



I. IDENTIFICATION

1. Proposed Work Site at: BRUCK PLAZA - RT 70 80 BRUCK PLAZA
2. Name of Owner in Fee: STERNBACHS Tel. (932) 477 4000
- Address BRUCK PLAZA RT 70 BRUCK NY zip code _____
3. Ownership in Fee: Public _____ Private _____
4. Principal Contractor: ADI SECURITY SERVICES Tel. (609) 860-2186
- Address 2540 RTE 130 CRANBURY NJ 08512
- License No. OR, if new _____ Exp. Date _____
- Federal Employee No. _____ FAX: (_____) _____
5. Architect or Engineer _____ Tel. (_____) _____
- Address _____
6. Responsible Person in Charge of Work _____
- Tel. (_____) _____ FAX (_____) _____

five alarms

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

Update

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)

1. ☐ Minor Work
2. ☐ New Building
3. ☐ Addition
4. ☐ Alteration
5. ☒ Fire Protection
6. ☐ Plumbing
7. ☐ Electrical
8. ☐ Elevator Devices
9. ☐ Asbestos Abat. Subch. 8
10. ☐ Lead Hazard Abatement
11. ☐ Demolition

TOTAL COSTS

Est. Cost

OPTIONAL (for office use only)Plans
Rec'd by

Date
Rec'd

Rejection
Date

Approval
Date

Re-viewer

Result
Approach

Resubmission Dates

Approval

Re-
viewe

VII. DESCRIPTION OF BUILDING USE

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:
Steinbach's
2. Use Group:
B
3. Change in Use Group. Indicate Former:

III. DO YOU WANT: (optional)

- ☐ Partial Releases
- ☐ Prototype Processing

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

- | | |
|---|---|
| 1. ☐ Elevators/Escalators/Lifts/
Dumbwaiters/Moving Walks | 5. ☐ Cross-Connections/Backflow Preventers |
| 2. ☐ High Pressure Boilers | 6. ☐ Hazardous Uses/Places of Assembly |
| 3. ☐ Pressure Vessels | 7. ☐ Sprinklers |
| 4. ☐ Refrigeration Systems | 8. ☐ Smoke Control Systems in Open Wells |
| | 9. ☐ Underground Storage Tanks |

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

4/27/98

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

ADT Security Services - Michael McJannet

Address

2540 RTE 130 Suite 100

Cranbury

Telephone

(609) 860 2186

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			X	X	X	X	X	X	
☐ Planning Board			X	X	X	X	X	X	
☐ Zoning Board			X	X	X	X	X	X	
☐ Sewer Authority			X	X	X	X	X	X	
☐ Water Authority			X	X	X	X	X	X	
☐ Police Department			X	X	X	X	X	X	
☐ Health Department			X	X	X	X	X	X	
☐ Soil Conservation			X	X	X	X	X	X	
☐ N.J. Department of Community Affairs			X	X	X	X	X	X	
☐ N.J. Department of Transportation			X	X	X	X	X	X	
☐ N.J. Department of Environmental Protection			X	X	X	X	X	X	
☐ Utility Dig No.			X	X	X	X	X	X	
☐									
☐									

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

Name of Code & Edition	Name of Code & Edition	Other
Building _____	Energy _____	_____
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

UCC NEW JERSEY
CONSTRUCTION
PERMIT

Date Issued 04/29/98
Control #
Permit # 98-1182

IDENTIFICATION Block 671 Lot 8

Work Site Location 80 BRICK PLAZA STEINBACH

FIRE ALARMS

Owner in Fee FEDERAL REALTY INVESTMENT

Address 1220 PARK AVE

WILLOW GROVE, PA 19090-

Telephone (800)688-8980

Contractor ADT SECURITIES

Address 2540 RT 130

CRANBURY, NJ

Telephone (609)260-2146

Lic. No. or Bldrs. Reg. No.

Federal Emp. No.

or Social Security No.

Exp. Date / /

Is hereby granted permission to perform the following work:

☐ BUILDING ☐ PLUMBING ☐ OTHER

☐ ELECTRICAL ☒ FIRE PROTECTION

☐ ELEVATOR DEVICES

DESCRIPTION OF WORK:

NOTE: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$ 10,000

J. L. Sullivan
CONSTRUCTION OFFICIAL

PAYMENTS (Office Use Only)

Building 0

Electrical 0

Plumbing 0

Fire Protection 90

Elevator Devices 0

Other

DCA Training Fee 8

Cart. of Occ. 0

Other

Total 98

Check No. 02006117

Cash

Collected By: CS

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
FIRE PROTECTION
SUBCODE
TECHNICAL SECTION

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

Block 671 Lot 8
Work Site Location 80 BRICK PLAZA STEINBACH

FIRE ALARMS

Owner in Fee FEDERAL REALTY INVESTMENT

Address 122C PARK AVE

WILLOW GROVE, PA 19090-

Tele. (800)688-8980

Contractor ADT SECURITIES

Address 2540 RT 130

CRANBURY, NJ

Tele. (609)260-2146

Lic. No. or Bldgs. Reg. No.

Federal Exp. No.

or Social Security No.

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed M

Construction Class Present Proposed

Heating Systems ☐ New ☐ Existing

Type: ☐ Gas ☐ Oil ☐ Electrical ☐ Solar

☐ Other

Location:

Total Est Cost of Fire Prot. Work \$ 10,000 (X) Other FIRE STATION

JOB SUMMARY (Office Use Only)

PLAN REVIEW

☐ No Plans Required

Joint Plan Review Required:

☐ Bldg ☐ Elect

☐ Plumb ☐ Elevator

☐ Fire Plans Approved

Date: 4/29/98

Approved By:

SUBCODE APPROVAL

☒ CO ☐ CCO

Date: 6/30/98

Approved By:

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

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

Number

Wet Sprinkler Heads 0

Dry Sprinkler Heads 0

TOTAL 0

Smoke Detectors 5

Heat Detectors 2

TOTAL 7

Stand Pipes 0

Kitchen Hood Exhaust Systems 0

Pre-Engineered Systems 0

CO2 Suppression 0

Halon Suppression 0

Foam Suppression 0

Dry Chemical 0

Wet Chemical 0

Gas or Oil Fired Appliance 0

Other FIRE ALARM PANEL

Other 4 Smoke Alts

Administrative Surcharge \$ 0

Minimum Fee \$ 0

TOTAL FEE \$ 90

DCA Training Fee \$ 8

Date Received 04/27/98
Date Issued 4/29/98
Control # C28-80
Permit # 98-1162

FEE (Office Use Only)

SIGNATURE

U.C.C. Form F-140B

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
FIRE PROTECTION
SUBCODE
TECHNICAL SECTION

Date Received 04/27/98
Date Issued 4/24/98
Control # C28-80
Permit # 98-1182

A. IDENTIFICATION-APPLICANT: COMPLETE ALL APPLICABLE INFORMATION, WHEN CHANG-

ING CONTRACTORS, NOTIFY THIS OFFICE, CALL UTILITY DIG NO: 1-800-272-1000

Block 671 Lot 8

Work Site Location 80 BRICK PLAZA STEINBACH

FIRE ALARMS

Owner in Fee FEDERAL REALTY INVESTMENT

Address 127C PARK AVE

WILTON GROVE, PA 19090-

Tele. (800) 688-8980

Contractor ADV SECURITIES

Address 2540 ET 130

CRANFORD, NJ

Tele. (609) 260-2146

Lic. No. or Bldr

Federal Emp. No. [REDACTED]

or Social Security No.

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed H

Construction Class Present Proposed

Heating Systems [] New [] Existing

Type: [] Gas [] Oil [] Electrical [] Solar

[] Other

Location:

Total Est Cost of Fire Prot. Work \$ 10,000 [X] Other FIRE STATION

JOB SUMMARY (Office Use Only)

PLAN-REVIEW

[] No Plans Required

Joint Plan Review Required:

[] Bidg [] Elect

[] Plumb [] Elevator

[] Fire Plans Approved

Date: 4/24/98

Approved By: [Signature]

SUBCODE APPROVAL

[] CO [] CCO [] CA

Date:

Approved By:

INSPECTIONS Dates (Month/Day)

Type Failure Failure Approval Initial

Suppr Test

F-Alarm Test

Smoke Test

Mechanical

TCO

Other

Other

Other

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.H.G. Storage Tanks

Number

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Capacity

Fuel

Administrative Surcharge \$

Minimum Fee \$

TOTAL FEE \$

DCA Training Fee \$

U.C.C. Form F-140B

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
FIRE PROTECTION
SUBCODE
TECHNICAL SECTION

Date Received 04/27/98
Date Issued / /
Control # C28-80
Permit #

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

Block 671 Lot 8
Work Site Location 80 BRICK PLAZA STEINBACH

FIRE ALARMS
Owner in Fee FEDERAL REALTY INVESTMENT
Address 122C PARK AVE
WILLOW GROVE, PA 19090-

Tele. (800) 688-8980
Contractor ADT SECURITIES
Address 2540 RT 130
CEANBURY, NJ

Tele. (609) 260-2146
Lic. No. or Bldgs. No. 1
Federal Emp. No. [REDACTED]
or Social Security No. [REDACTED]

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed M
Construction Class Present Proposed
Heating Systems [] New [] Existing
Type: [] Gas [] Oil [] Electrical [] Solar
[] Other

Location:
Total Est Cost of Fire Prot. Work \$ 10,000 [X] Other FIRE STATION
JOB SUMMARY (Office Use Only)

PLAN REVIEW
[] No Plans Required
Joint Plan Review Required: Type Failure Failure Approval Initial

INSPECTIONS
[] Bldg [] Elect
[] Plumb [] Elevator
[] Fire Plans Approved
Date: Suppr Test
P-Alarm Test
Smoke Test
Mechanical
TCO
Other
Other
Other

Approved By: _____
SUBCODE APPROVAL
[] CO [] CCO [] CA
Date: _____
Approved By: _____

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

Number	FEE (Office Use Only)
Wet Sprinkler Heads	0
Dry Sprinkler Heads	0
TOTAL	0

Number	FEE (Office Use Only)
Smoke Detectors	5
Heat Detectors	2
TOTAL	7
Stand Pipes	5,000
Kitchen Hood Exhaust Systems	0
Pre-Engineered Systems	0
CO2 Suppression	0
Halon Suppression	0
Foam Suppression	0
Dry Chemical	0
Wet Chemical	0

Number	FEE (Office Use Only)
Gas or Oil Fired Appliance	0
Other	0
Other	0

Number	FEE (Office Use Only)
Paid [] Check #	Administrative Surcharge \$ 0
Minimum Fee \$	0
Collected by: TOTAL FEE \$	35
DCA Training Fee \$	8

SIGNATURE

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
FIRE PROTECTION
SUBCODE
TECHNICAL SECTION

Date Received 04/27/98
Date Issued / /
Control # C28-80
Permit #

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

Block 671 Lot 8
Work site location 30 BRICK PLAZA STEINACH

FIRE ALARMS

Owner in fee FEDERAL REALTY INVESTMENT
Address 122C PARK AVE
WILSON GROVE, PA 19090-

Tele (800) 688-8980

Contractor AUT SECURITIES

Address 2540 RT 130

CHANDLER, NJ

Tele (609) 260-2146

Lic. No. or Bids. Reg. No.

Federal Emp. No.

or Social Security No.

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed M

Construction Class Present Proposed

Heating Systems [] New [] Existing

Type: [] Gas [] Oil [] Electrical [] Solar

[] Other

Location:

Total Ret Cost of Fire Prot. Work \$ 10,000 [X] Other FIRE STATION

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[] No Plans Required

Joint Plan Review Required:

[] Bldg [] Elect

[] Plumb [] Elevator

[] Fire Plans Approved

Date:

Approved By:

SUBCODE APPROVAL

[] CO [] CCO [] CA

Date:

Approved By:

INSPECTIONS Dates (Month/Day)

Type Failure Failure Approval Initial

Suppr Test

P-Alarm Test

Smoke Test

Mechanical

TCO

Other

Other

Other

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.H.G. Storage Tanks

Number

PER (Office Use Only)

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

Administrative Surcharge

Paid [] Check \$

Collected by:

DCA Training Fee

SIGNATURE



FIRE ALARM SYSTEMS

Description

Wheelock's **Patented 2 WIRE Series AS Audible Strobe Appliance(s)** and **Series AH Audibles** offer more features with **Less Current and Zero Inrush**. The audible provides a **Selectable** choice of either a **continuous** horn tone or **temporal pattern** (code 3) tone when constant voltage from a Fire Alarm Control Panel (FACP) is applied. Each tone has 3 dBA settings to choose from. All models (audible only or audible/strobe) may be **Synchronized** when used in conjunction with the SM or DSM Sync Module. Additionally, the *audible may be silenced while maintaining strobe activation* on combination Series AS units.

The Series AS Audible Strobes and AH Audibles are designed for maximum performance, reliability, and cost-effectiveness while meeting or exceeding the latest requirements of NFPA 72 (National Fire Alarm Code), ANSI 117.1 (American National Standard for Accessible and Usable Buildings and Facilities) UL Standard 1971 (Standard for Signaling Devices for The Hearing Impaired) and UL 464 (Audible Signal Appliances). AS Audible Strobe Appliances, when properly specified and installed in accordance with NFPA/ANSI standards can provide the Equivalent Facilitation allowed under ADA Accessibility Guidelines (ADAAG General Section 2.2) by meeting or exceeding the Illumination which results from the ADA specified strobe intensity of 75 candela at 50 feet. This is an illumination of .030 lumens per square foot.

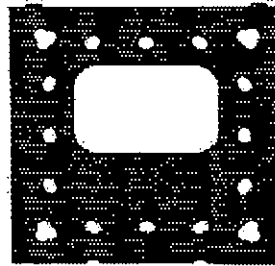
When used with the Wheelock Series SM or DSM Sync Module, synchronization of the continuous horn tone provides the *temporal (code 3) tone* (mandated by NFPA-72 (1993) with an effective date of July '98) simultaneously for all audible appliances. This ensures a distinct temporal (code 3) pattern when 2 or more audibles are within hearing distance. If not synchronized the temporal sound could overlap and not be distinctive. At the same time the strobes will be synchronized. This provides the ability to comply with **ADA recommendations** concerning photosensitive epilepsy and NFPA standards when installing 2 or more visual appliances within the field of view. *All of this plus the ability to silence the audible is achieved by using only 2 WIRES.*

Features

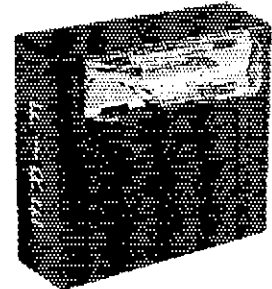
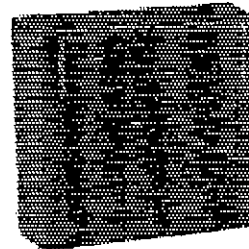
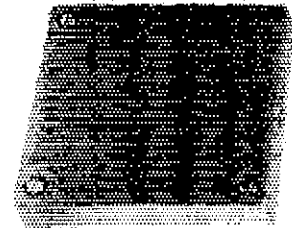
SERIES AS Audible Strobes and Series AH Audible Appliances

- **Approvals Include:** Underwriters Laboratories UL 1971 and UL464 Listings, FCC Part 15, European Community (CE), New York City (MEA), California State Fire Marshal (CSFM), Pending: Chicago (BFP) and Factory Mutual (FM).
- **ADA/NFPA/ANSI compliant.** Meets OSHA 29 Part 1910.165.
- **LOWER CURRENT.**
- **ZERO INRUSH**
- **PATENTED 2-Wire Appliance.**
- **Selectable Continuous Horn or Temporal (code 3) Tones.**
- **3 Selectable dBA levels in both tones.**
 - **Continuous Tone:** Anechoic; 90, 95, 99 dBA Reverberant 82, 88, or 91 dBA.
 - **Temporal (Code 3) Tone:** Anechoic; 90, 95, 99 dBA Reverberant 75, 82 or 85 dBA.
- **Patented Universal Mounting Plate** allows mounting to single gang, double gang, 4" square, 100 mm European backboxes or the SHBB surface backbox. No additional trim plates required.

SERIES AS AUDIBLE STROBE APPLIANCES • SERIES AH AUDIBLE APPLIANCES



UNIVERSAL MOUNTING PLATE

HORIZONTALLY MOUNTED STROBE
(15, 15/75, 30, 75 & 110 cd)
(shown as wall mount)SERIES AH
(Indoor only)SERIES AH-WP
(weatherproof)

- **SERIES AS Audible Strobe Appliances** are available in Wall and Ceiling mount models.
 - **Wall mount** available in 15, 15/75, 30, 75 and 110 candela intensity. The 15/75 candela wall mounted strobes are listed at 15 candela under UL Standard 1971 and meet 75 candela intensity on axis for ADA guidelines with low current draw.
 - **Ceiling mount** available in 15, 30, 75 and 100 candela intensity.
- All models can be Synchronized by adding the Series SM or DSM Sync Module to the NAC circuit.
- **Sync the Audible** – Maintain the Temporal Pattern when 2 or more appliances are in an area. Meets NFPA requirement for Temporal Evacuation Notification.
- **Sync the Strobe** – Maintain True 1 Flash per second when using 2 or more visual appliances within the field of view. Meets ADA and NFPA.
- Ability to **Silence the Audible** while maintaining the strobe flash.
- **ALL FEATURES ON 2-WIRES!**
- 12 and 24 volt models available.
- **SERIES AH Audible Appliances** are available in two models.
 - **AH-12 or AH-24 Indoor Audible Horn** – Enclosed in a matching grille to the Series AS.
 - **AH-12WP or AH-24WP** can be installed indoor or outdoor (weatherproof). When used outdoor, must be used with a WBB-Weatherproof Backbox.

NOTE: All CAUTIONS and WARNINGS are identified by the symbol ▲. All warnings are printed in bold capital letters.

▲ **WARNING:** PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING. SPECIFYING OR APPLYING THIS PRODUCT, FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS AND WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

General Notes:

Strobes are designed to flash at 1 flash per second minimum from 20-31VDC. (for 24 VDC models) or 10.5-15.6 VDC (for 12 VDC models). Note that NFPA-72 (1996) specifies a flash rate of 1 to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.

All candela ratings represent minimum effective Strobe intensity based on UL 1971.

Series AS Strobe products are UL 1971 for indoor use with a temperature range of 32° F to 120° F (0° C to 49° C) and maximum humidity of 85%.

Series AH horns are listed under UL 464 for audible signal appliances.

Series AH-12WP and AH-24WP audible appliance are Listed under UL 464 for indoor/outdoor use with a temperature range of -31° F to 150° F (-35° C to 66° C) maximum humidity of 95%.

Specifications and Ordering Information

ALL MOUNT AUDIBLE STROBES

Model Number*	Order Code*	Input Voltage (VDC)	Strobe Candela	Mounting Options***
AS-2415W-FR/FW	7404/7419	24	15	A,B,D,F,G,O,R,X
AS-241575W-FR/FW	7405/7420	24	15/75	A,B,D,F,G,O,R,X
AS-2430W-FR/FW	7406/7421	24	30	A,B,D,F,G,O,R,X
AS-2475W-FR/FW	7407/7422	24	75	A,B,D,F,G,O,R,X
AS-24110W-FR/FW	7408/7423	24	110	A,B,D,F,G,O,R,X
AS-1215W-FR/FW	7409/7424	12	15	A,B,D,F,G,O,R,X
AS-121575W-FR/FW	7410/7425	12	15/75	A,B,D,F,G,O,R,X
AH-12-R/W	7891/7894	12	—	A,B,D,F,G,O,R,X
AH-24-R/W	7892/7893	24	—	A,B,D,F,G,O,R,X
AH-12WP-R	7415	12	—	K
AH-24WP-R	7416	24	—	K

SPECIAL NOTE: AS Wall model numbers above reference both RED & WHITE products; Example: AS-2415W-FR = RED; Change FR to FW = WHITE

ORDER CODE: 7404=RED/7419=WHITE

CEILING MOUNT AUDIBLE STROBES

Available Dec. '97

Model Number**	Order Code	Input Voltage (VDC)	Strobe Candela	Mounting Options***
AS-2415C-FW	7411	24	15	A,B,D,F,G,R,V,X
AS-2430C-FW	7412	24	30	A,B,D,F,G,R,V,X
AS-2475C-FW	7413	24	75	A,B,D,F,G,R,V,X
AS-24100C-FW	7414	24	100	A,B,D,F,G,R,V,X

NOTES:

Refer code suffix: W = wall mount; WP = weather proof;

W = white; C = ceiling; F = fire lettering or call Customer Service if other lettering is required (Ex. Feuge); R = red plate.

Example: AS-2415W-FR ← Red
AS-2415C-FW ← White

Wall ← Fire Ceiling ← Fire

** Ceiling models available in red. Consult Wheelock Customer Service for delivery information.

*** Refer to Data Sheet #S7000 for additional mounting information.

Model Number*	Order Code	Input Voltage (VDC)	Avg Current @ 12 or 24 VDC	Mounting Options
SYNCHRONIZATION MODULES				
SYNC MODULE				
24 .025 E,N				
24 .038 W				

Note: SMSync Modules are rated for 3.0 amperes at 12 or 24 VDC; DSM Dual Sync Modules are rated for 3.0 amperes per circuit. The maximum number of interconnected DSM modules is twenty (20). Refer to Data Sheet #S3000 and Installation Instruction (PB3123-SM & PB3177-DSM) for additional information.

AVERAGE CURRENT* (Amperes) Audible Strobe					
At the 3 Audible Settings @ 20, 24, 31 & 10.5, 12 and 15.6 VDC					
Average Current — with Hi dBA Setting (99 dBA)					
Voltage	AS-2415W	AS-241575W	AS-2430W	AS-2475W	AS-24110W
20.0 VDC	0.088	0.105	0.128	0.200	0.230
24.0 VDC	0.087	0.102	0.120	0.177	0.202
31.0 VDC	0.090	0.100	0.119	0.152	0.183
10.5 VDC	0.248	0.317			
12.0 VDC	0.238	0.285			
15.6 VDC	0.233	0.258			
Average Current — with Med dBA Setting (95 dBA)					
Voltage	AS-2415W	AS-241575W	AS-2430W	AS-2475W	AS-24110W
20.0 VDC	0.074	0.089	0.116	0.184	0.216
24.0 VDC	0.072	0.083	0.105	0.156	0.183
31.0 VDC	0.067	0.077	0.092	0.130	0.158
10.5 VDC	0.205	0.267			
12.0 VDC	0.191	0.231			
15.6 VDC	0.179	0.200			
Average Current — with Low dBA Setting (90 dBA)					
Voltage	AS-2415W	AS-241575W	AS-2430W	AS-2475W	AS-24110W
20.0 VDC	0.070	0.084	0.111	0.178	0.210
24.0 VDC	0.064	0.077	0.098	0.149	0.177
31.0 VDC	0.058	0.067	0.084	0.117	0.148
10.5 VDC	0.184	0.250			
12.0 VDC	0.162	0.211			
15.6 VDC	0.145	0.174			

* Average current per actual Wheelock Production Testing at 10.5, 12, 15.6, 20, 24 & 31 VDC. For rated average, peak and inrush current across the UL listed voltage range for both filtered DC and unfiltered VRMS. See Installation Instruction (PB3508 for Series AS & PB3519 for Series AH).

AVERAGE CURRENT* (Amperes) Audible Only				
Voltage	AH-24-R/W	AH-24WP-R	AH-12-R/W	AH-12WP-R
	Hi/Med/Lo	Hi/Med/Lo	Hi/Med/Lo	Hi/Med/Lo
20.0 VDC	.035/.020/.014	.035/.020/.014		
24.0 VDC	.041/.024/.017	.041/.024/.017		
31.0 VDC	.053/.030/.021	.053/.030/.021		
10.5 VDC			.093/.037/.030	.093/.037/.030
12.0 VDC			.100/.043/.035	.100/.043/.035
15.6 VDC			.128/.056/.040	.128/.056/.040

SPECIAL NOTE:

Enhanced Ceiling Models will be available Dec. 1997 and Enhanced 12 V Wall Models will be available Jan. 1998. For applications requiring these appliances, prior to these dates, refer to Data sheet #S8000 or call Customer Service for assistance.

Series AS/AH Quick Reference Guide

Model Number	Wall Mount	Ceiling Mount	Non-Sync	Sync's w/ SM or DSM	Strobe Candela	24 VDC	12 VDC	*Model # Color RED	**Model # Color WHITE
AS-2415W-FR	X		X	X	15	X		X	
AS-241575W-FR	X		X	X	15/75	X		X	
AS-2430W-FR	X		X	X	30	X		X	
AS-2475W-FR	X		X	X	75	X		X	
AS-24110W-FR	X		X	X	110	X		X	
AS-1215W-FR	X		X	X	15		X	X	
AS-121575W-FR	X		X	X	15/75		X	X	
AS-2415C-FW		X	X	X	15	X			X
AS-2430C-FW		X	X	X	30	X			X
AS-2475C-FW		X	X	X	75	X			X
AS-24100C-FW		X	X	X	100	X			X
AH-12-R	X	X	X	X			X	X	
AH-24-R	X	X	X	X		X		X	
AH-12WP-R	X	X	X	X			X	X	
AH-24WP-R	X	X	X	X		X		X	

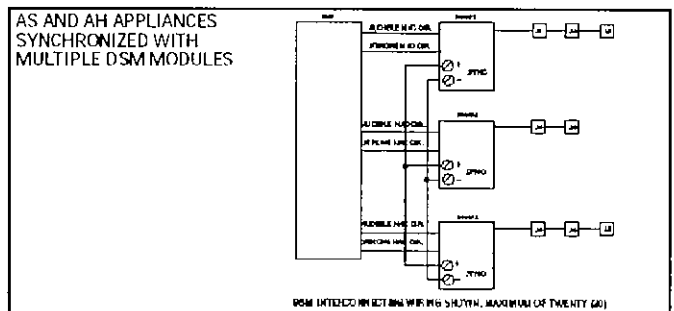
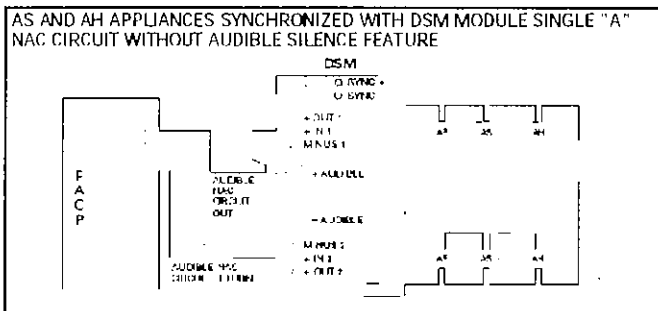
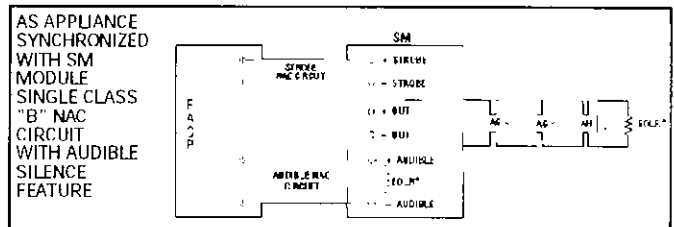
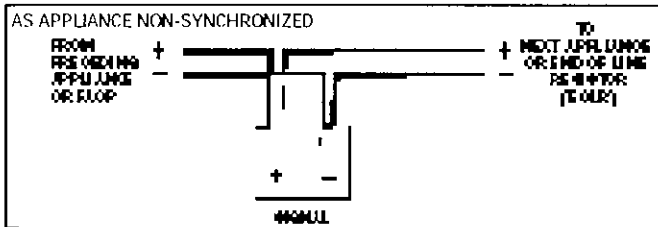
* Model # Color is Red, can be ordered in White, see Specifications & Ordering Information for white order code.

** Model # Color is White, can be ordered in Red, call Customer Service for order code & Delivery.

▲ WARNING: CONTACT WHEELLOCK FOR "INSTALLATION INSTRUCTIONS" (P83509 Series AS, P83641 Series AH-WP & P83519 Series AH) AND "GENERAL INFORMATION" SHEET (P82380) ON THESE PRODUCTS. THESE DOCUMENTS DO UNDERGO PERIODIC CHANGES. IT IS IMPORTANT THAT YOU HAVE CURRENT INFORMATION ON THESE PRODUCTS. THESE MATERIALS CONTAIN IMPORTANT INFORMATION THAT SHOULD BE READ PRIOR TO SPECIFYING OR INSTALLING THESE PRODUCTS, INCLUDING:

- TOTAL CURRENT REQUIRED BY ALL APPLIANCES CONNECTED TO SYSTEM PRIMARY AND SECONDARY POWER SOURCES.
- FUSE RATINGS ON NOTIFICATION APPLIANCE CIRCUITS TO HANDLE PEAK CURRENTS FROM ALL APPLIANCES ON THOSE CIRCUITS.
- COMPOSITE FLASH RATE FROM MULTIPLE STROBES WITHIN A PERSON'S FIELD OF VIEW.
- THE VOLTAGE APPLIED TO THESE PRODUCTS MUST BE WITHIN THEIR RATED INPUT VOLTAGE RANGE.
- INSTALLATION OF 110 CANDELA STROBE PRODUCTS IN SLEEPING AREAS.
- INSTALLATION IN OFFICE AREAS AND OTHER SPECIFICATION AND INSTALLATION ISSUES.
- USE SERIES AS/AH ONLY ON CIRCUITS WITH CONTINUOUSLY APPLIED OPERATING VOLTAGE. DO NOT USE SERIES AS ON CODED OR INTERRUPTED CIRCUITS IN WHICH THE APPLIED VOLTAGE IS CYCLED ON AND OFF AS THE STROBE MAY NOT FLASH.
- FAILURE TO COMPLY WITH THE INSTALLATION INSTRUCTIONS OR GENERAL INFORMATION SHEETS COULD RESULT IN IMPROPER INSTALLATION, APPLICATION, AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.
- CONDUCTOR SIZE (AWG), LENGTH AND AMPACITY SHOULD BE TAKEN INTO CONSIDERATION PRIOR TO DESIGN AND INSTALLATION OF THESE PRODUCTS, PARTICULARLY IN RETROFIT INSTALLATIONS.

Wiring Diagrams (for all models)



Refer to SM/DSM data sheet S3000 and Installation instructions (P83123-SM & P83177-DSM).

* Value determined by FACP NAC circuits.

Note: AS/AH must be set on continuous horn tone to achieve synchronized temporal (code 3) tone and connected to the SM or DSM Sync Module.

Wheelock products must be used within their published specifications and must be PROPERLY specified, applied, installed, operated, maintained and operationally tested in accordance with their installation instructions at the time of installation and at least twice a year or more often and in accordance with local, state and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters' Laboratories (UL), National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ).

Architects and Engineers Specifications

The notification appliances shall be Wheelock's Patented Series AS Audible Strobe and Series AH Audible Horn appliances; and when synchronization is required the companion SM and DSM Sync Modules, or approved equals. Series AS appliances and SM and DSM Sync Modules shall be listed under UL Standard 1971 (Emergency Devices for the Hearing Impaired for Indoor Fire Protection Service). Series AH Audible Horn shall be UL listed under Standard 464 (Fire Protective Signaling). Series AS, AH, SM and DSM shall be certified to meet FCC part 15, Class B.

The appliances shall be designed for 2-wire operation and shall provide either a continuous or temporal (Code 3) horn tone when constant voltage from a Notification Appliance Circuit (NAC) of the Fire Alarm Control Panel (FACP) is applied or synchronized temporal (Code 3) horn and synchronized strobe when used in conjunction with the SM or DSM Sync Modules.

Series AS shall be designed so that the audible signal may be silenced while maintaining strobe activation (when used with the SM or DSM Sync Modules). The SM and DSM Sync Modules shall incorporate two inputs from the Notification Appliance Circuits (NAC) for power connection from the Fire Alarm Control Panel; one for the strobe circuit (NAC) and one for the audible circuit (NAC). A single 2-wire output shall control both the audible and visual appliances. Upon activation of the audible silence function of the Fire Alarm Control Panel, the audible signal shall be silenced while maintaining strobe activation.

Sound output at 10 feet shall be field selectable for 90, 95, or 99 dBA anechoic for both continuous and temporal (Code 3) tones. Series AS shall provide listed strobe intensities of 15, 15/75, 30, 75, and 110 candela for wall mount and/or 15, 30, 75 and 100 candela for ceiling mount applications, with a flash rate of one flash per second minimum across the Listed voltage range. The strobe appliance shall incorporate a Xenon flashtube enclosed in a rugged Lexan lens. The maximum allowable current at 24 VDC shall be 87 mA @ 15 cd, 102 mA @ 15/75 cd, 120 mA @ 30 cd, 177 mA @ 75 cd and 202 mA @ 110 cd. All appliances shall incorporate a zero inrush circuit design. The strobe shall have a horizontal plane.

The Sync Module shall be designed and available in two versions; the SM 12/24 for control of a single Class B NAC circuit; and a dual output version, the DSM-12/24 for control of either a single Class A or two Class B NAC circuits. The DSM shall provide the additional capability of "daisy-chaining", that is, the ability to interconnect multiple DSM's for synchronous horn and strobe operation on multiple NAC circuits. DSM-12/24 Interconnection capability shall be for a maximum of 20 modules (40 Class "B" NAC circuits or 20 Class "A" NAC circuits). Rated average current requirement for the SM 12/24 shall be .014 amperes @ 12 VDC and .025 amperes @ 24 VDC; the DSM 12/24 shall be .020 amperes @ 12 VDC and .038 amperes @ 24 VDC. The SM Sync Module shall be capable of handling a 3 ampere load at 12 or 24 VDC; the DSM Sync Modules shall be capable of handling a load of 3 amperes *per circuit* in the Class "B" mode and 3 amperes *per module* in the Class "A" mode at 12 or 24 VDC.

SM or DSM Sync Modules and AS Audible Strobes shall be designed as a system for continuous activation of the strobes should the Sync Control Module contacts fail in the passive state (i.e., contacts remain closed). In this default mode, the strobes shall revert to a non-synchronized default flash rate.

Series AS/AH appliances shall be designed for operation at 12 VDC or 24 VDC, over their respective listed voltage ranges of 10.5 to 15.6 VDC; and 20.0 to 31.0 VDC. The units shall be designed for operation on filtered DC, or unfiltered VRMS. Rated average current for Series AS shall depend upon voltage and strobe intensity; the current shall be as low as .058 amperes for 24 VDC versions and .145 amperes for 12 VDC versions. Rated average current for Series AH (volume set at high dB output) shall be .041 amperes for 24 VDC versions and .113 amperes for 12 VDC versions.

All versions shall be polarized for DC supervision and shall incorporate screw terminals for in/out field wiring of #18 to #12 AWG wire size.

Series AS/AH shall incorporate a unique Patented Universal Mounting Plate which shall allow mounting to single-gang, double-gang, 4" square, 100 mm European backboxes or Wheelock's SHBB surface backbox. No additional trim plate shall be required for flush mounting.

Dimensions for the Series AS/AH shall be 4 and 5/8 inches square by 1 and 1/2 inches deep.

Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock, Inc. standard terms and conditions.

3 YEAR WARRANTY

NATIONAL SALES OFFICE

1-800-631-2148

Canada 800-397-5777

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S8100 REV. 11/97



Unimode 4-16

Fire Alarm Control Panel

A2-450

Section: Conventional

February 19, 1998

GENERAL

The ADT Unimode 4-16 fire alarm control panel is a medium-sized unit designed for maximum flexibility and ease of installation. The microprocessor control and modular construction enable users to configure the system to meet their precise requirements. Field programmability simplifies initial installation and allows quick updates to meet future needs.

The center of the system is the Central Processor Unit (CPU-500) module which monitors and controls one or two additional user-selected modules. The Unimode 4-16 may be configured as a 4-, 8-, 12-, or 16-zone system. In addition, up to eight control points may be added, creating a maximum capacity of 28 points (16 zones and 12 output circuits).

Internal communications are accomplished over a high-speed serial data bus. Each module on the bus is automatically addressed, supervised and controlled by the CPU-500.

FEATURES

- Walk Test feature for single-person test of the system. Includes special zone-change audible indication and zone trouble indication.
- March Time, Temporal Code, or Steady selectable per notification circuit or control relay.
- Alarm verification, programmable per zone, with automatic discrimination between smoke detectors and dry-contact initiating devices.
- Field-programmable with multiple passwords and a special programming key to ensure the integrity of field-programmed information.
- Releasing service option with selectable time delays, abort circuit, and manual release.
- Multiple-hazard releasing option. Four cross-zone circuits.
- Presignal option with selectable time delays and manual evacuation control. Includes new positive alarm sequence option per NFPA standards.
- Two-stage alert/evacuation option meets Canadian and U.S. requirements.
- All initiating and notification circuits are power-limited for use with limited-energy cable.
- Resound of subsequent alarms, troubles, or supervisory signals, each with a distinct local audible indication.
- Each initiating zone may be programmed for normal, water-flow, or supervisory operation.
- Field-programmable supervisory complies with NFPA standards requiring distinction between supervisory condition and open-circuit trouble conditions.



S232



CS118/CