



I. IDENTIFICATION

- # Upgrade Fire Alarm System

1.	Building	\$		
2.	Electrical			
3.	Plumbing			
4.	Fire Protection		335-	
5.	Elevator Devices			
6.	Subtotal	\$		
7.	Less 20% for State Plan Review			
8.	Subtotal	\$		
9.	DCA Training Fee		1	
10.	Subtotal			
11.	Cert. of Occupancy			
12.	Other			
13.	TOTAL	\$	336-	

1. Number of Stories _____
2. Height of Structure _____ ft.
3. Area — Largest Floor _____ sq. ft.
4. New Building Area _____ sq. ft.
5. Volume of New Structure _____ cu. ft.
6. Construction Classification _____
7. Total Land Area Disturbed _____ sq. ft.
8. Flood Hazard Zone _____
9. Base Flood Elevation _____ ft.
10. Wetlands yes _____
 no _____
11. Max. Live Load _____
12. Max. Occupancy Load _____

(office use only)

TOTAL COSTS

OPTIONAL (for office use only)

Plans Rec'd by	Date Rec'd	Rejection Date	Approval Date	Re- viewer	Resubmission Dates		Re- viewer
					Approval	Rejection	
Extra floor 5th floor		OK			6/12/00		OK
				Basement	O/R		
				1st floor	OK		
				2nd floor	OK		
				3rd floor	OK		

- ☐ Partial Releases
- ☐ Prototype Processing

1. ☐ Elevators/Escalators/Lifts/
Dumbwaiters/Moving Walks

2. ☐ High Pressure Boilers

3. ☐ Pressure Vessels

4. ☐ Refrigeration Systems

5. ☐ Cross-Connections/Backflow Preventers

6. ☐ Hazardous Uses/Places of Assembly

7. ☐ Sprinklers

8. ☐ Smoke Control Systems in Open Wells

9. ☐ Underground Storage Tanks

A. RESIDENTIAL

1. ☐ Hotels (R-1)
2. ☐ Multi-Family (R-2)
3. ☐ Two-Family (R-3) BOCA
4. ☐ Two-Family (R-4) CABO
5. ☐ One-Family (R-3) BOCA
6. ☐ One-Family (R-4) CABO

No. of dwelling units:

Before Construction _____
After Construction _____
Net Gain or Loss _____

B. NON-RESIDENTIAL

1. State Specific Use:
2. Use Group:
3. Change in Use Group, Indicate Former:

CERTIFICATION IN LIEU OF OATH

I. OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

- A. ☐ I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

- B. ☐ I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(e)1.vii:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

- C. ☐ I further certify that I will perform or supervise the following work:

C.1. ☐ Building C.2. ☐ Fire Protection

I further certify that I will perform the following work:

C.3. ☐ Electrical C.4. ☐ Plumbing

- D. ☐ I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature _____ Date _____

II. AGENT SECTION (to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the Uniform Construction Code, N.J.A.C. 5:32-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

☐ Check if contractor.

Agent Name _____

Address _____

Telephone (_____) _____

Signature _____

III. ☐ LEAD HAZARD ABATEMENT: Include Homeowner or Building Owner Affidavit as per N.J.A.C. 5:17.

OFFICE DATE RECEIVED: _____

VIII. PRIOR APPROVALS CHECKLIST (office use only)	LOCAL APPROVAL		COUNTY APPROVAL		REGIONAL APPROVAL		STATE APPROVAL		COMMENTS
	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	
☐ Zoning Officer									
☐ Planning Board									
☐ Zoning Board									
☐ Sewer Authority									
☐ Water Authority									
☐ Police Department									
☐ Health Department									
☐ Soil Conservation									
☐ N.J. Department of Community Affairs									
☐ N.J. Department of Transportation									
☐ N.J. Department of Environmental Protection									
☐ Utility Dig No.									
☐									
☐									

IX. SUBCODES AND SPECIAL REGULATIONS APPLICABLE (office use only—optional)

Name of Code & Edition _____

Name of Code & Edition _____

Building _____	Energy _____	Other _____
Electrical _____	Barrier Free _____	
Plumbing _____	Flood Hazard _____	
Fire Protection _____	As Built Elevation Cert. _____	
Mechanical _____	Other _____	

X. CERTIFICATES ISSUED (office use only)

DATE ISSUED _____

DATE EXPIRED _____

DATE REISSUED _____

DATE EXPIRED _____

☐ Temporary Certificate of Occupancy	No. _____	_____	_____	_____
☐ Temporary Certificate of Compliance	No. _____	_____	_____	_____
☐ Continued Certificate of Occupancy	No. _____	_____	_____	_____
☐ Certificate of Compliance	No. _____	_____	_____	_____
☐ Certificate of Occupancy	No. _____	_____	_____	_____
☐ Certificate of Approval	No. _____	_____	_____	_____
☐ Lead Abatement Clearance Certificate	No. _____	_____	_____	_____

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

IDENTIFICATION

UCC NEW JERSEY
CERTIFICATE

Date Issued 06/20/2000
Control #
Permit # 99-3552

Block 1170 Lot 18 Qual
Work Site Location 425 JACK MARTIN BLVD
FIRE SPRINKLERS
Owner in Fee/Occupant MERIDIAN HEALTH SYS
Address 425 JACK MARTIN BLVD
BRICK, NJ 08724-
Telephone (732)840-3323
Contractor SYSTEMS SALES CORP
Address 1345 CAMPUS PKY
NEPTUNE, NJ
Telephone (732)751-0600 Fax ()
Lic. No. or Bldrs. Reg. No.
Federal Emp. No. 22-2359665

Home Warranty No.
Type of Warranty Plan: [] State [] Private
Use Group 1-2
Maximum Live Load 0
Construction Classification
Maximum Occupancy Load 0
Description of Work/Use:

[] CERTIFICATE OF OCCUPANCY

This serves notice that said building or structure has been constructed in accordance with the New Jersey Uniform Construction Code and is approved for occupancy.

[] CERTIFICATE OF CLEARANCE - LEAD ABATEMENT 5:17

This serves notice that based on written certification, lead abatement was performed as per NJAC 5:17, to the following extent:
[] Total removal of lead-based paint hazards in scope of work
[] Partial or limited time period (____ years); see file

[X] CERTIFICATE OF APPROVAL

This serves notice that the work completed has been constructed or installed in accordance with the New Jersey Uniform Construction Code and is approved.
If the permit was issued for minor work, this certificate was based upon what was visible at the time of inspection.

[] CERTIFICATE OF CONTINUED OCCUPANCY

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

[] TEMPORARY CERTIFICATE OF OCCUPANCY/COMPLIANCE

If this is a Temporary Certificate of Occupancy or Compliance, the following conditions must be met no later than _____ or the owner will be subject to fine or order to vacate:

[] CERTIFICATE OF COMPLIANCE

This serves notice that said potentially hazardous equipment has been installed and/or maintained in accordance with the New Jersey Uniform Construction Code and is approved for use until _____.

CONSTRUCTION OFFICIAL
U.C.C. 7360 (rev. 3/96)

Fee \$ 0
Paid [X] Check No. 4672
Collected by: TL

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**0004**
3552*#
K 0.00
1170 # 0.00
1B # 335.00
A. 1.00
- 336.00
K 336.00
GE 0.00
037A005 12*38

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09/17/99 NO. 5

Date Issued 09/11/99
Control #
Permit # 99-3557

1947
1948

PROPERTY TAXES	0.00
RENT	0.00
UTILITIES	0.00
INSURANCE	0.00
MAINTENANCE	0.00
ADVERTISING	0.00
TRAVEL	0.00
MEALS	0.00
ENTERTAINMENT	0.00
OTHER	0.00
TOTAL	0.00



FIRE PROTECTION SUBCODE TECHNICAL SECTION



Date Received 9/17/99
Date Issued 9/17/99
Control # 99-3552
Permit # up grade fire
5th floor

A. IDENTIFICATION - APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 1170 Lot 18
Work Site Location 445 Yorkman Blvd
Owner/in Fee Buck Woodgate
Address same

Tele. ()
Contractor Systems Sales Corp
Address 1345 Canyon Dr
Tel. 332-757-0600
Lic. No. 332-359665
Federal, Emp. No. 332-359665 or Social Security No.

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed
Const. Class. Present Proposed
Heating Systems [] New [] Existing
Type: [] Gas, [] Oil [] Electrical [] Solar
[] Other
Location:

Total Est. Cost of Fire Prot. Work \$ [] Other

JOB SUMMARY (Office Use Only)

PLAN REVIEW:	INSPECTIONS:	Dates (Month/Day)
Joint Plan Review Required	Type:	Failure Failure Approval Initial
[] Bldg. [] Plumb.	Suppression Test	
[] Elec. [] Elevator	Fire Alarm Test	6-30-00 (24)
[] Fire Plans Approved	Smoke Test	
Date: 5-14-99	Mechanical	
Approved by: [Signature]	TCO	
SUBCODE APPROVAL:	Other	
[] CO [] CCO	Other	
Date: 6-30-00	Other	
Approved by: [Signature]		

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

SIGNATURE

D. TECHNICAL SITE DATA

Description of Work
Water Supply Source
Method of Valve Supervision
Local Alarm Supervision
Central Supervision
Proprietary Supervision

Flammable Liquid Storage Tanks
Combustible Liquid Storage Tanks
L.P.G. Storage Tanks
L.N.G. Storage Tanks

Horn unit
Wet Sprinkler Heads
Dry Sprinkler Heads
TOTAL
Duct S.D.

Smoke Detectors
Heat Detectors
TOTAL

Stand Pipes
Kitchen Hood Exhaust Systems

Pre-Engineered Systems
CO₂ Suppression
Halon Suppression
Foam Suppression
Dry Chemical
Wet Chemical

Gas or Oil Fired Appliance
OTHER

FEE (Office Use Only)

Paid [] Check #	Administrative Surcharge \$
	Minimum Fee \$
	DCA Training Fee \$
Collected by:	TOTAL FEE \$



**FIRE PROTECTION
SUBCODE
TECHNICAL SECTION**



Date Received 9/17/99
Date Issued 99-3552
Control # 913-118
Permit # _____

A. IDENTIFICATION - APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS NOTIFY THIS OFFICE. CALL UTILITY DIG NO. 1-800-272-1000.

Block 1170 Lot 18
Work Site Location 445 Jackson Blvd
Owner in Fee Buch Hospital
Address _____
Tele. (____) _____
Contractor Systems Data Corp
Address 1345 Campus Dr
Tele. (____) 732-4951000
Lic. No. _____
Federal Emp. No. 222359665 or Social Security No. _____

B. FIRE PROTECTION CHARACTERISTICS

Use Group _____ Present _____ Proposed _____
Const. Class. _____ Present _____ Proposed _____
Heating Systems [] New [] Existing
Type: [] Gas [] Oil [] Electrical [] Solar
[] Other _____
Location: _____
Total Est. Cost of Fire Prot. Work \$ _____ [] Other _____

JOB SUMMARY (Office Use Only)

PLAN REVIEW: ☒ NO Plans Required
Joint Plan Review Required: _____
[] Bldg. [] Plumb. _____
[] Elec. [] Elevator _____
[] Fire Plans Approved _____
Date: 9-14-99
Approved by: [Signature]
SUBCODE APPROVAL: _____
[] CO [] CCO [] Other _____
Date: 9-20-00
Approved by: [Signature]

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

SIGNATURE _____

D. TECHNICAL SITE DATA

Description of Work _____
Water Supply Source _____
Method of Valve Supervision _____
Local Alarm Supervision _____
Central Supervision _____
Proprietary Supervision _____

Flammable Liquid Storage Tanks _____
Combustible Liquid Storage Tanks _____
L.P.G. Storage Tanks _____
L.N.G. Storage Tanks _____
() Capacity _____ Fuel _____
() Capacity _____ Fuel _____
() Capacity _____ Fuel _____

Turn unit
Wet-Sprinkler Heads _____
Dry-Sprinkler Heads _____
TOTAL Duct 5 D' _____
Number _____

Smoke Detectors _____
Heat Detectors _____
TOTAL _____

Stand Pipes _____
Kitchen Hood Exhaust Systems _____

Pre-Engineered Systems _____
CO₂ Suppression _____
Halon Suppression _____
Foam Suppression _____
Dry Chemical _____
Wet Chemical _____

Gas or Oil Fired Appliance _____
OTHER _____

Paid [] Check # _____
Collected by: _____
Administrative Surcharge \$ _____
Minimum Fee \$ _____
DCA Training Fee \$ _____
TOTAL FEE \$ _____

FEE (Office Use Only)



FIRE PROTECTION SUBCODE TECHNICAL SECTION



Date Received 9/17/99
Date Issued 99-3552
Control # C13-718
Permit # True

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 1170 Lot 18
Work Site Location 425 Jackman Blvd
Owner in Fee Buck Hospital
Address same
Tele. () 1345 Chicago City
Contractor 1345 Chicago City
Address 1345 Chicago City
Tele. () 1345 Chicago City
Lic. No. 1345 Chicago City
Federal Emp. No. 222 359 665 or Social Security No. _____

B. FIRE PROTECTION CHARACTERISTICS

Use Group _____ Present _____ Proposed _____
Const. Class. _____ Present _____ Proposed _____
Heating Systems [] New [] Existing
Type: [] Gas [] Oil [] Electrical [] Solar
[] Other _____
Location: _____
Total Est. Cost of Fire Prot. Work \$ _____ [] Other _____

JOB SUMMARY (Office Use Only)

PLAN REVIEW:		INSPECTIONS:	
Joint Plan Review Required:	Type:	Dates (Month/Day)	Initial
[] No Plans Required	Suppression Test		
[] Bldg. [] Plumb.	Fire Alarm Test		
[] Elec. [] Elevator	Smoke Test		
[] Fire Plans Approved	Mechanical		
Date: <u>9/14/99</u>	TCO		
Approved by: <u>[Signature]</u>	Other		
SUBCODE APPROVAL:	Other		
[] CO [] CCO [] SEA	Other		
Date: <u>9/17/99</u>			
Approved by: <u>[Signature]</u>			

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

SIGNATURE _____

D. TECHNICAL SITE DATA

Description of Work _____
Water Supply Source _____
Method of Valve Supervision _____
Local Alarm Supervision _____
Central Supervision _____
Proprietary Supervision _____

Flammable Liquid Storage Tanks _____
Combustible Liquid Storage Tanks _____
L.P.G. Storage Tanks _____
L.N.G. Storage Tanks _____

() Capacity _____ Fuel _____
() Capacity _____ Fuel _____
() Capacity _____ Fuel _____

Wet-Sprinkler Heads _____
Dry-Sprinkler Heads _____
TOTAL Det 5.00

Number

FEE (Office Use Only)

Smoke Detectors _____
Heat Detectors _____
TOTAL _____

67
10
124

Stand Pipes _____
Kitchen Hood Exhaust Systems _____

Pre-Engineered Systems _____

CO₂ Suppression _____
Halon Suppression _____
Foam Suppression _____
Dry Chemical _____
Wet Chemical _____

Gas or Oil Fired Appliance _____
OTHER _____

Paid [] Check # _____
Collected by: _____
Administrative Surcharge \$ _____
Minimum Fee \$ _____
DCA Training Fee \$ _____
TOTAL FEE \$ _____



**FIRE PROTECTION
SUBCODE
TECHNICAL SECTION**



Date Received 9/17/99
Date Issued 9/17/99
Control # 99-3552
Permit # 99-3552

A. IDENTIFICATION - APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.
Block 1170 Lot 18
Work Site Location 445 13th Street
Owner in Fee Beach Woodford
Address Beach Woodford

Tele. () 445 13th Street
Contractor 1345 Campbell Key
Address 1345 Campbell Key
Tele. 732-751-0600
L.C. No. 732-359665 or Social Security No.
Federal Emp. No. 732-359665

B. FIRE PROTECTION CHARACTERISTICS
Use Group Present Proposed
Const. Class. Present Proposed
Heating Systems () New () Existing
Type: () Gas () Oil () Electrical () Solar
() Other SPRINKLER

Location:
Total Est. Cost of Fire Prot. Work \$ () Other

JOB SUMMARY (Office Use Only)	
PLAN REVIEW:	INSPECTIONS:
Joint Plan Review Required: <u></u>	Type: <u></u>
() Bldg. () Plumb.	Suppression Test <u></u>
() Elec. () Elevator	Fire Alarm Test <u>6-11-00</u>
() Fire Plans Approved	Smoke Test <u></u>
Date: <u>8-14-99</u>	Mechanical <u></u>
Approved by: <u>PCR</u>	TCO <u></u>
SUBCODE APPROVAL: <u>PCR</u>	Other <u></u>
() CO () CCO () CCA	Other <u></u>
Date: <u>6-18-00</u>	Other <u></u>
Approved by: <u>PCR</u>	Other <u></u>

C. CERTIFICATION IN LIEU OF OATH
I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

SIGNATURE

D. TECHNICAL SITE DATA

Description of Work

Water Supply Source
Method of Valve Supervision
Local Alarm Supervision
Central Supervision
Proprietary Supervision

Flammable Liquid Storage Tanks () Capacity
Combustible Liquid Storage Tanks () Capacity
L.P.G. Storage Tanks () Capacity
L.N.G. Storage Tanks () Capacity

Smoke Detectors 70
Heat Detectors 13
TOTAL 135

Stand Pipes
Kitchen Hood Exhaust Systems

Pre-Engineered Systems

CO₂ Suppression
Halon Suppression
Foam Suppression
Dry Chemical
Wet Chemical

Gas or Oil Fired Appliance
OTHER

FEE (Office Use Only)

Paid () Check # <u></u>	Administrative Surcharge \$ <u></u>
	Minimum Fee \$ <u></u>
	DCA Training Fee \$ <u></u>
Collected by: <u></u>	TOTAL FEE \$ <u></u>



FIRE PROTECTION SUBCODE TECHNICAL SECTION



Date Received 9/17/99
Date Issued
Control # 913-718 99-3552
Permit #

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 1170 Lot 18
Work Site Location 445 South Market Street
Owner in Fee Buck Street
Address same
Tele. () Supreme Sales Corp
Contractor 1345 Campus Drive
Address Superior
Tele. 932-751-0600
Lic. No. 223359665 or Social Security No.
Federal Emp. No.

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed
Const. Class. Present Proposed
Heating Systems () New () Existing
Type: () Gas () Oil () Electrical () Solar
() Other gas
Location: () Other
Total Est. Cost of Fire Prot. Work \$ () Other

JOB SUMMARY (Office Use Only)

PLAN REVIEW: NO Plans Required
Joint Plan Review Required:
() Bldg. () Plumb.
() Elec. () Elevator
() Fire Plans Approved
Date: 9-14-99
Approved by: (Signature)
SUBCODE APPROVAL:
() CO () CCO () Other 6-12-99
Date: 6-12-99
Approved by: (Signature)

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

SIGNATURE

D. TECHNICAL SITE DATA

Description of Work 1st Floor Upgrade Fire Alarm Sys.
Water Supply Source
Method of Valve Supervision
Local Alarm Supervision
Central Supervision
Proprietary Supervision

Flammable Liquid Storage Tanks () Capacity Fuel
Combustible Liquid Storage Tanks () Capacity Fuel
L.P.G. Storage Tanks () Capacity Fuel
L.N.G. Storage Tanks () Capacity Fuel

4.00 Unit
Wet Sprinkler Heads 20
Dry Sprinkler Heads 20
TOTAL DETECTORS 20

Smoke Detectors 71
Heat Detectors 12
TOTAL 143

Stand Pipes
Kitchen Hood Exhaust Systems

Pre-Engineered Systems
CO₂ Suppression
Halon Suppression
Foam Suppression
Dry Chemical
Wet Chemical

Gas or Oil Fired Appliance
OTHER

Paid () Check # Administrative Surcharge \$
Minimum Fee \$
DCA Training Fee \$
Collected by: TOTAL FEE \$

FEE (Office Use Only)



**FIRE PROTECTION
SUBCODE
TECHNICAL SECTION**



Date Received 9/17/99
Date Issued _____
Control # 013-718
Permit # 99-3552

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 1175 Lot 18
Work Site Location 4425 Buck Mountain Road
Owner in Fee Buck Mountain
Address same

Tele. () _____
Contractor Superior Sales Corp.
Address 1345 Campus Hwy
Tele. () 732 257 0600
Lic. No. _____
Federal Emp. No. 222-357665 or Social Security No. _____

B. FIRE PROTECTION CHARACTERISTICS

Use Group _____ Present _____ Proposed _____
Const. Class. _____ Present _____ Proposed _____
Heating Systems [] New [] Existing
Type: [] Gas [] Oil [] Electrical [] Solar
Location: _____
Total Est. Cost of Fire Prot. Work \$ _____

JOB SUMMARY (Office Use Only)

PLAN REVIEW:	INSPECTIONS:	Dates (Month/Day)
☒ No Plans Required	Type: _____	Failure _____ Failure _____ Approval _____ Initial _____
Joint Plan Review Required:	Suppression Test	_____
[] Bldg. [] Plumb.	Fire Alarm Test	_____
[] Elec. [] Elevator	Smoke Test	_____
[] Fire Plans Approved	Mechanical	_____
Date: <u>9-18-99</u>	TCO	_____
Approved by: <u>[Signature]</u>	Other	_____
SUBCODE APPROVAL:	Other	_____
[] CO [] CCO	Other	_____
Date: <u>9-18-99</u>	Other	_____
Approved by: <u>[Signature]</u>	Other	_____

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

SIGNATURE _____

D. TECHNICAL SITE DATA

Basement level
Upgrade Fire Alarm Sys.

Description of Work	Number	Fuel
Water Supply Source	_____	_____
Method of Valve Supervision	_____	_____
Local Alarm Supervision	_____	_____
Central Supervision	_____	_____
Proprietary Supervision	_____	_____
Flammable Liquid Storage Tanks	_____	_____
Combustible Liquid Storage Tanks	_____	_____
L.P.G. Storage Tanks	_____	_____
L.N.G. Storage Tanks	_____	_____

Hand Unit
Wet Sprinkler Head
Dry Sprinkler Head
57500 unit
TOTAL DUCTS _____

Smoke Detectors 21
Heat Detectors 20
TOTAL 64

Stand Pipes _____
Kitchen Hood Exhaust Systems _____

Pre-Engineered Systems _____
CO₂ Suppression _____
Halon Suppression _____
Foam Suppression _____
Dry Chemical _____
Wet Chemical _____

Gas or Oil Fired Appliance _____
OTHER _____

FEE (Office Use Only)

Paid [] Check # _____
Minimum Fee \$ _____
DCA Training Fee \$ _____
TOTAL FEE \$ _____
Collected by: _____

***BRICK HOSPITAL
BRICK, NJ***

***EDWARDS FIRE ALARM SYSTEM
EQUIPMENT SUBMITTAL***

ELECTRICAL CONTRACTOR

***MERIDIAN HEALTH SYSTEM
RED BANK, NJ***

SUBMITTAL PREPARED BY

***SYSTEMS SALES CORPORATION
1345 CAMPUS PARKWAY
MONMOUTH SHORES CORPORATE PARK
NEPTUNE, NJ 07753-6815***

(732) 751-0600

Brian M. Ventrella

SSC Project No. 9508

9/9/99

BRICK HOSPITAL

BRICK, NJ

EDWARDS FIRE ALARM SYSTEM EQUIPMENT

BASEMENT

<u>QUAN</u>	<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
1	EST3	Addressable Fire Alarm System Control Panel	1-2
20	SIGA-HFS	Intelligent Heat Detectors – Fixed Temperature 135°F	5-6
20	SIGA-SB	Bases for SIGA-HFS Heat Detectors	5-6
21	SIGA-PS	Intelligent Photoelectric Smoke Detectors	7-8
21	SIGA-SB	Bases for SIGA-PS Smoke Detectors	7-8
8	SIGA-CT1	Single Input Modules for Existing Pull Stations	11-12
2	SIGA-CT1	Single Input Modules for Stand Alone Tamper Switches	11-12
6	SIGA-CT2	Dual Input Modules for Waterflow & Tamper Switches	11-12
9	757-1A-T	Horn Units	13-14
14	405-7A-T	Strobe Units	15-16

1st FLOOR

<u>QUAN</u>	<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
1	3-LCDANN	Remote Annunciator	3-4
12	SIGA-HFS	Intelligent Heat Detectors – Fixed Temperature 135°F	5-6
12	SIGA-SB	Bases for SIGA-HFS Heat Detectors	5-6
71	SIGA-PS	Intelligent Photoelectric Smoke Detectors	7-8

71	SIGA-SB	Bases for SIGA-PS Smoke Detectors	7-8
20	SIGA-PS	Intelligent Photoelectric Duct Smoke Detectors	7-8
20	SIGA-RB	Relay Bases for SIGA-PS Duct Smoke Detectors	7-8
20	SIGA-DH	Housings for Duct Smoke Detectors	9-10
15	SIGA-CT1	Single Input Modules for Existing Pull Stations	11-12
1	SIGA-CT1	Single Input Module for Ansul System	11-12
4	SIGA-CT2	Dual Input Modules for Waterflow & Tamper Switches	11-12
20	757-1A-T	Horn Units	13-14
20	405-7A-T	Strobe Units	15-16

2nd FLOOR

<u>QUAN</u>	<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
13	SIGA-HFS	Intelligent Heat Detectors – Fixed Temperature 135°F	5-6
13	SIGA-SB	Bases for SIGA-HFS Heat Detectors	5-6
70	SIGA-PS	Intelligent Photoelectric Smoke Detectors	7-8
70	SIGA-SB	Bases for SIGA-PS Smoke Detectors	7-8
10	SIGA-LED	Remote Alarm LED's for Patient Room Smoke Detectors	7-8
20	SIGA-PS	Intelligent Photoelectric Duct Smoke Detectors	7-8
20	SIGA-RB	Relay Bases for SIGA-PS Duct Smoke Detectors	7-8
20	SIGA-DH	Housings for Duct Smoke Detectors	9-10
9	SIGA-CT1	Single Input Modules for Existing Pull Stations	11-12
1	SIGA-CT1	Single Input Module for Ansul System	11-12
3	SIGA-CT2	Dual Input Modules for Waterflow & Tamper Switches	11-12

15	757-1A-T	Horn Units	13-14
15	405-7A-T	Strobe Units	15-16

3rd FLOOR

<u>QUAN</u>	<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
10	SIGA-HFS	Intelligent Heat Detectors – Fixed Temperature 135°F	5-6
10	SIGA-SB	Bases for SIGA-HFS Heat Detectors	5-6
67	SIGA-PS	Intelligent Photoelectric Smoke Detectors	7-8
67	SIGA-SB	Bases for SIGA-PS Smoke Detectors	7-8
29	SIGA-LED	Remote Alarm LED's for Patient Room Smoke Detectors	7-8
23	SIGA-PS	Intelligent Photoelectric Duct Smoke Detectors	7-8
23	SIGA-RB	Relay Bases for SIGA-PS Duct Smoke Detectors	7-8
23	SIGA-DH	Housings for Duct Smoke Detectors	9-10
9	SIGA-CT1	Single Input Modules for Existing Pull Stations	11-12
3	SIGA-CT2	Dual Input Modules for Waterflow & Tamper Switches	11-12
12	757-1A-T	Horn Units	13-14
12	405-7A-T	Strobe Units	15-16

4th FLOOR

<u>QUAN</u>	<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
8	SIGA-HFS	Intelligent Heat Detectors – Fixed Temperature 135°F	5-6
8	SIGA-SB	Bases for SIGA-HFS Heat Detectors	5-6
77	SIGA-PS	Intelligent Photoelectric Smoke Detectors	7-8
77	SIGA-SB	Bases for SIGA-PS Smoke Detectors	7-8
37	SIGA-LED	Remote Alarm LED's for Patient Room Smoke Detectors	7-8
41	SIGA-PS	Intelligent Photoelectric Duct Smoke Detectors	7-8
41	SIGA-RB	Relay Bases for SIGA-PS Duct Smoke Detectors	7-8
41	SIGA-DH	Housings for Duct Smoke Detectors	9-10
9	SIGA-CT1	Single Input Modules for Existing Pull Stations	11-12
3	SIGA-CT2	Dual Input Modules for Waterflow & Tamper Switches	11-12
8	757-1A-T	Horn Units	13-14
15	405-7A-T	Strobe Units	15-16

5th FLOOR

<u>QUAN</u>	<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
7	SIGA-HFS	Intelligent Heat Detectors – Fixed Temperature 135°F	5-6
7	SIGA-SB	Bases for SIGA-HFS Heat Detectors	5-6
70	SIGA-PS	Intelligent Photoelectric Smoke Detectors	7-8
70	SIGA-SB	Bases for SIGA-PS Smoke Detectors	7-8
23	SIGA-LED	Remote Alarm LED's for Patient Room Smoke Detectors	7-8

29	SIGA-PS	Intelligent Photoelectric Duct Smoke Detectors	7-8
29	SIGA-RB	Relay Bases for SIGA-PS Duct Smoke Detectors	7-8
29	SIGA-DH	Housings for Duct Smoke Detectors	9-10
7	SIGA-CT1	Single Input Modules for Existing Pull Stations	11-12
3	SIGA-CT2	Dual Input Modules for Waterflow & Tamper Switches	11-12
9	757-1A-T	Horn Units	13-14
13	405-7A-T	Strobe Units	15-16



EDWARDS SYSTEMS TECHNOLOGY

EST3 Multiplex System

EST3

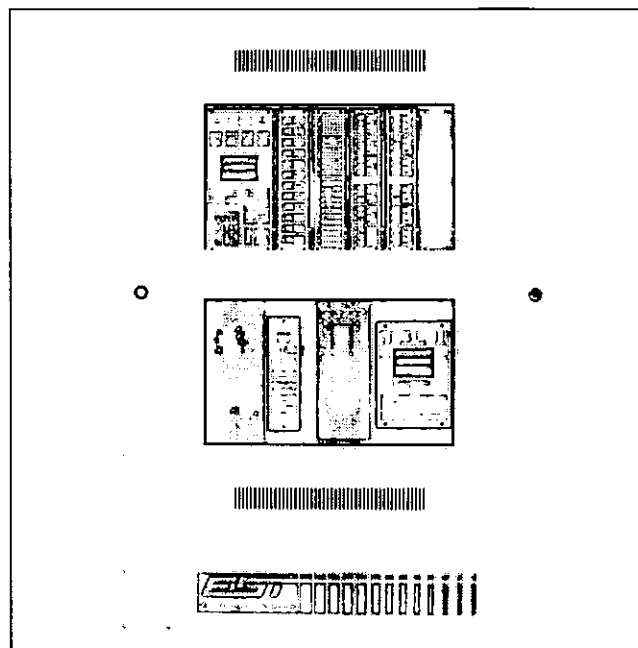
Features

- 168 CHARACTER LCD
 - displays information important to user first
 - First and Last alarm display hands free
- EXCEPTIONAL ALARM RESPONSE TIMES
 - 3 second alarm response time over any size network
 - 750ms loop alarm response time
- TOTAL NETWORK WIRING OVER 300,000 FEET
- 8 MULTIPLEXED CHANNELS FOR AUDIO SOURCE SELECTION ON ONE PAIR OF WIRES
- ZONED AUDIO AMPLIFIERS
- SUPPORTS PROPRIETARY AND LOCAL SYSTEM OPERATIONS
- FOR RETROFIT EXISTING WIRE MAY BE USED IF ELECTRICALLY SOUND
- SLIDE IN LED AND SWITCH LABELS
- SIGNATURE SERIES DETECTORS AND MODULES SUPPORT
- AUTOMATIC DEVICE AND PANEL ADDRESSING
- 250 DEVICES PER LOOP, 2500 DEVICES PER NODE
- DEVICE CIRCUIT MAPPING
- UP TO 32 TROUBLE BITS PER DEVICE FOR TROUBLE SHOOTING

Description

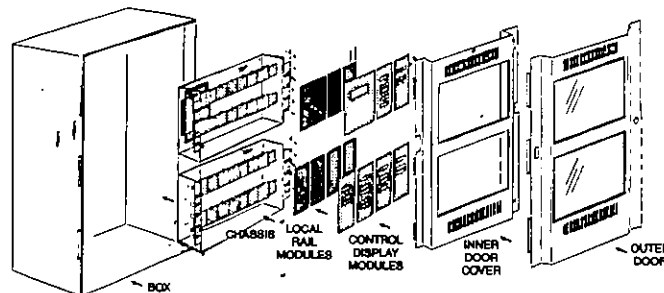
EST3 is a modular system uniquely designed to easily meet the needs of standalone single node systems or multi-node networks. Both fire alarm and audio systems use the same fundamental components simplifying system layouts. A powerful System Definition Utility helps define flexible system operations in a fraction of the time required by others. Virtually all EST3 operating features are software controlled. This gives EST3 great site flexibility and ensures operational changes and upgrades will be possible years after the initial installation.

From the elegant contoured door design of the Lobby Enclosure through the standard industrial design of Remote Closet cabinets both aesthetics and function are addressed.



Application Notes

EST3 is a superbly adaptable Life Safety System lending itself to smaller and larger buildings alike. System components arrange in layers starting with the wallbox system and ending with inner and outer doors. Cabinets are available with room for system batteries up to 65 Amp hours. With EST3 one 24 volt battery supports up to four power supplies.



The power supplies use a unique paralleling arrangement that ensures optimization of each supplies full capacity. Each supply will support up to 7 Amps of load, with 4 supplies 28 Amps of current is available all backed up by one battery. This gives EST3 continuing cost saving benefits in system maintenance as well as initial system cost.

A user interface layer made up of a Main Display Interface module and a system of generic modules maximize design flexibility for custom systems.



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OWEN SOUND, CANADA 519-376-2430 Fax: 519-376-7258
INTERNATIONAL: CANADA 905-678-6767 Fax: 905-678-9791

Main Display Interface

EST3's Main Display Interface module focuses on the emergency user. Simple to understand lights and switches help the operator execute system commands with confidence. Eight lines of 21 characters (168 characters total) provide the room needed to convey emergency information in a useful format. Hands free, the first highest priority event displays. The Main Display always shows the last highest priority event. Without opening the door of the EST3 the first and last alarm is given. EST3 modular system design means a Main Display Interface module is not required in remote nodes with no user interface requirements.

EST3's Main Display Interface provides a menu system to support maintenance functions such as point disabling or reports for use by staff or service personnel.

Display Modules

EST3's, generic control/display module's provide membrane switches with positive tactile feedback and colored LEDs giving the emergency user the simplest of interfaces. Control/Display module locations are independent of the underlying connection hardware, the local rail module. This keeps system lay out flexibility maximized.

Panel Capacities

EST3 makes isolation of field wiring easy with building wiring termination's being made on local rail module removable terminal blocks. EST3 local rail modules include, zoned amplifiers, Single Signature Loop Controllers, Conventional Hardwired modules, and the main CPU module. System design allows convenient separation of high voltage and power limited wiring.

EST3 supports both single node and multiple node single network systems. As a stand alone panel or single node from 5 to 21 module spaces are available. This provides enough space for up to four system power supplies providing 28 Amps of power. A single panel supports up to 10 Signature loop controllers (250 devices per loop, 2500 points total per node). Utilizing conventional circuits, up to 15 local rail modules fit, supporting 120 conventional zones. Up to half of the conventional circuits could be Notification Appliance Circuits, with 19 Control Display modules, and a Main Display Interface module.

Networks

EST3 operates on a multi priority peer-to-peer token ring network. The multi-priority token ring gives EST3 exceptional alarm response. Response time is less than 3 seconds

across the network virtually independent of the total number of nodes. EST3 token ring network configuration also affords long distances between nodes. The distance between panels on #18AWG (1.0mm²) is 5000ft (1523m). With 64 nodes supported on a network the total network length is in excess of 300,000 ft (91400m).

Network communication is via RS-485 serial ports. This two wire circuit supports Class 'A' or 'B'. The EST3 network meets NFPA style 7 communications standards in Class 'A' configuration.

The EST3 uses distributed data base technology, designed to survive the rigors of fire and fire fighting. In Class 'B' configuration a single break or short on the network wiring will isolate the system into two groups of panels each with one or more nodes. Each group of panels continues functioning as a peer-to-peer network working with their combined data bases. In Class 'A' a single break or short on the network wiring causes the system to isolate the fault. Network communication continues uninterrupted. If multiple faults occur, the network re-configures into multiple networks and functions as described above for Class 'B'. This means a system continues to respond to activations from every node that can transmit and receive network messages. Local responses always execute since the local data base resides at each node maximizing survivability.

ADDING AUDIO

EST3 audio is a matter of selecting components for installation in standard fire alarm cabinet assemblies. EST3 uses intelligent zoned amplifiers, this reduces wire runs and space needs at a central location. Audio control equipment and zoned amplifiers use the same system power supplies as fire alarm components. All these components are supported by standby battery. Where multiple nodes make up the system a single pair of wires carries eight channels of digital audio between nodes. The system will deliver up to eight messages/signals simultaneously meaning occupants signaling messaging is never interrupted. This eliminates confusion when the emergency user requires the use of an audio channel when delivering zone specific messages.

The EST3 provides simple paging controls. Pressing the ALL CALL selects all paging zones for message delivery. Pressing Page to EVACUATION automatically selects all areas in evacuation. Similarly, the user can Page to ALERT. Zoned paging requires the user to simply press zone paging switches. After the user completes a page delivery, signaling automatically restore when the user releases the microphone talk key.



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INTERNATIONAL: CANADA 905-678-6767 Fax: 905-678-9791

Engineering Specification

It shall be possible to support a single stand alone node or up to 64 nodes communicating on a peer-to-peer multi-priority token ring protocol network. Any node on the network with a new alarm must have priority on the Network. Network alarm response must be under 3 seconds. Field wiring connections must be made at removable terminal blocks. Status LEDs shall be provided for communications of network, RS-232, audio and internal rail communications. Internal node communication speed must be programmable. The control panel and system components must be manufactured by an ISO 9001 standards listed company.

The communication format between the control panel and analog devices shall be digital.

Loop alarm recognition must be within 750 milliseconds of a device reporting an alarm state. It must be possible to wire the Loop as Class A or Class B with non shielded, non twisted wire. It must be possible to wire branches (T-taps) with Class B wiring. Should the communications between devices and the Data controller be lost, the device circuit shall go into stand-alone mode. The circuit shall act like a conventional alarm receiving circuit in the stand alone mode. Should bus communications be lost, local rail modules must continue to function, recognize and store functional status changes. In the event of an alarm, provision must be made to signal the network and make it aware of the alarm condition.

The fire alarm power supplies must be capable of being paralleled and share the load. Multiple power supplies must be capable of being backed up with a single 24 volt battery pack for reduced maintenance. A battery per power supply is not acceptable. The power supply shall be capable of charging up to 65 AH batteries. The power supply must be able to perform an automatic load test of batteries and return a trouble if the batteries fall outside a predetermined range. Power supplies must incorporate the ability to adjust the charge rate of batteries based on ambient temperatures. It shall be possible to adjust for ambient temperature changes in local cabinets as well as remote cabinets.

The system shall provide a user interface that displays system events in a text format, and supports basic common control LEDs and switches. The Common Control Switches and LEDs provided as minimum will be; Reset switch and LED, Alarm Silence switch and LED, Panel Silence switch and LED, Drill switch and LED. It must be possible to add additional common controls as required through the use of modular display units. The user interface must provide an LCD that will allow custom event messages of up to 42 characters. The system must provide the emergency user, hands free viewing of the first and last highest priority event. The last highest priority event must always display and update automatically. Events shall be automatically placed in easy to access queues. It shall be possible to view

specific event types separately. Having to scroll through a mixed list of event types is not acceptable. The total number of active events by type must be displayed. Visual indication must be provided for any event type that has not been acknowledged or viewed. It must be possible to customize the designation of all user interface LEDs and Switches for local language requirements.

The Life Safety system shall incorporate annunciation of Alarm, Supervisory, Trouble and Monitor operations. Annunciation must be through the use of LED display strips complete with a means to custom label each LED as to its function. Where applicable control of remote smoke control devices must be made available at the control center. Switches with LEDs must provide positive feed back to the operator of remote equipment status. Where voice audio is required a means of paging individual zones must be made. The status of each paging zone must be annunciated. It must be possible to selectively page into specific zones. It shall be possible to manipulate the evacuation of the building from the main control center. It must be possible for the emergency operator to put specific zones into evacuation manually.

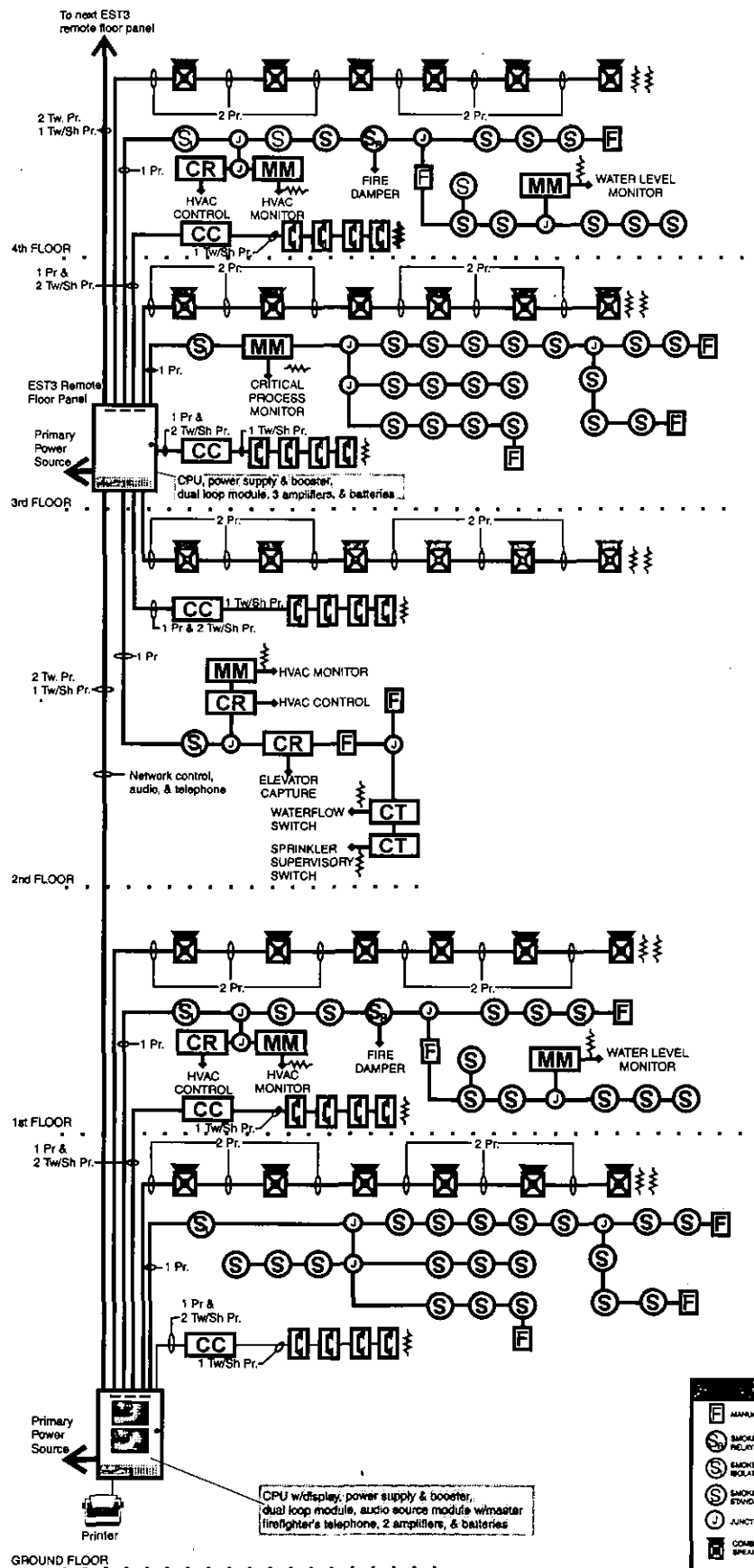
The audio system amplifiers must be able to operate 25Vrms or 70.4Vrms speakers. The system shall provide simultaneous page, alert and evacuation signaling. Systems that cause signaling devices to go silent while performing any signaling functions will not be accepted. System amplifiers must be distributed zoned type. Centrally banked systems are not acceptable. An integral circuit for operating traditional NAC devices must be provided with each system amplifier. The circuit must have a minimum rating of 3.5 Amps for operating 24Vdc signals. It must be possible to have up to 8 separate audio signal sources for paging and signaling purposes. The system must provide as a minimum the following paging common controls and indicators: Ready to page LED, VU display of paging output level, single switch function for paging to all - Alert zones, Evacuation zones, and areas not programmed for signaling. The system must provide high quality analog to digital conversion of paging sources. Digital transmission of paging must be provided between system nodes. The analog sources must be sampled and converted to digital with a sampling rate no less than 9600 baud. It must be possible to transmit signal sources (Alert, Alarm, Page, etc.) together over a single pair of wires between nodes.

The fire panel shall be capable of supporting a variety of conventional smoke detectors with a single module. It must be possible to support polarized bells, horns or strobes. It shall be possible to provide hardwired supervisory and monitor functions with latching or non-latching operations. It shall be possible to display any circuit on an LCD or LED annunciator located anywhere on the network.



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INTERNATIONAL: CANADA 905-678-6767 Fax: 905-678-9791

Typical Wiring



LEGEND	
	MANUAL PULL STATION
	SMOKE DETECTOR WITH RELAY BASE
	SMOKE DETECTOR WITH ISOLATOR BASE
	SMOKE DETECTOR WITH ENDWARD BASE
	FUNCTION BOX
	COMBINATION SMOKE/HEAT PROBE
	FIREFIGHTER'S TELEPHONE
	SIGNAL MODULE
	CONTROL RELAY MODULE
	INPUT MODULE
	UNIVERSAL INPUT/OUTPUT MODULE
	MONITOR MODULE
	END-OF-LINE RESISTOR

Size conductors per application. Refer to EST3 Installation Manual for additional details.

Remote Annunciators

Model: 3-LCDANN, 3-6ANN, 3-10ANN, 3-EVXXX

Features

- LCD ANNUNCIATOR HAS 168 CHARACTER DISPLAY
 - Displays information important to the user first
 - First and last alarm display hands free
- LCD USES QUEUES TO SORT EVENTS
- VARIETY OF WALLBOX CONFIGURATIONS
 - Size the annunciator to the application
- PROGRAMMABLE LED FLASH RATES
- SLIDE IN LABELS
 - makes customization for regional language easy
- FULL LINE OF DRIVER BOARDS FOR GRAPHIC ANNUNCIATORS

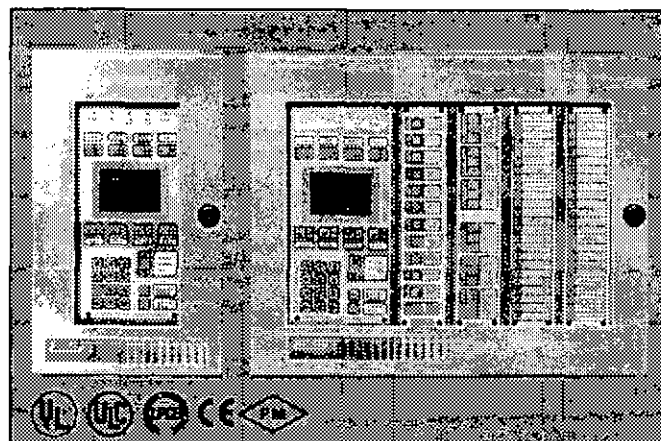
Description

The EST3 system supports a full range of annunciator options. Annunciator cabinets are constructed from 16 gauge cold rolled steel. The gray textured enamel finish of the annunciators complements any decor. Both surface and semi-flush mounting cabinet configurations maximize mounting flexibility and esthetic appeal. Cabinet arrangements allow both LED and LCD annunciation to easily combine in a single enclosure. Slide in labeling for LEDs and Switches provides designation flexibility for labeling in local languages. For Graphic annunciation EST3 offers LED driver boards perfectly suited to operate in most graphic annunciators.

Application

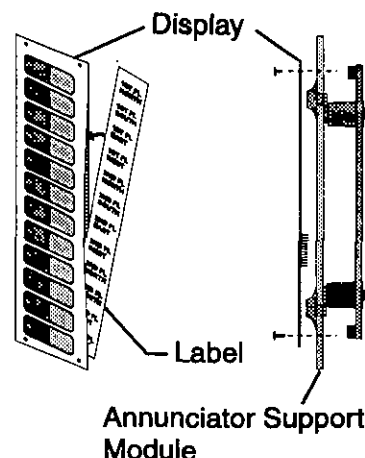
Use EST3 remote annunciators when a compact system status display is needed. Annunciator configurations include: LCD only display, LED only displays or combination LED and LCD display in a single enclosure.

The LCD display uses the 3-LCD Liquid crystal display module. The 3-LCD has eight lines of 21 characters on its LCD display providing the room needed to convey emergency information in a useful format.



The 3-LCD always displays the last highest priority event even when the user is viewing other message queues. To give the greatest message flexibility EST3 event messages can route to specific annunciators. Routing can be initiated at a specific time/shift change. Messages need only display in areas having to respond to an event.

For LED display, the full line of EST3 Control/Display Modules support event display. Control/Display modules install over any annunciator support module maximizing annunciator design flexibility. A Lamptest feature can program to any spare control switch. If a 3-LCD display is installed in the annunciator, simply operate the Alarm Silence and Trouble Silence switches simultaneously to lamptest all LEDs.



Ordering Information

Catalog Number	Description	Shipping Wt. lb (kg)
3-LCDANN	Remote LCD Command Module Annunciator - Comes with CPU, LCD display and doors. Order wallbox separately.	3.8 (1.7)
3-LCDANN(-E)	Remote LCD Command Module Annunciator - Comes with CPU, LCD display and doors. Order wallbox separately. EN-54 certified only, CE.	3.8 (1.7)
3-6ANN	Six Position Base Annunciator - Comes with two 3 - ANNSM annunciator support modules, a CPU, display and doors. Order Display/Control modules, additional support modules and wallbox separately.	6.28 (2.85)
3-6ANN(-E)	Six Position Base Annunciator - Comes with two 3 - ANNSM annunciator support modules, a CPU, display and doors. Order Display/Control modules, additional support modules and wallbox separately. EN-54 certified only, CE.	6.28 (2.85)
3-10ANN	Ten Position Base Annunciator - Comes with two 3 - ANNSM annunciator support modules, a CPU, display and doors. Order Display/Control modules, additional support modules and wallbox separately.	10.5 (4.8)
3-10ANN(-E)	Ten Position Base Annunciator - Comes with two 3 - ANNSM annunciator support modules, a CPU, display and doors. Order Display/Control modules, additional support modules and wallbox separately. EN-54 certified only, CE.	10.5 (4.8)
3-ANNCPU1	Annunciator CPU	1 (.45)
3-ANNSM	Annunciator Support Module	.45 (.2)
3-LCD	Liquid Crystal Display Module	.8 (.36)
3-ANNBF	Blank Filler Plate	.5 (.22)
3-24R	24 Red LED Display Module	.35 (.12)
3-24Y	24 Yellow LED Display Module	.35 (.12)
3-24G	24 Green LED Display Module	.35 (.12)
3-12SR	12 switches with 12 Red LED Display/Control Module	.35 (.12)
3-12SY	12 switches with 12 Yellow LED Display/Control Module	.35 (.12)
3-12SG	12 switches with 12 Green LED Display/Control Module	.35 (.12)
3-12RY	12 Red LED and 12 Yellow LED Display Module	.35 (.12)
3-12/S1GY	12 switches with one Green and one Yellow LED per switch Display/Control Module	.35 (.12)
3-12/S1RY	12 switches with one Red and one Yellow LED per switch Display/Control Module	.35 (.12)
3-12/S2Y	12 switches with two Yellow LEDs per switch Display/Control Module	.35 (.12)
3-6/3S1G2Y	6 groups of 3 switches. Each switch with one LED. LEDs provided Green, Yellow, Yellow.	.35 (.12)
3-6/3S1GYR	6 groups of 3 switches. Each switch with one LED. LEDs provided Green, Yellow, Red.	.35 (.12)
3-EVDVR	LED/SWITCH Driver Module, For EST Graphics	.35 (.12)
3-EVDVRA	LED/SWITCH Driver Module Assembly for 3rd Party Graphics	.35 (.12)
3-EVPWR	Power Supply for EST Graphics	.5 (.22)
3-EVPWRA	Power Supply Assembly c/w 19" rail mounting chassis assembly Space for one 3-ANNCPU1 for 3rd Party Graphics	2.5 (1.2)
3-EVDVRX	Plastic mounting extrusion 19" mounting - Space for up to three 3-EVDVRA modules.	.35 (.12)

Enclosure Ordering Information

Catalog Number	Description	Shipping Wt. lb (kg)
RLCM/B	Remote Command module flush mount LCD wallbox	2.5 (1.2)
RLCM/B-S	Remote Command module surface mount LCD wallbox	2.5 (1.2)
3-RLCM/D	Inner & outer doors for RLCM/B(-S)	2 (.9)
6ANN/B	Six position LED/LCD flush mount wallbox	6 (2.7)
6ANN/B-S	Six position LED/LCD surface mount wallbox	6 (2.7)
10ANN/B	Ten position LED/LCD flush mount wallbox	6 (2.7)
10ANN/B-S	Ten position LED/LCD surface mount wallbox	6 (2.7)

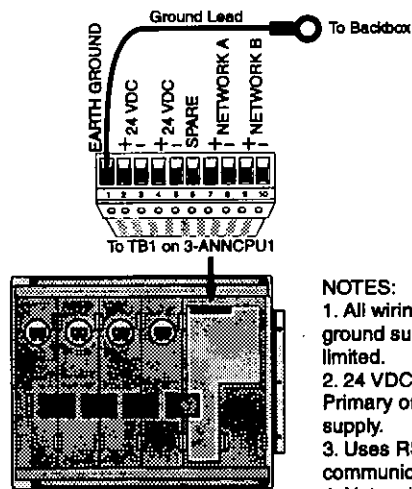
Specification

Catalog Number	3-ANNCPU1	3-ANNSM	3-LCD
Agency Listings	UL, ULc, FM, CE, LPCB		
Mounting Space	2 Spaces	1 Space	Mounts over 3-ANNCPU
Communication Format	RS-485	N/A	N/A
Current @ 24Vdc			
Standby	171mA	10mA	10mA
Alarm	195mA	10mA	50mA
Wiring Termination	Plug in terminal strip	N/A	N/A
Wiring Size	Twisted Pair 18-14 AWG (0.75-1.5 mm ²)	N/A	N/A
Max. Wire Distance	5000ft (1524m) between any 3 panels	N/A	N/A
Relative Humidity	93% non condensing		
Temperature Rating	0°-49°C (32° - 120°F)		
Wiring Styles	Class A or Class B		

Note: For a complete list of EST3 annunciator display and control modules please refer to EST literature sheet part number 85010-0055

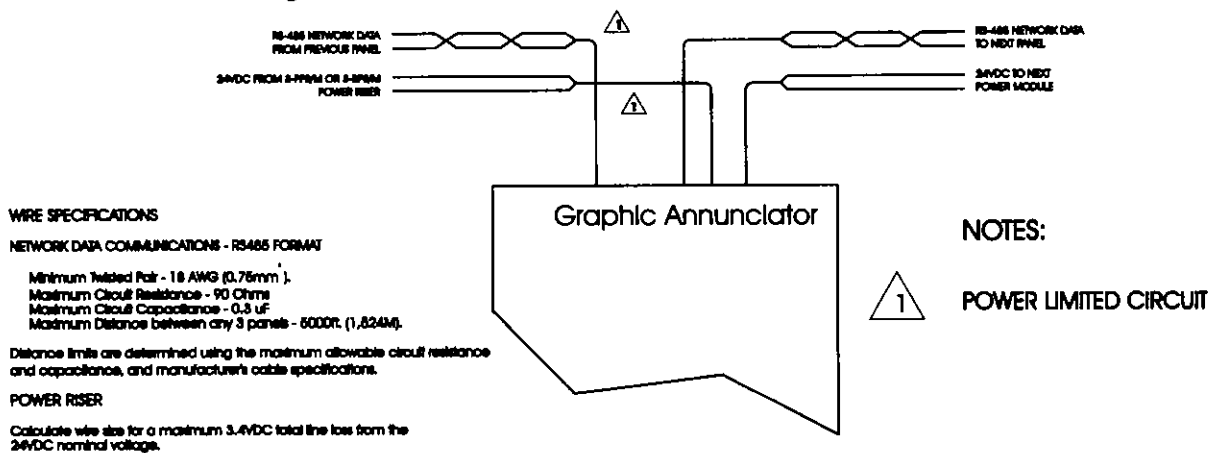
Typical Wiring

Rear view 3-ANNCPU1 Field Wiring
3-6ANN Shown



- NOTES:
1. All wiring except earth ground supervised and power limited.
 2. 24 VDC available from Primary or Booster Power supply.
 3. Uses RS-485 Network communication format
 4. Network wiring Twisted Pair

Graphic Annunciator Field Wiring



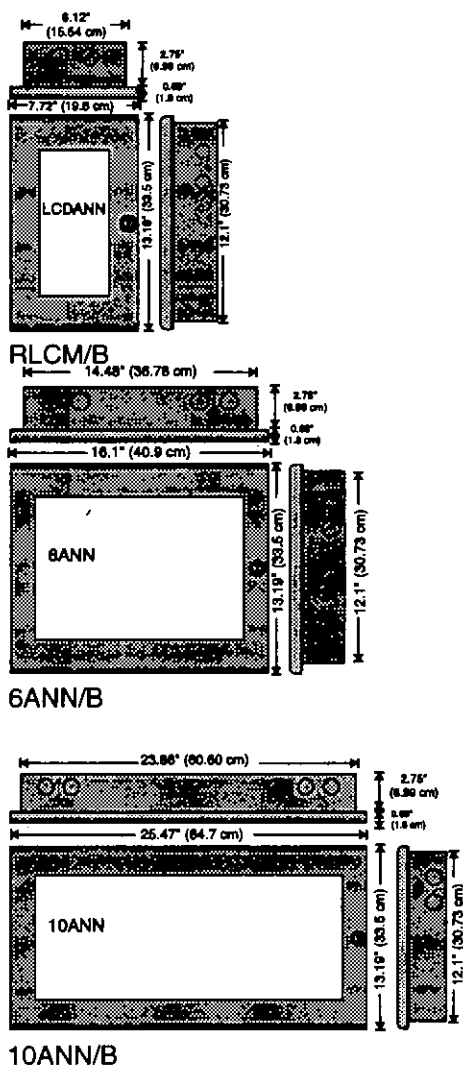
Engineering Specification

The Life Safety system shall incorporate annunciation of Alarm, Supervisory, Trouble and Monitor operations. Annunciation must be through the use of both LED display strips complete with a means to custom label each LED as to its function. Where applicable control switches must be provided. Switches with LEDs must provide positive feed back to the operator of remote equipment status. An LCD display with basic common control LEDs and switches shall be provided. The Common Control Switches and LEDs provided as minimum will be: Reset switch and LED, Alarm Silence switch and LED, Panel Silence switch and LED, Drill switch and LED. It must be possible to add additional common control units required though the use of modular display / control units.

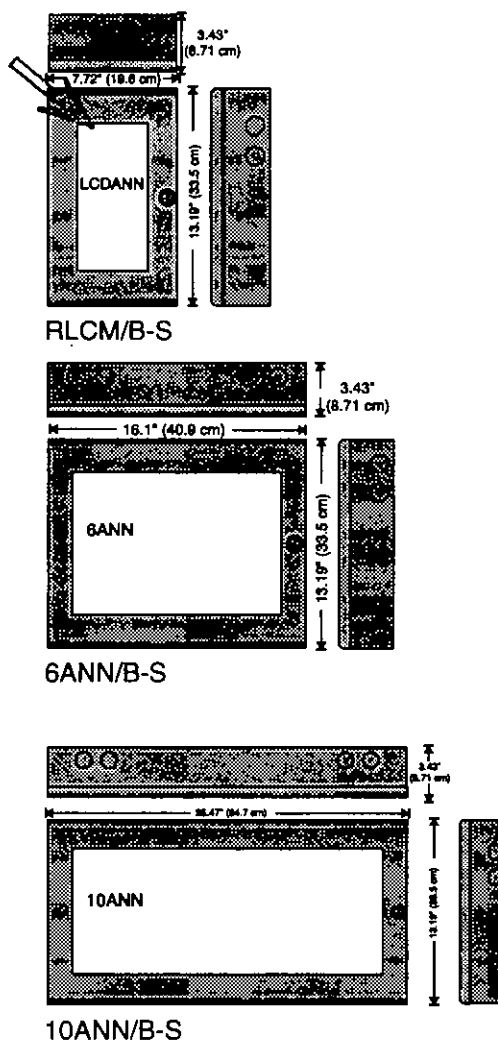
The LCD interface must provide the ability to display custom event messages of up to 42 characters. The LCD must provide the emergency user, hands free viewing of the first and last highest priority event. The last highest priority event must always display and update automatically. System events must automatically be placed in queues. It shall be possible to view specific event types separately. Having to scroll through a mixed list of events types is not acceptable. The total number of active events by type must be displayed. It must be possible to customize the designations of all user interface LEDs and Switches for local language requirements. It must be possible to route system event messages to specific annunciator locations.

Wallbox Installation and Mounting

Semi-Flush Mounting



Surface Mounting



It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.



EDWARDS SYSTEMS TECHNOLOGY

INTELLIGENT ANALOG DEVICES

**SIGNATURE
SERIES**

Intelligent Heat Detectors

Models SIGA-HFS & SIGA-HRS

Features

- 70 FOOT (21.3 METER) SPACING
- 15°F (9°C)/MIN RATE-OF-RISE/135°F (57°C) FT. AND 135°F (57°C) FIXED TEMPERATURE TYPE
- INTELLIGENT DETECTOR c/w INTEGRAL MICROPROCESSOR
- NON-VOLATILE MEMORY
- AUTOMATIC DEVICE MAPPING
- ELECTRONIC ADDRESSING
- IDENTIFICATION OF DEFECTIVE DETECTORS
- TWIN RED/GREEN STATUS LEDS
- STANDARD, RELAY, and FAULT ISOLATOR MOUNTING BASES
- DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS

Description

EST's Signature Series Model SIGA-HFS and SIGA-HRS Intelligent Heat Detectors gather analog information from their fixed temperature and/or rate-of-rise heat sensing elements and converts it into digital signals. The detector's on-board microprocessor measures and analyzes these signals. It compares the information to historical readings and time patterns to make an alarm decision. Digital filters remove signal patterns that are not typical of fires. Unwanted alarms are nearly eliminated.

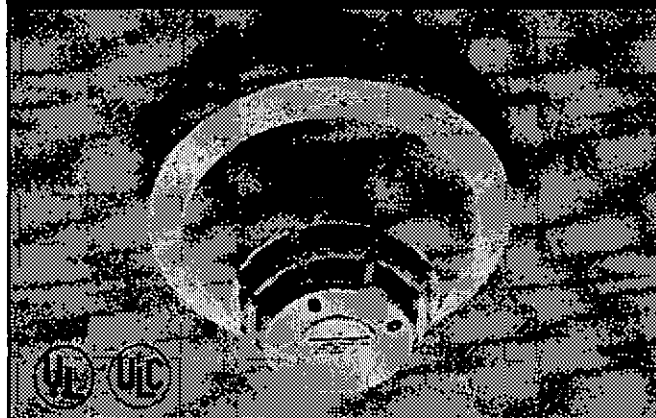
The microprocessor in each detector provides four additional benefits - **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector's non-volatile memory. This information is accessible for review any time at the control panel, PC, or by using the SIGA-PRO Signature Program/Service Tool.

The information stored in the detector's memory includes:

- detector type, serial number, and address.
- date of manufacture, hours of operation, and last maintenance date.
- current detector (ambient) temperature values.
- number of recorded alarms and troubles.

Intelligent Fixed-Temperature Heat Detector, SIGA-HFS
Intelligent Fixed-Temp./R-O-R Heat Detector, SIGA-HRS



- time and date of last alarm.
- analog signal patterns just before the last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. This "mapping" feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally. The history log for the detector at its original location remains relevant and intact.

The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the "mystery" out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the circuit.

EDWARDS SYSTEMS TECHNOLOGY

SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

Stand-alone Operation - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit. Each detector on the circuit continues to collect and analyze information from its surroundings. Both the SIGA-HRS and SIGA-HFS detectors alarm if the ambient temperature increases to 135°F (57°C) or for the SIGA-HRS only, the temperature increases at a rate exceeding 15°F (9°C)/minute. If the detector is mounted to a relay base, the relay operates.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the control panel when it has something new to report. This provides very fast control panel response time and allows a lower baud rate (speed) to be used for communication on the circuit. The lower baud rate offers several advantages including:

- less sensitivity to circuit wire characteristics.
- less sensitivity to noise glitches on the cable.
- less emitted noise from the analog wiring.
- twisted or shielded wiring is not required.

Electronic Addressing - The loop controller electronically addresses each detector, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each detector has its own unique serial number stored in its "on-board memory". The loop controller identifies each device on the circuit and assigns a "soft" address to that device's serial number. If desired, detectors can be addressed using the SIGA-PRO Signature Program/Service Tool.

Installation Spacing - The SIGA-HFS (fixed temperature) and the SIGA-HRS (fixed temperature/rate-of-rise combination) intelligent heat detectors are rated for installation at up to 70 foot (21.3 meter) spacing. These detectors may be installed in rooms with ambient temperatures up to 100°F (38°C).

Status LEDs - Twin LEDs are visible from any direction. A flashing GREEN led shows normal system polling from the loop controller. A flashing RED led means the detector is in alarm state. Both leds on steady shows alarm state - stand-alone mode. Normal green led activity is not distracting to building occupants, but can be quickly spotted by a maintenance technician.

Quality and Reliability - EST detectors are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance. All critical contacts are gold plated.

Compatibility

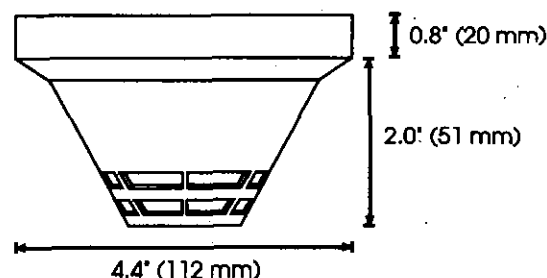
The SIGA-HFS and SIGA-HRS detectors are compatible only with EST's Signature Loop Controller.

Specifications Table

Catalog Number	SIGA-HFS	SIGA-HRS
Heat Sensing Element	Fixed Temperature	Combination Fixed Temperature/Rate-of-Rise
Alarm Point	Alarms at 135°F (57°C) Ambient	Alarms at 135°F (57°C) Ambient or temp. increase exceeding 15°F (9°C) per minute
Detector Spacing	70 feet (21.3 meter) center to center spacing	
Storage and Operating Environment	Operating Temperature: 32°F to 100°F (0°C to 38°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH, Non-Condensing	
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)	
Operating Current	Quiescent: 45µA @ 19 V Alarm: 45µA @ 19 V Emergency Stand-alone Alarm Mode: 18mA Pulse Current: 100 µA (100 msec) During Communication: 9 mA maximum	
Construction & Finish	High Impact Engineering Polymer - White	
Compatible Mounting Bases	SIGA-SB, SIGA-SB4 Standard Base, SIGA-RB, SIGA-RB4 Relay Base, SIGA-IB, SIGA-IB4 Isolator Base	
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm Both LEDs - Glow steady when in alarm (stand-alone) Compatible Remote Red led (model SIGA-LED) Flashes when in alarm	
Compatibility	Use With: SIGNATURE Loop Controller	
Address Requirements	Uses 1 Device Address	
Agency Listings	UL, ULC	

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2" or 4" octagon boxes, and to 4" square electrical boxes 1-1/2" (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers.



Testing & Maintenance

Each detector automatically identifies when it is defective and the user-friendly maintenance program shows the current state of each detector and other pertinent messages. Single detectors may be turned off temporarily, from the control panel. Availability of maintenance features is dependent on the fire alarm system used. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

Application

The table below shows six standard test fires used to rate the sensitivity of smoke and heat detectors. The table indicates that no single sensing element is suited for all test fires.

EST recommends that this detector be installed according to latest recognized edition of national and local fire alarm codes.

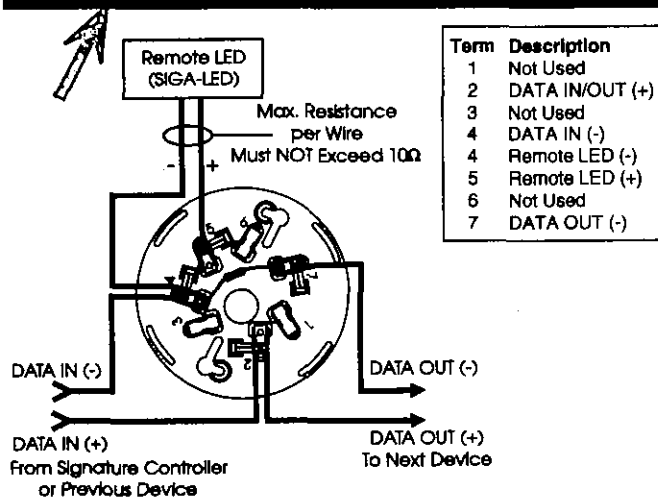
Test Fire	Type of Detector				
	SIGA-IS Ion	SIGA-PS Photo	SIGA-HRS and SIGA-HFS Rate-of- Rise/Fixed Temp.	SIGA-PHS Photo/Heat 3D	SIGA-IPHS Ion/Photo/Heat 4D
Open Wood	optimum	unsuitable	optimum	very suitable	optimum
Wood Pyrolysis	suitable	optimum	unsuitable	optimum	optimum
Smouldering Cotton	very suitable	optimum	unsuitable	optimum	optimum
Poly Urethane Foam	very suitable	very suitable	suitable	very suitable	optimum
n-Heptane	optimum	very suitable	very suitable	optimum	optimum
Liquid Fire without Smoke	unsuitable	unsuitable	optimum	very suitable	very suitable

Typical Wiring

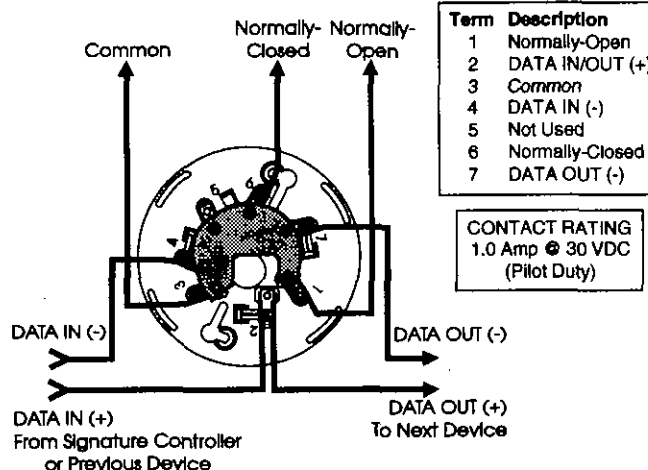
The detector mounting bases will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.5mm²) wire sizes.

Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

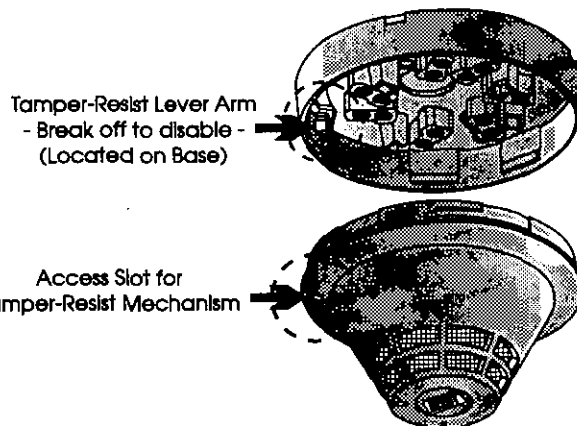
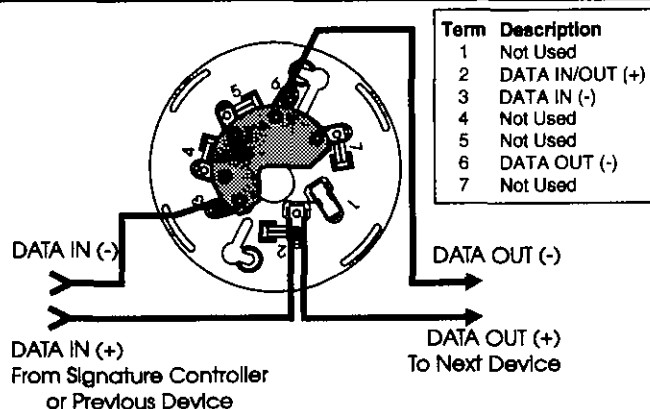
Standard Detector Base, SIGA-SB, SIGA-SB4



Relay Detector Base, SIGA-RB, SIGA-RB4



Isolator Detector Base, SIGA-IB, SIGA-IB4



Accessories

All detector mounting bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½" or 4" octagon boxes, 1½" (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4" sq. electrical boxes in addition to the above boxes. They include the SIGA-TS Trim Skirt which is used to cover the "mounting ears" on the base.

Standard Base SIGA-SB, SIGA-SB4 - This is the basic mounting base for EST Signature Series detectors. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB, SIGA-RB4 - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The relay base does not support the SIGA-LED Remote LED.

The relay is controlled by the detector and operates as follows:

- at system power-up or reset, the relay is de-energized.
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB, SIGA-IB4 - This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates as follows:

- a short on the line causes all isolators to open within 23 msec.
- at 10 msec intervals, beginning on one side of the Class A circuit nearest the loop controller, the isolators close to provide the next isolator down the line with power.



- when the isolator next to the short closes, it reopens within 10 msec.

The process repeats beginning on the other side of the loop controller.

Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS Trim Skirt - Supplied with 4" bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases. Use black model with SIGA-IPHSB.

Warnings & Cautions

This detector will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

This detector will NOT sense fires that start in areas where heat cannot reach the detector. Heat from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

The heat sensor in this device only provides a source of information to supplement the information provided by photoelectric or ionization smoke detectors which may be located nearby. **The heat detector by itself does NOT provide life safety protection.** Under no circumstances should heat detectors be relied on as the sole means of fire protection.

Ordering Information Table

Catalog Number	Description	Carton Dims. Inches (mm)	Ship Wt. lbs (kg)
SIGA-HFS	Intelligent Fixed Temperature Heat Detector - UL/ULC Listed	5 (127)w x 3.6 (91)h x 5 (127)d	.5 (.23)
SIGA-HRS	Intelligent Fixed Temperature/Rate-of-Rise Heat Detector - UL/ULC Listed		
Accessories			
SIGA-SB	Detector Mounting Base	6 (152)w x 1 (25)h x 6 (152)d	.2 (.09)
SIGA-SB4	4" Detector Mounting Base c/w SIGA-TS Trim Skirt		
SIGA-RB	Detector Mounting Base w/Relay		
SIGA-RB4	4" Detector Mounting Base w/Relay c/w SIGA-TS Trim Skirt		
SIGA-IB	Detector Mounting Base w/Fault Isolator		
SIGA-IB4	4" Detector Mounting Base w/ Fault Isolator c/w SIGA-TS Trim Skirt	3.8 (97)w x 2.8 (71)h x 6 (152)d	.2 (.09)
SIGA-LED	Remote Alarm LED	6 (152)w x 1 (25)h x 6 (152)d	.1 (.04)
SIGA-TS	Trim Skirt (supplied with 4" bases)		

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

Intelligent Photoelectric Smoke Detector

Model SIGA-PS

Features

- INTEGRAL MICROPROCESSOR
- NON-VOLATILE MEMORY
- AUTOMATIC DEVICE MAPPING
- ELECTRONIC ADDRESSING
- ENVIRONMENTAL COMPENSATION
- INTELLIGENT DETECTOR
- WIDE 0.67% TO 3.77%/FT. SENSITIVITY RANGE
- PRE-ALARM SENSITIVITY SETTING
- IDENTIFICATION OF DIRTY OR DEFECTIVE DETECTORS
- AUTOMATIC DAY/NIGHT SENSITIVITY ADJUSTMENT
- TWIN RED/GREEN STATUS LEDS
- STANDARD, RELAY, and FAULT ISOLATOR MOUNTING BASES
- DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS

Description

EST's Signature Series Model SIGA-PS Intelligent Photoelectric Smoke Detector gathers analog information from its smoke sensing element and converts it into digital signals. The detector's on-board microprocessor *measures and analyzes* these signals. It compares the information to historical readings and time patterns to make an alarm decision. Digital filters remove signal patterns that are not typical of fires. Unwanted alarms are nearly eliminated.

The microprocessor in each detector provides four additional benefits - **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector's non-volatile memory. This information is accessible for review any time at the control panel, PC, or by using the SIGA-PRO Signature Program/Service Tool.

The information stored in the detector's memory includes:

- detector type, serial number, and address.
- date of manufacture, hours of operation, and last maintenance date.

Intelligent Photoelectric Smoke Detector, SIGA-PS



- current detector sensitivity values and the extent of environmental compensation.
- original detector sensitivity values upon manufacturing.
- number of recorded alarms and troubles.
- time and date of last alarm.
- analog signal patterns just before the last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. The "mapping" feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally. The history log for the detector at its original location remains relevant and intact.

The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the "mystery" out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the circuit.

Stand-alone Operation - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit. Each detector on the circuit continues to collect and analyze information from its surroundings. The detector alarms if the preset smoke obscuration level is reached. If the detector is mounted to a relay base, the relay operates.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the loop controller when it has something new to report. This provides very fast response time and allows a lower baud rate (speed) to be used for communication on the loop. The lower baud rate offers several advantages including:

- less sensitivity to circuit wire characteristics.
- less sensitivity to noise glitches on the cable.
- less emitted noise from the analog wiring.
- twisted or shielded wiring is not required.

Electronic Addressing - The loop controller electronically addresses each detector, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each detector has its own unique serial number stored in its "on-board memory". The loop controller identifies each device on the circuit and assigns a "soft" address to that device's serial number. If desired, detectors can be addressed using the SIGA-PRO Signature Program/Service Tool.

Environmental Compensation - Detection sensitivity is almost independent of its installed environment and its physical condition. Environmental compensation means the sensing element adapts to long-term changes caused by dirt, humidity, aging etc. It even compensates for small amounts of normal ambient smoke. Approximately six times an hour the detector adjusts and updates the sensitivity (% obscuration) baseline for its sensing element. Approximately once every hour this information is written to its permanent memory. The detector's "learned" baseline is not lost, even when the detector is removed for cleaning.

The detector's sensitivity setting selected by the installer floats up or down to remain constant relative to the changing baseline. This is called differential sensing.

Sensitivity Range - The SIGA-PS Photoelectric Detector has a sensitivity range or window of 0.67% to 3.77%. The installer selects the detector's ALARM sensitivity level from five available settings within the range.

Pre-Alarm - Pre-alarm warnings may alert local staff to a possible fire condition allowing them to investigate before entering into a full alarm condition which requires building evacuation. The wide sensitivity range permits the use of early warning pre-alarm values. The pre-alarm value is 75% of the alarm setting.

Automatic Day/Night Sensitivity Selection - Signature Series detectors may be programmed for different sensitivities during day and night periods. This allows the detector to be more sensitive during unoccupied periods when lower ambient background conditions are expected.

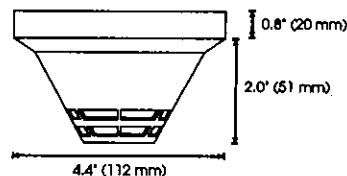
Stability - The SIGA-PS detector's sensitivity remains stable in wind velocities up to 5,000 ft/min (25.3 m/sec). Ambient temperature has very little effect on the detector. The detector may be installed in rooms with ambient temperatures up to 120°F (49°C).

Status LEDs - Twin LEDs are visible from any direction. A flashing GREEN led shows normal system polling from the loop controller. A flashing RED led means the detector is in alarm state. Both leds on steady shows alarm state - stand-alone mode. Normal green led activity is not distracting to building occupants, but can be quickly spotted by a maintenance technician.

Quality and Reliability - EST detectors are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance. All critical contacts are gold plated.

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2" or 4" octagon boxes, and to 4" square electrical boxes 1-1/2" (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers.



Testing & Maintenance

Each detector automatically identifies when it is dirty or defective and causes a "dirty detector" message. The detector's sensitivity measurement can also be transmitted to the loop controller. A sensitivity report can be printed to satisfy NFPA sensitivity measurements which must be conducted at the end of the first year and every two years thereafter.

The user-friendly maintenance program shows the current state of each detector and other pertinent messages. Single detectors may be turned off temporarily from the control panel. Availability of maintenance features is dependent on the fire alarm system used. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

Compatibility

The SIGA-PS detectors are compatible only with EST's Signature Loop Controller.

Application

Although photoelectric detectors have a wide range of fire sensing capabilities they are best suited for detecting slow, smoldering fires. The table below shows six standard test fires used to rate the sensitivity of smoke and heat detectors. The table indicates that no single sensing element is suited for all test fires.

EST recommends that this detector be installed according to latest recognized edition of national and local fire alarm codes.

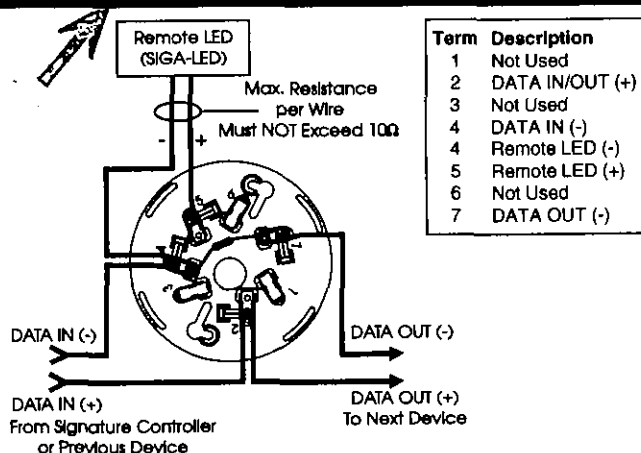
Test Fire	Type of Detector				
	SIGA-IS Ion	SIGA-PS Photo	SIGA-HRS and SIGA-HFS Rate-of-Rise/Fixed Temp.	SIGA-PHS Photo/Heat 3D	SIGA-IPHS Ion/Photo/Heat 4D
Open Wood	optimum	unsuitable	optimum	very suitable	optimum
Wood Pyrolysis	suitable	optimum	unsuitable	optimum	optimum
Smoldering Cotton	very suitable	optimum	unsuitable	optimum	optimum
Poly Urethane Foam	very suitable	very suitable	suitable	very suitable	optimum
n-Heptane	optimum	very suitable	very suitable	optimum	optimum
Liquid Fire without Smoke	unsuitable	unsuitable	optimum	very suitable	very suitable

Typical Wiring

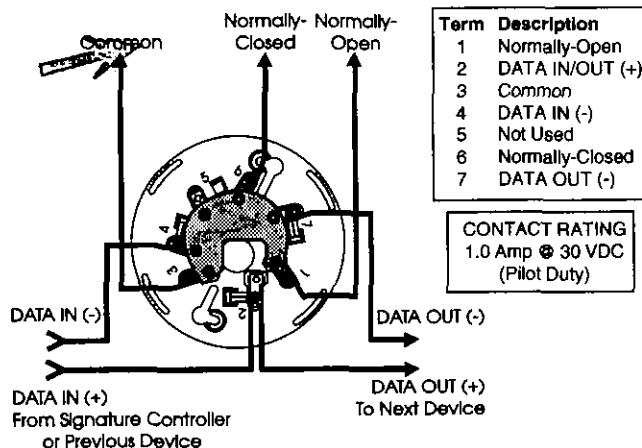
The detector mounting bases accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.5mm²) wire sizes.

Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

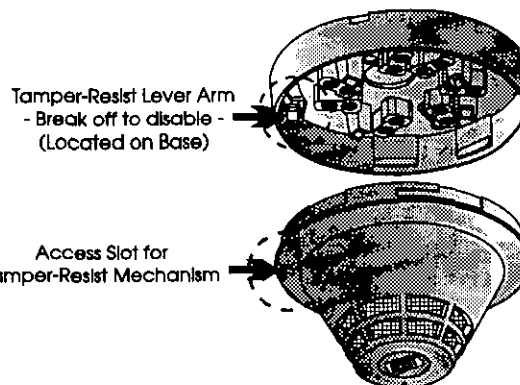
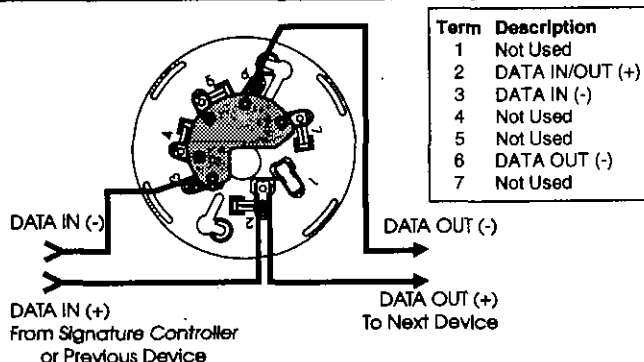
Standard Detector Base, SIGA-SB, SIGA-SB4



Relay Detector Base, SIGA-RB, SIGA-RB4



Isolator Detector Base, SIGA-IB, SIGA-IB4



Warnings & Cautions

This detector will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

This detector will NOT sense fires that start in areas where smoke cannot reach the detector. Smoke from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

Accessories

All detector mounting bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½" or 4" octagon boxes, 1½" (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4" sq. electrical boxes in addition to the above boxes. They include the SIGA-TS Trim Skirt which is used to cover the "mounting ears" on the base.

Standard Base SIGA-SB, SIGA-SB4 - This is the basic mounting base for EST Signature Series detectors. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB, SIGA-RB4 - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The relay base does not support the SIGA-LED Remote LED.

The relay is controlled by the detector and operates as follows:

- at system power-up or reset, the relay is de-energized.
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB, SIGA-IB4 - This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates as follows:

- a short on the line causes all isolators to open within 23 msec.
- at 10 msec intervals, beginning on one side of the Class A circuit nearest the loop controller, the isolators close to provide the next isolator down the line with power.
- when the isolator next to the short closes, it reopens within 10 msec.

The process repeats beginning on the other side of the loop controller.



Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS Trim Skirt - Supplied with 4" bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases. Use black model with SIGA-IPHSB.

Specifications

Catalog Number	SIGA-PS
Sensing Element	Photoelectric - Light Scattering Principle
Storage and Operating Environment	Air Velocity Range: 0 to 5,000 ft/min (0 to 25.39 m/s) Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH, Non-Condensing
Sensitivity Range	ULI/ULC - 0.67% to 3.77% obscuration/foot
User Selected Alarm Sensitivity Settings	Most Sensitive: 1.0%/ft. More Sensitive: 2.0%/ft. Normal: 2.5%/ft. Less Sensitive: 3.0%/ft. Least Sensitive: 3.5%/ft.
Pre-alarm Sensitivity	75% of Alarm Sensitivity Setting
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)
Operating Current	Quiescent: 45µA @ 19 V Alarm: 45µA @ 19 V Emergency Stand-alone Alarm Mode: 18mA Pulse Current: 100 µA (100 msec) During Communication: 9 mA maximum
Construction & Finish	High Impact Engineering Polymer - White
Compatible Mounting Bases	SIGA-SB, SIGA-SB4 Standard Base, SIGA-RB, SIGA-RB4 Relay Base, SIGA-IB, SIGA-IB4 Isolator Base
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm Both LEDs - Glow steady when in alarm (stand-alone) Compatible Remote Red LED (model SIGA-LED) Flashes when in alarm
Compatibility	Use With: SIGNATURE Loop Controller
Address Requirements	Uses 1 Device Address
Agency Listings	UL, ULC

Ordering Information

Catalog Number	Description	Carton Dims. Inches (mm)	Ship Wt. lbs (kg)
SIGA-PS	Intelligent Photoelectric Detector - UL/ULC Listed	5 (127)w x 3.6 (91)h x 5 (127)d	.5 (.23)
Accessories			
SIGA-SB	Detector Mounting Base - Standard	6 (152)w x 1 (25)h x 6 (152)d	.2 (.09)
SIGA-SB4	4" Detector Mounting base c/w SIGA-TS Trim Skirt		
SIGA-RB	Detector Mounting Base w/Relay		
SIGA-RB4	4" Detector Mounting Base w/Relay c/w SIGA-TS Trim Skirt		
SIGA-IB	Detector Mounting Base w/Fault Isolator		
SIGA-IB4	4" Detector Mounting Base w/ Fault Isolator c/w SIGA-TS Trim Skirt	3.8 (97)w x 2.8 (71)h x 6 (152)d	.2 (.09)
SIGA-LED	Remote Alarm LED		
SIGA-TS	Trim Skirt (supplied with 4" bases)	6 (152)w x 1 (25)h x 6 (152)d	.1 (.04)

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.



Intelligent Duct Smoke Detector Housing

- Model SIGA-DH

Features

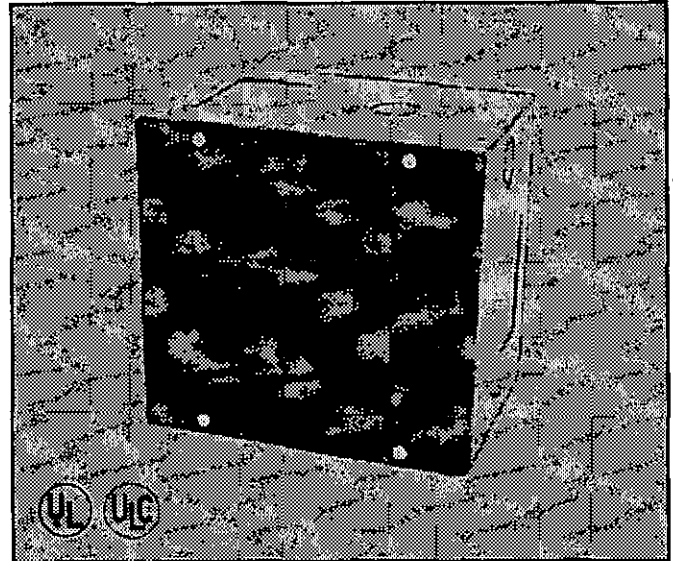
- **SUITABLE FOR HIGH AIR VELOCITY DUCT APPLICATIONS**
Up to 4000 ft/min. (20.3 m/sec.) with Photoelectric Detector.
- **STANDARD SIGNATURE SERIES DETECTORS**
Designed for use with standard 4D, 3D, and Photoelectric Signature Series smoke detectors. Does not require "special" duct smoke heads.
- **STANDARD, RELAY OR ISOLATOR DETECTOR BASE**
Detector "plugs-in" to base then easily installs into housing.
- **INSTALL IN DUCTS UP TO 10 FT. (3.05 M) WIDE**
- **REMOTE LED AND TEST STATION ACCESSORIES**
- **DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS**

Description

The **SIGA-DH Duct Smoke Detector Housing** is specially engineered to exploit all the capabilities of Signature Series intelligent photoelectric and multisensor smoke detectors. EST Signature Series detectors gather analog information from each of their one or more sensing elements and converts it into digital signals. The detector's onboard microprocessor measures and analyzes these signals. It compares them to historical readings, time patterns and known characteristics to make an alarm decision. Digital filters and complex Algorithms are applied for optimum detector accuracy. Unwanted alarms are nearly eliminated.

Each duct housing is packaged with detailed installation instructions, gaskets and a self-adhesive drilling template for locating and mounting the detector. The large access door is completely removable to allow fast detector installation and field wiring connections. The 16 gauge steel housing is finished in red baked enamel for easy identification. Five 1-gang knockouts on the housing provide a convenient location for mounting intelligent Signature Series modules.

The **SIGA-DH Duct Housing** comes with a 6 inch (150 mm) exhaust tube. Air sampling tubes are available in lengths from 8 inches (200 mm) to 10 feet (3048 mm) and must be ordered separately. Compatible smoke detectors, mounting



bases, and accessories are listed in the Ordering Information. Refer to individual device catalog literature pages for more detail.

Intelligent Duct Smoke Detectors

Compatible Signature Series detectors include the **SIGA-IPHS 4D Multisensor Smoke Detector with THREE INTEGRATED SENSING TECHNOLOGIES**. It combines Ionization, Photoelectric and Heat sensors and processes and analyzes information from each sensor separately using dynamic filters. Also compatible are the **SIGA-PHS 3D Multisensor Detector** and the **SIGA-PS Photoelectric Detector**. The installer selects the alarm sensitivity level from the detector's wide **0.67 to 3.7% sensitivity range window**. Five settings are available from within the range.

Environmental Compensation

Detection sensitivity for Signature Series detectors is almost independent of their installed environment and their physical condition. Each sensing element adapts to long-term changes caused by dirt, humidity, aging etc. Every 8.6 minutes the detector adjusts and updates the sensitivity (% obscuration) ambient baseline for its smoke sensing element. Every 68 minutes this information is written to its permanent memory.

The detector's alarm sensitivity setting selected by the installer floats up or down to remain constant relative to the changing baseline. This is called environmental compensation.

Identification of Dirty or Defective Detectors

Each detector automatically identifies when it is polluted and causes a "dirty detector" message. The detector's sensitivity measurement can also be transmitted to the loop controller. This measurement satisfies NFPA sensitivity measurement

EDWARDS SYSTEMS TECHNOLOGY
SARASOTA, FLA. 941-738-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-378-2430 Fax: 519-372-1581
INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

requirements. The detector's internal components are self-supervised. Up to 32 trouble codes are generated and displayed for diagnostics.

Non-Volatile Memory

Signature Series smoke detectors permanently store a serial number, type of device and job number. Automatic updates of historic information including hours of operation, last maintenance date, number of alarms and troubles, time and date of last alarm are available. In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Electronic Addressing & Device Mapping

The Signature loop controller automatically addresses each detector to save valuable time during system commissioning. Setting complicated switches or dials on each intelligent device is not required. If desired, the detectors can be custom addressed using the **Signature Series Data Entry Program**.

The wired circuits between each device can be examined using the data entry program along with the self-mapping feature built into all Signature Series devices. With its graphic support, layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the 'mystery' out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping also allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the data loop.

Stand-Alone Operation

On-board intelligence permits Signature devices to operate in stand-alone mode. Should loop controller CPU communications fail for more than 4 seconds, all devices on that circuit (loop) go into stand-alone mode. The loop acts like a conventional alarm receiving circuit. Each detector on the loop continues to collect and analyze information from its surroundings. The detector alarms if the preset smoke obscuration level is reached and causes a loop alarm. If the detector is mounted to a relay base, the relay operates.

Quality and Reliability

EST detectors are designed and manufactured in North America to ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for corrosion resistance and all critical contacts are gold plated.

Signature Duct Detector Accessories Duct Detector Air Sampling Tubes

One air sampling inlet tube must be ordered for each duct smoke detector housing. Refer to Ordering Information for available lengths.

Detector Mounting Bases

One detector mounting base must be ordered for each duct smoke housing. Removing a detector from its base (except isolator base) does not affect other devices operating on the same data loop. Available bases are:

Standard Base SIGA-SB - This is the basic mounting base. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp @ 30 Vdc (pilot duty). The relay's position is supervised to avoid accidentally jarring it out of position. The Relay Base does not support the SIGA-LED Remote LED. Relay bases are not affected or activated by the SIGA-DTS Duct Test Station.

The relay is controlled by the detector and operates as follows:

- at system power-up or reset, the relay is de-energized
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB - This base includes a built-in line fault isolator. A detector must be installed for it to operate. The integral isolator relay is controlled by the detector or the loop controller. A maximum of 96 isolator bases can be installed on one loop. The Isolator Base does not support the SIGA-LED Remote LED.

Alarm LED Indicator

The SIGA-LED Alarm Indicator is suitable for use with the SIGA-SB detector base only. A maximum of 1 can be operated for each detector. It features a red LED on a 1-gang plastic plate and can be installed remote or directly on the SIGA-DH Duct Housing.

Duct Test Station

The SIGA-DTS Duct Test Station uses a key switch along with an integral intelligent input module mounted on a 2-gang plastic plate. It is supplied with 2 keys and features a red alarm led.

When the key is turned to the "TEST" position, the led lights and the integral module remotely inputs a duct detector test alarm. The actions and sequences programmed at the control panel to activate dampers and other smoke control measures, are easily tested. Detector relay bases are not affected or activated. Resetting the control panel clears the test and returns the system to normal. The key cannot be removed when in the "TEST" position.

The Duct Test Station mounts to standard 2" deep North American 2-gang and 4" square electric boxes and European 100 mm square boxes.

Air Velocity Test Kit

The 6263-SG Air Velocity Test Kit is specially designed to interface to the SIGA-DH Duct Housing. It is used to test or confirm the air velocity in HVAC ducts where the duct housing is installed.

Specifications

SIGA-DH Duct Housing (NOTE: The SIGA-DH Duct Housing is NOT WEATHERPROOF or DUST TIGHT.)

Dimensions	7-3/8" (188mm)W x 7" (178mm)H x 5" (127mm)D		
Material and Finish	16 Gauge Cold Rolled Steel, Red - Baked Enamel		
Conduit Knockouts	Combination 1/2" & 3/4"		
Agency Approvals	UL, ULC, MEA, CSFM		
Compatible Smoke Detectors	SIGA-PS	SIGA-PHS	SIGA-IPHS
Air Velocity Range	300 to 4000 ft/min. (1.5 to 20.3 m/sec)		300 to 1000 ft/min. (1.5 to 5.0 m/sec)
Smoke Sensing Element(s)	Photoelectric - Light Scattering Principle	Photoelectric - Light Scattering Principle Heat - 135°F (57°C) Fixed Temperature	Ionization - Unipolar Photoelectric - Light Scattering Principle Heat - Alarms at 65°F (35°C) change in ambient temp.
Operating Environment	Temperature: 32 to 120°F (0 to 49°C) Humidity: 0 to 93% RH, non-condensing	Temperature: 32 to 100°F (0 to 38°C) Humidity: 0 to 93% RH, non-condensing	
Storage Environment	Temperature: -4 to 140°F (-20 to 60°C); Humidity: 0 to 93% RH, non-condensing		
ULI/ULC Sensitivity Range	0.67% to 3.77% obscuration/foot (305mm)		0.67% to 3.70% obscuration/foot (305mm)
User Selected Alarm Sensitivity Settings	Least Sensitive: 3.5%; Less Sensitive: 3.0%; Normal: 2.5%; More Sensitive: 2.0%; Most Sensitive: 1.0%		
Pre-alarm Sensitivity	75% of Alarm Sensitivity Setting		
Electrical and Physical Characteristics	refer to individual detector catalog sheets		
Compatible Mounting Bases	SIGA-SB Standard Base, SIGA-RB Relay Base, SIGA-IB Isolator Base		
Compatible Remote LED	SIGA-LED (led flashes when in alarm)		
Controller Compatibility	SIGNATURE Loop Controller		
Addressing Restrictions	Uses 1 Input Device Address		

SIGA-DTS Duct Test Station

Operating Current	Standby = 250uA; Activated = 400uA
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)
Replacement Key	p/n - P-037449
Storage and Operating Temperature	32 to 120°F (0 to 49°C)
Onboard LED Operation	Red LED - flashes when in alarm or test state
Mounting	North American electric box: 2" deep 2-gang or 4" square ; European electric box: 100 mm square
Construction & Finish	High Impact Engineered Plastic 2-gang front plate - White
Addressing Restrictions	Uses 1 Module Address

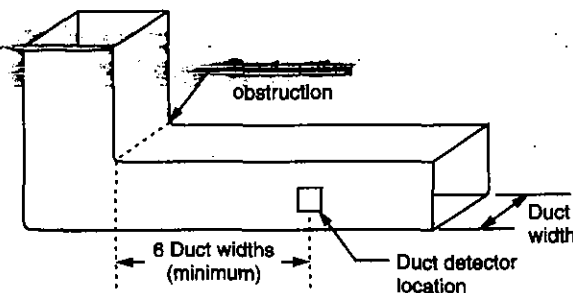
Application Notes

The **SIGA-DH Duct Smoke Detector Housing** requires a clear, flat, accessible area on the duct of at least 7-3/8" (188mm) W x 7" (175mm) H. The duct housing must be installed on ducts at least 8" (200mm) wide. To avoid the effects of stratification, install the detector housing a minimum of six (6) duct widths beyond any bend in the duct. Duct detectors are usually installed on the "supply" duct after the air filters; or in the "return" air stream prior to being diluted by outside air.

Sample tube length must span the entire width of the air duct and the tube can be easily cut to any length. Inlet tubes longer than 3 ft.(900mm) must be supported at both ends.

Duct Detectors continually sample air flow in a HVAC duct

and initiate an alarm condition whenever smoke is detected. An alarm is activated when the quantity (percent obscuration) of combustion products in that air sample exceeds the detector's sensitivity setting.



Air velocity in the duct maintains the air flow that enters the detector housing through perforations in the air sampling inlet tube and discharges through the outlet exhaust tube. The detector housing must be installed with its INLET air sampling tube upstream of the EXHAUST tube. Before installing the duct detector housing, test the duct air velocity to verify it is within the limits of the Signature Smoke Detector that is being installed. Also verify that duct air relative humidity is within 0 and 93 percent.

WARNING: Duct detectors have specific limitations. Duct Detectors ARE NOT a substitute for an open area smoke detector. Duct Detectors ARE NOT a substitute for early warning detection. Duct Detectors ARE NOT a replacement for a building's regular fire detection system. Smoke Detectors ARE NOT designed to detect toxic gases which can build up to hazardous levels in some fires. These devices WILL NOT operate without electrical power. As fires frequently cause power interruptions, EST suggests you discuss further safeguards with your local fire protection specialist.

Typical Wiring

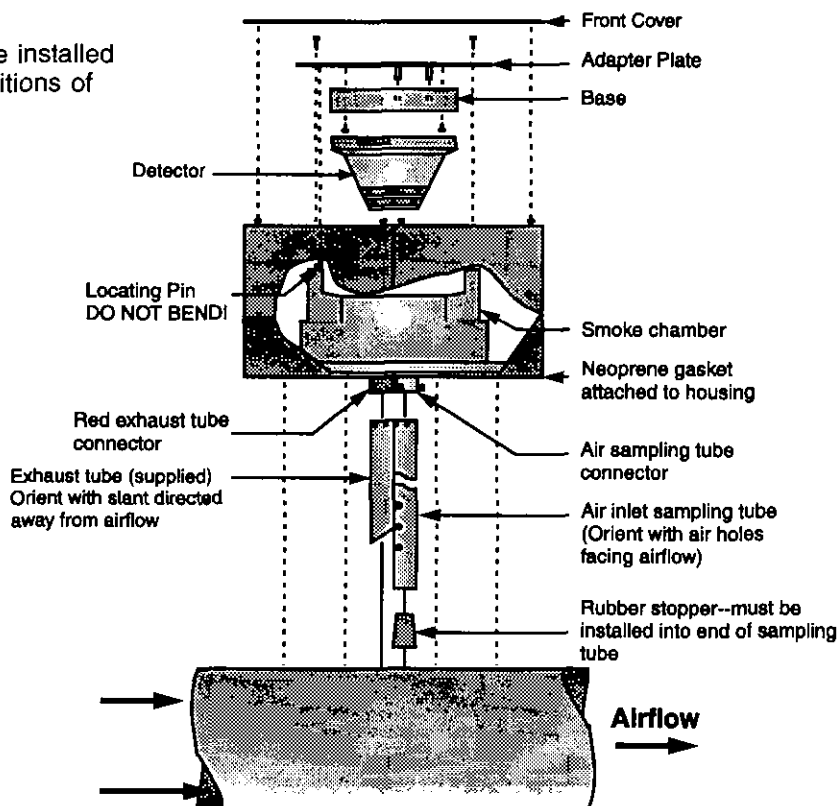
The detector mounting bases and test station will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.50mm²) wire sizes. Note: #14 AWG (1.5 mm²) is not recommended due to difficulty of installation. See Loop Controller and Detector catalog sheets for detailed wiring requirement specifications.

Ordering Information

Catalog Number	Description	Ship Wt - lb. (kg)
SIGA-DH	Duct Detector Housing	6.5 (.3)
6261-001	8" (200mm) Air Sampling Inlet Tube	.25 (.1)
6261-002	24" (600mm) Air Sampling Inlet Tube	.5 (.2)
6261-003	42" (1060mm) Air Sampling Inlet Tube	1.6 (.8)
6261-006	78" (1980mm) Air Sampling Inlet Tube	2.2 (1)
6261-010	120" (3048mm) Air Sampling Inlet Tube	4.4 (2)
SIGA-IPHS	4D Multisensor Detector	.5 (.23)
SIGA-PHS	3D Multisensor Detector	.5 (.23)
SIGA-PS	Photoelectric Detector	.5 (.23)
SIGA-SB	Standard Base	.2 (.09)
SIGA-RB	Relay Base	.2 (.09)
SIGA-IB	Isolator Base	.2 (.09)
SIGA-LED	Alarm LED Indicator	.2 (.09)
SIGA-DTS	Duct Test Station	.4 (.18)
6263-SG	Duct Air Velocity Test Kit	

Installation and Mounting

EST recommends Duct Detectors always be installed in accordance with the latest recognized editions of local and national fire alarm codes.



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Input Modules

Models SIGA-CT1, SIGA-CT2 & SIGA-MCT2

Features

■ MULTIPLE APPLICATIONS

Including Alarm, Alarm with delayed latching (retard) for waterflow applications, Supervisory, and Monitor. The installer selects one of four (4) "personality codes" to be downloaded to the module through the loop controller.

■ PLUG-IN (UIO) OR STANDARD 1-GANG MOUNT

UIO versions allow quick installation where multiple modules are required. The 1-gang mount version is ideal for remote locations that require a single module.

■ AUTOMATIC DEVICE MAPPING

Signature modules transmit information to the loop controller regarding their circuit locations with respect to other Signature devices on the wire loop.

■ ELECTRONIC ADDRESSING

Programmable addresses are downloaded from the loop controller, a PC, or the SIGA-PRO Signature Program/Service Tool. There are no switches or dials to set.

■ INTELLIGENT DEVICE WITH MICROPROCESSOR

All decisions are made at the module to allow lower communication speed with substantially improved control panel response time and less sensitivity to line noise and loop wiring properties; twisted or shielded wire is not required.

■ NON-VOLATILE MEMORY

Permanently stores serial number, type of device, and job number. Automatically updates historic information including hours of operation, last maintenance date, number of alarms and troubles, and time and date of last alarm.

■ STAND-ALONE OPERATION

The module makes decisions and inputs an alarm from initiating devices connected to it even if the loop controller's polling interrogation stops. (Function availability dependent upon control panel.)

■ DIAGNOSTIC LEDs

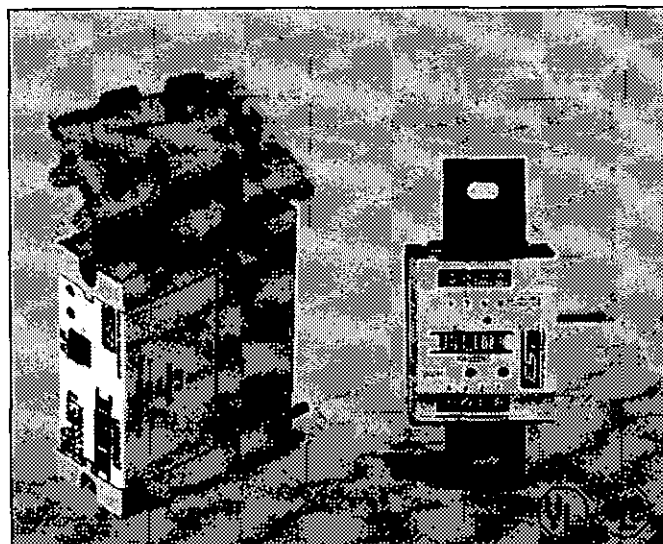
Flashing GREEN shows normal polling; flashing RED shows alarm/active state.

■ HIGH AMBIENT TEMPERATURE OPERATION

Install in ambient temperatures up to 120°F (49°C).

■ DESIGNED TO ISO 9001 STANDARDS

All Signature products are manufactured to strict international quality standards to ensure highest reliability.



Description

The SIGA-CT1 Single Input Module and SIGA-CT2/SIGA-MCT2 Dual Input Modules are intelligent analog addressable devices used to connect one or two Class B normally-open Alarm, Supervisory, or Monitor type dry contact Initiating Device Circuits (IDC).

The actual function of these modules is determined by the "personality code" selected by the installer. This code is downloaded to the module from the Signature loop controller during system configuration.

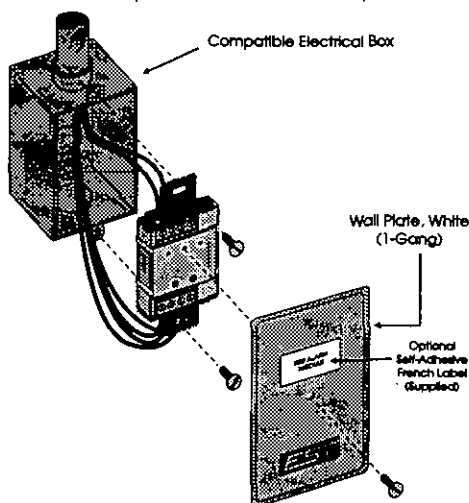
The input modules gather analog information from the initiating devices connected to them and convert it into digital signals. The module's on-board microprocessor analyzes the signal and decides whether or not to input an alarm.

The SIGA-CT1 and SIGA-CT2 mount to standard North American 1-gang electrical boxes, making them ideal for locations where only one module is required. Separate I/O and data loop connections are made to each module.

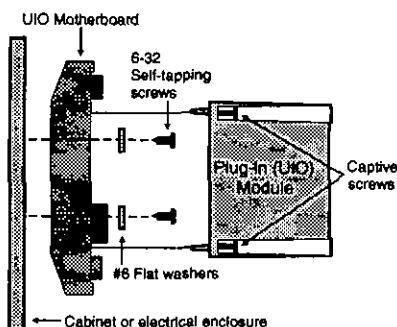
The SIGA-MCT2 is part of the UIO family of plug-in Signature Series modules. It functions identically to the SIGA-CT2, but takes advantage of the modular flexibility and easy installation that characterizes all UIO modules. Two- and six-module UIO motherboards are available. All wiring connections are made to terminal blocks on the motherboard. UIO assemblies may be mounted in EST enclosures.

Installation

SIGA-CT1 and SIGA-CT2: modules mount to North American 2½" (64 mm) deep 1-gang boxes and 1½" (38 mm) deep 4" square boxes with 1-gang covers. The terminals are suited for #14 to #18 AWG (1.5 mm² to 0.75 mm²) wire size.



SIGA-MCT2: mount the UIO motherboard inside a suitable EST enclosure with screws and washers provided. Plug the SIGA-MCT2 into any available position on the motherboard and secure the module to the motherboard with the captive screws. Wiring connections are made to the terminals on the motherboard (see wiring diagram). UIO motherboard terminals are suited for #12 to #18 AWG (2.5 mm² to 0.75 mm²) wire size.



Electronic Addressing - The loop controller electronically addresses each module, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each module has its own unique serial number stored in its on-board memory. The loop controller identifies each device on the loop and assigns a "soft" address to each serial number. If desired, the modules can be addressed using the SIGA-PRO Signature Program/Service Tool.

EST recommends that this module be installed according to latest recognized edition of national and local fire alarm codes.

Compatibility

The Signature Series modules are compatible only with EST's Signature Loop Controller.

Application

The duty performed by the SIGA-CT1 and SIGA-CT2/MCT2 is determined by their sub-type code or "Personality Code". The code is selected by the installer depending upon the desired application and is downloaded from the loop controller.

One (1) personality code can be assigned to the SIGA-CT1. Two (2) personality codes can be assigned to the SIGA-CT2/MCT2. Codes 1, 2, 3 and 4 can be mixed on SIGA-CT2/MCT2 modules only. For example, personality code 1 can be assigned to the first address (circuit A) and code 4 can be assigned to the second address (circuit B).

NORMALLY-OPEN ALARM - LATCHING (Personality Code 1) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact initiating devices such as **Pull Stations, Heat Detectors**, etc. An ALARM signal is sent to the loop controller when the input contact is closed. The alarm condition is latched at the module.

NORMALLY-OPEN ALARM - DELAYED LATCHING (Personality Code 2) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally-open dry contact initiating devices such as **Waterflow Alarm Switches**. An ALARM signal is sent to the loop controller when the input contact is closed for approximately 16 seconds. The alarm condition is latched at the module.

NORMALLY-OPEN ACTIVE - NON-LATCHING (Personality Code 3) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally-open dry contact monitoring input such as from **Fans, Dampers, Doors**, etc. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is not latched at the module.

NORMALLY-OPEN ACTIVE - LATCHING (Personality Code 4) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact monitoring input such as from **Supervisory and Tamper Switches**. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is latched at the module.

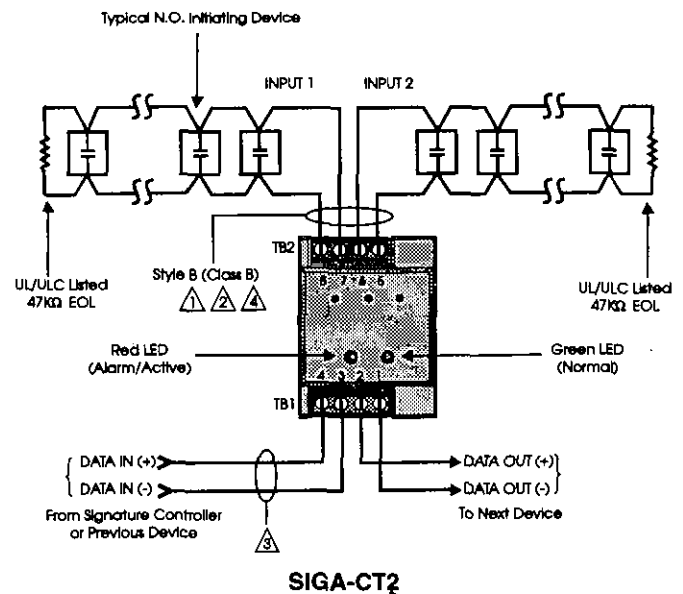
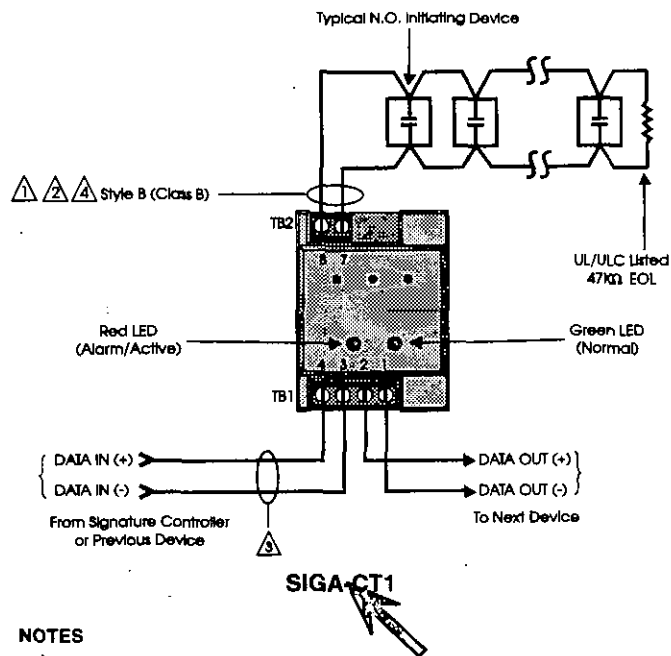
Ordering Information

Catalog Number	Description	Ship Wt. lbs (kg)
SIGA-CT1	Single Input Module - UL/ULC Listed	0.4 (0.15)
SIGA-CT2	Dual Input Module - UL/ULC Listed	0.4 (0.15)
SIGA-MCT2	Dual Input Plug-in (UIO) Module - UL Listed	0.1 (0.05)
Related Equipment		
27193-11	Surface Mount Box - Red, 1-gang	1.0 (0.6)
27193-16	Surface Mount Box - White, 1-gang	1.0 (0.6)
SIGA-UIO2R	Universal Input-Output Module Board w/Riser Inputs - 2 Module Positions	0.32 (0.15)
SIGA-UIO6R	Universal Input-Output Module Board w/Riser Inputs - 6 Module Positions	0.62 (0.28)
SIGA-UIO6	Universal Input-Output Module Board - 6 Module Positions	0.56 (0.25)

Typical Wiring

Modules will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.50mm²) wire sizes. UIO versions will also accept #12 AWG (2.5mm²). Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

Initiating (Slave) Device Circuit Wire Specifications		
Maximum Allowable Wire Resistance	50 ohms (25 ohms per wire) per Circuit	
Maximum Allowable Wire Capacitance	0.1µF per Circuit	
For Design Reference:	Wire Size	Maximum Distance to EOLR
	#18 AWG (0.75 mm ²)	3,930 ft (1,198 m)
	#16 AWG (1.00 mm ²)	6,225 ft (1,897 m)
	#14 AWG (1.50 mm ²)	9,900 ft (3,018 m)

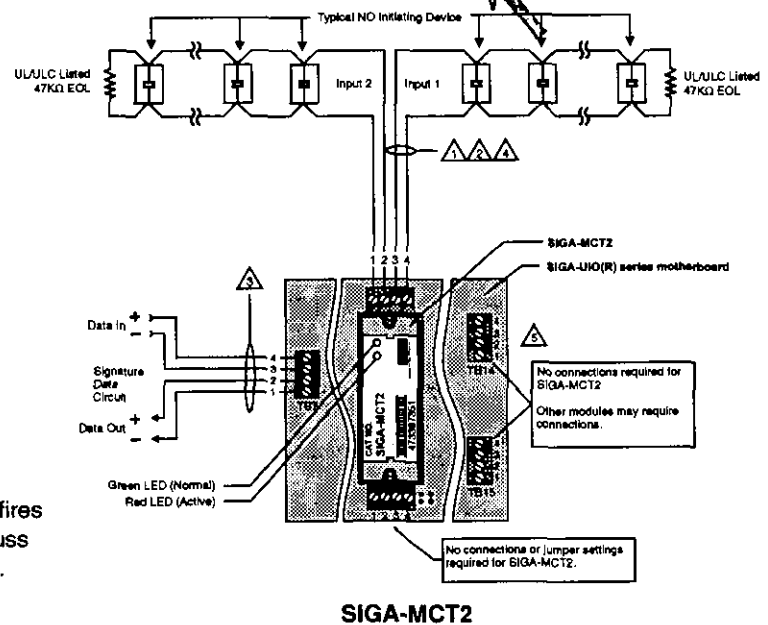


NOTES

- 1 Maximum 25 Ohm resistance per wire.
- 2 Maximum #12 AWG (2.5 mm²) wire; Minimum #18 AWG (0.75 mm²).
- Standard 1-gang version: Maximum #14 AWG (1.5mm²) wire. Min. #18 (0.75mm²).
- 3 Refer to Signature controller installation sheet for wiring specifications.
- 4 Maximum 10 Vdc @ 350 mA
- 5 The SIGA-UIO6R and the SIGA-UIO2R do not come with TB14.
- 6 All wiring is supervised and power-limited.
- 7 These modules will not support 2-wire smoke detectors.

Warnings & Cautions

This module will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your local fire protection specialist.



Specifications

Catalog Number	SIGA-0T1	SIGA-0T2	SIGA-MCT2
Description	Single Input Module		Dual Input Module
Type Code	48 (factory set) 4 sub-types (personality codes) are available		49 (factory set) 4 sub-types (personality codes) are available
Address Requirements	Uses 1 Module Address		Uses 2 Module Addresses
Operating Current	Standby = 250µA; Activated = 400µA		Standby = 396µA; Activated = 680µA
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)		
Construction	High Impact Engineering Polymer		
Mounting	North American 2½" (64 mm) deep 1-gang boxes and 1½" (38 mm) deep 4" square boxes with 1-gang covers		UIO2R/6R/6 Motherboard
Storage and Operating Environment	Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH		
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm/active Both LEDs - Glow steady when in alarm (stand-alone)		
Compatibility	Use with Signature Loop Controller		
Agency Listings	UL, ULC (See Ordering Table)		

Description (Signature Overview)

The Signature Series intelligent analog-addressable system from Edwards Systems Technology is an entire family of multi-sensor detectors and mounting bases, multiple-function input and output modules, network and non-network control panels, and user-friendly maintenance and service tools. Analog information from equipment connected to Signature devices is gathered and converted into digital signals. An onboard microprocessor in each Signature device measures and analyzes the signal and decides whether or not to input an alarm. The microprocessor in each Signature device provides four additional benefits – **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log – Each Signature Series device constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in its non-volatile memory. This information is accessible for review any time at the control panel, PC, or using the SIGA-PRO Signature Program/Service Tool. The information stored in device memory includes:

- Device serial number, address, and type.
- Date of manufacture, hours of operation, and last maintenance date.
- Number of recorded alarms and troubles.
- Time and date of last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

Automatic Device Mapping – The Signature Data Controller (SDC) learns where each device's serial number address is installed relative to other devices on the circuit. The SDC keeps a "map" of all Signature Series devices connected to it. The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "As-Built" drawing information showing branch wiring (T-taps), device types and their address are stored on disk for printing hard copy. This takes the 'mystery' out of the installation. The preparation of "As-Built" drawings is fast and efficient.

Device mapping allows the Signature Data Controller to discover:

- Unexpected additional device addresses.
- Missing device addresses.
- Changes to the wiring in the circuit.

Most Signature modules use a 'personality code' selected by the installer to determine their actual function. Personality codes are

downloaded from the SDC during system configuration and are indicated during device mapping.

Standalone Operation – A decentralized alarm decision by the device is guaranteed. Onboard intelligence permits the device to operate in standalone (degrade) mode. If Signature loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into standalone mode. The circuit acts like a conventional alarm receiving circuit. Each Signature device on the circuit continues to collect and analyze information from its slave devices. When connected to a panel utilizing standalone operation, modules with their 'personality' set as alarm devices (IDC) will alarm should their slave alarm-initiating device activate.

Fast Stable Communication – Built-in intelligence means less information needs to be sent between the device and the Signature Data Controller (SDC). Other than regular supervisory polling response, Signature devices only need to communicate with the SDC when they have something new to report. This provides very fast control panel response and allows a lower baud rate (speed) to be used for communication on the circuit. The lower baud rate offers several advantages including:

- Less sensitivity to circuit wire characteristics.
- Less sensitivity to noise glitches on the cable.
- Less emitted noise from the analog wiring.
- Twisted or shielded wiring is not required.

Diagnostic LEDs – Twin LEDs on most Signature devices provide visual indication of normal and alarm-active conditions. A flashing green LED shows normal system polling. A flashing red LED means the module is in alarm-active state. Both LEDs on steady indicates alarm-active state – standalone mode.

Testing & Maintenance – Automatic self-diagnosis identifies when a Signature device is defective and causes a trouble message. The user-friendly maintenance program shows the current state of each device and other pertinent information. Single devices may be turned off temporarily, from the control panel. **Scheduled maintenance (Regular or Selected) for proper system operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.**

Quality and Reliability – EST Signature devices are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance.

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.



**Self-Synchronizing Design
Temporal Output**

NEW

**UL 1971
Listed**

757 Series Temporal Horn

Integrity Family

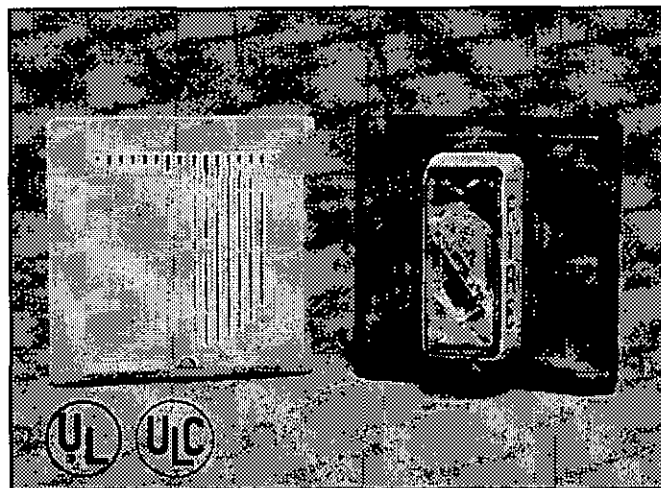
Features

- **SYNCHRONIZED TEMPORAL AUDIBLE OUTPUT**
Select for self-synchronizing temporal signal or steady tone. External "synch-control" module is not required.
- **SYNCHRONIZED STROBE FLASH**
Self-synchronizing flash from multiple strobes improves the safety for photosensitive people. External "synch-control" module is not required.
- **MOUNTS TO 2-GANG BOX**
Flush mount to standard North American 2-gang or 4 inch square electric box.
- **ADJUSTABLE HIGH OR LOW dBA OUTPUT**
Select for 98 dBA or 94 dBA sound output.
- **TRUE HORN TONE**
Low pitch "growling" sound demands attention.
- **ADA/UL1971/ULC LISTED STROBE**
All strobe models provide "Equivalent Facilitation" allowed under ADA Accessibility Guidelines, satisfy NFPA codes and are UL1971 listed as Signaling Devices for the Hearing Impaired.
- **EASY INSTALLATION**
A universal mounting plate allows Integrity to be wired then left hanging "free" to allow easy V.I. and testing before it is fastened to electrical box.
- **SCREW TERMINAL WIRE CONNECTION**
Large terminals speed installation and accept up to #12 AWG (2.5mm²) wire.
- **FIELD CHANGEABLE LENS MARKINGS**
Standard "FIRE" strobe marking/language is easily changed with optional snap-on Lens Kits.
- **UL/ULC RATED OUTDOOR OPTION**

Description

EST's 757 Integrity Series Temporal Horn and Temporal Horn/Strobe are perfect for life safety applications as an alert and alarm signal, especially to notify the hearing impaired. The horn emits a piercing low frequency sound that is easily heard above moderate ambient noise levels.

Integrity's rugged plastic housing is available with a red or white textured finish. With its ingenious mounting sub-plate, the horn is firmly held in place with a single screw ensuring a quick, attractive installation. A separate trim plate is not required for flush mounting. Separate terminals to accept up to #12 AWG



(2.5mm²) wire are provided for field connection of the strobe and horn.

Matching Integrity Speakers, Chimes, and Strobe combinations are also available.

HORN: During installation, the horn is configured for steady or temporal tone signal and either low or high dB output. When temporal output is selected all horns on a common 2-wire circuit are self-synchronized (see specifications). External "synch-control" modules are not required.

Integrity Series horns emit a low frequency "growling" tone to really demand attention. Select *'high'* output for 98 dBA; choose *'low'* output for 94 dBA. (Average measurement at 10 feet (3.05 M) in anechoic chamber.)

STROBE: EST strobes are self-synchronized to flash at 1 fps across their full operating voltage range. The strobe operates on any existing 2-wire signal circuit. Separately installed "synch-control" modules are not required. A very small portion of the population have a condition which may cause them to become disoriented from multiple random flashes of light. This risk is minimized with Integrity's strobe.

The flash from EST strobes can be noticed from almost any position in the room, corridor, or large open space. The output is controlled using a specially shaped reflector to disperse the light in all viewing directions. EST strobes are UL1971 listed with both wall and ceiling cd intensity ratings (see Specifications). This is useful in areas where the Authority Having Jurisdiction (AHJ) permits ceiling mount strobes.

757 Series Temporal Horn/Strobes are shipped with wall mount style "FIRE" lens markings. Where ceiling mount, other languages or different lens markings are required, optional LKW and LKC series Lens Marking Kits are offered. Lens marking sleeves snap right over the strobe lens providing quick, easy, change. Consult EST for availability of other languages or special markings.

EDWARDS SYSTEMS TECHNOLOGY

SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

Audible Signal Application

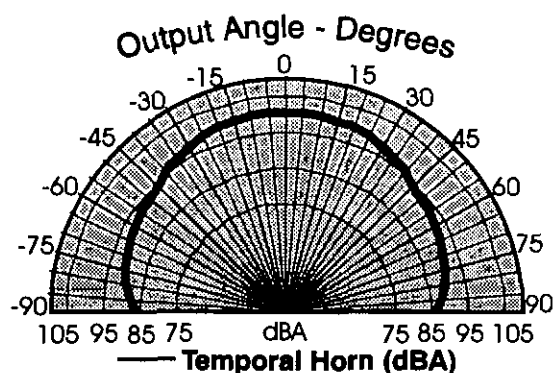
Suggested sound pressure levels in each signaling zone for alert or alarm signals are at least 15 dB above the average ambient sound level or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater, measured 5' (1.5 m) above the floor. The average ambient sound level is the RMS, A-weighted sound pressure measured over a 24-hour period.

Doubling the distance from the signal to the ear will theoretically cause a 6 dB reduction in the received sound pressure level. The actual effect depends on the acoustic properties of materials in the space. A 3 dBA difference is a "just noticeable" change in volume.

Typical Sound Output Distribution

dBA measured at 10 ft. in anechoic chamber

757 Series Temporal Horn ('HIGH' output)



Visible Signal Application

These guidelines are based on ANSI/NFPA 72 National Fire Alarm Code (1993). When applied and installed in accordance with that code, EST strobes meet or exceed the illumination produced by the ADA specified 75 candela (cd) strobe at 50 feet. However, optimum performance is obtained by providing "Equivalent Facilitation" as allowed by the Americans with Disabilities Act Accessibility Guidelines [ADA(AG)]. Contact EST for exact spacing requirements.

Non-Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Up to 20' x 20' (6.1 x 6.1m)	757-5A 15 cd @ 70 mA or 757-7A* 15/75 cd @ 105 mA
Up to 30' x 30' (9.1 x 9.1m)	757-3A 30 cd @ 105 mA
Up to 50' x 50' (15.2 x 15.2m)	757-8A 110 cd @ 219 mA
Corridors	Wall Mounted - EST Model:
Any Length x Max. 20' (6.1m) Wide	757-5A or 757-7A* spaced @ 100' (30.5 m) never exceeding 151 (4.5 m) from end wall

* Model 757-7A is rated at 15 cd (wall or ceiling mount) per UL1971, and 75 cd per UL1838 thereby meeting ADA on axis only requirements of 75 cd.

Non-Sleeping Rooms and Corridors: EST strobes rated at less than 110 cd per UL1971 are intended for use in non-sleeping areas only. Install them 80" (2.03 m) above floor level OR within the space between 6" (150 mm) to 24" (610 mm) below the ceiling, whichever is lower. No point in any space (including corridors) required to have strobes shall be more than 50' (15.2 m) from the signal (in the horizontal plane). The 110 cd strobe should be used in non-sleeping areas only when the room exceeds 40' x 40' (12.2 m x 12.2 m). In large rooms

or spaces (such as auditoriums) that exceed 100' (30.4 m) across and without obstructions more than 72" (1.8 m) above the finished floor, strobes may be placed around the perimeter, spaced a maximum of 100' (30.4 m) apart, in lieu of suspending them from the ceiling.

Sleeping Rooms: EST model 757-8A is rated at 110 cd. It is intended for use in sleeping rooms and should be installed along with a smoke detector. It must be wall mounted at least

Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Any Size	757-8A 110 cd @ 219 mA

80" (2.03 m) above floor level, but no closer than 24" (610 mm) to the ceiling. The distance from the strobe to the pillow must not exceed 16' (4.8 m).

Application Notes - USA

In any case, audible signals cannot have a sound level less than 75 dBA at 10' (3m) per NFPA 72 and cannot exceed 120 dBA per ADA (130 dBA per NFPA 72) at the minimum hearing distance to audible appliance. Audible signals shall be installed with the top of the device above the floor not less than 80" (2.3 m) and below the finished ceilings at least 6" (150 mm) (per NFPA 72).

Strobes must be used to supplement audible signals wherever the average ambient sound level exceeds 105 dBA. Combination Audible/Visible signals must be installed per NFPA guidelines established for strobes.

ADA suggests that the following areas may require Visual Alarm Signals:

- rest rooms, meeting rooms, and other general usage areas.
- lobbies, hallways, and other common use areas.
- sleeping rooms intended for use by persons with hearing impairments.
- work areas used by a person with a hearing impairment (per Title 1 of ADA).

Application Notes - CANADA

(Based in part on 1995 Canada National Building Code)

The fire alarm signal sound pressure level shall not exceed 110 dBA in any normally occupied area. The sound pressure level from an audible signal in a floor area used for occupancies other than residential occupancies shall be not less than 10 dBA above the ambient noise, and never less than 65 dBA. The sound pressure level in sleeping rooms from an audible signal shall not be less than 75 dBA when any intervening doors between the device and the sleeping room are closed. Audible signal devices shall be installed not less than 1.8 m to the center of the device above the floor (per CAN/ULC S524).

The fire alarm audible signal shall be supplemented by fire alarm strobes in any floor area where the ambient noise level exceeds 87 dBA, or where the occupants of the floor area use ear protective devices, are located within an audiometric booth, or are located within sound insulating enclosures. This also applies to assembly occupancies in which music and other sounds associated with performances could exceed 100 dBA.

Strobes shall be installed in a building so that the flash from not less than one device is visible throughout the floor area or portion thereof in which they are installed. For maximum safety, EST recommends that strobes be installed as per the guidelines shown here under Strobe Application.

Specifications

Standalone Synchronization Characteristics (note 5)	Strobe flash at 1 per second within 200 milliseconds on common circuit Hom pulses at temporal rate within 200 milliseconds on common circuit			
Operating Volts	Strobe: 20-24 Vdc Continuous; Hom: 20-24 Vdc Continuous			
Hom Output (note 1)	Anechoic: High Setting - 104 dBA (peak)/98 dBA (avg); Low Setting - 99 dBA (peak)/94 dBA (avg) Reverberant: High Setting - 85 dBA (continuous)/82 dBA (temporal); Low Setting - 82 dBA (continuous)/75 dBA (temporal)			
Hom Current	High Output: 40 mA @ 24 Vdc; 55mA @ 24 Vrms FWR; Low Output: 20 mA @ 24 Vdc; 28 mA @ 24 Vrms FWR			
Rated Strobe Output - candela (cd)	757-5A-	757-7A-	757-3A-	757-8A-
UL 1971	15 cd wall mount only	15 cd wall 15 cd ceiling	30 cd wall 15 cd ceiling	110 cd wall 60 cd ceiling
UL 1638	not UL 1638 rated	75 cd	30 cd	120 cd
ULC S526	15 cd	75 cd	30 cd	120 cd
Average Strobe Current (note 2)	24Vdc: 70mA 20Vdc: 80mA	24Vdc: 105mA 20Vdc: 125mA	24Vdc: 105mA 20Vdc: 125mA	24Vdc: 219mA 20Vdc: 272mA
Peak Strobe Current (note 2)	20Vdc: 208mA	20Vdc: 208mA	20Vdc: 208mA	20Vdc: 352mA
Average Strobe Current (note 3)	24Vdc: 84mA 20Vdc: 99mA	24Vdc: 168mA 20Vdc: 204mA	24Vdc: 168mA 20Vdc: 204mA	24Vdc: 325mA 20Vdc: 355mA
Peak Strobe Current (note 3)	20Vdc: 360mA	20Vdc: 594mA	20Vdc: 594mA	20Vdc: 876mA
Strobe Marking	Supplied with LKW-1 "FIRE" red letters, vertical both sides (Wall Mount) - see LKW and LKC series for ceiling style and optional markings.			
Flash Tube Enclosure	Clear LEXAN with white marking sleeve			
Housing	Textured, color impregnated engineered plastics - exceeds 94V-0 UL flammability rating			
Wire Connections	Terminals - separate, polarized inputs for Hom & Strobe, #12 AWG (2.5mm ²) maximum			
INDOOR Operating Environment	93% @ 40 °C relative humidity; 32-120 °F (0-49 °C) ambient temperature			
OUTDOOR Operating Environment (must use weatherproof box)	98% @ 40 °C relative humidity; -35-150°F (-31-66°C) ambient temperature (757-7A: rated at 50 cd @ -35°C per UL/ -40°C per ULC) (757-8A: rated at 100 cd @ -35°C per UL/ -40°C per ULC)			
Mounting - INDOOR	Flush: North-American 2-gang box, 3" high x 4" wide x 2 3/4" (69 mm) minimum Surface: 757A-SB Back box Bi-directional: 757A-BDF Mounting Frame			
Mounting - OUTDOOR	Surface: 757A-WB Weatherproof Box			
Agency Listings	UL 1971, UL 1638, UL 464, ULC S526, ULC S525 (All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule)			

Note 1 - Measured at 10 ft (3m) @ 24 Vdc. Subtract 3 dBA for models with strobes

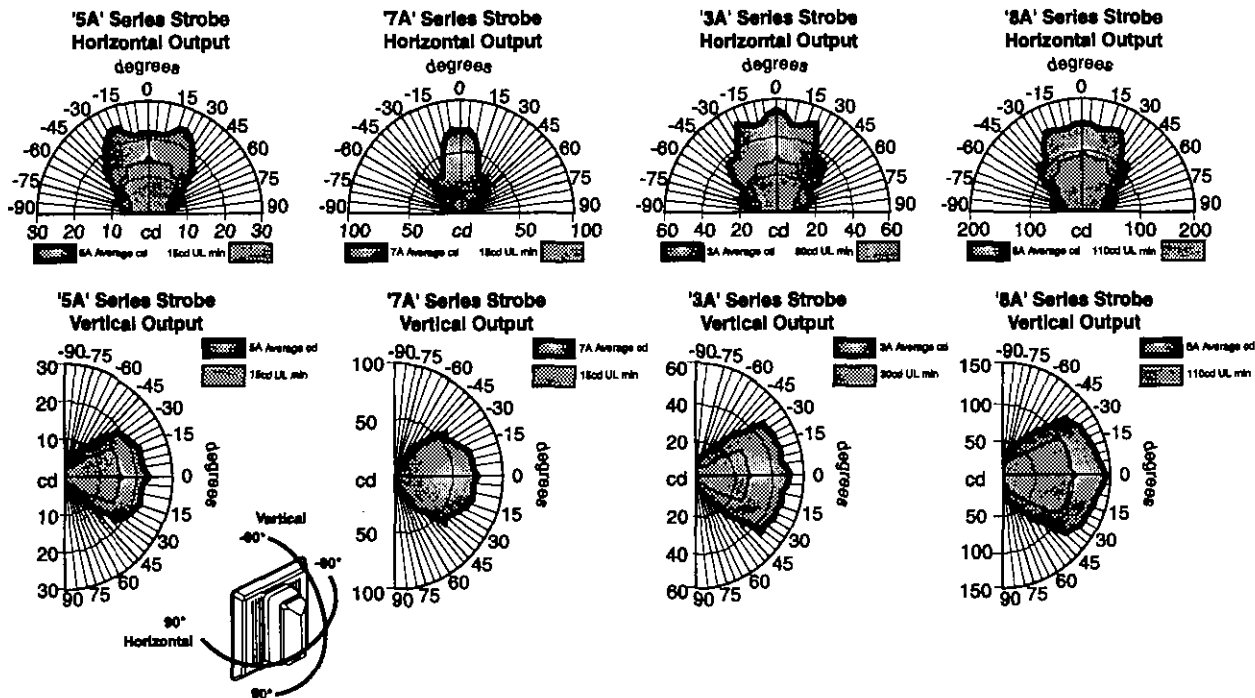
Note 2 - Connected to FILTERED dc source.

Note 3 - Connected to UNFILTERED (Full Wave Rectified) dc source.

Note 4 - Use the average current rating to establish the maximum number of strobes, wire gauge and standby power requirements.

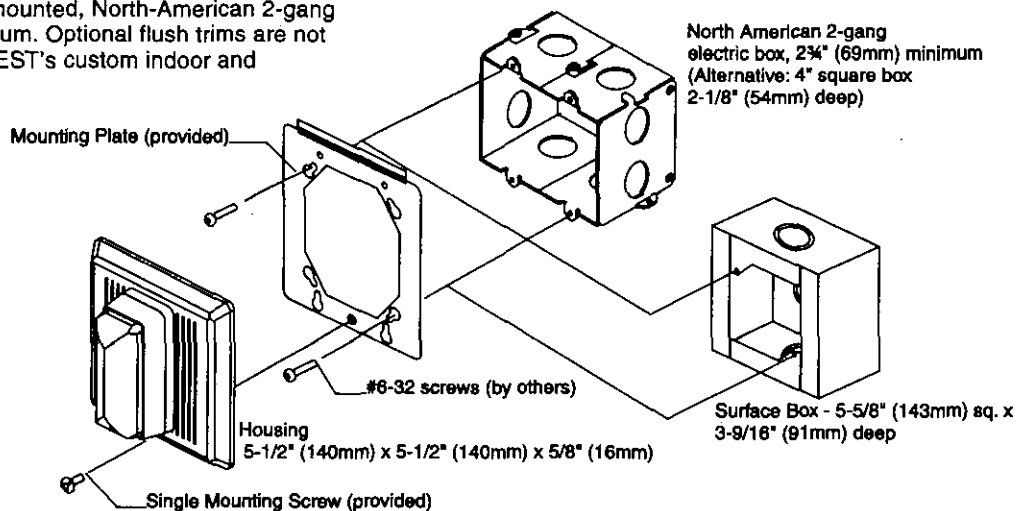
Note 5 - Temporal audible pattern is defined as: 1/2 sec ON, 1/2 sec OFF, 1/2 sec ON, 1/2 sec OFF, 1/2 sec ON, 1 1/2 sec OFF, then repeat cycle.

Light Output Patterns



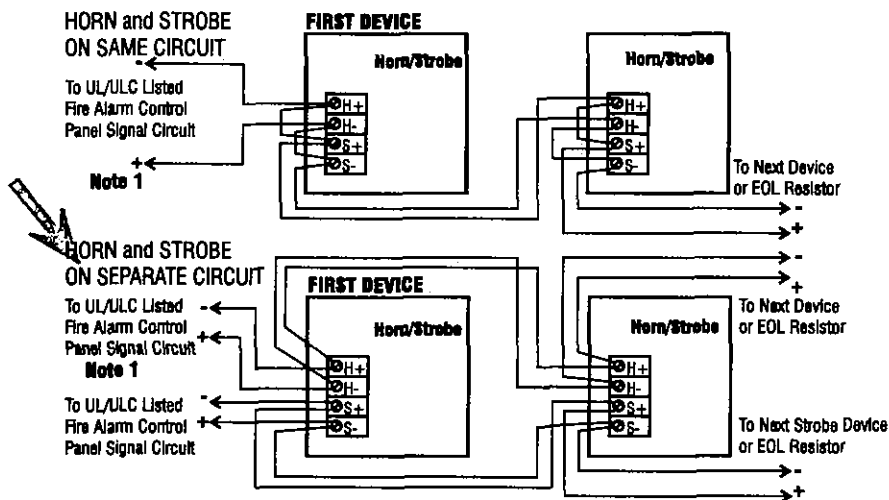
Installation and Mounting

All models fit to a standard flush mounted, North-American 2-gang electrical box, 2 3/4" (69 mm) minimum. Optional flush trims are not required. For surface mount, use EST's custom indoor and outdoor surface boxes painted in color-matched red or white epoxy. EST recommends that fire alarm horn/strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.



Typical Wiring

The strobe must be connected to signal circuits which output a constant (not pulsed) voltage. The horn can be connected to continuous voltage circuits.



Note 1: Polarity of Signal Circuit is shown in supervisory state. Polarity reverses in alarm condition.

Ordering Information

Catalog Number	Description	Ship Wt. lb. (kg)
TEMPORAL HORNS		
757-1A-T*	Temporal Horn, Red	1.7(.8)
TEMPORAL HORN/STROBES		
757-5A-T*	Temporal Horn/Strobe, 15cd, Red	2(.9)
757-7A-T*	Temporal Horn/Strobe, 15/75cd, Red	
757-3A-T*	Temporal Horn/Strobe, 30cd, Red	
757-8A-T*	Temporal Horn/Strobe, 110cd, Red	

WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist. These visual signal appliances' flash intensity may not be adequate to alert or awaken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. EST recommends that strobes in sleeping rooms be 110 cd minimum.

MOUNTING ACCESSORIES		
757A-SB*	Surface Box, Red, Indoor	1.5(.7)
757A-WB*	Weatherproof Box, Red, Surface	1.5(.7)
757A-BDF*	Bi-directional Frame, Red	4(1.8)
LENS MARKING KITS (see note 1)		
LKW-1	"FIRE", Wall Orientation (supplied)	0.1 (.05)
LKW-1R	"FIRE", Wall Orientation, RED	
LKW-2	"FEU", Wall Orientation	
LKW-3	"FIRE/FEU", Wall Orientation	
LKW-4	"SMOKE", Wall Orientation	
LKW-5	"HALON", Wall Orientation	
LKW-6	"CO2", Wall Orientation	
LKW-7	"EMERGENCY", Wall Orientation	
LKW-8	"ALARM", Wall Orientation	
LKW-9	"FUEGO", Wall Orientation	
* Add Suffix "W" to catalog no. for WHITE. (e.g. 757-7A-TW)		
Note 1 - Change "W" to "C" for CEILING mount. (e.g. LKC-1)		

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.



**Self-Synchronizing Design
with Terminal Block**

Strobe

Models: 405-3A, -5A, -6A, -7A -8A

Features

■ SYNCHRONIZING STROBE

EST strobes are self-synchronizing; no external control module is required. Synchronized flash from multiple strobes improves the safety for photosensitive people.

■ SATISFIES ADA CODE REQUIREMENTS

ADA/UL1971/ULC listed strobe is available in five intensities. All models provide the "Equivalent Facilitation" allowed under ADA Accessibility Guidelines. Use single strobe in rooms up to 50' x 50' and satisfy both ADA and NFPA codes.

■ SUPERIOR VISIBILITY

In addition to being UL 1638 and ULC S526 listed as Visual Signal Appliances, EST strobes have a "distributed" light output pattern and are UL 1971 listed as Signaling Devices for the Hearing Impaired.

■ FIELD CHANGEABLE LENS MARKINGS

Lens language or standard "FIRE" marking is easily changed with optional LKW and LKC series Lens Kits.

■ SCREW TERMINAL WIRE CONNECTION

Large terminals speed installation and accept up to #12 AWG (2.5mm²) wire.

■ RUGGED STEEL FRONT PLATE

Red or white front plate is finished with durable baked epoxy polyester powder-coat finish.

■ FITS 4" SQUARE FLUSH BOX

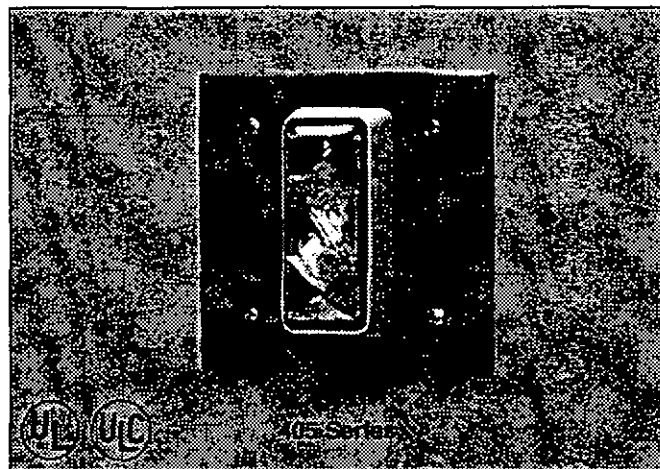
Ideal for retrofit and new projects.

■ UL/ULC RATED OUTDOOR OPTION

Description

EST 405 Series Strobes are especially designed for use with compatible life safety communication and control equipment to alert the hearing impaired. EST strobes are available with 15cd, 15/75 (ADA) cd, 30cd, 60cd, and 110cd effective flash intensity.

EST strobes are self-synchronized to flash at 1 fps across their full operating voltage range. The strobe operates on any existing 2-wire signal circuit. Separately installed "synch control modules" are not required. A very small portion of the population have a condition which may cause them to become disoriented from multiple random flashes of light. This risk is minimized with Integrity's strobe.



The flash from EST strobes can be noticed from almost any position in the room, corridor, or large open space. The light dispersion is controlled with a specially shaped reflector. It directs a minimum of 12 percent of rated light output above and below the strobe, and a minimum of 25 percent of rated light straight out both sides. EST strobes are UL1971 listed with both wall and ceiling cd intensity ratings (see Specifications). This is useful in areas where the Authority Having Jurisdiction (AHJ) permits ceiling mount strobes.

The 405 series is shipped with standard wall mount style "FIRE" lens markings. Where ceiling mount, other languages, or different lens markings are required, EST offers optional LKW/LKC series Lens Marking Kits. These optional lens markings just "snap on" to the strobe for quick, easy, conversion. Consult EST for availability of special lens languages or markings.

The strobe is designed for 20 to 24 volt dc operation and must be connected to signal circuits which output a constant (not pulsed) voltage. A diode is used to allow full signal circuit supervision and terminals to accept up to #12 AWG (2.5mm²) wire are provided for making polarized connections.

The steel housing/front plate is finished in red or white color. Durable baked epoxy polyester powder-coat paint is used. The 405 series strobes are a part of a full line of ADA/UL 1971/ULC S526 listed fire alarm Audible/Visible signals available from EST. Single-gang mount (202 series) strobes are also available.

Strobe Application

All models are listed to standard UL 1971 - Signaling Devices for the Hearing Impaired and CAN/ULC S526 Standard for Visual Signal Appliances for Fire Alarm Systems. Each strobe can provide the "Equivalent Facilitation" allowed under Americans with Disabilities Act Accessibility Guidelines (ADA(AG)).

These guidelines are based on ANSI/NFPA 72 National Fire Alarm Code (1993). When applied and installed in accordance with that code, EST strobes meet or exceed the illumination produced by the ADA specified 75 candela (cd) strobe at 50 feet. However, optimum performance is obtained by providing "Equivalent Facilitation" as allowed by the Americans with Disabilities Act Accessibility Guidelines [ADA(AG)]. Contact EST for exact spacing requirements.

Non-Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Up to 20' x 20' (6.1 m x 6.1 m)	405-5A 15 cd @ 70mA or 405-7A* 15/75 cd @ 105 mA
Up to 30' x 30' (9.1 m x 9.1 m)	405-3A 30 cd @ 105mA
Up to 40' x 40' (12.2 m x 12.2 m)	405-6A 60 cd @ 155mA
Up to 50' x 50' (15.2 m x 15.2 m)	405-8A 110 cd @ 219mA
Corridors	Wall Mounted - EST Model:
Any Length x Max. 20' (6.1m) Wide	405-5A or 405-7A* spaced @ 100' (30.5m) never exceeding 15' (4.5m) from end wall

* Model 405-7A is rated at 15 cd (wall or ceiling mount) per UL1971, and 75 cd per UL 1638 thereby meeting ADA on axis only requirements of 75 cd.

Non-Sleeping Rooms and Corridors: EST strobes rated at less than 110 cd per UL1971 are intended for use in non-sleeping areas only. Install them 80" (2.03m) above floor level OR within the space between 6" (150mm) to 24" (610mm) below the ceiling, whichever is lower. No point in any space (including corridors) required to have strobes shall be more than 50' (15.2m) from the signal (in the horizontal plane). The 110 cd strobe should be used in non-sleeping areas only when the room exceeds 40' X 40' (12.2m X 12.2m).

In large rooms or spaces (such as auditoriums) that exceed 100' (30.4m) across and without obstructions more than 72" (1.8m) above the finished floor, strobes may be placed around the perimeter, spaced a maximum of 100' (30.4m) apart, in lieu of suspending them from the ceiling.

Sleeping rooms: EST model 405-8A is rated at 110 cd. It is intended for use in sleeping rooms and should be installed along with a smoke detector. It must be wall mounted at least 80" (2.03m) above floor level, but no closer than 24" (610mm) to the ceiling. The distance from the strobe to the pillow must not exceed 16' (4.8m).

Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Any size	405-8A 110 cd @ 219mA

Application Notes — USA

Strobes must be used to supplement audible signals wherever the average ambient sound level exceeds 105 dBA. Combination Audible/Visible signals must be installed per NFPA guidelines established for strobes.

ADA suggests that the following areas may require Visual Alarm Signals:

- rest rooms, meeting rooms, and other general usage areas.
- lobbies, hallways, and other common use areas.
- sleeping rooms intended for use by persons with hearing impairment (per Title 1 of ADA).
- work areas used by a person with a hearing impairment (per Title 1 of ADA).

Application Notes — CANADA

(Based in part on 1995 Canada National Building Code)

The fire alarm audible signal shall be supplemented by fire alarm strobes in any floor area where the ambient noise level exceeds 87 dBA, or where the occupants of the floor area use ear protective devices, are located within an audiometric booth, or are located within sound insulating enclosures. This also applies to assembly occupancies in which music and other sounds associated with performances could exceed 100 dBA.

Strobes shall be installed in a building so that the flash from not less than one device is visible throughout the floor area or portion thereof in which they are installed. For maximum safety, EST recommends that strobes be installed as per the guidelines shown here under Strobe Application.

Specifications

Catalog Number	405-5A-*	405-7A-*	405-3A-*	405-6A-*	405-8A-*
UL 1971 Rated Strobe Output - candela (cd)	15cd (wall only)	15cd (wall or ceiling)	30cd (wall) 15cd (ceiling)	80cd (wall) 30cd (ceiling)	110cd (wall) 60cd (ceiling)
UL 1638/ULC S526 Rated Strobe Output	15cd (not UL 1638)	75cd	30cd	80cd	120cd
Average Operating Current (note 2)	70mA @ 24Vdc 80mA @ 20Vdc	105mA @ 24Vdc 125mA @ 20Vdc	105mA @ 24Vdc 125mA @ 20Vdc	155mA @ 24Vdc 185mA @ 20Vdc	219mA @ 24Vdc 272mA @ 20Vdc
Peak Operating Current (note 2)	208mA @ 20Vdc	208mA @ 20Vdc	208mA @ 20Vdc	265mA @ 20Vdc	352mA @ 20Vdc
Average Operating Current (note 3)	84mA @ 24Vdc 99mA @ 20Vdc	188mA @ 24Vdc 204mA @ 20Vdc	168mA @ 24Vdc 204mA @ 20Vdc	219mA @ 24Vdc 282mA @ 20Vdc	325mA @ 24Vdc 355mA @ 20Vdc
Peak Operating Current (note 3)	360mA @ 20Vdc	594mA @ 20Vdc	594mA @ 20Vdc	723mA @ 20Vdc	876mA @ 20Vdc
Strobe Flash Rate	Synchronized at 1 flash per second (no external control module required)				
Strobe Operating Volts	20 to 24Vdc (Continuous)				
Operating Environment	INDOOR: 85% @ 30°C RH; 32-120°F (0-49°C) ambient temperature OUTDOOR: 93% @ 30°C RH; -40-150°F (-40-66°C) ambient temp 7A* (50cd @ -35°C per UL @ -40°C per ULC) and 8A* (100cd @ -35°C per UL @ -40°C per ULC) models only; Must use weatherproof 4" sq. box Supplied with LKW-1 "FIRE" red letters, vertical both sides (Wall Mount) - see LKW and LKC series for ceiling style and optional markings				
Lens Markings					
Wire Connections	Terminals - polarized input, #12 AWG (2.5mm ²) max wire size				
Flash Tube Enclosure	Clear LEXAN				
Strobe Plate, Finish	CRS steel - 5 1/2 (140mm) square, red or white baked epoxy polyester powder-coat finish				
Mounting	INDOOR: North American 4" square electrical box; OUTDOOR: EST 449 series weatherproof surface box or North American 4" square weatherproof box				
Agency Listings	UL 1971, UL 1638, ULC S526 (All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule)				

*Suffix "-T" for RED front plate, "-TW" for WHITE front plate.

Note 1: Use the average current rating to establish the maximum number of strobes, wire gauge, and standby power requirements.

Note 2: From a FILTERED dc source.

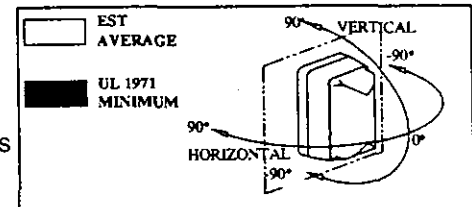
Note 3: From a UNFILTERED (Full Wave Rectified) dc source.

UL 1971 WALL MOUNTED STROBE LIGHT OUTPUT DISTRIBUTION PATTERNS

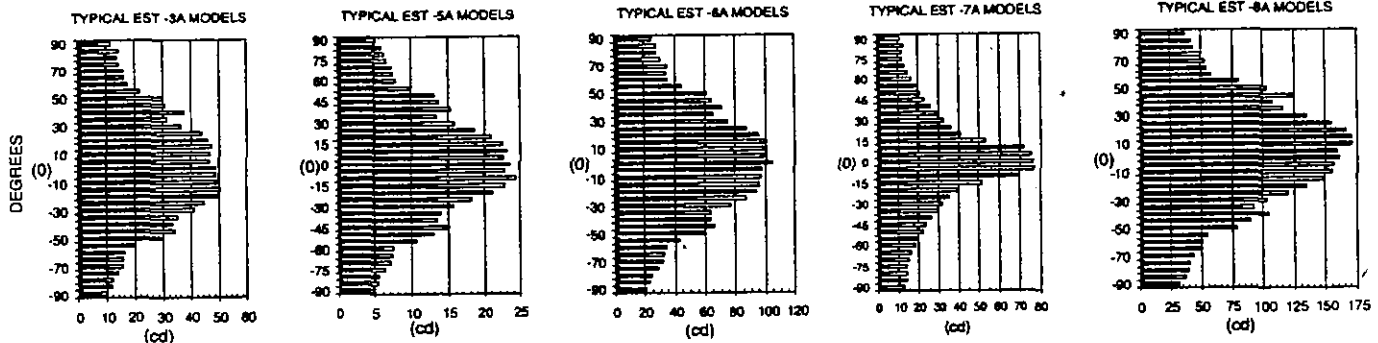
SOURCE: UL STANDARD 1971 - SIGNALING DEVICES FOR THE HEARING IMPAIRED

SOURCE: UL STANDARD 1638 - VISUAL SIGNAL APPLIANCES

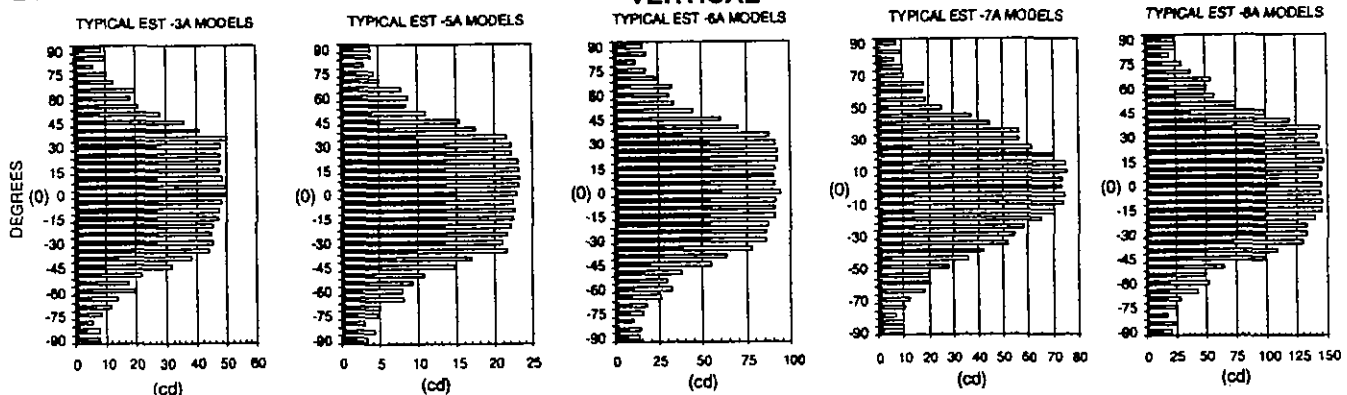
SOURCE: UL CANADA STANDARD S526 - VISUAL SIGNAL APPLIANCES FOR FIRE ALARM SYSTEMS



HORIZONTAL



VERTICAL

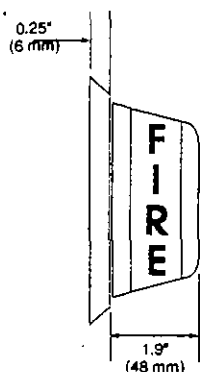


Installation and Mounting

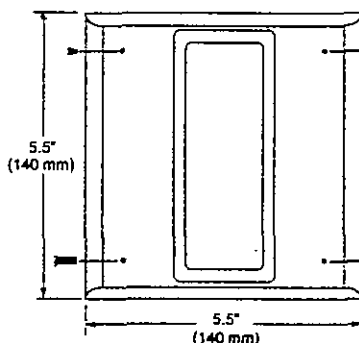
All models fit to a standard flush mounted, North American 4" electrical box, 1-1/2" (38 mm) deep minimum. Optional EST weatherproof, surface mount boxes are available. The strobes must be connected to signal circuits which output a constant (not pulsed) voltage. EST recommends that these strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.

WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist.

These visual signal appliances' flash intensity may not be adequate to alert or waken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. EST recommends that strobes in sleeping rooms be 110 cd minimum.



**SIDE VIEW,
WALL MOUNTED**



**FRONT VIEW,
WALL MOUNTED**

Countersunk Philip head screws are provided to secure unit onto electrical box.

Two Plastic Caps are provided for indoor mounting.

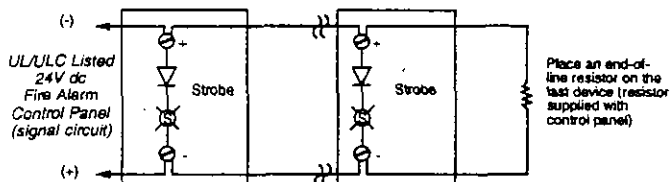


**SIDE VIEW,
CEILING MOUNTED**

*Changeable Lens Marking, LKW or LKC Series.

Typical Wiring -24 Vdc

Polarity of signal circuit shown in supervisory state. On alarm, polarity reverses.



CAUTION: This unit is designed to be used on signal circuits that output a constant voltage of 20-24 VDC. Do not connect this unit to a coded or pulsating voltage. Electrical supervision requires wire run to be broken at each terminal. Do not loop signal circuit field wires around strobe terminals.

Ordering Information - Strobes

Catalog Number	Description	Ship Wt. lb (kg)
405-5A-T	Strobe - 15 cd, Red	1 (0.4)
405-5A-TW	Strobe - 15 cd, White	
405-7A-T	Strobe - 15/75, Red	
405-7A-TW	Strobe - 15/75, White	
405-3A-T	Strobe - 30 cd, Red	
405-3A-TW	Strobe - 30 cd, White	
405-6A-T	Strobe - 60 cd, Red	
405-6A-TW	Strobe - 60 cd, White	
405-8A-T	Strobe - 110 cd, Red	
405-8A-TW	Strobe - 110 cd, White	
Mounting Accessories		
449	Surface Mount Box - Outdoor, Gray	1 (0.4)

Ordering Information - Lens Marking Kits

Catalog Number	Description	Ship Wt. lb (kg)
LKW-1	"FIRE" - Wall Orientation (supplied)	0.2 (0.1)
LKW-1R	"FIRE" - Wall Orientation, red with white letters	
LKW-2	"FEU" - Wall Orientation	
LKW-3	"FIRE/FEU" - Wall Orientation	
LKW-4	"SMOKE" - Wall Orientation	
LKW-5	"HALON" - Wall Orientation	
LKW-6	"CO2" - Wall Orientation	
LKW-7	"EMERGENCY" - Wall Orientation	
LKW-8	"ALARM" - Wall Orientation	
LKW-9	"FUEGO" - Wall Orientation	0.2 (0.1)
LKC-1	"FIRE" - Ceiling Orientation	
LKC-2	"FEU" - Ceiling Orientation	
LKC-3	"FIRE/FEU" - Ceiling Orientation	
LKC-4	"SMOKE" - Ceiling Orientation	
LKC-5	"HALON" - Ceiling Orientation	
LKC-6	"CO2" - Ceiling Orientation	
LKC-7	"EMERGENCY" - Ceiling Orientation	
LKC-8	"ALARM" - Ceiling Orientation	
LKC-9	"FUEGO" - Ceiling Orientation	

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0103677	Grnd_Fault_Data_Card_1_01_05	GROUNDFAULT	5	0103677 Ground Fault DataCard1
0103678	Reconstruct_Line_Data_Card_1_01_05	LOCALMONITOR	5	0103678 ReconstructingLine DataCard1
0103679	Smoke_Power_Current_Limit_Card_1_01_05	LOCALTROUBLE	5	0103679 Smoke Power Current Limit Card1
0103681	Line_Opened_or_Shorted_Data_Card_2_01_05	LOCALTROUBLE	5	0103681 Open/Short Fault DataCard2
0103682	Map_Fault_Data_Card_2_01_05	LOCALTROUBLE	5	0103682 Map Fault DataCard2
0103683	Mapping_in_Progress_Data_Card_2_01_05	LOCALMONITOR	5	0103683 Mapping In Progress DataCard2
0103684	Mapping_Disblid_Data_Card_2_01_05	LOCALMONITOR	5	0103684 Mapping Disabled DataCard2
0103685	Dev_Maint_Alert_Data_Card_2_01_05	LOCALMONITOR	5	0103685 Dev. Maintnc Alert DataCard2
0103686	Unprogrammed_Device_Data_Card_2_01_05	LOCALALARM	5	0103686 Unprogrammed Device DataCard2
0103687	Grnd_Fault_Data_Card_2_01_05	GROUNDFAULT	5	0103687 Ground Fault DataCard2
0103688	Reconstruct_Line_Data_Card_2_01_05	LOCALMONITOR	5	0103688 ReconstructingLine DataCard2
0103689	Smoke_Power_Current_Limit_Card_2_01_05	LOCALTROUBLE	5	0103689 Smoke Power Current Limit Card2
0104000	I/O_CARD2	3-IDC8/4	6	
0104001	SIG_CKT5_HORN_W	AUDIBLE	6	SIG_CKT5_HORN
0104002	SIG_CKT6_STROBE_W	VISIBLE	6	SIG_CKT6_STROBE
0104003	SPARE3	GENALARM	6	SPARE3
0104004	SPARE4	GENALARM	6	SPARE4
0104005	SIG_CKT7_HORN_W	AUDIBLE	6	SIG_CKT7_HORN
0104006	SIG_CKT8_STROBE_W	VISIBLE	6	SIG_CKT8_STROBE
0104007	SPARE5	SMOKE	6	SPARE5
0104008	SPARE6	SMOKE	6	SPARE6
0104600	Annunciator_Supervision_01_06	LOCALTROUBLE	6	0104600 Annunciator Supervision
0104601	Rail_Module_Communications_Fault_01_06	LOCALTROUBLE	6	0104601 Rail Module Communication Fault
0104604	Internal_Fault_01_06	LOCALTROUBLE	6	0104604 Internal Fault

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0104605	Database_Supervision_01_06	LOCAL.TROUBLE	6	0104605 Database Supervision
0104606	Code_Supervision_01_06	LOCAL.TROUBLE	6	0104606 Code Supervision
0104609	Configuration_Fault_01_06	LOCAL.TROUBLE	6	0104609 Configuration Fault
0106000	LOOP_2	3-DSDC	8	
0106001	SMK_1W_PHAR_01	SMOKEVfy	8	1W PHARMACY HALL*** SMOKE BY MEN'S LAV.
0106002	SMK_1W_PHAR_02	SMOKEVfy	8	1W PHARMACY HALL*** SMOKE BY WINDOW
0106003	SMK_1W_PHAR_03	SMOKEVfy	8	1W PHARMACY HALL*** SMOKE BY WINDOW
0106004	SMK_1W_PHAR_04	SMOKEVfy	8	1W PHARMACY HALL*** SMOKE BY STAIR 6
0106005	SMK_1W_PHAR_05	SMOKEVfy	8	1W PHARMACY*** SMOKE AT ENTRANCE
0106006	SMK_1W_PHAR_06	SMOKEVfy	8	1W PHARMACY*** SMK CENTER OF PHARMACY
0106007	SMK_1W_PHAR_07	SMOKEVfy	8	1W PHARMACY*** SMK ABOVE COPY MACHINE
0106008	SMK_1W_PHAR_08	SMOKEVfy	8	1W PHARMACY*** SMK PHARMACY STORE RM.
0106009	HEAT_1W_09	HEAT	8	1W ELECTRIC CLOSET***HEAT CLOSET BY ELEV.
0106010	SMK_1W_10	SMOKEVfy	8	1WEST***SMK ELEC. CLSTBED ASSIGNMENT OFF
0106011	SMK_1W_11	SMOKEVfy	8	1W MAIN CORR.***SMOKEBY RADIOLOGY CORR.
0106012	SMK_1W_12_WALT	SMOKEVfy	8	1 WEST***SMOKE ELEVATOR LOBBY
0106013	SMK_1W_13	SMOKEVfy	8	1W MAIN CORR.***SMOKEBY PHLEBOTOMY S OF DR
0106014	SMK_1W_14	SMOKEVfy	8	1W MAIN CORR.***SMK BY PHLEBOTOMY N OF DR
0106015	SMK_1W_RAD_15	SMOKEVfy	8	1W RADIOLOGY***SMOKE FILE RM. REAR DOOR
0106016	SMK_1W_RAD_16	SMOKEVfy	8	1W RADIOLOGY***SMOKE FILE RM BY COUNTER
0106017	SMK_1W_RAD_17	SMOKEVfy	8	1W RADIOLOGY***SMOKE CORR. ER REGISTRAR
0106018	SMK_1W_RAD_18	SMOKEVfy	8	1W RADIOLOGY***SMOKE ER & X-RAY INTERSECT
0106019	SMK_1W_RAD_19	SMOKEVfy	8	1W RADIOLOGY***SMOKE CORR. BY READING RM.2
0106020	SMK_1W_RAD_20	SMOKEVfy	8	1W RADIOLOGY***SMOKE CORR.BY X-RAY RM 2

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0106021	SMK_1W_RAD_21	SMOKEVfy	8	1W RADIOLOGY***SMOKE CORR. BY HOLD AREA
0106022	SMK_1W_RAD_22	SMOKEVfy	8	1W RADIOLOGY***SMOKE CORR. BY WORK RM 1
0106023	SMK_1W_RAD_23	SMOKEVfy	8	1W RADIOLOGY***SMOKE CORR. BY SPECIAL PROC
0106024	SMK_1W_RAD_24	SMOKEVfy	8	1W RADIOLOGY***SMOKE CORR. BY NUCLEAR MED
0106025	SMK_1W_RAD_25	SMOKEVfy	8	1W RADIOLOGY***SMOKE CORR. BY X-RAY RM 4
0106026	SMK_1W_ER_26	SMOKEVfy	8	1W EMERGENCY ROOM***SMK PARAMEDIC OFFICE
0106027	DUCT_1W_27	SMOKEVfy	8	1W***DUCT MAIN CORR. N OF DOORS BY PHLEB.
0106028	DUCT_1W_28	SMOKEVfy	8	1WEST *** DUCT MER 11AHU-15 RETURN
0106029	DUCT_1W_29	SMOKEVfy	8	1WEST *** DUCT MER 11AHU-15 SUPPLY
0106030	DUCT_1W_30	SMOKEVfy	8	1W OUTPATIENT REG.***DUCT
0106031	DUCT_1W_31	SMOKEVfy	8	1W***DUCT MAIN CORR. S OF DOORS BY PHLEB.
0106032	DUCT_1W_RAD_32	SMOKEVfy	8	1W RADIOLOGY***DUCT RADIOLOGIST OFFICE
0106033	DUCT_1W_RAD_33	SMOKEVfy	8	1W RADIOLOGY***DUCT HOLDING AREA RETURN
0106034	DUCT_1W_RAD_34	SMOKEVfy	8	1W RADIOLOGY***DUCT HOLDING AREA SUPPLY
0106035	DUCT_1W_SDS_35	SMOKEVfy	8	1W SDS ELEVATOR LOBBYDUCT AHU-13
0106036	DUCT_1W_SDS_36	SMOKEVfy	8	1W SDS ELEVATOR LOBBYDUCT AHU-13
0106037	DUCT_1W_ER_37	SMOKEVfy	8	1W E.R.***DUCT NURSE LOUNGE AHU-12
0106038	DUCT_1W_ER_38	SMOKEVfy	8	1W E.R.***DUCT MER 13 AHU-12
0106039	DUCT_1W_PHAR_39	SMOKEVfy	8	1W PHARMACY***DUCT HALL BY MER11 AHU14
0106040	DUCT_1W_PHAR_40	SMOKEVfy	8	1W PHARMACY***DUCT MER 11 AHU-14 SUPPLY
0106041	SMK_1W_RAD_41	SMOKEVfy	8	1W RADIOLOGY***SMOKE CT SCAN CONTROL RM
0106042	SMK_1W_RAD_42	SMOKEVfy	8	1W RADIOLOGY***SMOKE CT SCAN ROOM
0106043	DUCT_2W_SDS_43	SMOKEVfy	8	2 WEST SDS***DUCT AHU-16 BEHIND PAT REG
0106044	DUCT_2W_SDS_44	SMOKEVfy	8	2 WEST SDS***DUCT AHU-16 BEHIND PAT REG

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0106045	DUCT_2W_SDS_45	SMOKEVFX	8	2 WEST SDS*** DUCT AHU-16 MER 14
0106046	DUCT_2W_SDS_46	SMOKEVFX	8	2 WEST SDS*** DUCT AHU-16 MER 14
0106047	DUCT_2W_SDS_47	SMOKEVFX	8	2 WEST SDS*** DUCT CORR. BY SDS BED 3
0106048	DUCT_2W_SDS_48	SMOKEVFX	8	2 WEST SDS*** DUCT AHU-17 MER 14
0106049	DUCT_2W_SDS_49	SMOKEVFX	8	2 WEST SDS*** DUCT PATIENT LAV BY MER 14
0106050	DUCT_2W_SDS_50	SMOKEVFX	8	2 WEST SDS*** DUCT TRANSFUSION ROOM
0106051	DUCT_2S_51	SMOKEVFX	8	2 SOUTH*** DUCT CORR. BY STAIR #1
0106052	DUCT_2S_52	SMOKEVFX	8	2 SOUTH*** DUCT CORR BY CENTRAL SCHED
0106053	DUCT_2S_53	SMOKEVFX	8	2 SOUTH*** DUCT TOPOR HOLDING AREA LOBBY
0106054	DUCT_2S_54	SMOKEVFX	8	2 SOUTH*** DUCT OR HOLDING AREA LOBBY
0106055	DUCT_2S_55	SMOKEVFX	8	2 SOUTH*** DUCT DECONTAMINATION ROOM
0106056	DUCT_2S_56	SMOKEVFX	8	2 SOUTH*** DUCT ELEV. LOBBY REAR
0106057	DUCT_2W_57	SMOKEVFX	8	2 WEST***DUCT MER 12 AHU-19
0106058	DUCT_2W_58	SMOKEVFX	8	2 WEST*** DUCT RECEIVING CORR AHU-19
0106059	DUCT_2W_59	SMOKEVFX	8	2 WEST*** DUCT RECEIVING CORR AHU-19
0106060	DUCT_2W_60	SMOKEVFX	8	2 WEST*** DUCT RECEIVING CORR AHU-19
0106061	DUCT_2W_61	SMOKEVFX	8	2 WEST*** DUCT MER 12 AHU-18
0106062	DUCT_2W_62	SMOKEVFX	8	2 WEST*** DUCT AHU-18BEHIND CCU LOUNGE
0106063	SMK_2S_63	SMOKEVFX	8	2 SOUTH*** SMOKE MAIN & SOUTH CORR INT
0106064	SMK_2S_64	SMOKEVFX	8	2 SOUTH*** SMOKE S. CORR BY LOAD DOCK
0106065	SMK_2S_65	SMOKEVFX	8	2 SOUTH*** SMOKE EAST CORR BY KITCHEN
0106066	SMK_2S_66	SMOKEVFX	8	2 SOUTH*** SMOKE EAST CORR BY CAFE
0106067	SMK_2S_67	SMOKEVFX	8	2 SOUTH*** SMOKE EAST CORR BY STAIR 1
0106068	SMK_2S_68	SMOKEVFX	8	2 SOUTH*** SMOKE CAFE ANNEX SOUTH

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0106069	SMK_2S_69	SMOKEVfy	8	2 SOUTH*** SMOKE CORR BY MENU OFFICE
0106070	SMK_2S_70	SMOKEVfy	8	2 SOUTH*** SMOKE CORR BY STAIR 2
0106071	HEAT_2S_71	HEAT	8	2 SOUTH*** HEAT LINEN CHUTE ROOM
0106072	SMK_2S_72	SMOKEVfy	8	2 SOUTH*** SMOKE CAFE ANNEX NORTH
0106073	SMK_2S_73	SMOKEVfy	8	2 SOUTH*** SMOKE CORR CENTRAL STERILE
0106074	SMK_2S_74	SMOKEVfy	8	2 SOUTH*** SMOKE CORR BY OR ENTRANCE
0106075	SMK_2S_75	SMOKEVfy	8	2 SOUTH O.R.*** SMOKEOR HOLDING AREA
0106076	SMK_2S_76	SMOKEVfy	8	2 SOUTH*** SMOKE CORRBV CENTRAL STERILE W
0106077	SMK_2S_77	SMOKEVfy	8	2 SOUTH O.R.*** SMOKE MALE LOCKER ROOM
0106078	SMK_2S_78	SMOKEVfy	8	2 SOUTH O.R.*** SMOKE MALE LOCKER ROOM
0106079	SMK_2S_79	SMOKEVfy	8	2 SOUTH O.R.*** SMOKECORR BY O.R. #8
0106080	SMK_2S_80	SMOKEVfy	8	2 SOUTH O.R.*** SMOKECORR BY NURSE STATION
0106081	SMK_2S_81	SMOKEVfy	8	2 SOUTH O.R.*** SMOKECORR BY O.R. #11
0106082	SMK_2S_82	SMOKEVfy	8	2 SOUTH O.R.*** SMOKECORR BY O.R. #12
0106083	SMK_2S_83	SMOKEVfy	8	2 SOUTH PACU*** SMOKEBY BED #3
0106084	SMK_2S_84	SMOKEVfy	8	2 SOUTH PACU*** SMOKEBY BED #9
0106085	SMK_2S_85	SMOKEVfy	8	2 SOUTH PACU*** SMOKEBY BED #12
0106086	SMK_2S_86	SMOKEVfy	8	2 SOUTH PACU*** SMOKEBY BED #1
0106087	DUCT_2W_SDS_87	SMOKEVfy	8	2 WEST SDS*** DUCT HBO MANAGER OFFICE
0106088	SMK_1W_EC_88	SMOKEVfy	8	1W EXPRESS CARE*** SMK BY NURSE STATION
0106089	DUCT_1W_EC_89	SMOKEVfy	8	1W EXPRESS CARE*** EFTDUCT CORR BY STAIR6
0106090	SMK_1W_EC_90	SMOKEVfy	8	1W EXPRESS CARE*** SMK WAITING AREA
0106091	SMK_1W_EC_91	SMOKEVfy	8	1W EXPRESS CARE*** SMK CORR BY HBO
0106092	SMK_1W_EC_92	SMOKEVfy	8	1W EXPRESS CARE*** CORR S/E AREA

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0106093	SMK_1W_EC_93	SMOKEVfy	8	1W EXPRESS CARE*** SMK CORR BY X-RAY
0106094	SMK_1W_EC_94	SMOKEVfy	8	1W EXPRESS CARE*** SMK CORR BY EXAM 3
0106095	SMK_1W_EC_95	SMOKEVfy	8	1W EXPRESS CARE*** SMK IN X-RAY
0106096	SMK_1W_EC_96	SMOKEVfy	8	1W EXPRESS CARE*** SMK RECEPTION AREA
0106097	SMK_1W_EC_97	SMOKEVfy	8	1W EXPRESS CARE*** SMK CORR BY DARK RM
0106098	DUCT_1W_ER_98	SMOKEVfy	8	5 WEST ER***DUCT AHU13 CORR BY BED 3
0106099	SMK_2S_99_SPR1	SMOKEVfy	8	2 SOUTH*** SMOKE REAR ELEV. LOBBY
0106100	SMK_2S_100_SPR1	SMOKEVfy	8	2 SOUTH*** SMOKE FRONT ELEV. LOBBY
0106101	SMK_1W_L2_101	SMOKEVfy	8	1 WEST*** DUCT TEMPORARY TRIAGE
0106126	PULL_1W_L26	PULL	8	1W PHARMACY HALL*** PULL BY STAIR 6
0106127	PULL_1W_RAD_127	PULL	8	1W RADIOLOGY***PULL HALL BY ER INTERSECT
0106128	HEAT_1W_ER_128	HEAT	8	1WEST E.R.*** HEAT MER13 ABOVE AHU-12
0106129	HEAT_1W_ER_129	HEAT	8	1WEST E.R.*** HEAT MER13 ABOVE AHU-13
0106130	PULL_1W_ER_130	PULL	8	1W EMERGENCY ROOM M.E.R. #13 BEHIND ER
0106131	SIG_CKTIW_A_HORN_W	AUDIBLE	8	1W HORN CIRCUIT A CC1 IN BED ASSN CLST
0106132	SIG_CKTIW_B_HORN_W	AUDIBLE	8	1W HORN CIRCUIT B CC1 IN BED ASSN CLST
0106133	SIG_CKTIW_C_HORN_W	AUDIBLE	8	W. SIGNAL CIRCUIT C CC1 IN BED ASSN CLST
0106134	SIG_CKTIW_D_HORN_W	AUDIBLE	8	W. SIGNAL CIRCUIT D CC1 IN BED ASSN CLST
0106135	SIG_CKTIW_E_HORN_W	AUDIBLE	8	W. SIGNAL CIRCUIT E CC1 IN BED ASSN CLST
0106136	SIG_CKTIW_F_HORN_W	AUDIBLE	8	W. SIGNAL CIRCUIT F CC1 IN BED ASSN CLST
0106137	NAC_RISER_1W	POWER	8	HORN POWER RISER 1W CT IN BED ASSN CLOSET
0106138	HEAT_1W_MER11_138	HEAT	8	1 WEST*** HEAT MER11 ABOVE AHU-15
0106139	HEAT_1W_MER11_139	HEAT	8	1 WEST*** HEAT MER11 ABOVE AHU-14
0106140	PULL_1W_MER11_140	PULL	8	1 WEST*** PULL MER 11

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0106141	PULL_2S_141	PULL	8	2 SOUTH*** PULL CORR BY STAIR 1
0106142	PULL_2S_142	PULL	8	2 SOUTH*** PULL CORR BY STAIR 2
0106143	PULL_2S_143	PULL	8	2 SOUTH*** PULL CORR KITCHEN ENTRANCE
0106144	PULL_2S_OR_144	PULL	8	2 SOUTH O.R.*** PULL CORR BY NURSE STATION
0106145	PULL_2S_OR_145	PULL	8	2 SOUTH O.R.*** PULL CORR BY STAIR 3
0106146	RELAY_146_FOR_89	FANCONTROL	8	RELAY FOR DAMPER CTRL7 1W EC 01060089
0106147	GENALARM_2S_147	GENALARM	8	2 SOUTH KITCHEN*** HOOD SYSTEM
0106148	SIG_CKT1W_HORN_W	AUDIBLE	8	5W HORN CIRCUIT CC1 IN BED ASSN CLST
0106149	STROBE_1W_L2_149_W	VISIBLE	8	1W STROBE CC1 IN BED ASSN CLST
0106150	STROBE_1W_L2_150_W	VISIBLE	8	1W ER STROBE CC1 IN BED ASSN CLST
0106151	STROBE_2W_L2_151_W	VISIBLE	8	2W STROBE CC1 IN BED ASSN CLST
0106152	STROBE_3W_L2_152_W	VISIBLE	8	3W STROBE CC1 IN BED ASSN CLST
0106153	STROBE_4W_L2_153_W	VISIBLE	8	4W STROBE CC1 IN BED ASSN CLCT
0106154	STROBE_5W_L2_154_W	VISIBLE	8	4 WEST STROBE CC1 IN BED ASSN CLST
0106155	RELAY_1W_DAMPER_L2_155	DAMPERCONTROL	8	1 WEST DAMPER RELAY TEMPORARY TRIAGE
0106600	Annunciator_Supervision_01_08	LOCALTROUBLE	8	0106600 Annunciator Supervision
0106601	Rail_Module_Communications_Fault_01_08	LOCALTROUBLE	8	0106601 Rail Module Communication Fault
0106604	Internal_Fault_01_08	LOCALTROUBLE	8	0106604 Internal Fault
0106605	Database_Supervision_01_08	LOCALTROUBLE	8	0106605 Database Supervision
0106606	Code_Supervision_01_08	LOCALTROUBLE	8	0106606 Code Supervision
0106607	Data_Card_Fault_1_01_08	LOCALTROUBLE	8	0106607 Data Card Fault One
0106608	Data_Card_Fault_2_01_08	LOCALTROUBLE	8	0106608 Data Card Fault Two
0106609	Configuration_Fault_01_08	LOCALTROUBLE	8	0106609 ConfigurationFault
0106670	In_Bootloader_01_08	LOCALTROUBLE	8	0106670 Waiting For SDU Download

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0106671	Line_Opened_or_Shorted_Data_Card_1_01_08	LOCALTROUBLE	8	0106671 Open/Short Fault DataCard1
0106672	Map_Fault_Data_Card_1_01_08	LOCALTROUBLE	8	0106672 Map Fault DataCard1
0106673	Mapping_In_Progress_Data_Card_1_01_08	LOCALMONITOR	8	0106673 Mapping In Progress DataCard1
0106674	Mapping_Disbld_Data_Card_1_01_08	LOCALMONITOR	8	0106674 Mapping Disabled DataCard1
0106675	Device_Maint_Alert_Data_Card_1_01_08	LOCALMONITOR	8	0106675 Dev. Maintnc Alert DataCard1
0106676	Unprogrammed_Device_Data_Card_1_01_08	LOCALALARM	8	0106676 Unprogrammed Device DataCard1
0106677	Grnd_Fault_Data_Card_1_01_08	GROUNDFAULT	8	0106677 Ground Fault DataCard1
0106678	Reconstct_Line_Data_Card_1_01_08	LOCALMONITOR	8	0106678 ReconstructingLine DataCard1
0106679	Smoke_Power_Current_Limit_Card_1_01_08	LOCALTROUBLE	8	0106679 Smoke Power Current Limit Card1
0106681	Line_Opened_or_Shorted_Data_Card_2_01_08	LOCALTROUBLE	8	0106681 Open/Short Fault DataCard2
0106682	Map_Fault_Data_Card_2_01_08	LOCALTROUBLE	8	0106682 Map Fault DataCard2
0106683	Mapping_in_Progress_Data_Card_2_01_08	LOCALMONITOR	8	0106683 Mapping In Progress DataCard2
0106684	Mapping_Disbld_Data_Card_2_01_08	LOCALMONITOR	8	0106684 Mapping Disabled DataCard2
0106685	Dev_Maint_Alert_Data_Card_2_01_08	LOCALMONITOR	8	0106685 Dev. Maintnc Alert DataCard2
0106686	Unprogrammed_Device_Data_Card_2_01_08	LOCALALARM	8	0106686 Unprogrammed Device DataCard2
0106687	Grnd_Fault_Data_Card_2_01_08	GROUNDFAULT	8	0106687 Ground Fault DataCard2
0106688	Reconstct_Line_Data_Card_2_01_08	LOCALMONITOR	8	0106688 ReconstructingLine DataCard2
0106689	Smoke_Power_Current_Limit_Card_2_01_08	LOCALTROUBLE	8	0106689 Smoke Power Current Limit Card2
0107000	LOOP_3	3-DSDC	9	
0107001	SMK_2W_ICU_1	SMOKEVfy	9	2 WEST ICU*** SMOKE CORR BY ICU WAITING
0107002	SMK_2W_2	SMOKEVfy	9	2 WEST*** SMOKE CORR BY H.B.O. OFFICE
0107003	SMK_2W_3	SMOKEVfy	9	2 WEST*** SMOKE CORR BY H.B.O. CHAMBR
0107004	SMK_2W_4	SMOKEVfy	9	2 WEST*** SMOKE CORR BY WOUND MNGMT
0107005	SMK_2W_5	SMOKEVfy	9	2 WEST SDS*** SMOKE CORR BY ENDO #3

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0107006	SMK_2w_6	SMOKEVfy	9	2 WEST SDS*** SMOKE CORR BY ENDO CONSULT
0107007	SMK_2w_7	SMOKEVfy	9	2 WEST SDS*** SMOKE CORR BY ENDO #1
0107008	SMK_2w_8	SMOKEVfy	9	2 WEST SDS*** SMOKE CORR BY ENDO #1 DOORS
0107009	SMK_2w_9	SMOKEVfy	9	2 WEST *** SMOKE MAINCORR BY SUPPORT CARE
0107010	SMK_2w_10	SMOKEVfy	9	2 WEST*** SMOKE MAIN CORR BY CATH LAB
0107011	SMK_2w_11_WPRI	SMOKEVfy	9	2 WEST*** SMOKE MAIN CORR ELEV LOBBY
0107012	SMK_2w_12_WPRI	SMOKEVfy	9	2 WEST*** SMOKE MAIN CORR ELEV LOBBY
0107013	SMK_2w_13	SMOKEVfy	9	2 WEST*** SMOKE MAIN CORR BY CARDIAC SVCS
0107014	SMK_2w_14	SMOKEVfy	9	2 WEST*** SMOKE MAIN CORR BY STERILE PROC
0107015	SMK_2w_15	SMOKEVfy	9	2 WEST*** SMOKE STERILE PROCESSING
0107016	SMK_2w_16	SMOKEVfy	9	2 WEST*** SMOKE STERILE PROC.TOWEL RM
0107017	DUCT_3S_17	SMOKEVfy	9	3 SOUTH*** DUCT WAITING RM LAV. EF
0107018	DUCT_3S_18	SMOKEVfy	9	3 SOUTH*** DUCT ROOM 316 LAV EXHAUST
0107019	DUCT_3S_19	SMOKEVfy	9	3 SOUTH*** DUCT ROOM 303 LAV EXHAUST
0107020	DUCT_3S_20	SMOKEVfy	9	3 SOUTH*** DUCT ROOM 305 LAV EXHAUST
0107021	DUCT_3S_21	SMOKEVfy	9	3 SOUTH*** DUCT ROOM 309 LAV EXHAUST
0107022	DUCT_3S_22	SMOKEVfy	9	3 SOUTH*** DUCT ROOM 312 LAV EXHAUST
0107023	DUCT_3S_23	SMOKEVfy	9	3 SOUTH*** DUCT ROOM 315 LAV EXHAUST
0107024	DUCT_3S_24	SMOKEVfy	9	3 SOUTH*** DUCT ROOM 318 LAV EXHAUST
0107025	DUCT_3S_25	SMOKEVfy	9	3 SOUTH*** DUCT ROOM 310 LAV EXHAUST
0107026	DUCT_3S_26	SMOKEVfy	9	3 SOUTH***DUCT AHU-4 M.E.R. #7
0107027	DUCT_3S_27	SMOKEVfy	9	3 SOUTH***DUCT AHU-5 M.E.R. #7
0107028	DUCT_3S_28	SMOKEVfy	9	3 SOUTH***DUCT AHU-6M.E.R. #7
0107029	DUCT_3S_29	SMOKEVfy	9	3 SOUTH***DUCT AHU-6AMER 7 TOP OF COMP RM

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0107030	DUCT_3S_30	SMOKEVFX	9	3 SOUTH***DUCT AHU-7 M.E.R. #7
0107031	DUCT_3S_31	SMOKEVFX	9	3 SOUTH***DUCT AHU-8 M.E.R. #8
0107032	DUCT_3S_32	SMOKEVFX	9	3 SOUTH***DUCT CORR BY STAIR #1
0107033	DUCT_5W_33	SMOKEVFX	9	5 WEST***DUCT EF-6 BY MAIL ROOM
0107034	DUCT_5W_34	SMOKEVFX	9	5 WEST***DUCT EF-6 BY STAIR 5
0107035	DUCT_5W_35	SMOKEVFX	9	5 WEST***DUCT EF-3 CORR BY STAIR 4 #2
0107036	DUCT_5W_36	SMOKEVFX	9	5 WEST***DUCT EF-3 CORR BY STAIR 4
0107037	DUCT_2W_37	SMOKEVFX	9	2 WEST***DUCT EF-6 TRANSFUSION ROOM
0107038	DUCT_1W_SDS_38	SMOKEVFX	9	1 WEST SDS***DUCT EF-3 ELEVATOR LOBBY
0107039	DUCT_1W_39	SMOKEVFX	9	1 WEST***DUCT EF-6 MAIN LOBBY
0107040	DUCT_1W_PHARM_40	SMOKEVFX	9	1 WEST PHARMACY***DUCT EF-6 BY SINK
0107041	DUCT_3W_41	SMOKEVFX	9	3 WEST***DUCT EF-3 CORR BY ROOM 333
0107042	DUCT_3W_42	SMOKEVFX	9	3 WEST***DUCT EF-6 MATERNITY OR #2
0107043	SMK_2W_CCU_43	SMOKEVFX	9	2 WEST CCU***SMOKE BY ANTE ROOM
0107044	SMK_2W_CCU_44	SMOKEVFX	9	2 WEST CCU***SMOKE BY BED #4
0107045	SMK_2W_CCU_45	SMOKEVFX	9	2 WEST CCU***SMOKE BY BED #7
0107046	SMK_2W_CCU_46	SMOKEVFX	9	2 WEST CCU***SMOKE BY BED #10
0107047	SMK_2W_47	SMOKEVFX	9	2 WEST***SMOKE CORRIDOR BY MER 12
0107048	SMK_2W_48	SMOKEVFX	9	2 W***SMOKE RECV CORR BY DECONTAMINATION
0107049	SMK_2W_49	SMOKEVFX	9	2 WEST***SMOKE CORR BY RECV. CORR
0107050	SMK_2W_50	SMOKEVFX	9	2 WEST***SMOKE CORR BY RESPIRATORY THER.
0107051	SMK_2W_51	SMOKEVFX	9	2 WEST***SMOKE CORR BY ECHOCARDIOGRAM
0107052	SMK_2W_52	SMOKEVFX	9	2 WEST***SMOKE IN ECHOCARDIOGRAM
0107053	SMK_2W_53	SMOKEVFX	9	2 WEST***SMOKE RESOURCE MNGMT OFFICE

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0107054	SMK_2W_54	SMOKEVfy	9	2 WEST*** SMOKE RECV CORR ENTRANCE
0107055	SMK_2W_55	SMOKEVfy	9	2 WEST*** SMOKE RECV CORR BY OFFICE
0107056	SMK_2W_56	SMOKEVfy	9	2 WEST*** SMOKE RESP.THERAPY STORAGE
0107057	SMK_2W_57	SMOKEVfy	9	2 WEST*** SMOKE RESOURCE MNGMT OFFICE
0107058	SMK_2W_58_WPRI	SMOKEVfy	9	2 WEST*** SMOKE REAR ELEV. LOBBY
0107059	SMK_2W_CCU_59	SMOKEVfy	9	2 WEST CCU***SMOKE IN ROOM #1
0107060	SMK_2W_CCU_60	SMOKEVfy	9	2 WEST CCU***SMOKE IN ROOM #2
0107061	SMK_2W_CCU_61	SMOKEVfy	9	2 WEST CCU*** SMOKE IN ROOM #3
0107062	SMK_2W_CCU_62	SMOKEVfy	9	2 WEST CCU***SMOKE IN ROOM #4
0107063	SMK_2W_CCU_63	SMOKEVfy	9	2 WEST CCU***SMOKE IN ROOM #5
0107064	SMK_2W_CCU_64	SMOKEVfy	9	2 WEST CCU*** SMOKE IN ROOM #6
0107065	SMK_2W_CCU_65	SMOKEVfy	9	2 WEST CCU*** SMOKE IN ROOM #7
0107066	SMK_2W_CCU_66	SMOKEVfy	9	2 WEST CCU*** SMOKE IN ROOM #8
0107067	SMK_2W_CCU_67	SMOKEVfy	9	2 WEST CCU*** SMOKE IN ROOM #9
0107068	SMK_2W_CCU_68	SMOKEVfy	9	2 WEST CCU*** SMOKE IN ROOM #10
0107069	HEAT_2W_CCU_69	HEAT	9	2 WEST CCU*** HEAT JANITOR CLOSET
0107070	SMK_2W_70	SMOKEVfy	9	2 WEST***SMOKE CORR BY TRANSFUSION RM
0107071	SMK_2W_71	SMOKEVfy	9	2 WEST***SMOKE CORR BY PAIN MNGMNT
0107072	SMK_2W_SDS_72	SMOKEVfy	9	2 WEST SDS***SMOKE BEHIND P.A.T. REG.
0107073	SMK_2W_SDS_73	SMOKEVfy	9	2 WEST SDS***SMOKE CORR BY STAIR #4
0107074	SMK_2W_SDS_74	SMOKEVfy	9	2 WEST SDS***SMOKE P.A.T. LOBBY REAR
0107075	SMK_2W_SDS_75	SMOKEVfy	9	2 WEST SDS*** SMOKE P.A.T. ELEV. LOBBY
0107076	SMK_2W_SDS_76	SMOKEVfy	9	2 WEST SDS***SMOKE CORR BY SDS WAITING
0107077	SMK_2W_SDS_77	SMOKEVfy	9	2 WEST SDS*** SMOKE CORR BY SOIL WK RM

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0107078	SMK_2W_SDS_78	SMOKEVfy	9	2 WEST SDS***SMOKE CORR BY PANTRY
0107079	SMK_2W_SDS_79	SMOKEVfy	9	2 WEST SDS***SMOKE CORR BY BED 1
0107080	SMK_2W_SDS_80	SMOKEVfy	9	2 WEST SDS***SMOKE CORR BY BED 5
0107081	SMK_2W_SDS_81	SMOKEVfy	9	2 WEST SDS***SMOKE CORR BY BED 7
0107082	SMK_2W_SDS_82	SMOKEVfy	9	2 WEST SDS***SMOKE CORR BY BED 9
0107083	SMK_2W_SDS_83	SMOKEVfy	9	2 WEST SDS***SMOKE CORR BY BED 12
0107084	SMK_2W_SDS_84	SMOKEVfy	9	2 WEST SDS***SMOKE CORR BY MINOR RM 3
0107085	SMK_2W_SDS_85	SMOKEVfy	9	2 WEST SDS***SMOKE CORR BY ENDO 4
0107086	SMK_2W_OR_86	SMOKEVfy	9	2 SOUTH OR***SMOKE HOLD AREA BY SDS ENT.
0107087	SMK_2W_SDS_87	SMOKEVfy	9	2 WEST SDS***SMOKE HOUSEKEEPING CLOSET
0107088	SMK_2W_88	SMOKEVfy	9	2 WEST***SMOKE DIABETES MNGMNT OFF.
0107089	HEAT_2W_MER12_89	HEAT	9	2 WEST***HEAT MER 12 ABOVE AHU-18
0107090	HEAT_2W_MER12_90	HEAT	9	2 WEST***HEAT MER 12 ABOVE AHU-19
0107091	HEAT_2W_SDS_MER14_91	HEAT	9	2 WEST SDS***HEAT MER 14 ABOVE AHU-16
0107092	HEAT_2W_SDS_MER14_92	HEAT	9	2 WEST SDS***HEAT MER 14 ABOVE AHU-17
0107093	HEAT_2W_SDS_MER14_93	HEAT	9	2 WEST SDS***HEAT ELEV. MACH. ROOM
0107094	DUCT_5W_MER15_94	SMOKEVfy	9	5 WEST***DUCT AHU21 RMER 15 ABOVE OFFICE W
0107095	DUCT_5W_MER15_95	SMOKEVfy	9	5 WEST***DUCT AHU21 SMER 15 ABOVE OFFICE E
0107096	DUCT_3W_96	SMOKEVfy	9	3 WEST***DUCT AHU21 IN ROOM 334
0107097	DUCT_3W_97	SMOKEVfy	9	3 WEST***DUCT AHU21 CORR BY ADMISSIONS
0107098	DUCT_3W_98	SMOKEVfy	9	3 WEST***DUCT AHU21 IN ROOM 333
0107099	DUCT_5W_99	SMOKEVfy	9	5 WEST***DUCT CORR BY ROOM 540
0107100	DUCT_5W_100	SMOKEVfy	9	5 WEST***DUCT AHU23 CORR BY ROOM 551
0107101	DUCT_5W_101	SMOKEVfy	9	5 WEST***DUCT MER 15 AHU-23 RETURN

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0107102	DUCT_5W_102	SMOKEVfy	9	5 WEST*** DUCT MER 15 AHU-23 SUPPLY
0107103	DUCT_5W_103	SMOKEVfy	9	5 WEST*** DUCT MER 15 AHU-20 SUPPLY
0107104	DUCT_5W_104	SMOKEVfy	9	5 WEST*** DUCT MER 15 AHU-20 RETURN
0107105	DUCT_5W_105	SMOKEVfy	9	5 WEST***DUCT AHU23 STORAGE RM BY 533
0107106	DUCT_5W_106	SMOKEVfy	9	5 WEST***DUCT AHU23 CORR BY ROOM 533 S
0107107	DUCT_4W_107	SMOKEVfy	9	4 WEST***DUCT EF-6 IN ROOM 461
0107108	SMK_2W_108	SMOKEVfy	9	2 WEST*** SMOKE CASE MNGMT REAR OFC
0107126	PULL_2W_126	PULL	9	2 WEST*** PULL CORR BY ICU WAITING
0107127	PULL_2W_127	PULL	9	2 WEST S.D.S.*** PULLCORR BY ENDO #2
0107128	PULL_2W_128	PULL	9	2 WEST*** PULL MAIN CORR BY CATH LAB
0107129	RELAY_129_FOR_40	FANCONTROL	9	RELAY FOR DAMPER CTRLPHARMACY BY SINK
0107130	RELAY_130_FOR_39	FANCONTROL	9	RELAY FOR DAMPER CTRL1W MAIN LOBBY
0107131	RELAY_131_FOR_38	FANCONTROL	9	RELAY FOR DAMPER CTRL1W SDS ELEV LOBBY
0107132	RELAY_132_FOR_37	FANCONTROL	9	RELAY FOR DAMPER CTRL2W TRANSFUSION RM
0107133	PULL_2W_CCU_133	PULL	9	2 WEST CCU*** PULL BY NURSE STATION
0107134	PULL_2W_134	PULL	9	2 WEST*** PULL BY STAIRWELL #8
0107135	PULL_2W_SDS_135	PULL	9	2 WEST SDS*** PULL P.A.T. REG. LOBBY
0107136	PULL_2W_SDS_136	PULL	9	2 WEST SDS*** PULL CORR BY MINOR RM 3
0107137	PULL_2W_MER12_137	PULL	9	2 WEST*** PULL MER 12
0107138	PULL_2W_SDS_MER14_138	PULL	9	2 WEST SDS*** PULL MER 14
0107139	RELAY_139_FOR_98	FANCONTROL	9	RELAY FOR DAMPER CTRL3W ROOM 333 01070098
0107140	RELAY_140_FOR_107	FANCONTROL	9	RELAY FOR DAMPER CTRL6 4W RM 461 0107107
0107141	FLOW_1W_141	WATERFLOW	9	1 WEST*** WATERFLOW STAIR 5 BY SECURITY
0107142	TAMP_1W_142	SUPERVISORY	9	1 WEST***VALVE TAMPERSTAIR 5 BY SECURITY

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0107143	FLOW_2W_143	WATERFLOW	9	2 WEST*** WATERFLOW SWITCH IN STAIR 5
0107144	TAMP_2W_144	SUPERVISORY	9	2 WEST***VALVE TAMPERSTAIR 5 S-2
0107145	TAMP_2W_145	SUPERVISORY	9	2 WEST***VALVE TAMPERSTAIR 5 S-6
0107146	TAMP_2W_SDS_146	SUPERVISORY	9	2 WEST***VALVE TAMPERSDS STAIR 4 S-7
0107147	SPARE_2W_SDS_147	MONITOR	9	SPARE 2W SDS STAIR 4
0107148	TAMP_2W_148	SUPERVISORY	9	2 WEST***VALVE TAMPERSTAIR 6
0107149	SPARE_2W_149	MONITOR	9	SPARE 2W STAIR 6
0107150	FLOW_5W_150	WATERFLOW	9	5 WEST*** WATERFLOW STAIR 5
0107151	TAMP_5W_151	SUPERVISORY	9	5 WEST***VALVE TAMPERSTAIR 5
0107152	FLOW_4W_152	WATERFLOW	9	4 WEST***WATERFLOW STAIR 5
0107153	TAMP_4W_153	SUPERVISORY	9	4 WEST***VALVE TAMPERSTAIR 5
0107154	FLOW_3W_154	WATERFLOW	9	3 WEST***WATERFLOW STAIR 5
0107155	TAMP_3W_155	SUPERVISORY	9	3 WEST***VALVE TAMPERSTAIR 5
0107156	FLOW_5S_156	WATERFLOW	9	5 SOUTH***WATERFLOW STAIRWELL 1
0107157	TAMP_5S_157	SUPERVISORY	9	5 SOUTH***VALVE TAMPERSTAIRWELL 1
0107158	FLOW_4S_158	WATERFLOW	9	4 SOUTH***WATERFLOW STAIRWELL 1
0107159	TAMP_4S_159	SUPERVISORY	9	4 SOUTH***VALVE TAMPERSTAIRWELL 1
0107160	FLOW_3S_160	WATERFLOW	9	3 SOUTH***WATERFLOW STAIRWELL 1
0107161	TAMP_3S_161	SUPERVISORY	9	3 SOUTH***VALVE TAMPERSTAIRWELL 1
0107162	FLOW_2S_162	WATERFLOW	9	2 SOUTH***WATERFLOW STAIRWELL 1
0107163	TAMP_2S_163	SUPERVISORY	9	2 SOUTH***VALVE TAMPERSTAIRWELL 1
0107164	TAMP_2S_BB_164	SUPERVISORY	9	2 SOUTH***VALVE TAMPERIN BLOOD BANK
0107165	GENALARM_3S_165	GENALARM	9	3 SOUTH COMP ROOM*** HALON SYSTEM
0107166	SIG_CKT_2W_W	AUDIBLE	9	2W HORNS CC1 IN 2W TELCO CLST

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0107167	FLOW_6W_167	WATERFLOW	9	6 WEST** FLOW ELEV. SHAFTS
0107168	TAMP_6W_168	SUPERVISORY	9	6 WEST**/VALVE TAMPER ELEV SHAFTS x4
0107600	Annunciator_Supervision_01_09	LOCALTROUBLE	9	0107600 Annunciator Supervision
0107601	Rail_Module_Communications_Fault_01_09	LOCALTROUBLE	9	0107601 Rail Module Communication Fault
0107604	Internal_Fault_01_09	LOCALTROUBLE	9	0107604 Internal Fault
0107605	Database_Supervision_01_09	LOCALTROUBLE	9	0107605 Database Supervision
0107606	Code_Supervision_01_09	LOCALTROUBLE	9	0107606 Code Supervision
0107607	Data_Card_Fault_1_01_09	LOCALTROUBLE	9	0107607 Data Card Fault One
0107608	Data_Card_Fault_2_01_09	LOCALTROUBLE	9	0107608 Data Card Fault Two
0107609	Configuration_Fault_01_09	LOCALTROUBLE	9	0107609 ConfigurationFault
0107670	In_Bootloader_01_09	LOCALTROUBLE	9	0107670 Waiting For SDU Download
0107671	Line_Opened_or_Shorted_Data_Card_1_01_09	LOCALTROUBLE	9	0107671 Open/Short Fault DataCard1
0107672	Map_Fault_Data_Card_1_01_09	LOCALTROUBLE	9	0107672 Map Fault DataCard1
0107673	Mapping_In_Progress_Data_Card_1_01_09	LOCALMONITOR	9	0107673 Mapping In Progress DataCard1
0107674	Mapping_Disbld_Data_Card_1_01_09	LOCALMONITOR	9	0107674 Mapping Disabled DataCard1
0107675	Device_Maint_Alert_Data_Card_1_01_09	LOCALMONITOR	9	0107675 Dev. Maintnc Alert DataCard1
0107676	Unprogrammed_Device_Data_Card_1_01_09	LOCALALARM	9	0107676 Unprogrammed Device DataCard1
0107677	Grnd_Fault_Data_Card_1_01_09	GROUNDFAULT	9	0107677 Ground Fault DataCard1
0107678	Reconstruct_Line_Data_Card_1_01_09	LOCALMONITOR	9	0107678 ReconstructingLine DataCard1
0107679	Smoke_Power_Current_Limit_Card_1_01_09	LOCALTROUBLE	9	0107679 Smoke Power Current Limit Card1
0107681	Line_Opened_or_Shorted_Data_Card_2_01_09	LOCALTROUBLE	9	0107681 Open/Short Fault DataCard2
0107682	Map_Fault_Data_Card_2_01_09	LOCALTROUBLE	9	0107682 Map Fault DataCard2
0107683	Mapping_in_Progress_Data_Card_2_01_09	LOCALMONITOR	9	0107683 Mapping In Progress DataCard2
0107684	Mapping_Disbld_Data_Card_2_01_09	LOCALMONITOR	9	0107684 Mapping Disabled DataCard2

\$DU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0107685	Dev_Maint_Alert_Data_Card_2_01_09	LOCALMONITOR	9	0107685 Dev. Maintnc Alert DataCard2
0107686	Unprogrammed_Device_Data_Card_2_01_09	LOCALALARM	9	0107686 Unprogrammed Device DataCard2
0107687	Grnd_Fault_Data_Card_2_01_09	GROUNDFAULT	9	0107687 Ground Fault DataCard2
0107688	Reconstit_Line_Data_Card_2_01_09	LOCALMONITOR	9	0107688 ReconstructingLine DataCard2
0107689	Smoke_Power_Current_Limit_Card_2_01_09	LOCALTROUBLE	9	0107689 Smoke Power Current Limit Card2
0108000	LOOP_4	3-SDSC	10	
0108001	DUCT_4E_ONC_01	SMOKEVFX	10	4 EAST***DUCT EF-2 CORR BY ROOM 470
0108002	DUCT_4E_ONC_02	SMOKEVFX	10	4 EAST***DUCT EF-1 CORR BY ROOM 470
0108003	DUCT_4W_03	SMOKEVFX	10	4 WEST***DUCT AHU22 IN ENVIRON SVCS RM S
0108004	DUCT_4W_04	SMOKEVFX	10	4 WEST***DUCT AHU22 MAIN CORR BY PHONES R
0108005	DUCT_4W_05	SMOKEVFX	10	4 WEST***DUCT AHU22 CORR BY REHAB DEPT R
0108006	DUCT_4W_06	SMOKEVFX	10	4 WEST***DUCT AHU22 CORR BY DAY ROOM S
0108007	DUCT_4W_07	SMOKEVFX	10	5 WEST***DUCT AHU22R MER 15 ABOVE OFFICE
0108008	DUCT_4W_08	SMOKEVFX	10	5 WEST***DUCT AHU22S MER 15 ABOVE OFFICE
0108009	DUCT_5S_09	SMOKEVFX	10	5 SOUTH*** DUCT EF ROOM 503 LAV
0108010	DUCT_5S_10	SMOKEVFX	10	5 SOUTH*** DUCT EF ROOM 505 LAV
0108011	DUCT_5S_11	SMOKEVFX	10	5 SOUTH*** DUCT CORR BY STAIR 1
0108012	DUCT_5S_12	SMOKEVFX	10	5 SOUTH*** DUCT EF ROOM 508 LAV
0108013	DUCT_5S_13	SMOKEVFX	10	5 SOUTH*** DUCT EF ROOM 510 LAV
0108014	DUCT_5S_14	SMOKEVFX	10	5 SOUTH*** DUCT EF ROOM 512 LAV
0108015	DUCT_5S_15	SMOKEVFX	10	5 SOUTH*** DUCT CORR BY ROOM 505
0108016	DUCT_5S_16	SMOKEVFX	10	5 SOUTH SICU***DUCT IN STAFF LOUNGE EF
0108017	DUCT_5S_17	SMOKEVFX	10	5 SOUTH SICU***DUCT STAFF LAV BY RM 8 EF
0108018	DUCT_5S_18	SMOKEVFX	10	5 SOUTH SICU***DUCT IN MED ROOM EF

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0108019	DUCT_5S_19	SMOKEVFX	10	5 SOUTH SICU***DUCT STAFF LOUNGE AHU-15
0108020	SMK_1S_20	SMOKEVFX	10	1 SOUTH*** SMOKE STAIRWELL #2
0108021	SMK_2S_21	SMOKEVFX	10	2 SOUTH*** SMOKE STAIRWELL #2
0108022	SMK_3S_22	SMOKEVFX	10	3 SOUTH*** SMOKE STAIRWELL #2
0108023	SMK_4S_23	SMOKEVFX	10	4 SOUTH*** SMOKE STAIRWELL #2
0108024	SMK_5S_24	SMOKEVFX	10	5 SOUTH*** SMOKE STAIRWELL #2
0108025	SMK_2S_25	SMOKEVFX	10	2 SOUTH*** SMOKE STAIRWELL #3
0108026	SMK_3S_26	SMOKEVFX	10	3 SOUTH*** SMOKE STAIRWELL #3
0108027	SMK_5S_27	SMOKEVFX	10	5 SOUTH*** SMOKE TOP OF STAIRWELL #5
0108028	SMK_5S_28	SMOKEVFX	10	5 SOUTH*** SMOKE TOP OF STAIRWELL #4
0108029	SMK_4S_29	SMOKEVFX	10	4 SOUTH*** SMOKE TOP OF STAIRWELL #6
0108030	SMK_3S_30	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY STAIR 2
0108031	HEAT_3S_31	HEAT	10	3 SOUTH*** HEAT LINEN CHUTE ROOM
0108032	HEAT_3S_32	HEAT	10	3 SOUTH*** HEAT MAIL ROOM
0108033	SMK_3S_33	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY PEDIATRICS
0108034	SMK_3S_34	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY MER 8
0108035	SMK_3S_35	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY ROOM 318
0108036	SMK_3S_36	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY ROOM 316
0108037	SMK_3S_37	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY ROOM 313
0108038	SMK_3S_38	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY ROOM 312
0108039	SMK_3S_39	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY ROOM 309
0108040	SMK_3S_40	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY ROOM 307
0108041	SMK_3S_41	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY ROOM 303
0108042	SMK_3S_42	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY ROOM 301

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0108043	SMK_3S_43	SMOKEVFX	10	3 SOUTH*** SMOKE CORR BY WAITING RM
0108044	SMK_3S_44	SMOKEVFX	10	3 SOUTH*** SMOKE MAIN CORR BY 3S ENT.
0108045	SMK_3S_45	SMOKEVFX	10	3 SOUTH*** SMOKE TUNNEL BY 3W
0108046	SMK_3S_46_WPRI	SMOKEVFX	10	3 SOUTH*** SMOKE TUNNEL BY 3W DOORS
0108047	SMK_3W_47_WPRI	SMOKEVFX	10	3 WEST*** SMOKE ELEVATOR LOBBY
0108048	SMK_3W_48	SMOKEVFX	10	3 WEST*** SMOKE CORR BY TELCO CLOSET
0108049	SMK_3W_49	SMOKEVFX	10	3 WEST*** SMOKE CORR BY WAITING LNG
0108050	SMK_3W_50	SMOKEVFX	10	3 WEST*** SMOKE IN WAITING LOUNGE
0108051	HEAT_3W_51	HEAT	10	3 WEST*** HEAT IN ELECTRIC CLOSET
0108052	SMK_3W_52	SMOKEVFX	10	3 WEST*** SMOKE IN DOCTORS LOUNGE
0108053	SMK_3W_53	SMOKEVFX	10	3 WEST NUR.***SMOKE BY NURSE STATION
0108054	SMK_3W_54	SMOKEVFX	10	3 WEST NUR.***SMOKE CORR BY NURSERY A
0108055	SMK_3W_55	SMOKEVFX	10	3 WEST NUR.***SMOKE IN NURSERY B
0108056	SMK_3W_56	SMOKEVFX	10	3 WEST NUR.***SMOKE CORR BY ADMISSIONS
0108057	SMK_3W_57	SMOKEVFX	10	3 WEST NUR.***SMOKE IN NURSERY A
0108058	SMK_3W_58	SMOKEVFX	10	3_WEST SRM*** SMOKE CORR BY STAIRWELL 5
0108059	SMK_3W_59	SMOKEVFX	10	3_WEST*** SMOKE CORR BY ROOM 333
0108060	SMK_3W_60	SMOKEVFX	10	3_WEST*** SMOKE CORR BY ROOM 336
0108061	SMK_3W_61	SMOKEVFX	10	3_WEST*** SMOKE OVERFLOW MED ROOM
0108062	SMK_3W_62	SMOKEVFX	10	3_WEST*** SMOKE CORR BY ROOM 338
0108063	SMK_3W_63	SMOKEVFX	10	3_WEST*** SMOKE CORR BY ROOM 340
0108064	SMK_3W_64_RM340	SMOKEVFX	10	3_WEST*** SMOKE IN ROOM 340
0108065	SMK_3W_65_RM339	SMOKEVFX	10	3_WEST*** SMOKE IN ROOM 339
0108066	SMK_3W_66_RM338	SMOKEVFX	10	3_WEST*** SMOKE IN ROOM 338

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0108067	SMK_3W_67_RM337	SMOKEVfy	10	3_WEST*** SMOKE IN ROOM 337
0108068	SMK_3W_68_RM336	SMOKEVfy	10	3_WEST*** SMOKE IN ROOM 336
0108069	SMK_3W_69_RM335	SMOKEVfy	10	3_WEST*** SMOKE IN ROOM 335
0108070	SMK_3W_70_RM334	SMOKEVfy	10	3_WEST*** SMOKE IN ROOM 334
0108071	SMK_3W_71_RM333	SMOKEVfy	10	3_WEST*** SMOKE IN ROOM 333
0108072	SMK_3W_72	SMOKEVfy	10	3_WEST*** SMOKE CORR BY FEMALE LOCKER
0108073	SMK_3W_73	SMOKEVfy	10	3_WEST*** SMOKE CORR BY MALE LOCKER
0108074	SMK_3W_74	SMOKEVfy	10	3_WEST SRM OR***SMK BY C-SECTION 1
0108075	SMK_3W_75	SMOKEVfy	10	3_WEST SRM OR***SMK BY NURSE STATION
0108076	SMK_3W_76	SMOKEVfy	10	3_WEST SRM OR***SMK IN SOILED WORK ROOM
0108077	SMK_3W_77	SMOKEVfy	10	3_WEST SRM OR***SMK BY SOILED WORK ROOM
0108078	SMK_3W_78	SMOKEVfy	10	3_WEST SRM OR***SMK BY MALE LOCKER ROOM
0108079	SMK_3W_SRM_79_RM361	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 361
0108080	SMK_3W_SRM_80_RM362	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 362
0108081	SMK_3W_SRM_81_RM375	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 375
0108082	SMK_3W_SRM_82_RM373	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 373
0108083	SMK_3W_SRM_83_RM371	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 371
0108084	SMK_3W_SRM_84_RM370	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 370
0108085	SMK_3W_SRM_85_RM366	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 366
0108086	SMK_3W_SRM_86_RM367	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 367
0108087	SMK_3W_SRM_87_RM368	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 368
0108088	SMK_3W_SRM_88_RM369	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 369
0108089	SMK_3W_SRM_89_RM374	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 374
0108090	SMK_3W_SRM_90_RM372	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 372

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0108091	SMK_3W_SRM_91_RM363	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 363
0108092	SMK_3W_SRM_92_RM364	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 364
0108093	SMK_3W_SRM_93_RM365	SMOKEVfy	10	3_WEST_SRM*** SMOKE IN ROOM 365
0108094	SMK_3W_SRM_94	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY ROOM 361
0108095	SMK_3W_SRM_95	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY ROOM 375
0108096	SMK_3W_SRM_96	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY ROOM 373
0108097	SMK_3W_SRM_97	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY ROOM 371
0108098	SMK_3W_SRM_98	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY STAFF LAV.
0108099	SMK_3W_SRM_99	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BTWN 374 & 363
0108100	SMK_3W_SRM_100	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY ROOM 363
0108101	SMK_3W_SRM_101	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY PANTRY
0108102	SMK_3W_SRM_102	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY ROOM 368
0108103	SMK_3W_SRM_103	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY ROOM 370
0108104	SMK_3W_SRM_104	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY MANAGER OFF.
0108105	SMK_3W_SRM_105	SMOKEVfy	10	3_WEST_SRM*** SMOKE CORR BY ON-CALL RM
0108106	SMK_3W_SRM_106	SMOKEVfy	10	3_WEST_SRM*** SMOKE STORAGE RM N. DET.
0108107	SMK_3W_SRM_107	SMOKEVfy	10	3_WEST_SRM*** SMOKE STORAGE RM S. DET.
0108108	SMK_3W_SC_108	SMOKEVfy	10	3_WEST_SCN*** SMOKE CORR BY DR. OFFICE
0108109	SMK_3W_SC_109	SMOKEVfy	10	3_WEST_SCN*** SMOKE CORR BY NURSERIES
0108110	SMK_3W_SC_110	SMOKEVfy	10	3_WEST_SCN*** SMOKE IN STORAGE ROOM
0108111	SMK_3W_SC_111	SMOKEVfy	10	3_WEST_SCN*** SMOKE CORR BY I.C. NURSERY
0108112	HEAT_3W_SC_112	HEAT	10	3_WEST_SCN*** HEAT HOUSEKEEPING CLOSET
0108113	SMK_3W_SC_113_RM344	SMOKEVfy	10	3_WEST_SCN*** SMOKE IN I.C. NURSERY
0108114	SMK_3W_SC_114_RM343	SMOKEVfy	10	3_WEST_SCN*** SMOKE IN C.C. NURSERY

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0108115	SMK_3W_SC_115_RM341	SMOKEVFX	10	3 WEST SCN*** SMOKE IN ISO NURSERY #1
0108116	SMK_3W_SC_116_RM342	SMOKEVFX	10	3 WEST SCN*** SMOKE IN ISO NURSERY #2
0108117	DUCT_5S_117	SMOKEVFX	10	5 SOUTH*** DUCT IN MER 10
0108118	SMK_3S_118_SPR1	SMOKEVFX	10	3 SOUTH*** SMOKE ELEV LOBBY
0108126	RELAY_126_FOR_16	FANCONTROL	10	RELAY FOR DAMPER CTRL5S 01080016
0108127	RELAY_127_FOR_19	FANCONTROL	10	RELAY FOR DAMPER CTRL5S 01080019 AHU-15
0108128	PULL_3S_128	PULL	10	3 SOUTH*** PULL BY STAIRWELL #2
0108129	PULL_3S_129	PULL	10	3 SOUTH*** PULL AT NURSE STATION
0108130	PULL_3S_130	PULL	10	3 SOUTH*** PULL BY STAIRWELL #1
0108131	PULL_3W_131	PULL	10	3 WEST NUR***PULL BY NURSE STATION
0108132	PULL_3W_132	PULL	10	3 WEST SRM*** PULL BY STAIRWELL 5
0108133	PULL_3W_133	PULL	10	3 WEST*** PULL BY STAIRWELL 4
0108134	PULL_3W_SRM_134	PULL	10	3 WEST SRM*** PULL NURSE STATION
0108135	PULL_3W_SRM_135	PULL	10	3 WEST SRM*** PULL BY STAIRWELL 6
0108136	PULL_3W_SC_136	PULL	10	3 WEST SCN*** PULL NURSE STATION
0108137	PULL_3S_137	PULL	10	3 SOUTH*** PULL MECH RM ENTRANCE
0108138	PULL_3S_138	PULL	10	3 SOUTH*** PULL MECH RM REAR EXIT
0108139	HEAT_3S_139	HEAT	10	3 SOUTH*** HEAT MECH RM ABOVE RAF-4
0108140	HEAT_3S_140	HEAT	10	3 SOUTH*** HEAT MECH RM ABOVE RAF-6
0108141	HEAT_3S_141	HEAT	10	3 SOUTH*** HEAT MECH RM ABOVE AHU-4
0108142	HEAT_3S_142	HEAT	10	3 SOUTH*** HEAT MECH RM ABOVE AHU-5
0108143	HEAT_3S_143	HEAT	10	3 SOUTH*** HEAT MECH RM ABOVE COMP RM
0108144	HEAT_3S_144	HEAT	10	3 SOUTH*** HEAT MECH RM ABOVE AHU-7
0108145	3W_CR_145_RM361	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 361

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0108146	3W_CR_146_RM362	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 362
0108147	3W_CR_147_RM363	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 363
0108148	3W_CR_148_RM364	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 364
0108149	3W_CR_149_RM365	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 365
0108150	3W_CR_150_RM366	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 366
0108151	3W_CR_151_RM367	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 367
0108152	3W_CR_152_RM368	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 368
0108153	3W_CR_153_RM369	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 369
0108154	3W_CR_154_RM370	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 370
0108155	3W_CR_155_RM371	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 371
0108156	3W_CR_156_RM372	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 372
0108157	3W_CR_157_RM373	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 373
0108158	3W_CR_158_RM374	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 374
0108159	3W_CR_159_RM375	NONSUPERVISEDOUTPUT	10	3W SRM RELAY RM 375
0108160	3W_CT_160	POWER	10	3W SRM POWER FAIL ANNUNCIATOR POWER
0108161	3W_CR_161_RM342	NONSUPERVISEDOUTPUT	10	3W S.C. RELAY ISO #2
0108162	3W_CR_162_RM341	NONSUPERVISEDOUTPUT	10	3W S.C. RELAY ISO #1
0108163	3W_CR_163_RM343	NONSUPERVISEDOUTPUT	10	3W S.C. RELAY CONTINUING CARE
0108164	3W_CR_164_RM344	NONSUPERVISEDOUTPUT	10	3W S.C. RELAY INT. CARE
0108165	3W_CT_165	POWER	10	3W S.C. POWER FAIL ANNUNCIATOR POWER
0108166	3W_CR_166_RM336	NONSUPERVISEDOUTPUT	10	3W CENTER RELAY RM 336
0108167	3W_CR_167_RM337	NONSUPERVISEDOUTPUT	10	3W CENTER RELAY RM 337
0108168	3W_CR_168_RM338	NONSUPERVISEDOUTPUT	10	3W CENTER RELAY RM 338
0108169	3W_CR_169_RM339	NONSUPERVISEDOUTPUT	10	3W CENTER RELAY RM 339

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0108170	3W_CR_170_RM340	NONSUPERVISEDOUTPUT	10	3W CENTER RELAY RM 340
0108171	3W_CR_171_RM333	NONSUPERVISEDOUTPUT	10	3W CENTER RELAY RM 333
0108172	3W_CR_172_RM334	NONSUPERVISEDOUTPUT	10	3W CENTER RELAY RM 334
0108173	3W_CR_173_RM335	NONSUPERVISEDOUTPUT	10	3W CENTER RELAY RM 335
0108174	3W_CT_174	POWER	10	3W CNTR POWER FAIL ANNUNCIATOR POWER
0108175	RELAY_SOUTH_SHUTDOWN	FANCONTROL	10	SOUTH WING SHUTDOWN RELAY ABV BOIL RM OFF
0108600	Annunciator_Supervision_01_10	LOCALTROUBLE	10	0108600 Annunciator Supervision
0108601	Rail_Module_Communications_Fault_01_10	LOCALTROUBLE	10	0108601 Rail Module Communication Fault
0108604	Internal_Fault_01_10	LOCALTROUBLE	10	0108604 Internal Fault
0108605	Database_Supervision_01_10	LOCALTROUBLE	10	0108605 Database Supervision
0108606	Code_Supervision_01_10	LOCALTROUBLE	10	0108606 Code Supervision
0108607	Data_Card_Fault_1_01_10	LOCALTROUBLE	10	0108607 Data Card Fault One
0108608	Data_Card_Fault_2_01_10	LOCALTROUBLE	10	0108608 Data Card Fault Two
0108609	Configuration_Fault_01_10	LOCALTROUBLE	10	0108609 Configuration Fault
0108670	In_Bootloader_01_10	LOCALTROUBLE	10	0108670 Waiting For SDU Download
0108671	Line_Opened_or_Shorted_Data_Card_1_01_10	LOCALTROUBLE	10	0108671 Open/Short Fault DataCard1
0108672	Map_Fault_Data_Card_1_01_10	LOCALTROUBLE	10	0108672 Map Fault DataCard1
0108673	Mapping_In_Progress_Data_Card_1_01_10	LOCALMONITOR	10	0108673 Mapping In Progress DataCard1
0108674	Mapping_Disbld_Data_Card_1_01_10	LOCALMONITOR	10	0108674 Mapping Disabled DataCard1
0108675	Device_Maint_Alert_Data_Card_1_01_10	LOCALMONITOR	10	0108675 Dev. Maintnc Alert DataCard1
0108676	Unprogrammed_Device_Data_Card_1_01_10	LOCALALARM	10	0108676 Unprogrammed Device DataCard1
0108677	Grnd_Fault_Data_Card_1_01_10	GROUNDFAULT	10	0108677 Ground Fault DataCard1
0108678	Reconstict_Line_Data_Card_1_01_10	LOCALMONITOR	10	0108678 Reconstructing Line DataCard1
0108679	Smoke_Power_Current_Limit_Card_1_01_10	LOCALTROUBLE	10	0108679 Smoke Power Current Limit Card1

\$DU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0108681	Line_Opened_or_Shorted_Data_Card_2_01_10	LOCALTROUBLE	10	0108681 Open/Short Fault DataCard2
0108682	Map_Fault_Data_Card_2_01_10	LOCALTROUBLE	10	0108682 Map Fault DataCard2
0108683	Mapping_in_Progress_Data_Card_2_01_10	LOCALMONITOR	10	0108683 Mapping In Progress DataCard2
0108684	Mapping_Disbld_Data_Card_2_01_10	LOCALMONITOR	10	0108684 Mapping Disabled DataCard2
0108685	Dev_Maint_Alert_Data_Card_2_01_10	LOCALMONITOR	10	0108685 Dev. Maintnc Alert DataCard2
0108686	Unprogrammed_Device_Data_Card_2_01_10	LOCALALARM	10	0108686 Unprogrammed Device DataCard2
0108687	Grnd_Fault_Data_Card_2_01_10	GROUNDFAULT	10	0108687 Ground Fault DataCard2
0108688	Reconstct_Line_Data_Card_2_01_10	LOCALMONITOR	10	0108688 Reconstructing Line DataCard2
0108689	Smoke_Power_Current_Limit_Card_2_01_10	LOCALTROUBLE	10	0108689 Smoke Power Current Limit Card2
0109000	LOOP_5	3-SDSC	11	
0109001	SMK_4E_ONC_01_RM461	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 461
0109002	SMK_4E_ONC_02_RM462	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 462
0109003	SMK_4E_ONC_03_RM463	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 463
0109004	SMK_4E_ONC_04_RM464	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 464
0109005	SMK_4E_ONC_05_RM465	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 465
0109006	SMK_4E_ONC_06_RM466	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 466
0109007	SMK_4E_ONC_07_RM468	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 468
0109008	SMK_4E_ONC_08_RM469	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 469
0109009	SMK_4E_ONC_09_RM470	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 470
0109010	SMK_4E_ONC_10_RM471	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 471
0109011	SMK_4E_ONC_11_RM472	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 472
0109012	SMK_4E_ONC_12_RM473	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 473
0109013	SMK_4E_ONC_13_RM474	SMOKEVFX	11	4_EAST_ONC***SMOKE IN ROOM 474
0109014	SMK_4E_ONC_14	SMOKEVFX	11	4_EAST_ONC***SMOKE CORR BY CONSULT RM

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0109015	SMK_4E_ONC_15	SMOKEVFX	11	4_EAST_ONC*** SMOKE CORR BY CLEAN WORK RM
0109016	SMK_4E_ONC_16	SMOKEVFX	11	4_EAST_ONC*** SMOKE CORR BY ROOM 473
0109017	SMK_4E_ONC_17	SMOKEVFX	11	4_EAST_ONC*** SMOKE CORR BY ROOM 470
0109018	SMK_4E_ONC_18	SMOKEVFX	11	4_EAST_ONC*** SMOKE CORR BY ROOM 468
0109019	SMK_4E_ONC_19	SMOKEVFX	11	4_EAST_ONC*** SMOKE CORR BY AMB SVCS
0109020	SMK_4E_ONC_20	SMOKEVFX	11	4_EAST_ONC*** SMOKE CORR BY ROOM 465
0109021	SMK_4E_ONC_21	SMOKEVFX	11	4_EAST_ONC*** SMOKE CORR BY ROOM 463
0109022	SMK_4E_ONC_22	SMOKEVFX	11	4_EAST_ONC*** SMOKE CORR BY ROOM 461
0109023	SMK_4W_23	SMOKEVFX	11	4_WEST*** SMOKE MAIN CORR BY S WING
0109024	SMK_4W_24	SMOKEVFX	11	4_WEST*** SMOKE MAIN CORR N OF ELEV
0109025	SMK_4W_25_WPRI	SMOKEVFX	11	4_WEST*** SMOKE ELEV LOBBY N DET.
0109026	SMK_4W_26_WPRI	SMOKEVFX	11	4_WEST*** SMOKE ELEV LOBBY S DET.
0109027	SMK_4W_27	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ELEC ROOM
0109028	SMK_4W_28	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ENVIRON SVCS
0109029	SMK_4W_29	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ROOM 431
0109030	SMK_4W_30	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ROOM 433
0109031	SMK_4W_31	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ROOM 436
0109032	SMK_4W_32	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ROOM 438
0109033	SMK_4W_33	SMOKEVFX	11	4_WEST*** SMOKE CORR BY STAIR 4
0109034	SMK_4W_34	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ROOM 442
0109035	SMK_4W_35	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ROOM 444
0109036	SMK_4W_36	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ROOM 446
0109037	SMK_4W_37	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ROOM 449
0109038	SMK_4W_38	SMOKEVFX	11	4_WEST*** SMOKE CORR BY ROOM 451

\$DU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message	
0109039	SMK_4W_39	SMOKEVfy	11	4_WEST*** SMOKE	CORR BY STAIR 5
0109040	SMK_4W_40	SMOKEVfy	11	4_WEST*** SMOKE	CORR BY DAY ROOM
0109041	SMK_4W_41	SMOKEVfy	11	4_WEST*** SMOKE	CORR BY PAY PHONES
0109042	HEAT_4W_42	HEAT	11	4_WEST*** HEAT	IN ELECTRIC CLOSET
0109043	SMK_4W_43_RM431	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 431
0109044	SMK_4W_44_RM432	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 432
0109045	SMK_4W_45_RM433	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 433
0109046	SMK_4W_46_RM434	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 434
0109047	SMK_4W_47_RM435	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 435
0109048	SMK_4W_48_RM436	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 436
0109049	SMK_4W_49_RM437	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 437
0109050	SMK_4W_50_RM438	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 438
0109051	SMK_4W_51_RM439	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 439
0109052	SMK_4W_52_RM440	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 440
0109053	SMK_4W_53_RM441	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 441
0109054	SMK_4W_54_RM442	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 442
0109055	SMK_4W_55_RM443	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 443
0109056	SMK_4W_56_RM444	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 444
0109057	SMK_4W_57_RM445	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 445
0109058	SMK_4W_58_RM446	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 446
0109059	SMK_4W_59_RM447	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 447
0109060	SMK_4W_60_RM448	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 448
0109061	SMK_4W_61_RM449	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 449
0109062	SMK_4W_62_RM450	SMOKEVfy	11	4_WEST*** SMOKE	IN ROOM 450

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0109063	SMK_4W_63_RM451	SMOKEVfy	11	4_WEST*** SMOKE IN ROOM 451
0109064	SMK_4W_64_RM452	SMOKEVfy	11	4_WEST*** SMOKE IN ROOM 452
0109065	SMK_4W_65_RM453	SMOKEVfy	11	4_WEST*** SMOKE IN ROOM 453
0109066	SMK_4S_66	SMOKEVfy	11	4_SOUTH*** SMOKE STORAGE BY TELCO CLST
0109067	HEAT_4S_67	HEAT	11	4_SOUTH*** HEAT LINEN CHUTE ROOM
0109068	HEAT_4S_68	HEAT	11	4_SOUTH*** HEAT RADIOLOGY STORAGE
0109069	SMK_4S_69	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY ELEV LOBBY
0109070	SMK_4S_70	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY MER 9
0109071	SMK_4S_71	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY ENVIRON CLST
0109072	SMK_4S_72	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY HOME TRAINING
0109073	SMK_4S_73	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY HOME TRAINING
0109074	SMK_4S_74	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY CHAIR 7
0109075	SMK_4S_75	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY BIOMED
0109076	SMK_4S_76	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY RE-USE RM
0109077	SMK_4S_77	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY BED 18
0109078	SMK_4S_78	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY EXAM ROOM
0109079	SMK_4S_79	SMOKEVfy	11	4_SOUTH*** SMOKE CORR BY WAITING RM
0109080	DUCT_4S_80	SMOKEVfy	11	4_SOUTH*** DUCT MER 9
0109081	DUCT_4S_81	SMOKEVfy	11	4_SOUTH*** DUCT WAITING ROOM LAV EF
0109082	DUCT_4S_82	SMOKEVfy	11	4_SOUTH*** DUCT STAFF LOUNGE LAV EF
0109083	DUCT_4S_83	SMOKEVfy	11	4_SOUTH*** DUCT BIO-MED LAV EF
0109084	DUCT_4S_84	SMOKEVfy	11	4_SOUTH*** DUCT EF DIALYSIS OFFICE LAV
0109085	DUCT_4S_85	SMOKEVfy	11	4_SOUTH*** DUCT CORR BY STAIR 1
0109086	DUCT_4S_86	SMOKEVfy	11	4_SOUTH*** DUCT CONF RM LAV EF

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0109087	SMK_4S_87_SPRI	SMOKEVFX	11	4 SOUTH*** SMOKE ELEV.LOBBY
0109126	PULL_4E_ONC_126	PULL	11	4_EAST_ONC*** PULL BY NURSE STATION
0109127	PULL_4E_ONC_127	PULL	11	4_EAST_ONC*** PULL BY STAIRWELL 6
0109128	PULL_4W_128	PULL	11	4_WEST*** PULL AT NURSE STATION
0109129	PULL_4W_129	PULL	11	4_WEST*** PULL BY STAIR 4
0109130	PULL_4W_130	PULL	11	4_WEST*** PULL BY STAIR 5
0109131	PULL_4S_131	PULL	11	4 SOUTH*** PULL BY STAIRWELL 2
0109132	PULL_4S_132	PULL	11	4 SOUTH*** PULL BY STAIRWELL 1
0109133	PULL_4S_133	PULL	11	4 SOUTH*** PULL NURSE STATION
0109134	4W_CR_134_RM431	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_431
0109135	4W_CR_135_RM432	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_432
0109136	4W_CR_136_RM433	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_433
0109137	4W_CR_137_RM434	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_434
0109138	4W_CR_138_RM435	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_435
0109139	4W_CR_139_RM436	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_436
0109140	4W_CR_140_RM437	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_437
0109141	4W_CR_141_RM438	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_438
0109142	4W_CR_142_RM439	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_439
0109143	4W_CR_143_RM440	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_440
0109144	4W_CR_144_RM441	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_441
0109145	4W_CR_145_RM442	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_442
0109146	4W_CR_146_RM443	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_443
0109147	4W_CR_147_RM444	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_444
0109148	4W_CR_148_RM445	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_445

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cabi_MAIN_PANEL LRM: <All>

Logical Address	Label	Device Type	Slot Position	Message
0109149	4W_CR_149_RM446	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_446
0109150	4W_CR_150_RM447	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_447
0109151	4W_CR_151_RM448	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_448
0109152	4W_CR_152_RM449	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_449
0109153	4W_CR_153_RM450	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_450
0109154	4W_CR_154_RM451	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_451
0109155	4W_CR_155_RM452	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_452
0109156	4W_CR_156_RM453	NONSUPERVISEDOUTPUT	11	4W_RELAY_RM_453
0109157	4W_CT_157	POWER	11	4W_POWER_FAIL ANNUNCIATOR POWER
0109158	4E_CR_158_RM461	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_461
0109159	4E_CR_159_RM462	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_462
0109160	4E_CR_160_RM463	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_463
0109161	4E_CR_161_RM464	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_464
0109162	4E_CR_162_RM465	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_465
0109163	4E_CR_163_RM466	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_466
0109164	4E_CR_164_RM467	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_467
0109165	4E_CR_165_RM468	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_468
0109166	4E_CR_166_RM469	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_469
0109167	4E_CR_167_RM470	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_470
0109168	4E_CR_168_RM471	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_471
0109169	4E_CR_169_RM472	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_472
0109170	4E_CR_170_RM473	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_473
0109171	4E_CR_171_RM474	NONSUPERVISEDOUTPUT	11	4E_RELAY_RM_474
0109172	4E_CT_172	POWER	11	4E_POWER_FAIL ANNUNCIATOR POWER

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0109600	Annunciator_Supervision_01_11	LOCALTROUBLE	11	0109600 Annunciator Supervision
0109601	Rail_Module_Communications_Fault_01_11	LOCALTROUBLE	11	0109601 Rail Module Communication Fault
0109604	Internal_Fault_01_11	LOCALTROUBLE	11	0109604 Internal Fault
0109605	Database_Supervision_01_11	LOCALTROUBLE	11	0109605 Database Supervision
0109606	Code_Supervision_01_11	LOCALTROUBLE	11	0109606 Code Supervision
0109607	Data_Card_Fault_1_01_11	LOCALTROUBLE	11	0109607 Data Card Fault One
0109608	Data_Card_Fault_2_01_11	LOCALTROUBLE	11	0109608 Data Card Fault Two
0109609	Configuration_Fault_01_11	LOCALTROUBLE	11	0109609 ConfigurationFault
0109670	In_Bootloader_01_11	LOCALTROUBLE	11	0109670 Waiting For SDU Download
0109671	Line_Opened_or_Shorted_Data_Card_1_01_11	LOCALTROUBLE	11	0109671 Open/Short Fault DataCard1
0109672	Map_Fault_Data_Card_1_01_11	LOCALTROUBLE	11	0109672 Map Fault DataCard1
0109673	Mapping_In_Progress_Data_Card_1_01_11	LOCALMONITOR	11	0109673 Mapping In Progress DataCard1
0109674	Mapping_Disbld_Data_Card_1_01_11	LOCALMONITOR	11	0109674 Mapping Disabled DataCard1
0109675	Device_Maint_Alert_Data_Card_1_01_11	LOCALMONITOR	11	0109675 Dev. Maintnc Alert DataCard1
0109676	Unprogrammed_Device_Data_Card_1_01_11	LOCALALARM	11	0109676 Unprogrammed Device DataCard1
0109677	Grnd_Fault_Data_Card_1_01_11	GROUNDFAULT	11	0109677 Ground Fault DataCard1
0109678	Reconstct_Line_Data_Card_1_01_11	LOCALMONITOR	11	0109678 ReconstructingLine DataCard1
0109679	Smoke_Power_Current_Limit_Card_1_01_11	LOCALTROUBLE	11	0109679 Smoke Power Current Limit Card1
0109681	Line_Opened_or_Shorted_Data_Card_2_01_11	LOCALTROUBLE	11	0109681 Open/Short Fault DataCard2
0109682	Map_Fault_Data_Card_2_01_11	LOCALTROUBLE	11	0109682 Map Fault DataCard2
0109683	Mapping_in_Progress_Data_Card_2_01_11	LOCALMONITOR	11	0109683 Mapping In Progress DataCard2
0109684	Mapping_Disbld_Data_Card_2_01_11	LOCALMONITOR	11	0109684 Mapping Disabled DataCard2
0109685	Dev_Maint_Alert_Data_Card_2_01_11	LOCALMONITOR	11	0109685 Dev. Maintnc Alert DataCard2
0109686	Unprogrammed_Device_Data_Card_2_01_11	LOCALALARM	11	0109686 Unprogrammed Device DataCard2

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0109687	Grnd_Fault_Data_Card_2_01_11	GROUNDFAULT	11	0109687 Ground Fault DataCard2
0109688	Reconstruct_Line_Data_Card_2_01_11	LOCALMONITOR	11	0109688 ReconstructingLine DataCard2
0109689	Smoke_Power_Current_Limit_Card_2_01_11	LOCALTROUBLE	11	0109689 Smoke Power Current Limit Card2
0110000	LOOP_6	3-DSDC	12	
0110001	SMK_5S_01	SMOKEVFX	12	5_SOUTH*** SMOKE CORR BY TELCO CLOSET
0110002	SMK_5S_02	SMOKEVFX	12	5_SOUTH*** SMOKE CORR BY ELEV LOBBY
0110003	HEAT_5S_03	HEAT	12	5_SOUTH*** HEAT HOUSEKEEPING CLOSET
0110004	HEAT_5S_04	HEAT	12	5_SOUTH*** HEAT LINEN CHUTE ROOM
0110005	SMK_5S_05	SMOKEVFX	12	5_SOUTH*** SMOKE CORR BY MER 10
0110006	SMK_5S_06	SMOKEVFX	12	5_SOUTH*** SMOKE CORR BY PUBLIC LAV
0110007	SMK_5S_07	SMOKEVFX	12	5_SOUTH*** SMOKE CORR BY WAITING RM
0110008	SMK_5S_08	SMOKEVFX	12	5_SOUTH*** SMOKE CORR BY ROOM 503
0110009	SMK_5S_09	SMOKEVFX	12	5_SOUTH*** SMOKE CORR BY SHOWER ROOM
0110010	SMK_5S_10	SMOKEVFX	12	5_SOUTH*** SMOKE CORR BY ROOM 508
0110011	SMK_5S_11	SMOKEVFX	12	5_SOUTH*** SMOKE CORR BY ROOM 513
0110012	SMK_5S_SICU_12	SMOKEVFX	12	5_SOUTH SICU***SMOKE CORR BY ROOM 1
0110013	SMK_5S_SICU_13	SMOKEVFX	12	5_SOUTH SICU***SMOKE CORR BY MED ROOM
0110014	SMK_5S_SICU_14	SMOKEVFX	12	5_SOUTH SICU***SMOKE IN ROOM 7
0110015	SMK_5S_SICU_15	SMOKEVFX	12	5_SOUTH SICU***SMOKE IN ROOM 8
0110016	SMK_5W_16	SMOKEVFX	12	5 WEST*** SMOKE TUNNEL BY SOUTH WING
0110017	SMK_5W_17	SMOKEVFX	12	5 WEST*** SMOKE TUNNEL CENTER DET.
0110018	SMK_5W_18	SMOKEVFX	12	5 WEST*** SMOKE TUNNEL BY W. ELEV.
0110019	SMK_5W_19_WPRI	SMOKEVFX	12	5 WEST*** SMOKE ELEV LOBBY NORTH DET.
0110020	SMK_5W_20_WPRI	SMOKEVFX	12	5 WEST*** SMOKE ELEV LOBBY SOUTH DET.

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0110021	SMK_5W_21	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ELEC. ROOM
0110022	HEAT_5W_22	HEAT	12	5 WEST*** HEAT IN ELECTRIC ROOM
0110023	SMK_5W_23	SMOKEVFX	12	5 WEST*** SMOKE CORR BY MER 15
0110024	SMK_5W_24	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 531
0110025	SMK_5W_25	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 533
0110026	SMK_5W_26	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 534
0110027	SMK_5W_27	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 537
0110028	SMK_5W_28	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 538
0110029	SMK_5W_29	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 541
0110030	SMK_5W_30	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 543
0110031	SMK_5W_31	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 546
0110032	SMK_5W_32	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 549
0110033	SMK_5W_33	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 551
0110034	SMK_5W_34	SMOKEVFX	12	5 WEST*** SMOKE CORR BY ROOM 552
0110035	SMK_5W_35	SMOKEVFX	12	5 WEST*** SMOKE CORR BY STAIR 5
0110036	SMK_5W_36	SMOKEVFX	12	5 WEST*** SMOKE CORR BY MAIL ROOM
0110037	SMK_5W_37	SMOKEVFX	12	5 WEST*** SMOKE CORR BY DAY ROOM
0110038	SMK_5W_38_RM531	SMOKEVFX	12	5 WEST*** SMOKE IN ROOM 531
0110039	SMK_5W_39_RM532	SMOKEVFX	12	5 WEST*** SMOKE IN ROOM 532
0110040	SMK_5W_40_RM533	SMOKEVFX	12	5 WEST*** SMOKE IN ROOM 533
0110041	SMK_5W_41_RM534	SMOKEVFX	12	5 WEST*** SMOKE IN ROOM 534
0110042	SMK_5W_42_RM535	SMOKEVFX	12	5 WEST*** SMOKE IN ROOM 535
0110043	SMK_5W_43_RM536	SMOKEVFX	12	5 WEST*** SMOKE IN ROOM 536
0110044	SMK_5W_44_RM537	SMOKEVFX	12	5 WEST*** SMOKE IN ROOM 537

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0110045	SMK_5W_45_RM538	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 538
0110046	SMK_5W_46_RM539	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 539
0110047	SMK_5W_47_RM540	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 540
0110048	SMK_5W_48_RM541	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 541
0110049	SMK_5W_49_RM542	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 542
0110050	SMK_5W_50_RM543	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 543
0110051	SMK_5W_51_RM544	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 544
0110052	SMK_5W_52_RM545	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 545
0110053	SMK_5W_53_RM546	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 546
0110054	SMK_5W_54_RM547	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 547
0110055	SMK_5W_55_RM548	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 548
0110056	SMK_5W_56_RM549	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 549
0110057	SMK_5W_57_RM550	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 550
0110058	SMK_5W_58_RM551	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 551
0110059	SMK_5W_59_RM552	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 552
0110060	SMK_5W_60_RM553	SMOKEVFX	12	5_WEST*** SMOKE IN ROOM 553
0110061	HEAT_5W_61	HEAT	12	5_WEST*** HEAT HOUSEKEEPING CLOSET
0110062	HEAT_5W_MER15_62	HEAT	12	5_WEST*** HEAT MER15 BY ROOF HATCH
0110063	HEAT_5W_MER15_63	HEAT	12	5_WEST*** HEAT MER15 BY MCC-W5-1
0110064	HEAT_5W_MER15_64	HEAT	12	5_WEST*** HEAT MER15 HOUSEKEEPING STORAGE
0110065	HEAT_5W_MER15_65	HEAT	12	5_WEST*** HEAT MER15 TOP OF AHU-21
0110066	HEAT_5W_MER15_66	HEAT	12	5_WEST*** HEAT MER15 TOP OF AHU-23
0110067	SMK_5W_67	SMOKEVFX	12	5_WEST*** SMOKE CENTER OF TUNNEL
0110068	SMK_5W_68	SMOKEVFX	12	5_WEST*** SMOKE CORR BY ROOM 544

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0110069	SMK_6W_69_WPRI	SMOKEVFX	12	W. ELEV SHAFT***SMK CAR 5 TOP OF SHAFT
0110070	SMK_6W_70_WPRI	SMOKEVFX	12	W. ELEV SHAFT***SMK CAR 6 TOP OF SHAFT
0110071	SMK_7W_71_WPRI	SMOKEVFX	12	7W MACHINE ROOM***SMK ELEV. MACHINE ROOM
0110072	SMK_6W_72_WPRI	SMOKEVFX	12	6 WEST*** SMOKE ELEV. LOBBY
0110073	HEAT_7W_73_WSHUNT	HEAT	12	7 WEST*** HEAT ELEV. MACHINE ROOM
0110074	SMK_5S_74_SPRI	SMOKEVFX	12	5 SOUTH*** SMOKE ELEV. LOBBY
0110075	SMK_5S_75	SMOKEVFX	12	6 SOUTH*** SMOKE PENTHOUSE
0110076	SMK_6S_76_SPRI	SMOKEVFX	12	6 SOUTH*** SMOKE ELEV. MACH. RM. F
0110077	SMK_6S_77_SPRI	SMOKEVFX	12	6 SOUTH*** SMOKE ELEV MACH RM R
0110078	SMK_6S_78	SMOKEVFX	12	6 SOUTH*** SMOKE SECURITY MGR OFFICE
0110079	SMK_6W_79_WPRI	SMOKEVFX	12	W. ELEV SHAFT***SMK CAR 4 TOP OF SHAFT
0110126	PULL_5S_126	PULL	12	5_SOUTH*** PULL AT NURSE STATION
0110127	PULL_5S_127	PULL	12	5_SOUTH*** PULL BY STAIRWELL 1
0110128	PULL_5S_128	PULL	12	5_SOUTH*** PULL BY STAIRWELL 2
0110129	PULL_5W_129	PULL	12	5 WEST*** PULL BY STAIRWELL 4
0110130	PULL_5W_130	PULL	12	5 WEST*** PULL AT NURSE STATION
0110131	PULL_5W_131	PULL	12	5 WEST*** PULL CORR BY DAY ROOM
0110132	HEAT_5W_MER15_132	HEAT	12	5 WEST***HEAT MER15 ABOVE OFFICE
0110133	PULL_5W_MER15_133	PULL	12	5 WEST***PULL MER15 BY ENTRANCE
0110134	PRI_RECALL_5S_134	NONSUPERVISEDOUTPUT	12	5 SOUTH RELAY PRIMARY ELEV RECALL
0110135	ALT_RECALL_5S_135	NONSUPERVISEDOUTPUT	12	5 SOUTH RELAY ALT. ELEV. RECALL
0110136	PRI_RECALL_5W_136	NONSUPERVISEDOUTPUT	12	5 WEST RELAY PRIMARY ELEV RECALL
0110137	ALT_RECALL_5W_137	NONSUPERVISEDOUTPUT	12	5 WEST RELAY ALT. ELEV. RECALL
0110138	SHUNTTRIP_5W_138	NONSUPERVISEDOUTPUT	12	5 WEST RELAY ELEVATOR SHUNT TRIP

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0110139	PULL_6S_139	PULL	12	6 SOUTH***PULL PENTHOUSE
0110140	SPARE_6S_140	MONITOR	12	SPARE 6 SOUTH P.H.
0110141	CR_5W_141_RM531	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_531
0110142	CR_5W_142_RM532	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_532
0110143	CR_5W_143_RM533	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_533
0110144	CR_5W_144_RM534	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_534
0110145	CR_5W_145_RM535	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_535
0110146	CR_5W_146_RM536	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_536
0110147	CR_5W_147_RM537	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_537
0110148	CR_5W_148_RM538	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_538
0110149	CR_5W_149_RM539	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_539
0110150	CR_5W_150_RM540	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_540
0110151	CR_5W_151_RM541	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_541
0110152	CR_5W_152_RM542	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_542
0110153	CR_5W_153_RM543	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_543
0110154	CR_5W_154_RM544	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_544
0110155	CR_5W_155_RM545	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_545
0110156	CR_5W_156_RM546	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_546
0110157	CR_5W_157_RM547	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_547
0110158	CR_5W_158_RM548	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_548
0110159	CR_5W_159_RM549	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_549
0110160	CR_5W_160_RM550	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_550
0110161	CR_5W_161_RM551	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_551
0110162	CR_5W_162_RM552	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_552

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0110163	CR_5W_163_RM553	NONSUPERVISEDOUTPUT	12	RELAY_5W_ANN_RM_553
0110164	L6_5W_164	POWER	12	5W POWER FAIL ANNUNCIATOR POWER
0110600	Annunciator Supervision_01_12	LOCALTROUBLE	12	0110600 Annunciator Supervision
0110601	Rail Module Communications_Fault_01_12	LOCALTROUBLE	12	0110601 Rail Module Communication Fault
0110604	Internal Fault_01_12	LOCALTROUBLE	12	0110604 Internal Fault
0110605	Database Supervision_01_12	LOCALTROUBLE	12	0110605 Database Supervision
0110606	Code Supervision_01_12	LOCALTROUBLE	12	0110606 Code Supervision
0110607	Data_Card_Fault_1_01_12	LOCALTROUBLE	12	0110607 Data Card Fault One
0110608	Data_Card_Fault_2_01_12	LOCALTROUBLE	12	0110608 Data Card Fault Two
0110609	Configuration_Fault_01_12	LOCALTROUBLE	12	0110609 Configuration Fault
0110670	In_Bootloader_01_12	LOCALTROUBLE	12	0110670 Waiting For SDU Download
0110671	Line_Opened_or_Shorted_Data_Card_1_01_12	LOCALTROUBLE	12	0110671 Open/Short Fault DataCard1
0110672	Map_Fault_Data_Card_1_01_12	LOCALTROUBLE	12	0110672 Map Fault DataCard1
0110673	Mapping_In_Progress_Data_Card_1_01_12	LOCALMONITOR	12	0110673 Mapping In Progress DataCard1
0110674	Mapping_Disblid_Data_Card_1_01_12	LOCALMONITOR	12	0110674 Mapping Disabled DataCard1
0110675	Device_Maint_Alert_Data_Card_1_01_12	LOCALMONITOR	12	0110675 Dev. Maintnc Alert DataCard1
0110676	Unprogrammed_Device_Data_Card_1_01_12	LOCALALARM	12	0110676 Unprogrammed Device DataCard1
0110677	Grnd_Fault_Data_Card_1_01_12	GROUNDFAULT	12	0110677 Ground Fault DataCard1
0110678	Reconstruct_Line_Data_Card_1_01_12	LOCALMONITOR	12	0110678 ReconstructingLine DataCard1
0110679	Smoke_Power_Current_Limit_Card_1_01_12	LOCALTROUBLE	12	0110679 Smoke Power Current Limit Card1
0110681	Line_Opened_or_Shorted_Data_Card_2_01_12	LOCALTROUBLE	12	0110681 Open/Short Fault DataCard2
0110682	Map_Fault_Data_Card_2_01_12	LOCALTROUBLE	12	0110682 Map Fault DataCard2
0110683	Mapping_in_Progress_Data_Card_2_01_12	LOCALMONITOR	12	0110683 Mapping In Progress DataCard2
0110684	Mapping_Disblid_Data_Card_2_01_12	LOCALMONITOR	12	0110684 Mapping Disabled DataCard2

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0110685	Dev_Maint_Alert_Data_Card_2_01_12	LOCALMONITOR	12	0110685 Dev. Maintnc Alert DataCard2
0110686	Unprogrammed_Device_Data_Card_2_01_12	LOCALALARM	12	0110686 Unprogrammed Device DataCard2
0110687	Grnd_Fault_Data_Card_2_01_12	GROUNDFAULT	12	0110687 Ground Fault DataCard2
0110688	Reconstruct_Line_Data_Card_2_01_12	LOCALMONITOR	12	0110688 ReconstructingLine DataCard2
0110689	Smoke_Power_Current_Limit_Card_2_01_12	LOCALTROUBLE	12	0110689 Smoke Power Current Limit Card2

BsmT
 smt 12 H00T 2,5 w/e 4,1 Tamp 6,1 Duct 3,5 Fire pump no AC pump run
 18 2 9

H
 S
 111

262 1035

MSVCE T-211
 MFC42.011

-OPERATOR COMMAND- 08:41:58 06-23-2000 - ACTIVATE RESET

ALARM VRF ACTIVE :: 11:26:48 06-23-2000 T:006 P:01 C:10 D:0021

5 WEST*** SMOKE CORR BY ELEC. ROOM

-OPERATOR COMMAND- 11:27:17 06-23-2000 - ACTIVATE PANEL SILENCE

<http://www.enrbydavis.com/bad.htm> ALARM ACTIVE :: 11:27:26 06-23-2000 T:000 P:01 C:10 D:0021

6/21/00

5 WEST*** SMOKE CORR BY ELEC. ROOM

-OPERATOR COMMAND- 11:28:01 06-23-2000 - ACTIVATE PANEL SILENCE

ALARM ACTIVE :: 11:29:10 06-23-2000 T:000 P:01 C:10 D:0037

5 WEST*** SMOKE CORR BY DAY ROOM

PULL STN ACTIVE :: 11:30:08 06-23-2000 T:001 P:01 C:10 D:0131

5 WEST*** PULL CORR BY DAY ROOM

ALARM ACTIVE :: 11:32:14 06-23-2000 T:000 P:01 C:10 D:0068

5 WEST*** SMOKE CORR BY ROOM 544

ALARM ACTIVE :: 11:32:48 06-23-2000 T:000 P:01 C:10 D:0048

5 _WEST*** SMOKE IN ROOM 541

ALARM ACTIVE :: 11:34:40 06-23-2000 T:000 P:01 C:10 D:0027

5 WEST*** SMOKE CORR BY ROOM 537

PULL STN ACTIVE :: 11:35:13 06-23-2000 T:001 P:01 C:10 D:0130

5 WEST*** PULL AT NURSE STATION

ALARM ACTIVE :: 11:38:02 06-23-2000 T:000 P:01 C:10 D:0018

5 WEST*** SMOKE TUNNEL BY W. ELEV.

ALARM ACTIVE :: 11:39:28 06-23-2000 T:000 P:01 C:10 D:0002

5 _SOUTH*** SMOKE CORR BY ELEV LOBBY

PULL STN ACTIVE :: 11:40:29 06-23-2000 T:001 P:01 C:10 D:0128

5 _SOUTH*** PULL BY STAIRWELL 2

ALARM ACTIVE :: 11:41:57 06-23-2000 T:000 P:01 C:10 D:0012

5 _SOUTH SICU***SMOKE CORR BY ROOM 1

ALARM ACTIVE :: 11:44:27 06-23-2000 T:000 P:01 C:10 D:0010

5 _SOUTH*** SMOKE CORR BY ROOM 508

ALARM ACTIVE :: 11:49:52 06-23-2000 T:000 P:01 C:08 D:0117

5 SOUTH*** DUCT IN MER 10

-OPERATOR COMMAND- 11:51:55 06-23-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:52:06 06-23-2000 - ACTIVATE PANEL SILENCE

ALARM VRF ACTIVE :: 11:54:52 06-23-2000 T:006 P:01 C:10 D:0074
5 SOUTH*** SMOKE ELEV. LOBBY

ALARM ACTIVE :: 11:55:18 06-23-2000 T:000 P:01 C:10 D:0074
5 SOUTH*** SMOKE ELEV. LOBBY

-OPERATOR COMMAND- 11:55:41 06-23-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 11:59:15 06-23-2000 - ACTIVATE PANEL SILENCE

INSPECTION AND TESTING FORM

DATE: 6/15/2000

TIME:

SERVICE ORGANIZATION

NAME: Systems Sales Corporation

ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753

REPRESENTATIVE: D. Murphy

LICENSE NO.:

TELEPHONE: (732) 751 - 0600

PROPERTY NAME (USER)

NAME: Brick Hospital (5th Floor)

ADDRESS: 425 Jack Martin Blvd.
Brick, N.J. 08723

OWNER CONTACT: Mr. Bill Transue

TELEPHONE: (732) 840-2200

MONITORING ENTITY

CONTACT: King Central (by other)

TELEPHONE: (800) 624-3068

MONITORING ACCOUNT REF. NO. : 388-2641

APPROVING AGENCY

CONTACT:

TELEPHONE:

TYPE TRANSMISSION

- McCulloh
- Multiplex
- X - Digital
- Reverse Polarity
- RF
- Other (Specify)

SERVICE

- X - Acceptance
- Monthly
- Quarterly
- Semiannually
- Annually
- Other (Specify)

PANEL MANUFACTURER: EST-Edwards Systems Technologies

MODEL NO.: EST-3

CIRCUIT STYLES: 4

NO. OF CIRCUITS: 9

SOFTWARE REV.: 1.52

LAST DATE SYSTEM HAD ANY SERVICE PERFORMED: 5/31/2000

LAST DATE THAT ANY SOFTWARE OR CONFIGURATION WAS REVISED: 3/26/2000

ALARM-INITIATING DEVICES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
7	4	MANUAL STATIONS
0		ION DETECTORS
62	4	PHOTO DETECTORS
32	4	DUCT DETECTORS
10	4	HEAT DETECTORS
2	4	WATERFLOW SWITCHES
2	4	SUPERVISORY SWITCHES
1	4	OTHER (SPECIFY)

ALARM NOTIFICATION APPLIANCES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
9	Y	BELLS
0		HORNS
		CHIMES
11	Y	STROBES
		SPEAKERS
-	-	OTHER (SPECIFY)

NO. OF ALARM NOTIFICATION APPLIANCE CIRCUITS: 37

ARE CIRCUITS SUPERVISED? YES X NO

SUPERVISORY SIGNAL INITIATING DEVICES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
N/A		BUILDING TEMP.
N/A		SITE WATER TEMP.
N/A		SITE WATER LEVEL
1		FIRE PUMP POWER
1		FIRE PUMP RUNNING
N/A		FIRE PUMP AUTO POSITION
N/A		FIRE PUMP OR PUMP CONTROLLER TROUBLE
N/A		GENERATOR IN AUTO POSITION
N/A		GENERATOR OR CONTROLLER TROUBLE
N/A		SWITCH TRANSFER
N/A		GENERATOR ENGINE RUNNING
N/A		OTHER: (SPECIFY)

SIGNALING LINE CIRCUITS

Quantity and style (See NFPA 72, Table 3-6) of signaling line circuits connected to system:

Quantity 9 Style(s) 4

SYSTEM POWER SUPPLIES

a. Primary (Main): Nominal Voltage 120Vac , Amps 15
 Overcurrent Protection: Type Circuit Breaker , Amps 15
 Location (Panel Number): E-14 Breaker #9
 Disconnecting Means Location: S. Basement MER 4

b. Secondary (Standby):
 Storage Battery: Amp-Hr. Rating 24Vdc 7AH
 Calculated capacity to operate system, in hours: X 24 60
 Engine-driven generator dedicated to fire alarm system:
 Location of fuel storage:

TYPE BATTERY

 Dry Cell
 Nickel-Cadmium
 X Sealed Lead-Acid
 Lead-Acid
 Other (Specify)
 Emergency or standby system used as a backup to primary power supply, instead of using a secondary power supply:
 Emergency system described in NFPA 70, Article 700
 Legally required standby described in NFPA 70, Article 701
 Optional standby system described in NFPA 70, Article 702, which also meets the
 performance of Article 700 or 701

**PRIOR TO ANY TESTING
NOTIFICATIONS ARE MADE:**

YES NO WHO TIME

MONITORING ENTITY X
BUILDING OCCUPANTS X
BUILDING MANAGEMENT X
OTHER (SPECIFY)
AHJ (NOTIFIED) OF ANY IMPAIRMENTS

SYSTEM TESTS AND INSPECTIONS

TYPE	VISUAL	FUNCTIONAL COMMENTS
CONTROL PANEL		X
INTERFACE EQUIPMENT		X
LAMPS/LEDS		X
FUSES		X
PRIMARY POWER SUPPLY		X
TROUBLE SIGNALS		X
DISCONNECT SWITCHES		X
GROUND FAULT MONITORING		X

SECONDARY POWER

TYPE	VISUAL	FUNCTIONAL COMMENTS
BATTERY CONDITION		X
LOAD VOLTAGE		X
DISCHARGE TEST		
CHARGER TEST	X	
SPECIFIC GRAVITY		N/A

TRANSIENT SUPPRESSORS

REMOTE ANNUNCIATORS X3

NOTIFICATION APPLIANCES

AUDIBLE		X
VISUAL	X	
SPEAKERS		
VOICE CLARITY		

INITIATING AND SUPERVISORY DEVICE TESTS AND INSPECTIONS

DEVICE VISUAL FUNCTIONAL FACTORY MEAS. LOC&S/N TYPE SETTING PASS FAIL

All devices tested

COMMENTS: See attached report

	VISUAL	FUNCTIONAL	COMMENTS
EMERGENCY COMMUNICATIONS EQUIPMENT			
PHONE SET		N/A	
PHONE JACKS		N/A	
OFF-HOOK INDICATOR		N/A	
AMPLIFIER(S)		N/A	
TONE GENERATOR(S)		N/A	
CALL IN SIGNAL		N/A	
SYSTEM PERFORMANCE		N/A	
DEVICE	SIMULATED	VISUAL	FUNCTIONAL
INTERFACE EQUIPMENT			
(SPECIFY) Elev. Recall			X
(SPECIFY) Fan Shutdown			X
(SPECIFY) Door Holders			X
SPECIAL HAZARD SYSTEMS			
(SPECIFY)	N/A		
(SPECIFY)	N/A		
(SPECIFY)	N/A		
SPECIAL PROCEDURES:	N/A		

COMMENTS:

ON/OFF PREMISES MONITORING:	YES	NO	TIME	COMMENTS
ALARM SIGNAL	X			
ALARM RESTORAL	X			
TROUBLE SIGNAL	X			
TROUBLE RESTORAL	X			
SUPERVISORY SIGNAL	X			
SUPERVISORY RESTORAL	X			

NOTIFICATIONS THAT TESTING IS COMPLETE	YES	NO	WHO	COMMENTS
BUILDING MANAGEMENT				
MONITORING AGENCY				
BUILDING OCCUPANTS				
OTHER (SPECIFY)				

THE FOLLOWING DID NOT OPERATE CORRECTLY:

SYSTEM RESTORED TO NORMAL OPERATION:	DATE	TIME
--------------------------------------	------	------

THIS TESTING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS.

NAME OF INSPECTOR: D. Murphy (Systems Sales Corp. Representative)
 DATE: TIME:

SIGNATURE:

NAME OF OWNER OR REPRESENTATIVE:
 DATE: TIME:

Brick Hospital Renovation
9/9/99

Counts per Mike V. & Dave Murphy 8/31/99

Counts include some rough guestimates by D.M. for areas where Mike V. could not gain access to

Location	A	B	C	D	E	F	G	H	I	J	K	L
Basement	21	0	20	0	8	2	0	6	9	14	1	0
1 st Floor	71	0	12	20	15	0	1	4	20	20	0	1
2 nd Floor	70	10	13	20	9	0	1	3	15	15	0	0
3 rd Floor	67	29	10	23	9	0	0	3	12	12	0	0
4 th Floor	77	37	8	41	9	0	0	3	8	15	0	0
5 th Floor	70	23	7	29	7	0	0	3	9	13	0	0
Totals	376	99	70	133	57	2	2	22	73	89	1	1

64
143
133
124
149
128

- A) Smoke Detector
- B) Remote LED for Patient Room Smoke Detector
- C) Heat Detector
- D) Duct Smoke Detector
- E) SIGA-CT1 for Existing Pull Stations
- F) SIGA-CT1 for Stand Alone Tamper Switch
- G) SIGA-CT1 for Kitchen Ansul System
- H) SIGA-CT2 for Combination Waterflow / Tamper Switch
- I) Horn Unit
- J) Strobe Unit
- K) FACP
- L) Annunciator

\$325

Annunciator Breakdowns – Per Dave Murphy 8/31/99

Item	Location	Type	Total Points
1	1 West – Security Desk	New 3-LCDANN	All
2	1 South – Clinic Area	To Be Removed per Bill Transue	N/A
3	2 West – CCU	Reuse Existing with SIGA-CR's	10
4	3 West – Special Care Nursery	Reuse Existing with SIGA-CR's	4
5	3 Center – West 3W	Reuse Existing with SIGA-CR's	8
6	3 East – Single Room Maternity	Reuse Existing with SIGA-CR's	15
7	3 Center – Nursery	Reuse Existing with SIGA-CR's	2
8	4 East – Oncology	Reuse Existing with SIGA-CR's	14
9	4 West – Med. Surg.	Reuse Existing with SIGA-CR's	23
10	5 West – PCCU	Reuse Existing with SIGA-CR's	23
Re-Use 9 Existing Annunciators, 1 New 3-LCDANN at Security			99 Points

INSPECTION AND TESTING FORM

DATE: 6/15/2000

TIME:

SERVICE ORGANIZATION

NAME: Systems Sales Corporation

ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753

REPRESENTATIVE: D. Murphy

LICENSE NO.:

TELEPHONE: (732) 751 - 0600

PROPERTY NAME (USER)

NAME: Brick Hospital (4th Floor)

ADDRESS: 425 Jack Martin Blvd
Brick, N.J. 08723

OWNER CONTACT: Mr. Bill Transue

TELEPHONE: (732) 840-2200

MONITORING ENTITY

CONTACT: King Central (by other)

TELEPHONE: (800) 624-3068

MONITORING ACCOUNT REF. NO.: 388-2641

APPROVING AGENCY

CONTACT:

TELEPHONE:

TYPE TRANSMISSION

- McCulloh
- Multiplex
- X - Digital
- Reverse Polarity
- RF
- Other (Specify)

SERVICE

- X - Acceptance
- Monthly
- Quarterly
- Semiannually
- Annually
- Other (Specify)

PANEL MANUFACTURER: EST-Edwards Systems Technologies

MODEL NO.: EST-3

CIRCUIT STYLES: 4

NO. OF CIRCUITS: 9

SOFTWARE REV.: 1.52

LAST DATE SYSTEM HAD ANY SERVICE PERFORMED: 5/31/2000

LAST DATE THAT ANY SOFTWARE OR CONFIGURATION WAS REVISED: 3/26/2000

ALARM-INITIATING DEVICES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
8	4	MANUAL STATIONS
0		ION DETECTORS
80	4	PHOTO DETECTORS
16	4	DUCT DETECTORS
3	4	HEAT DETECTORS
2	4	WATERFLOW SWITCHES
2	4	SUPERVISORY SWITCHES
0	4	OTHER (SPECIFY)

ALARM NOTIFICATION APPLIANCES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
9	Y	BELLS
0	Y	HORNS
19	Y	CHIMES
-	-	STROBES
-	-	SPEAKERS
-	-	OTHER (SPECIFY)

NO. OF ALARM NOTIFICATION APPLIANCE CIRCUITS: 37

ARE CIRCUITS SUPERVISED? YES X NO

SUPERVISORY SIGNAL INITIATING DEVICES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
N/A		BUILDING TEMP.
N/A		SITE WATER TEMP.
N/A		SITE WATER LEVEL
1		FIRE PUMP POWER
1		FIRE PUMP RUNNING
N/A		FIRE PUMP AUTO POSITION
N/A		FIRE PUMP OR PUMP CONTROLLER TROUBLE
N/A		GENERATOR IN AUTO POSITION
N/A		GENERATOR OR CONTROLLER TROUBLE
N/A		SWITCH TRANSFER
N/A		GENERATOR ENGINE RUNNING
N/A		OTHER: (SPECIFY)

SIGNALING LINE CIRCUITS

Quantity and style (See NFPA 72, Table 3-6) of signaling line circuits connected to system:

Quantity 9 Style(s) 4

SYSTEM POWER SUPPLIES

- a. Primary (Main): Nominal Voltage 120Vac , Amps 15
Overcurrent Protection: Type Circuit Breaker , Amps 15
Location (Panel Number): E-14 Breaker #9
Disconnecting Means Location: S.Basement MKR 4
- b. Secondary (Standby):
Storage Battery: Amp-Hr. Rating 24Vdc 7AH
Calculated capacity to operate system, in hours: X 24 60
Engine-driven generator dedicated to fire alarm system:
Location of fuel storage:

TYPE BATTERY

- Dry Cell
- Nickel-Cadmium
- X Sealed Lead-Acid
- Lead-Acid
- Other (Specify)
Emergency or standby system used as a backup to primary power supply, instead of using a secondary power supply:
Emergency system described in NFPA 70, Article 700
Legally required standby described in NFPA 70, Article 701
Optional standby system described in NFPA 70, Article 702, which also meets the performance of Article 700 or 701

**PRIOR TO ANY TESTING
NOTIFICATIONS ARE MADE:**

YES NO WHO TIME

MONITORING ENTITY X
BUILDING OCCUPANTS X
BUILDING MANAGEMENT X
OTHER (SPECIFY)
AHJ (NOTIFIED) OF ANY IMPAIRMENTS

SYSTEM TESTS AND INSPECTIONS

TYPE	VISUAL	FUNCTIONAL COMMENTS
CONTROL PANEL		X
INTERFACE EQUIPMENT		X
LAMPS/LEDS		X
FUSES		X
PRIMARY POWER SUPPLY		X
TROUBLE SIGNALS		X
DISCONNECT SWITCHES		X
GROUND FAULT MONITORING		X

SECONDARY POWER

TYPE	VISUAL	FUNCTIONAL COMMENTS
BATTERY CONDITION		X
LOAD VOLTAGE		X
DISCHARGE TEST		
CHARGER TEST	X	
SPECIFIC GRAVITY		N/A

TRANSIENT SUPPRESSORS

REMOTE ANNUNCIATORS X3

NOTIFICATION APPLIANCES

	VISUAL	FUNCTIONAL COMMENTS
AUDIBLE		X
VISUAL	X	
SPEAKERS		
VOICE CLARITY		

INITIATING AND SUPERVISORY DEVICE TESTS AND INSPECTIONS

DEVICE VISUAL FUNCTIONAL FACTORY MEAS. LOC&S/N TYPE SETTING PASS FAIL

All devices tested

COMMENTS: See attached report

	VISUAL	FUNCTIONAL	COMMENTS
EMERGENCY COMMUNICATIONS EQUIPMENT			

PHONE SET	N/A
PHONE JACKS	N/A
OFF-HOOK INDICATOR	N/A
AMPLIFIER(S)	N/A
tone generator(s)	N/A
CALL IN SIGNAL	N/A
SYSTEM PERFORMANCE	N/A

	DEVICE	SIMULATED	VISUAL	FUNCTIONAL
INTERFACE EQUIPMENT				
(SPECIFY)	Elev. Recall			X
(SPECIFY)	Fan Shutdown			X
(SPECIFY)	Door Holders			X

SPECIAL HAZARD SYSTEMS	
(SPECIFY)	N/A
(SPECIFY)	N/A
(SPECIFY)	N/A
SPECIAL PROCEDURES:	N/A

COMMENTS:

ON/OFF PREMISES MONITORING:	YES	NO	TIME	COMMENTS
ALARM SIGNAL	X			
ALARM RESTORAL	X			
TROUBLE SIGNAL	X			
TROUBLE RESTORAL	X			
SUPERVISORY SIGNAL	X			
SUPERVISORY RESTORAL	X			

NOTIFICATIONS THAT TESTING IS COMPLETE	YES	NO	WHO	COMMENTS
BUILDING MANAGEMENT				
MONITORING AGENCY				
BUILDING OCCUPANTS				
OTHER (SPECIFY)				

THE FOLLOWING DID NOT OPERATE CORRECTLY:

SYSTEM RESTORED TO NORMAL OPERATION:	DATE	TIME
---	-------------	-------------

THIS TESTING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS.

NAME OF INSPECTOR: D. Murphy (Systems Sales Corp. Representative)

DATE: **TIME:**

SIGNATURE:

NAME OF OWNER OR REPRESENTATIVE:

DATE: **TIME:**

SIGNATURE:

-OPERATOR COMMAND- 09:08:50 06-20-2000 - ACTIVATE RESET

ALARM VRF ACTIVE :: 11:17:46 06-20-2000 T:006 P:01 C:09 D:0040

4_WEST*** SMOKE CORR BY DAY ROOM

ALARM ACTIVE :: 11:18:11 06-20-2000 T:000 P:01 C:09 D:0040

4_WEST*** SMOKE CORR BY DAY ROOM

ALARM ACTIVE :: 11:20:04 06-20-2000 T:000 P:01 C:09 D:0001

4_EAST_ONC***SMOKE IN ROOM 461

ALARM ACTIVE :: 11:23:09 06-20-2000 T:000 P:01 C:07 D:0107

4 WEST***DUCT EF-6 IN ROOM 461

ALARM ACTIVE :: 11:25:28 06-20-2000 T:000 P:01 C:09 D:0020

4_EAST_ONC*** SMOKE CORR BY ROOM 465

ALARM ACTIVE :: 11:27:20 06-20-2000 T:000 P:01 C:09 D:0019

4_EAST_ONC*** SMOKE CORR BY AMB SVCS

PULL STN ACTIVE :: 11:28:36 06-20-2000 T:001 P:01 C:09 D:0127

4_EAST_ONC*** PULL BY STAIRWELL 6

ALARM ACTIVE :: 11:30:54 06-20-2000 T:000 P:01 C:09 D:0043

4_WEST*** SMOKE IN ROOM 431

ALARM ACTIVE :: 11:32:07 06-20-2000 T:000 P:01 C:09 D:0038

4_WEST*** SMOKE CORR BY ROOM 451

ALARM ACTIVE :: 11:33:07 06-20-2000 T:000 P:01 C:09 D:0034

4_WEST*** SMOKE CORR BY ROOM 442

ALARM ACTIVE :: 11:35:25 06-20-2000 T:000 P:01 C:09 D:0023

4_WEST*** SMOKE MAIN CORR BY S WING

PULL STN ACTIVE :: 11:37:34 06-20-2000 T:001 P:01 C:09 D:0131

4 SOUTH*** PULL BY STAIRWELL 2

ALARM ACTIVE :: 11:38:47 06-20-2000 T:000 P:01 C:09 D:0072

4 SOUTH*** SMOKE CORR BY HOME TRAINING

ALARM ACTIVE :: 11:40:04 06-20-2000 T:000 P:01 C:09 D:0074

4 SOUTH*** SMOKE CORR BY CHAIR 7

PULL STN ACTIVE :: 11:41:51 06-20-2000 T:001 P:01 C:09 D:0132
4 SOUTH*** PULL BY STAIRWELL 1
PULL STN ACTIVE :: 11:43:11 06-20-2000 T:001 P:01 C:09 D:0133

4 SOUTH*** PULL NURSE STATION

-OPERATOR COMMAND- 11:44:02 06-20-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:44:04 06-20-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:44:13 06-20-2000 - ACTIVATE PANEL SILENCE

ALARM VRF ACTIVE :: 11:47:07 06-20-2000 T:006 P:01 C:09 D:0071

4 SOUTH*** SMOKE CORR BY ENVIRON CLST

ALARM ACTIVE :: 11:47:32 06-20-2000 T:000 P:01 C:09 D:0071

4 SOUTH*** SMOKE CORR BY ENVIRON CLST

-OPERATOR COMMAND- 11:47:47 06-20-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 11:49:22 06-20-2000 - RESTORE ALARM SILENCE

-OPERATOR COMMAND- 11:49:37 06-20-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 11:49:45 06-20-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:50:05 06-20-2000 - RESTORE ALARM SILENCE

Brick Hospital Renovation
9/9/99

Counts per Mike V. & Dave Murphy 8/31/99

Counts include some rough guesstimates by D.M. for areas where Mike V. could not gain access to

Location	A	B	C	D	E	F	G	H	I	J	K	L
Basement	21	0	20	0	8	2	0	6	9	14	1	0
1 st Floor	71	0	12	20	15	0	1	4	20	20	0	1
2 nd Floor	70	10	13	20	9	0	1	3	15	15	0	0
3 rd Floor	67	29	10	23	9	0	0	3	12	12	0	0
4 th Floor	77	37	8	41	9	0	0	3	8	15	0	0
5 th Floor	70	23	7	29	7	0	0	3	9	13	0	0
Totals	376	99	70	133	57	2	2	22	73	89	1	1

64
143
133
124
149
128

- A) Smoke Detector
- B) Remote LED for Patient Room Smoke Detector
- C) Heat Detector
- D) Duct Smoke Detector
- E) SIGA-CT1 for Existing Pull Stations
- F) SIGA-CT1 for Stand Alone Tamper Switch
- G) SIGA-CT1 for Kitchen Ansul System
- H) SIGA-CT2 for Combination Waterflow / Tamper Switch
- I) Horn Unit
- J) Strobe Unit
- K) FACP
- L) Annunciator

5325

Annunciator Breakdowns – Per Dave Murphy 8/31/99

Item	Location	Type	Total Points
1	1 West – Security Desk	New 3-LCDANN	All
2	1 South – Clinic Area	To Be Removed per Bill Transue	N/A
3	2 West – CCU	Reuse Existing with SIGA-CR's	10
4	3 West – Special Care Nursery	Reuse Existing with SIGA-CR's	4
5	3 Center – West 3W	Reuse Existing with SIGA-CR's	8
6	3 East – Single Room Maternity	Reuse Existing with SIGA-CR's	15
7	3 Center – Nursery	Reuse Existing with SIGA-CR's	2
8	4 East – Oncology	Reuse Existing with SIGA-CR's	14
9	4 West – Med. Surg.	Reuse Existing with SIGA-CR's	23
10	5 West – PCCU	Reuse Existing with SIGA-CR's	23
Re-Use 9 Existing Annunciators, 1 New 3-LCDANN at Security			99 Points

Brick Hospital Renovation
9/9/99

Counts per Mike V. & Dave Murphy 8/31/99

Counts include some rough guestimates by D.M. for areas where Mike V. could not gain access to

Location	A	B	C	D	E	F	G	H	I	J	K	L
Basement	21	0	20	0	8	2	0	6	9	14	1	0
1 st Floor	71	0	12	20	15	0	1	4	20	20	0	1
2 nd Floor	70	10	13	20	9	0	1	3	15	15	0	0
3 rd Floor	67	29	10	23	9	0	0	3	12	12	0	0
4 th Floor	77	37	8	41	9	0	0	3	8	15	0	0
5 th Floor	70	23	7	29	7	0	0	3	9	13	0	0
Totals	376	99	70	133	57	2	2	22	73	89	1	1

64
143
133
124
149
128

- A) Smoke Detector
- B) Remote LED for Patient Room Smoke Detector
- C) Heat Detector
- D) Duct Smoke Detector
- E) SIGA-CT1 for Existing Pull Stations
- F) SIGA-CT1 for Stand Alone Tamper Switch
- G) SIGA-CT1 for Kitchen Ansul System
- H) SIGA-CT2 for Combination Waterflow / Tamper Switch
- I) Horn Unit
- J) Strobe Unit
- K) FACP
- L) Annunciator

5325

Annunciator Breakdowns - Per Dave Murphy 8/31/99

Item	Location	Type	Total Points
1	1 West - Security Desk	New 3-LCDANN	All
2	1 South - Clinic Area	To Be Removed per Bill Transue	N/A
3	2 West - CCU	Reuse Existing with SIGA-CR's	10
4	3 West - Special Care Nursery	Reuse Existing with SIGA-CR's	4
5	3 Center - West 3W	Reuse Existing with SIGA-CR's	8
6	3 East - Single Room Maternity	Reuse Existing with SIGA-CR's	15
7	3 Center - Nursery	Reuse Existing with SIGA-CR's	2
8	4 East - Oncology	Reuse Existing with SIGA-CR's	14
9	4 West - Med. Surg.	Reuse Existing with SIGA-CR's	23
10	5 West - PCCU	Reuse Existing with SIGA-CR's	23
Re-Use 9 Existing Annunciators, 1 New 3-LCDANN at Security			99 Points

-OPERATOR COMMAND- 10:31:43 06-12-2000 - ACTIVATE RESET

ALARM VRF ACTIVE :: 10:54:00 06-12-2000 T:006 P:01 C:07 D:0012
2 WEST*** SMOKE MAIN CORR ELEV LOBBY

-OPERATOR COMMAND- 10:54:04 06-12-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 10:54:05 06-12-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 10:54:08 06-12-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 10:54:09 06-12-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 10:54:10 06-12-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 10:54:15 06-12-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 10:54:17 06-12-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 10:54:18 06-12-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 10:54:20 06-12-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 10:54:21 06-12-2000 - ACTIVATE RESET

ALARM ACTIVE :: 10:54:25 06-12-2000 T:000 P:01 C:07 D:0012
2 WEST*** SMOKE MAIN CORR ELEV LOBBY

-OPERATOR COMMAND- 10:54:35 06-12-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 10:54:37 06-12-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 10:55:04 06-12-2000 - RESTORE ALARM SILENCE

-OPERATOR COMMAND- 10:55:06 06-12-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 10:55:08 06-12-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 10:55:36 06-12-2000 - ACTIVATE RESET

MONITOR ACTIVE :: 10:57:54 06-12-2000 T:031 P:01 C:02 D:0004

EST_3_FACP_DISABLE

-OPERATOR COMMAND- 10:57:59 06-12-2000 - ACTIVATE PANEL SILENCE

ALARM VRF ACTIVE :: 11:06:52 06-12-2000 T:006 P:01 C:07 D:0003
2 WEST*** SMOKE CORR BY H.B.O. CHAMBR

ALARM ACTIVE :: 11:07:17 06-12-2000 T:000 P:01 C:07 D:0003
2 WEST*** SMOKE CORR BY H.B.O. CHAMBR

PULL STN ACTIVE :: 11:08:29 06-12-2000 T:001 P:01 C:07 D:0128
2 WEST*** PULL MAIN CORR BY CATH LAB

ALARM ACTIVE :: 11:11:39 06-12-2000 T:000 P:01 C:06 D:0060
2 WEST*** DUCT RECEIVING CORR AHU-19

ALARM ACTIVE :: 11:12:53 06-12-2000 T:000 P:01 C:07 D:0054
2 WEST*** SMOKE RECV CORR ENTRANCE
SUPERVISORY ACTV :: 11:14:00 06-12-2000 T:011 P:01 C:07 D:0148
2 WEST*** VALVE TAMPER STAIR 6

ALARM ACTIVE :: 11:17:11 06-12-2000 T:000 P:01 C:08 D:0059
3 WEST*** SMOKE CORR BY ROOM 333
ALARM ACTIVE :: 11:17:55 06-12-2000 T:000 P:01 C:08 D:0071
3 WEST*** SMOKE IN ROOM 333

ALARM ACTIVE :: 11:19:30 06-12-2000 T:000 P:01 C:07 D:0041
3 WEST*** DUCT EF-3 CORR BY ROOM 333
ALARM ACTIVE :: 11:21:37 06-12-2000 T:000 P:01 C:08 D:0073
3 WEST*** SMOKE CORR BY MALE LOCKER

ALARM ACTIVE :: 11:24:07 06-12-2000 T:000 P:01 C:08 D:0043
3 SOUTH*** SMOKE CORR BY WAITING RM

-OPERATOR COMMAND- 11:01:01 06-08-2000 - ACTIVATE RESET

ALARM VRF ACTIVE :: 11:05:20 06-08-2000 T:006 P:01 C:03 D:0105

WEST_BSMT*** SMOKE ELEVATOR LOBBY

ALARM ACTIVE :: 11:05:48 06-08-2000 T:000 P:01 C:03 D:0105

WEST_BSMT*** SMOKE ELEVATOR LOBBY

-OPERATOR COMMAND- 11:06:07 06-08-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 11:06:08 06-08-2000 - RESTORE ALARM SILENCE

-OPERATOR COMMAND- 11:06:10 06-08-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:06:20 06-08-2000 - ACTIVATE PANEL SILENCE

-OPERATOR COMMAND- 11:06:23 06-08-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 11:06:28 06-08-2000 - ACTIVATE ALARM SILENCE

ALARM VRF ACTIVE :: 11:08:51 06-08-2000 T:006 P:01 C:07 D:0086

2 SOUTH OR*** SMOKE HOLD AREA BY SDS ENT.

-OPERATOR COMMAND- 11:09:08 06-08-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:10:31 06-08-2000 - ACTIVATE PANEL SILENCE

SWITCH ACTIVE :: 11:12:39 06-08-2000 T:036 P:01 C:33 D:0001

WEST HORNS/STROBES DISABLED SWITCH 1

SWITCH ACTIVE :: 11:12:45 06-08-2000 T:036 P:01 C:33 D:0002

SOUTH HORNS/STROBES DISABLED SWITCH 2

SWITCH ACTIVE :: 11:13:02 06-08-2000 T:036 P:01 C:33 D:0003

ABC HORNS/STROBES DISABLED SWITCH 3

ALARM VRF ACTIVE :: 11:13:26 06-08-2000 T:006 P:01 C:06 D:0012

1 WEST***SMOKE ELEVATOR LOBBY

ALARM ACTIVE :: 11:13:51 06-08-2000 T:000 P:01 C:06 D:0012

1 WEST***SMOKE ELEVATOR LOBBY

-OPERATOR COMMAND- 11:15:23 06-08-2000 - ACTIVATE RESET

ALARM VRF ACTIVE :: 11:19:12 06-08-2000 T:006 P:01 C:03 D:0033
1 SOUTH*** SMOKE ELEV. LOBBY

ALARM ACTIVE :: 11:19:36 06-08-2000 T:000 P:01 C:03 D:0033
1 SOUTH*** SMOKE ELEV. LOBBY

-OPERATOR COMMAND- 11:20:17 06-08-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:20:44 06-08-2000 - ACTIVATE PANEL SILENCE

SWITCH ACTIVE :: 11:23:42 06-08-2000 T:036 P:01 C:33 D:0008
ABC RELAYS DISABLED SWITCH 8

-OPERATOR COMMAND- 11:23:45 06-08-2000 - ACTIVATE PANEL SILENCE

ALARM VRF ACTIVE :: 11:24:22 06-08-2000 T:006 P:01 C:03 D:0036
1S MAIN CORRIDOR ** SMK BY CHAPEL ENT.

ALARM ACTIVE :: 11:24:47 06-08-2000 T:000 P:01 C:03 D:0036
1S MAIN CORRIDOR ** SMK BY CHAPEL ENT.

ALARM ACTIVE :: 11:25:01 06-08-2000 T:000 P:01 C:02 D:0003
EXISTING_FACP_ALARM

-OPERATOR COMMAND- 11:25:18 06-08-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 11:25:23 06-08-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:25:46 06-08-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:26:17 06-08-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:27:09 06-08-2000 - ACTIVATE RESET

ALARM ACTIVE :: 11:27:26 06-08-2000 T:000 P:01 C:02 D:0003
EXISTING_FACP_ALARM

-OPERATOR COMMAND- 11:27:41 06-08-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 11:28:02 06-08-2000 - ACTIVATE RESET

ALARM VRF ACTIVE :: 11:29:27 06-08-2000 T:006 P:01 C:03 D:0030
1S PHYSICIAN ENT.*** SMK BY CARDIAC REHB

ALARM ACTIVE :: 11:29:51 06-08-2000 T:000 P:01 C:03 D:0030
1S PHYSICIAN ENT.*** SMK BY CARDIAC REHB

ALARM ACTIVE :: 11:30:04 06-08-2000 T:000 P:01 C:02 D:0003
EXISTING_FACP_ALARM

-OPERATOR COMMAND- 11:30:39 06-08-2000 - ACTIVATE ALARM SILENCE

-OPERATOR COMMAND- 11:31:58 06-08-2000 - ACTIVATE RESET

-OPERATOR COMMAND- 11:32:24 06-08-2000 - ACTIVATE RESET

SWITCH ACTIVE :: 11:37:07 06-08-2000 T:036 P:01 C:33 D:0001
WEST HORNS/STROBES DISABLED SWITCH 1

SWITCH ACTIVE :: 11:37:08 06-08-2000 T:036 P:01 C:33 D:0002
SOUTH HORNS/STROBES DISABLED SWITCH 2

SWITCH ACTIVE :: 11:37:11 06-08-2000 T:036 P:01 C:33 D:0003
ABC HORNS/STROBES DISABLED SWITCH 3

SWITCH ACTIVE :: 11:37:13 06-08-2000 T:036 P:01 C:33 D:0004
WEST ELEV. RELAYS DISABLED SWITCH 4

SWITCH ACTIVE :: 11:37:14 06-08-2000 T:036 P:01 C:33 D:0005
SOUTH ELEV. RELAYS DISABLED SWITCH 5

SWITCH ACTIVE :: 11:37:15 06-08-2000 T:036 P:01 C:33 D:0006
ABC ELEV. RELAYS DISABLED SWITCH 6

-OPERATOR COMMAND- 11:37:19 06-08-2000 - ACTIVATE PANEL SILENCE

BRICK HOSPITAL BRICK, NJ

EDWARDS FIRE ALARM SYSTEM EQUIPMENT

2nd FLOOR

<u>QUAN</u>	<u>ITEM</u>	<u>DESCRIPTION</u>
13	SIGA-HFS	Intelligent Heat Detectors – Fixed Temperature 135°F
13	SIGA-SB	Bases for SIGA-HFS Heat Detectors
70	SIGA-PS	Intelligent Photoelectric Smoke Detectors
70	SIGA-SB	Bases for SIGA-PS Smoke Detectors
10	SIGA-LED	Remote Alarm LED's for Patient Room Smoke Detectors
20	SIGA-PS	Intelligent Photoelectric Duct Smoke Detectors
20	SIGA-RB	Relay Bases for SIGA-PS Duct Smoke Detectors
20	SIGA-DH	Housings for Duct Smoke Detectors
9	SIGA-CT1	Single Input Modules for Existing Pull Stations
1	SIGA-CT1	Single Input Module for Ansul System
3	SIGA-CT2	Dual Input Modules for Waterflow & Tamper Switches
15	757-1A-T	Horn Units
15	405-7A-T	Strobe Units



Intelligent Heat Detectors

Models SIGA-HFS & SIGA-HRS

Features

- 70 FOOT (21.3 METER) SPACING
- 15°F (9°C)/MIN RATE-OF-RISE/135°F (57°C) FT. AND 135°F (57°C) FIXED TEMPERATURE TYPE
- INTELLIGENT DETECTOR c/w INTEGRAL MICROPROCESSOR
- NON-VOLATILE MEMORY
- AUTOMATIC DEVICE MAPPING
- ELECTRONIC ADDRESSING
- IDENTIFICATION OF DEFECTIVE DETECTORS
- TWIN RED/GREEN STATUS LEDS
- STANDARD, RELAY, and FAULT ISOLATOR MOUNTING BASES
- DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS

Description

EST's Signature Series Model SIGA-HFS and SIGA-HRS Intelligent Heat Detectors gather analog information from their fixed temperature and/or rate-of-rise heat sensing elements and converts it into digital signals. The detector's on-board microprocessor measures and analyzes these signals. It compares the information to historical readings and time patterns to make an alarm decision. Digital filters remove signal patterns that are not typical of fires. Unwanted alarms are nearly eliminated.

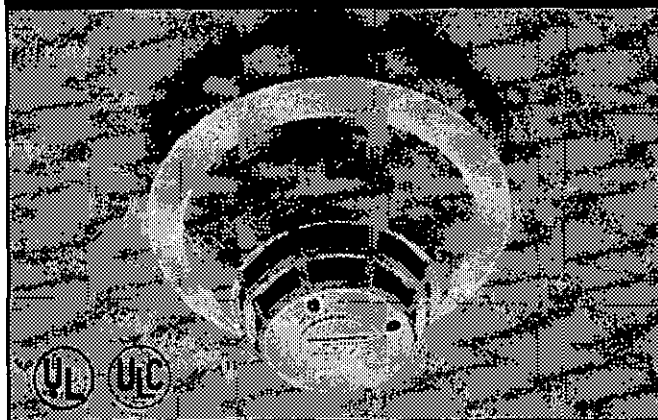
The microprocessor in each detector provides four additional benefits - **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector's non-volatile memory. This information is accessible for review any time at the control panel, PC, or by using the SIGA-PRO Signature Program/Service Tool.

The information stored in the detector's memory includes:

- detector type, serial number, and address.
- date of manufacture, hours of operation, and last maintenance date.
- current detector (ambient) temperature values.
- number of recorded alarms and troubles.

Intelligent Fixed-Temperature Heat Detector, SIGA-HFS
Intelligent Fixed-Temp./R-O-R Heat Detector, SIGA-HRS



- time and date of last alarm.
- analog signal patterns just before the last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. This "mapping" feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally. The history log for the detector at its original location remains relevant and intact.

The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the "mystery" out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the circuit.

EDWARDS SYSTEMS TECHNOLOGY

SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

Stand-alone Operation - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit. Each detector on the circuit continues to collect and analyze information from its surroundings. Both the SIGA-HRS and SIGA-HFS detectors alarm if the ambient temperature increases to 135°F (57°C) or for the SIGA-HRS only, the temperature increases at a rate exceeding 15°F (9°C)/minute. If the detector is mounted to a relay base, the relay operates.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the control panel when it has something new to report. This provides very fast control panel response time and allows a lower baud rate (speed) to be used for communication on the circuit. The lower baud rate offers several advantages including:

- less sensitivity to circuit wire characteristics.
- less sensitivity to noise glitches on the cable.
- less emitted noise from the analog wiring.
- twisted or shielded wiring is not required.

Electronic Addressing - The loop controller electronically addresses each detector, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each detector has its own unique serial number stored in its "on-board memory". The loop controller identifies each device on the circuit and assigns a "soft" address to that device's serial number. If desired, detectors can be addressed using the SIGA-PRO Signature Program/Service Tool.

Installation Spacing - The SIGA-HFS (fixed temperature) and the SIGA-HRS (fixed temperature/rate-of-rise combination) intelligent heat detectors are rated for installation at up to 70 foot (21.3 meter) spacing. These detectors may be installed in rooms with ambient temperatures up to 100°F (38°C).

Status LEDs - Twin LEDs are visible from any direction. A flashing GREEN led shows normal system polling from the loop controller. A flashing RED led means the detector is in alarm state. Both leds on steady shows alarm state - stand-alone mode. Normal green led activity is not distracting to building occupants, but can be quickly spotted by a maintenance technician.

Quality and Reliability - EST detectors are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance. All critical contacts are gold plated.

Compatibility

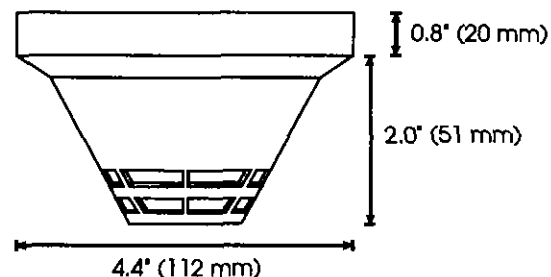
The SIGA-HFS and SIGA-HRS detectors are compatible only with EST's Signature Loop Controller.

Specifications Table

Catalog Number	SIGA-HFS	SIGA-HRS
Heat Sensing Element	Fixed Temperature	Combination Fixed Temperature/Rate-of-Rise
Alarm Point	Alarms at 135°F (57°C) Ambient	Alarms at 135°F (57°C) Ambient or temp. increase exceeding 15°F (9°C) per minute
Detector Spacing	70 feet (21.3 meter) center to center spacing	
Storage and Operating Environment	Operating Temperature: 32°F to 100°F (0°C to 38°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH, Non-Condensing	
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)	
Operating Current	Quiescent: 45µA @ 19 V Alarm: 45µA @ 19 V Emergency Stand-alone Alarm Mode: 18mA Pulse Current: 100 µA (100 msec) During Communication: 9 mA maximum	
Construction & Finish	High Impact Engineering Polymer - White	
Compatible Mounting Bases	SIGA-SB, SIGA-SB4 Standard Base, SIGA-RB, SIGA-RB4 Relay Base, SIGA-IB, SIGA-IB4 Isolator Base	
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm Both LEDs - Glow steady when in alarm (stand-alone) Compatible Remote Red led (model SIGA-LED) Flashes when in alarm	
Compatibility	Use With: SIGNATURE Loop Controller	
Address Requirements	Uses 1 Device Address	
Agency Listings	UL, ULC	

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2" or 4" octagon boxes, and to 4" square electrical boxes 1-1/2" (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers.



Testing & Maintenance

Each detector automatically identifies when it is defective and the user-friendly maintenance program shows the current state of each detector and other pertinent messages. Single detectors may be turned off temporarily, from the control panel. Availability of maintenance features is dependent on the fire alarm system used. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

Application

The table below shows six standard test fires used to rate the sensitivity of smoke and heat detectors. The table indicates that no single sensing element is suited for all test fires.

EST recommends that this detector be installed according to latest recognized edition of national and local fire alarm codes.

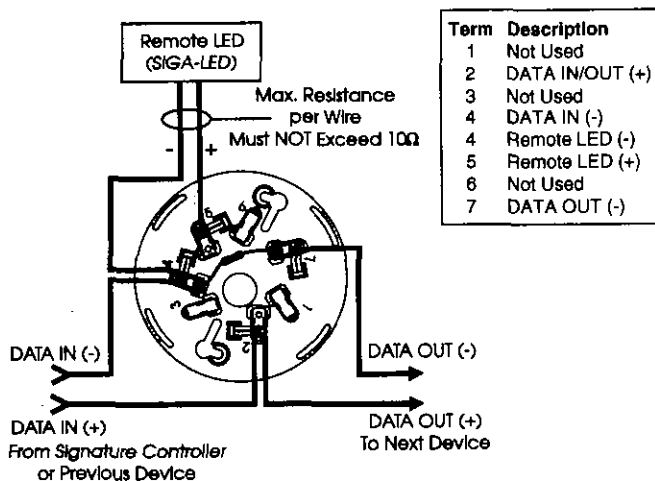
Test Fire	Type of Detector				
	SIGA-IS Ion	SIGA-PS Photo	SIGA-HRS and SIGA-HFS Rate-of- Rise/Fixed Temp.	SIGA-PHS Photo/Heat 3D	SIGA-IPHS Ion/Photo/Heat 4D
Open Wood	optimum	unsuitable	optimum	very suitable	optimum
Wood Pyrolysis	suitable	optimum	unsuitable	optimum	optimum
Smoldering Cotton	very suitable	optimum	unsuitable	optimum	optimum
Poly Urethane Foam	very suitable	very suitable	suitable	very suitable	optimum
n-Heptane	optimum	very suitable	very suitable	optimum	optimum
Liquid Fire without Smoke	unsuitable	unsuitable	optimum	very suitable	very suitable

Typical Wiring

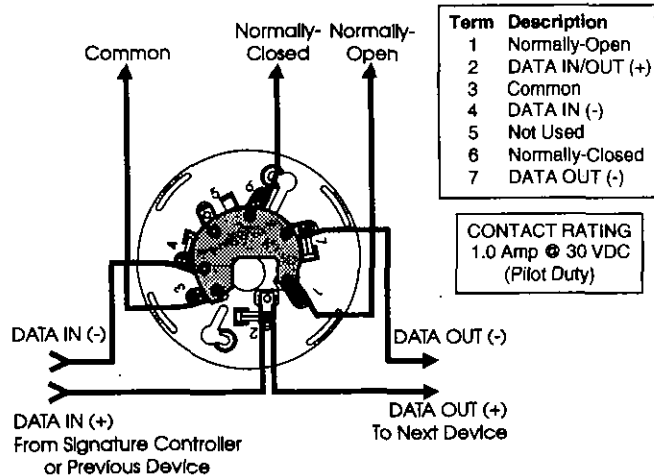
The detector mounting bases will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.5mm²) wire sizes.

Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

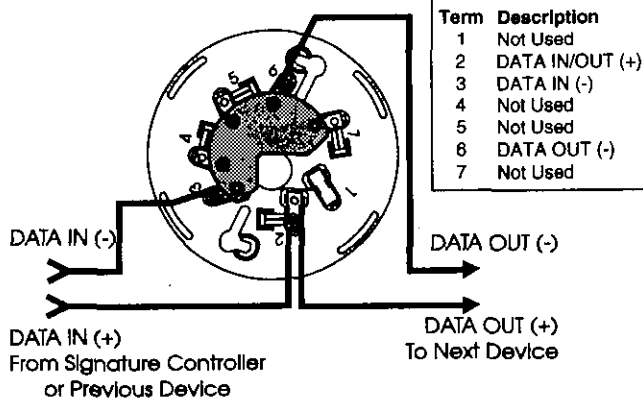
Standard Detector Base, SIGA-SB, SIGA-SB4



Relay Detector Base, SIGA-RB, SIGA-RB4



Isolator Detector Base, SIGA-IB, SIGA-IB4



Tamper-Resist Lever Arm
- Break off to disable -
(Located on Base)

Access Slot for
Tamper-Resist Mechanism

Accessories

All detector mounting bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½" or 4" octagon boxes, 1½" (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4" sq. electrical boxes in addition to the above boxes. They include the SIGA-TS Trim Skirt which is used to cover the "mounting ears" on the base.

Standard Base SIGA-SB, SIGA-SB4 - This is the basic mounting base for EST Signature Series detectors. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB, SIGA-RB4 - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The relay base does not support the SIGA-LED Remote LED.

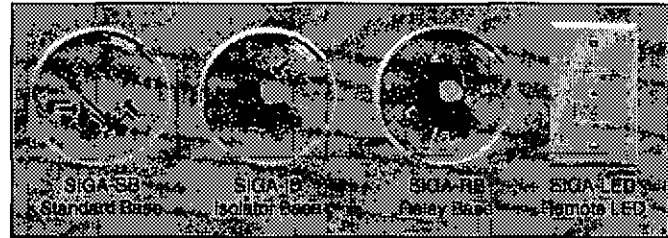
The relay is controlled by the detector and operates as follows:

- at system power-up or reset, the relay is de-energized.
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB, SIGA-IB4 - This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates as follows:

- a short on the line causes all isolators to open within 23 msec.
- at 10 msec intervals, beginning on one side of the Class A circuit nearest the loop controller, the isolators close to provide the next isolator down the line with power.



- when the isolator next to the short closes, it reopens within 10 msec.

The process repeats beginning on the other side of the loop controller.

Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS Trim Skirt - Supplied with 4" bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases. Use black model with SIGA-IPHSB.

Warnings & Cautions

This detector will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

This detector will NOT sense fires that start in areas where heat cannot reach the detector. Heat from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

The heat sensor in this device only provides a source of information to supplement the information provided by photoelectric or ionization smoke detectors which may be located nearby. **The heat detector by itself does NOT provide life safety protection.** Under no circumstances should heat detectors be relied on as the sole means of fire protection.

Ordering Information Table

Catalog Number	Description	Carton Dims. Inches (mm)	Ship Wt. lbs (kg)
SIGA-HFS	Intelligent Fixed Temperature Heat Detector - UL/ULC Listed	5 (127)w x 3.6 (91)h x 5 (127)d	.5 (.23)
SIGA-HRS	Intelligent Fixed Temperature/Rate-of-Rise Heat Detector - UL/ULC Listed		
Accessories			
SIGA-SB	Detector Mounting Base	6 (152)w x 1 (25)h x 6 (152)d	.2 (.09)
SIGA-SB4	4" Detector Mounting Base c/w SIGA-TS Trim Skirt		
SIGA-RB	Detector Mounting Base w/Relay		
SIGA-RB4	4" Detector Mounting Base w/Relay c/w SIGA-TS Trim Skirt		
SIGA-IB	Detector Mounting Base w/Fault Isolator		
SIGA-IB4	4" Detector Mounting Base w/ Fault Isolator c/w SIGA-TS Trim Skirt	3.8 (97)w x 2.8 (71)h x 6 (152)d	.2 (.09)
SIGA-LED	Remote Alarm LED		
SIGA-TS	Trim Skirt (supplied with 4" bases)	6 (152)w x 1 (25)h x 6 (152)d	.1 (.04)

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

Intelligent Photoelectric Smoke Detector

Model SIGA-PS

Features

- INTEGRAL MICROPROCESSOR
- NON-VOLATILE MEMORY
- AUTOMATIC DEVICE MAPPING
- ELECTRONIC ADDRESSING
- ENVIRONMENTAL COMPENSATION
- INTELLIGENT DETECTOR
- WIDE 0.67% TO 3.77%/FT. SENSITIVITY RANGE
- PRE-ALARM SENSITIVITY SETTING
- IDENTIFICATION OF DIRTY OR DEFECTIVE DETECTORS
- AUTOMATIC DAY/NIGHT SENSITIVITY ADJUSTMENT
- TWIN RED/GREEN STATUS LEDS
- STANDARD, RELAY, and FAULT ISOLATOR MOUNTING BASES
- DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS

Description

EST's Signature Series Model SIGA-PS Intelligent Photoelectric Smoke Detector gathers analog information from its smoke sensing element and converts it into digital signals. The detector's on-board microprocessor measures and analyzes these signals. It compares the information to historical readings and time patterns to make an alarm decision. Digital filters remove signal patterns that are not typical of fires. Unwanted alarms are nearly eliminated.

The microprocessor in each detector provides four additional benefits - **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector's non-volatile memory. This information is accessible for review any time at the control panel, PC, or by using the SIGA-PRO Signature Program/Service Tool.

The information stored in the detector's memory includes:

- detector type, serial number, and address.
- date of manufacture, hours of operation, and last maintenance date.

Intelligent Photoelectric Smoke Detector, SIGA-PS



- current detector sensitivity values and the extent of environmental compensation.
- original detector sensitivity values upon manufacturing.
- number of recorded alarms and troubles.
- time and date of last alarm.
- analog signal patterns just before the last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. The "mapping" feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally. The history log for the detector at its original location remains relevant and intact.

The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the "mystery" out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the circuit.

EDWARDS SYSTEMS TECHNOLOGY

SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
 CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
 OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
 INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
 PITTSFIELD, ME. 207-487-3104

Stand-alone Operation - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit. Each detector on the circuit continues to collect and analyze information from its surroundings. The detector alarms if the preset smoke obscuration level is reached. If the detector is mounted to a relay base, the relay operates.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the loop controller when it has something new to report. This provides very fast response time and allows a lower baud rate (speed) to be used for communication on the loop. The lower baud rate offers several advantages including:

- less sensitivity to circuit wire characteristics.
- less sensitivity to noise glitches on the cable.
- less emitted noise from the analog wiring.
- twisted or shielded wiring is not required.

Electronic Addressing - The loop controller electronically addresses each detector, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each detector has its own unique serial number stored in its "on-board memory". The loop controller identifies each device on the circuit and assigns a "soft" address to that device's serial number. If desired, detectors can be addressed using the SIGA-PRO Signature Program/Service Tool.

Environmental Compensation - Detection sensitivity is almost independent of its installed environment and its physical condition. Environmental compensation means the sensing element adapts to long-term changes caused by dirt, humidity, aging etc. It even compensates for small amounts of normal ambient smoke. Approximately six times an hour the detector adjusts and updates the sensitivity (% obscuration) baseline for its sensing element. Approximately once every hour this information is written to its permanent memory. The detector's "learned" baseline is not lost, even when the detector is removed for cleaning.

The detector's sensitivity setting selected by the installer floats up or down to remain constant relative to the changing baseline. This is called differential sensing.

Sensitivity Range - The SIGA-PS Photoelectric Detector has a sensitivity range or window of 0.67% to 3.77%. The installer selects the detector's ALARM sensitivity level from five available settings within the range.

Pre-Alarm - Pre-alarm warnings may alert local staff to a possible fire condition allowing them to investigate before entering into a full alarm condition which requires building evacuation. The wide sensitivity range permits the use of early warning pre-alarm values. The pre-alarm value is 75% of the alarm setting.

Automatic Day/Night Sensitivity Selection - Signature Series detectors may be programmed for different sensitivities during day and night periods. This allows the detector to be more sensitive during unoccupied periods when lower ambient background conditions are expected.

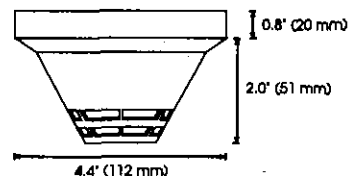
Stability - The SIGA-PS detector's sensitivity remains stable in wind velocities up to 5,000 ft/min (25.3 m/sec). Ambient temperature has very little effect on the detector. The detector may be installed in rooms with ambient temperatures up to 120°F (49°C).

Status LEDs - Twin LEDs are visible from any direction. A flashing GREEN led shows normal system polling from the loop controller. A flashing RED led means the detector is in alarm state. Both leds on steady shows alarm state - stand-alone mode. Normal green led activity is not distracting to building occupants, but can be quickly spotted by a maintenance technician.

Quality and Reliability - EST detectors are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance. All critical contacts are gold plated.

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2" or 4" octagon boxes, and to 4" square electrical boxes 1-1/2" (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers.



Testing & Maintenance

Each detector automatically identifies when it is dirty or defective and causes a "dirty detector" message. The detector's sensitivity measurement can also be transmitted to the loop controller. A sensitivity report can be printed to satisfy NFPA sensitivity measurements which must be conducted at the end of the first year and every two years thereafter.

The user-friendly maintenance program shows the current state of each detector and other pertinent messages. Single detectors may be turned off temporarily from the control panel. Availability of maintenance features is dependent on the fire alarm system used. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

Compatibility

The SIGA-PS detectors are compatible only with EST's Signature Loop Controller.

Application

Although photoelectric detectors have a wide range of fire sensing capabilities they are best suited for detecting slow, smoldering fires. The table below shows six standard test fires used to rate the sensitivity of smoke and heat detectors. The table indicates that no single sensing element is suited for all test fires.

EST recommends that this detector be installed according to latest recognized edition of national and local fire alarm codes.

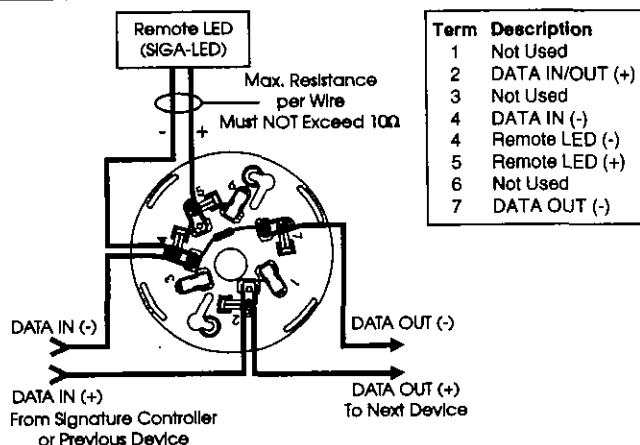
Test Fire	Type of Detector				
	SIGA-IS Ion	SIGA-PS Photo	SIGA-HRS and SIGA-HFS Rate-of -Rise/Fixed Temp.	SIGA-PHS Photo/Heat 3D	SIGA-IPHS Ion/Photo/Heat 4D
Open Wood	optimum	unsuitable	optimum	very suitable	optimum
Wood Pyrolysis	suitable	optimum	unsuitable	optimum	optimum
Smouldering Cotton	very suitable	optimum	unsuitable	optimum	optimum
Poly Urethane Foam	very suitable	very suitable	suitable	very suitable	optimum
n-Heptane	optimum	very suitable	very suitable	optimum	optimum
Liquid Fire without Smoke	unsuitable	unsuitable	optimum	very suitable	very suitable

Typical Wiring

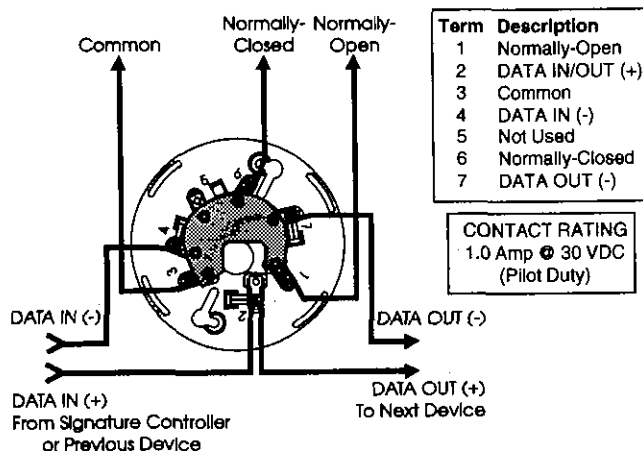
The detector mounting bases accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.5mm²) wire sizes.

Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

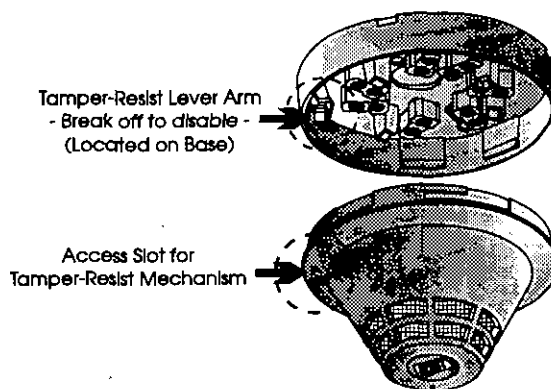
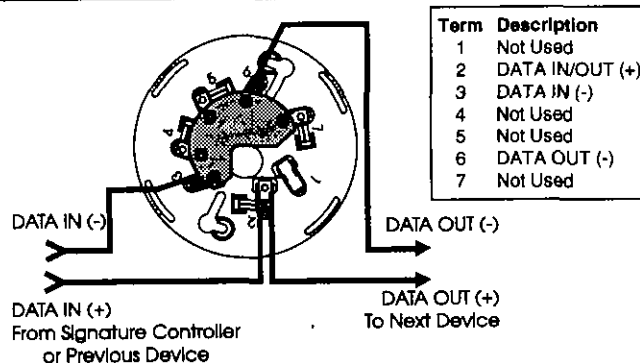
Standard Detector Base, SIGA-SB, SIGA-SB4



Relay Detector Base, SIGA-RB, SIGA-RB4



Isolator Detector Base, SIGA-IB, SIGA-IB4



Warnings & Cautions

This detector will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

This detector will NOT sense fires that start in areas where smoke cannot reach the detector. Smoke from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

Accessories

All detector mounting bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½" or 4" octagon boxes, 1½" (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4" sq. electrical boxes in addition to the above boxes. They include the SIGA-TS Trim Skirt which is used to cover the "mounting ears" on the base.

Standard Base SIGA-SB, SIGA-SB4 - This is the basic mounting base for EST Signature Series detectors. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB, SIGA-RB4 - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The relay base does not support the SIGA-LED Remote LED.

The relay is controlled by the detector and operates as follows:

- at system power-up or reset, the relay is de-energized.
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB, SIGA-IB4 - This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates as follows:

- a short on the line causes all isolators to open within 23 msec.
- at 10 msec intervals, beginning on one side of the Class A circuit nearest the loop controller, the isolators close to provide the next isolator down the line with power.
- when the isolator next to the short closes, it reopens within 10 msec.

The process repeats beginning on the other side of the loop controller.



Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS Trim Skirt - Supplied with 4" bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases. Use black model with SIGA-IPHSB.

Specifications

Catalog Number	SIGA-PS
Sensing Element	Photoelectric - Light Scattering Principle
Storage and Operating Environment	Air Velocity Range: 0 to 5,000 ft/min (0 to 25.39 m/s) Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH, Non-Condensing
Sensitivity Range	ULI/ULC - 0.67% to 3.77% obscuration/foot
User Selected Alarm Sensitivity Settings	Most Sensitive: 1.0%/ft. More Sensitive: 2.0%/ft. Normal: 2.5%/ft. Less Sensitive: 3.0%/ft. Least Sensitive: 3.5%/ft.
Pre-alarm Sensitivity	75% of Alarm Sensitivity Setting
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)
Operating Current	Quiescent: 45µA @ 19 V Alarm: 45µA @ 19 V Emergency Stand-alone Alarm Mode: 18mA Pulse Current: 100 µA (100 msec) During Communication: 9 mA maximum
Construction & Finish	High Impact Engineering Polymer - White
Compatible Mounting Bases	SIGA-SB, SIGA-SB4 Standard Base, SIGA-RB, SIGA-RB4 Relay Base, SIGA-IB, SIGA-IB4 Isolator Base
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm Both LEDs - Glow steady when in alarm (stand-alone) Compatible Remote Red LED (model SIGA-LED) Flashes when in alarm
Compatibility	Use With: SIGNATURE Loop Controller
Address Requirements	Uses 1 Device Address
Agency Listings	UL, ULC

Ordering Information

Catalog Number	Description	Carton Dims. Inches (mm)	Ship Wt. lbs (kg)
SIGA-PS	Intelligent Photoelectric Detector - UL/ULC Listed	5 (127)w x 3.6 (91)h x 5 (127)d	.5 (.23)
Accessories			
SIGA-SB	Detector Mounting Base - Standard	6 (152)w x 1 (25)h x 6 (152)d	.2 (.09)
SIGA-SB4	4" Detector Mounting base c/w SIGA-TS Trim Skirt		
SIGA-RB	Detector Mounting Base w/Relay		
SIGA-RB4	4" Detector Mounting Base w/Relay c/w SIGA-TS Trim Skirt		
SIGA-IB	Detector Mounting Base w/Fault Isolator		
SIGA-IB4	4" Detector Mounting Base w/ Fault Isolator c/w SIGA-TS Trim Skirt	3.8 (97)w x 2.8 (71)h x 6 (152)d	.2 (.09)
SIGA-LED	Remote Alarm LED		
SIGA-TS	Trim Skirt (supplied with 4" bases)	6 (152)w x 1 (25)h x 8 (152)d	.1 (.04)

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Intelligent Duct Smoke Detector Housing

- Model SIGA-DH

Features

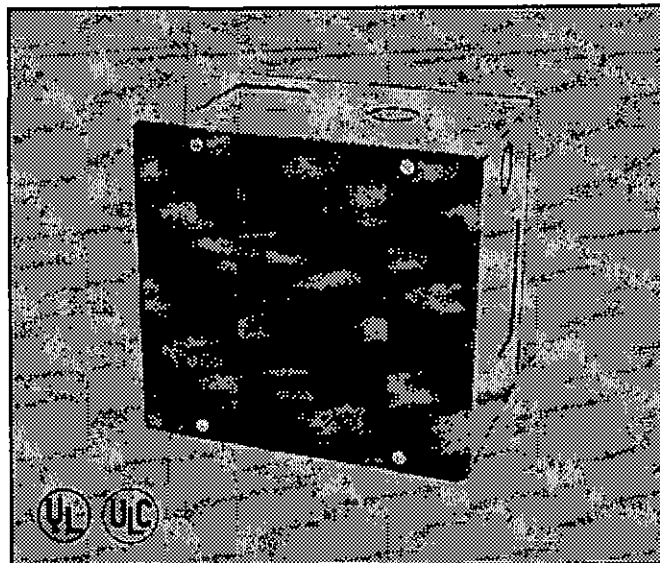
- **SUITABLE FOR HIGH AIR VELOCITY DUCT APPLICATIONS**
Up to 4000 ft/min. (20.3 m/sec.) with Photoelectric Detector.
- **STANDARD SIGNATURE SERIES DETECTORS**
Designed for use with standard 4D, 3D, and Photoelectric Signature Series smoke detectors. Does not require "special" duct smoke heads.
- **STANDARD, RELAY OR ISOLATOR DETECTOR BASE**
Detector "plugs-in" to base then easily installs into housing.
- **INSTALL IN DUCTS UP TO 10 FT. (3.05 M) WIDE**
- **REMOTE LED AND TEST STATION ACCESSORIES**
- **DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS**

Description

The **SIGA-DH Duct Smoke Detector Housing** is specially engineered to exploit all the capabilities of Signature Series intelligent photoelectric and multisensor smoke detectors. EST Signature Series detectors gather analog information from each of their one or more sensing elements and converts it into digital signals. The detector's onboard microprocessor measures and analyzes these signals. It compares them to historical readings, time patterns and known characteristics to make an alarm decision. Digital filters and complex Algorithms are applied for optimum detector accuracy. Unwanted alarms are nearly eliminated.

Each duct housing is packaged with detailed installation instructions, gaskets and a self-adhesive drilling template for locating and mounting the detector. The large access door is completely removable to allow fast detector installation and field wiring connections. The 16 gauge steel housing is finished in red baked enamel for easy identification. Five 1-gang knockouts on the housing provide a convenient location for mounting intelligent Signature Series modules.

The **SIGA-DH Duct Housing** comes with a 6 inch (150 mm) exhaust tube. Air sampling tubes are available in lengths from 8 inches (200 mm) to 10 feet (3048 mm) and must be ordered separately. Compatible smoke detectors, mounting



bases, and accessories are listed in the Ordering Information. Refer to individual device catalog literature pages for more detail.

Intelligent Duct Smoke Detectors

Compatible Signature Series detectors include the **SIGA-IPHS 4D Multisensor Smoke Detector with THREE INTEGRATED SENSING TECHNOLOGIES**. It combines Ionization, Photoelectric and Heat sensors and processes and analyzes information from each sensor separately using dynamic filters. Also compatible are the **SIGA-PHS 3D Multisensor Detector** and the **SIGA-PS Photoelectric Detector**. The installer selects the alarm sensitivity level from the detector's wide **0.67 to 3.7% sensitivity range window**. Five settings are available from within the range.

Environmental Compensation

Detection sensitivity for Signature Series detectors is almost independent of their installed environment and their physical condition. Each sensing element adapts to long-term changes caused by dirt, humidity, aging etc. Every 8.6 minutes the detector adjusts and updates the sensitivity (% obscuration) ambient baseline for its smoke sensing element. Every 68 minutes this information is written to its permanent memory.

The detector's alarm sensitivity setting selected by the installer floats up or down to remain constant relative to the changing baseline. This is called environmental compensation.

Identification of Dirty or Defective Detectors

Each detector automatically identifies when it is polluted and causes a "dirty detector" message. The detector's sensitivity measurement can also be transmitted to the loop controller. This measurement satisfies NFPA sensitivity measurement

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SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-899-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

requirements. The detector's internal components are self-supervised. Up to 32 trouble codes are generated and displayed for diagnostics.

Non-Volatile Memory

Signature Series smoke detectors permanently store a serial number, type of device and job number. Automatic updates of historic information including hours of operation, last maintenance date, number of alarms and troubles, time and date of last alarm are available. In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Electronic Addressing & Device Mapping

The Signature loop controller automatically addresses each detector to save valuable time during system commissioning. Setting complicated switches or dials on each intelligent device is not required. If desired, the detectors can be custom addressed using the **Signature Series Data Entry Program**.

The wired circuits between each device can be examined using the data entry program along with the self-mapping feature built into all Signature Series devices. With its graphic support, layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the 'mystery' out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping also allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the data loop.

Stand-Alone Operation

On-board intelligence permits Signature devices to operate in stand-alone mode. Should loop controller CPU communications fail for more than 4 seconds, all devices on that circuit (loop) go into stand-alone mode. The loop acts like a conventional alarm receiving circuit. Each detector on the loop continues to collect and analyze information from its surroundings. The detector alarms if the preset smoke obscuration level is reached and causes a loop alarm. If the detector is mounted to a relay base, the relay operates.

Quality and Reliability

EST detectors are designed and manufactured in North America to ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for corrosion resistance and all critical contacts are gold plated.

Signature Duct Detector Accessories Duct Detector Air Sampling Tubes

One air sampling inlet tube must be ordered for each duct smoke detector housing. Refer to Ordering Information for available lengths.

Detector Mounting Bases

One detector mounting base must be ordered for each duct smoke housing. Removing a detector from its base (except isolator base) does not affect other devices operating on the same data loop. Available bases are:

Standard Base SIGA-SB - This is the basic mounting base. The SIGA-LED Remote LED is supported by the 'Standard Base'.

Relay Base SIGA-RB - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp @ 30 Vdc (pilot duty). The relay's position is supervised to avoid accidentally jarring it out of position. The Relay Base does not support the SIGA-LED Remote LED. Relay bases are not affected or activated by the SIGA-DTS Duct Test Station.

The relay is controlled by the detector and operates as follows:

- at system power-up or reset, the relay is de-energized
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB - This base includes a built-in line fault isolator. A detector must be installed for it to operate. The integral isolator relay is controlled by the detector or the loop controller. A maximum of 96 isolator bases can be installed on one loop. The Isolator Base does not support the SIGA-LED Remote LED.

Alarm LED Indicator

The **SIGA-LED Alarm Indicator** is suitable for use with the **SIGA-SB detector base only**. A maximum of 1 can be operated for each detector. It features a red LED on a 1-gang plastic plate and can be installed remote or directly on the **SIGA-DH Duct Housing**.

Duct Test Station

The **SIGA-DTS Duct Test Station** uses a key switch along with an integral intelligent input module mounted on a 2-gang plastic plate. It is supplied with 2 keys and features a red alarm led.

When the key is turned to the "TEST" position, the led lights and the integral module remotely inputs a duct detector test alarm. The actions and sequences programmed at the control panel to activate dampers and other smoke control measures, are easily tested. Detector relay bases are not affected or activated. Resetting the control panel clears the test and returns the system to normal. The key cannot be removed when in the "TEST" position.

The Duct Test Station mounts to standard 2" deep North American 2-gang and 4" square electric boxes and European 100 mm square boxes.

Air Velocity Test Kit

The **6263-SG Air Velocity Test Kit** is specially designed to interface to the SIGA-DH Duct Housing. It is used to test or confirm the air velocity in HVAC ducts where the duct housing is installed.

Specifications

SIGA-DH Duct Housing (NOTE: The SIGA-DH Duct Housing is NOT WEATHERPROOF or DUST TIGHT.)

Dimensions	7-3/8" (188mm)W x 7" (178mm)H x 5" (127mm)D		
Material and Finish	16 Gauge Cold Rolled Steel, Red - Baked Enamel		
Conduit Knockouts	Combination 1/2" & 3/4"		
Agency Approvals	UL, ULC, MEA, CSFM		
Compatible Smoke Detectors	SIGA-PS	SIGA-PHS	SIGA-IPHS
Air Velocity Range	300 to 4000 ft/min. (1.5 to 20.3 m/sec)		300 to 1000 ft/min. (1.5 to 5.0 m/sec)
Smoke Sensing Element(s)	Photoelectric - Light Scattering Principle	Photoelectric - Light Scattering Principle Heat - 135°F (57°C) Fixed Temperature	Ionization - Unipolar Photoelectric - Light Scattering Principle Heat - Alarms at 65°F (35°C) change in ambient temp.
Operating Environment	Temperature: 32 to 120°F (0 to 49°C) Humidity: 0 to 93% RH, non-condensing	Temperature: 32 to 100°F (0 to 38°C) Humidity: 0 to 93% RH, non-condensing	
Storage Environment	Temperature: -4 to 140°F (-20 to 60°C); Humidity: 0 to 93% RH, non-condensing		
ULI/ULC Sensitivity Range	0.67% to 3.77% obscuration/foot (305mm)		0.67% to 3.70% obscuration/foot (305mm)
User Selected Alarm Sensitivity Settings	Least Sensitive: 3.5%; Less Sensitive: 3.0%; Normal: 2.5%; More Sensitive: 2.0%; Most Sensitive: 1.0%		
Pre-alarm Sensitivity	75% of Alarm Sensitivity Setting		
Electrical and Physical Characteristics	refer to individual detector catalog sheets		
Compatible Mounting Bases	SIGA-SB Standard Base, SIGA-RB Relay Base, SIGA-IB Isolator Base		
Compatible Remote LED	SIGA-LED (led flashes when in alarm)		
Controller Compatibility	SIGNATURE Loop Controller		
Addressing Restrictions	Uses 1 Input Device Address		

SIGA-DTS Duct Test Station

Operating Current	Standby = 250uA; Activated = 400uA
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)
Replacement Key	p/n - P-037449
Storage and Operating Temperature	32 to 120°F (0 to 49°C)
Onboard LED Operation	Red LED - flashes when in alarm or test state
Mounting	North American electric box: 2" deep 2-gang or 4" square ; European electric box: 100 mm square
Construction & Finish	High Impact Engineered Plastic 2-gang front plate - White
Addressing Restrictions	Uses 1 Module Address

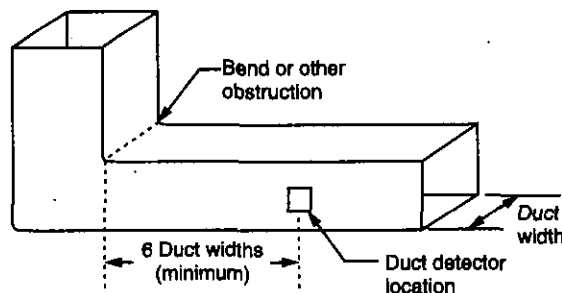
Application Notes

The **SIGA-DH Duct Smoke Detector Housing** requires a clear, flat, accessible area on the duct of at least 7-3/8" (188mm) W x 7" (175mm) H. The duct housing must be installed on ducts at least 8" (200mm) wide. To avoid the effects of stratification, install the detector housing a minimum of six (6) duct widths beyond any bends in the duct. Duct detectors are usually installed on the "supply" duct after the air filters; or in the "return" air stream prior to being diluted by outside air.

Sample tube length must span the entire width of the air duct and the tube can be easily cut to any length. Inlet tubes longer than 3 ft.(900mm) must be supported at both ends.

Duct Detectors continually sample air flow in a HVAC duct

and initiate an alarm condition whenever smoke is detected. An alarm is activated when the quantity (percent obscuration) of combustion products in that air sample exceeds the detector's sensitivity setting.



Air velocity in the duct maintains the air flow that enters the detector housing through perforations in the air sampling inlet tube and discharges through the outlet exhaust tube. The detector housing must be installed with its INLET air sampling tube upstream of the EXHAUST tube. Before installing the duct detector housing, test the duct air velocity to verify it is within the limits of the Signature Smoke Detector that is being installed. Also verify that duct air relative humidity is within 0 and 93 percent.

WARNING: Duct detectors have specific limitations. Duct Detectors ARE NOT a substitute for an open area smoke detector. Duct Detectors ARE NOT a substitute for early warning detection. Duct Detectors ARE NOT a replacement for a building's regular fire detection system. Smoke Detectors ARE NOT designed to detect toxic gases which can build up to hazardous levels in some fires. These devices WILL NOT operate without electrical power. As fires frequently cause power interruptions, EST suggests you discuss further safeguards with your local fire protection specialist.

Typical Wiring

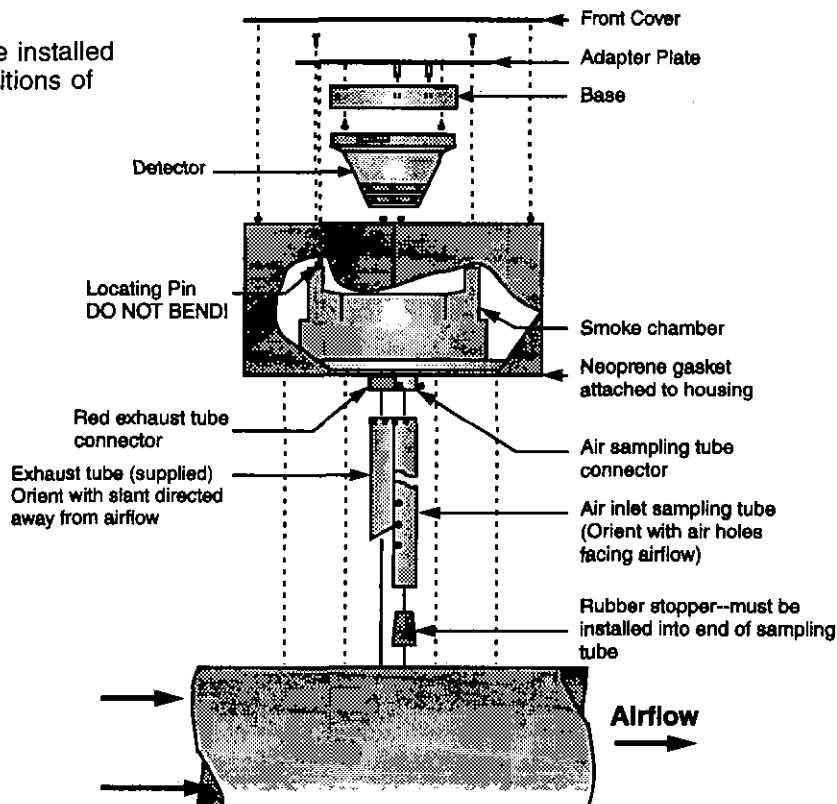
The detector mounting bases and test station will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.50mm²) wire sizes. Note: #14 AWG (1.5 mm²) is not recommended due to difficulty of installation. See Loop Controller and Detector catalog sheets for detailed wiring requirement specifications.

Ordering Information

Catalog Number	Description	Ship Wt - lb. (kg)
SIGA-DH	Duct Detector Housing	6.5 (3)
6261-001	8" (200mm) Air Sampling Inlet Tube	.25 (.1)
6261-002	24" (600mm) Air Sampling Inlet Tube	.5 (.2)
6261-003	42" (1060mm) Air Sampling Inlet Tube	1.6 (.8)
6261-006	78" (1980mm) Air Sampling Inlet Tube	2.2 (1)
6261-010	120" (3048mm) Air Sampling Inlet Tube	4.4 (2)
SIGA-IPHS	4D Multisensor Detector	.5 (.23)
SIGA-PHS	3D Multisensor Detector	.5 (.23)
SIGA-PS	Photoelectric Detector	.5 (.23)
SIGA-SB	Standard Base	.2 (.09)
SIGA-RB	Relay Base	.2 (.09)
SIGA-IB	Isolator Base	.2 (.09)
SIGA-LED	Alarm LED Indicator	.2 (.09)
SIGA-DTS	Duct Test Station	.4 (.18)
6263-SG	Duct Air Velocity Test Kit	

Installation and Mounting

EST recommends Duct Detectors always be installed in accordance with the latest recognized editions of local and national fire alarm codes.



It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

Input Modules

Models SIGA-CT1, SIGA-CT2 & SIGA-MCT2

Features

■ MULTIPLE APPLICATIONS

Including Alarm, Alarm with delayed latching (retard) for waterflow applications, Supervisory, and Monitor. The installer selects one of four (4) "personality codes" to be downloaded to the module through the loop controller.

■ PLUG-IN (UIO) OR STANDARD 1-GANG MOUNT

UIO versions allow quick installation where multiple modules are required. The 1-gang mount version is ideal for remote locations that require a single module.

■ AUTOMATIC DEVICE MAPPING

Signature modules transmit information to the loop controller regarding their circuit locations with respect to other Signature devices on the wire loop.

■ ELECTRONIC ADDRESSING

Programmable addresses are downloaded from the loop controller, a PC, or the SIGA-PRO Signature Program/Service Tool. There are no switches or dials to set.

■ INTELLIGENT DEVICE WITH MICROPROCESSOR

All decisions are made at the module to allow lower communication speed with substantially improved control panel response time and less sensitivity to line noise and loop wiring properties; twisted or shielded wire is not required.

■ NON-VOLATILE MEMORY

Permanently stores serial number, type of device, and job number. Automatically updates historic information including hours of operation, last maintenance date, number of alarms and troubles, and time and date of last alarm.

■ STAND-ALONE OPERATION

The module makes decisions and inputs an alarm from initiating devices connected to it even if the loop controller's polling interrogation stops. (Function availability dependent upon control panel.)

■ DIAGNOSTIC LEDs

Flashing GREEN shows normal polling; flashing RED shows alarm/active state.

■ HIGH AMBIENT TEMPERATURE OPERATION

Install in ambient temperatures up to 120°F (49°C).

■ DESIGNED TO ISO 9001 STANDARDS

All Signature products are manufactured to strict international quality standards to ensure highest reliability.



Description

The SIGA-CT1 Single Input Module and SIGA-CT2/SIGA-MCT2 Dual Input Modules are intelligent analog addressable devices used to connect one or two Class B normally-open Alarm, Supervisory, or Monitor type dry contact Initiating Device Circuits (IDC).

The actual function of these modules is determined by the "personality code" selected by the installer. This code is downloaded to the module from the Signature loop controller during system configuration.

The input modules gather analog information from the initiating devices connected to them and convert it into digital signals. The module's on-board microprocessor analyzes the signal and decides whether or not to input an alarm.

The SIGA-CT1 and SIGA-CT2 mount to standard North American 1-gang electrical boxes, making them ideal for locations where only one module is required. Separate I/O and data loop connections are made to each module.

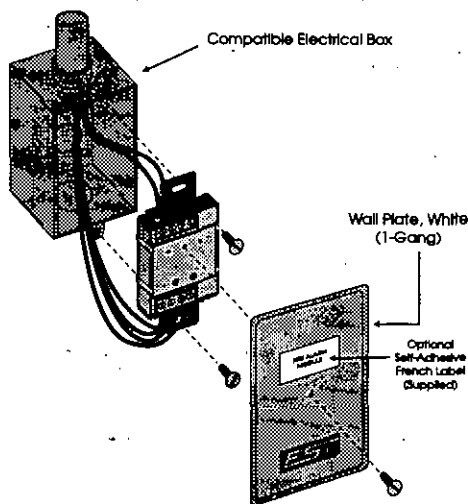
The SIGA-MCT2 is part of the UIO family of plug-in Signature Series modules. It functions identically to the SIGA-CT2, but takes advantage of the modular flexibility and easy installation that characterizes all UIO modules. Two- and six-module UIO motherboards are available. All wiring connections are made to terminal blocks on the motherboard. UIO assemblies may be mounted in EST enclosures.

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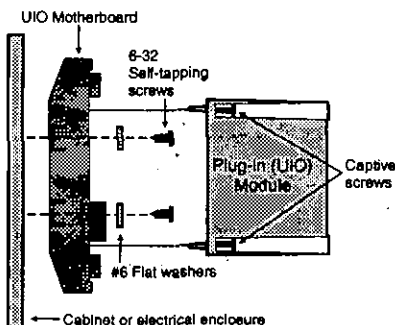
SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-378-2430 Fax: 519-372-1581
INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

Installation

SIGA-CT1 and SIGA-CT2: modules mount to North American 2½" (64 mm) deep 1-gang boxes and 1½" (38 mm) deep 4" square boxes with 1-gang covers. The terminals are suited for #14 to #18 AWG (1.5 mm² to 0.75 mm²) wire size.



SIGA-MCT2: mount the UIO motherboard inside a suitable EST enclosure with screws and washers provided. Plug the SIGA-MCT2 into any available position on the motherboard and secure the module to the motherboard with the captive screws. Wiring connections are made to the terminals on the motherboard (see wiring diagram). UIO motherboard terminals are suited for #12 to #18 AWG (2.5 mm² to 0.75 mm²) wire size.



Electronic Addressing - The loop controller electronically addresses each module, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each module has its own unique serial number stored in its on-board memory. The loop controller identifies each device on the loop and assigns a "soft" address to each serial number. If desired, the modules can be addressed using the SIGA-PRO Signature Program/Service Tool.

EST recommends that this module be installed according to latest recognized edition of national and local fire alarm codes.

Compatibility

The Signature Series modules are compatible only with EST's Signature Loop Controller.

Application

The duty performed by the SIGA-CT1 and SIGA-CT2/MCT2 is determined by their sub-type code or "Personality Code". The code is selected by the installer depending upon the desired application and is downloaded from the loop controller.

One (1) personality code can be assigned to the SIGA-CT1. Two (2) personality codes can be assigned to the SIGA-CT2/MCT2. Codes 1, 2, 3 and 4 can be mixed on SIGA-CT2/MCT2 modules only. For example, personality code 1 can be assigned to the first address (circuit A) and code 4 can be assigned to the second address (circuit B).

NORMALLY-OPEN ALARM - LATCHING (Personality Code 1) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact initiating devices such as **Pull Stations, Heat Detectors**, etc. An ALARM signal is sent to the loop controller when the input contact is closed. The alarm condition is latched at the module.

NORMALLY-OPEN ALARM - DELAYED LATCHING (Personality Code 2) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact initiating devices such as **Waterflow Alarm Switches**. An ALARM signal is sent to the loop controller when the input contact is closed for approximately 16 seconds. The alarm condition is latched at the module.

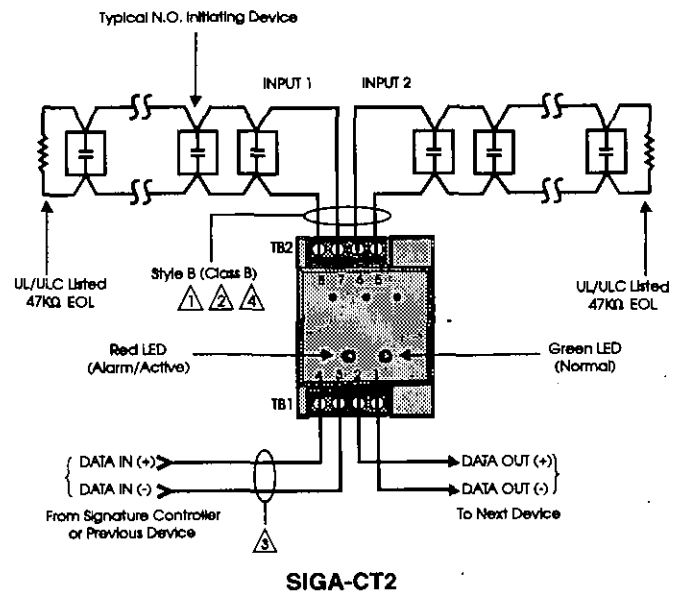
NORMALLY-OPEN ACTIVE - NON-LATCHING (Personality Code 3) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact monitoring input such as from **Fans, Dampers, Doors**, etc. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is not latched at the module.

NORMALLY-OPEN ACTIVE - LATCHING (Personality Code 4) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact monitoring input such as from **Supervisory and Tamper Switches**. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is latched at the module.

Ordering Information

Catalog Number	Description	Ship Wt. lbs (kg)
SIGA-CT1	Single Input Module - UL/ULC Listed	0.4 (0.15)
SIGA-CT2	Dual Input Module - UL/ULC Listed	0.4 (0.15)
SIGA-MCT2	Dual Input Plug-in (UIO) Module - UL Listed	0.1 (0.05)
Related Equipment		
27193-11	Surface Mount Box - Red, 1-gang	1.0 (0.6)
27193-16	Surface Mount Box - White, 1-gang	1.0 (0.6)
SIGA-UIO2R	Universal Input-Output Module Board w/Riser Inputs - 2 Module Positions	0.32 (0.15)
SIGA-UIO6R	Universal Input-Output Module Board w/Riser Inputs - 6 Module Positions	0.62 (0.28)
SIGA-UIO6	Universal Input-Output Module Board - 6 Module Positions	0.56 (0.25)

Initiating (Slave) Device Circuit Wire Specifications		
Maximum Allowable Wire Resistance	50 ohms (25 ohms per wire) per Circuit	
Maximum Allowable Wire Capacitance	0.1µF per Circuit	
For Design Reference:	Wire Size	Maximum Distance to EOLR
	#18 AWG (0.75 mm²)	3,930 ft (1,198 m)
	#16 AWG (1.00 mm²)	6,225 ft (1,897 m)
	#14 AWG (1.50 mm²)	9,900 ft (3,018 m)



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Specifications

Catalog Number	SIGA-CT1	SIGA-CT2	SIGA-MCT2
Description	Single Input Module		Dual Input Module
Type Code	48 (factory set) 4 sub-types (personality codes) are available		49 (factory set) 4 sub-types (personality codes) are available
Address Requirements	Uses 1 Module Address		Uses 2 Module Addresses
Operating Current	Standby = 250µA; Activated = 400µA		Standby = 396µA; Activated = 680µA
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)		
Construction	High Impact Engineering Polymer		
Mounting	North American 2½" (64 mm) deep 1-gang boxes and 1½" (38 mm) deep 4" square boxes with 1-gang covers		UIO2R/6R/6 Motherboard
Storage and Operating Environment	Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH		
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm/active Both LEDs - Glow steady when in alarm (stand-alone)		
Compatibility	Use with Signature Loop Controller		
Agency Listings	UL, ULC (See Ordering Table)		

Description (Signature Overview)

The Signature Series intelligent analog-addressable system from Edwards Systems Technology is an entire family of multi-sensor detectors and mounting bases, multiple-function input and output modules, network and non-network control panels, and user-friendly maintenance and service tools. Analog information from equipment connected to Signature devices is gathered and converted into digital signals. An onboard microprocessor in each Signature device measures and analyzes the signal and decides whether or not to input an alarm. The microprocessor in each Signature device provides four additional benefits – **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log – Each Signature Series device constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in its non-volatile memory. This information is accessible for review any time at the control panel, PC, or using the SIGA-PRO Signature Program/Service Tool. The information stored in device memory includes:

- Device serial number, address, and type.
- Date of manufacture, hours of operation, and last maintenance date.
- Number of recorded alarms and troubles.
- Time and date of last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

Automatic Device Mapping – The Signature Data Controller (SDC) learns where each device's serial number address is installed relative to other devices on the circuit. The SDC keeps a "map" of all Signature Series devices connected to it. The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "As-Built" drawing information showing branch wiring (T-taps), device types and their address are stored on disk for printing hard copy. This takes the 'mystery' out of the installation. The preparation of "As-Built" drawings is fast and efficient.

Device mapping allows the Signature Data Controller to discover:

- Unexpected additional device addresses.
- Missing device addresses.
- Changes to the wiring in the circuit.

Most Signature modules use a 'personality code' selected by the installer to determine their actual function. Personality codes are

downloaded from the SDC during system configuration and are indicated during device mapping.

Standalone Operation – A decentralized alarm decision by the device is guaranteed. Onboard intelligence permits the device to operate in standalone (degrade) mode. If Signature loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into standalone mode. The circuit acts like a conventional alarm receiving circuit. Each Signature device on the circuit continues to collect and analyze information from its slave devices. When connected to a panel utilizing standalone operation, modules with their 'personality' set as alarm devices (IDC) will alarm should their slave alarm-initiating device activate.

Fast Stable Communication – Built-in intelligence means less information needs to be sent between the device and the Signature Data Controller (SDC). Other than regular supervisory polling response, Signature devices only need to communicate with the SDC when they have something new to report. This provides very fast control panel response and allows a lower baud rate (speed) to be used for communication on the circuit. The lower baud rate offers several advantages including:

- Less sensitivity to circuit wire characteristics.
- Less sensitivity to noise glitches on the cable.
- Less emitted noise from the analog wiring.
- Twisted or shielded wiring is not required.

Diagnostic LEDs – Twin LEDs on most Signature devices provide visual indication of normal and alarm-active conditions. A flashing green LED shows normal system polling. A flashing red LED means the module is in alarm-active state. Both LEDs on steady indicates alarm-active state – standalone mode.

Testing & Maintenance – Automatic self-diagnosis identifies when a Signature device is defective and causes a trouble message. The user-friendly maintenance program shows the current state of each device and other pertinent information. Single devices may be turned off temporarily, from the control panel. **Scheduled maintenance (Regular or Selected) for proper system operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.**

Quality and Reliability – EST Signature devices are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance.

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.



FIRE ALARM SIGNALING APPLIANCES

Self-Synchronizing Design
Temporal Output

NEW

UL 1971
Listed

757 Series Temporal Horn

Integrity Family

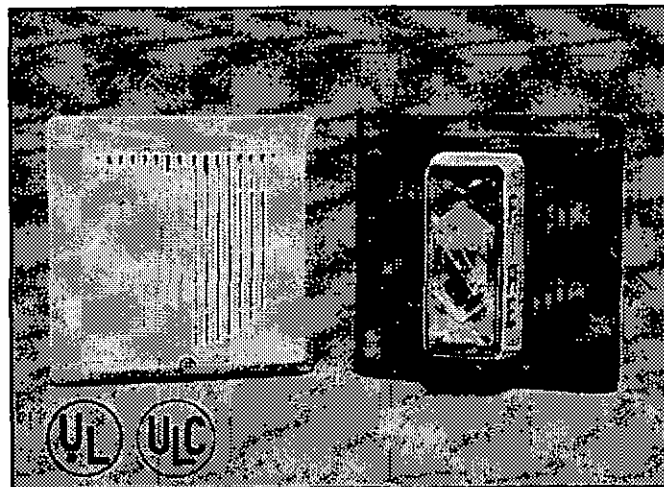
Features

- **SYNCHRONIZED TEMPORAL AUDIBLE OUTPUT**
Select for self-synchronizing temporal signal or steady tone. External "synch-control" module is not required.
- **SYNCHRONIZED STROBE FLASH**
Self-synchronizing flash from multiple strobes improves the safety for photosensitive people. External "synch-control" module is not required.
- **MOUNTS TO 2-GANG BOX**
Flush mount to standard North American 2-gang or 4 inch square electric box.
- **ADJUSTABLE HIGH OR LOW dBA OUTPUT**
Select for 98 dBA or 94 dBA sound output.
- **TRUE HORN TONE**
Low pitch "growling" sound demands attention.
- **ADA/UL1971/ULC LISTED STROBE**
All strobe models provide "Equivalent Facilitation" allowed under ADA Accessibility Guidelines, satisfy NFPA codes and are UL1971 listed as Signaling Devices for the Hearing Impaired.
- **EASY INSTALLATION**
A universal mounting plate allows Integrity to be wired then left hanging "free" to allow easy V.I. and testing before it is fastened to electrical box.
- **SCREW TERMINAL WIRE CONNECTION**
Large terminals speed installation and accept up to #12 AWG (2.5mm²) wire.
- **FIELD CHANGEABLE LENS MARKINGS**
Standard "FIRE" strobe marking/language is easily changed with optional snap-on Lens Kits.
- **UL/ULC RATED OUTDOOR OPTION**

Description

EST's 757 Integrity Series Temporal Horn and Temporal Horn/Strobe are perfect for life safety applications as an alert and alarm signal, especially to notify the hearing impaired. The horn emits a piercing low frequency sound that is easily heard above moderate ambient noise levels.

Integrity's rugged plastic housing is available with a red or white textured finish. With its ingenious mounting sub-plate, the horn is firmly held in place with a single screw ensuring a quick, attractive installation. A separate trim plate is not required for flush mounting. Separate terminals to accept up to #12 AWG



(2.5mm²) wire are provided for field connection of the strobe and horn.

Matching Integrity Speakers, Chimes, and Strobe combinations are also available.

HORN: During installation, the horn is configured for steady or temporal tone signal and either low or high dB output. When temporal output is selected all horns on a common 2-wire circuit are self-synchronized (see specifications). External "synch-control" modules are not required.

Integrity Series horns emit a low frequency "growling" tone to really demand attention. Select *'high'* output for 98 dBA; choose *'low'* output for 94 dBA. (Average measurement at 10 feet (3.05 M) in anechoic chamber.)

STROBE: EST strobes are self-synchronized to flash at 1 fps across their full operating voltage range. The strobe operates on any existing 2-wire signal circuit. Separately installed "synch-control" modules are not required. A very small portion of the population have a condition which may cause them to become disoriented from multiple random flashes of light. This risk is minimized with Integrity's strobe.

The flash from EST strobes can be noticed from almost any position in the room, corridor, or large open space. The output is controlled using a specially shaped reflector to disperse the light in all viewing directions. EST strobes are UL1971 listed with both wall and ceiling cd intensity ratings (see Specifications). This is useful in areas where the Authority Having Jurisdiction (AHJ) permits ceiling mount strobes.

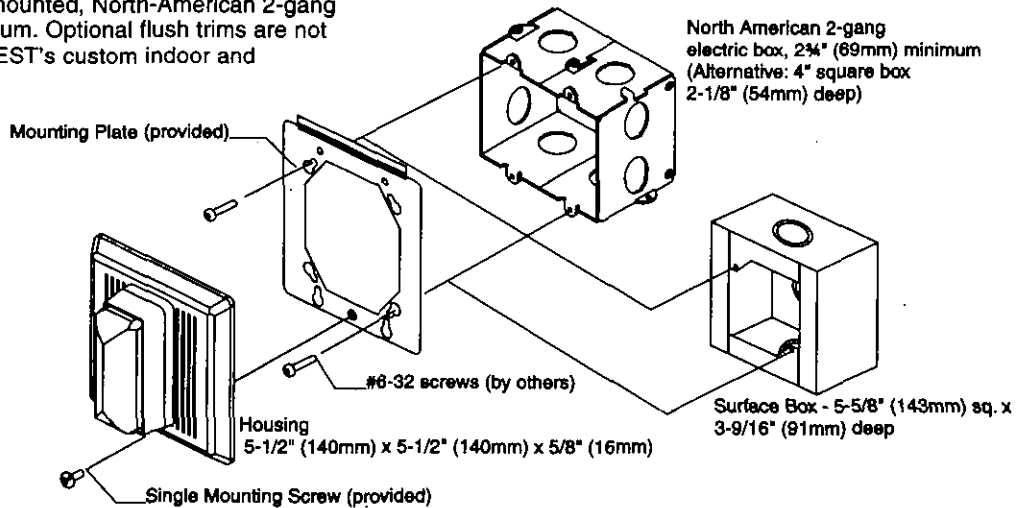
757 Series Temporal Horn/Strobes are shipped with wall mount style "FIRE" lens markings. Where ceiling mount, other languages or different lens markings are required, optional LKW and LKC series Lens Marking Kits are offered. Lens marking sleeves snap right over the strobe lens providing quick, easy, change. Consult EST for availability of other languages or special markings.

EDWARDS SYSTEMS TECHNOLOGY

SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

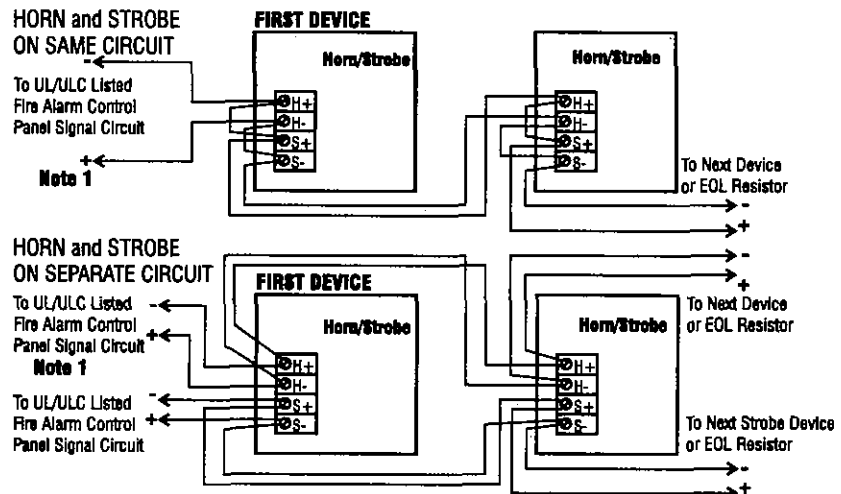
Installation and Mounting

All models fit to a standard flush mounted, North-American 2-gang electrical box, 2 3/4" (69 mm) minimum. Optional flush trims are not required. For surface mount, use EST's custom indoor and outdoor surface boxes painted in color-matched red or white epoxy. EST recommends that fire alarm horn/strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.



Typical Wiring

The strobe must be connected to signal circuits which output a constant (not pulsed) voltage. The horn can be connected to continuous voltage circuits.



Note 1: Polarity of Signal Circuit is shown in supervisory state. Polarity reverses in alarm condition.

Ordering Information

Catalog Number	Description	Ship Wt. lb. (kg)
TEMPORAL HORNS		
757-1A-T*	Temporal Horn, Red	1.7(.8)
TEMPORAL HORN/STROBES		
757-5A-T*	Temporal Horn/Strobe, 15cd, Red	2(.9)
757-7A-T*	Temporal Horn/Strobe, 15/75cd, Red	
757-3A-T*	Temporal Horn/Strobe, 30cd, Red	
757-8A-T*	Temporal Horn/Strobe, 110cd, Red	

WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist. These visual signal appliances' flash intensity may not be adequate to alert or awaken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. EST recommends that strobes in sleeping rooms be 110 cd minimum.

MOUNTING ACCESSORIES

757A-SB*	Surface Box, Red, Indoor	1.5(.7)
757A-WB*	Weatherproof Box, Red, Surface	1.5(.7)
757A-BDF*	Bi-directional Frame, Red	4(1.8)

LENS MARKING KITS (see note 1)

LKW-1	"FIRE", Wall Orientation (supplied)	0.1 (.05)
LKW-1R	"FIRE", Wall Orientation, RED	
LKW-2	"FEU", Wall Orientation	
LKW-3	"FIRE/FEU", Wall Orientation	
LKW-4	"SMOKE", Wall Orientation	
LKW-5	"HALON", Wall Orientation	
LKW-6	"CO2", Wall Orientation	
LKW-7	"EMERGENCY", Wall Orientation	
LKW-8	"ALARM", Wall Orientation	
LKW-9	"FUEGO", Wall Orientation	

* Add Suffix "W" to catalog no. for WHITE. (e.g. 757-7A-TW)

Note 1 - Change "W" to "C" for CEILING mount. (e.g. LKC-1)

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.



**Self-Synchronizing Design
with Terminal Block**

Strobe

Models: 405-3A, -5A, -6A, -7A -8A

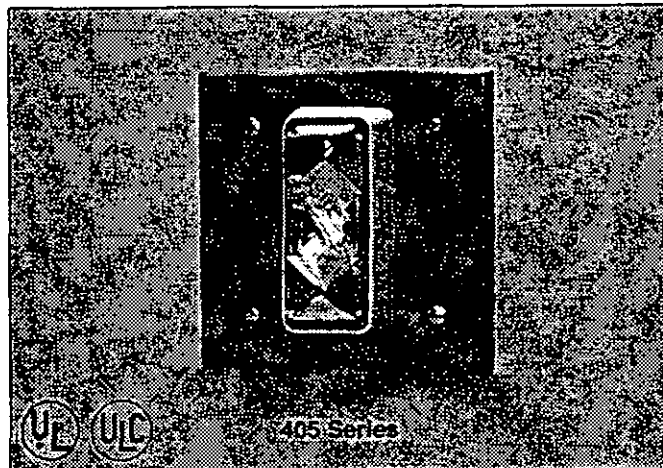
Features

- **SYNCHRONIZING STROBE**
EST strobes are self-synchronizing; no external control module is required. Synchronized flash from multiple strobes improves the safety for photosensitive people.
- **SATISFIES ADA CODE REQUIREMENTS**
ADA/UL1971/ULC listed strobe is available in five intensities. All models provide the "Equivalent Facilitation" allowed under ADA Accessibility Guidelines. Use single strobe in rooms up to 50' x 50' and satisfy both ADA and NFPA codes.
- **SUPERIOR VISIBILITY**
In addition to being UL 1638 and ULC S526 listed as Visual Signal Appliances, EST strobes have a "distributed" light output pattern and are UL 1971 listed as Signaling Devices for the Hearing Impaired.
- **FIELD CHANGEABLE LENS MARKINGS**
Lens language or standard "FIRE" marking is easily changed with optional LKW and LKC series Lens Kits.
- **SCREW TERMINAL WIRE CONNECTION**
Large terminals speed installation and accept up to #12 AWG (2.5mm²) wire.
- **RUGGED STEEL FRONT PLATE**
Red or white front plate is finished with durable baked epoxy polyester powder-coat finish.
- **FITS 4" SQUARE FLUSH BOX**
Ideal for retrofit and new projects.
- **UL/ULC RATED OUTDOOR OPTION**

Description

EST 405 Series Strobes are especially designed for use with compatible life safety communication and control equipment to alert the hearing impaired. EST strobes are available with 15cd, 15/75 (ADA) cd, 30cd, 60cd, and 110cd effective flash intensity.

EST strobes are self-synchronized to flash at 1 fps across their full operating voltage range. The strobe operates on any existing 2-wire signal circuit. Separately installed "synch control modules" are not required. A very small portion of the population have a condition which may cause them to become disoriented from multiple random flashes of light. This risk is minimized with Integrity's strobe.



The flash from EST strobes can be noticed from almost any position in the room, corridor, or large open space. The light dispersion is controlled with a specially shaped reflector. It directs a minimum of 12 percent of rated light output above and below the strobe, and a minimum of 25 percent of rated light straight out both sides. EST strobes are UL1971 listed with both wall and ceiling cd intensity ratings (see Specifications). This is useful in areas where the Authority Having Jurisdiction (AHJ) permits ceiling mount strobes.

The 405 series is shipped with standard wall mount style "FIRE" lens markings. Where ceiling mount, other languages, or different lens markings are required, EST offers optional LKW/LKC series Lens Marking Kits. These optional lens markings just "snap on" to the strobe for quick, easy, conversion. Consult EST for availability of special lens languages or markings.

The strobe is designed for 20 to 24 volt dc operation and must be connected to signal circuits which output a constant (not pulsed) voltage. A diode is used to allow full signal circuit supervision and terminals to accept up to #12 AWG (2.5mm²) wire are provided for making polarized connections.

The steel housing/front plate is finished in red or white color. Durable baked epoxy polyester powder-coat paint is used. The 405 series strobes are a part of a full line of ADA/UL 1971/ULC S526 listed fire alarm Audible/Visible signals available from EST. Single-gang mount (202 series) strobes are also available.

EDWARDS SYSTEMS TECHNOLOGY

SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-899-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

Strobe Application

All models are listed to standard UL 1971 - Signaling Devices for the Hearing Impaired and CAN/ULC S526 Standard for Visual Signal Appliances for Fire Alarm Systems. Each strobe can provide the "Equivalent Facilitation" allowed under Americans with Disabilities Act Accessibility Guidelines (ADA(AG)).

These guidelines are based on ANSI/NFPA 72 National Fire Alarm Code (1993). When applied and installed in accordance with that code, EST strobes meet or exceed the illumination produced by the ADA specified 75 candela (cd) strobe at 50 feet. However, optimum performance is obtained by providing "Equivalent Facilitation" as allowed by the Americans with Disabilities Act Accessibility Guidelines [ADA(AG)]. Contact EST for exact spacing requirements.

Non-Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Up to 20' x 20' (6.1 m x 6.1 m)	405-5A 15 cd @ 70mA or 405-7A* 15/75 cd @ 105 mA
Up to 30' x 30' (9.1 m x 9.1 m)	405-3A 30 cd @ 105mA
Up to 40' x 40' (12.2 m x 12.2 m)	405-6A 60 cd @ 155mA
Up to 50' x 50' (15.2 m x 15.2 m)	405-8A 110 cd @ 219mA
Corridors	Wall Mounted - EST Model:
Any Length x Max. 20' (6.1m) Wide	405-5A or 405-7A* spaced @ 100' (30.5m) never exceeding 15' (4.5m) from end wall

* Model 405-7A is rated at 15 cd (wall or ceiling mount) per UL1971, and 75 cd per UL 1638 thereby meeting ADA on axis only requirements of 75 cd.

Non-Sleeping Rooms and Corridors: EST strobes rated at less than 110 cd per UL1971 are intended for use in non-sleeping areas only. Install them 80" (2.03m) above floor level OR within the space between 6" (150mm) to 24" (610mm) below the ceiling, whichever is lower. No point in any space (including corridors) required to have strobes shall be more than 50' (15.2m) from the signal (in the horizontal plane). The 110 cd strobe should be used in non-sleeping areas only when the room exceeds 40' X 40' (12.2m X 12.2m).

In large rooms or spaces (such as auditoriums) that exceed 100' (30.4m) across and without obstructions more than 72" (1.8m) above the finished floor, strobes may be placed around the perimeter, spaced a maximum of 100' (30.4m) apart, in lieu of suspending them from the ceiling.

Sleeping rooms: EST model 405-8A is rated at 110 cd. It is intended for use in sleeping rooms and should be installed along with a smoke detector. It must be wall mounted at least 80" (2.03m) above floor level, but no closer than 24" (610mm) to the ceiling. The distance from the strobe to the pillow must not exceed 16' (4.8m).

Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Any size	405-8A 110 cd @ 219mA

Application Notes — USA

Strobes must be used to supplement audible signals whenever the average ambient sound level exceeds 105 dBA. Combination Audible/Visible signals must be installed per NFPA guidelines established for strobes.

ADA suggests that the following areas may require Visual Alarm Signals:

- rest rooms, meeting rooms, and other general usage areas.
- lobbies, hallways, and other common use areas.
- sleeping rooms intended for use by persons with hearing impairment (per Title 1 of ADA).
- work areas used by a person with a hearing impairment (per Title 1 of ADA).

Application Notes — CANADA

(Based in part on 1995 Canada National Building Code)

The fire alarm audible signal shall be supplemented by fire alarm strobes in any floor area where the ambient noise level exceeds 87 dBA, or where the occupants of the floor area use ear protective devices, are located within an audiometric booth, or are located within sound insulating enclosures. This also applies to assembly occupancies in which music and other sounds associated with performances could exceed 100 dBA.

Strobes shall be installed in a building so that the flash from not less than one device is visible throughout the floor area or portion thereof in which they are installed. For maximum safety, EST recommends that strobes be installed as per the guidelines shown here under Strobe Application.

Specifications

Catalog Number	405-5A-"	405-7A-"	405-3A-"	405-6A-"	405-8A-"
UL 1971 Rated Strobe Output - candle (cd)	15cd (wall only)	15cd (wall or ceiling)	30cd (wall) 15cd (ceiling)	60cd (wall) 30cd (ceiling)	110cd (wall) 60cd (ceiling)
UL 1638/ULC S526 Rated Strobe Output	15cd (not UL 1638)	75cd	30cd	60cd	120cd
Average Operating Current (note 2)	70mA @ 24Vdc 80mA @ 20Vdc	105mA @ 24Vdc 125mA @ 20Vdc	105mA @ 24Vdc 125mA @ 20Vdc	155mA @ 24Vdc 185mA @ 20Vdc	219mA @ 24Vdc 272mA @ 20Vdc
Peak Operating Current (note 2)	208mA @ 20Vdc	208mA @ 20Vdc	208mA @ 20Vdc	265mA @ 20Vdc	352mA @ 20Vdc
Average Operating Current (note 3)	84mA @ 24Vdc 99mA @ 20Vdc	168mA @ 24Vdc 204mA @ 20Vdc	168mA @ 24Vdc 204mA @ 20Vdc	219mA @ 24Vdc 282mA @ 20Vdc	325mA @ 24Vdc 355mA @ 20Vdc
Peak Operating Current (note 3)	360mA @ 20Vdc	594mA @ 20Vdc	594mA @ 20Vdc	723mA @ 20Vdc	876mA @ 20Vdc
Strobe Flash Rate	Synchronized at 1 flash per second (no external control module required)				
Strobe Operating Volts	20 to 24Vdc (Continuous)				
Operating Environment	INDOOR: 85% @ 30°C RH; 32-120°F (0-49°C) ambient temperature OUTDOOR: 93% @ 30°C RH; -40-150°F (-40-66°C) ambient temp '7A' (50cd @ -35°C per UL @ -40°C per ULC) and '8A' (100cd @ -35°C per UL @ -40°C per ULC) models only; Must use weatherproof 4" sq. box Supplied with LKW-1 "FIRE" red letters, vertical both sides (Wall Mount) - see LKW and LKC series for ceiling style and optional markings				
Lens Markings					
Wire Connections	Terminals - polarized input, #12 AWG (2.5mm ²) max wire size				
Flash Tube Enclosure	ClearLEXAN				
Strobe Plate, Finish	CRS steel - 5½ (140mm) square, red or white baked epoxy polyester powder-coat finish				
Mounting	INDOOR: North American 4" square electrical box; OUTDOOR: EST 449 series weatherproof surface box or North American 4" square weatherproof box				
Agency Listings	UL 1971, UL 1638, ULC S526 (All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule)				

*Suffix "-T" for RED front plate, "-TW" for WHITE front plate.

Note 1: Use the average current rating to establish the maximum number of strobes, wire gauge, and standby power requirements.

Note 2: From a FILTERED dc source.

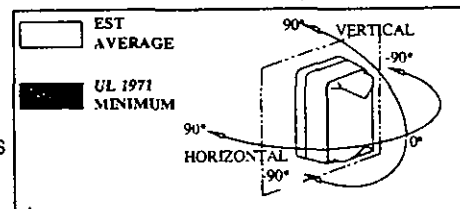
Note 3: From a UNFILTERED (Full Wave Rectified) dc source.

UL 1971 WALL MOUNTED STROBE LIGHT OUTPUT DISTRIBUTION PATTERNS

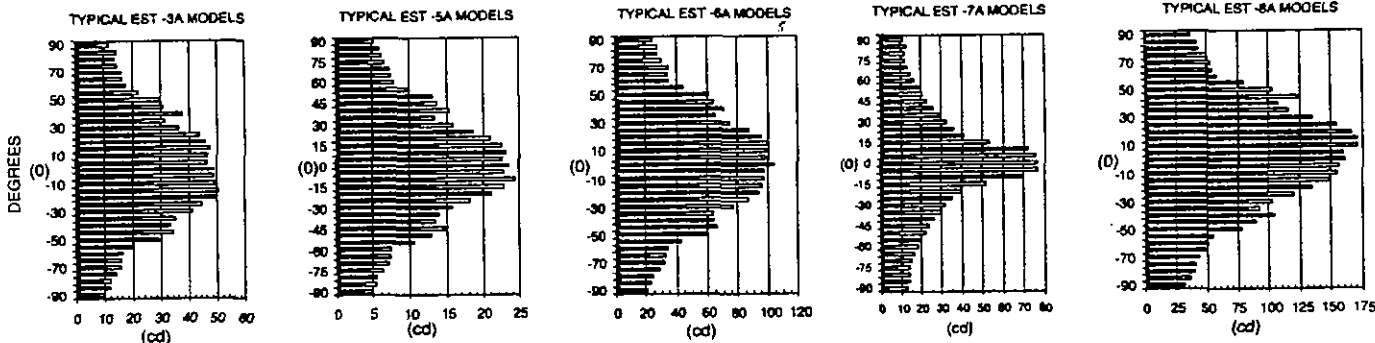
SOURCE: UL STANDARD 1971 - SIGNALING DEVICES FOR THE HEARING IMPAIRED

SOURCE: UL STANDARD 1638 - VISUAL SIGNAL APPLIANCES

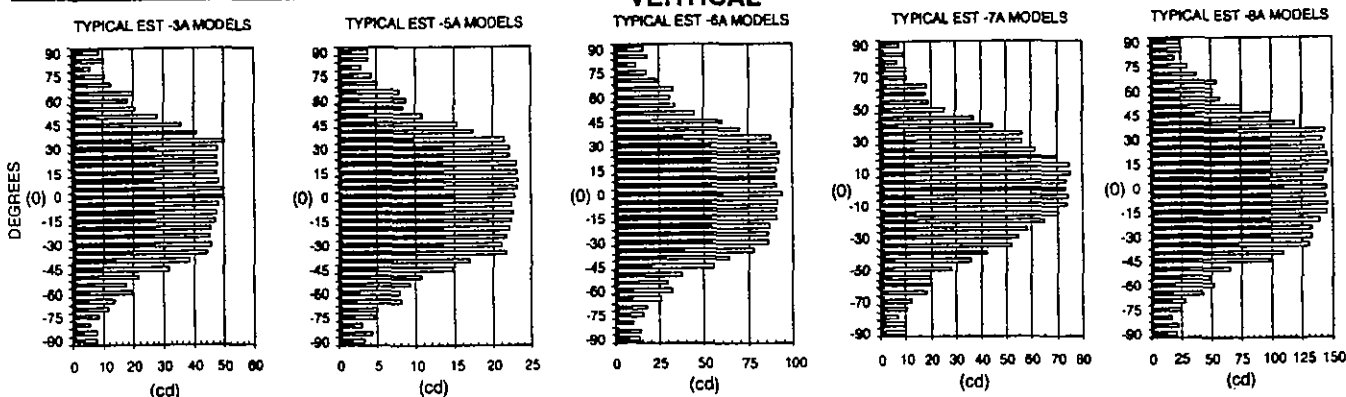
SOURCE: UL CANADA STANDARD S526 - VISUAL SIGNAL APPLIANCES FOR FIRE ALARM SYSTEMS



HORIZONTAL



VERTICAL

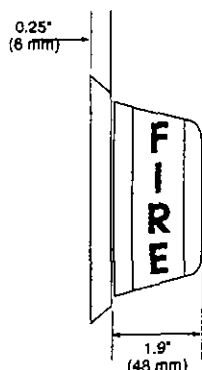


Installation and Mounting

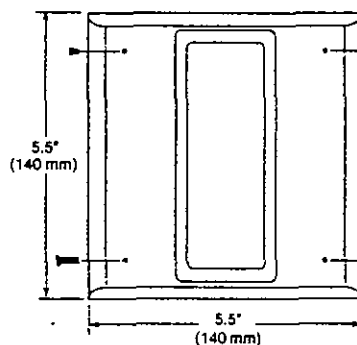
All models fit to a standard flush mounted, North American 4" electrical box, 1-1/2" (38 mm) deep minimum. Optional EST weatherproof, surface mount boxes are available. The strobes must be connected to signal circuits which output a constant (not pulsed) voltage. EST recommends that these strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.

WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist.

These visual signal appliances' flash intensity may not be adequate to alert or waken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. EST recommends that strobes in sleeping rooms be 110 cd minimum.



**SIDE VIEW,
WALL MOUNTED**



**FRONT VIEW,
WALL MOUNTED**

Countersunk Philip head screws are provided to secure unit onto electrical box.

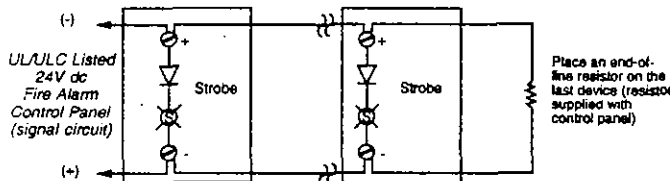
Two Plastic Caps are provided for indoor mounting.



**SIDE VIEW,
CEILING MOUNTED**
*Changeable Lens Marking, LKW or LKC Series.

Typical Wiring -24 Vdc

Polarity of signal circuit shown in supervisory state. On alarm, polarity reverses.



CAUTION: This unit is designed to be used on signal circuits that output a constant voltage of 20-24 VDC. Do not connect this unit to a coded or pulsating voltage. Electrical supervision requires wire run to be broken at each terminal. Do not loop signal circuit field wires around strobe terminals.

Ordering Information - Strobes

Catalog Number	Description	Ship Wt. lb (kg)
405-5A-T	Strobe - 15 cd, Red	1 (0.4)
405-5A-TW	Strobe - 15 cd, White	
405-7A-T	Strobe - 15/75, Red	
405-7A-TW	Strobe - 15/75, White	
405-3A-T	Strobe - 30 cd, Red	
405-3A-TW	Strobe - 30 cd, White	
405-6A-T	Strobe - 60 cd, Red	
405-6A-TW	Strobe - 60 cd, White	
405-8A-T	Strobe - 110 cd, Red	
405-8A-TW	Strobe - 110 cd, White	
Mounting Accessories		
449	Surface Mount Box - Outdoor, Gray	1 (0.4)

Ordering Information - Lens Marking Kits

Catalog Number	Description	Ship Wt. lb (kg)
LKW-1	"FIRE" - Wall Orientation (supplied)	0.2 (0.1)
LKW-1R	"FIRE" - Wall Orientation, red with white letters	
LKW-2	"FEU" - Wall Orientation	
LKW-3	"FIRE/FEU" - Wall Orientation	
LKW-4	"SMOKE" - Wall Orientation	
LKW-5	"HALON" - Wall Orientation	
LKW-6	"CO2" - Wall Orientation	
LKW-7	"EMERGENCY" - Wall Orientation	
LKW-8	"ALARM" - Wall Orientation	
LKW-9	"FUEGO" - Wall Orientation	
LKC-1	"FIRE" - Ceiling Orientation	
LKC-2	"FEU" - Ceiling Orientation	
LKC-3	"FIRE/FEU" - Ceiling Orientation	
LKC-4	"SMOKE" - Ceiling Orientation	
LKC-5	"HALON" - Ceiling Orientation	
LKC-6	"CO2" - Ceiling Orientation	
LKC-7	"EMERGENCY" - Ceiling Orientation	
LKC-8	"ALARM" - Ceiling Orientation	
LKC-9	"FUEGO" - Ceiling Orientation	

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

INSPECTION AND TESTING FORM

DATE: 6/12/2000

TIME:

SERVICE ORGANIZATION

NAME: Systems Sales Corporation
ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753
REPRESENTATIVE: D. Murphy
LICENSE NO.:
TELEPHONE: (732) 751-0600

PROPERTY NAME (USER)

NAME: Brick Hospital (2nd Floor)
ADDRESS: 425 Jack Martin Blvd
Brick, N.J. 08723
OWNER CONTACT: Mr. Bill Transue
TELEPHONE: (732) 840-2200

MONITORING ENTITY

CONTACT: King Central (by other)
TELEPHONE: (800) 624-3068
MONITORING ACCOUNT REF. NO.: 388-2641

APPROVING AGENCY

CONTACT:
TELEPHONE:

TYPE TRANSMISSION

- ☐ - McCulloch
☐ - Multiplex
☒ - Digital
☐ - Reverse Polarity
☐ - RF
☐ - Other (Specify)

SERVICE

- ☒ - Acceptance
☐ - Monthly
☐ - Quarterly
☐ - Semiannually
☐ - Annually
☐ - Other (Specify)

PANEL MANUFACTURER: EST-Edwards Systems Technologies MODEL NO.: EST-3

CIRCUIT STYLES: 4

NO. OF CIRCUITS: 9

SOFTWARE REV.: 1.52

LAST DATE SYSTEM HAD ANY SERVICE PERFORMED: 5/31/2000

LAST DATE THAT ANY SOFTWARE OR CONFIGURATION WAS REVISED: 3/26/2000

ALARM-INITIATING DEVICES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
14	4	MANUAL STATIONS
0		ION DETECTORS
97	4	PHOTO DETECTORS
21	4	DUCT DETECTORS
8	4	HEAT DETECTORS
2	4	WATERFLOW SWITCHES
6	4	SUPERVISORY SWITCHES
1	4	OTHER (SPECIFY) Kitchen hood extinguishing system

ALARM NOTIFICATION APPLIANCES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
12	Y	BELLS
7	Y	HORNS
22	Y	CHIMES
-	-	STROBES
-	-	SPEAKERS
-	-	OTHER (SPECIFY)

NO. OF ALARM NOTIFICATION APPLIANCE CIRCUITS: 37

ARE CIRCUITS SUPERVISED? YES X NO

SUPERVISORY SIGNAL INITIATING DEVICES AND CIRCUIT INFORMATION

QTY OF CIRCUIT STYLE

N/A	BUILDING TEMP.
N/A	SITE WATER TEMP.
N/A	SITE WATER LEVEL
1	FIRE PUMP POWER
1	FIRE PUMP RUNNING
N/A	FIRE PUMP AUTO POSITION
N/A	FIRE PUMP OR PUMP CONTROLLER TROUBLE
N/A	GENERATOR IN AUTO POSITION
N/A	GENERATOR OR CONTROLLER TROUBLE
N/A	SWITCH TRANSFER
N/A	GENERATOR ENGINE RUNNING
N/A	OTHER: (SPECIFY)

SIGNALING LINE CIRCUITS

Quantity and style (See NFPA 72, Table 3-6) of signaling line circuits connected to system:

Quantity 9 Style(s) 4

SYSTEM POWER SUPPLIES

- a. Primary (Main): Nominal Voltage 120Vac , Amps 15
 Overcurrent Protection: Type Circuit Breaker , Amps 15
 Location (Panel Number): E-14 Breaker #9
 Disconnecting Means Location: S. Basement MMR 4
- b. Secondary (Standby):
 Storage Battery: Amp-Hr. Rating 24Vdc 7AH
 Calculated capacity to operate system, in hours: X 24 60
 Engine-driven generator dedicated to fire alarm system:
 Location of fuel storage:

TYPE BATTERY

- Dry Cell
 Nickel-Cadmium
X Sealed Lead-Acid
 Lead-Acid
 Other (Specify)

 Emergency or standby system used as a backup to primary power supply, instead of using a secondary power supply:
 Emergency system described in NFPA 70, Article 700
 Legally required standby described in NFPA 70, Article 701
 Optional standby system described in NFPA 70, Article 702, which also meets the performance of Article 700 or 701

**PRIOR TO ANY TESTING
NOTIFICATIONS ARE MADE:**

YES NO WHO TIME

MONITORING ENTITY X
BUILDING OCCUPANTS X
BUILDING MANAGEMENT X
OTHER (SPECIFY)
AHJ (NOTIFIED) OF ANY IMPAIRMENTS

SYSTEM TESTS AND INSPECTIONS

TYPE	VISUAL	FUNCTIONAL COMMENTS
CONTROL PANEL		X
INTERFACE EQUIPMENT		X
LAMPS/LEDS		X
FUSES		X
PRIMARY POWER SUPPLY		X
TROUBLE SIGNALS		X
DISCONNECT SWITCHES		X
GROUND FAULT MONITORING		X

SECONDARY POWER

TYPE	VISUAL	FUNCTIONAL COMMENTS
BATTERY CONDITION		X
LOAD VOLTAGE		X
DISCHARGE TEST		
CHARGER TEST	X	
SPECIFIC GRAVITY		N/A

TRANSIENT SUPPRESSORS

REMOTE ANNUNCIATORS X3

NOTIFICATION APPLIANCES

AUDIBLE		X
VISUAL	X	
SPEAKERS		
VOICE CLARITY		

INITIATING AND SUPERVISORY DEVICE TESTS AND INSPECTIONS

DEVICE VISUAL FUNCTIONAL FACTORY MEAS. LOC&S/N TYPE SETTING PASS FAIL

All devices tested

COMMENTS: See attached report

	VISUAL	FUNCTIONAL	COMMENTS
--	--------	------------	----------

EMERGENCY COMMUNICATIONS EQUIPMENT

PHONE SET	N/A
PHONE JACKS	N/A
OFF-HOOK INDICATOR	N/A
AMPLIFIER(S)	N/A
tone GENERATOR(S)	N/A
CALL IN SIGNAL	N/A
SYSTEM PERFORMANCE	N/A

	DEVICE	SIMULATED	VISUAL	FUNCTIONAL
--	--------	-----------	--------	------------

INTERFACE EQUIPMENT

(SPECIFY)	Elev. Recall			X
(SPECIFY)	Fan Shutdown			X
(SPECIFY)	Door Holders			X

SPECIAL HAZARD SYSTEMS

(SPECIFY)	N/A
(SPECIFY)	N/A
(SPECIFY)	N/A

SPECIAL PROCEDURES: N/A

COMMENTS:

ON/OFF PREMISES MONITORING:	YES	NO	TIME	COMMENTS
ALARM SIGNAL	X			
ALARM RESTORAL	X			
TROUBLE SIGNAL	X			
TROUBLE RESTORAL	X			
SUPERVISORY SIGNAL	X			
SUPERVISORY RESTORAL	X			

NOTIFICATIONS THAT TESTING

IS COMPLETE	YES	NO	WHO	COMMENTS
BUILDING MANAGEMENT				
MONITORING AGENCY				
BUILDING OCCUPANTS				
OTHER (SPECIFY)				

THE FOLLOWING DID NOT OPERATE CORRECTLY:

SYSTEM RESTORED TO NORMAL OPERATION: DATE TIME

THIS TESTING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS.

NAME OF INSPECTOR: D. Murphy (Systems Sales Corp. Representative)

DATE: TIME:

SIGNATURE:

NAME OF OWNER OR REPRESENTATIVE:

DATE: TIME:

SIGNATURE:

Brick Hospital Renovation
9/9/99

Counts per Mike V. & Dave Murphy 8/31/99

Counts include some rough guestimates by D.M. for areas where Mike V. could not gain access to

Location	A	B	C	D	E	F	G	H	I	J	K	L
Basement	21	0	20	0	8	2	0	6	9	14	1	0
1 st Floor	71	0	12	20	15	0	1	4	20	20	0	1
2 nd Floor	70	10	13	20	9	0	1	3	15	15	0	0
3 rd Floor	67	29	10	23	9	0	0	3	12	12	0	0
4 th Floor	77	37	8	41	9	0	0	3	8	15	0	0
5 th Floor	70	23	7	29	7	0	0	3	9	13	0	0
Totals	376	99	70	133	57	2	2	22	73	89	1	1

64
143
133
124
149
128

- A) Smoke Detector
- B) Remote LED for Patient Room Smoke Detector
- C) Heat Detector
- D) Duct Smoke Detector
- E) SIGA-CT1 for Existing Pull Stations
- F) SIGA-CT1 for Stand Alone Tamper Switch
- G) SIGA-CT1 for Kitchen Ansul System
- H) SIGA-CT2 for Combination Waterflow / Tamper Switch
- I) Horn Unit
- J) Strobe Unit
- K) FACP
- L) Annunciator

\$325

Annunciator Breakdowns – Per Dave Murphy 8/31/99

Item	Location	Type	Total Points
1	1 West – Security Desk	New 3-LCDANN	All
2	1 South – Clinic Area	To Be Removed per Bill Transue	N/A
3	2 West – CCU	Reuse Existing with SIGA-CR's	10
4	3 West – Special Care Nursery	Reuse Existing with SIGA-CR's	4
5	3 Center – West 3W	Reuse Existing with SIGA-CR's	8
6	3 East – Single Room Maternity	Reuse Existing with SIGA-CR's	15
7	3 Center – Nursery	Reuse Existing with SIGA-CR's	2
8	4 East – Oncology	Reuse Existing with SIGA-CR's	14
9	4 West – Med. Surg.	Reuse Existing with SIGA-CR's	23
10	5 West – PCCU	Reuse Existing with SIGA-CR's	23
Re-Use 9 Existing Annunciators, 1 New 3-LCDANN at Security			99 Points

***BRICK HOSPITAL
BRICK, NJ***

EDWARDS FIRE ALARM SYSTEM EQUIPMENT

1st FLOOR

<u>QUAN</u>	<u>ITEM</u>	<u>DESCRIPTION</u>
1	3-LCDANN	Remote Annunciator
12	SIGA-HFS	Intelligent Heat Detectors – Fixed Temperature 135°F
12	SIGA-SB	Bases for SIGA-HFS Heat Detectors
71	SIGA-PS	Intelligent Photoelectric Smoke Detectors
71	SIGA-SB	Bases for SIGA-PS Smoke Detectors
20	SIGA-PS	Intelligent Photoelectric Duct Smoke Detectors
20	SIGA-RB	Relay Bases for SIGA-PS Duct Smoke Detectors
20	SIGA-DH	Housings for Duct Smoke Detectors
15	SIGA-CT1	Single Input Modules for Existing Pull Stations
1	SIGA-CT1	Single Input Module for Ansul System
4	SIGA-CT2	Dual Input Modules for Waterflow & Tamper Switches
20	757-1A-T	Horn Units
20	405-7A-T	Strobe Units



Liquid Crystal Display Module

Model: 3-LCD

Features

- USES SIMPLE LIGHTS AND SWITCHES
- DISPLAYS INFORMATION IMPORTANT TO USER
- HANDS FREE FIRST ALARM DISPLAY
- LAST EVENT OF HIGHEST PRIORITY ALWAYS DISPLAYS
- 8 LINES BY 21 CHARACTER GRAPHIC LCD DISPLAY — 168 CHARACTERS TOTAL
- MULTILINGUAL
 - Supports English, French, Spanish, and Russian
- USES QUEUES TO SORT EVENTS
 - a queue is a list of messages Alarm, Supervisory, Trouble and Monitor
- SLIDE IN LED AND SWITCH LABELS
 - makes customization for regional language easy

Description

The Main Display interface is the primary user interface in the EST3 Life Safety System. The main display interface focuses on the emergency user by putting information important to the user up front. Hands free, the first highest priority event is shown. The display always gives the last highest priority event. Arriving at the panel and without opening the door the first and last alarm is given. Simple to understand lights and switches help the emergency user execute system commands with confidence.

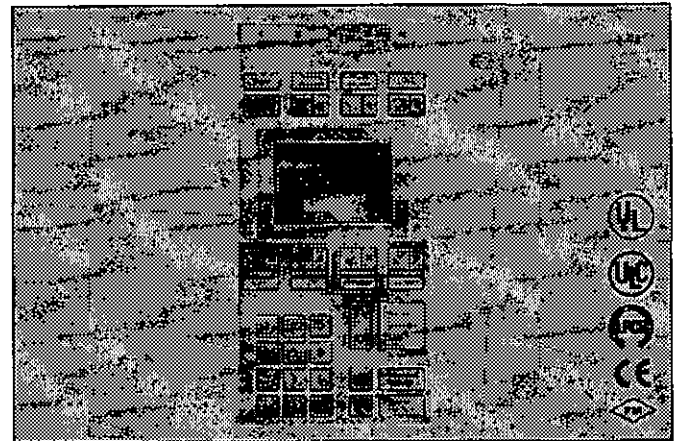
A menu system supports maintenance functions such as disables or reports for use by staff or service personnel.

Application

The 3-LCD module mounts to the local rail over the nodes Central Processing Unit Module (3-CPU). The 3-LCD module is optional in any network node.

Ensuring information clarity the 3-LCD uses a backlit high contrast supertwist graphical display. Eight lines of 21 characters provide the room needed to convey emergency information in a useful format.

The 3-LCD always displays the last highest priority event even when the user is viewing other message queues. Further message flexibility is provided with EST3's message routing ability. Messages from a node can display at every node on the network or messages can route to specific



nodes only. Routing can be initiated at a specific time/shift change. There is no need to have messages display in areas that are not affected by an event.

The 3-LCD can display messages in English, Spanish, French, and Russian. The bilingual display lets the operator select between either of two languages. Consult your representative for available language combinations.

The EST3 system configures for Proprietary, Local or EN54 market operations. The mode of operation is selected through the System Definition Utility (SDU) which may adjust the following operations slightly to fit the system operation selected.

About LEDs and Switches

Further enhancing the 3-LCD user interface are easy to read and understand lights and switches. All functions are laid out in a logical order. At the top of the 3-LCD are five system status LEDs. Here determining the general condition of the system is easy.

				
Power	Test	CPU Fail	Gnd Fault	Disable

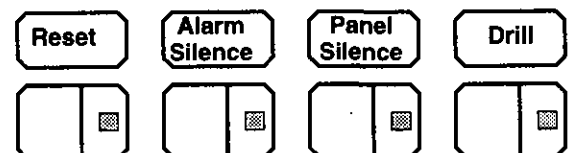
Power LED: Green, on when AC power is on.

Test LED: Yellow, on when any portion of the system (Group) is under test.

CPU Fail LED: Yellow, on when CPU stops running.

Gnd Fault LED: Yellow, on when a ground exists on the system (group)

Disable LED: Yellow, on when any point or zone is disabled by a user.



For EN-54 compliance, please see page 4.

EDWARDS SYSTEMS TECHNOLOGY

SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
 CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
 OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
 INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
 PITTSFIELD, ME. 207-487-3104

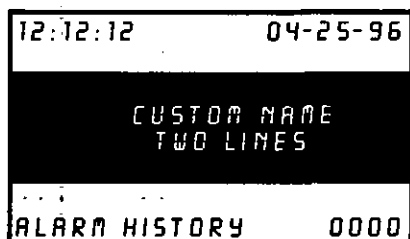
Below the general status LEDs are located four, LED / Switch common controls. The versatility of EST3 allows system designers to define the features as affecting a domain (defined group of nodes) or as global (affects all nodes) across the network. This feature is very useful when configuring systems with multiple buildings on one network. As an example, operating the reset in one building may have adverse effect in other buildings. With EST3 having operational differences between buildings on the same network is not a problem.

Pressing **Reset** starts the system's reset operation. The yellow LED has three flash rates during reset. The LED flashes fast during the smoke power down phase of reset, flashes slow during the restart phase, and turns on steady for the restoral phase. The Reset LED turns off when the system is normal.

Pressing **Alarm Silence** turns off all Notification Appliance Circuits defined as audible. The yellow LED turns on when silence is active via the Alarm Silence switch or via alarm silence software timers.

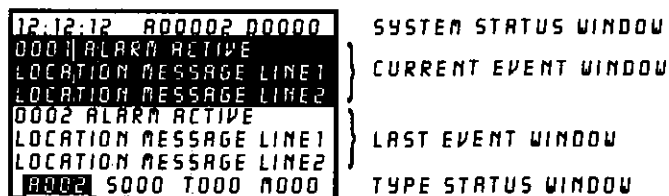
Pressing **Panel Silence** turns off the system's internal audible signal. The yellow LED turns on when panel silence is active. The EST3 panel buzzer has user programmable signal rates for alarm, supervisory, trouble and monitor conditions.

Pressing **Drill** turns on the drill LED and all signals sound evacuation. Drill does not activate city tie connections. Auxiliary relays will not activate unless programmed to do so with drill.



In the center of the 3-LCD is the Liquid Crystal Display. In the normal condition the date and time plus a definable system title display on the LCD. The last line of the display gives an alarm history. This total equals the number of times the system has entered the alarm state from the normal state.

When active events are on display, the LCD formats into four logical windows.



In the system status window, the display shows the time and the status of active and disabled points.

The current event window, lines 2, 3, 4 automatically display the first active event of the highest priority if the user has not taken control of the system. Once the emergency user takes control, this window displays user message selections.

The second line of the display shows system event information. In the example above the display shows the chrono-

logical number of the event (0001 is the first alarm) followed by the event type (Alarm Active). EST3 supports over 45 event type messages from which system designers choose. The last two lines of the current event window are custom programmable location message lines with space for 42 characters.

The last event window shows the last highest priority event. This window is always displayed and updated automatically by the system. Here the emergency user can monitor the progress of a fire.



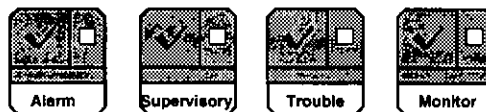
Previous
Message
Next

When EST3 is configured for a local mode system viewing the second alarm message is easy, just press the NEXT key. The next

message scrolls into the current event window. The last highest priority event always remains on view. No matter what queue the user selects for viewing, the LCD always displays the most recent alarm. A new alarm event resounds the panel audible signal and appears immediately on display without overwriting information the user selected for view.

The final window of the LCD the type status window shows the total number of active events by queue type. A is alarm, S is supervisory, T is trouble, and M is monitor. The number following each letter is the number of active events existing in each queue.

EST3 breaks down event types into queues and automatically displays the first event of the highest priority type.



For EN-54 compliance, please see page 4.

Priority order is alarm, supervisory, trouble, monitor. By using queues an emergency user does not waste time scrolling through a mixed event list looking for alarms or confusing an alarm message with other message types.

EST3 configures for **remote proprietary** system operation where every event must be acknowledged by viewing them before the internal buzzer will silence. Or the EST3 will configure for **Local** operation. Here the internal buzzer silences by pressing panel silence. If any events exist in queues that have not been viewed the queue LED continues to flash informing the user of un-seen events.

When all events in a queue are acknowledged or 'seen', the LED associated with the queue turns on steady. If a new event is added to the queue, the EST3 internal buzzer resounds and the queue LED flashes.

EST3 allows device grouping into logical group zones. Here two or more alarm devices (such as detectors or pull stations) make up the zone. When a device in the zone activates, the LCD displays the zone description. Each zone only displays once, regardless of the number of devices active within the zone.

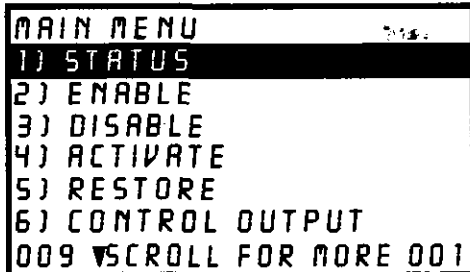


Details

To display 'device' information the user presses the Details key. The device with the lowest address

displays in the first window. If multiple devices are active each is available for viewing by using the arrow associated with the Previous Message Next key and scrolling through the device list.

The common controls easily expand beyond the Main Display interface by adding a Control Display Module and assigning features to its switch controls.

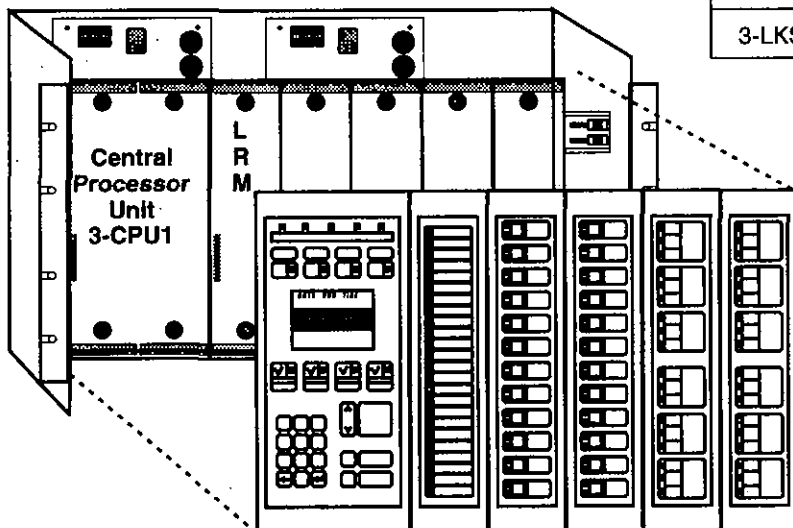


For Maintenance users, the EST3 provides a smooth operating menu system providing powerful tools for system management, reports, and trouble shooting.

Specifications

Catalog Number	3-LCD
Agency Listings	UL, ULC, FM, CE, EN-54
LCD Display	8 Lines by 21 Characters Backlit LCD
Mounting	Two local rail spaces on top of 3-CPU
Common Control Switches and LEDs	Reset switch and LED Alarm Silence switch and LED Panel Silence switch and LED Drill Switch and LED
Alarm Current	50mA
Standby Current	10mA

Installation and Mounting



Engineers Specification

The system shall provide a user interface that displays system events in a text format, and supports basic common control LEDs and switches. The Common Control Switches and LEDs provided as minimum will be; Reset switch and LED, Alarm Silence switch and LED, Panel Silence switch and LED, Drill switch and LED. It must be possible to add additional common controls as required through the use of modular display units. The user interface must provide an LCD that will allow custom event messages of up to 42 characters. The interface must provide a minimum of 8 lines by 21 characters and provide the emergency user, hands free viewing of the first and last highest priority event. The last highest priority event must always display and update automatically. Events shall be automatically placed in easy to access queues. It shall be possible to view specific event types separately. Having to scroll through a mixed list of event types is not acceptable. The total number of active events by type must be displayed. Visual indication must be provided of any event type which has not been acknowledged or viewed. It must be possible to customize the designation of all user interface LEDs and Switches for local language requirements. It shall be possible to have a custom message for each device in addition to zone messages. Custom device messages must support a minimum of 42 characters each. Instructional text messages must support a minimum of 1,000 characters each. The display shall be capable of displaying English, Spanish, French, or Russian messages.

Ordering Information

Catalog Number	Description	Shipping Wt Lb. (kg)
3-LCD	Liquid Crystal Display Module	.8 (.36)
3-LKE	UK English Label Kit	.25 (.11)
3-LKF	French Label Kit	.25 (.11)
3-LKR	Russian Label Kit	.25 (.11)
3-LKS	Spanish Label Kit	.25 (.11)

EN-54 compliance

In 1998 the British-based Loss Prevention Certification Board (LPCB) certified EST3 control panels and power supplies as having surpassed the requirements of the pivotal EN-54 standard, parts two and four. LPCB Certificate #257c for EST3 fire alarm control panels marks the first such certification since the stringent EN standards were ratified in 1997. In order to meet these standards, display and control functions have undergone slight modifications for the EN-54 marketplace. These differences are highlighted below. All other control and annunciation features remain unchanged.

System Status LEDs

				
Power	Test	CPU Fault	Sounder	Disable

Power LED (Green): on when DC power is on.

Test LED (Yellow): on when any portion of the system (Group) is under test.

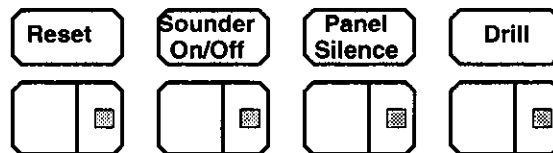
CPU Fault LED (Yellow): on when CPU stops running (processor failures must be manually reset).

Gnd Fault LED: Not available.

Sounder LED (Yellow): flashing indicates fault on sounder circuit. Steady indicates a disabled sounder circuit.

Disable LED (Yellow): on when any point or zone is disabled by a user (disabled conditions have priority over fault conditions).

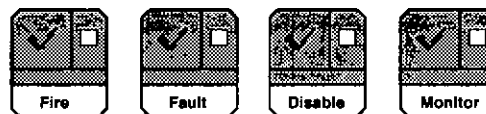
Switch Functions



Pressing **Sounder On/Off** turns off all sounder circuits defined as audible. The yellow LED turns on when silence is activated via the Sounder On/Off or via the alarm silence software timers.

See Page 2 for descriptions of *Reset*, *Panel Silence*, and *Drill* functions.

Event Queues



For EN-54 compliance, EST3 configures for remote proprietary system operation. This requires that every event must be acknowledged by viewing them before the internal buzzer will silence. The priority order is Fire, Fault, Disable, Monitor.

Intelligent Heat Detectors

Models SIGA-HFS & SIGA-HRS

Features

- 70 FOOT (21.3 METER) SPACING
- 15°F (9°C)/MIN RATE-OF-RISE/135°F (57°C) FT. AND 135°F (57°C) FIXED TEMPERATURE TYPE
- INTELLIGENT DETECTOR c/w INTEGRAL MICROPROCESSOR
- NON-VOLATILE MEMORY
- AUTOMATIC DEVICE MAPPING
- ELECTRONIC ADDRESSING
- IDENTIFICATION OF DEFECTIVE DETECTORS
- TWIN RED/GREEN STATUS LEDS
- STANDARD, RELAY, and FAULT ISOLATOR MOUNTING BASES
- DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS

Description

EST's Signature Series Model SIGA-HFS and SIGA-HRS Intelligent Heat Detectors gather analog information from their fixed temperature and/or rate-of-rise heat sensing elements and converts it into digital signals. The detector's on-board microprocessor measures and analyzes these signals. It compares the information to historical readings and time patterns to make an alarm decision. Digital filters remove signal patterns that are not typical of fires. Unwanted alarms are nearly eliminated.

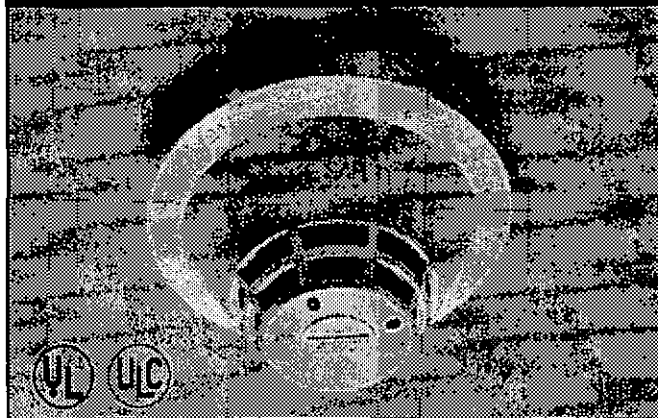
The microprocessor in each detector provides four additional benefits - **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector's non-volatile memory. This information is accessible for review any time at the control panel, PC, or by using the SIGA-PRO Signature Program/Service Tool.

The information stored in the detector's memory includes:

- detector type, serial number, and address.
- date of manufacture, hours of operation, and last maintenance date.
- current detector (ambient) temperature values.
- number of recorded alarms and troubles.

Intelligent Fixed-Temperature Heat Detector, SIGA-HFS
Intelligent Fixed-Temp./R-O-R Heat Detector, SIGA-HRS



- time and date of last alarm.
- analog signal patterns just before the last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. This "mapping" feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally. The history log for the detector at its original location remains relevant and intact.

The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the "mystery" out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the circuit.

Stand-alone Operation - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit. Each detector on the circuit continues to collect and analyze information from its surroundings. Both the SIGA-HRS and SIGA-HFS detectors alarm if the ambient temperature increases to 135°F (57°C) or for the SIGA-HRS only, the temperature increases at a rate exceeding 15°F (9°C)/minute. If the detector is mounted to a relay base, the relay operates.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the control panel when it has something new to report. This provides very fast control panel response time and allows a lower baud rate (speed) to be used for communication on the circuit. The lower baud rate offers several advantages including:

- less sensitivity to circuit wire characteristics.
- less sensitivity to noise glitches on the cable.
- less emitted noise from the analog wiring.
- twisted or shielded wiring is not required.

Electronic Addressing - The loop controller electronically addresses each detector, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each detector has its own unique serial number stored in its "on-board memory". The loop controller identifies each device on the circuit and assigns a "soft" address to that device's serial number. If desired, detectors can be addressed using the SIGA-PRO Signature Program/Service Tool.

Installation Spacing - The SIGA-HFS (fixed temperature) and the SIGA-HRS (fixed temperature/rate-of-rise combination) intelligent heat detectors are rated for installation at up to 70 foot (21.3 meter) spacing. These detectors may be installed in rooms with ambient temperatures up to 100°F (38°C).

Status LEDs - Twin LEDs are visible from any direction. A flashing GREEN led shows normal system polling from the loop controller. A flashing RED led means the detector is in alarm state. Both leds on steady shows alarm state - stand-alone mode. Normal green led activity is not distracting to building occupants, but can be quickly spotted by a maintenance technician.

Quality and Reliability - EST detectors are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance. All critical contacts are gold plated.

Compatibility

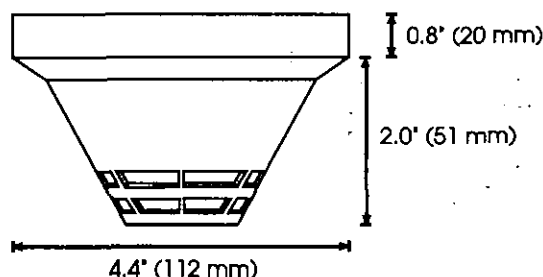
The SIGA-HFS and SIGA-HRS detectors are compatible only with EST's Signature Loop Controller.

Specifications Table

Catalog Number	SIGA-HFS	SIGA-HRS
Heat Sensing Element	Fixed Temperature	Combination Fixed Temperature/Rate-of-Rise
Alarm Point	Alarms at 135°F (57°C) Ambient	Alarms at 135°F (57°C) Ambient or temp. increase exceeding 15°F (9°C) per minute
Detector Spacing	70 feet (21.3 meter) center to center spacing	
Storage and Operating Environment	Operating Temperature: 32°F to 100°F (0°C to 38°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH, Non-Condensing	
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)	
Operating Current	Quiescent: 45µA @ 19 V Alarm: 45µA @ 19 V Emergency Stand-alone Alarm Mode: 18mA Pulse Current: 100 µA (100 msec) During Communication: 9 mA maximum	
Construction & Finish	High Impact Engineering Polymer - White	
Compatible Mounting Bases	SIGA-SB, SIGA-SB4 Standard Base, SIGA-RB, SIGA-RB4 Relay Base, SIGA-IB, SIGA-IB4 Isolator Base	
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm Both LEDs - Glow steady when in alarm (stand-alone) Compatible Remote Red led (model SIGA-LED) Flashes when in alarm	
Compatibility	Use With: SIGNATURE Loop Controller	
Address Requirements	Uses 1 Device Address	
Agency Listings	UL, ULC	

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2" or 4" octagon boxes, and to 4" square electrical boxes 1-1/2" (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers.



Testing & Maintenance

Each detector automatically identifies when it is defective and the user-friendly maintenance program shows the current state of each detector and other pertinent messages. Single detectors may be turned off temporarily, from the control panel. Availability of maintenance features is dependent on the fire alarm system used. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

Application

The table below shows six standard test fires used to rate the sensitivity of smoke and heat detectors. The table indicates that no single sensing element is suited for all test fires.

EST recommends that this detector be installed according to latest recognized edition of national and local fire alarm codes.

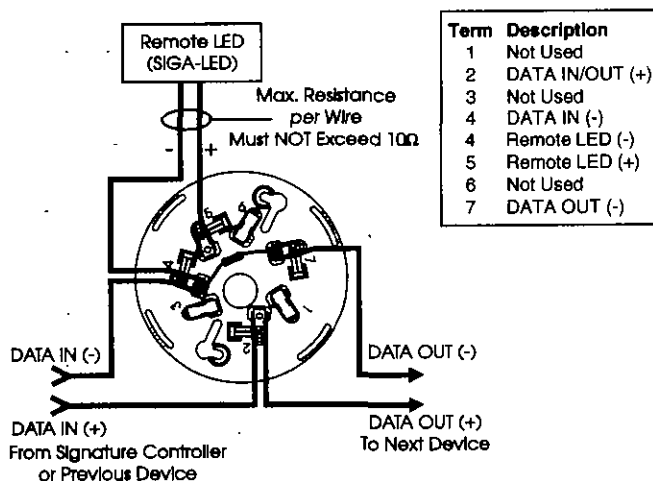
Test Fire	Type of Detector				
	SIGA-IS Ion	SIGA-PS Photo	SIGA-HRS and SIGA-HFS Rate-of- Rise/Fixed Temp.	SIGA-PHS Photo/Heat 3D	SIGA-IPHS Ion/Photo/Heat 4D
Open Wood	optimum	unsuitable	optimum	very suitable	optimum
Wood Pyrolysis	suitable	optimum	unsuitable	optimum	optimum
Smouldering Cotton	very suitable	optimum	unsuitable	optimum	optimum
Poly Urethane Foam	very suitable	very suitable	suitable	very suitable	optimum
n-Heptane	optimum	very suitable	very suitable	optimum	optimum
Liquid Fire without Smoke	unsuitable	unsuitable	optimum	very suitable	very suitable

Typical Wiring

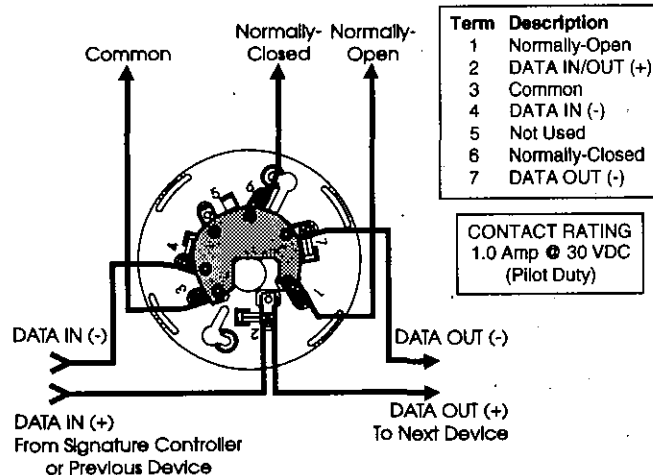
The detector mounting bases will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.5mm²) wire sizes.

Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

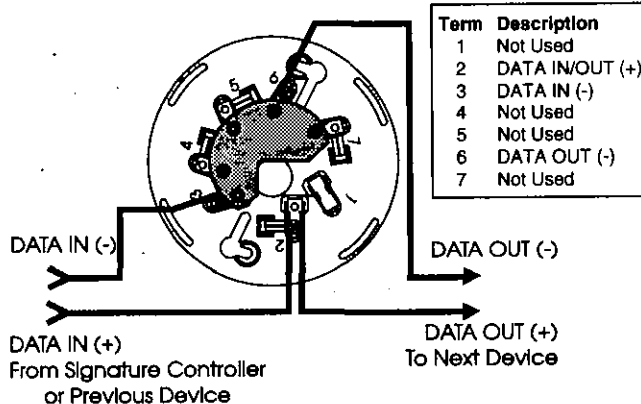
Standard Detector Base, SIGA-SB, SIGA-SB4



Relay Detector Base, SIGA-RB, SIGA-RB4



Isolator Detector Base, SIGA-IB, SIGA-IB4



Tamper-Resist Lever Arm
- Break off to disable -
(Located on Base)

Access Slot for
Tamper-Resist Mechanism

Accessories

All detector mounting bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½" or 4" octagon boxes, 1½" (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4" sq. electrical boxes in addition to the above boxes. They include the SIGA-TS Trim Skirt which is used to cover the "mounting ears" on the base.

Standard Base SIGA-SB, SIGA-SB4 - This is the basic mounting base for EST Signature Series detectors. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB, SIGA-RB4 - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The relay base does not support the SIGA-LED Remote LED.

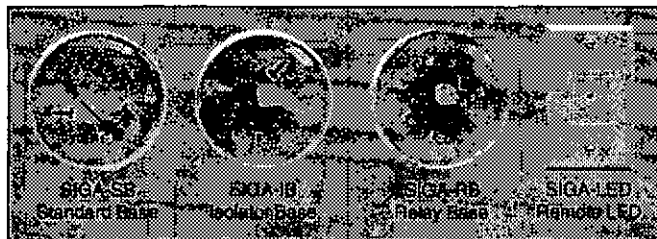
The relay is controlled by the detector and operates as follows:

- at system power-up or reset, the relay is de-energized.
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB, SIGA-IB4 - This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates as follows:

- a short on the line causes all isolators to open within 23 msec.
- at 10 msec intervals, beginning on one side of the Class A circuit nearest the loop controller, the isolators close to provide the next isolator down the line with power.



- when the isolator next to the short closes, it reopens within 10 msec.

The process repeats beginning on the other side of the loop controller.

Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS Trim Skirt - Supplied with 4" bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases. Use black model with SIGA-IPHSB.

Warnings & Cautions

This detector will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

This detector will NOT sense fires that start in areas where heat cannot reach the detector. Heat from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

The heat sensor in this device only provides a source of information to supplement the information provided by photoelectric or ionization smoke detectors which may be located nearby. **The heat detector by itself does NOT provide life safety protection.** Under no circumstances should heat detectors be relied on as the sole means of fire protection.

Ordering Information Table

Catalog Number	Description	Carton Dims. inches (mm)	Ship Wt. lbs (kg)
SIGA-HFS	Intelligent Fixed Temperature Heat Detector - UL/ULC Listed	5 (127)w x 3.6 (91)h x 5 (127)d	.5 (.23)
SIGA-HRS	Intelligent Fixed Temperature/Rate-of-Rise Heat Detector - UL/ULC Listed		
Accessories			
SIGA-SB	Detector Mounting Base	6 (152)w x 1 (25)h x 6 (152)d	.2 (.09)
SIGA-SB4	4" Detector Mounting Base c/w SIGA-TS Trim Skirt		
SIGA-RB	Detector Mounting Base w/Relay		
SIGA-RB4	4" Detector Mounting Base w/Relay c/w SIGA-TS Trim Skirt		
SIGA-IB	Detector Mounting Base w/Fault Isolator		
SIGA-IB4	4" Detector Mounting Base w/ Fault Isolator c/w SIGA-TS Trim Skirt	3.8 (97)w x 2.8 (71)h x 6 (152)d	.2 (.09)
SIGA-LED	Remote Alarm LED		
SIGA-TS	Trim Skirt (supplied with 4" bases)	6 (152)w x 1 (25)h x 6 (152)d	.1 (.04)

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

Intelligent Photoelectric Smoke Detector

Model SIGA-PS

Features

- INTEGRAL MICROPROCESSOR
- NON-VOLATILE MEMORY
- AUTOMATIC DEVICE MAPPING
- ELECTRONIC ADDRESSING
- ENVIRONMENTAL COMPENSATION
- INTELLIGENT DETECTOR
- WIDE 0.67% TO 3.77%/FT. SENSITIVITY RANGE
- PRE-ALARM SENSITIVITY SETTING
- IDENTIFICATION OF DIRTY OR DEFECTIVE DETECTORS
- AUTOMATIC DAY/NIGHT SENSITIVITY ADJUSTMENT
- TWIN RED/GREEN STATUS LEDS
- STANDARD, RELAY, and FAULT ISOLATOR MOUNTING BASES
- DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS

Description

EST's Signature Series Model SIGA-PS Intelligent Photoelectric Smoke Detector gathers analog information from its smoke sensing element and converts it into digital signals. The detector's on-board microprocessor measures and analyzes these signals. It compares the information to historical readings and time patterns to make an alarm decision. Digital filters remove signal patterns that are not typical of fires. Unwanted alarms are nearly eliminated.

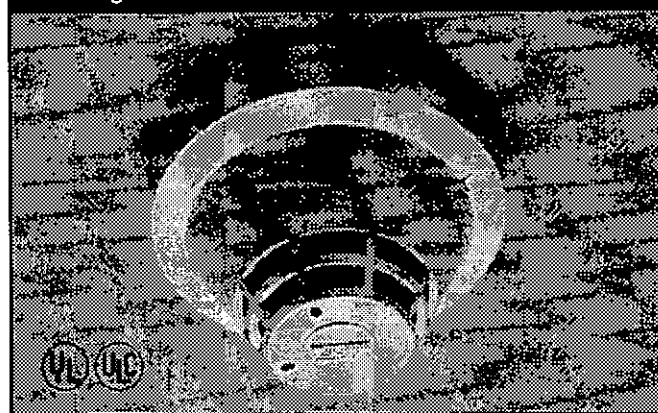
The microprocessor in each detector provides four additional benefits - **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector's non-volatile memory. This information is accessible for review any time at the control panel, PC, or by using the SIGA-PRO Signature Program/Service Tool.

The information stored in the detector's memory includes:

- detector type, serial number, and address.
- date of manufacture, hours of operation, and last maintenance date.

Intelligent Photoelectric Smoke Detector, SIGA-PS



- current detector sensitivity values and the extent of environmental compensation.
- original detector sensitivity values upon manufacturing.
- number of recorded alarms and troubles.
- time and date of last alarm.
- analog signal patterns just before the last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. The "mapping" feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally. The history log for the detector at its original location remains relevant and intact.

The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the "mystery" out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the circuit.

Stand-alone Operation - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit. Each detector on the circuit continues to collect and analyze information from its surroundings. The detector alarms if the preset smoke obscuration level is reached. If the detector is mounted to a relay base, the relay operates.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the loop controller when it has something new to report. This provides very fast response time and allows a lower baud rate (speed) to be used for communication on the loop. The lower baud rate offers several advantages including:

- less sensitivity to circuit wire characteristics.
- less sensitivity to noise glitches on the cable.
- less emitted noise from the analog wiring.
- twisted or shielded wiring is not required.

Electronic Addressing - The loop controller electronically addresses each detector, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each detector has its own unique serial number stored in its "on-board memory". The loop controller identifies each device on the circuit and assigns a "soft" address to that device's serial number. If desired, detectors can be addressed using the SIGA-PRO Signature Program/Service Tool.

Environmental Compensation - Detection sensitivity is almost independent of its installed environment and its physical condition. Environmental compensation means the sensing element adapts to long-term changes caused by dirt, humidity, aging etc. It even compensates for small amounts of normal ambient smoke. Approximately six times an hour the detector adjusts and updates the sensitivity (% obscuration) baseline for its sensing element. Approximately once every hour this information is written to its permanent memory. The detector's "learned" baseline is not lost, even when the detector is removed for cleaning.

The detector's sensitivity setting selected by the installer floats up or down to remain constant relative to the changing baseline. This is called differential sensing.

Sensitivity Range - The SIGA-PS Photoelectric Detector has a sensitivity range or window of 0.67% to 3.77%. The installer selects the detector's ALARM sensitivity level from five available settings within the range.

Pre-Alarm - Pre-alarm warnings may alert local staff to a possible fire condition allowing them to investigate before entering into a full alarm condition which requires building evacuation. The wide sensitivity range permits the use of early warning pre-alarm values. The pre-alarm value is 75% of the alarm setting.

Automatic Day/Night Sensitivity Selection - Signature Series detectors may be programmed for different sensitivities during day and night periods. This allows the detector to be more sensitive during unoccupied periods when lower ambient background conditions are expected.

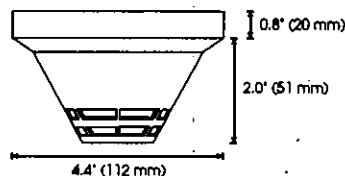
Stability - The SIGA-PS detector's sensitivity remains stable in wind velocities up to 5,000 ft/min (25.3 m/sec). Ambient temperature has very little effect on the detector. The detector may be installed in rooms with ambient temperatures up to 120°F (49°C).

Status LEDs - Twin LEDs are visible from any direction. A flashing GREEN led shows normal system polling from the loop controller. A flashing RED led means the detector is in alarm state. Both leds on steady shows alarm state - stand-alone mode. Normal green led activity is not distracting to building occupants, but can be quickly spotted by a maintenance technician.

Quality and Reliability - EST detectors are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance. All critical contacts are gold plated.

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2" or 4" octagon boxes, and to 4" square electrical boxes 1-1/2" (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers.



Testing & Maintenance

Each detector automatically identifies when it is dirty or defective and causes a "dirty detector" message. The detector's sensitivity measurement can also be transmitted to the loop controller. A sensitivity report can be printed to satisfy NFPA sensitivity measurements which must be conducted at the end of the first year and every two years thereafter.

The user-friendly maintenance program shows the current state of each detector and other pertinent messages. Single detectors may be turned off temporarily from the control panel. Availability of maintenance features is dependent on the fire alarm system used. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

Compatibility

The SIGA-PS detectors are compatible only with EST's Signature Loop Controller.

Application

Although photoelectric detectors have a wide range of fire sensing capabilities they are best suited for detecting slow, smoldering fires. The table below shows six standard test fires used to rate the sensitivity of smoke and heat detectors. The table indicates that no single sensing element is suited for all test fires.

EST recommends that this detector be installed according to latest recognized edition of national and local fire alarm codes.

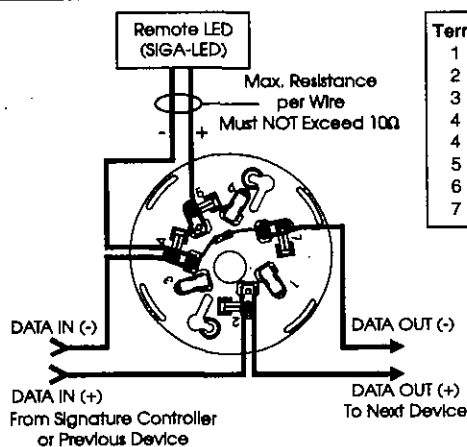
Test Fire	Type of Detector				
	SIGA-IS Ion	SIGA-PS Photo	SIGA-HRS and SIGA-HFS Rate-of- -Rise/Fixed Temp.	SIGA-PHS Photo/Heat 3D	SIGA-IPHS Ion/Photo/Heat 4D
Open Wood	optimum	unsuitable	optimum	very suitable	optimum
Wood Pyrolysis	suitable	optimum	unsuitable	optimum	optimum
Smoldering Cotton	very suitable	optimum	unsuitable	optimum	optimum
Poly Urethane Foam	very suitable	very suitable	suitable	very suitable	optimum
n-Heptane	optimum	very suitable	very suitable	optimum	optimum
Liquid Fire without Smoke	unsuitable	unsuitable	optimum	very suitable	very suitable

Typical Wiring

The detector mounting bases accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.5mm²) wire sizes.

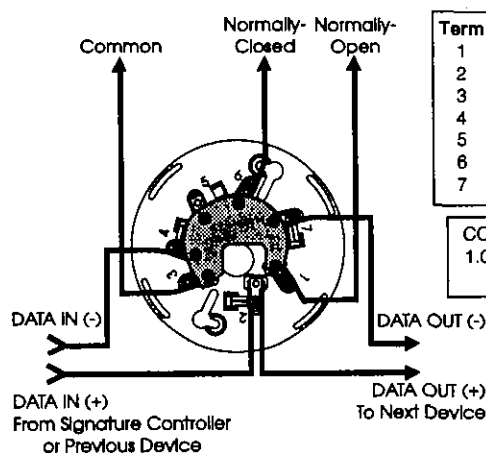
Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

Standard Detector Base, SIGA-SB, SIGA-SB4



Term	Description
1	Not Used
2	DATA IN/OUT (+)
3	Not Used
4	DATA IN (-)
5	Remote LED (-)
6	Not Used
7	DATA OUT (-)

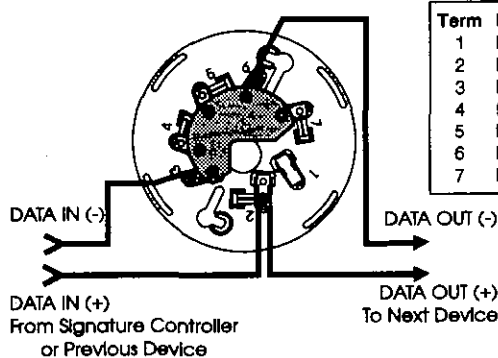
Relay Detector Base, SIGA-RB, SIGA-RB4



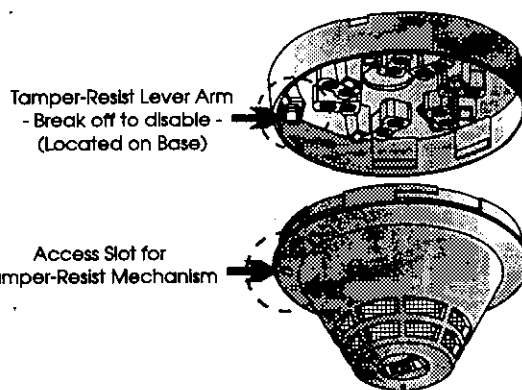
Term	Description
1	Normally-Open
2	DATA IN/OUT (+)
3	Common
4	DATA IN (-)
5	Not Used
6	Normally-Closed
7	DATA OUT (-)

CONTACT RATING
1.0 Amp @ 30 VDC
(Pilot Duty)

Isolator Detector Base, SIGA-IB, SIGA-IB4



Term	Description
1	Not Used
2	DATA IN/OUT (+)
3	DATA IN (-)
4	Not Used
5	Not Used
6	DATA OUT (-)
7	Not Used



Warnings & Cautions

This detector will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

This detector will NOT sense fires that start in areas where smoke cannot reach the detector. Smoke from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

Accessories

All detector mounting bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½" or 4" octagon boxes, 1½" (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4" sq. electrical boxes in addition to the above boxes. They include the SIGA-TS Trim Skirt which is used to cover the "mounting ears" on the base.

Standard Base SIGA-SB, SIGA-SB4 - This is the basic mounting base for EST Signature Series detectors. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB, SIGA-RB4 - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The relay base does not support the SIGA-LED Remote LED.

The relay is controlled by the detector and operates as follows:

- at system power-up or reset, the relay is de-energized.
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB, SIGA-IB4 - This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates as follows:

- a short on the line causes all isolators to open within 23 msec.
- at 10 msec intervals, beginning on one side of the Class A circuit nearest the loop controller, the isolators close to provide the next isolator down the line with power.
- when the isolator next to the short closes, it reopens within 10 msec.

The process repeats beginning on the other side of the loop controller.



Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS Trim Skirt - Supplied with 4" bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases. Use black model with SIGA-IPHSB.

Specifications

Catalog Number	SIGA-PS
Sensing Element	Photoelectric - Light Scattering Principle
Storage and Operating Environment	Air Velocity Range: 0 to 5,000 ft/min (0 to 25.39 m/s) Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH, Non-Condensing
Sensitivity Range	ULI/ULC - 0.67% to 3.77% obscuration/foot
User Selected Alarm Sensitivity Settings	Most Sensitive: 1.0%/ft. More Sensitive: 2.0%/ft. Normal: 2.5%/ft. Less Sensitive: 3.0%/ft. Least Sensitive: 3.5%/ft.
Pre-alarm Sensitivity	75% of Alarm Sensitivity Setting
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)
Operating Current	Quiescent: 45µA @ 19 V Alarm: 45µA @ 19 V Emergency Stand-alone Alarm Mode: 18mA Pulse Current: 100 µA (100 msec) During Communication: 9 mA maximum
Construction & Finish	High Impact Engineering Polymer - White
Compatible Mounting Bases	SIGA-SB, SIGA-SB4 Standard Base, SIGA-RB, SIGA-RB4 Relay Base, SIGA-IB, SIGA-IB4 Isolator Base
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm Both LEDs - Glow steady when in alarm (stand-alone) Compatible Remote Red LED (model SIGA-LED) - Flashes when in alarm
Compatibility	Use With: SIGNATURE Loop Controller
Address Requirements	Uses 1 Device Address
Agency Listings	UL, ULC

Ordering Information

Catalog Number	Description	Carton Dims. Inches (mm)	Ship Wt. lbs (kg)
SIGA-PS	Intelligent Photoelectric Detector - UL/ULC Listed	5 (127)w x 3.6 (91)h x 5 (127)d	.5 (.23)
Accessories			
SIGA-SB	Detector Mounting Base - Standard	6 (152)w x 1 (25)h x 6 (152)d	.2 (.09)
SIGA-SB4	4" Detector Mounting base c/w SIGA-TS Trim Skirt		
SIGA-RB	Detector Mounting Base w/Relay		
SIGA-RB4	4" Detector Mounting Base w/Relay c/w SIGA-TS Trim Skirt		
SIGA-IB	Detector Mounting Base w/Fault Isolator		
SIGA-IB4	4" Detector Mounting Base w/ Fault Isolator c/w SIGA-TS Trim Skirt	3.8 (97)w x 2.8 (71)h x 6 (152)d	.2 (.09)
SIGA-LED	Remote Alarm LED		
SIGA-TS	Trim Skirt (supplied with 4" bases)	6 (152)w x 1 (25)h x 6 (152)d	.1 (.04)

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Intelligent Duct Smoke Detector Housing

- Model SIGA-DH

Features

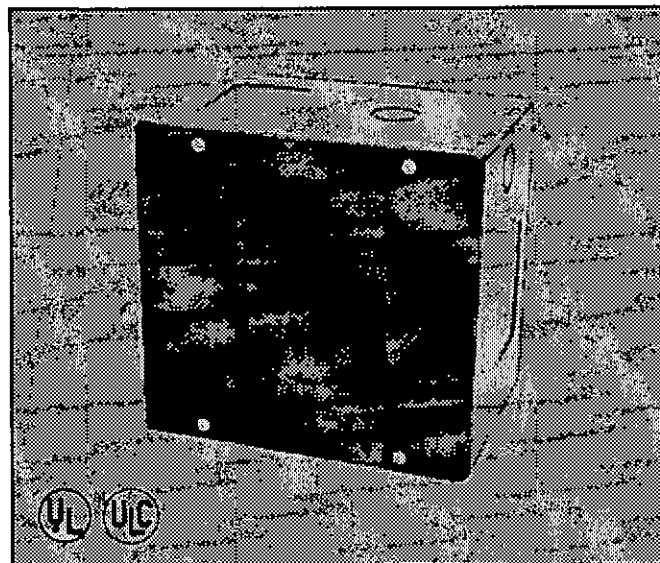
- **SUITABLE FOR HIGH AIR VELOCITY DUCT APPLICATIONS**
Up to 4000 ft/min. (20.3 m/sec.) with Photoelectric Detector.
- **STANDARD SIGNATURE SERIES DETECTORS**
Designed for use with standard 4D, 3D, and Photoelectric Signature Series smoke detectors. Does not require "special" duct smoke heads.
- **STANDARD, RELAY OR ISOLATOR DETECTOR BASE**
Detector "plugs-in" to base then easily installs into housing.
- **INSTALL IN DUCTS UP TO 10 FT. (3.05 M) WIDE**
- **REMOTE LED AND TEST STATION ACCESSORIES**
- **DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS**

Description

The **SIGA-DH Duct Smoke Detector Housing** is specially engineered to exploit all the capabilities of Signature Series intelligent photoelectric and multisensor smoke detectors. EST Signature Series detectors gather analog information from each of their one or more sensing elements and converts it into digital signals. The detector's onboard microprocessor measures and analyzes these signals. It compares them to historical readings, time patterns and known characteristics to make an alarm decision. Digital filters and complex Algorithms are applied for optimum detector accuracy. Unwanted alarms are nearly eliminated.

Each duct housing is packaged with detailed installation instructions, gaskets and a self-adhesive drilling template for locating and mounting the detector. The large access door is completely removable to allow fast detector installation and field wiring connections. The 16 gauge steel housing is finished in red baked enamel for easy identification. Five 1-gang knockouts on the housing provide a convenient location for mounting intelligent Signature Series modules.

The **SIGA-DH Duct Housing** comes with a 6 inch (150 mm) exhaust tube. Air sampling tubes are available in lengths from 8 inches (200 mm) to 10 feet (3048 mm) and must be ordered separately. Compatible smoke detectors, mounting



bases, and accessories are listed in the Ordering Information. Refer to individual device catalog literature pages for more detail.

Intelligent Duct Smoke Detectors

Compatible Signature Series detectors include the **SIGA-IPHS 4D Multisensor Smoke Detector with THREE INTEGRATED SENSING TECHNOLOGIES**. It combines Ionization, Photoelectric and Heat sensors and processes and analyzes information from each sensor separately using dynamic filters. Also compatible are the **SIGA-PHS 3D Multisensor Detector** and the **SIGA-PS Photoelectric Detector**. The installer selects the alarm sensitivity level from the detector's wide **0.67 to 3.7% sensitivity range window**. Five settings are available from within the range.

Environmental Compensation

Detection sensitivity for Signature Series detectors is almost independent of their installed environment and their physical condition. Each sensing element adapts to long-term changes caused by dirt, humidity, aging etc. Every 8.6 minutes the detector adjusts and updates the sensitivity (% obscuration) ambient baseline for its smoke sensing element. Every 68 minutes this information is written to its permanent memory.

The detector's alarm sensitivity setting selected by the installer floats up or down to remain constant relative to the changing baseline. This is called environmental compensation.

Identification of Dirty or Defective Detectors

Each detector automatically identifies when it is polluted and causes a "dirty detector" message. The detector's sensitivity measurement can also be transmitted to the loop controller. This measurement satisfies NFPA sensitivity measurement

EDWARDS SYSTEMS TECHNOLOGY

SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

requirements. The detector's internal components are self-supervised. Up to 32 trouble codes are generated and displayed for diagnostics.

Non-Volatile Memory

Signature Series smoke detectors permanently store a serial number, type of device and job number. Automatic updates of historic information including hours of operation, last maintenance date, number of alarms and troubles, time and date of last alarm are available. In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Electronic Addressing & Device Mapping

The Signature loop controller automatically addresses each detector to save valuable time during system commissioning. Setting complicated switches or dials on each intelligent device is not required. If desired, the detectors can be custom addressed using the **Signature Series Data Entry Program**.

The wired circuits between each device can be examined using the data entry program along with the self-mapping feature built into all Signature Series devices. With its graphic support, layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the 'mystery' out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping also allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the data loop.

Stand-Alone Operation

On-board intelligence permits Signature devices to operate in stand-alone mode. Should loop controller CPU communications fail for more than 4 seconds, all devices on that circuit (loop) go into stand-alone mode. The loop acts like a conventional alarm receiving circuit. Each detector on the loop continues to collect and analyze information from its surroundings. The detector alarms if the preset smoke obscuration level is reached and causes a loop alarm. If the detector is mounted to a relay base, the relay operates.

Quality and Reliability

EST detectors are designed and manufactured in North America to ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for corrosion resistance and all critical contacts are gold plated.

Signature Duct Detector Accessories

Duct Detector Air Sampling Tubes

One air sampling inlet tube must be ordered for each duct smoke detector housing. Refer to Ordering Information for available lengths.

Detector Mounting Bases

One detector mounting base must be ordered for each duct smoke housing. Removing a detector from its base (except isolator base) does not affect other devices operating on the same data loop. Available bases are:

Standard Base SIGA-SB - This is the basic mounting base. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp @ 30 Vdc (pilot duty). The relay's position is supervised to avoid accidentally jarring it out of position. The Relay Base does not support the SIGA-LED Remote LED. Relay bases are not affected or activated by the SIGA-DTS Duct Test Station.

The relay is controlled by the detector and operates as follows:

- at system power-up or reset, the relay is de-energized
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB - This base includes a built-in line fault isolator. A detector must be installed for it to operate. The integral isolator relay is controlled by the detector or the loop controller. A maximum of 96 isolator bases can be installed on one loop. The Isolator Base does not support the SIGA-LED Remote LED.

Alarm LED Indicator

The **SIGA-LED Alarm Indicator** is suitable for use with the **SIGA-SB detector base only**. A maximum of 1 can be operated for each detector. It features a red LED on a 1-gang plastic plate and can be installed remote or directly on the **SIGA-DH Duct Housing**.

Duct Test Station

The **SIGA-DTS Duct Test Station** uses a key switch along with an integral intelligent input module mounted on a 2-gang plastic plate. It is supplied with 2 keys and features a red alarm led.

When the key is turned to the "TEST" position, the led lights and the integral module remotely inputs a duct detector test alarm. The actions and sequences programmed at the control panel to activate dampers and other smoke control measures, are easily tested. Detector relay bases are not affected or activated. Resetting the control panel clears the test and returns the system to normal. The key cannot be removed when in the "TEST" position.

The Duct Test Station mounts to standard 2" deep North American 2-gang and 4" square electric boxes and European 100 mm square boxes.

Air Velocity Test Kit

The **6263-SG Air Velocity Test Kit** is specially designed to interface to the SIGA-DH Duct Housing. It is used to test or confirm the air velocity in HVAC ducts where the duct housing is installed.

Specifications

SIGA-DH Duct Housing (NOTE: The SIGA-DH Duct Housing is NOT WEATHERPROOF or DUST TIGHT.)

Dimensions	7-3/8" (188mm)W x 7" (178mm)H x 5" (127mm)D		
Material and Finish	16 Gauge Cold Rolled Steel, Red ¹ - Baked Enamel		
Conduit Knockouts	Combination 1/2" & 3/4"		
Agency Approvals	UL, ULC, MEA, CSFM		
Compatible Smoke Detectors	SIGA-PS	SIGA-PHS	SIGA-IPHS
Air Velocity Range	300 to 4000 ft/min. (1.5 to 20.3 m/sec)		300 to 1000 ft/min. (1.5 to 5.0 m/sec)
Smoke Sensing Element(s)	Photoelectric - Light Scattering Principle	Photoelectric - Light Scattering Principle Heat - 135°F (57°C) Fixed Temperature	Ionization - Unipolar Photoelectric - Light Scattering Principle Heat - Alarms at 65°F (35°C) change in ambient temp.
Operating Environment	Temperature: 32 to 120°F (0 to 49°C) Humidity: 0 to 93% RH, non-condensing	Temperature: 32 to 100°F (0 to 38°C) Humidity: 0 to 93% RH, non-condensing	
Storage Environment	Temperature: -4 to 140°F (-20 to 60°C); Humidity: 0 to 93% RH, non-condensing		
ULI/ULC Sensitivity Range	0.67% to 3.77% obscuration/foot (305mm)		0.67% to 3.70% obscuration/foot (305mm)
User Selected Alarm Sensitivity Settings	Least Sensitive: 3.5%; Less Sensitive: 3.0%; Normal: 2.5%; More Sensitive: 2.0%; Most Sensitive: 1.0%		
Pre-alarm Sensitivity	75% of Alarm Sensitivity Setting		
Electrical and Physical Characteristics	refer to individual detector catalog sheets		
Compatible Mounting Bases	SIGA-SB Standard Base, SIGA-RB Relay Base, SIGA-IB Isolator Base		
Compatible Remote LED	SIGA-LED (led flashes when in alarm)		
Controller Compatibility	SIGNATURE Loop Controller		
Addressing Restrictions	Uses 1 Input Device Address		

SIGA-DTS Duct Test Station

Operating Current	Standby = 250uA; Activated = 400uA
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)
Replacement Key	p/n - P-037449
Storage and Operating Temperature	32 to 120°F (0 to 49°C)
Onboard LED Operation	Red LED - flashes when in alarm or test state
Mounting	North American electric box: 2" deep 2-gang or 4" square ; European electric box: 100 mm square
Construction & Finish	High Impact Engineered Plastic 2-gang front plate - White
Addressing Restrictions	Uses 1 Module Address

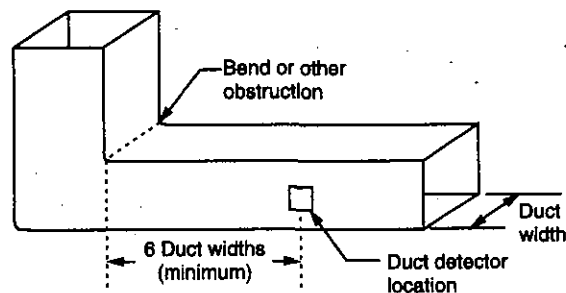
Application Notes

The **SIGA-DH Duct Smoke Detector Housing** requires a clear, flat, accessible area on the duct of at least 7-3/8" (188mm) W x 7" (175mm) H. The duct housing must be installed on ducts at least 8" (200mm) wide. To avoid the effects of stratification, install the detector housing a minimum of six (6) duct widths beyond any bends in the duct. Duct detectors are usually installed on the "supply" duct after the air filters; or in the "return" air stream prior to being diluted by outside air.

Sample tube length must span the entire width of the air duct and the tube can be easily cut to any length. Inlet tubes longer than 3 ft.(900mm) must be supported at both ends.

Duct Detectors continually sample air flow in a HVAC duct

and initiate an alarm condition whenever smoke is detected. An alarm is activated when the quantity (percent obscuration) of combustion products in that air sample exceeds the detector's sensitivity setting.



Air velocity in the duct maintains the air flow that enters the detector housing through perforations in the air sampling inlet tube and discharges through the outlet exhaust tube. The detector housing must be installed with its INLET air sampling tube upstream of the EXHAUST tube. Before installing the duct detector housing, test the duct air velocity to verify it is within the limits of the Signature Smoke Detector that is being installed. Also verify that duct air relative humidity is within 0 and 93 percent.

WARNING: Duct detectors have specific limitations. Duct Detectors ARE NOT a substitute for an open area smoke detector. Duct Detectors ARE NOT a substitute for early warning detection. Duct Detectors ARE NOT a replacement for a building's regular fire detection system. Smoke Detectors ARE NOT designed to detect toxic gases which can build up to hazardous levels in some fires. These devices WILL NOT operate without electrical power. As fires frequently cause power interruptions, EST suggests you discuss further safeguards with your local fire protection specialist.

Typical Wiring

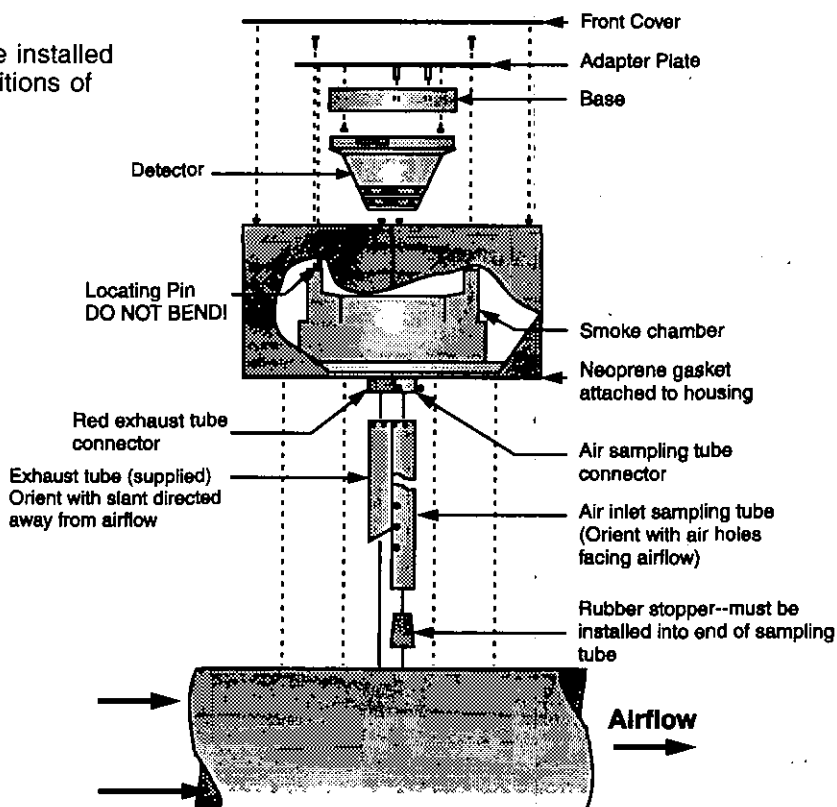
The detector mounting bases and test station will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.50mm²) wire sizes. Note: #14 AWG (1.5 mm²) is not recommended due to difficulty of installation. See Loop Controller and Detector catalog sheets for detailed wiring requirement specifications.

Ordering Information

Catalog Number	Description	Ship Wt - lb. (kg)
SIGA-DH	Duct Detector Housing	6.5 (3)
6261-001	8" (200mm) Air Sampling Inlet Tube	.25 (.1)
6261-002	24" (600mm) Air Sampling Inlet Tube	.5 (.2)
6261-003	42" (1060mm) Air Sampling Inlet Tube	1.6 (.8)
6261-006	78" (1980mm) Air Sampling Inlet Tube	2.2 (1)
6261-010	120" (3048mm) Air Sampling Inlet Tube	4.4 (2)
SIGA-IPHS	4D Multisensor Detector	.5 (.23)
SIGA-PHS	3D Multisensor Detector	.5 (.23)
SIGA-PS	Photoelectric Detector	.5 (.23)
SIGA-SB	Standard Base	.2 (.09)
SIGA-RB	Relay Base	.2 (.09)
SIGA-IB	Isolator Base	.2 (.09)
SIGA-LED	Alarm LED Indicator	.2 (.09)
SIGA-DTS	Duct Test Station	.4 (.18)
6263-SG	Duct Air Velocity Test Kit	

Installation and Mounting

EST recommends Duct Detectors always be installed in accordance with the latest recognized editions of local and national fire alarm codes.



It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

Input Modules

Models SIGA-CT1, SIGA-CT2 & SIGA-MCT2

Features

■ MULTIPLE APPLICATIONS

Including Alarm, Alarm with delayed latching (retard) for waterflow applications, Supervisory, and Monitor. The installer selects one of four (4) "personality codes" to be downloaded to the module through the loop controller.

■ PLUG-IN (UIO) OR STANDARD 1-GANG MOUNT

UIO versions allow quick installation where multiple modules are required. The 1-gang mount version is ideal for remote locations that require a single module.

■ AUTOMATIC DEVICE MAPPING

Signature modules transmit information to the loop controller regarding their circuit locations with respect to other Signature devices on the wire loop.

■ ELECTRONIC ADDRESSING

Programmable addresses are downloaded from the loop controller, a PC, or the SIGA-PRO Signature Program/Service Tool. There are no switches or dials to set.

■ INTELLIGENT DEVICE WITH MICROPROCESSOR

All decisions are made at the module to allow lower communication speed with substantially improved control panel response time and less sensitivity to line noise and loop wiring properties; twisted or shielded wire is not required.

■ NON-VOLATILE MEMORY

Permanently stores serial number, type of device, and job number. Automatically updates historic information including hours of operation, last maintenance date, number of alarms and troubles, and time and date of last alarm.

■ STAND-ALONE OPERATION

The module makes decisions and inputs an alarm from initiating devices connected to it even if the loop controller's polling interrogation stops. (Function availability dependent upon control panel.)

■ DIAGNOSTIC LEDs

Flashing GREEN shows normal polling; flashing RED shows alarm/active state.

■ HIGH AMBIENT TEMPERATURE OPERATION

Install in ambient temperatures up to 120°F (49°C).

■ DESIGNED TO ISO 9001 STANDARDS

All Signature products are manufactured to strict international quality standards to ensure highest reliability.



Description

The SIGA-CT1 Single Input Module and SIGA-CT2/SIGA-MCT2 Dual Input Modules are intelligent analog addressable devices used to connect one or two Class B normally-open Alarm, Supervisory, or Monitor type dry contact Initiating Device Circuits (IDC).

The actual function of these modules is determined by the "personality code" selected by the installer. This code is downloaded to the module from the Signature loop controller during system configuration.

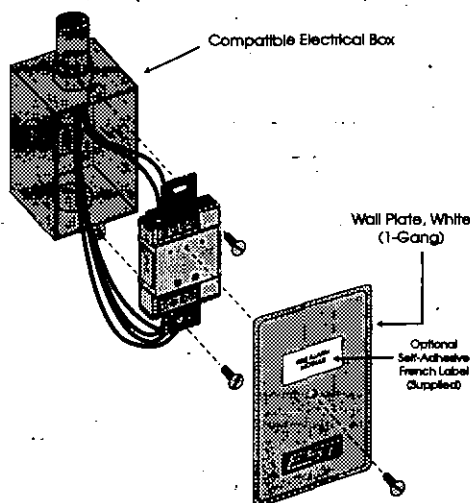
The input modules gather analog information from the initiating devices connected to them and convert it into digital signals. The module's on-board microprocessor analyzes the signal and decides whether or not to input an alarm.

The SIGA-CT1 and SIGA-CT2 mount to standard North American 1-gang electrical boxes, making them ideal for locations where only one module is required. Separate I/O and data loop connections are made to each module.

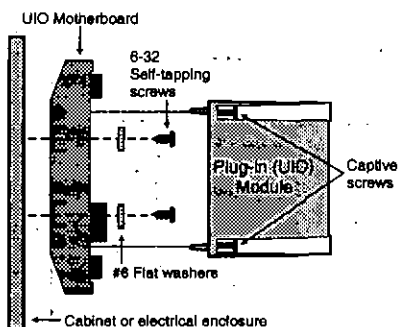
The SIGA-MCT2 is part of the UIO family of plug-in Signature Series modules. It functions identically to the SIGA-CT2, but takes advantage of the modular flexibility and easy installation that characterizes all UIO modules. Two- and six-module UIO motherboards are available. All wiring connections are made to terminal blocks on the motherboard. UIO assemblies may be mounted in EST enclosures.

Installation

SIGA-CT1 and SIGA-CT2: modules mount to North American 2½" (64 mm) deep 1-gang boxes and 1½" (38 mm) deep 4" square boxes with 1-gang covers. The terminals are suited for #14 to #18 AWG (1.5 mm² to 0.75 mm²) wire size.



SIGA-MCT2: mount the UIO motherboard inside a suitable EST enclosure with screws and washers provided. Plug the SIGA-MCT2 into any available position on the motherboard and secure the module to the motherboard with the captive screws. Wiring connections are made to the terminals on the motherboard (see wiring diagram). UIO motherboard terminals are suited for #12 to #18 AWG (2.5 mm² to 0.75 mm²) wire size.



Electronic Addressing - The loop controller electronically addresses each module, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each module has its own unique serial number stored in its on-board memory. The loop controller identifies each device on the loop and assigns a "soft" address to each serial number. If desired, the modules can be addressed using the SIGA-PRO Signature Program/Service Tool.

EST recommends that this module be installed according to latest recognized edition of national and local fire alarm codes.

Compatibility

The Signature Series modules are compatible only with EST's Signature Loop Controller.

Application

The duty performed by the SIGA-CT1 and SIGA-CT2/MCT2 is determined by their sub-type code or "Personality Code". The code is selected by the installer depending upon the desired application and is downloaded from the loop controller.

One (1) personality code can be assigned to the SIGA-CT1. Two (2) personality codes can be assigned to the SIGA-CT2/MCT2. Codes 1, 2, 3 and 4 can be mixed on SIGA-CT2/MCT2 modules only. For example, personality code 1 can be assigned to the first address (circuit A) and code 4 can be assigned to the second address (circuit B).

NORMALLY-OPEN ALARM - LATCHING (Personality Code 1) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact initiating devices such as **Pull Stations, Heat Detectors**, etc. An ALARM signal is sent to the loop controller when the input contact is closed. The alarm condition is latched at the module.

NORMALLY-OPEN ALARM - DELAYED LATCHING (Personality Code 2) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact initiating devices such as **Waterflow Alarm Switches**. An ALARM signal is sent to the loop controller when the input contact is closed for approximately 16 seconds. The alarm condition is latched at the module.

NORMALLY-OPEN ACTIVE - NON-LATCHING (Personality Code 3) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact monitoring input such as from **Fans, Dampers, Doors**, etc. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is not latched at the module.

NORMALLY-OPEN ACTIVE - LATCHING (Personality Code 4) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact monitoring input such as from **Supervisory and Tamper Switches**. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is latched at the module.

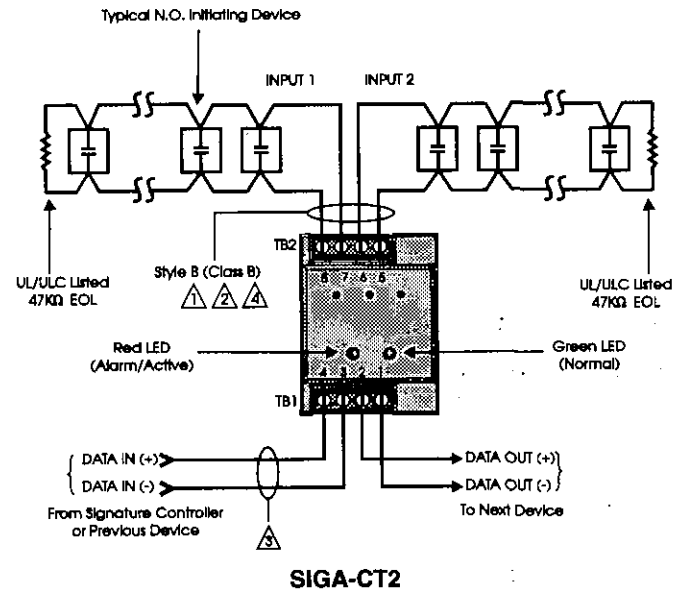
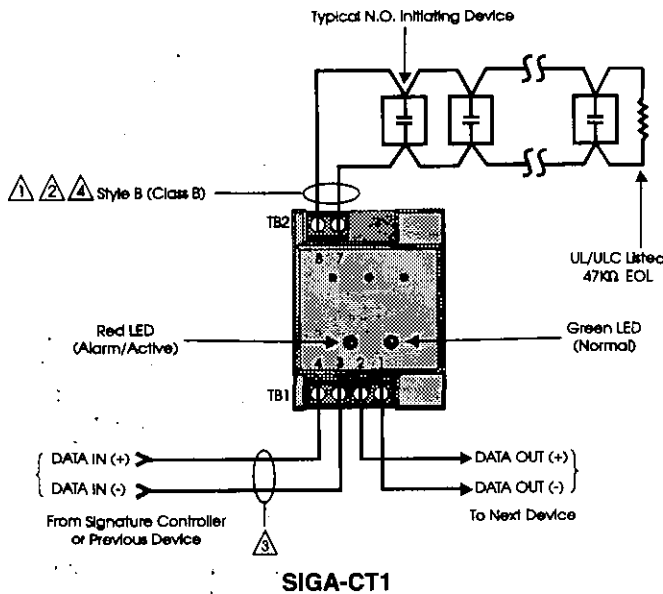
Ordering Information

Catalog Number	Description	Ship Wt. lbs (kg)
SIGA-CT1	Single Input Module - UL/ULC Listed	0.4 (0.15)
SIGA-CT2	Dual Input Module - UL/ULC Listed	0.4 (0.15)
SIGA-MCT2	Dual Input Plug-in (UIO) Module - UL Listed	0.1 (0.05)
Related Equipment		
27193-11	Surface Mount Box - Red, 1-gang	1.0 (0.6)
27193-16	Surface Mount Box - White, 1-gang	1.0 (0.6)
SIGA-UIO2R	Universal Input-Output Module Board w/Riser Inputs - 2 Module Positions	0.32 (0.15)
SIGA-UIO6R	Universal Input-Output Module Board w/Riser Inputs - 6 Module Positions	0.62 (0.28)
SIGA-UIO6	Universal Input-Output Module Board - 6 Module Positions	0.56 (0.25)

Typical Wiring

Modules will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.50mm²) wire sizes. UIO versions will also accept #12 AWG (2.5mm²). Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

Initiating (Slave) Device Circuit Wire Specifications		
Maximum Allowable Wire Resistance	50 ohms (25 ohms per wire) per Circuit	
Maximum Allowable Wire Capacitance	0.1µF per Circuit	
For Design Reference:	Wire Size	Maximum Distance to EOLR
	#18 AWG (0.75 mm ²)	3,930 ft (1,198 m)
	#16 AWG (1.00 mm ²)	6,225 ft (1,897 m)
	#14 AWG (1.50 mm ²)	9,900 ft (3,018 m)

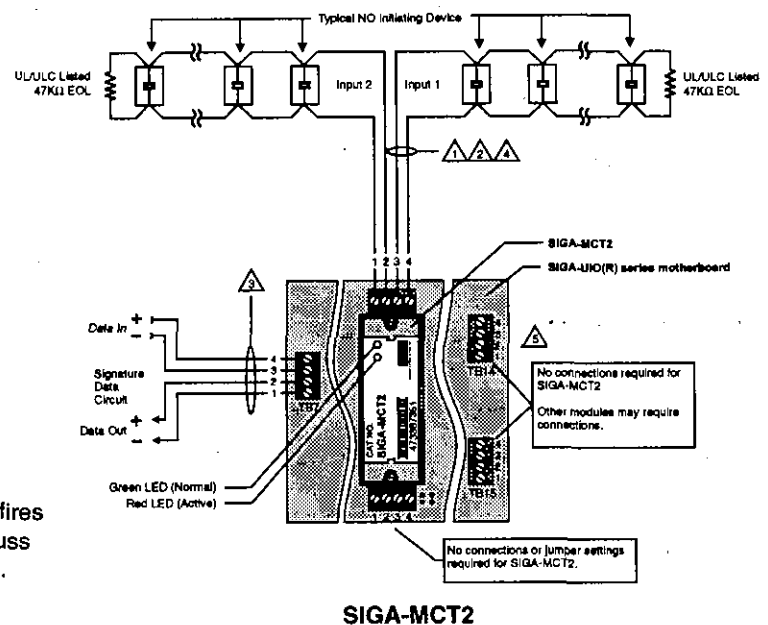


NOTES

- 1 Maximum 25 Ohm resistance per wire.
- 2 Maximum #12 AWG (2.5 mm²) wire; Minimum #18 AWG (0.75 mm²).
- Standard 1-gang version: Maximum #14 AWG (1.5mm²) wire. Min. #18 (0.75mm²).
- 3 Refer to Signature controller installation sheet for wiring specifications.
- 4 Maximum 10 Vdc @ 350 mA
- 5 The SIGA-UIO6R and the SIGA-UIO2R do not come with TB14.
- 6 All wiring is supervised and power-limited.
- 7 These modules will not support 2-wire smoke detectors.

Warnings & Cautions

This module will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your local fire protection specialist.



Specifications

Catalog Number	SIGA-CT1	SIGA-CT2	SIGA-MCT2
Description	Single Input Module		Dual Input Module
Type Code	48 (factory set) 4 sub-types (personality codes) are available		49 (factory set) 4 sub-types (personality codes) are available
Address Requirements	Uses 1 Module Address		Uses 2 Module Addresses
Operating Current	Standby = 250µA; Activated = 400µA		Standby = 396µA; Activated = 680µA
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)		
Construction	High Impact Engineering Polymer		
Mounting	North American 2½" (64 mm) deep 1-gang boxes and 1½" (38 mm) deep 4" square boxes with 1-gang covers		UIO2R/6R/6 Motherboard
Storage and Operating Environment	Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH		
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm/active Both LEDs - Glow steady when in alarm (stand-alone)		
Compatibility	Use with Signature Loop Controller		
Agency Listings	UL, ULC (See Ordering Table)		

Description (Signature Overview)

The Signature Series intelligent analog-addressable system from Edwards Systems Technology is an entire family of multi-sensor detectors and mounting bases, multiple-function input and output modules, network and non-network control panels, and user-friendly maintenance and service tools. Analog information from equipment connected to Signature devices is gathered and converted into digital signals. An onboard microprocessor in each Signature device measures and analyzes the signal and decides whether or not to input an alarm. The microprocessor in each Signature device provides four additional benefits – **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log – Each Signature Series device constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in its non-volatile memory. This information is accessible for review any time at the control panel, PC, or using the SIGA-PRO Signature Program/Service Tool. The information stored in device memory includes:

- Device serial number, address, and type.
- Date of manufacture, hours of operation, and last maintenance date.
- Number of recorded alarms and troubles.
- Time and date of last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

Automatic Device Mapping – The Signature Data Controller (SDC) learns where each device's serial number address is installed relative to other devices on the circuit. The SDC keeps a "map" of all Signature Series devices connected to it. The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "As-Built" drawing information showing branch wiring (T-taps), device types and their address are stored on disk for printing hard copy. This takes the 'mystery' out of the installation. The preparation of "As-Built" drawings is fast and efficient.

Device mapping allows the Signature Data Controller to discover:

- Unexpected additional device addresses.
- Missing device addresses.
- Changes to the wiring in the circuit.

Most Signature modules use a 'personality code' selected by the installer to determine their actual function. Personality codes are

downloaded from the SDC during system configuration and are indicated during device mapping.

Standalone Operation – A decentralized alarm decision by the device is guaranteed. Onboard intelligence permits the device to operate in standalone (degrade) mode. If Signature loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into standalone mode. The circuit acts like a conventional alarm receiving circuit. Each Signature device on the circuit continues to collect and analyze information from its slave devices. When connected to a panel utilizing standalone operation, modules with their 'personality' set as alarm devices (IDC) will alarm should their slave alarm-initiating device activate.

Fast Stable Communication – Built-in intelligence means less information needs to be sent between the device and the Signature Data Controller (SDC). Other than regular supervisory polling response, Signature devices only need to communicate with the SDC when they have something new to report. This provides very fast control panel response and allows a lower baud rate (speed) to be used for communication on the circuit. The lower baud rate offers several advantages including:

- Less sensitivity to circuit wire characteristics.
- Less sensitivity to noise glitches on the cable.
- Less emitted noise from the analog wiring.
- Twisted or shielded wiring is not required.

Diagnostic LEDs – Twin LEDs on most Signature devices provide visual indication of normal and alarm-active conditions. A flashing green LED shows normal system polling. A flashing red LED means the module is in alarm-active state. Both LEDs on steady indicates alarm-active state – standalone mode.

Testing & Maintenance – Automatic self-diagnosis identifies when a Signature device is defective and causes a trouble message. The user-friendly maintenance program shows the current state of each device and other pertinent information. Single devices may be turned off temporarily, from the control panel. **Scheduled maintenance (Regular or Selected) for proper system operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.**

Quality and Reliability – EST Signature devices are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance.

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.



EDWARDS SYSTEMS TECHNOLOGY

FIRE ALARM SIGNALING APPLIANCES

Self-Synchronizing Design
Temporal Output

NEW

UL 1971
Listed

757 Series Temporal Horn

Integrity Family

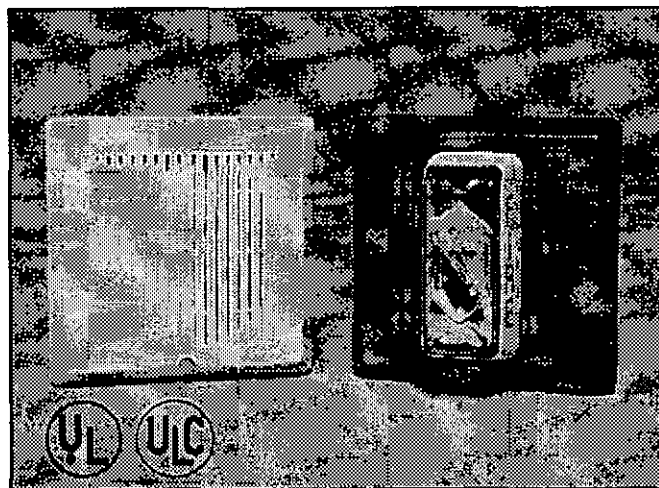
Features

- **SYNCHRONIZED TEMPORAL AUDIBLE OUTPUT**
Select for self-synchronizing temporal signal or steady tone. External "synch-control" module is not required.
- **SYNCHRONIZED STROBE FLASH**
Self-synchronizing flash from multiple strobes improves the safety for photosensitive people. External "synch-control" module is not required.
- **MOUNTS TO 2-GANG BOX**
Flush mount to standard North American 2-gang or 4 inch square electric box.
- **ADJUSTABLE HIGH OR LOW dBA OUTPUT**
Select for 98 dBA or 94 dBA sound output.
- **TRUE HORN TONE**
Low pitch "growling" sound demands attention.
- **ADA/UL1971/ULC LISTED STROBE**
All strobe models provide "Equivalent Facilitation" allowed under ADA Accessibility Guidelines, satisfy NFPA codes and are UL1971 listed as Signaling Devices for the Hearing Impaired.
- **EASY INSTALLATION**
A universal mounting plate allows Integrity to be wired then left hanging "free" to allow easy V.I. and testing before it is fastened to electrical box.
- **SCREW TERMINAL WIRE CONNECTION**
Large terminals speed installation and accept up to #12 AWG (2.5mm²) wire.
- **FIELD CHANGEABLE LENS MARKINGS**
Standard "FIRE" strobe marking/language is easily changed with optional snap-on Lens Kits.
- **UL/ULC RATED OUTDOOR OPTION**

Description

EST's 757 Integrity Series Temporal Horn and Temporal Horn/Strobe are perfect for life safety applications as an alert and alarm signal, especially to notify the hearing impaired. The horn emits a piercing low frequency sound that is easily heard above moderate ambient noise levels.

Integrity's rugged plastic housing is available with a red or white textured finish. With its ingenious mounting sub-plate, the horn is firmly held in place with a single screw ensuring a quick, attractive installation. A separate trim plate is not required for flush mounting. Separate terminals to accept up to #12 AWG



(2.5mm²) wire are provided for field connection of the strobe and horn.

Matching Integrity Speakers, Chimes, and Strobe combinations are also available.

HORN: During installation, the horn is configured for steady or temporal tone signal and either low or high dB output. When temporal output is selected all horns on a common 2-wire circuit are self-synchronized (see specifications). External "synch-control" modules are not required.

Integrity Series horns emit a low frequency "growling" tone to really demand attention. Select *high* output for 98 dBA; choose *low* output for 94 dBA. (Average measurement at 10 feet (3.05 M) in anechoic chamber.)

STROBE: EST strobes are self-synchronized to flash at 1 fps across their full operating voltage range. The strobe operates on any existing 2-wire signal circuit. Separately installed "synch-control" modules are not required. A very small portion of the population have a condition which may cause them to become disoriented from multiple random flashes of light. This risk is minimized with Integrity's strobe.

The flash from EST strobes can be noticed from almost any position in the room, corridor, or large open space. The output is controlled using a specially shaped reflector to disperse the light in all viewing directions. EST strobes are UL1971 listed with both wall and ceiling cd intensity ratings (see Specifications). This is useful in areas where the Authority Having Jurisdiction (AHJ) permits ceiling mount strobes.

757 Series Temporal Horn/Strobes are shipped with wall mount style "FIRE" lens markings. Where ceiling mount, other languages or different lens markings are required, optional LKW and LKC series Lens Marking Kits are offered. Lens marking sleeves snap right over the strobe lens providing quick, easy, change. Consult EST for availability of other languages or special markings.

EDWARDS SYSTEMS TECHNOLOGY

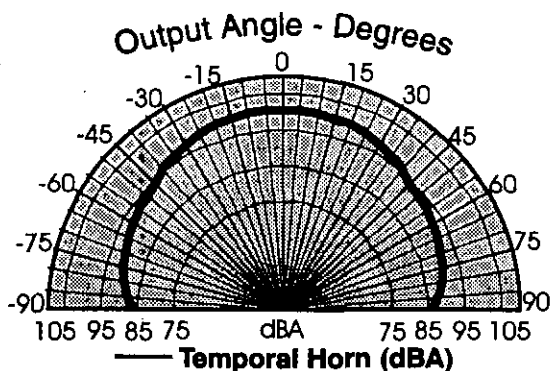
SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-378-2430 Fax: 519-372-1581
INTERNATIONAL CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

Audible Signal Application

Suggested sound pressure levels in each signaling zone for alert or alarm signals are at least 15 dB above the average ambient sound level or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater, measured 5' (1.5 m) above the floor. The average ambient sound level is the RMS, A-weighted sound pressure measured over a 24-hour period.

Doubling the distance from the signal to the ear will theoretically cause a 6 dB reduction in the received sound pressure level. The actual effect depends on the acoustic properties of materials in the space. A 3 dBA difference is a "just noticeable" change in volume.

Typical Sound Output Distribution
dBA measured at 10 ft. in anechoic chamber
757 Series Temporal Horn ('HIGH' output)



Visible Signal Application

These guidelines are based on ANSI/NFPA 72 National Fire Alarm Code (1993). When applied and installed in accordance with that code, EST strobes meet or exceed the illumination produced by the ADA specified 75 candela (cd) strobe at 50 feet. However, optimum performance is obtained by providing "Equivalent Facilitation" as allowed by the Americans with Disabilities Act Accessibility Guidelines [ADA(AG)]. Contact EST for exact spacing requirements.

Non-Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Up to 20' x 20' (6.1 x 6.1m)	757-5A 15 cd @ 70 mA or 757-7A* 15/75 cd @ 105 mA
Up to 30' x 30' (9.1 x 9.1m)	757-3A 30 cd @ 105 mA
Up to 50' x 50' (15.2 x 15.2m)	757-8A 110 cd @ 219 mA
Corridors	Wall Mounted - EST Model:
Any Length x Max. 20' (6.1m) Wide	757-5A or 757-7A* spaced @ 100' (30.5 m) never exceeding 151 (4.5 m) from end wall

* Model 757-7A is rated at 15 cd (wall or ceiling mount) per UL1971, and 75 cd per UL1638 thereby meeting ADA on axis only requirements of 75 cd.

Non-Sleeping Rooms and Corridors: EST strobes rated at less than 110 cd per UL1971 are intended for use in non-sleeping areas only. Install them 80" (2.03 m) above floor level OR within the space between 6" (150 mm) to 24" (610 mm) below the ceiling, whichever is lower. No point in any space (including corridors) required to have strobes shall be more than 50' (15.2 m) from the signal (in the horizontal plane). The 110 cd strobe should be used in non-sleeping areas only when the room exceeds 40' x 40' (12.2 m x 12.2 m). In large rooms

or spaces (such as auditoriums) that exceed 100' (30.4 m) across and without obstructions more than 72" (1.8 m) above the finished floor, strobes may be placed around the perimeter, spaced a maximum of 100' (30.4 m) apart, in lieu of suspending them from the ceiling.

Sleeping Rooms: EST model 757-8A is rated at 110 cd. It is intended for use in sleeping rooms and should be installed along with a smoke detector. It must be wall mounted at least

Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Any Size	757-8A 110 cd @ 219 mA

80" (2.03 m) above floor level, but no closer than 24" (610 mm) to the ceiling. The distance from the strobe to the pillow must not exceed 16' (4.8 m).

Application Notes - USA

In any case, audible signals cannot have a sound level less than 75 dBA at 10' (3m) per NFPA 72 and cannot exceed 120 dBA per ADA (130 dBA per NFPA 72) at the minimum hearing distance to audible appliance. Audible signals shall be installed with the top of the device above the floor not less than 90" (2.3 m) and below the finished ceilings at least 6" (150 mm) (per NFPA 72).

Strobes must be used to supplement audible signals wherever the average ambient sound level exceeds 105 dBA. Combination Audible/Visible signals must be installed per NFPA guidelines established for strobes.

ADA suggests that the following areas may require Visual Alarm Signals:

- rest rooms, meeting rooms, and other general usage areas.
- lobbies, hallways, and other common use areas.
- sleeping rooms intended for use by persons with hearing impairments.
- work areas used by a person with a hearing impairment (per Title 1 of ADA).

Application Notes - CANADA

(Based in part on 1995 Canada National Building Code)

The fire alarm signal sound pressure level shall not exceed 110 dBA in any normally occupied area. The sound pressure level from an audible signal in a floor area used for occupancies other than residential occupancies shall be not less than 10 dBA above the ambient noise, and never less than 65 dBA. The sound pressure level in sleeping rooms from an audible signal shall not be less than 75 dBA when any intervening doors between the device and the sleeping room are closed. Audible signal devices shall be installed not less than 1.8 m to the center of the device above the floor (per CAN/ULC S524).

The fire alarm audible signal shall be supplemented by fire alarm strobes in any floor area where the ambient noise level exceeds 87 dBA, or where the occupants of the floor area use ear protective devices, are located within an audiometric booth, or are located within sound insulating enclosures. This also applies to assembly occupancies in which music and other sounds associated with performances could exceed 100 dBA.

Strobes shall be installed in a building so that the flash from not less than one device is visible throughout the floor area or portion thereof in which they are installed. For maximum safety, EST recommends that strobes be installed as per the guidelines shown here under Strobe Application.

Specifications

Standalone Synchronization Characteristics (note 5)	Strobe flash at 1 per second within 200 milliseconds on common circuit Horn pulses at temporal rate within 200 milliseconds on common circuit			
Operating Volts	Strobe: 20-24 Vdc Continuous; Horn: 20-24 Vdc Continuous			
Horn Output (note 1)	Anechoic: High Setting - 104 dBA (peak)/98 dBA (avg); Low Setting - 99 dBA (peak)/94 dBA (avg) Reverberent: High Setting - 85 dBA (continuous)/82 dBA (temporal); Low Setting - 82 dBA (continuous)/75 dBA (temporal)			
Horn Current	High Output: 40 mA @ 24 Vdc; 55mA @ 24 Vrms FWR; Low Output: 20 mA @ 24 Vdc; 28 mA @ 24 Vrms FWR			
Rated Strobe Output - candela (cd)	757-5A-	757-7A-	757-3A-	757-8A-
UL 1971	15 cd wall mount only	15 cd wall 15 cd ceiling	30 cd wall 15 cd ceiling	110 cd wall 60 cd ceiling
UL 1638	not UL 1638 rated	75 cd	30 cd	120 cd
ULC S526	15 cd	75 cd	30 cd	120 cd
Average Strobe Current (note 2)	24Vdc: 70mA 20Vdc: 80mA	24Vdc: 105mA 20Vdc: 125mA	24Vdc: 105mA 20Vdc: 125mA	24Vdc: 219mA 20Vdc: 272mA
Peak Strobe Current (note 2)	20Vdc: 208mA	20Vdc: 208mA	20Vdc: 208mA	20Vdc: 352mA
Average Strobe Current (note 3)	24Vdc: 84mA 20Vdc: 99mA	24Vdc: 168mA 20Vdc: 204mA	24Vdc: 168mA 20Vdc: 204mA	24Vdc: 325mA 20Vdc: 355mA
Peak Strobe Current (note 3)	20Vdc: 360mA	20Vdc: 594mA	20Vdc: 594mA	20Vdc: 876mA
Strobe Marking	Supplied with LKW-1 "FIRE" red letters, vertical both sides (Wall Mount) - see LKW and LKC series for ceiling style and optional markings.			
Flash Tube Enclosure	Clear LEXAN with white marking sleeve			
Housing	Textured, color impregnated engineered plastics - exceeds 94V-0 UL flammability rating			
Wire Connections	Terminals - separate, polarized inputs for Horn & Strobe, #12 AWG (2.5mm ²) maximum			
INDOOR Operating Environment	93% @ 40_C relative humidity; 32-120_F (0-49_C) ambient temperature			
OUTDOOR Operating Environment (must use weatherproof box)	98% @ 40_C relative humidity; -35-150°F (-31-66°C) ambient temperature (757-7A: rated at 50 cd @ -35°C per UL/ @ -40°C per ULC) (757-8A: rated at 100 cd @ -35°C per UL/ @ -40°C per ULC)			
Mounting - INDOOR	Flush: North-American 2-gang box, 3" high x 4" wide x 2 3/4" (69 mm) minimum Surface: 757A-SB Back box Bi-directional: 757A-BDF Mounting Frame			
Mounting - OUTDOOR	Surface: 757A-WB Weatherproof Box			
Agency Listings	UL 1971, UL 1638, UL 464, ULC S526, ULC S525 (All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule)			

Note 1 - Measured at 10 ft (3m) @ 24 Vdc. Subtract 3 dBA for models with strobes

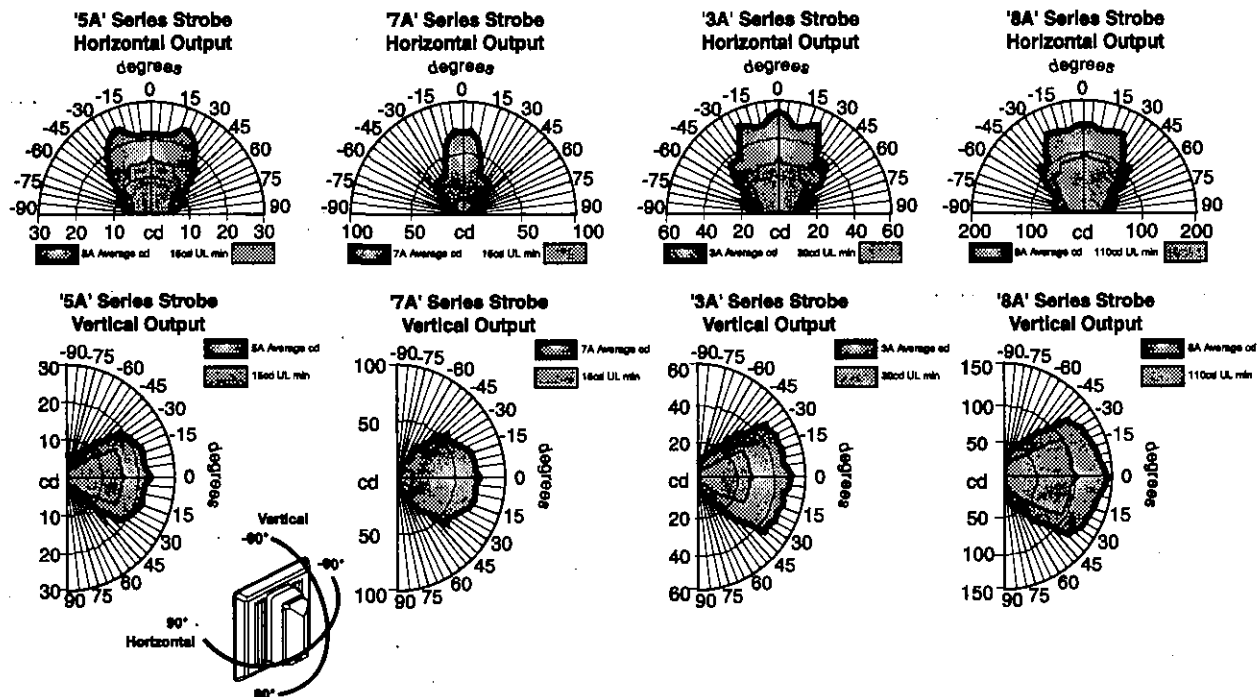
Note 2 - Connected to FILTERED dc source.

Note 3 - Connected to UNFILTERED (Full Wave Rectified) dc source.

Note 4 - Use the average current rating to establish the maximum number of strobes, wire gauge and standby power requirements.

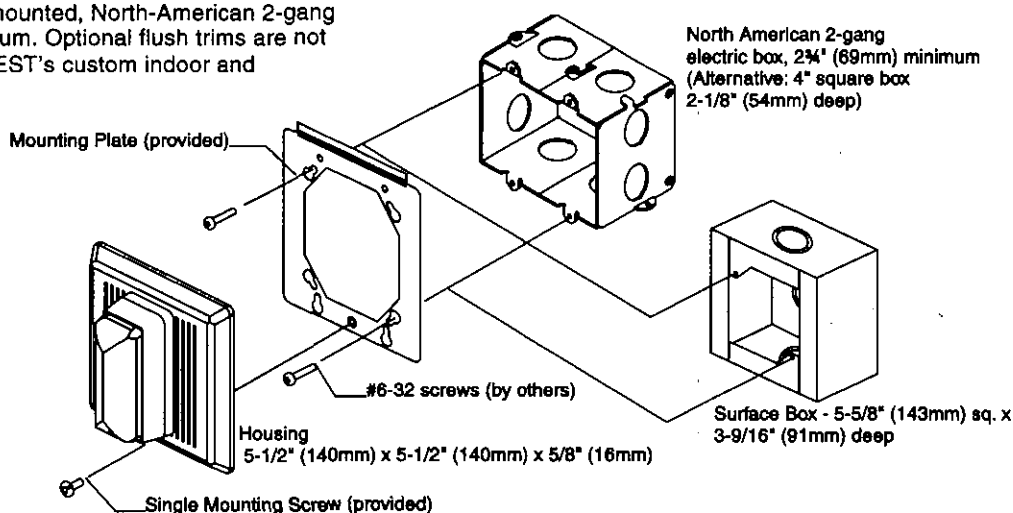
Note 5 - Temporal audible pattern is defined as: 1/2 sec ON, 1/2 sec OFF, 1/2 sec ON, 1/2 sec OFF, 1/2 sec ON, 1 1/2 sec OFF, then repeat cycle.

Light Output Patterns



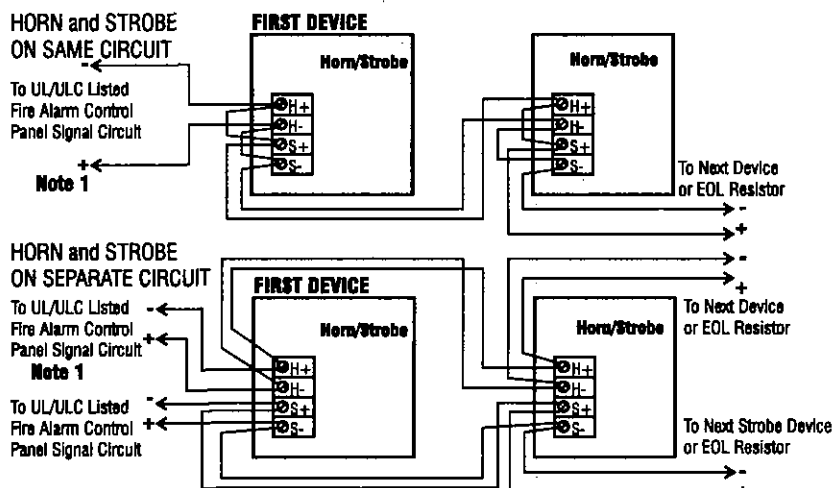
Installation and Mounting

All models fit to a standard flush mounted, North-American 2-gang electrical box, 2 3/4" (69 mm) minimum. Optional flush trims are not required. For surface mount, use EST's custom indoor and outdoor surface boxes painted in color-matched red or white epoxy. EST recommends that fire alarm horn/strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.



Typical Wiring

The strobe must be connected to signal circuits which output a constant (not pulsed) voltage. The horn can be connected to continuous voltage circuits.



Note 1: Polarity of Signal Circuit is shown in supervisory state. Polarity reverses in alarm condition.

Ordering Information

Catalog Number	Description	Ship Wt. lb. (kg)
TEMPORAL HORNS		
757-1A-T*	Temporal Horn, Red	1.7(.8)
TEMPORAL HORN/STROBES		
757-5A-T*	Temporal Horn/Strobe, 15cd, Red	2(.9)
757-7A-T*	Temporal Horn/Strobe, 15/75cd, Red	
757-3A-T*	Temporal Horn/Strobe, 30cd, Red	
757-8A-T*	Temporal Horn/Strobe, 110cd, Red	

WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist. These visual signal appliances' flash intensity may not be adequate to alert or awaken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. EST recommends that strobes in sleeping rooms be 110 cd minimum.

MOUNTING ACCESSORIES		
757A-SB*	Surface Box, Red, Indoor	1.5(.7)
757A-WB*	Weatherproof Box, Red, Surface	1.5(.7)
757A-BDF*	Bi-directional Frame, Red	4(1.8)
LENS MARKING KITS (see note 1)		
LKW-1	"FIRE", Wall Orientation (supplied)	0.1 (.05)
LKW-1R	"FIRE", Wall Orientation, RED	
LKW-2	"FEU", Wall Orientation	
LKW-3	"FIRE/FEU", Wall Orientation	
LKW-4	"SMOKE", Wall Orientation	
LKW-5	"HALON", Wall Orientation	
LKW-6	"CO2", Wall Orientation	
LKW-7	"EMERGENCY", Wall Orientation	
LKW-8	"ALARM", Wall Orientation	
LKW-9	"FUEGO", Wall Orientation	
* Add Suffix "W" to catalog no. for WHITE. (e.g. 757-7A-TW)		
Note 1 - Change "W" to "C" for CEILING mount. (e.g. LKC-1)		

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.



**Self-Synchronizing Design
with Terminal Block**

Strobe

Models: 405-3A, -5A, -6A, -7A -8A

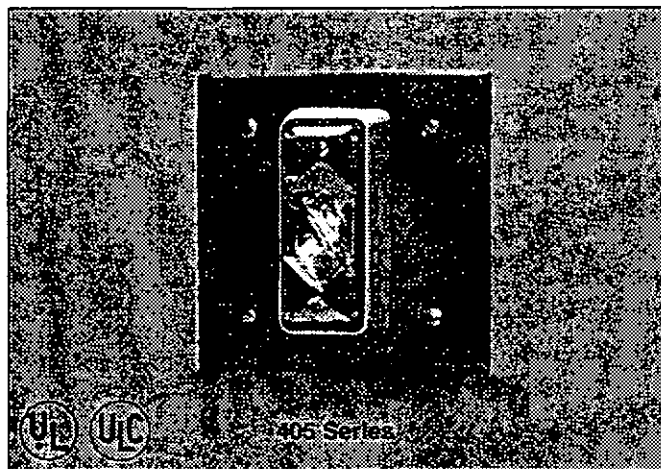
Features

- **SYNCHRONIZING STROBE**
EST strobes are self-synchronizing; no external control module is required. Synchronized flash from multiple strobes improves the safety for photosensitive people.
- **SATISFIES ADA CODE REQUIREMENTS**
ADA/UL1971/ULC listed strobe is available in five intensities. All models provide the "Equivalent Facilitation" allowed under ADA Accessibility Guidelines. Use single strobe in rooms up to 50' x 50' and satisfy both ADA and NFPA codes.
- **SUPERIOR VISIBILITY**
In addition to being UL 1638 and ULC S526 listed as Visual Signal Appliances, EST strobes have a "distributed" light output pattern and are UL 1971 listed as Signaling Devices for the Hearing Impaired.
- **FIELD CHANGEABLE LENS MARKINGS**
Lens language or standard "FIRE" marking is easily changed with optional LKW and LKC series Lens Kits.
- **SCREW TERMINAL WIRE CONNECTION**
Large terminals speed installation and accept up to #12 AWG (2.5mm²) wire.
- **RUGGED STEEL FRONT PLATE**
Red or white front plate is finished with durable baked epoxy polyester powder-coat finish.
- **FITS 4" SQUARE FLUSH BOX**
Ideal for retrofit and new projects.
- **UL/ULC RATED OUTDOOR OPTION**

Description

EST 405 Series Strobes are especially designed for use with compatible life safety communication and control equipment to alert the hearing impaired. EST strobes are available with 15cd, 15/75 (ADA) cd, 30cd, 60cd, and 110cd effective flash intensity.

EST strobes are self-synchronized to flash at 1 fps across their full operating voltage range. The strobe operates on any existing 2-wire signal circuit. Separately installed "synch control modules" are not required. A very small portion of the population have a condition which may cause them to become disoriented from multiple random flashes of light. This risk is minimized with Integrity's strobe.



The flash from EST strobes can be noticed from almost any position in the room, corridor, or large open space. The light dispersion is controlled with a specially shaped reflector. It directs a minimum of 12 percent of rated light output above and below the strobe, and a minimum of 25 percent of rated light straight out both sides. EST strobes are UL1971 listed with both wall and ceiling cd intensity ratings (see Specifications). This is useful in areas where the Authority Having Jurisdiction (AHJ) permits ceiling mount strobes.

The 405 series is shipped with standard wall mount style "FIRE" lens markings. Where ceiling mount, other languages, or different lens markings are required, EST offers optional LKW/LKC series Lens Marking Kits. These optional lens markings just "snap on" to the strobe for quick, easy, conversion. Consult EST for availability of special lens languages or markings.

The strobe is designed for 20 to 24 volt dc operation and must be connected to signal circuits which output a constant (not pulsed) voltage. A diode is used to allow full signal circuit supervision and terminals to accept up to #12 AWG (2.5mm²) wire are provided for making polarized connections.

The steel housing/front plate is finished in red or white color. Durable baked epoxy polyester powder-coat paint is used. The 405 series strobes are a part of a full line of ADA/UL 1971/ULC S526 listed fire alarm Audible/Visible signals available from EST. Single-gang mount (202 series) strobes are also available.

Strobe Application

All models are listed to standard UL 1971 - Signaling Devices for the Hearing Impaired and CAN/ULC S526 Standard for Visual Signal Appliances for Fire Alarm Systems. Each strobe can provide the "Equivalent Facilitation" allowed under Americans with Disabilities Act Accessibility Guidelines (ADA(AG)).

These guidelines are based on ANSI/NFPA 72 National Fire Alarm Code (1993). When applied and installed in accordance with that code, EST strobes meet or exceed the illumination produced by the ADA specified 75 candela (cd) strobe at 50 feet. However, optimum performance is obtained by providing "Equivalent Facilitation" as allowed by the Americans with Disabilities Act Accessibility Guidelines [ADA(AG)]. Contact EST for exact spacing requirements.

Non-Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Up to 20' x 20' (6.1 m x 6.1 m)	405-5A 15 cd @ 70mA or 405-7A* 15/75 cd @ 105 mA
Up to 30' x 30' (9.1 m x 9.1 m)	405-3A 30 cd @ 105mA
Up to 40' x 40' (12.2 m x 12.2 m)	405-6A 60 cd @ 155mA
Up to 50' x 50' (15.2 m x 15.2 m)	405-8A 110 cd @ 219mA
Corridors	Wall Mounted - EST Model:
Any Length x Max. 20' (6.1m) Wide	405-5A or 405-7A* spaced @ 100' (30.5m) never exceeding 15' (4.5m) from end wall

* Model 405-7A is rated at 15 cd (wall or ceiling mount) per UL1971, and 75 cd per UL 1638 thereby meeting ADA on axis only requirements of 75 cd.

Non-Sleeping Rooms and Corridors: EST strobes rated at less than 110 cd per UL1971 are intended for use in non-sleeping areas only. Install them 80" (2.03m) above floor level OR within the space between 6" (150mm) to 24" (610mm) below the ceiling, whichever is lower. No point in any space (including corridors) required to have strobes shall be more than 50' (15.2m) from the signal (in the horizontal plane). The 110 cd strobe should be used in non-sleeping areas only when the room exceeds 40' X 40' (12.2m X 12.2m).

In large rooms or spaces (such as auditoriums) that exceed 100' (30.4m) across and without obstructions more than 72" (1.8m) above the finished floor, strobes may be placed around the perimeter, spaced a maximum of 100' (30.4m) apart, in lieu of suspending them from the ceiling.

Sleeping rooms: EST model 405-8A is rated at 110 cd. It is intended for use in sleeping rooms and should be installed along with a smoke detector. It must be wall mounted at least 80" (2.03m) above floor level, but no closer than 24" (610mm) to the ceiling. The distance from the strobe to the pillow must not exceed 16' (4.8m).

Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Any size	405-8A 110 cd @ 219mA

Application Notes — USA

Strobes must be used to supplement audible signals whenever the average ambient sound level exceeds 105 dBA. Combination Audible/Visible signals must be installed per NFPA guidelines established for strobes.

ADA suggests that the following areas may require Visual Alarm Signals:

- rest rooms, meeting rooms, and other general usage areas.
- lobbies, hallways, and other common use areas.
- sleeping rooms intended for use by persons with hearing impairment (per Title 1 of ADA).
- work areas used by a person with a hearing impairment (per Title 1 of ADA).

Application Notes — CANADA

(Based in part on 1995 Canada National Building Code)

The fire alarm audible signal shall be supplemented by fire alarm strobes in any floor area where the ambient noise level exceeds 87 dBA, or where the occupants of the floor area use ear protective devices, are located within an audiometric booth, or are located within sound insulating enclosures. This also applies to assembly occupancies in which music and other sounds associated with performances could exceed 100 dBA.

Strobes shall be installed in a building so that the flash from not less than one device is visible throughout the floor area or portion thereof in which they are installed. For maximum safety, EST recommends that strobes be installed as per the guidelines shown here under Strobe Application.

Specifications

Catalog Number	405-5A-*	405-7A-*	405-3A-*	405-6A-*	405-8A-*
UL 1971 Rated Strobe Output - candela (cd)	15cd (wall only)	15cd (wall or ceiling)	30cd (wall) 15cd (ceiling)	60cd (wall) 30cd (ceiling)	110cd (wall) 60cd (ceiling)
UL 1638/ULC S526 Rated Strobe Output	15cd (not UL 1638)	75cd	30cd	60cd	120cd
Average Operating Current (note 2)	70mA @ 24Vdc 80mA @ 20Vdc	105mA @ 24Vdc 125mA @ 20Vdc	105mA @ 24Vdc 125mA @ 20Vdc	155mA @ 24Vdc 185mA @ 20Vdc	219mA @ 24Vdc 272mA @ 20Vdc
Peak Operating Current (note 2)	208mA @ 20Vdc	208mA @ 20Vdc	208mA @ 20Vdc	265mA @ 20Vdc	352mA @ 20Vdc
Average Operating Current (note 3)	84mA @ 24Vdc 99mA @ 20Vdc	168mA @ 24Vdc 204mA @ 20Vdc	168mA @ 24Vdc 204mA @ 20Vdc	219mA @ 24Vdc 282mA @ 20Vdc	325mA @ 24Vdc 355mA @ 20Vdc
Peak Operating Current (note 3)	360mA @ 20Vdc	594mA @ 20Vdc	594mA @ 20Vdc	723mA @ 20Vdc	876mA @ 20Vdc
Strobe Flash Rate	Synchronized at 1 flash per second (no external control module required)				
Strobe Operating Volts	20 to 24Vdc (Continuous)				
Operating Environment	INDOOR: 85% @ 30°C RH; 32-120°F (0-49°C) ambient temperature OUTDOOR: 93% @ 30°C RH; -40-150°F (-40-66°C) ambient temp 7A' (50cd @ -35°C per UL @ -40°C per ULC) and 8A' (100cd @ -35°C per UL @ -40°C per ULC) models only: Must use weatherproof 4" sq. box				
Lens Markings	Supplied with LKW-1 "FIRE" red letters, vertical both sides (Wall Mount) - see LKW and LKC series for ceiling style and optional markings				
Wire Connections	Terminals - polarized input, #12 AWG (2.5mm ²) max wire size				
Flash Tube Enclosure	Clear LEXAN				
Strobe Plate, Finish	CRS steel - 5/8" (140mm) square, red or white baked epoxy polyester powder-coat finish				
Mounting	INDOOR: North American 4" square electrical box; OUTDOOR: EST 449 series weatherproof surface box or North American 4" square weatherproof box				
Agency Listings	UL 1971, UL 1638, ULC S526 (All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule)				

*Suffix "-T" for RED front plate, "-TW" for WHITE front plate.

Note 1: Use the average current rating to establish the maximum number of strobes, wire gauge, and standby power requirements.

Note 2: From a FILTERED dc source.

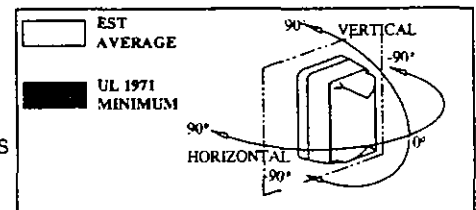
Note 3: From a UNFILTERED (Full Wave Rectified) dc source.

UL 1971 WALL MOUNTED STROBE LIGHT OUTPUT DISTRIBUTION PATTERNS

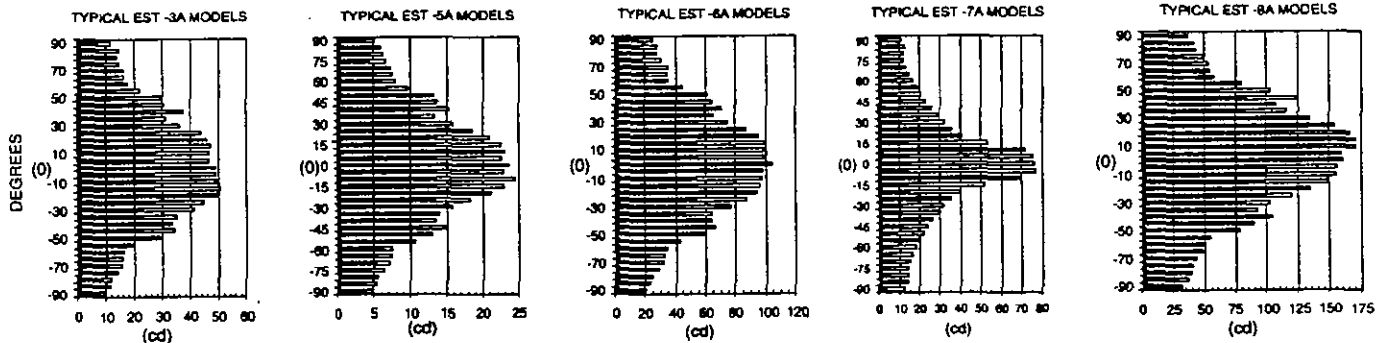
SOURCE: UL STANDARD 1971 - SIGNALING DEVICES FOR THE HEARING IMPAIRED

SOURCE: UL STANDARD 1638 - VISUAL SIGNAL APPLIANCES

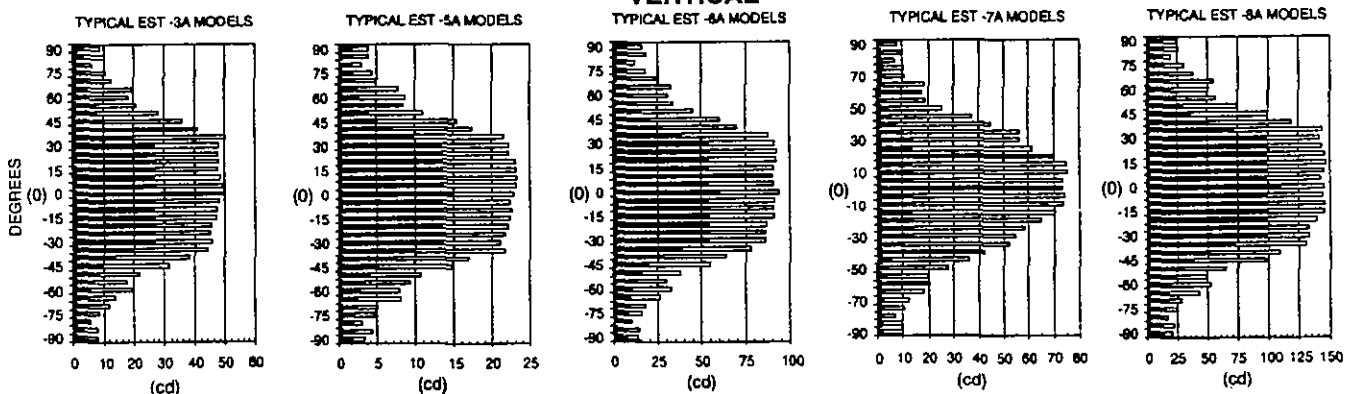
SOURCE: UL CANADA STANDARD S526 - VISUAL SIGNAL APPLIANCES FOR FIRE ALARM SYSTEMS



HORIZONTAL



VERTICAL

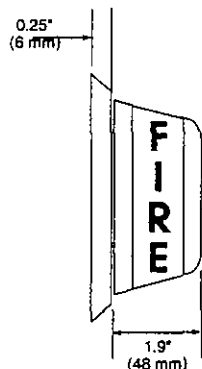


Installation and Mounting

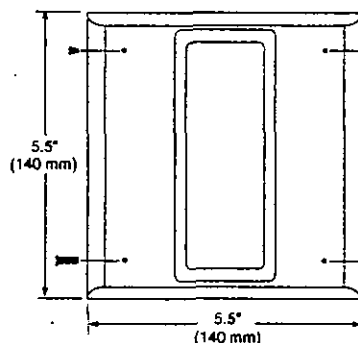
All models fit to a standard flush mounted, North American 4" electrical box, 1-1/2" (38 mm) deep minimum. Optional EST weatherproof, surface mount boxes are available. The strobes must be connected to signal circuits which output a constant (not pulsed) voltage. EST recommends that these strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.

WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist.

These visual signal appliances' flash intensity may not be adequate to alert or waken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. EST recommends that strobes in sleeping rooms be 110 cd minimum.



**SIDE VIEW,
WALL MOUNTED**



**FRONT VIEW,
WALL MOUNTED**

Countersunk Philip head screws are provided to secure unit onto electrical box.

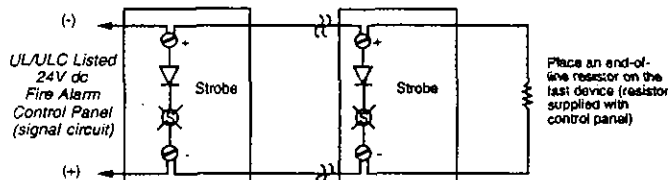
Two Plastic Caps are provided for indoor mounting.



**SIDE VIEW,
CEILING MOUNTED**
*Changeable Lens Marking, LKW or LKC Series.

Typical Wiring -24 Vdc

Polarity of signal circuit shown in supervisory state. On alarm, polarity reverses.



CAUTION: This unit is designed to be used on signal circuits that output a constant voltage of 20-24 VDC. Do not connect this unit to a coded or pulsating voltage. Electrical supervision requires wire run to be broken at each terminal. Do not loop signal circuit field wires around strobe terminals.

Ordering Information - Strobes

Catalog Number	Description	Ship Wt. lb (kg)
405-5A-T	Strobe - 15 cd, Red	1 (0.4)
405-5A-TW	Strobe - 15 cd, White	
405-7A-T	Strobe - 15/75, Red	
405-7A-TW	Strobe - 15/75, White	
405-3A-T	Strobe - 30 cd, Red	
405-3A-TW	Strobe - 30 cd, White	
405-6A-T	Strobe - 60 cd, Red	
405-6A-TW	Strobe - 60 cd, White	
405-8A-T	Strobe - 110 cd, Red	
405-8A-TW	Strobe - 110 cd, White	
Mounting Accessories		
449	Surface Mount Box - Outdoor, Gray	1 (0.4)

Ordering Information - Lens Marking Kits

Catalog Number	Description	Ship Wt. lb (kg)
LKW-1	"FIRE" - Wall Orientation (supplied)	0.2 (0.1)
LKW-1R	"FIRE" - Wall Orientation, red with white letters	
LKW-2	"FEU" - Wall Orientation	
LKW-3	"FIRE/FEU" - Wall Orientation	
LKW-4	"SMOKE" - Wall Orientation	
LKW-5	"HALON" - Wall Orientation	
LKW-6	"CO2" - Wall Orientation	
LKW-7	"EMERGENCY" - Wall Orientation	
LKW-8	"ALARM" - Wall Orientation	
LKW-9	"FUEGO" - Wall Orientation	0.2 (0.1)
LKC-1	"FIRE" - Ceiling Orientation	
LKC-2	"FEU" - Ceiling Orientation	
LKC-3	"FIRE/FEU" - Ceiling Orientation	
LKC-4	"SMOKE" - Ceiling Orientation	
LKC-5	"HALON" - Ceiling Orientation	
LKC-6	"CO2" - Ceiling Orientation	
LKC-7	"EMERGENCY" - Ceiling Orientation	
LKC-8	"ALARM" - Ceiling Orientation	
LKC-9	"FUEGO" - Ceiling Orientation	

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

INSPECTION AND TESTING FORM

DATE:

TIME:

SERVICE ORGANIZATION

NAME: Systems Sales Corporation

ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753

REPRESENTATIVE: D. Murphy

LICENSE NO.:

TELEPHONE: (732) 751 - 0600

PROPERTY NAME (USER)

NAME: Brick Hospital (1st Floor)

ADDRESS: 425 Jack Martin Blvd.
Brick, N.J. 08723

OWNER CONTACT: Mr. Bill Transue

TELEPHONE: (732) 840-2200

MONITORING ENTITY

CONTACT: King Central (by other)

TELEPHONE: (800) 624-3068

MONITORING ACCOUNT REF. NO. : 388-2641

APPROVING AGENCY

CONTACT:

TELEPHONE:

TYPE TRANSMISSION

- McCulloh
- Multiplex
- ☒ - Digital
- Reverse Polarity
- RF
- Other (Specify)

SERVICE

- ☒ - Acceptance
- Monthly
- Quarterly
- Semiannually
- Annually
- Other (Specify)

PANEL MANUFACTURER: EST-Edwards Systems Technologies MODEL NO.: EST-3

CIRCUIT STYLES: 4

NO. OF CIRCUITS: 9

SOFTWARE REV.: 1.52

LAST DATE SYSTEM HAD ANY SERVICE PERFORMED: 5/31/2000

LAST DATE THAT ANY SOFTWARE OR CONFIGURATION WAS REVISED: 3/26/2000

ALARM-INITIATING DEVICES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
13	4	MANUAL STATIONS
0		ION DETECTORS
73	4	PHOTO DETECTORS
23	4	DUCT DETECTORS
11	4	HEAT DETECTORS
2	4	WATERFLOW SWITCHES
3	4	SUPERVISORY SWITCHES
1	4	OTHER (SPECIFY) Kitchen hood extinguishing system

ALARM NOTIFICATION APPLIANCES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
22	Y	BELLS
-	-	HORNS
-	-	CHIMES
22	Y	STROBES
-	-	SPEAKERS
-	-	OTHER (SPECIFY)

NO. OF ALARM NOTIFICATION APPLIANCE CIRCUITS: 37

ARE CIRCUITS SUPERVISED? YES ☒ NO

SUPERVISORY SIGNAL INITIATING DEVICES AND CIRCUIT INFORMATION

QTY OF CIRCUIT STYLE

N/A	BUILDING TEMP.
N/A	SITE WATER TEMP.
N/A	SITE WATER LEVEL
1	FIRE PUMP POWER
1	FIRE PUMP RUNNING
N/A	FIRE PUMP AUTO POSITION
N/A	FIRE PUMP OR PUMP CONTROLLER TROUBLE
N/A	GENERATOR IN AUTO POSITION
N/A	GENERATOR OR CONTROLLER TROUBLE
N/A	SWITCH TRANSFER
N/A	GENERATOR ENGINE RUNNING
N/A	OTHER: (SPECIFY)

SIGNALING LINE CIRCUITS

Quantity and style (See NFPA 72, Table 3-6) of signaling line circuits connected to system:

Quantity 9 Style(s) 4

SYSTEM POWER SUPPLIES

- a. Primary (Main): Nominal Voltage 120Vac , Amps 15
 Overcurrent Protection: Type Circuit Breaker , Amps 15
 Location (Panel Number): E-14 Breaker #9
 Disconnecting Means Location: S.Basement MER 4
- b. Secondary (Standby):
 Storage Battery: Amp-Hr. Rating 24Vdc 7AH
 Calculated capacity to operate system, in hours: X 24 60
 Engine-driven generator dedicated to fire alarm system:
 Location of fuel storage:

TYPE BATTERY

- Dry Cell
 Nickel-Cadmium
X Sealed Lead-Acid
 Lead-Acid
 Other (Specify)

 Emergency or standby system used as a backup to primary power supply, instead of using a secondary power supply:
 Emergency system described in NFPA 70, Article 700
 Legally required standby described in NFPA 70, Article 701
 Optional standby system described in NFPA 70, Article 702, which also meets the performance of Article 700 or 701

**PRIOR TO ANY TESTING
NOTIFICATIONS ARE MADE:**

YES NO WHO TIME

MONITORING ENTITY X
BUILDING OCCUPANTS X
BUILDING MANAGEMENT X
OTHER (SPECIFY)
AHJ (NOTIFIED) OF ANY IMPAIRMENTS

SYSTEM TESTS AND INSPECTIONS

TYPE	VISUAL	FUNCTIONAL COMMENTS
CONTROL PANEL		X
INTERFACE EQUIPMENT		X
LAMPS/LEDS		X
FUSES		X
PRIMARY POWER SUPPLY		X
TROUBLE SIGNALS		X
DISCONNECT SWITCHES		X
GROUND FAULT MONITORING		X

SECONDARY POWER

TYPE	VISUAL	FUNCTIONAL COMMENTS
BATTERY CONDITION		X
LOAD VOLTAGE		X
DISCHARGE TEST		
CHARGER TEST		X
SPECIFIC GRAVITY		N/A

TRANSIENT SUPPRESSORS

REMOTE ANNUNCIATORS x3

NOTIFICATION APPLIANCES

AUDIBLE		X
VISUAL		X
SPEAKERS		
VOICE CLARITY		

INITIATING AND SUPERVISORY DEVICE TESTS AND INSPECTIONS

DEVICE VISUAL FUNCTIONAL FACTORY MEAS. LOC&S/N TYPE SETTING PASS FAIL

All devices tested

COMMENTS: See attached report

	VISUAL	FUNCTIONAL	COMMENTS
EMERGENCY COMMUNICATIONS EQUIPMENT			

PHONE SET		N/A	
PHONE JACKS		N/A	
OFF-HOOK INDICATOR		N/A	
AMPLIFIER(S)		N/A	
TONE GENERATOR(S)		N/A	
CALL IN SIGNAL		N/A	
SYSTEM PERFORMANCE		N/A	

	DEVICE	SIMULATED	VISUAL	FUNCTIONAL
INTERFACE EQUIPMENT				
(SPECIFY)	Elev. Recall			X
(SPECIFY)	Fan Shutdown			X
(SPECIFY)	Door Holders			X

SPECIAL HAZARD SYSTEMS	
(SPECIFY)	N/A
(SPECIFY)	N/A
(SPECIFY)	N/A
SPECIAL PROCEDURES:	N/A

COMMENTS:

ON/OFF PREMISES MONITORING:	YES	NO	TIME	COMMENTS
ALARM SIGNAL	X			
ALARM RESTORAL	X			
TROUBLE SIGNAL	X			
TROUBLE RESTORAL	X			
SUPERVISORY SIGNAL	X			
SUPERVISORY RESTORAL	X			

NOTIFICATIONS THAT TESTING IS COMPLETE	YES	NO	WHO	COMMENTS
BUILDING MANAGEMENT				
MONITORING AGENCY				
BUILDING OCCUPANTS				
OTHER (SPECIFY)				

THE FOLLOWING DID NOT OPERATE CORRECTLY:

SYSTEM RESTORED TO NORMAL OPERATION:	DATE	TIME
--------------------------------------	------	------

THIS TESTING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS.

NAME OF INSPECTOR: D. Murphy (Systems Sales Corp. Representative)

DATE: TIME:

SIGNATURE:

NAME OF OWNER OR REPRESENTATIVE:

DATE: TIME:

SIGNATURE:

Brick Hospital Renovation
9/9/99

Counts per Mike V. & Dave Murphy 8/31/99

Counts include some rough guesstimates by D.M. for areas where Mike V. could not gain access to

Location	A	B	C	D	E	F	G	H	I	J	K	L
Basement	21	0	20	0	8	2	0	6	9	14	1	0
1 st Floor	71	0	12	20	15	0	1	4	20	20	0	1
2 nd Floor	70	10	13	20	9	0	1	3	15	15	0	0
3 rd Floor	67	29	10	23	9	0	0	3	12	12	0	0
4 th Floor	77	37	8	41	9	0	0	3	8	15	0	0
5 th Floor	70	23	7	29	7	0	0	3	9	13	0	0
Totals	376	99	70	133	57	2	2	22	73	89	1	1

64
143
133
124
149
128

- A) Smoke Detector
- B) Remote LED for Patient Room Smoke Detector
- C) Heat Detector
- D) Duct Smoke Detector
- E) SIGA-CT1 for Existing Pull Stations
- F) SIGA-CT1 for Stand Alone Tamper Switch
- G) SIGA-CT1 for Kitchen Ansul System
- H) SIGA-CT2 for Combination Waterflow / Tamper Switch
- I) Horn Unit
- J) Strobe Unit
- K) FACP
- L) Annunciator

\$325

Annunciator Breakdowns – Per Dave Murphy 8/31/99

Item	Location	Type	Total Points
1	1 West – Security Desk	New 3-LCDANN	All
2	1 South – Clinic Area	To Be Removed per Bill Transue	N/A
3	2 West – CCU	Reuse Existing with SIGA-CR's	10
4	3 West – Special Care Nursery	Reuse Existing with SIGA-CR's	4
5	3 Center – West 3W	Reuse Existing with SIGA-CR's	8
6	3 East – Single Room Maternity	Reuse Existing with SIGA-CR's	15
7	3 Center – Nursery	Reuse Existing with SIGA-CR's	2
8	4 East – Oncology	Reuse Existing with SIGA-CR's	14
9	4 West – Med. Surg.	Reuse Existing with SIGA-CR's	23
10	5 West – PCCU	Reuse Existing with SIGA-CR's	23
Re-Use 9 Existing Annunciators, 1 New 3-LCDANN at Security			99 Points

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0101611	Rail_Vltg_Blw_Batt_01_03	LOCALTROUBLE	3	0101611 Rail Volts Below Battry Volts
0101612	Heat_Sink_Too_Hot_01_03	LOCALTROUBLE	3	0101612 Heat Sink Too Hot
0101613	Lo_Bat_Cut_Off_01_03	LOCALTROUBLE	3	0101613 Low Battery Cut Off
0101614	AC_Brownout_01_03	LOCALTROUBLE	3	0101614 AC Brownout
0101615	Batt_Trbl_01_03	LOCALTROUBLE	3	0101615 Battery Trouble
0101616	Aux_Pwr_Ovld_Ckt_2_01_03	LOCALTROUBLE	3	0101616 Aux Power Overload Circuit 2
0101617	Pwr_Supply_Fail_01_03	LOCALTROUBLE	3	0101617 Power Supply Failure
0101618	Aux_Pwr_Ovld_Ckt_1_01_03	LOCALTROUBLE	3	0101618 Aux Power Overload Circuit 1
0101619	Drvr_Pwr_Supply_Fail_01_03	LOCALTROUBLE	3	0101619 Driver Power Supply Failure
0102000	I/O_CARD1	3-IDC8/4	4	
0102001	BSMT_SIG_CKT1_HORN_W	AUDIBLE	4	BSMT_SIG_CKT1_HORN
0102002	BSMT_SIG_CKT2_STROBE_W	VISIBLE	4	BSMT_SIG_CKT2_STROBE
0102003	EXISTING_FACP_ALARM	GENALARM	4	EXISTING_FACP_ALARM
0102004	EST_3_FACP_DISABLE	MONITOR	4	EST_3_FACP_DISABLE
0102005	BSMT_SIG_CKT3_HORN_W	AUDIBLE	4	BSMT_SIG_CKT3_HORN
0102006	BSMT_SIG_CKT4_STROBE_W	VISIBLE	4	BSMT_SIG_CKT4_STROBE
0102007	SPARE1	SMOKE	4	SPARE1
0102008	SPARE2	SMOKE	4	SPARE2
0102600	Annunciator_Supervision_01_04	LOCALTROUBLE	4	0102600 Annunciator Supervision
0102601	Rail_Module_Communications_Fault_01_04	LOCALTROUBLE	4	0102601 Rail Module Communication Fault
0102604	Internal_Fault_01_04	LOCALTROUBLE	4	0102604 Internal Fault
0102605	Database_Supervision_01_04	LOCALTROUBLE	4	0102605 Database Supervision
0102606	Code_Supervision_01_04	LOCALTROUBLE	4	0102606 Code Supervision
0102609	Configuration_Fault_01_04	LOCALTROUBLE	4	0102609 ConfigurationFault

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0103000	LOOP1	3-DSDC	5	
0103001	SMK_BSMNT_1	SMOKEVFY	5	W.BSMNT_CORR***SMK OUTSIDE_MEETING ROOM
0103002	SMK_BSMNT_2	SMOKEVFY	5	W.BSMNT_CORR***SMK OUTSIDE COMP. ROOM
0103003	SMK_BSMNT_3	SMOKEVFY	5	W.BSMNT_CORR***SMK OUTSIDE LINEN ROOM
0103004	SMK_BSMNT_4	SMOKEVFY	5	W.BSMNT_CORR***SMK OUTSIDE MED_RECORDS
0103005	SMK_BSMNT_5	SMOKEVFY	5	W.BSMNT_CORR***SMK OUTSIDE_MAT_MGT
0103006	SMK_BSMNT_6_WPRI	SMOKEVFY	5	W.BSMNT_CORR***SMK OUTSIDE_FAC MGT
0103007	SMK_BSMNT_7	SMOKEVFY	5	W.BSMNT_CORR***SMK OUTSIDE_MENS_LOCKERS
0103008	SMK_BSMNT_8	SMOKEVFY	5	W.BSMNT_CORR***SMK OUTSIDE_STAIR_4
0103009	SMK_BSMNT_9	SMOKEVFY	5	W. BASEMENT***SMOKE CORRIDOR TO_STAIR_3
0103010	SMK_BSMNT_10	SMOKEVFY	5	W.BSMNT_CORR***SMK OUTSIDE_RESTROOMS
0103011	SMK_BSMNT_11	SMOKEVFY	5	BASEMENT_SMOKE_____MENS_RESTROOM
0103012	SMK_BSMNT_12	SMOKEVFY	5	BASEMENT_SMOKE_____WOMENS_RESTROOM
0103013	SMK_BSMNT_13	SMOKEVFY	5	BASEMENT_SMOKE_____FACILITY MANAGEMENT
0103014	SMK_BSMNT_14	SMOKEVFY	5	BASEMENT_SMOKE_____FACILITY MANAGEMENT
0103015	SMK_BSMNT_15	SMOKEVFY	5	BASEMENT_SMOKE_MENS__LOCKER_ROOM_BATHROOM
0103016	SMK_BSMNT_16	SMOKEVFY	5	BASEMENT_SMOKE_WOMENSLOCKER_ROOM_BATHROOM
0103017	SMK_BSMNT_17	SMOKEVFY	5	BASEMENT_SMOKE_____MECHANICAL_ROOM
0103018	HEAT_BSMNT_18	HEAT	5	BASEMENT_____MECHANICAL_ROOM
0103019	SMK_2W_CATH_19	SMOKEVFY	5	2W CATH LAB ** SMOKE PATIENT HOLDING
0103020	SMK_2W_CATH_20	SMOKEVFY	5	2W CATH LAB ** SMOKE CONTROL ROOM
0103021	SMK_2WCATH_21	SMOKEVFY	5	2W CATH LAB ** SMOKE HALL BY CONTROL ROOM
0103022	SMK_2W_CATH_22	SMOKEVFY	5	2W CATH LAB ** SMOKE NURSE STATION
0103023	SMK_2W_CATH_23	SMOKEVFY	5	2W CATH LAB ** SMOKE PROCEDURE ROOM

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0103024	SMK_2W_CATH_24	SMOKEVfy	5	2W CATH LAB ** SMOKE VENDOR EQUIPMENT ROOM
0103025	SMK_2W_CATH_25	SMOKEVfy	5	2W CATH LAB ** SMOKE HALL BY STAFF LOUNGE
0103026	SMK_1S_EHALL_26	SMOKEVfy	5	1S PHYSICIAN ENT.*** SMOKE BY ENTRANCE
0103027	SMK_1S_EHALL_27	SMOKEVfy	5	1S PHYSICIAN ENT*** SMOKE
0103028	SMK_1S_EHALL_28	SMOKEVfy	5	1S PHYSICIAN ENT.*** SMK BY MER 6 1S-Q4
0103029	SMK_1S_EHALL_29	SMOKEVfy	5	1S PHYSICIAN ENT*** SMK BY PATIENT REP
0103030	SMK_1S_EHALL_30	SMOKEVfy	5	1S PHYSICIAN ENT.*** SMK BY CARDIAC REHB
0103031	HEAT_1S_31	HEAT	5	1 SOUTH*** HEAT CONSTRUCTION AREA
0103032	SMK_1S_32	SMOKEVfy	5	1 SOUTH***SMOKE CHAPLAIN'S OFFICE
0103033	SMK_1S_33_SALT	SMOKEVfy	5	1 SOUTH*** SMOKE ELEV. LOBBY
0103036	SMK_1S_FAMHEALTH_36	SMOKEVfy	5	1S MAIN CORRIDOR ** SMK BY CHAPEL ENT.
0103037	SMK_1S_FAMHEALTH_37	SMOKEVfy	5	1S MAIN CORR ** SMOKE BY STAIR #2
0103039	DUCT_1S_39	SMOKEVfy	5	1S PHYSICIAN ENT*** DUCT BY FINANCE DOOR
0103040	DUCT_1S_40	SMOKEVfy	5	1S M.E.R. 6*** AHU1 DUCT BY DOMESTIC H.W.
0103041	DUCT_1S_41	SMOKEVfy	5	1S M.E.R. 6*** AHU2 DUCT BY AIR HANDLER
0103045	DUCT_1S_45	SMOKEVfy	5	1S PHYSICIAN ENT*** DUCT BY DOOR RE8
0103051	SMK_1S_51	SMOKEVfy	5	1 SOUTH *** SMOKE MAIN HALL BY CASHIER
0103059	SMK_2S_59	SMOKEVfy	5	2S STAIRWELL #1*** SMOKE
0103060	SMK_3S_60	SMOKEVfy	5	3S STAIRWELL #1*** SMOKE
0103061	SMK_4S_61	SMOKEVfy	5	4S STAIRWELL #1*** SMOKE
0103062	SMK_5S_62	SMOKEVfy	5	5S STAIRWELL #1*** SMOKE
0103063	SMK_5S_63	SMOKEVfy	5	5S STAIRWELL #1*** SMOKE ROOF LEVEL
0103064	SMK_1S_64	SMOKEVfy	5	1S STAIRWELL #1*** SMOKE BY DR. ENTRANCE
0103065	SMK_1W_ER_65	SMOKEVfy	5	1WEST E.R.***SMOKE BY MANAGER OFFICE

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0103066	SMK_1W_ER_66	SMOKEVfy	5	1WEST E.R.***SMOKE HALL BY KITCHEN
0103067	SMK_1W_ER_67	SMOKEVfy	5	1 WEST E.R.***SMOKE BY PATIENT HOLD A-D
0103068	SMK_1W_ER_68	SMOKEVfy	5	1 WEST E.R.*** SMOKE HALL BY BED #1
0103069	SMK_1W_ER_69	SMOKEVfy	5	1 WEST E.R.*** SMOKE HALL BY BED #2
0103070	SMK_1W_ER_70	SMOKEVfy	5	1 WEST E.R.*** SMOKE HALL BY BED #3
0103071	SMK_1W_ER_71	SMOKEVfy	5	1 WEST E.R.*** SMOKE RED NURSE STATION
0103072	SMK_1W_ER_72	SMOKEVfy	5	1 WEST E.R.*** SMOKE BLUE NURSE STATION
0103073	SMK_1W_ER_73	SMOKEVfy	5	1 WEST E.R.*** SMOKE HALL BY BED #5
0103074	SMK_1W_ER_74	SMOKEVfy	5	1 WEST E.R.*** SMOKE HALL BY BED #9.5
0103075	SMK_1W_ER_75	SMOKEVfy	5	1 WEST E.R.*** SMOKE HALL BY BED #8
0103076	SMK_1W_ER_76	SMOKEVfy	5	1 WEST E.R.*** SMOKE HALL BY BED #10
0103077	SMK_1W_ER_77	SMOKEVfy	5	1 WEST E.R.*** SMOKE E.R. RECEPTION AREA
0103078	SMK_1W_ER_78	SMOKEVfy	5	1W ER*** WAITING RM SMOKE BY TRIAGE
0103079	SMK_1W_ER_79	SMOKEVfy	5	1W ER*** WAIT RM SMK BY EXPRESS CARE
0103080	SMK_1W_ER_80	SMOKEVfy	5	1W ER***WAITING RM SMK IN EXPRESS CARE
0103081	SMK_1W_81	SMOKEVfy	5	1W MAIN ENTRANCE*** SMOKE BY SECURITY
0103082	SMK_1W_82	SMOKEVfy	5	1W MAIN HALL***SMOKE HALL BY E.R. REG.
0103083	SMK_1W_83	SMOKEVfy	5	1W MAIN HALL***SMOKE BY PHARMACY HALL
0103084	SMK_1W_84	SMOKEVfy	5	1W S.D.S. ENTRANCE***SMOKE IN ELEV. LOBBY
0103085	SMK_1W_ER_85	SMOKEVfy	5	1 WEST E.R.***SMOKE IN ROOM #1
0103086	SMK_1W_ER_86	SMOKEVfy	5	1 WEST E.R.***SMOKE IN ROOM #2
0103087	SMK_1W_ER_87	SMOKEVfy	5	1 WEST E.R.***SMOKE IN ROOM #3
0103094	SMK_SBSMT_94	SMOKEVfy	5	SOUTH_BSMT*** SMOKE GENERATOR ROOM
0103095	SMK_SBSMT_95	SMOKEVfy	5	SOUTH_BSMT*** SMOKE ELEC RM BY TRN 1

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0103096	SMK_SBSMT_96	SMOKEVfy	5	SOUTH_BSMT*** SMOKE ELEC RM BY SW GEAR R
0103097	SMK_SBSMT_97	SMOKEVfy	5	SOUTH_BSMT*** SMOKE ELEC RM BY SW GEAR L
0103098	SMK_SBSMT_98	SMOKEVfy	5	SOUTH_BSMT*** SMOKE ELEC RM BY TRN 4
0103099	HEAT_SBSMT_99	HEAT	5	SOUTH_BSMT*** HEAT BY ENGINEER OFFICE
0103100	HEAT_SBSMT_100	HEAT	5	SOUTH_BSMT*** HEAT ABOVE BOILER 3
0103101	SMK_WBSMT_101	SMOKEVfy	5	WEST_BSMT*** SMOKE CORR BY STAIR 6
0103102	SMK_WBSMT_102	SMOKEVfy	5	WEST_BSMT*** SMOKE CORR. CENTER DETECTOR
0103103	SMK_WBSMT_103	SMOKEVfy	5	WEST_BSMT*** SMOKE CORR BY ELEV LOBBY
0103104	SMK_WBSMT_104	SMOKEVfy	5	WEST_BSMT*** SMOKE CORR BY ELEC ROOM
0103105	SMK_WBSMT_105	SMOKEVfy	5	WEST_BSMT*** SMOKE ELEVATOR LOBBY
0103106	HEAT_WBSMT_106	HEAT	5	WEST_BSMT*** HEAT TELCO SWITCH ROOM
0103107	HEAT_WBSMT_107	HEAT	5	WEST_BSMT*** HEAT ELEC RM BY TWB-2
0103108	HEAT_WBSMT_108	HEAT	5	WEST_BSMT*** HEAT ELEC RM BY MAIN BRKR
0103109	HEAT_WBSMT_109	HEAT	5	WEST_BSMT*** HEAT ELEC RM BY ATS-6
0103110	DUCT_WBSMT_110	SMOKEVfy	5	WEST_BSMT*** DUCT ABSORBER RM AHU-24S
0103111	DUCT_WBSMT_111	SMOKEVfy	5	WEST_BSMT*** DUCT MED LIBRARY AHU-24R
0103112	HEAT_WBSMT_112	HEAT	5	WEST_BSMT*** HEAT MER BY ENTRANCE
0103113	HEAT_WBSMT_113	HEAT	5	WEST_BSMT*** HEAT MER BY AHU-24 RETURN
0103114	HEAT_WBSMT_114	HEAT	5	WEST_BSMT*** HEAT MER BY AHU-24 SUPPLY
0103115	HEAT_WBSMT_115	HEAT	5	WEST_BSMT*** HEAT MER ABOVE CWP-4
0103116	HEAT_WBSMT_116	HEAT	5	WEST_BSMT*** HEAT MER ABOVE CWP-6
0103117	HEAT_WBSMT_117	HEAT	5	WEST_BSMT*** HEAT MER BY CHWP-6
0103118	DUCT_WBSMT_118	SMOKEVfy	5	WEST_BSMT*** DUCT EF14CORR REAR CONF DOOR
0103119	SMK_SBSMT_119	SMOKEVfy	5	SOUTH_BSMT*** SMOKE STAIRWELL 1

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1 MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0103120	SMK_1S_120	SMOKEVFX	5	1 SOUTH*** SMOKE NEW DR.'s LOUNGE
0103126	PULL_BSMT_126	PULL	5	BASEMENT_____OUTSIDE_STAIR_3
0103127	PULL_BSMT_127	PULL	5	BASEMENT_____OUTSIDE_STAIR_4
0103128	BSMT_RELAY	NONSUPERVISEDOUTPUT	5	BSMT_DOORS
0103129	PULL_1S_129	PULL	5	1S PHYSICIAN ENTRANCEPULL BY ENTRANCE
0103130	PULL_1S_130	PULL	5	1S PHYSICIAN ENTRANCEPULL BY CARDIAC REHAB
0103131	PULL_1S_FAMHEALTH_131	PULL	5	1S MAIN CORRIDOR ** PULL AT MAIN ENTRANCE
0103132	IRC-3_TRIGGER	NONSUPERVISEDOUTPUT	5	RELAY IRC-3 TRIGGER
0103133	TAMP_1S_133	SUPERVISORY	5	1 SOUTH**VALVE TAMPERCONSTRUCTION AREA
0103134	SIG_CKT1S_2S_HORN_S	AUDIBLE	5	2S HORN CIRCUIT CC1 IN 1S TELCO CLST
0103135	PULL_1W_RAD_135	PULL	5	1W RADIOLOGY***PULL BY C.T. DRESSING ROOM
0103136	HEAT_1S_136	HEAT	5	1S M.E.R. #6 *** HEAT DETECTORS
0103137	PULL_1W_ER_137	PULL	5	1W E.R.*** PULL AT AMBULANCE ENTRANCE
0103138	HEAT_1W_ER_138	HEAT	5	1W E.R.*** HEAT AMBULANCE ENTRANCE
0103139	PULL_1W_ER_139	PULL	5	1W E.R.*** PULL IN EXPRESS CARE
0103140	PULL_1W_140	PULL	5	1W MAIN HALL*** PULL MAIN ENT. BY SECURITY
0103141	HEAT_1W_141	HEAT	5	1W VESTIBULE*** HEAT ENTRANCE BY SECURITY
0103142	PULL_1W_SDS_142	PULL	5	1W SDS*** PULL ELEVATOR LOBBY
0103143	HEAT_1W_SDS_143	HEAT	5	1W SDS*** HEAT IN VESTIBULE
0103144	PULL_1W_SDS_144	PULL	5	1W SDS*** PULL STAIRWELL #4
0103145	SIG_CKT1S_A_HORN_S	AUDIBLE	5	1S HORN CIRCUIT A CC1 IN TELCO CLOSET
0103146	SIG_CKT1S_B_HORN_S	AUDIBLE	5	1S HORN CIRCUIT B CC1 IN TELCO CLOSET
0103147	SIG_CKT_C_HORN_S	AUDIBLE	5	S. SIGNAL CIRCUIT C CC1 IN TELCO CLOSET
0103148	SIG_CKT_D_HORN_S	AUDIBLE	5	S. SIGNAL CIRCUIT D CC1 IN TELCO CLOSET

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0103149	SIG_CKT_E_HORN_S	AUDIBLE	5	S. SIGNAL CIRCUIT E CC1 IN TELCO CLOSET
0103150	SIG_CKT_F_HORN_S	AUDIBLE	5	S. SIGNAL CIRCUIT F CC1 IN TELCO CLOSET
0103151	NAC_RISER_1S	POWER	5	HORN POWER RISER 1S CT IN TELCO CLOSET
0103152	SIG_CKT_BSM_T_W	AUDIBLE	5	W.BSMT HORNS CC1 IN TELCO SW. RM
0103153	SIG_CKT_BSM_T_S	AUDIBLE	5	S. BSMT HORNS CC1 IN 6500 CABINET
0103154	STROBE_1S_L1_154_S	VISIBLE	5	1 SOUTH STROBES CC1 IN 1S TELCO CLST
0103155	PULL_SBSMT_155	PULL	5	SOUTH_BSM_T*** PULL #3BOTTOM OF STAIRS
0103156	PULL_SBSMT_156	PULL	5	SOUTH_BSM_T*** PULL #2MER 4
0103157	PULL_SBSMT_157	PULL	5	SOUTH_BSM_T*** PULL BOTTOM OF STAIR 1
0103158	PULL_WBSMT_158	PULL	5	WEST_BSM_T*** PULL BY STAIR 6
0103159	PULL_WBSMT_159	PULL	5	WEST_BSM_T*** PULL MECH EQUIP ROOM
0103160	STROBE_2S_L1_160_S	VISIBLE	5	2 SOUTH STROBES CC1 IN 1S TELCO CLST
0103161	RELAY_WBSMT_EF14_161	FANCONTROL	5	WEST BSM_T**RELAY EF14IN DET. 01030118
0103162	FLOW_WBSMT_162	WATERFLOW	5	WEST BSM_T**WATERFLOW ABSORBER ROOM
0103163	TAMP_WBSMT_163	SUPERVISORY	5	WEST BSM_T**VALVE TMPRABSORBER ROOM
0103164	FLOW_SBSMT_164	WATERFLOW	5	S. BSM_T***WATERFLOW ABOVE UTILITY TUB
0103165	TAMP_SBSMT_165	SUPERVISORY	5	S. BSM_T**VALVE TAMPERABOVE UTILITY TUB
0103166	FLOW_SBSMT_166	WATERFLOW	5	S. BSM_T***WATERFLOW PUMP RM BY ENTRANCE
0103167	GENALARM_CAFEHOOD_167	GENALARM	5	1 SOUTH*** CAFE' EXTINGUISHING SYSTEM
0103168	TAMP_SBSMT_168	SUPERVISORY	5	S.BSM_T**VALVE TAMPER PUMP RM FP H2OSHUTOFF
0103169	TAMP_SBSMT_169	SUPERVISORY	5	S.BSM_T**VALVE TAMPER PUMP RM- ALL FLOORS
0103170	TAMP_SBSMT_170	SUPERVISORY	5	S.BSM_T**VALVE TAMPER PUMP RM. 3 SWITCHES
0103171	FLOW_SBSMT_171	WATERFLOW	5	S.BSM_T*** WATERFLOW BY BOILER 2
0103172	TAMP_SBSMT_172	SUPERVISORY	5	S.BSM_T**VALVE TAMPER BY BOILER 2

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0103173	GENALARM_PUMPRUN_173	GENALARM	5	S.BSMT***FIRE PUMP RUNNING
0103174	POWER_PUMP_NO_AC_174	POWER	5	S.BSMT***FIRE PUMP POWER FAILURE
0103175	TAMP_1S_175	SUPERVISORY	5	1 SOUTH**VALVE TAMPERSTAIRWELL 1
0103176	FLOW_SBSMT_176	WATERFLOW	5	S.BSMT***WATERFLOW BY BOILER 2 UP HIGH
0103177	TAMP_SBSMT_177	SUPERVISORY	5	S.BSMT**VALVE TAMPER BY BOILER 2 UP HIGH
0103178	STROBE_3S_L1_178_S	VISIBLE	5	3 SOUTH STROBES CC1 IN 1S TELCO CLST
0103179	STROBE_4S_L1_179_S	VISIBLE	5	4 SOUTH STROBES CC1 IN 1S TELCO CLST
0103180	STROBE_5S_L1_180_S	VISIBLE	5	5 SOUTH STROBES CC1 IN 1S TELCO CLST
0103181	STROBE_6S_L1_181_S	VISIBLE	5	6 SOUTH STROBES CC1 IN 1S TELCO CLST
0103600	Annunciator_Supervision_01_05	LOCAL TROUBLE	5	0103600 Annunciator Supervision
0103601	Rail_Module_Communications_Fault_01_05	LOCAL TROUBLE	5	0103601 Rail Module Communication Fault
0103604	Internal_Fault_01_05	LOCAL TROUBLE	5	0103604 Internal Fault
0103605	Database_Supervision_01_05	LOCAL TROUBLE	5	0103605 Database Supervision
0103606	Code_Supervision_01_05	LOCAL TROUBLE	5	0103606 Code Supervision
0103607	Data_Card_Fault_1_01_05	LOCAL TROUBLE	5	0103607 Data Card Fault One
0103608	Data_Card_Fault_2_01_05	LOCAL TROUBLE	5	0103608 Data Card Fault Two
0103609	Configuration_Fault_01_05	LOCAL TROUBLE	5	0103609 Configuration Fault
0103670	In_Bootloader_01_05	LOCAL TROUBLE	5	0103670 Waiting For SDU Download
0103671	Line_Opened_or_Shorted_Data_Card_1_01_05	LOCAL TROUBLE	5	0103671 Open/Short Fault DataCard1
0103672	Map_Fault_Data_Card_1_01_05	LOCAL TROUBLE	5	0103672 Map Fault DataCard1
0103673	Mapping_In_Progress_Data_Card_1_01_05	LOCAL MONITOR	5	0103673 Mapping In Progress DataCard1
0103674	Mapping_Disbld_Data_Card_1_01_05	LOCAL MONITOR	5	0103674 Mapping Disabled DataCard1
0103675	Device_Maint_Alert_Data_Card_1_01_05	LOCAL MONITOR	5	0103675 Dev. Maintnc Alert DataCard1
0103676	Unprogrammed_Device_Data_Card_1_01_05	LOCAL ALARM	5	0103676 Unprogrammed Device DataCard1

SDU Objects by Logical Address

Project: BRICKHSP Version: 07.00.00 Cabinet: Cab1_MAIN_PANEL LRM: < All >

Logical Address	Label	Device Type	Slot Position	Message
0132000	3-LCD1	3-LCD	1	3-LCD1
0100000	3-CCU1	3-CPU	1	3-CCU1
0100600	Annunciator_Supervision_01_01	LOCALTROUBLE	1	0100600 Annunciator Supervision
0100601	ClassA_Failure_01_01	LOCALTROUBLE	1	0100601 Network Class'A' Failure
0100602	Ground_Fault_Detection_01_01	GROUNDFAULT	1	0100602 Ground Fault Detection
0100603	Audio_Supervision_01_01	LOCALTROUBLE	1	0100603 Audio Supervision
0100604	Internal_Fault_01_01	LOCALTROUBLE	1	0100604 Internal Fault
0100605	Database_Supervision_01_01	LOCALTROUBLE	1	0100605 Database Supervision
0100606	Code_Supervision_01_01	LOCALTROUBLE	1	0100606 Code Supervision
0100607	Auxiliary_Port_One_01_01	LOCALTROUBLE	1	0100607 Auxiliary Port One
0100608	Auxiliary_Port_Two_01_01	LOCALTROUBLE	1	0100608 Auxiliary Port Two
0100609	Panel_in_Download_Mode_01_01	LOCALTROUBLE	1	0100609 Panel In Download Mode
0100610	Network_Audio_Circuit_A_Fault_01_01	LOCALTROUBLE	1	0100610 Network AudioCircuit A Fault
0100611	Network_Audio_Circuit_B_Fault_01_01	LOCALTROUBLE	1	0100611 Network AudioCircuit B Fault
0100612	Unexpected_Card_01_01	LOCALTROUBLE	1	0100612 Unexpected Card
0133000	SWITCH1	12SW/12LED	3	SWITCHBANK_1
0133001	1_SW_1	SWITCH	3	WEST HORNS/STROBES DISABLED SWITCH 1
0133002	1_SW_2	SWITCH	3	SOUTH HORNS/STROBES DISABLED SWITCH 2
0133003	1_SW_3	SWITCH	3	ABC HORNS/STROBES DISABLED SWITCH 3
0133004	1_SW_4	SWITCH	3	WEST ELEV. RELAYS DISABLED SWITCH 4
0133005	1_SW_5	SWITCH	3	SOUTH ELEV. RELAYS DISABLED SWITCH 5
0133006	1_SW_6	SWITCH	3	ABC ELEV. RELAYS DISABLED SWITCH 6
0133007	1_SW_7	SWITCH	3	WEST/SOUTH RELAYS DISABLED SWITCH 7
0133008	1_SW_8	SWITCH	3	ABC RELAYS DISABLED SWITCH 8

INSPECTION AND TESTING FORM

DATE:

TIME:

SERVICE ORGANIZATION

NAME: Systems Sales Corporation

ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753

REPRESENTATIVE: D. Murphy

LICENSE NO.:

TELEPHONE: (732) 751 - 0600

PROPERTY NAME (USER)

NAME: Brick Hospital (Basement)

ADDRESS: 4945 Jack Martin Blvd.
Brick, N.J. 08723

OWNER CONTACT: Mr. Bill Transue

TELEPHONE: (732) 840-2200

MONITORING ENTITY

CONTACT: King Central (by other)

TELEPHONE: (800) 624-3068

MONITORING ACCOUNT REF. NO. : 388-2641

APPROVING AGENCY

CONTACT:

TELEPHONE:

TYPE TRANSMISSION

- ☐ - McCulloh
☐ - Multiplex
☒ - Digital
☐ - Reverse Polarity
☐ - RF
☐ - Other (Specify)

SERVICE

- ☒ - Acceptance
☐ - Monthly
☐ - Quarterly
☐ - Semiannually
☐ - Annually
☐ - Other (Specify)

PANEL MANUFACTURER: EST-Edwards Systems Technologies MODEL NO.: EST-3

CIRCUIT STYLES: 4

NO. OF CIRCUITS: 9

SOFTWARE REV.: 1.52

LAST DATE SYSTEM HAD ANY SERVICE PERFORMED: 5/31/2000

LAST DATE THAT ANY SOFTWARE OR CONFIGURATION WAS REVISED: 3/26/2000

ALARM-INITIATING DEVICES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
7	4	MANUAL STATIONS
0		ION DETECTORS
29	4	PHOTO DETECTORS
8 3	4	DUCT DETECTORS
12	4	HEAT DETECTORS
5	4	WATERFLOW SWITCHES
7	4	SUPERVISORY SWITCHES
1	4	OTHER (SPECIFY) fire pump run

ALARM NOTIFICATION APPLIANCES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE	
13	Y	BELLS
-	-	HORNS
-	-	CHIMES
13	Y	STROBES
-	-	SPEAKERS
-	-	OTHER (SPECIFY)

NO. OF ALARM NOTIFICATION APPLIANCE CIRCUITS: 37

ARE CIRCUITS SUPERVISED? YES ☒ NO

SUPERVISORY SIGNAL INITIATING DEVICES AND CIRCUIT INFORMATION

QTY OF	CIRCUIT STYLE
N/A	BUILDING TEMP.
N/A	SITE WATER TEMP.
N/A	SITE WATER LEVEL
1	FIRE PUMP POWER
1	FIRE PUMP RUNNING
N/A	FIRE PUMP AUTO POSITION
N/A	FIRE PUMP OR PUMP CONTROLLER TROUBLE
N/A	GENERATOR IN AUTO POSITION
N/A	GENERATOR OR CONTROLLER TROUBLE
N/A	SWITCH TRANSFER
N/A	GENERATOR ENGINE RUNNING
N/A	OTHER: (SPECIFY)

SIGNALING LINE CIRCUITS

Quantity and style (See NFPA 72, Table 3-6) of signaling line circuits connected to system:
Quantity9 Style(s) 4

SYSTEM POWER SUPPLIES

- a. Primary (Main): Nominal Voltage 120Vac , Amps 15
 Overcurrent Protection: Type Circuit Breaker , Amps 15
 Location (Panel Number): E-14 Breaker #9
 Disconnecting Means Location: S.Basement MER 4
- b. Secondary (Standby):
 Storage Battery: Amp-Hr. Rating 24Vdc 7AH
 Calculated capacity to operate system, in hours: X 24 60
 Engine-driven generator dedicated to fire alarm system:
 Location of fuel storage:

TYPE BATTERY

- Dry Cell
- Nickel-Cadmium
- X Sealed Lead-Acid
- Lead-Acid
- Other (Specify)
 Emergency or standby system used as a backup to primary power supply, instead of using a secondary power supply:

 Emergency system described in NFPA 70, Article 700
 Legally required standby described in NFPA 70, Article 701
 Optional standby system described in NFPA 70, Article 702, which also meets the performance of Article 700 or 701

PRIOR TO ANY TESTING**NOTIFICATIONS ARE MADE:**

YES	NO	WHO	TIME
-----	----	-----	------

MONITORING ENTITY	X		
BUILDING OCCUPANTS	X		
BUILDING MANAGEMENT	X		
OTHER (SPECIFY)			
AHJ (NOTIFIED) OF ANY IMPAIRMENTS			

SYSTEM TESTS AND INSPECTIONS

TYPE	VISUAL	FUNCTIONAL	COMMENTS
CONTROL PANEL		X	
INTERFACE EQUIPMENT		X	
LAMPS/LEDS		X	
FUSES		X	
PRIMARY POWER SUPPLY		X	
TROUBLE SIGNALS		X	
DISCONNECT SWITCHES		X	
GROUND FAULT MONITORING		X	

SECONDARY POWER

TYPE	VISUAL	FUNCTIONAL	COMMENTS
BATTERY CONDITION		X	
LOAD VOLTAGE		X	
DISCHARGE TEST			
CHARGER TEST		X	
SPECIFIC GRAVITY		N/A	

TRANSIENT SUPPRESSORS

REMOTE ANNUNCIATORS	x3
---------------------	----

NOTIFICATION APPLIANCES

AUDIBLE	X
VISUAL	X
SPEAKERS	
VOICE CLARITY	

INITIATING AND SUPERVISORY DEVICE TESTS AND INSPECTIONS**DEVICE VISUAL FUNCTIONAL FACTORY MEAS. LOC&S/N TYPE SETTING PASS FAIL****All devices tested****COMMENTS:** See attached report

	VISUAL	FUNCTIONAL	COMMENTS
EMERGENCY COMMUNICATIONS EQUIPMENT			

PHONE SET	N/A
PHONE JACKS	N/A
OFF-HOOK INDICATOR	N/A
AMPLIFIER(S)	N/A
TONE GENERATOR(S)	N/A
CALL IN SIGNAL	N/A
SYSTEM PERFORMANCE	N/A

	DEVICE	SIMULATED	VISUAL	FUNCTIONAL
INTERFACE EQUIPMENT				
(SPECIFY)	Elev. Recall			X
(SPECIFY)	Fan Shutdown			X
(SPECIFY)	Door Holders			X

SPECIAL HAZARD SYSTEMS	
(SPECIFY)	N/A
(SPECIFY)	N/A
(SPECIFY)	N/A
SPECIAL PROCEDURES:	N/A

COMMENTS:

ON/OFF PREMISES MONITORING:	YES	NO	TIME	COMMENTS
ALARM SIGNAL	X			
ALARM RESTORAL	X			
TROUBLE SIGNAL	X			
TROUBLE RESTORAL	X			
SUPERVISORY SIGNAL	X			
SUPERVISORY RESTORAL	X			

NOTIFICATIONS THAT TESTING IS COMPLETE	YES	NO	WHO	COMMENTS
BUILDING MANAGEMENT				
MONITORING AGENCY				
BUILDING OCCUPANTS				
OTHER (SPECIFY)				

THE FOLLOWING DID NOT OPERATE CORRECTLY:

SYSTEM RESTORED TO NORMAL OPERATION: DATE TIME

THIS TESTING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS.

NAME OF INSPECTOR: D. Murphy (Systems Sales Corp. Representative)

DATE: TIME:

SIGNATURE:

NAME OF OWNER OR REPRESENTATIVE:

DATE: TIME:

SIGNATURE:



**Self-Synchronizing Design
with Terminal Block**

Strobe

Models: 405-3A, -5A, -6A, -7A -8A

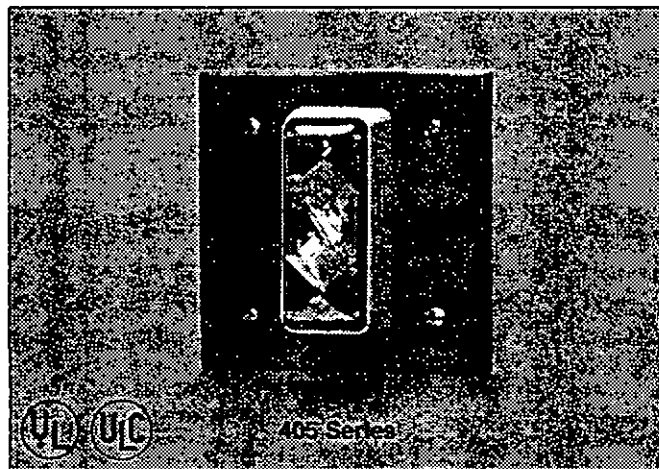
Features

- **SYNCHRONIZING STROBE**
EST strobes are self-synchronizing; no external control module is required. Synchronized flash from multiple strobes improves the safety for photosensitive people.
- **SATISFIES ADA CODE REQUIREMENTS**
ADA/UL1971/ULC listed strobe is available in five intensities. All models provide the "Equivalent Facilitation" allowed under ADA Accessibility Guidelines. Use single strobe in rooms up to 50' x 50' and satisfy both ADA and NFPA codes.
- **SUPERIOR VISIBILITY**
In addition to being UL 1638 and ULC S526 listed as Visual Signal Appliances, EST strobes have a "distributed" light output pattern and are UL 1971 listed as Signaling Devices for the Hearing Impaired.
- **FIELD CHANGEABLE LENS MARKINGS**
Lens language or standard "FIRE" marking is easily changed with optional LKW and LKC series Lens Kits.
- **SCREW TERMINAL WIRE CONNECTION**
Large terminals speed installation and accept up to #12 AWG (2.5mm²) wire.
- **RUGGED STEEL FRONT PLATE**
Red or white front plate is finished with durable baked epoxy polyester powder-coat finish.
- **FITS 4" SQUARE FLUSH BOX**
Ideal for retrofit and new projects.
- **UL/ULC RATED OUTDOOR OPTION**

Description

EST 405 Series Strobes are especially designed for use with compatible life safety communication and control equipment to alert the hearing impaired. EST strobes are available with 15cd, 15/75 (ADA) cd, 30cd, 60cd, and 110cd effective flash intensity.

EST strobes are self-synchronized to flash at 1 fps across their full operating voltage range. The strobe operates on any existing 2-wire signal circuit. Separately installed "synch control modules" are not required. A very small portion of the population have a condition which may cause them to become disoriented from multiple random flashes of light. This risk is minimized with Integrity's strobe.



The flash from EST strobes can be noticed from almost any position in the room, corridor, or large open space. The light dispersion is controlled with a specially shaped reflector. It directs a minimum of 12 percent of rated light output above and below the strobe, and a minimum of 25 percent of rated light straight out both sides. EST strobes are UL1971 listed with both wall and ceiling cd intensity ratings (see Specifications). This is useful in areas where the Authority Having Jurisdiction (AHJ) permits ceiling mount strobes.

The 405 series is shipped with standard wall mount style "FIRE" lens markings. Where ceiling mount, other languages, or different lens markings are required, EST offers optional LKW/LKC series Lens Marking Kits. These optional lens markings just "snap on" to the strobe for quick, easy, conversion. Consult EST for availability of special lens languages or markings.

The strobe is designed for 20 to 24 volt dc operation and must be connected to signal circuits which output a constant (not pulsed) voltage. A diode is used to allow full signal circuit supervision and terminals to accept up to #12 AWG (2.5mm²) wire are provided for making polarized connections.

The steel housing/front plate is finished in red or white color. Durable baked epoxy polyester powder-coat paint is used. The 405 series strobes are a part of a full line of ADA/UL 1971/ULC S526 listed fire alarm Audible/Visible signals available from EST. Single-gang mount (202 series) strobes are also available.

Strobe Application

All models are listed to standard UL 1971 - Signaling Devices for the Hearing Impaired and CAN/ULC S526 Standard for Visual Signal Appliances for Fire Alarm Systems. Each strobe can provide the "Equivalent Facilitation" allowed under Americans with Disabilities Act Accessibility Guidelines (ADA(AG)).

These guidelines are based on ANSI/NFPA 72 National Fire Alarm Code (1993). When applied and installed in accordance with that code, EST strobes meet or exceed the illumination produced by the ADA specified 75 candela (cd) strobe at 50 feet. However, optimum performance is obtained by providing "Equivalent Facilitation" as allowed by the Americans with Disabilities Act Accessibility Guidelines [ADA(AG)]. Contact EST for exact spacing requirements.

Non-Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Up to 20' x 20' (6.1 m x 6.1 m)	405-5A 15 cd @ 70mA or 405-7A* 15/75 cd @ 105 mA
Up to 30' x 30' (9.1 m x 9.1 m)	405-3A 30 cd @ 105mA
Up to 40' x 40' (12.2 m x 12.2 m)	405-6A 60 cd @ 155mA
Up to 50' x 50' (15.2 m x 15.2 m)	405-8A 110 cd @ 219mA
Corridors	Wall Mounted - EST Model:
Any Length x Max. 20' (6.1m) Wide	405-5A or 405-7A* spaced @ 100' (30.5m) never exceeding 15' (4.5m) from end wall

* Model 405-7A is rated at 15 cd (wall or ceiling mount) per UL1971, and 75 cd per UL 1638 thereby meeting ADA on axis only requirements of 75 cd.

Non-Sleeping Rooms and Corridors: EST strobes rated at less than 110 cd per UL1971 are intended for use in non-sleeping areas only. Install them 80" (2.03m) above floor level OR within the space between 6" (150mm) to 24" (610mm) below the ceiling, whichever is lower. No point in any space (including corridors) required to have strobes shall be more than 50' (15.2m) from the signal (in the horizontal plane). The 110 cd strobe should be used in non-sleeping areas only when the room exceeds 40' X 40' (12.2m X 12.2m).

In large rooms or spaces (such as auditoriums) that exceed 100' (30.4m) across and without obstructions more than 72" (1.8m) above the finished floor, strobes may be placed around the perimeter, spaced a maximum of 100' (30.4m) apart, in lieu of suspending them from the ceiling.

Sleeping rooms: EST model 405-8A is rated at 110 cd. It is intended for use in sleeping rooms and should be installed along with a smoke detector. It must be wall mounted at least 80" (2.03m) above floor level, but no closer than 24" (610mm) to the ceiling. The distance from the strobe to the pillow must not exceed 16' (4.8m).

Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Any size	405-8A 110 cd @ 219mA

Application Notes — USA

Strobes must be used to supplement audible signals whenever the average ambient sound level exceeds 105 dBA. Combination Audible/Visible signals must be installed per NFPA guidelines established for strobes.

ADA suggests that the following areas may require Visual Alarm Signals:

- rest rooms, meeting rooms, and other general usage areas.
- lobbies, hallways, and other common use areas.
- sleeping rooms intended for use by persons with hearing impairment (per Title 1 of ADA).
- work areas used by a person with a hearing impairment (per Title 1 of ADA).

Application Notes — CANADA

(Based in part on 1995 Canada National Building Code)

The fire alarm audible signal shall be supplemented by fire alarm strobes in any floor area where the ambient noise level exceeds 87 dBA, or where the occupants of the floor area use ear protective devices, are located within an audiometric booth, or are located within sound insulating enclosures. This also applies to assembly occupancies in which music and other sounds associated with performances could exceed 100 dBA.

Strobes shall be installed in a building so that the flash from not less than one device is visible throughout the floor area, or portion thereof in which they are installed. For maximum safety, EST recommends that strobes be installed as per the guidelines shown here under Strobe Application.

Specifications

Catalog Number	405-5A-*	405-7A-*	405-3A-*	405-6A-*	405-8A-*
UL 1971 Rated Strobe Output - candle (cd)	15cd (wall only)	15cd (wall or ceiling)	30cd (wall) 15cd (ceiling)	60cd (wall) 30cd (ceiling)	110cd (wall) 60cd (ceiling)
UL 1638/ULC S526 Rated Strobe Output	15cd (not UL 1638)	75cd	30cd	60cd	120cd
Average Operating Current (note 2)	70mA @ 24Vdc 80mA @ 20Vdc	105mA @ 24Vdc 125mA @ 20Vdc	105mA @ 24Vdc 125mA @ 20Vdc	155mA @ 24Vdc 185mA @ 20Vdc	219mA @ 24Vdc 272mA @ 20Vdc
Peak Operating Current (note 2)	208mA @ 20Vdc	208mA @ 20Vdc	208mA @ 20Vdc	265mA @ 20Vdc	352mA @ 20Vdc
Average Operating Current (note 3)	84mA @ 24Vdc 99mA @ 20Vdc	168mA @ 24Vdc 204mA @ 20Vdc	168mA @ 24Vdc 204mA @ 20Vdc	219mA @ 24Vdc 282mA @ 20Vdc	325mA @ 24Vdc 355mA @ 20Vdc
Peak Operating Current (note 3)	360mA @ 20Vdc	594mA @ 20Vdc	594mA @ 20Vdc	723mA @ 20Vdc	876mA @ 20Vdc
Strobe Flash Rate	Synchronized at 1 flash per second (no external control module required)				
Strobe Operating Volts	20 to 24Vdc (Continuous)				
Operating Environment	INDOOR: 85% @ 30°C RH; 32-120°F (0-49°C) ambient temperature OUTDOOR: 93% @ 30°C RH; -40-150°F (-40-68°C) ambient temp '7A' (50cd @ -35°C per UL @ -40°C per ULC) and '8A' (100cd @ -35°C per UL @ -40°C per ULC) models only: Must use weatherproof 4" sq. box Supplied with LKW-1 "FIRE" red letters, vertical both sides (Wall Mount) - see LKW and LKC series for ceiling style and optional markings				
Lens Markings					
Wire Connections	Terminals - polarized input, #12 AWG (2.5mm ²) max wire size				
Flash Tube Enclosure	Clear LEXAN				
Strobe Plate, Finish	CRS steel - 5 1/2" (140mm) square, red or white baked epoxy polyester powder-coat finish				
Mounting	INDOOR: North American 4" square electrical box; OUTDOOR: EST 449 series weatherproof surface box or North American 4" square weatherproof box				
Agency Listings	UL 1971, UL 1638, ULC S526 (All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule)				

*Suffix "-T" for RED front plate, "-TW" for WHITE front plate.

Note 1: Use the average current rating to establish the maximum number of strobes, wire gauge, and standby power requirements.

Note 2: From a FILTERED dc source.

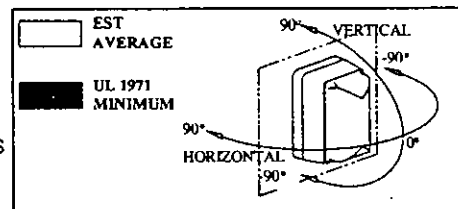
Note 3: From a UNFILTERED (Full Wave Rectified) dc source.

UL 1971 WALL MOUNTED STROBE LIGHT OUTPUT DISTRIBUTION PATTERNS

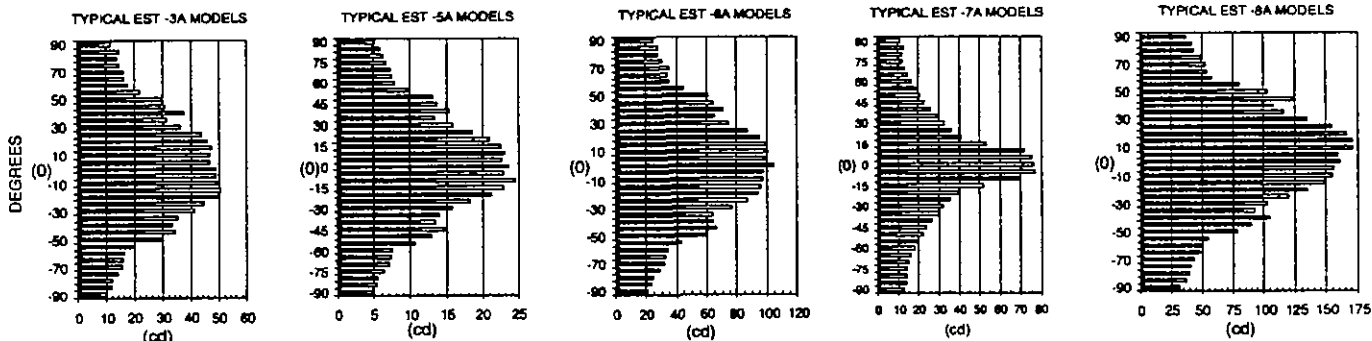
SOURCE: UL STANDARD 1971 - SIGNALING DEVICES FOR THE HEARING IMPAIRED

SOURCE: UL STANDARD 1638 - VISUAL SIGNAL APPLIANCES

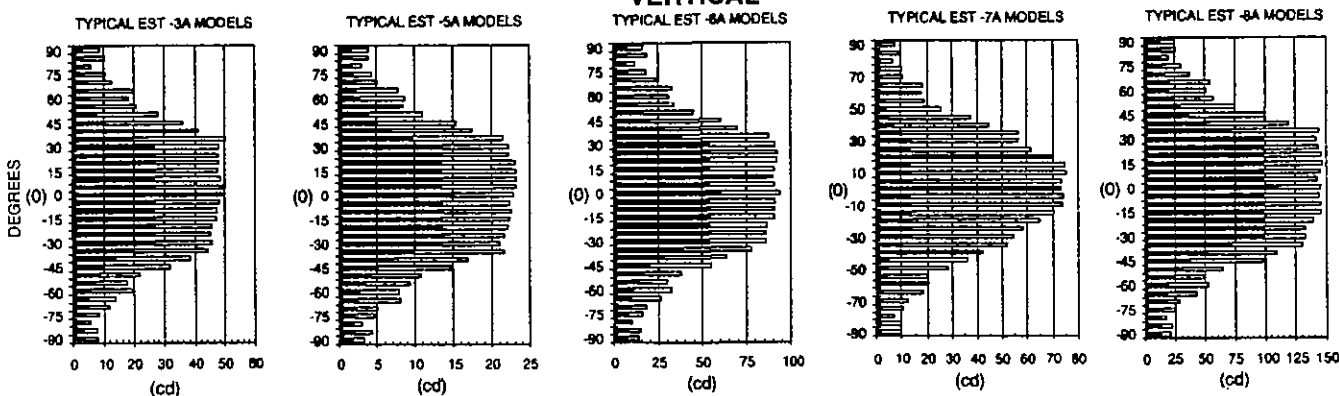
SOURCE: UL CANADA STANDARD S526 - VISUAL SIGNAL APPLIANCES FOR FIRE ALARM SYSTEMS



HORIZONTAL



VERTICAL

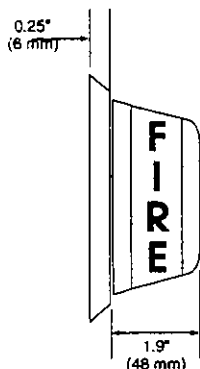


Installation and Mounting

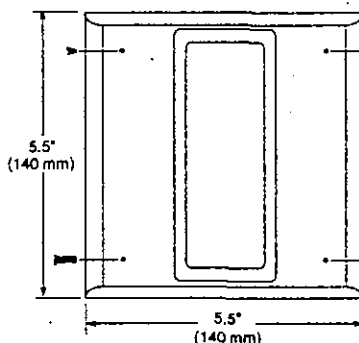
All models fit to a standard flush mounted, North American 4" electrical box, 1-1/2" (38 mm) deep minimum. Optional EST weatherproof, surface mount boxes are available. The strobes must be connected to signal circuits which output a constant (not pulsed) voltage. EST recommends that these strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.

WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist.

These visual signal appliances' flash intensity may not be adequate to alert or waken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. EST recommends that strobes in sleeping rooms be 110 cd minimum.



**SIDE VIEW,
WALL MOUNTED**



**FRONT VIEW,
WALL MOUNTED**

Countersunk Phillips head screws are provided to secure unit onto electrical box.

Two Plastic Caps are provided for indoor mounting.

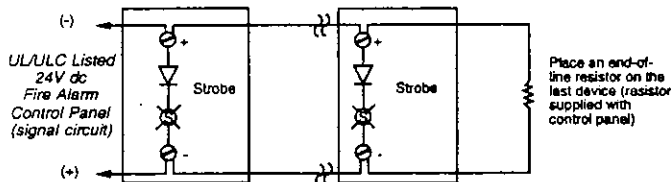


**SIDE VIEW,
CEILING MOUNTED**

*Changeable Lens Marking, LKW or LKC Series.

Typical Wiring -24 Vdc

Polarity of signal circuit shown in supervisory state. On alarm, polarity reverses.



CAUTION: This unit is designed to be used on signal circuits that output a constant voltage of 20-24 VDC. Do not connect this unit to a coded or pulsating voltage. Electrical supervision requires wire run to be broken at each terminal. Do not loop signal circuit field wires around strobe terminals.

Ordering Information - Strobes

Catalog Number	Description	Ship Wt. lb (kg)
405-5A-T	Strobe - 15 cd, Red	1 (0.4)
405-5A-TW	Strobe - 15 cd, White	
405-7A-T	Strobe - 15/75, Red	
405-7A-TW	Strobe - 15/75, White	
405-3A-T	Strobe - 30 cd, Red	
405-3A-TW	Strobe - 30 cd, White	
405-6A-T	Strobe - 60 cd, Red	
405-6A-TW	Strobe - 60 cd, White	
405-8A-T	Strobe - 110 cd, Red	
405-8A-TW	Strobe - 110 cd, White	
Mounting Accessories		
449	Surface Mount Box - Outdoor, Gray	1 (0.4)

Ordering Information - Lens Marking Kits

Catalog Number	Description	Ship Wt. lb (kg)
LKW-1	"FIRE" - Wall Orientation (supplied)	0.2 (0.1)
LKW-1R	"FIRE" - Wall Orientation, red with white letters	
LKW-2	"FEU" - Wall Orientation	
LKW-3	"FIRE/FEU" - Wall Orientation	
LKW-4	"SMOKE" - Wall Orientation	
LKW-5	"HALON" - Wall Orientation	
LKW-6	"CO2" - Wall Orientation	
LKW-7	"EMERGENCY" - Wall Orientation	
LKW-8	"ALARM" - Wall Orientation	
LKW-9	"FUEGO" - Wall Orientation	
LKC-1	"FIRE" - Ceiling Orientation	
LKC-2	"FEU" - Ceiling Orientation	
LKC-3	"FIRE/FEU" - Ceiling Orientation	
LKC-4	"SMOKE" - Ceiling Orientation	
LKC-5	"HALON" - Ceiling Orientation	
LKC-6	"CO2" - Ceiling Orientation	
LKC-7	"EMERGENCY" - Ceiling Orientation	
LKC-8	"ALARM" - Ceiling Orientation	
LKC-9	"FUEGO" - Ceiling Orientation	

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.



FIRE ALARM SIGNALING APPLIANCES

Self-Synchronizing Design
Temporal Output



UL 1971
Listed

757 Series Temporal Horn

Integrity Family

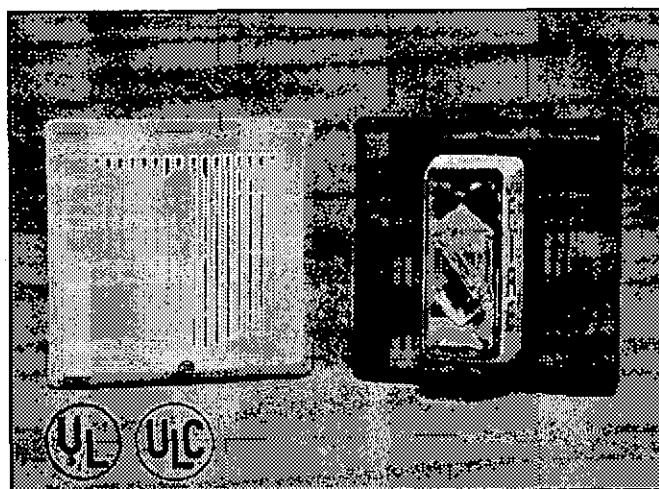
Features

- **SYNCHRONIZED TEMPORAL AUDIBLE OUTPUT**
Select for self-synchronizing temporal signal or steady tone. External "synch-control" module is not required.
- **SYNCHRONIZED STROBE FLASH**
Self-synchronizing flash from multiple strobes improves the safety for photosensitive people. External "synch-control" module is not required.
- **MOUNTS TO 2-GANG BOX**
Flush mount to standard North American 2-gang or 4 inch square electric box.
- **ADJUSTABLE HIGH OR LOW dBA OUTPUT**
Select for 98 dBA or 94 dBA sound output.
- **TRUE HORN TONE**
Low pitch "growling" sound demands attention.
- **ADA/UL1971/ULC LISTED STROBE**
All strobe models provide "Equivalent Facilitation" allowed under ADA Accessibility Guidelines, satisfy NFPA codes and are UL1971 listed as Signaling Devices for the Hearing Impaired.
- **EASY INSTALLATION**
A universal mounting plate allows Integrity to be wired then left hanging "free" to allow easy V.I. and testing before it is fastened to electrical box.
- **SCREW TERMINAL WIRE CONNECTION**
Large terminals speed installation and accept up to #12 AWG (2.5mm²) wire.
- **FIELD CHANGEABLE LENS MARKINGS**
Standard "FIRE" strobe marking/language is easily changed with optional snap-on Lens Kits.
- **UL/ULC RATED OUTDOOR OPTION**

Description

EST's 757 Integrity Series Temporal Horn and Temporal Horn/Strobe are perfect for life safety applications as an alert and alarm signal, especially to notify the hearing impaired. The horn emits a piercing low frequency sound that is easily heard above moderate ambient noise levels.

Integrity's rugged plastic housing is available with a red or white textured finish. With its ingenious mounting sub-plate, the horn is firmly held in place with a single screw ensuring a quick, attractive installation. A separate trim plate is not required for flush mounting. Separate terminals to accept up to #12 AWG



(2.5mm²) wire are provided for field connection of the strobe and horn.

Matching Integrity Speakers, Chimes, and Strobe combinations are also available.

HORN: During installation, the horn is configured for steady or temporal tone signal and either low or high dB output. When temporal output is selected all horns on a common 2-wire circuit are self-synchronized (see specifications). External "synch-control" modules are not required.

Integrity Series horns emit a low frequency "growling" tone to really demand attention. Select *'high'* output for 98 dBA; choose *'low'* output for 94 dBA. (Average measurement at 10 feet (3.05 M) in anechoic chamber.)

STROBE: EST strobes are self-synchronized to flash at 1 fps across their full operating voltage range. The strobe operates on any existing 2-wire signal circuit. Separately installed "synch-control" modules are not required. A very small portion of the population have a condition which may cause them to become disoriented from multiple random flashes of light. This risk is minimized with Integrity's strobe.

The flash from EST strobes can be noticed from almost any position in the room, corridor, or large open space. The output is controlled using a specially shaped reflector to disperse the light in all viewing directions. EST strobes are UL1971 listed with both wall and ceiling cd intensity ratings (see Specifications). This is useful in areas where the Authority Having Jurisdiction (AHJ) permits ceiling mount strobes.

757 Series Temporal Horn/Strobes are shipped with wall mount style "FIRE" lens markings. Where ceiling mount, other languages or different lens markings are required, optional LKW and LKC series Lens Marking Kits are offered. Lens marking sleeves snap right over the strobe lens providing quick, easy, change. Consult EST for availability of other languages or special markings.

EDWARDS SYSTEMS TECHNOLOGY

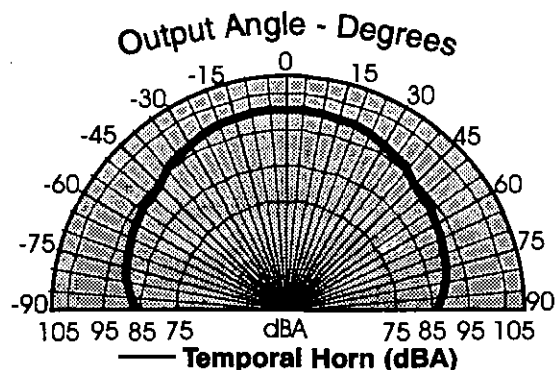
SARASOTA, FLA. 941-738-4200 Fax: 941-727-0740
CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
PITTSFIELD, ME. 207-487-3104

Audible Signal Application

Suggested sound pressure levels in each signaling zone for alert or alarm signals are at least 15 dB above the average ambient sound level or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater, measured 5' (1.5 m) above the floor. The average ambient sound level is the RMS, A-weighted sound pressure measured over a 24-hour period.

Doubling the distance from the signal to the ear will theoretically cause a 6 dB reduction in the received sound pressure level. The actual effect depends on the acoustic properties of materials in the space. A 3 dBA difference is a "just noticeable" change in volume.

Typical Sound Output Distribution
dBA measured at 10 ft. in anechoic chamber
757 Series Temporal Horn ('HIGH' output)



Visible Signal Application

These guidelines are based on ANSI/NFPA 72 National Fire Alarm Code (1993). When applied and installed in accordance with that code, EST strobes meet or exceed the illumination produced by the ADA specified 75 candela (cd) strobe at 50 feet. However, optimum performance is obtained by providing "Equivalent Facilitation" as allowed by the Americans with Disabilities Act Accessibility Guidelines [ADA(AG)]. Contact EST for exact spacing requirements.

Non-Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Up to 20' x 20' (6.1 x 6.1m)	757-5A 15 cd @ 70 mA or 757-7A* 15/75 cd @ 105 mA
Up to 30' x 30' (9.1 x 9.1m)	757-3A 30 cd @ 105 mA
Up to 50' x 50' (15.2 x 15.2m)	757-8A 110 cd @ 219 mA
Corridors	Wall Mounted - EST Model:
Any Length x Max. 20' (6.1m) Wide	757-5A or 757-7A* spaced @ 100' (30.5 m) never exceeding 15l (4.5 m) from end wall

* Model 757-7A is rated at 15 cd (wall or ceiling mount) per UL1971, and 75 cd per UL1638 thereby meeting ADA on axis only requirements of 75 cd.

Non-Sleeping Rooms and Corridors: EST strobes rated at less than 110 cd per UL1971 are intended for use in non-sleeping areas only. Install them 80" (2.03 m) above floor level OR within the space between 6" (150 mm) to 24" (610 mm) below the ceiling, whichever is lower. No point in any space (including corridors) required to have strobes shall be more than 50' (15.2 m) from the signal (in the horizontal plane). The 110 cd strobe should be used in non-sleeping areas only when the room exceeds 40' x 40' (12.2 m x 12.2 m). In large rooms

or spaces (such as auditoriums) that exceed 100' (30.4 m) across and without obstructions more than 72" (1.8 m) above the finished floor, strobes may be placed around the perimeter, spaced a maximum of 100' (30.4 m) apart, in lieu of suspending them from the ceiling.

Sleeping Rooms: EST model 757-8A is rated at 110 cd. It is intended for use in sleeping rooms and should be installed along with a smoke detector. It must be wall mounted at least

Sleeping Rooms	Use ONE Wall Mounted - EST Model:
Any Size	757-8A 110 cd @ 219 mA

80" (2.03 m) above floor level, but no closer than 24" (610 mm) to the ceiling. The distance from the strobe to the pillow must not exceed 16' (4.8 m).

Application Notes - USA

In any case, audible signals cannot have a sound level less than 75 dBA at 10' (3m) per NFPA 72 and cannot exceed 120 dBA per ADA (130 dBA per NFPA 72) at the minimum hearing distance to audible appliance. Audible signals shall be installed with the top of the device above the floor not less than 90" (2.3 m) and below the finished ceilings at least 6" (150 mm) (per NFPA 72).

Strobes must be used to supplement audible signals wherever the average ambient sound level exceeds 105 dBA. Combination Audible/Visible signals must be installed per NFPA guidelines established for strobes.

ADA suggests that the following areas may require Visual Alarm Signals:

- rest rooms, meeting rooms, and other general usage areas.
- lobbies, hallways, and other common use areas.
- sleeping rooms intended for use by persons with hearing impairments.
- work areas used by a person with a hearing impairment (per Title 1 of ADA).

Application Notes - CANADA

(Based in part on 1995 Canada National Building Code)

The fire alarm signal sound pressure level shall not exceed 110 dBA in any normally occupied area. The sound pressure level from an audible signal in a floor area used for occupancies other than residential occupancies shall be not less than 10 dBA above the ambient noise, and never less than 65 dBA. The sound pressure level in sleeping rooms from an audible signal shall not be less than 75 dBA when any intervening doors between the device and the sleeping room are closed. Audible signal devices shall be installed not less than 1.8 m to the center of the device above the floor (per CAN/ULC S524).

The fire alarm audible signal shall be supplemented by fire alarm strobes in any floor area where the ambient noise level exceeds 87 dBA, or where the occupants of the floor area use ear protective devices, are located within an audiometric booth, or are located within sound insulating enclosures. This also applies to assembly occupancies in which music and other sounds associated with performances could exceed 100 dBA.

Strobes shall be installed in a building so that the flash from not less than one device is visible throughout the floor area or portion thereof in which they are installed. For maximum safety, EST recommends that strobes be installed as per the guidelines shown here under Strobe Application.

Specifications

Standalone Synchronization Characteristics (note 5)	Strobe flash at 1 per second within 200 milliseconds on common circuit Horn pulses at temporal rate within 200 milliseconds on common circuit			
Operating Volts	Strobe: 20-24 Vdc Continuous; Horn: 20-24 Vdc Continuous			
Horn Output (note 1)	Anechoic: High Setting - 104 dBA (peak)/98 dBA (avg); Low Setting - 99 dBA (peak)/94 dBA (avg) Reverberent: High Setting - 85 dBA (continuous)/82 dBA (temporal); Low Setting - 82 dBA (continuous)/75 dBA (temporal)			
Horn Current	High Output: 40 mA @ 24 Vdc; 55mA @ 24 Vrms FWR; Low Output: 20 mA @ 24 Vdc; 28 mA @ 24 Vrms FWR			
Rated Strobe Output - candela (cd)	757-5A-	757-7A-	757-3A-	757-8A-
UL 1971	15 cd wall mount only	15 cd wall 15 cd ceiling	30 cd wall 15 cd ceiling	110 cd wall 60 cd ceiling
UL 1638	not UL 1638 rated	75 cd	30 cd	120 cd
ULC S526	15 cd	75 cd	30 cd	120 cd
Average Strobe Current (note 2)	24Vdc: 70mA 20Vdc: 80mA	24Vdc: 105mA 20Vdc: 125mA	24Vdc: 105mA 20Vdc: 125mA	24Vdc: 219mA 20Vdc: 272mA
Peak Strobe Current (note 2)	20Vdc: 208mA	20Vdc: 208mA	20Vdc: 208mA	20Vdc: 352mA
Average Strobe Current (note 3)	24Vdc: 84mA 20Vdc: 99mA	24Vdc: 168mA 20Vdc: 204mA	24Vdc: 168mA 20Vdc: 204mA	24Vdc: 325mA 20Vdc: 355mA
Peak Strobe Current (note 3)	20Vdc: 360mA	20Vdc: 594mA	20Vdc: 594mA	20Vdc: 876mA
Strobe Marking	Supplied with LKW-1 "FIRE" red letters, vertical both sides (Wall Mount) - see LKW and LKC series for ceiling style and optional markings.			
Flash Tube Enclosure	Clear LEXAN with white marking sleeve			
Housing	Textured, color impregnated engineered plastics - exceeds 94V-0 UL flammability rating			
Wire Connections	Terminals - separate, polarized inputs for Horn & Strobe, #12 AWG (2.5mm ²) maximum			
INDOOR Operating Environment	93% @ 40_C relative humidity; 32-120_F (0-49_C) ambient temperature			
OUTDOOR Operating Environment (must use weatherproof box)	98% @ 40_C relative humidity; -35-150°F (-31-66°C) ambient temperature (757-7A: rated at 50 cd @ -35°C per UL/ @ -40°C per ULC) (757-8A: rated at 100 cd @ -35°C per UL/ @ -40°C per ULC)			
Mounting - INDOOR	Flush: North-American 2-gang box, 3" high x 4" wide x 2 3/4" (69 mm) minimum Surface: 757A-SB Back box Bi-directional: 757A-BDF Mounting Frame			
Mounting - OUTDOOR	Surface: 757A-WB Weatherproof Box			
Agency Listings	UL 1971, UL 1638, UL 464, ULC S526, ULC S525 (All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule)			

Note 1 - Measured at 10 ft (3m) @ 24 Vdc. Subtract 3 dBA for models with strobes

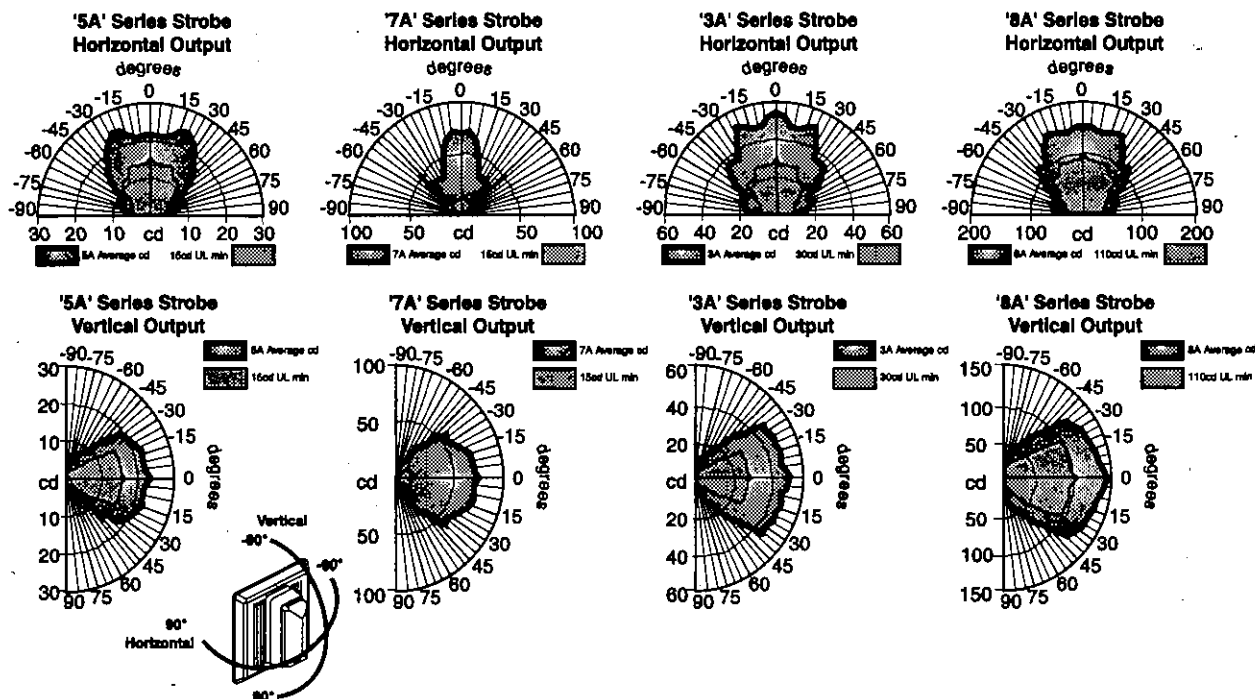
Note 2 - Connected to FILTERED dc source.

Note 3 - Connected to UNFILTERED (Full Wave Rectified) dc source.

Note 4 - Use the average current rating to establish the maximum number of strobes, wire gauge and standby power requirements.

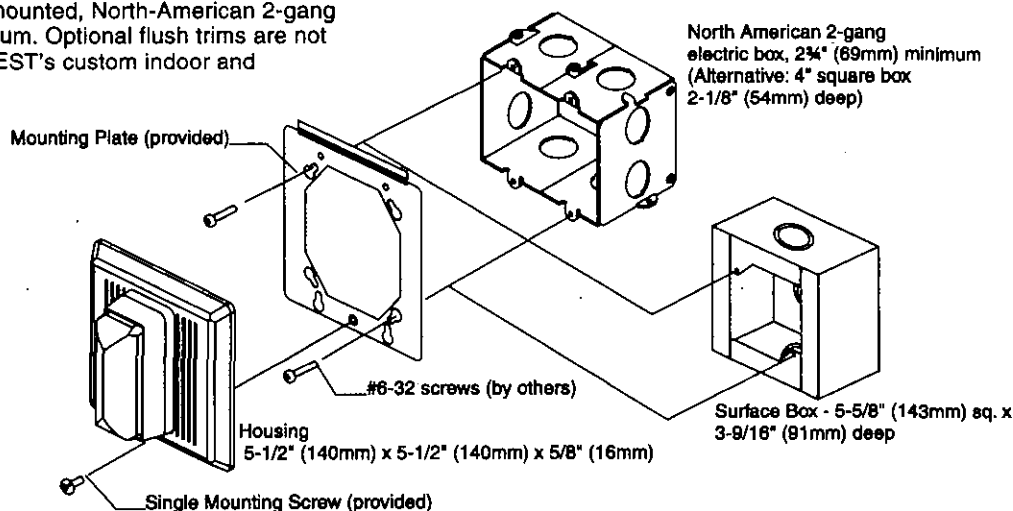
Note 5 - Temporal audible pattern is defined as: 1/2 sec ON, 1/2 sec OFF, 1/2 sec ON, 1/2 sec OFF, 1/2 sec ON, 1 1/2 sec OFF, then repeat cycle.

Light Output Patterns



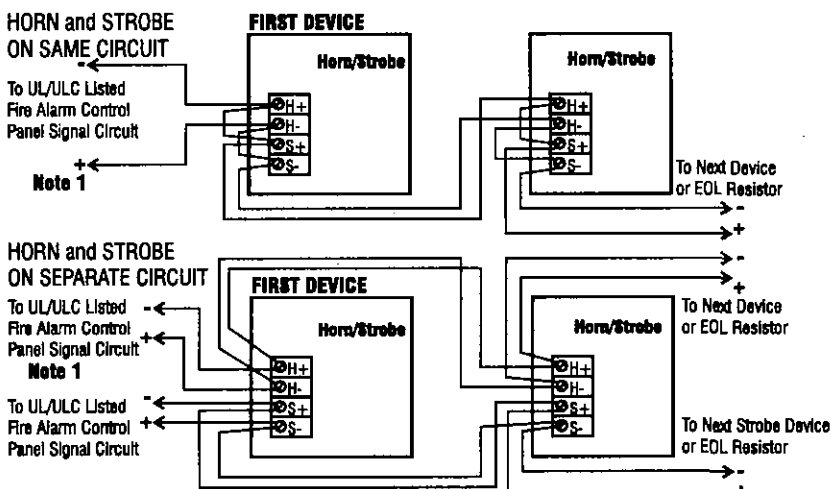
Installation and Mounting

All models fit to a standard flush mounted, North-American 2-gang electrical box, 2 3/4" (69 mm) minimum. Optional flush trims are not required. For surface mount, use EST's custom indoor and outdoor surface boxes painted in color-matched red or white epoxy. EST recommends that fire alarm horn/strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.



Typical Wiring

The strobe must be connected to signal circuits which output a constant (not pulsed) voltage. The horn can be connected to continuous voltage circuits.



Note 1: Polarity of Signal Circuit is shown in supervisory state. Polarity reverses in alarm condition.

Ordering Information

Catalog Number	Description	Ship Wt. lb. (kg)
TEMPORAL HORNS		
757-1A-T*	Temporal Horn, Red	1.7(.8)
TEMPORAL HORN/STROBES		
757-5A-T*	Temporal Horn/Strobe, 15cd, Red	2(.9)
757-7A-T*	Temporal Horn/Strobe, 15/75cd, Red	
757-3A-T*	Temporal Horn/Strobe, 30cd, Red	
757-8A-T*	Temporal Horn/Strobe, 110cd, Red	

WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist. These visual signal appliances' flash intensity may not be adequate to alert or awaken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. EST recommends that strobes in sleeping rooms be 110 cd minimum.

MOUNTING ACCESSORIES		
757A-SB*	Surface Box, Red, Indoor	1.5(.7)
757A-WB*	Weatherproof Box, Red, Surface	1.5(.7)
757A-BDF*	Bi-directional Frame, Red	4(1.8)
LENS MARKING KITS (see note 1)		
LKW-1	"FIRE", Wall Orientation (supplied)	0.1 (.05)
LKW-1R	"FIRE", Wall Orientation, RED	
LKW-2	"FEU", Wall Orientation	
LKW-3	"FIRE/FEU", Wall Orientation	
LKW-4	"SMOKE", Wall Orientation	
LKW-5	"HALON", Wall Orientation	
LKW-6	"CO2", Wall Orientation	
LKW-7	"EMERGENCY", Wall Orientation	
LKW-8	"ALARM", Wall Orientation	
LKW-9	"FUEGO", Wall Orientation	
* Add Suffix "W" to catalog no. for WHITE. (e.g. 757-7A-TW)		
Note 1 - Change "W" to "C" for CEILING mount. (e.g. LKC-1)		

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

Input Modules

Models SIGA-CT1, SIGA-CT2 & SIGA-MCT2

Features

■ MULTIPLE APPLICATIONS

Including Alarm, Alarm with delayed latching (retard) for waterflow applications, Supervisory, and Monitor. The installer selects one of four (4) "personality codes" to be downloaded to the module through the loop controller.

■ PLUG-IN (UIO) OR STANDARD 1-GANG MOUNT

UIO versions allow quick installation where multiple modules are required. The 1-gang mount version is ideal for remote locations that require a single module.

■ AUTOMATIC DEVICE MAPPING

Signature modules transmit information to the loop controller regarding their circuit locations with respect to other Signature devices on the wire loop.

■ ELECTRONIC ADDRESSING

Programmable addresses are downloaded from the loop controller, a PC, or the SIGA-PRO Signature Program/Service Tool. There are no switches or dials to set.

■ INTELLIGENT DEVICE WITH MICROPROCESSOR

All decisions are made at the module to allow lower communication speed with substantially improved control panel response time and less sensitivity to line noise and loop wiring properties; twisted or shielded wire is not required.

■ NON-VOLATILE MEMORY

Permanently stores serial number, type of device, and job number. Automatically updates historic information including hours of operation, last maintenance date, number of alarms and troubles, and time and date of last alarm.

■ STAND-ALONE OPERATION

The module makes decisions and inputs an alarm from initiating devices connected to it even if the loop controller's polling interrogation stops. (Function availability dependent upon control panel.)

■ DIAGNOSTIC LEDs

Flashing GREEN shows normal polling; flashing RED shows alarm/active state.

■ HIGH AMBIENT TEMPERATURE OPERATION

Install in ambient temperatures up to 120°F (49°C).

■ DESIGNED TO ISO 9001 STANDARDS

All Signature products are manufactured to strict international quality standards to ensure highest reliability.



Description

The SIGA-CT1 Single Input Module and SIGA-CT2/SIGA-MCT2 Dual Input Modules are intelligent analog addressable devices used to connect one or two Class B normally-open Alarm, Supervisory, or Monitor type dry contact Initiating Device Circuits (IDC).

The actual function of these modules is determined by the "personality code" selected by the installer. This code is downloaded to the module from the Signature loop controller during system configuration.

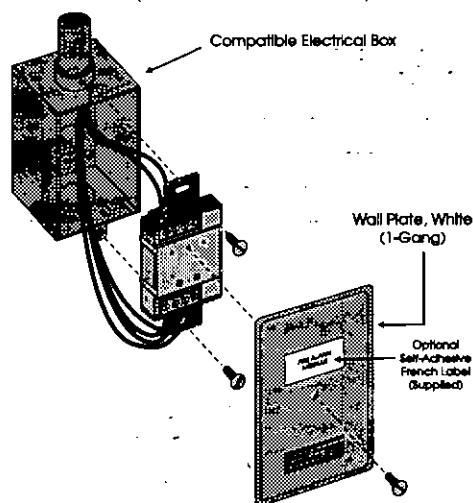
The input modules gather analog information from the initiating devices connected to them and convert it into digital signals. The module's on-board microprocessor analyzes the signal and decides whether or not to input an alarm.

The SIGA-CT1 and SIGA-CT2 mount to standard North American 1-gang electrical boxes, making them ideal for locations where only one module is required. Separate I/O and data loop connections are made to each module.

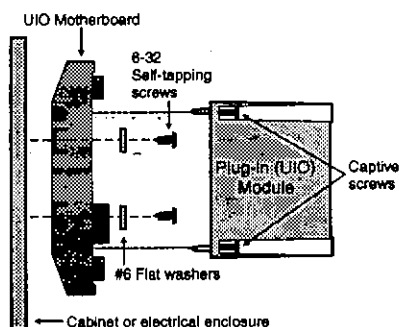
The SIGA-MCT2 is part of the UIO family of plug-in Signature Series modules. It functions identically to the SIGA-CT2, but takes advantage of the modular flexibility and easy installation that characterizes all UIO modules. Two- and six-module UIO motherboards are available. All wiring connections are made to terminal blocks on the motherboard. UIO assemblies may be mounted in EST enclosures.

Installation

SIGA-CT1 and SIGA-CT2: modules mount to North American 2½" (64 mm) deep 1-gang boxes and 1½" (38 mm) deep 4" square boxes with 1-gang covers. The terminals are suited for #14 to #18 AWG (1.5 mm² to 0.75 mm²) wire size.



SIGA-MCT2: mount the UIO motherboard inside a suitable EST enclosure with screws and washers provided. Plug the SIGA-MCT2 into any available position on the motherboard and secure the module to the motherboard with the captive screws. Wiring connections are made to the terminals on the motherboard (see wiring diagram). UIO motherboard terminals are suited for #12 to #18 AWG (2.5 mm² to 0.75 mm²) wire size.



Electronic Addressing - The loop controller electronically addresses each module, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each module has its own unique serial number stored in its on-board memory. The loop controller identifies each device on the loop and assigns a "soft" address to each serial number. If desired, the modules can be addressed using the SIGA-PRO Signature Program/Service Tool.

EST recommends that this module be installed according to latest recognized edition of national and local fire alarm codes.

Compatibility

The Signature Series modules are compatible only with EST's Signature Loop Controller.

Application

The duty performed by the SIGA-CT1 and SIGA-CT2/MCT2 is determined by their sub-type code or "Personality Code". The code is selected by the installer depending upon the desired application and is downloaded from the loop controller.

One (1) personality code can be assigned to the SIGA-CT1. Two (2) personality codes can be assigned to the SIGA-CT2/MCT2. Codes 1, 2, 3 and 4 can be mixed on SIGA-CT2/MCT2 modules only. For example, personality code 1 can be assigned to the first address (circuit A) and code 4 can be assigned to the second address (circuit B).

NORMALLY-OPEN ALARM - LATCHING (Personality Code 1) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact initiating devices such as **Pull Stations, Heat Detectors**, etc. An ALARM signal is sent to the loop controller when the input contact is closed. The alarm condition is latched at the module.

NORMALLY-OPEN ALARM - DELAYED LATCHING (Personality Code 2) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact initiating devices such as **Waterflow Alarm Switches**. An ALARM signal is sent to the loop controller when the input contact is closed for approximately 16 seconds. The alarm condition is latched at the module.

NORMALLY-OPEN ACTIVE - NON-LATCHING (Personality Code 3) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact monitoring input such as from **Fans, Dampers, Doors**, etc. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is not latched at the module.

NORMALLY-OPEN ACTIVE - LATCHING (Personality Code 4) - Assign to one or both circuits. Configures either circuit A or B or both for **Class B** normally open dry contact monitoring input such as from **Supervisory and Tamper Switches**. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is latched at the module.

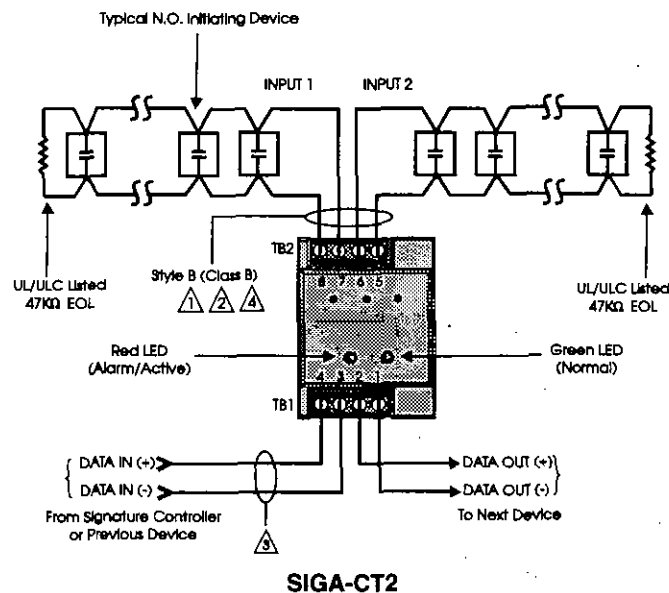
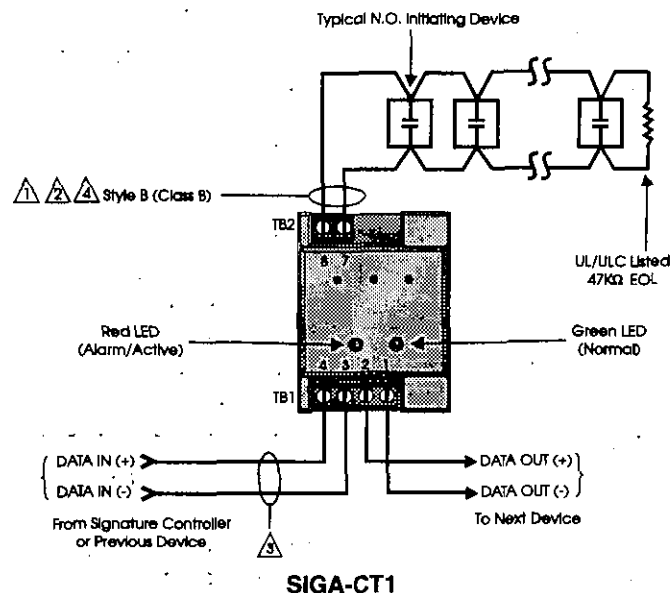
Ordering Information

Catalog Number	Description	Ship Wt. lbs (kg)
SIGA-CT1	Single Input Module - UL/ULC Listed	0.4 (0.15)
SIGA-CT2	Dual Input Module - UL/ULC Listed	0.4 (0.15)
SIGA-MCT2	Dual Input Plug-in (UIO) Module - UL Listed	0.1 (0.05)
Related Equipment		
27193-11	Surface Mount Box - Red, 1-gang	1.0 (0.6)
27193-16	Surface Mount Box - White, 1-gang	1.0 (0.6)
SIGA-UIO2R	Universal Input-Output Module Board w/Riser Inputs - 2 Module Positions	0.32 (0.15)
SIGA-UIO6R	Universal Input-Output Module Board w/Riser Inputs - 6 Module Positions	0.62 (0.28)
SIGA-UIO6	Universal Input-Output Module Board - 6 Module Positions	0.56 (0.25)

Typical Wiring

Modules will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.50mm²) wire sizes. UIO versions will also accept #12 AWG (2.5mm²). Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

Initiating (Slave) Device Circuit Wire Specifications		
Maximum Allowable Wire Resistance	50 ohms (25 ohms per wire) per Circuit	
Maximum Allowable Wire Capacitance	0.1µF per Circuit	
For Design Reference:	Wire Size	Maximum Distance to EOLR
	#18 AWG (0.75 mm ²)	3,930 ft (1,198 m)
	#16 AWG (1.00 mm ²)	6,225 ft (1,897 m)
	#14 AWG (1.50 mm ²)	9,900 ft (3,018 m)

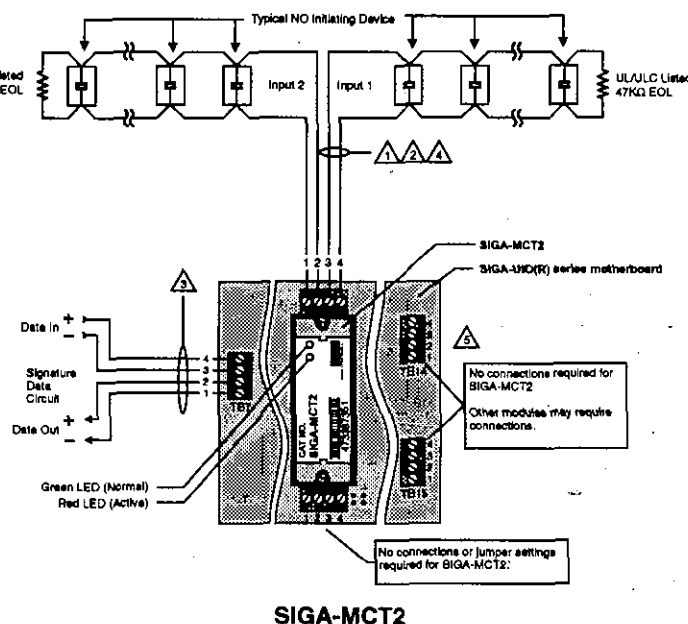


NOTES

- 1 Maximum 25 Ohm resistance per wire.
- 2 Maximum #12 AWG (2.5 mm²) wire; Minimum #18 AWG (0.75 mm²).
Standard 1-gang version: Maximum #14 AWG (1.5mm²) wire.
Min. #18 (0.75mm²).
- 3 Refer to Signature controller installation sheet for wiring specifications.
- 4 Maximum 10 Vdc @ 350 mA
- 5 The SIGA-UIO6R and the SIGA-UIO2R do not come with TB14.
- 6 All wiring is supervised and power-limited.
- 7 These modules will not support 2-wire smoke detectors.

Warnings & Cautions

This module will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your local fire protection specialist.



Specifications

Catalog Number	SIGA-CT1	SIGA-CT2	SIGA-MCT2
Description	Single Input Module		Dual Input Module
Type Code	48 (factory set) 4 sub-types (personality codes) are available		49 (factory set) 4 sub-types (personality codes) are available
Address Requirements	Uses 1 Module Address		Uses 2 Module Addresses
Operating Current	Standby = 250µA; Activated = 400µA		Standby = 396µA; Activated = 680µA
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)		
Construction	High Impact Engineering Polymer		
Mounting	North American 2½" (64 mm) deep 1-gang boxes and 1½" (38 mm) deep 4" square boxes with 1-gang covers		UIO2R/6R/6 Motherboard
Storage and Operating Environment	Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH		
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm/active Both LEDs - Glow steady when in alarm (stand-alone)		
Compatibility	Use with Signature Loop Controller		
Agency Listings	UL, ULC (See Ordering Table)		

Description (Signature Overview)

The Signature Series intelligent analog-addressable system from Edwards Systems Technology is an entire family of multi-sensor detectors and mounting bases, multiple-function input and output modules, network and non-network control panels, and user-friendly maintenance and service tools. Analog information from equipment connected to Signature devices is gathered and converted into digital signals. An onboard microprocessor in each Signature device measures and analyzes the signal and decides whether or not to input an alarm. The microprocessor in each Signature device provides four additional benefits – **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log – Each Signature Series device constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in its non-volatile memory. This information is accessible for review any time at the control panel, PC, or using the SIGA-PRO Signature Program/Service Tool. The information stored in device memory includes:

- Device serial number, address, and type.
- Date of manufacture, hours of operation, and last maintenance date.
- Number of recorded alarms and troubles.
- Time and date of last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

Automatic Device Mapping – The Signature Data Controller (SDC) learns where each device's serial number address is installed relative to other devices on the circuit. The SDC keeps a "map" of all Signature Series devices connected to it. The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "As-Built" drawing information showing branch wiring (T-taps), device types and their address are stored on disk for printing hard copy. This takes the 'mystery' out of the installation. The preparation of "As-Built" drawings is fast and efficient.

Device mapping allows the Signature Data Controller to discover:

- Unexpected additional device addresses.
- Missing device addresses.
- Changes to the wiring in the circuit.

Most Signature modules use a 'personality code' selected by the installer to determine their actual function. Personality codes are

downloaded from the SDC during system configuration and are indicated during device mapping.

Standalone Operation – A decentralized alarm decision by the device is guaranteed. Onboard intelligence permits the device to operate in standalone (degrade) mode. If Signature loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into standalone mode. The circuit acts like a conventional alarm receiving circuit. Each Signature device on the circuit continues to collect and analyze information from its slave devices. When connected to a panel utilizing standalone operation, modules with their 'personality' set as alarm devices (IDC) will alarm should their slave alarm-initiating device activate.

Fast Stable Communication – Built-in intelligence means less information needs to be sent between the device and the Signature Data Controller (SDC). Other than regular supervisory polling response, Signature devices only need to communicate with the SDC when they have something new to report. This provides very fast control panel response and allows a lower baud rate (speed) to be used for communication on the circuit. The lower baud rate offers several advantages including:

- Less sensitivity to circuit wire characteristics.
- Less sensitivity to noise glitches on the cable.
- Less emitted noise from the analog wiring.
- Twisted or shielded wiring is not required.

Diagnostic LEDs – Twin LEDs on most Signature devices provide visual indication of normal and alarm-active conditions. A flashing green LED shows normal system polling. A flashing red LED means the module is in alarm-active state. Both LEDs on steady indicates alarm-active state – standalone mode.

Testing & Maintenance – Automatic self-diagnosis identifies when a Signature device is defective and causes a trouble message. The user-friendly maintenance program shows the current state of each device and other pertinent information. Single devices may be turned off temporarily, from the control panel. **Scheduled maintenance (Regular or Selected) for proper system operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.**

Quality and Reliability – EST Signature devices are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance.

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

Intelligent Photoelectric Smoke Detector

Model SIGA-PS

Features

- INTEGRAL MICROPROCESSOR
- NON-VOLATILE MEMORY
- AUTOMATIC DEVICE MAPPING
- ELECTRONIC ADDRESSING
- ENVIRONMENTAL COMPENSATION
- INTELLIGENT DETECTOR
- WIDE 0.67% TO 3.77%/FT. SENSITIVITY RANGE
- PRE-ALARM SENSITIVITY SETTING
- IDENTIFICATION OF DIRTY OR DEFECTIVE DETECTORS
- AUTOMATIC DAY/NIGHT SENSITIVITY ADJUSTMENT
- TWIN RED/GREEN STATUS LEDS
- STANDARD, RELAY, and FAULT ISOLATOR MOUNTING BASES
- DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS

Description

EST's Signature Series Model SIGA-PS Intelligent Photoelectric Smoke Detector gathers analog information from its smoke sensing element and converts it into digital signals. The detector's on-board microprocessor measures and analyzes these signals. It compares the information to historical readings and time patterns to make an alarm decision. Digital filters remove signal patterns that are not typical of fires. Unwanted alarms are nearly eliminated.

The microprocessor in each detector provides four additional benefits - **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector's non-volatile memory. This information is accessible for review any time at the control panel, PC, or by using the SIGA-PRO Signature Program/Service Tool.

The information stored in the detector's memory includes:

- detector type, serial number, and address.
- date of manufacture, hours of operation, and last maintenance date.

Intelligent Photoelectric Smoke Detector. SIGA-PS



- current detector sensitivity values and the extent of environmental compensation.
- original detector sensitivity values upon manufacturing.
- number of recorded alarms and troubles.
- time and date of last alarm.
- analog signal patterns just before the last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. The "mapping" feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally. The history log for the detector at its original location remains relevant and intact.

The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the "mystery" out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the circuit.

EDWARDS SYSTEMS TECHNOLOGY

SARASOTA, FLA. 941-739-4200 Fax: 941-727-0740
 CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
 OWEN SOUND, CANADA 519-376-2430 Fax: 519-372-1581
 INTERNATIONAL: CANADA 905-270-1711 Fax: 905-270-9553
 PITTSFIELD, ME. 207-487-3104

Stand-alone Operation - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit. Each detector on the circuit continues to collect and analyze information from its surroundings. The detector alarms if the preset smoke obscuration level is reached. If the detector is mounted to a relay base, the relay operates.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the loop controller when it has something new to report. This provides very fast response time and allows a lower baud rate (speed) to be used for communication on the loop. The lower baud rate offers several advantages including:

- less sensitivity to circuit wire characteristics.
- less sensitivity to noise glitches on the cable.
- less emitted noise from the analog wiring.
- twisted or shielded wiring is not required.

Electronic Addressing - The loop controller electronically addresses each detector, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each detector has its own unique serial number stored in its "on-board memory". The loop controller identifies each device on the circuit and assigns a "soft" address to that device's serial number. If desired, detectors can be addressed using the SIGA-PRO Signature Program/Service Tool.

Environmental Compensation - Detection sensitivity is almost independent of its installed environment and its physical condition. Environmental compensation means the sensing element adapts to long-term changes caused by dirt, humidity, aging etc. It even compensates for small amounts of normal ambient smoke. Approximately six times an hour the detector adjusts and updates the sensitivity (% obscuration) baseline for its sensing element. Approximately once every hour this information is written to its permanent memory. The detector's "learned" baseline is not lost, even when the detector is removed for cleaning.

The detector's sensitivity setting selected by the installer floats up or down to remain constant relative to the changing baseline. This is called differential sensing.

Sensitivity Range - The SIGA-PS Photoelectric Detector has a sensitivity range or window of 0.67% to 3.77%. The installer selects the detector's ALARM sensitivity level from five available settings within the range.

Pre-Alarm - Pre-alarm warnings may alert local staff to a possible fire condition allowing them to investigate before entering into a full alarm condition which requires building evacuation. The wide sensitivity range permits the use of early warning pre-alarm values. The pre-alarm value is 75% of the alarm setting.

Automatic Day/Night Sensitivity Selection - Signature Series detectors may be programmed for different sensitivities during day and night periods. This allows the detector to be more sensitive during unoccupied periods when lower ambient background conditions are expected.

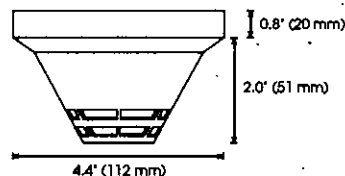
Stability - The SIGA-PS detector's sensitivity remains stable in wind velocities up to 5,000 ft/min (25.3 m/sec). Ambient temperature has very little effect on the detector. The detector may be installed in rooms with ambient temperatures up to 120°F (49°C).

Status LEDs - Twin LEDs are visible from any direction. A flashing GREEN led shows normal system polling from the loop controller. A flashing RED led means the detector is in alarm state. Both leds on steady shows alarm state - stand-alone mode. Normal green led activity is not distracting to building occupants, but can be quickly spotted by a maintenance technician.

Quality and Reliability - EST detectors are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance. All critical contacts are gold plated.

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2" or 4" octagon boxes, and to 4" square electrical boxes 1-1/2" (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers.



Testing & Maintenance

Each detector automatically identifies when it is dirty or defective and causes a "dirty detector" message. The detector's sensitivity measurement can also be transmitted to the loop controller. A sensitivity report can be printed to satisfy NFPA sensitivity measurements which must be conducted at the end of the first year and every two years thereafter.

The user-friendly maintenance program shows the current state of each detector and other pertinent messages. Single detectors may be turned off temporarily from the control panel. Availability of maintenance features is dependent on the fire alarm system used. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

Compatibility

The SIGA-PS detectors are compatible only with EST's Signature Loop Controller.

Application

Although photoelectric detectors have a wide range of fire sensing capabilities they are best suited for detecting slow, smoldering fires. The table below shows six standard test fires used to rate the sensitivity of smoke and heat detectors. The table indicates that no single sensing element is suited for all test fires.

EST recommends that this detector be installed according to latest recognized edition of national and local fire alarm codes.

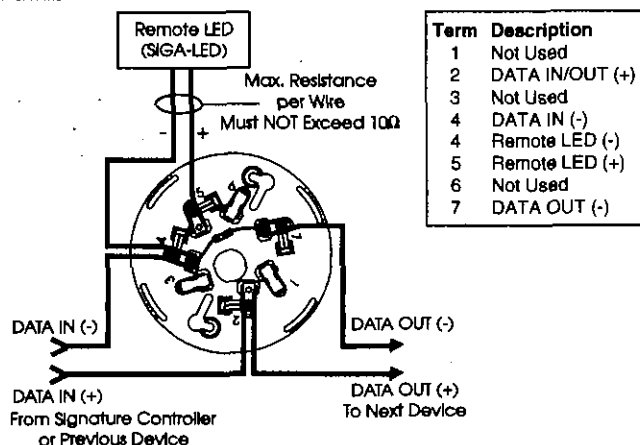
Test Fire	Type of Detector				
	SIGA-IS Ion	SIGA-PS Photo	SIGA-HRS and SIGA-HFS Rate-of- -Rise/Fixed Temp.	SIGA-PHS Photo/Heat 3D	SIGA-IPHS Ion/Photo/Heat 4D
Open Wood	optimum	unsuitable	optimum	very suitable	optimum
Wood Pyrolysis	suitable	optimum	unsuitable	optimum	optimum
Smoldering Cotton	very suitable	optimum	unsuitable	optimum	optimum
Poly Urethane Foam	very suitable	very suitable	suitable	very suitable	optimum
n-Heptane	optimum	very suitable	very suitable	optimum	optimum
Liquid Fire without Smoke	unsuitable	unsuitable	optimum	very suitable	very suitable

Typical Wiring

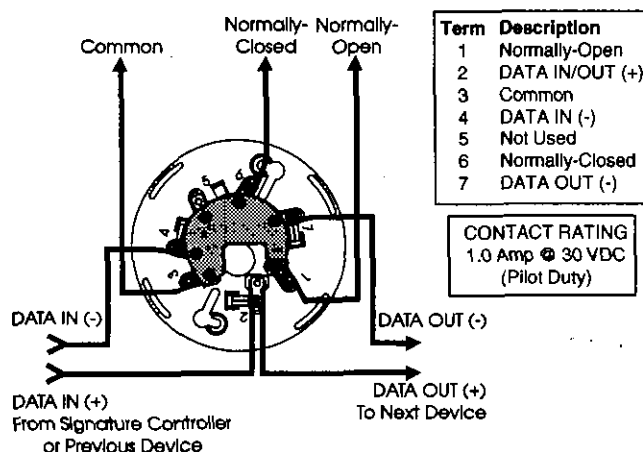
The detector mounting bases accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.5mm²) wire sizes.

Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

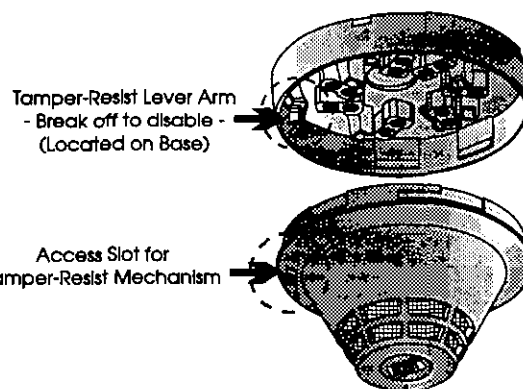
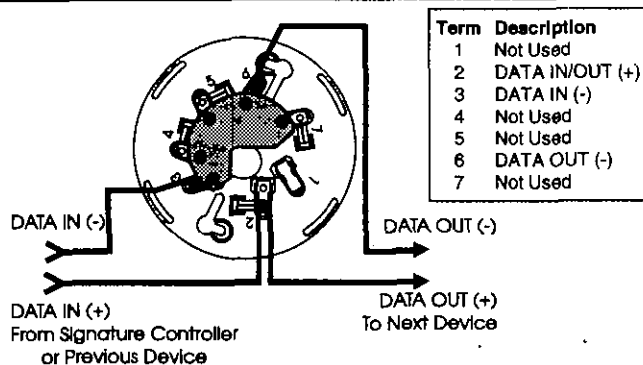
Standard Detector Base, SIGA-SB, SIGA-SB4



Relay Detector Base, SIGA-RB, SIGA-RB4



Isolator Detector Base, SIGA-IB, SIGA-IB4



Warnings & Cautions

This detector will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

This detector will NOT sense fires that start in areas where smoke cannot reach the detector. Smoke from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

Accessories

All detector mounting bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½" or 4" octagon boxes, 1½" (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4" sq. electrical boxes in addition to the above boxes. They include the SIGA-TS Trim Skirt which is used to cover the "mounting ears" on the base.

Standard Base SIGA-SB, SIGA-SB4 - This is the basic mounting base for EST Signature Series detectors. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB, SIGA-RB4 - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The relay base does not support the SIGA-LED Remote LED.

The relay is controlled by the detector and operates as follows:

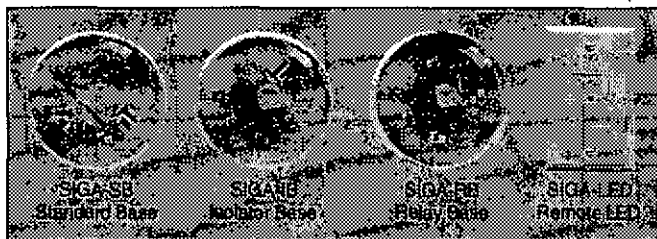
- at system power-up or reset, the relay is de-energized.
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB, SIGA-IB4 - This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates as follows:

- a short on the line causes all isolators to open within 23 msec.
- at 10 msec intervals, beginning on one side of the Class A circuit nearest the loop controller, the isolators close to provide the next isolator down the line with power.
- when the isolator next to the short closes, it reopens within 10 msec.

The process repeats beginning on the other side of the loop controller.



Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS Trim Skirt - Supplied with 4" bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases. Use black model with SIGA-IPHSB.

Specifications

Catalog Number	SIGA-PS
Sensing Element	Photoelectric - Light Scattering Principle
Storage and Operating Environment	Air Velocity Range: 0 to 5,000 ft/min (0 to 25.39 m/s) Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH, Non-Condensing
Sensitivity Range	ULI/ULC - 0.67% to 3.77% obscuration/foot
User Selected Alarm Sensitivity Settings	Most Sensitive: 1.0%/ft. More Sensitive: 2.0%/ft. Normal: 2.5%/ft. Less Sensitive: 3.0%/ft. Least Sensitive: 3.5%/ft.
Pre-alarm Sensitivity	75% of Alarm Sensitivity Setting
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)
Operating Current	Quiescent: 45µA @ 19 V Alarm: 45µA @ 19 V Emergency Stand-alone Alarm Mode: 18mA Pulse Current: 100 µA (100 msec) During Communication: 9 mA maximum
Construction & Finish	High Impact Engineering Polymer - White
Compatible Mounting Bases	SIGA-SB, SIGA-SB4 Standard Base, SIGA-RB, SIGA-RB4 Relay Base, SIGA-IB, SIGA-IB4 Isolator Base
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm Both LEDs - Glow steady when in alarm (stand-alone) Compatible Remote Red LED (model SIGA-LED) Flashes when in alarm
Compatibility	Use With: SIGNATURE Loop Controller
Address Requirements	Uses 1 Device Address
Agency Listings	UL, ULC

Ordering Information

Catalog Number	Description	Carton Dims. Inches (mm)	Ship Wt. lbs (kg)
SIGA-PS	Intelligent Photoelectric Detector - UL/ULC Listed	5 (127)w x 3.6 (91)h x 5 (127)d	.5 (.23)
Accessories			
SIGA-SB	Detector Mounting Base - Standard	6 (152)w x 1 (25)h x 6 (152)d	.2 (.09)
SIGA-SB4	4" Detector Mounting base c/w SIGA-TS Trim Skirt		
SIGA-RB	Detector Mounting Base w/Relay		
SIGA-RB4	4" Detector Mounting Base w/Relay c/w SIGA-TS Trim Skirt		
SIGA-IB	Detector Mounting Base w/Fault Isolator		
SIGA-IB4	4" Detector Mounting Base w/ Fault Isolator c/w SIGA-TS Trim Skirt	3.8 (97)w x 2.8 (71)h x 6 (152)d	.2 (.09)
SIGA-LED	Remote Alarm LED		
SIGA-TS	Trim Skirt (supplied with 4" bases)	6 (152)w x 1 (25)h x 6 (152)d	.1 (.04)

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Intelligent Heat Detectors

Models SIGA-HFS & SIGA-HRS

Features

- 70 FOOT (21.3 METER) SPACING
- 15°F (9°C)/MIN RATE-OF-RISE/135°F (57°C) FT. AND 135°F (57°C) FIXED TEMPERATURE TYPE
- INTELLIGENT DETECTOR c/w INTEGRAL MICROPROCESSOR
- NON-VOLATILE MEMORY
- AUTOMATIC DEVICE MAPPING
- ELECTRONIC ADDRESSING
- IDENTIFICATION OF DEFECTIVE DETECTORS
- TWIN RED/GREEN STATUS LEDS
- STANDARD, RELAY, and FAULT ISOLATOR MOUNTING BASES
- DESIGNED AND MANUFACTURED TO ISO 9001 STANDARDS

Description

EST's Signature Series Model SIGA-HFS and SIGA-HRS Intelligent Heat Detectors gather analog information from their fixed temperature and/or rate-of-rise heat sensing elements and converts it into digital signals. The detector's on-board microprocessor measures and analyzes these signals. It compares the information to historical readings and time patterns to make an alarm decision. Digital filters remove signal patterns that are not typical of fires. Unwanted alarms are nearly eliminated.

The microprocessor in each detector provides four additional benefits - **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector's non-volatile memory. This information is accessible for review any time at the control panel, PC, or by using the SIGA-PRO Signature Program/Service Tool.

The information stored in the detector's memory includes:

- detector type, serial number, and address.
- date of manufacture, hours of operation, and last maintenance date.
- current detector (ambient) temperature values.
- number of recorded alarms and troubles.

Intelligent Fixed-Temperature Heat Detector, SIGA-HFS
Intelligent Fixed-Temp./R-O-R Heat Detector, SIGA-HRS



- time and date of last alarm.
- analog signal patterns just before the last alarm.
- Up to 32 possible trouble codes which may be used to specifically diagnose faults.

In the unlikely event that an unwanted alarm does take place, the history file can be called up to help isolate the problem and prevent it from happening again.

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. This "mapping" feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally. The history log for the detector at its original location remains relevant and intact.

The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the "mystery" out of the installation. The preparation of "as-built" drawings is fast and efficient.

Device mapping allows the Signature loop controller to discover:

- unexpected additional device addresses.
- missing device addresses.
- changes to the wiring in the circuit.

Stand-alone Operation - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than 4 seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit. Each detector on the circuit continues to collect and analyze information from its surroundings. Both the SIGA-HRS and SIGA-HFS detectors alarm if the ambient temperature increases to 135°F (57°C) or for the SIGA-HRS only, the temperature increases at a rate exceeding 15°F (9°C)/minute. If the detector is mounted to a relay base, the relay operates.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the control panel when it has something new to report. This provides very fast control panel response time and allows a lower baud rate (speed) to be used for communication on the circuit. The lower baud rate offers several advantages including:

- less sensitivity to circuit wire characteristics.
- less sensitivity to noise glitches on the cable.
- less emitted noise from the analog wiring.
- twisted or shielded wiring is not required.

Electronic Addressing - The loop controller electronically addresses each detector, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each detector has its own unique serial number stored in its "on-board memory". The loop controller identifies each device on the circuit and assigns a "soft" address to that device's serial number. If desired, detectors can be addressed using the SIGA-PRO Signature Program/Service Tool.

Installation Spacing - The SIGA-HFS (fixed temperature) and the SIGA-HRS (fixed temperature/rate-of-rise combination) intelligent heat detectors are rated for installation at up to 70 foot (21.3 meter) spacing. These detectors may be installed in rooms with ambient temperatures up to 100°F (38°C).

Status LEDs - Twin LEDs are visible from any direction. A flashing GREEN led shows normal system polling from the loop controller. A flashing RED led means the detector is in alarm state. Both leds on steady shows alarm state - stand-alone mode. Normal green led activity is not distracting to building occupants, but can be quickly spotted by a maintenance technician.

Quality and Reliability - EST detectors are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance. All critical contacts are gold plated.

Compatibility

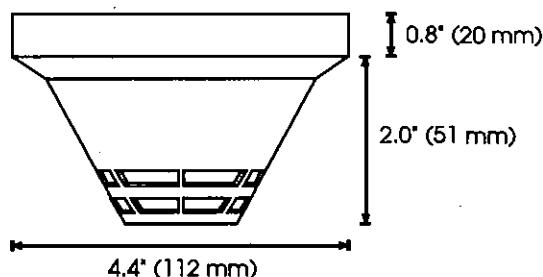
The SIGA-HFS and SIGA-HRS detectors are compatible only with EST's Signature Loop Controller.

Specifications Table

Catalog Number	SIGA-HFS	SIGA-HRS
Heat Sensing Element	Fixed Temperature	Combination Fixed Temperature/Rate-of-Rise
Alarm Point	Alarms at 135°F (57°C) Ambient	Alarms at 135°F (57°C) Ambient or temp. increase exceeding 15°F (9°C) per minute
Detector Spacing	70 feet (21.3 meter) center to center spacing	
Storage and Operating Environment	Operating Temperature: 32°F to 100°F (0°C to 38°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH, Non-Condensing	
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)	
Operating Current	Quiescent: 45µA @ 19 V Alarm: 45µA @ 19 V Emergency Stand-alone Alarm Mode: 18mA Pulse Current: 100 µA (100 msec) During Communication: 9 mA maximum	
Construction & Finish	High Impact Engineering Polymer - White	
Compatible Mounting Bases	SIGA-SB, SIGA-SB4 Standard Base, SIGA-RB, SIGA-RB4 Relay Base, SIGA-IB, SIGA-IB4 Isolator Base	
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm Both LEDs - Glow steady when in alarm (stand-alone) Compatible Remote Red led (model SIGA-LED) Flashes when in alarm	
Compatibility	Use With: SIGNATURE Loop Controller	
Address Requirements	Uses 1 Device Address	
Agency Listings	UL, ULC	

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2" or 4" octagon boxes, and to 4" square electrical boxes 1-1/2" (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers.



Testing & Maintenance

Each detector automatically identifies when it is defective and the user-friendly maintenance program shows the current state of each detector and other pertinent messages. Single detectors may be turned off temporarily, from the control panel. Availability of maintenance features is dependent on the fire alarm system used. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

Application

The table below shows six standard test fires used to rate the sensitivity of smoke and heat detectors. The table indicates that no single sensing element is suited for all test fires.

EST recommends that this detector be installed according to latest recognized edition of national and local fire alarm codes.

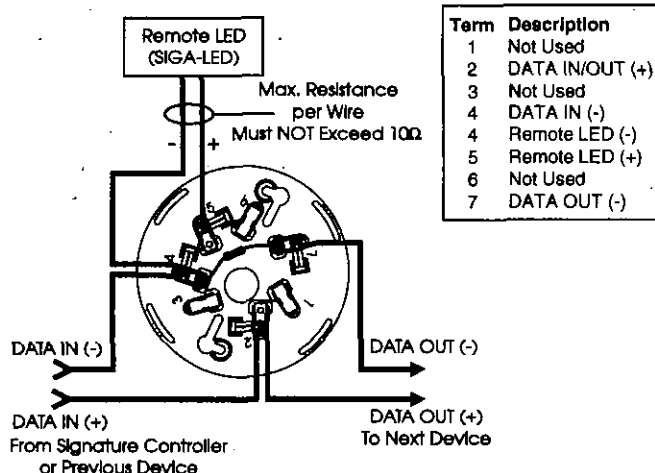
Test Fire	Type of Detector				
	SIGA-IS Ion	SIGA-PS Photo	SIGA-HRS and SIGA-HFS Rate-of- Rise/Fixed Temp.	SIGA-PHS Photo/Heat 3D	SIGA-IPHS Ion/Photo/Heat 4D
Open Wood	optimum	unsuitable	optimum	very suitable	optimum
Wood Pyrolysis	suitable	optimum	unsuitable	optimum	optimum
Smouldering Cotton	very suitable	optimum	unsuitable	optimum	optimum
Poly Urethane Foam	very suitable	very suitable	suitable	very suitable	optimum
n-Heptane	optimum	very suitable	very suitable	optimum	optimum
Liquid Fire without Smoke	unsuitable	unsuitable	optimum	very suitable	very suitable

Typical Wiring

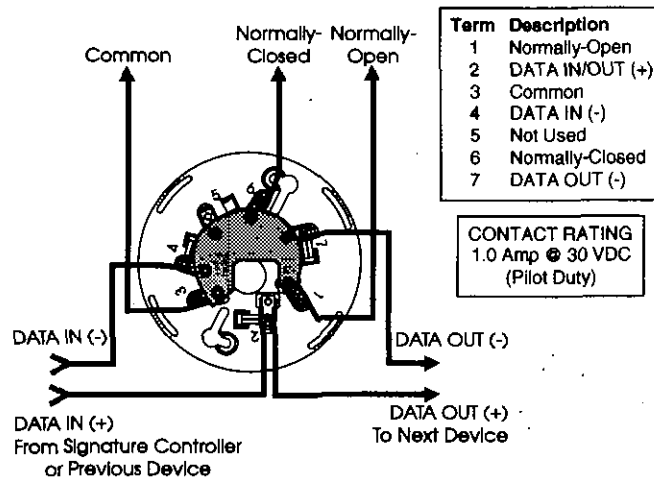
The detector mounting bases will accept #18 AWG (0.75mm²), #16 (1.0mm²), and #14 AWG (1.5mm²) wire sizes.

Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

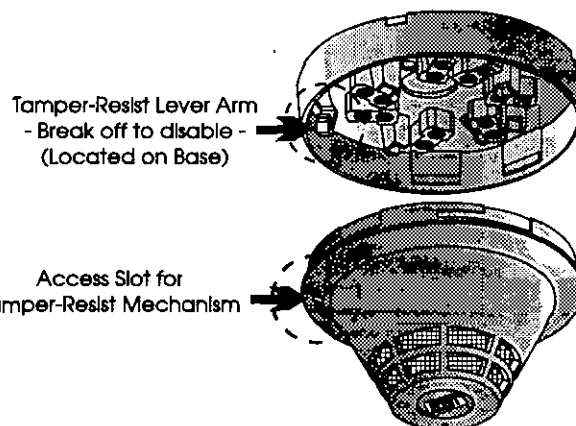
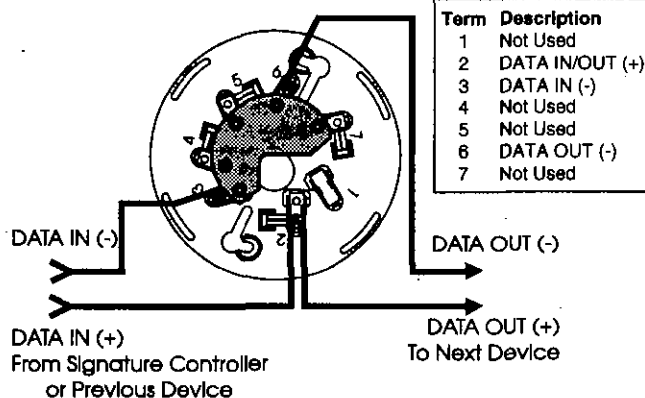
Standard Detector Base, SIGA-SB, SIGA-SB4



Relay Detector Base, SIGA-RB, SIGA-RB4



Isolator Detector Base, SIGA-IB, SIGA-IB4



Accessories

All detector mounting bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½" or 4" octagon boxes, 1½" (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4" sq. electrical boxes in addition to the above boxes. They include the SIGA-TS Trim Skirt which is used to cover the "mounting ears" on the base.

Standard Base SIGA-SB, SIGA-SB4 - This is the basic mounting base for EST Signature Series detectors. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB, SIGA-RB4 - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The relay base does not support the SIGA-LED Remote LED.

The relay is controlled by the detector and operates as follows:

- at system power-up or reset, the relay is de-energized.
- when a detector is installed in the base with the power on, the relay energizes for 4 seconds, then de-energizes.
- when a detector is removed from a base with the power on, the relay is de-energized.
- when the detector enters the alarm state, the relay is energized.

Isolator Base SIGA-IB, SIGA-IB4 - This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates as follows:

- a short on the line causes all isolators to open within 23 msec.
- at 10 msec intervals, beginning on one side of the Class A circuit nearest the loop controller, the isolators close to provide the next isolator down the line with power.



- when the isolator next to the short closes, it reopens within 10 msec.

The process repeats beginning on the other side of the loop controller.

Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS Trim Skirt - Supplied with 4" bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases. Use black model with SIGA-IPHSB.

Warnings & Cautions

This detector will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

This detector will NOT sense fires that start in areas where heat cannot reach the detector. Heat from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

The heat sensor in this device only provides a source of information to supplement the information provided by photoelectric or ionization smoke detectors which may be located nearby. **The heat detector by itself does NOT provide life safety protection.** Under no circumstances should heat detectors be relied on as the sole means of fire protection.

Ordering Information Table

Catalog Number	Description	Carton Dims. Inches (mm)	Ship Wt. lbs (kg)
SIGA-HFS	Intelligent Fixed Temperature Heat Detector - UL/ULC Listed	5 (127)w x 3.6 (91)h x 5 (127)d	.5 (.23)
SIGA-HRS	Intelligent Fixed Temperature/Rate-of-Rise Heat Detector - UL/ULC Listed		
Accessories			
SIGA-SB	Detector Mounting Base	6 (152)w x 1 (25)h x 6 (152)d	.2 (.09)
SIGA-SB4	4" Detector Mounting Base c/w SIGA-TS Trim Skirt		
SIGA-RB	Detector Mounting Base w/Relay		
SIGA-RB4	4" Detector Mounting Base w/ Relay c/w SIGA-TS Trim Skirt		
SIGA-IB	Detector Mounting Base w/Fault Isolator		
SIGA-IB4	4" Detector Mounting Base w/ Fault Isolator c/w SIGA-TS Trim Skirt	3.8 (97)w x 2.8 (71)h x 6 (152)d	.2 (.09)
SIGA-LED	Remote Alarm LED		
SIGA-TS	Trim Skirt (supplied with 4" bases)	6 (152)w x 1 (25)h x 6 (152)d	.1 (.04)

It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST.

EST3

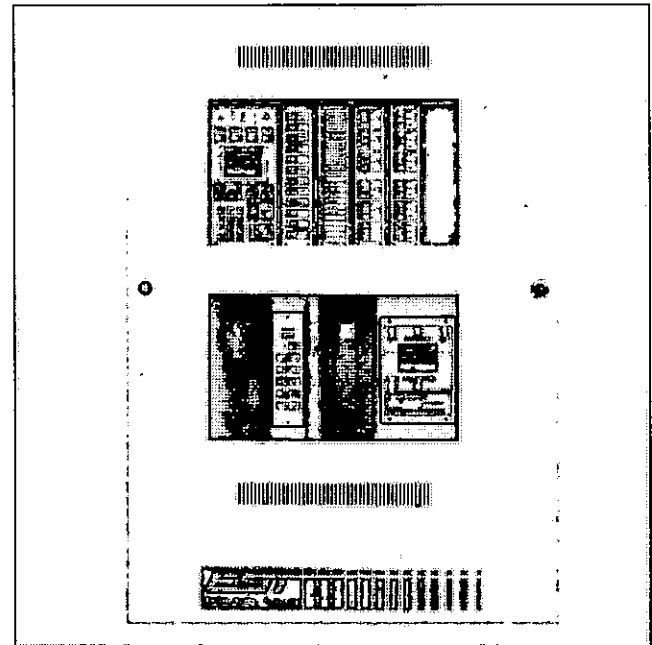
Features

- 168 CHARACTER LCD
 - displays information important to user first
 - First and Last alarm display hands free
- EXCEPTIONAL ALARM RESPONSE TIMES
 - 3 second alarm response time over any size network
 - 750ms loop alarm response time
- TOTAL NETWORK WIRING OVER 300,000 FEET
- 8 MULTIPLEXED CHANNELS FOR AUDIO SOURCE SELECTION ON ONE PAIR OF WIRES
- ZONED AUDIO AMPLIFIERS
- SUPPORTS PROPRIETARY AND LOCAL SYSTEM OPERATIONS
- FOR RETROFIT EXISTING WIRE MAY BE USED IF ELECTRICALLY SOUND
- SLIDE IN LED AND SWITCH LABELS
- SIGNATURE SERIES DETECTORS AND MODULES SUPPORT
- AUTOMATIC DEVICE AND PANEL ADDRESSING
- 250 DEVICES PER LOOP, 2500 DEVICES PER NODE
- DEVICE CIRCUIT MAPPING
- UP TO 32 TROUBLE BITS PER DEVICE FOR TROUBLE SHOOTING

Description

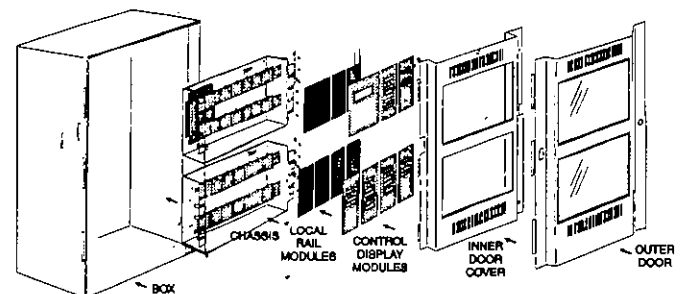
EST3 is a modular system uniquely designed to easily meet the needs of standalone single node systems or multi-node networks. Both fire alarm and audio systems use the same fundamental components simplifying system layouts. A powerful System Definition Utility helps define flexible system operations in a fraction of the time required by others. Virtually all EST3 operating features are software controlled. This gives EST3 great site flexibility and ensures operational changes and upgrades will be possible years after the initial installation.

From the elegant contoured door design of the Lobby Enclosure through the standard industrial design of Remote Closet cabinets both aesthetics and function are addressed.



Application Notes

EST3 is a superbly adaptable Life Safety System lending itself to smaller and larger buildings alike. System components arrange in layers starting with the wallbox system and ending with inner and outer doors. Cabinets are available with room for system batteries up to 65 Amp hours. With EST3 one 24 volt battery supports up to four power supplies.



The power supplies use a unique paralleling arrangement that ensures optimization of each supplies full capacity. Each supply will support up to 7 Amps of load, with 4 supplies 28 Amps of current is available all backed up by one battery. This gives EST3 continuing cost saving benefits in system maintenance as well as initial system cost.

A user interface layer made up of a Main Display Interface module and a system of generic modules maximize design flexibility for custom systems.

Main Display Interface

EST3's Main Display Interface module focuses on the emergency user. Simple to understand lights and switches help the operator execute system commands with confidence. Eight lines of 21 characters (168 characters total) provide the room needed to convey emergency information in a useful format. Hands free, the first highest priority event displays. The Main Display always shows the last highest priority event. Without opening the door of the EST3 the first and last alarm is given. EST3 modular system design means a Main Display Interface module is not required in remote nodes with no user interface requirements.

EST3's Main Display Interface provides a menu system to support maintenance functions such as point disabling or reports for use by staff or service personnel.

Display Modules

EST3's, generic control/display module's provide membrane switches with positive tactile feedback and colored LEDs giving the emergency user the simplest of interfaces. Control/Display module locations are independent of the underlying connection hardware, the local rail module. This keeps system lay out flexibility maximized.

Panel Capacities

EST3 makes isolation of field wiring easy with building wiring termination's being made on local rail module removable terminal blocks. EST3 local rail modules include, zoned amplifiers, Single Signature Loop Controllers, Conventional Hardwired modules, and the main CPU module. System design allows convenient separation of high voltage and power limited wiring.

EST3 supports both single node and multiple node single network systems. As a stand alone panel or single node from 5 to 21 module spaces are available. This provides enough space for up to four system power supplies providing 28 Amps of power. A single panel supports up to 10 Signature loop controllers (250 devices per loop, 2500 points total per node). Utilizing conventional circuits, up to 15 local rail modules fit, supporting 120 conventional zones. Up to half of the conventional circuits could be Notification Appliance Circuits, with 19 Control Display modules, and a Main Display Interface module.

Networks

EST3 operates on a multi priority peer-to-peer token ring network. The multi-priority token ring gives EST3 exceptional alarm response. Response time is less than 3 seconds

across the network virtually independent of the total number of nodes. EST3 token ring network configuration also affords long distances between nodes. The distance between panels on #18AWG (1.0mm²) is 5000ft (1523m). With 64 nodes supported on a network the total network length is in excess of 300,000 ft (91400m).

Network communication is via RS-485 serial ports. This two wire circuit supports Class 'A' or 'B'. The EST3 network meets NFPA style 7 communications standards in Class 'A' configuration.

The EST3 uses distributed data base technology, designed to survive the rigors of fire and fire fighting. In Class 'B' configuration a single break or short on the network wiring will isolate the system into two groups of panels each with one or more nodes. Each group of panels continues functioning as a peer-to-peer network working with their combined data bases. In Class 'A' a single break or short on the network wiring causes the system to isolate the fault. Network communication continues uninterrupted. If multiple faults occur, the network re-configures into multiple networks and functions as described above for Class 'B'. This means a system continues to respond to activations from every node that can transmit and receive network messages. Local responses always execute since the local data base resides at each node maximizing survivability.

ADDING AUDIO

EST3 audio is a matter of selecting components for installation in standard fire alarm cabinet assemblies. EST3 uses intelligent zoned amplifiers, this reduces wire runs and space needs at a central location. Audio control equipment and zoned amplifiers use the same system power supplies as fire alarm components. All these components are supported by standby battery. Where multiple nodes make up the system a single pair of wires carries eight channels of digital audio between nodes. The system will deliver up to eight messages/signals simultaneously meaning occupants signaling messaging is never interrupted. This eliminates confusion when the emergency user requires the use of an audio channel when delivering zone specific messages.

The EST3 provides simple paging controls. Pressing the ALL CALL selects all paging zones for message delivery. Pressing Page to EVACUATION automatically selects all areas in evacuation. Similarly, the user can Page to ALERT. Zoned paging requires the user to simply press zone paging switches. After the user completes a page delivery, signaling automatically restore when the user releases the microphone talk key.



EDWARDS SYSTEMS TECHNOLOGY

SARASOTA, FLA. 941-739-4200 Fax: 941-751-6384

CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931

OWEN SOUND, CANADA 519-376-2430 Fax: 519-376-7258

INTERNATIONAL: CANADA 905-678-6767 Fax: 905-678-9791

Engineering Specification

It shall be possible to support a single stand alone node or up to 64 nodes communicating on a peer-to-peer multi-priority token ring protocol network. Any node on the network with a new alarm must have priority on the Network. Network alarm response must be under 3 seconds. Field wiring connections must be made at removable terminal blocks. Status LEDs shall be provided for communications of network, RS-232, audio and internal rail communications. Internal node communication speed must be programmable. The control panel and system components must be manufactured by an ISO 9001 standards listed company.

The communication format between the control panel and analog devices shall be digital.

Loop alarm recognition must be within 750 milliseconds of a device reporting an alarm state. It must be possible to wire the Loop as Class A or Class B with non shielded, non twisted wire. It must be possible to wire branches (T-taps) with Class B wiring. Should the communications between devices and the Data controller be lost, the device circuit shall go into stand-alone mode. The circuit shall act like a conventional alarm receiving circuit in the stand alone mode. Should bus communications be lost, local rail modules must continue to function, recognize and store functional status changes. In the event of an alarm, provision must be made to signal the network and make it aware of the alarm condition.

The fire alarm power supplies must be capable of being paralleled and share the load. Multiple power supplies must be capable of being backed up with a single 24 volt battery pack for reduced maintenance. A battery per power supply is not acceptable. The power supply shall be capable of charging up to 65 AH batteries. The power supply must be able to perform an automatic load test of batteries and return a trouble if the batteries fall outside a predetermined range. Power supplies must incorporate the ability to adjust the charge rate of batteries based on ambient temperatures. It shall be possible to adjust for ambient temperature changes in local cabinets as well as remote cabinets.

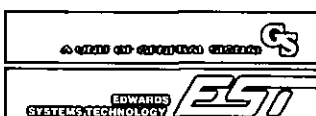
The system shall provide a user interface that displays system events in a text format, and supports basic common control LEDs and switches. The Common Control Switches and LEDs provided as minimum will be; Reset switch and LED, Alarm Silence switch and LED, Panel Silence switch and LED, Drill switch and LED. It must be possible to add additional common controls as required through the use of modular display units. The user interface must provide an LCD that will allow custom event messages of up to 42 characters. The system must provide the emergency user, hands free viewing of the first and last highest priority event. The last highest priority event must always display and update automatically. Events shall be automatically placed in easy to access queues. It shall be possible to view

specific event types separately. Having to scroll through a mixed list of event types is not acceptable. The total number of active events by type must be displayed. Visual indication must be provided for any event type that has not been acknowledged or viewed. It must be possible to customize the designation of all user interface LEDs and Switches for local language requirements.

The Life Safety system shall incorporate annunciation of Alarm, Supervisory, Trouble and Monitor operations. Annunciation must be through the use of LED display strips complete with a means to custom label each LED as to its function. Where applicable control of remote smoke control devices must be made available at the control center. Switches with LEDs must provide positive feed back to the operator of remote equipment status. Where voice audio is required a means of paging individual zones must be made. The status of each paging zone must be annunciated. It must be possible to selectively page into specific zones. It shall be possible to manipulate the evacuation of the building from the main control center. It must be possible for the emergency operator to put specific zones into evacuation manually.

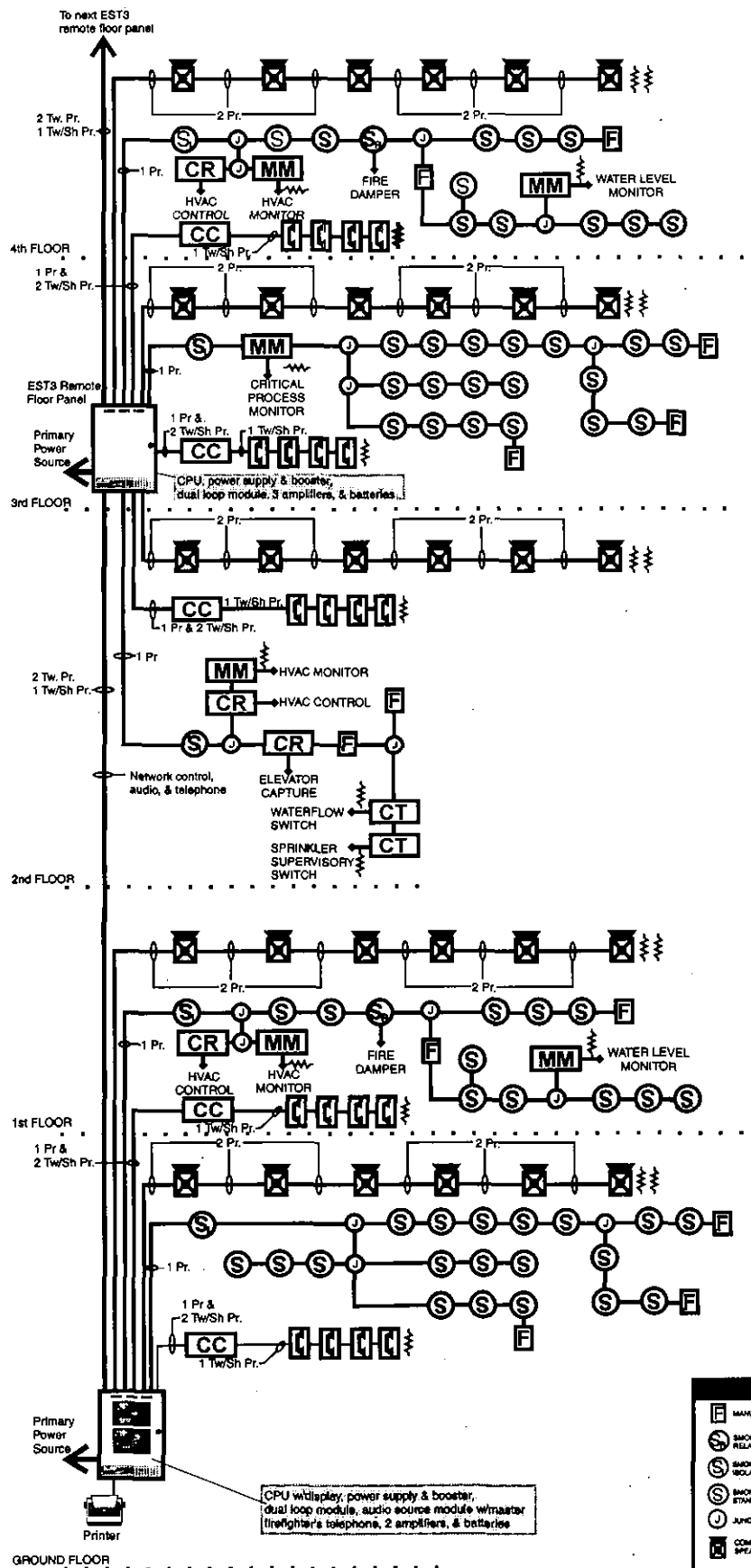
The audio system amplifiers must be able to operate 25Vrms or 70.4Vrms speakers. The system shall provide simultaneous page, alert and evacuation signaling. Systems that cause signaling devices to go silent while performing any signaling functions will not be accepted. System amplifiers must be distributed zoned type. Centrally banked systems are not acceptable. An integral circuit for operating traditional NAC devices must be provided with each system amplifier. The circuit must have a minimum rating of 3.5 Amps for operating 24Vdc signals. It must be possible to have up to 8 separate audio signal sources for paging and signaling purposes. The system must provide as a minimum the following paging common controls and indicators: Ready to page LED, VU display of paging output level, single switch function for paging to all - Alert zones, Evacuation zones, and areas not programmed for signaling. The system must provide high quality analog to digital conversion of paging sources. Digital transmission of paging must be provided between system nodes. The analog sources must be sampled and converted to digital with a sampling rate no less than 9600 baud. It must be possible to transmit signal sources (Alert, Alarm, Page, etc.) together over a single pair of wires between nodes.

The fire panel shall be capable of supporting a variety of conventional smoke detectors with a single module. It must be possible to support polarized bells, horns or strobes. It shall be possible to provide hardwired supervisory and monitor functions with latching or non-latching operations. It shall be possible to display any circuit on an LCD or LED annunciator located anywhere on the network.



EDWARDS SYSTEMS TECHNOLOGY
SARASOTA, FLA. 941-739-4200 Fax: 941-751-6384
CHESHIRE, CT. 203-699-3000 Fax: 203-250-1931
OWEN SOUND, CANADA 519-376-2430 Fax: 519-376-7258
INTERNATIONAL: CANADA 905-678-6767 Fax: 905-678-9791

Typical Wiring



Typical EST3 Wiring with
Emergency Voice/Alarm System w/ Firefighter's Telephones

LEGEND	
	MANUAL PULL STATION
	SMOKE DETECTOR WITH RELAY BASE
	SMOKE DETECTOR WITH ISOLATOR BASE
	SMOKE DETECTOR WITH STANDARD BASE
	JUNCTION BOX
	COMBINATION SPEAKER/STROBE
	FIREFIGHTER'S TELEPHONE
	SIGNAL MODULE
	CONTROL RELAY MODULE
	INPUT MODULE
	UNIVERSAL INPUT/OUTPUT MODULE
	MONITOR MODULE
	END-OF-LINE RESISTOR

Size conductors per application.
Refer to EST3 Installation Manual
for additional details.

BRICK HOSPITAL

BRICK, NJ

EDWARDS FIRE ALARM SYSTEM EQUIPMENT

BASEMENT

<u>QUAN</u>	<u>ITEM</u>	<u>DESCRIPTION</u>
1	EST3	Addressable Fire Alarm System Control Panel
20	SIGA-HFS	Intelligent Heat Detectors – Fixed Temperature 135°F
20	SIGA-SB	Bases for SIGA-HFS Heat Detectors
21	SIGA-PS	Intelligent Photoelectric Smoke Detectors
21	SIGA-SB	Bases for SIGA-PS Smoke Detectors
8	SIGA-CT1	Single Input Modules for Existing Pull Stations
2	SIGA-CT1	Single Input Modules for Stand Alone Tamper Switches
6	SIGA-CT2	Dual Input Modules for Waterflow & Tamper Switches
9	757-1A-T	Horn Units
14	405-7A-T	Strobe Units



Brick Hospital Renovation
9/9/99

Counts per Mike V. & Dave Murphy 8/31/99

Counts include some rough guesimates by D.M. for areas where Mike V. could not gain access to

Location	A	B	C	D	E	F	G	H	I	J	K	L
Basement	21	0	20	0	8	2	0	6	9	14	1	0
1 st Floor	71	0	12	20	15	0	1	4	20	20	0	1
2 nd Floor	70	10	13	20	9	0	1	3	15	15	0	0
3 rd Floor	67	29	10	23	9	0	0	3	12	12	0	0
4 th Floor	77	37	8	41	9	0	0	3	8	15	0	0
5 th Floor	70	23	7	29	7	0	0	3	9	13	0	0
Totals	376	99	70	133	57	2	2	22	73	89	1	1

64
143
133
124
149
128

- A) Smoke Detector
- B) Remote LED for Patient Room Smoke Detector
- C) Heat Detector
- D) Duct Smoke Detector
- E) SIGA-CT1 for Existing Pull Stations
- F) SIGA-CT1 for Stand Alone Tamper Switch
- G) SIGA-CT1 for Kitchen Ansul System
- H) SIGA-CT2 for Combination Waterflow / Tamper Switch
- I) Horn Unit
- J) Strobe Unit
- K) FACP
- L) Annunciator

325

Annunciator Breakdowns - Per Dave Murphy 8/31/99

Item	Location	Type	Total Points
1	1 West - Security Desk	New 3-LCDANN	All
2	1 South - Clinic Area	To Be Removed per Bill Transue	N/A
3	2 West - CCU	Reuse Existing with SIGA-CR's	10
4	3 West - Special Care Nursery	Reuse Existing with SIGA-CR's	4
5	3 Center - West 3W	Reuse Existing with SIGA-CR's	8
6	3 East - Single Room Maternity	Reuse Existing with SIGA-CR's	15
7	3 Center - Nursery	Reuse Existing with SIGA-CR's	2
8	4 East - Oncology	Reuse Existing with SIGA-CR's	14
9	4 West - Med. Surg.	Reuse Existing with SIGA-CR's	23
10	5 West - PCCU	Reuse Existing with SIGA-CR's	23
Re-Use 9 Existing Annunciators, 1 New 3-LCDANN at Security			99 Points

Certificate of Occupancy Single Family Dwelling

Location _____ Block _____ Lot _____

Final Inspections needed as follows:

1. Final Building
2. Final Plumbing
3. Final Electric
4. Final Fire
5. Certificate of Compliance BTMUA
6. Final Engineering
7. Report of Compliance, Ocean County Soil
8. Home Owners Warranty (HOW) or Affidavit by Owner

Certificate of Approval Additions and Alterations

Final inspections on all the Technical Sections that were paid for Building, Plumbing, Fire, and Electrical.

Report of Compliance from Ocean County Soils needed when; more than 5000 square feet are disturbed, almost always when more than 1 house is constructed as in Major and Minor Subdivisions. Affordable Housing when applicable. Stamped in Red when review is needed.

	FINALS	FINALS	FINALS
Building.	Approved.		
Plumbing.	Approved.		
Fire.	Approved.		
Electric.	Approved.		
Ctf of Comp BTMUA.	Approved.		
HOW	Approved.		
Engineering	Approved.		
Soil.	Approved.		
Affordable Housing.	Approved.		
Commercial Occupancy Load	Completed		
Public Works Garbage Can Receipt	Received		

COUNTER FORM
PLEASE PRINT

PLUMBING

CONTRACTOR:

ADDRESS:

PHONE:

LIC. #:

LIC. EXPIRATION DATE:

FEDERAL EMP. # (or S.S. #):

TECHNICAL SITE DATA (LIST ALL FIXTURES)

NO. FIXTURE/EQUIPMENT

____ Water Closet
____ Urinal / Bidet
____ Bath Tub
____ Lavatory
____ Shower
____ Floor Drain
____ Sink
____ Dishwasher
____ Drinking Fountain
____ Washing Machine
____ Hose Bibb
____ Gas Piping
____ Fuel Oil Piping
____ Water Heater
____ Steam Boiler
____ Hot Water Boiler
____ Sewer Pump
____ Interceptor / Separator
____ Backflow Preventer
____ Greasetrap
____ Water Cooled AC or Refrig. Unit
____ Sewer Connection
____ Septic (Disposal System) Closure
____ Water Service Connection
____ Gas Service Connection
____ Active Solar System
____ Vent Through Roof
____ Other

Estimated Cost of Plumbing Work: \$

Signature:

Owner ☐ Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

Date:

CONTRACTOR AFFIX SEAL:

FIRE

CONTRACTOR: Systems Sales Corporation

ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753-6815

PHONE: 732-751-0600

LIC. #:

EXP. DATE:

FEDERAL EMP. # (or S.S. #): 222-359-665/000

TECHNICAL DATA (DESCRIPTION OF WORK)

Upgrade Fire Alarm System
2nd Floor

Heating Type: ☐ Gas ☐ Oil ☐ Electric ☐ Solar
Heating Sys: ☐ New ☐ Existing
Location of Furnace / Boiler

Water Supply Source

Method of Valve Supervision

Local Alarm Supervision

Central Supervision

Proprietary Supervision

Flammable Liquid Storage Tanks Capacity: Fuel:

Combustible Liquid Storage Tanks Capacity: Fuel:

L.G.P. Storage Tanks Capacity: Fuel:

DESCRIPTION

NUMBER

Wet Sprinkler Heads

Dry Sprinkler Heads

Total

Smoke Detectors

Heat Detectors

Total

Stand Pipes

Kitchen Hood Exhaust Systems

Pre-Engineered Systems

Co2 Suppression

Halon Suppression

Foam Suppression

Dry Chemical

Wet Chemical

Gas or Oil Fired Appliance

Other

Other

Estimated Cost of Fire Protection Work: \$

Signature:

Owner ☐

Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

Site Location: Brick Hospital . Date Rec'd: _____
Block: _____ Lot: _____ Date Issued: _____
Owner/Id Fee: _____ Control #: _____
Address: 425 Jack Martin Blvd. Permit #: _____
State: NJ Zip: 08724 Phone: () _____
SS #: _____ Provide only if Applicant is owner

TOWNSHIP OF BRICK
401 Chambers Bridge Road
Brick, New Jersey 08723

COUNTER FORM
PLEASE PRINT

BUILDING

CONTRACTOR: _____
ADDRESS: _____
PHONE: _____
LIC #: _____
LIC. EXPIRATION DATE: _____
FEDERAL EMPL. # (or S.S. #): _____
TECHNICAL SITE DATA
DESCRIPTION OF WORK: _____

TYPE OF WORK

☐ New Building
☐ Addition ☐ Fence: Height (6' or More)
☐ Alteration ☐ Sign: Sq. Ft.
☐ Roofing ☐ Pool (In Ground)
☐ Siding ☐ Pool (Above Ground)
☐ Other: ☐ Asbestos Abatement
☐ Other: ☐ Demolition

BUILDING CHARACTERISTICS

USE GROUP Present: _____ Proposed: _____
CONSTR. CLASS Present: _____ Proposed: _____
No. of Stories: _____
Height of Structure: _____
Area - Largest Floor: _____
Ex. Building Area / All Floors: _____
Volume of Structure: _____ Total Land Disturbed: _____
Signature: _____

Estimated Cost of Building Work: _____
Ex. Building (1): \$ _____
eration (2): \$ _____
OTAL (1+2): \$ _____
UBC CODE APPROVAL: _____
PLANS: Required ☐ Approved ☐

Approved by: _____
Date: _____

ELECTRICAL

CONTRACTOR: _____
ADDRESS: _____
PHONE: _____
LIC #: _____ EXP. DATE: _____
FEDERAL EMPL. # (or S.S. #): _____

TECHNICAL DATA (LIST ALL FIXTURES)

DESCRIPTION	QTY	SIZE
ITEMS		
Lighting Fixtures		
Receptacles		
Switches		
Detectors		
Light Poles		
Motors - Exact HP		
Emergency & Exit Lights		
Communications Points		
Alarm Devices/E.A.C. Panel		

TOTAL NUMBERS

Pool Permit w/UV Lights	
Storable Pool/Spa/Hot Tub	
KW Elec. Range / Receptacle	KW
KW Oven / Surface Unit	KW
KW Elec. Water Heater	KW
KW Elec. Dryer / Receptacle	KW
KW Dishwasher	KW
HP Garbage Disposal	HP
KW Central A/C Unit	KW
HP/KW Space Heater/Air Handler	HP/KW
KW Baseboard Heat	KW
HP Motors 1/2 HP	HP
KW Transformer/Generator	KW
AMP Service	AMP
AMP Subpanels	AMP
AMP Motor Control Center	AMP
AMP Elec. Sign/Outline Light	KW
Other	
Other	
Other	
Other	

Estimated Cost of Electrical Work: \$ _____
Signature (print name): _____
Estimated Cost of Electrical Work: \$ _____
Signature (print name): _____

Owner ☐ Contractor ☐
SUBCODE APPROVAL: _____
PLANS: Required ☐ Approved ☐

Approved by: _____
Date: _____

CONTRACTOR AFFIX SEAL:

COUNTER FORM
PLEASE PRINT

PLUMBING

CONTRACTOR:

ADDRESS:

PHONE:

LIC. #:

LIC. EXPIRATION DATE:

FEDERAL EMP. # (or S.S. #):

TECHNICAL SITE DATA (LIST ALL FIXTURES)

NO. FIXTURE/EQUIPMENT

Water Closet
Urinal / Bidet
Bath Tub
Lavatory
Shower
Floor Drain
Sink
Dishwasher
Drinking Fountain
Washing Machine
Hose Bibb
Gas Piping
Fuel Oil Piping
Water Heater
Steam Boiler
Hot Water Boiler
Sewer Pump
Interceptor / Separator
Backflow Preventer
Greasetrap
Water Cooled AC or Refrig. Unit
Sewer Connection
Septic (Disposal System) Closure
Water Service Connection
Gas Service Connection
Active Solar System
Vent Through Roof
Other

Estimated Cost of Plumbing Work: \$

Signature:

Owner ☐ Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

Date:

CONTRACTOR AFFIX SEAL:

FIRE

CONTRACTOR: Systems Sales Corporation

ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753-6815

PHONE: 732-751-0600

LIC. #:

EXP. DATE:

FEDERAL EMP. # (or S.S. #): 222-359-665/000

TECHNICAL DATA (DESCRIPTION OF WORK)

Upgrade Fire Alarm System
3rd Floor

Heating Type: ☐ Gas ☐ Oil ☐ Electric ☐ Solar
Heating Sys: ☐ New ☐ Existing
Location of Furnace / Boiler

Water Supply Source

Method of Valve Supervision

Local Alarm Supervision

Central Supervision

Proprietary Supervision

Flammable Liquid Storage Tanks Capacity: Fuel:

Combustible Liquid Storage Tanks Capacity: Fuel:

L.G.P. Storage Tanks Capacity: Fuel:

DESCRIPTION

NUMBER

Wet Sprinkler Heads

Dry Sprinkler Heads

Total

Smoke Detectors

Heat Detectors

Total

Stand Pipes

Kitchen Hood Exhaust Systems

Pre-Engineered Systems

Co2 Suppression

Halon Suppression

Foam Suppression

Dry Chemical

Wet Chemical

Gas or Oil Fired Appliance

Other

Other

Estimated Cost of Fire Protection Work: \$

Signature:

Owner ☐

Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

Site Location: Brick Hospital Date Rec'd:
Block: Lot Date Issued:
Owner Id Fee: Control #:
Address: 425 Jack Martin Blvd. Permit #:
State: NJ Zip: 08724 Phone: ()
SS #: Provide only if Applicant is owner

TOWNSHIP OF BRICK
401 Chambers Bridge Road
Brick, New Jersey 08723

COUNTER FORM
PLEASE PRINT

BUILDING
CONTRACTOR:
ADDRESS:
PHONE:
LIC #:
LIC EXPIRATION DATE:
FEDERAL EMP # (or S.S. #):
TECHNICAL SITE DATA
DESCRIPTION OF WORK:

TYPE OF WORK
New Building
Addition Fence: Height (6' or More)
Alteration Sign: Sq. Ft.
Roofing Pool (In Ground)
Siding Pool (Above Ground)
Other: Asbestos Abatement
Other: Demolition

BUILDING CHARACTERISTICS
USE GROUP Present: Proposed:
CONSTR. CLASS Present: Proposed:
No. of Stories:
Height of Structure:
Area - Largest Floor:
New Building Area / All Floors:
Volume of Structure: Total Land Disturbed:
Signature:

Estimated Cost of Building Work:
New Building (1): \$
Foundation (2): \$
TOTAL (1+2): \$
UBC CODE APPROVAL:
PLANS: Required Approved

Approved by:
Date:

ELECTRICAL
CONTRACTOR:
ADDRESS:
PHONE:
LIC #: EXP. DATE:
FEDERAL EMPL # (or S.S. #):

TECHNICAL DATA (LIST ALL FIXTURES)
DESCRIPTION QTY SIZE
ITEMS
Lighting Fixtures
Receptacles
Switches
Detectors
Light Poles
Motors - Excl. HP
Emergency & Exit Lights
Communications Points
Alarm Devices / E.A.C. Panel

TOTAL NUMBERS
Pool Permit w/UV Lights
Storable Pool/Spa/Hot Tub
KW Elec. Range / Receptacle KW
KW Oven / Surface Unit KW
KW Elec. Water Heater KW
KW Elec. Dryer / Receptacle KW
KW Dishwasher KW
HP Garbage Disposal HP
KW Central A/C Unit KW
HP/KW Space Heater/Air Handler HP/KW
KW Baseboard Heat KW
HP Motors 1/+ HP HP
KW Transformer/Generator KW
AMP Service AMP
AMP Subpanels AMP
AMP Motor Control Center AMP
AMP Elec. Sign/Outline Light KW
Other
Other
Other

Estimated Cost of Electrical Work: \$
Signature (print name):
Estimated Cost of Electrical Work: \$
Signature (print name):

Owner Contractor
SUBCODE APPROVAL:
PLANS: Required Approved
Approved by:
Date:

CONTRACTOR AFFIX SEAL:

COUNTER FORM
PLEASE PRINT

PLUMBING

CONTRACTOR:

ADDRESS:

PHONE:

LIC. #:

LIC. EXPIRATION DATE:

FEDERAL EMP. # (or S.S. #):

TECHNICAL SITE DATA (LIST ALL FIXTURES)

NO. FIXTURE/EQUIPMENT

Water Closet
Urinal / Bidet
Bath Tub
Lavatory
Shower
Floor Drain
Sink
Dishwasher
Drinking Fountain
Washing Machine
Hose Bibb
Gas Piping
Fuel Oil Piping
Water Heater
Steam Boiler
Hot Water Boiler
Sewer Pump
Interceptor / Separator
Backflow Preventer
Greasetrap
Water Cooled AC or Refrig. Unit
Sewer Connection
Septic (Disposal System) Closure
Water Service Connection
Gas Service Connection
Active Solar System
Vent Through Roof
Other

Estimated Cost of Plumbing Work: \$

Signature:

Owner ☐

Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

Date:

CONTRACTOR AFFIX SEAL:

FIRE

CONTRACTOR: Systems Sales Corporation

ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753-6815

PHONE: 732-751-0600

LIC. #:

EXP. DATE:

FEDERAL EMP. # (or S.S. #): 222-359-665/000

TECHNICAL DATA (DESCRIPTION OF WORK)

Upgrade Fire Alarm System
4th Floor

Heating Type: ☐ Gas ☐ Oil ☐ Electric ☐ Solar
Heating Sys: ☐ New ☐ Existing
Location of Furnace / Boiler

Water Supply Source

Method of Valve Supervision

Local Alarm Supervision

Central Supervision

Proprietary Supervision

Flammable Liquid Storage Tanks Capacity Fuel:

Combustible Liquid Storage Tanks Capacity Fuel:

L.G.P. Storage Tanks Capacity Fuel:

DESCRIPTION

NUMBER

Wet Sprinkler Heads

Dry Sprinkler Heads

Total

Smoke Detectors

Heat Detectors

Total

Stand Pipes

Kitchen Hood Exhaust Systems

Pre-Engineered Systems

Co2 Suppression

Halon Suppression

Foam Suppression

Dry Chemical

Wet Chemical

Gas or Oil Fired Appliance

Other

Other

Estimated Cost of Fire Protection Work: \$

Signature:

Owner ☐

Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

Site Location: Brick Hospital Date Rec'd: _____
Block: _____ Lot: _____ Date Issued: _____
Owner Id Fee: _____ Control #: _____
Address: 425 Jack Martin Blvd. Permit #: _____
State: NJ Zip: 08724 Phone: (_____) _____
SS #: _____ Provide only if Applicant is owner

TOWNSHIP OF BRICK
401 Chambers Bridge Road
Brick, New Jersey 08723

COUNTER FORM
PLEASE PRINT

BUILDING

CONTRACTOR: _____
ADDRESS: _____
PHONE: _____
LIC. #: _____
LIC. EXPIRATION DATE: _____
FEDERAL EMPL. # (or S.S. #): _____
TECHNICAL SITE DATA
DESCRIPTION OF WORK: _____

TYPE OF WORK

☐ New Building
☐ Addition ☐ Fence: _____ Height (6' or More)
☐ Alteration ☐ Sign: _____ Sq. Ft.
☐ Roofing ☐ Pool (In Ground)
☐ Siding ☐ Pool (Above Ground)
☐ Other: _____ ☐ Asbestos Abatement
☐ Other: _____ ☐ Demolition

BUILDING CHARACTERISTICS

USE GROUP: _____ Present: _____ Proposed: _____
CONSTR. CLASS: _____ Present: _____ Proposed: _____
No. of Stories: _____
Height of Structure: _____
Area - Largest Floor: _____
Total Building Area / All Floors: _____
Volume of Structure: _____ Total Land Disturbed: _____
Signature: _____

Estimated Cost of Building Work: _____
New Building (1): \$ _____
Alteration (2): \$ _____
TOTAL (1+2): \$ _____
SUBCODE APPROVAL: _____
PLANS: _____ Required ☐ Approved ☐

Approved by: _____
Date: _____

ELECTRICAL

CONTRACTOR: _____
ADDRESS: _____
PHONE: _____
LIC. #: _____ EXP. DATE: _____
FEDERAL EMPL. # (or S.S. #): _____

TECHNICAL DATA (LIST ALL FIXTURES)

DESCRIPTION	QTY	SIZE
Lighting Fixtures		
Receptacles		
Switches		
Detectors		
Light Poles		
Motors - Exact HP		
Emergency & Exit Lights		
Communications Poles		
Alarm Devices / E.A.C. Panel		

TOTAL NUMBERS

Pool Permit / UV Lights	
Portable Pool / Spa / Hot Tub	
KW Elec. Range / Receptacle	KW
KW Oven / Surface Unit	KW
KW Elec. Water Heater	KW
KW Elec. Dryer / Receptacle	KW
KW Dishwasher	KW
HP Garbage Disposal	HP
KW Central A/C Unit	KW
HP/KW Space Heater / Air Handler	HP/KW
KW Baseboard Heat	KW
HP Motors 1/2 HP	HP
KW Transformer / Generator	KW
AMP Service	AMP
AMP Subpanels	AMP
AMP Motor Control Center	AMP
AMP Elec. Sign / Outline Light	KW
Other	
Other	
Other	
Other	

Estimated Cost of Electrical Work: \$ _____
Signature (print name): _____
Estimated Cost of Electrical Work: \$ _____
Signature (print name): _____

Owner ☐ Contractor ☐
SUBCODE APPROVAL: _____
PLANS: _____ Required ☐ Approved ☐
Approved by: _____
Date: _____

CONTRACTOR AFFIX SEAL:

Site Location: Brick Hospital	Date Rec'd:
Block: Lot:	Date Issued:
Owner Id Fee:	Control #:
Address: 425 Jack Martin Blvd.	Permit #:
State: NJ Zip: 08724 Phone: ()	
SS #:	
Provide only if Applicant is owner	

TOWNSHIP OF BRICK
401 Chambers Bridge Road
Brick, New Jersey 08723

COUNTER FORM
PLEASE PRINT

BUILDING

CONTRACTOR:
ADDRESS:

PHONE:
LIC. #:

EXP. DATE:
FEDERAL EMPL. # (or S.S. #):

TECHNICAL SITE DATA
DESCRIPTION OF WORK:

TYPE OF WORK

☐ New Building
☐ Addition
☐ Alteration
☐ Roofing
☐ Siding
☐ Other:
☐ Fence: Height (6' or More)
☐ Sign: Sq. Ft.
☐ Pool (In Ground)
☐ Pool (Above Ground)
☐ Asbestos Abatement
☐ Demolition

BUILDING CHARACTERISTICS

USE GROUP: Present: Proposed:
CONSTR. CLASS: Present: Proposed:
No. of Stories:
Height of Structure:
Area - Largest Floor:
Total Building Area / All Floors:
Volume of Structure: Total Land Disturbed:
Signature:

Estimated Cost of Building Work:
New Building (1): \$
Alteration (2): \$
TOTAL (1+2): \$
SUBCODE APPROVAL:
PLANS: Required ☐ Approved ☐

Approved by:
Date:

ELECTRICAL

CONTRACTOR:
ADDRESS:

PHONE:
LIC. #:

EXP. DATE:
FEDERAL EMPL. # (or S.S. #):

TECHNICAL DATA (LIST ALL FIXTURES)
DESCRIPTION QTY SIZE

ITEMS
Lighting Fixtures
Receptacles
Switches
Detectors
Light Poles
Motors - Exact HP
Emergency & Exit Lights
Communications Points
Alarm Devices / E.A.C. Panel

TOTAL NUMBERS

Pool Permit w/UV Lights
Storable Pool/Spa/Hot Tub
KW Elec. Range / Receptacle KW
KW Oven / Surface Unit KW
KW Elec. Water Heater KW
KW Elec. Dryer / Receptacle KW
KW Dishwasher KW
HP Garbage Disposal HP
KW Central A/C Unit KW
HP/KW Space Heater/Air Handler HP/KW
KW Baseboard Heat KW
HP Motors 1/+ HP HP
KW Transformer/Generator KW
AMP Service AMP
AMP Subpanels AMP
AMP Motor Control Center AMP
AMP Elec. Sign/Outline Light KW
Other
Other
Other
Other

Estimated Cost of Electrical Work: \$
Signature (print name):
Estimated Cost of Electrical Work: \$
Signature (print name):

Owner ☐ Contractor ☐
SUBCODE APPROVAL:
PLANS: Required ☐ Approved ☐

Approved by:
Date:

CONTRACTOR AFFIX SEAL:

COUNTER FORM
PLEASE PRINT

PLUMBING

CONTRACTOR:

ADDRESS:

PHONE:

LIC. #:

LIC. EXPIRATION DATE:

FEDERAL EMP. # (or S.S. #):

TECHNICAL SITE DATA (LIST ALL FIXTURES)

NO. FIXTURE/EQUIPMENT

Water Closet
Urinal / Bidet
Bath Tub
Lavatory
Shower
Floor Drain
Sink
Dishwasher
Drinking Fountain
Washing Machine
Hose Bibb
Gas Piping
Fuel Oil Piping
Water Heater
Steam Boiler
Hot Water Boiler
Sewer Pump
Interceptor / Separator
Backflow Preventer
Greasetrap
Water Cooled AC or Refrig. Unit
Sewer Connection
Septic (Disposal System) Closure
Water Service Connection
Gas Service Connection
Active Solar System
Vent Through Roof
Other

Estimated Cost of Plumbing Work: \$

Signature:

Owner ☐ Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

Date:

CONTRACTOR AFFIX SEAL:

FIRE

CONTRACTOR: Systems Sales Corporation

ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753-6815

PHONE: 732-751-0600

LIC. #:

EXP. DATE:

FEDERAL EMP. # (or S.S. #): 222-359-665/000

TECHNICAL DATA (DESCRIPTION OF WORK)

Upgrade Fire Alarm System
5th Floor

Heating Type: ☐ Gas ☐ Oil ☐ Electric ☐ Solar
Heating Sys: ☐ New ☐ Existing
Location of Furnace / Boiler

Water Supply Source

Method of Valve Supervision

Local Alarm Supervision

Central Supervision

Proprietary Supervision

Flammable Liquid Storage Tanks	Capacity	Fuel
Combustible Liquid Storage Tanks	Capacity	Fuel
L.G.P. Storage Tanks	Capacity	Fuel

DESCRIPTION NUMBER

Wet Sprinkler Heads

Dry Sprinkler Heads

Total

Smoke Detectors

Heat Detectors

Total

Stand Pipes

Kitchen Hood Exhaust Systems

Pre-Engineered Systems

Co2 Suppression

Halon Suppression

Foam Suppression

Dry Chemical

Wet Chemical

Gas or Oil Fired Appliance

Other

Other

Estimated Cost of Fire Protection Work: \$

Signature:

Owner ☐

Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

Site Location: Brick Hospital
Block: 1170 Lot: 18
Owner: In Fee
Address: 425 Jack Martin Blvd.
State: NJ Zip: 08724 Phone: ()
SS #: Provide only if Applicant is owner

TOWNSHIP OF BRICK
401 Chambers Bridge Road
Brick, New Jersey 08723

COUNTER FORM
PLEASE PRINT

BUILDING

CONTRACTOR:
ADDRESS:
PHONE:
LIC. #:
EXPIRATION DATE:
FEDERAL EMP. # (or S.S. #):
TECHNICAL SITE DATA
DESCRIPTION OF WORK:

TYPE OF WORK

☐ New Building
☐ Addition ☐ Fence: Height (6' or More)
☐ Alteration ☐ Sign: Sq. Ft.
☐ Roofing ☐ Pool (In Ground)
☐ Siding ☐ Pool (Above Ground)
☐ Other: ☐ Asbestos Abatement
☐ Other: ☐ Demolition

BUILDING CHARACTERISTICS

USE GROUP Present: Proposed:
CONSTR. CLASS Present: Proposed:
No. of Stories:
Height of Structure:
Area - Largest Floor:
New Building Area / All Floors:
Volume of Structure: Total Land Disturbed:
Signature:

Estimated Cost of Building Work:
New Building (1): \$
Alteration (2): \$
TOTAL (1+2): \$
SUBCODE APPROVAL:
PLANS: Required ☐ Approved ☐

Approved by:
Date:

ELECTRICAL

CONTRACTOR:
ADDRESS:
PHONE:
LIC. #:
EXP. DATE:
FEDERAL EMP. # (or S.S. #):

TECHNICAL DATA (LIST ALL FIXTURES).

DESCRIPTION	QTY	SIZE
ITEMS		
Lighting Fixtures		
Receptacles		
Switches		
Detectors		
Light Poles		
Motors - Fract. HP		
Emergency & Exit Lights		
Communications Points		
Alarm Devices / E.A.C. Panel		

TOTAL NUMBERS

Pool Permit w/UDW Lights	
Storable Pool/Spa/Hot Tub	
KW Elec. Range / Receptacle	KW
KW Oven / Surface Unit	KW
KW Elec. Water Heater	KW
KW Elec. Dryer / Receptacle	KW
KW Dishwasher	KW
HP Garbage Disposal	HP
KW Central A/C Unit	KW
HP/KW Space Heater/Air Handler	HP/KW
KW Baseboard Heat	KW
HP Motors 1/+ HP	HP
KW Transformer/Generator	KW
AMP Service	AMP
AMP Subpanels	AMP
AMP Motor Control Center	AMP
AMP Elec. Sign/Outline Light	KW
Other	
Other	
Other	
Other	

Estimated Cost of Electrical Work: \$
Signature (print name):
Estimated Cost of Electrical Work: \$
Signature (print name):

Owner ☐ Contractor ☐
SUBCODE APPROVAL:
PLANS: Required ☐ Approved ☐
Approved by:
Date:

CONTRACTOR AFFIX SEAL:

COUNTER FORM
PLEASE PRINT

PLUMBING

CONTRACTOR:

ADDRESS:

PHONE:

LIC. #:

LIC. EXPIRATION DATE:

FEDERAL EMP. # (or S.S. #):

TECHNICAL SITE DATA (LIST ALL FIXTURES)

NO. FIXTURE/EQUIPMENT

Water Closet
Urinal / Bidet
Bath Tub
Lavatory
Shower
Floor Drain
Sink
Dishwasher
Drinking Fountain
Washing Machine
Hose Bibb
Gas Piping
Fuel Oil Piping
Water Heater
Steam Boiler
Hot Water Boiler
Sewer Pump
Interceptor / Separator
Backflow Preventer
Grease trap
Water Cooled AC or Refrig. Unit
Sewer Connection
Septic (Disposal System) Closure
Water Service Connection
Gas Service Connection
Active Solar System
Vent Through Roof
Other

Estimated Cost of Plumbing Work: \$

Signature:

Owner ☐

Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

Date:

CONTRACTOR AFFIX SEAL:

FIRE

CONTRACTOR: Systems Sales Corporation

ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753-6815

PHONE: 732-751-0600

LIC. #:

EXP. DATE:

FEDERAL EMP. # (or S.S. #): 222-359-665/000

TECHNICAL DATA (DESCRIPTION OF WORK)

Upgrade Fire Alarm System
Basement Level

Heating Type: ☐ Gas ☐ Oil ☐ Electric ☐ Solar
Heating Sys: ☐ New ☐ Existing
Location of Furnace / Boiler

Water Supply Source

Method of Valve Supervision

Local Alarm Supervision

Central Supervision

Proprietary Supervision

Flammable Liquid Storage Tanks	Capacity	Fuel:
Combustible Liquid Storage Tanks	Capacity	Fuel:
L.G.P. Storage Tanks	Capacity	Fuel:

DESCRIPTION

NUMBER

Wet Sprinkler Heads

Dry Sprinkler Heads

Total

Smoke Detectors

Heat Detectors

Total

Stand Pipes

Kitchen Hood Exhaust Systems

Pre-Engineered Systems

Co2 Suppression

Halon Suppression

Foam Suppression

Dry Chemical

Wet Chemical

Gas or Oil Fired Appliance

Other

Other

Estimated Cost of Fire Protection Work: \$

Signature:

Owner ☐

Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

COUNTER FORM
PLEASE PRINT

PLUMBING

CONTRACTOR:

ADDRESS:

PHONE:

LIC. #:

LIC. EXPIRATION DATE:

FEDERAL EMP. # (or S.S. #):

TECHNICAL SITE DATA (LIST ALL FIXTURES)

NO. FIXTURE/EQUIPMENT

Water Closet
Urinal / Bidet
Bath Tub
Lavatory
Shower
Floor Drain
Sink
Dishwasher
Drinking Fountain
Washing Machine
Hose Bibb
Gas Piping
Fuel Oil Piping
Water Heater
Steam Boiler
Hot Water Boiler
Sewer Pump
Interceptor / Separator
Backflow Preventer
Greasetrap
Water Cooled AC or Refrig. Unit
Sewer Connection
Septic (Disposal System) Closure
Water Service Connection
Gas Service Connection
Active Solar System
Vent Through Roof
Other

Estimated Cost of Plumbing Work: \$

Signature:

Owner ☐ Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by:

Date:

CONTRACTOR AFFIX SEAL:

FIRE

CONTRACTOR: Systems Sales Corporation

ADDRESS: 1345 Campus Parkway
Neptune, NJ 07753-6815

PHONE: 732-751-0600

LIC. #:

EXP. DATE:

FEDERAL EMP. # (or S.S. #): 222-359-665/000

TECHNICAL DATA (DESCRIPTION OF WORK)

Upgrade Fire Alarm System
1st Floor

Heating Type: ☐ Gas ☐ Oil ☐ Electric ☐ Solar
Heating Sys: ☐ New ☐ Existing
Location of Furnace / Boiler

Water Supply Source

Method of Valve Supervision

Local Alarm Supervision

Central Supervision

Proprietary Supervision

Flammable Liquid Storage Tanks Capacity: Fuel:

Combustible Liquid Storage Tanks Capacity: Fuel:

L.G.P. Storage Tanks Capacity: Fuel:

DESCRIPTION

NUMBER

Wet Sprinkler Heads

Dry Sprinkler Heads

Total

Smoke Detectors

Heat Detectors

Total

Stand Pipes

Kitchen Hood Exhaust Systems

Pre-Engineered Systems

Co2 Suppression

Halon Suppression

Foam Suppression

Dry Chemical

Wet Chemical

Gas or Oil Fired Appliance

Other

Other

Estimated Cost of Fire Protection Work: \$

Signature:

Owner ☐

Contractor ☐

SUBCODE APPROVAL:

PLANS: Required ☐ Approved ☐

Approved by: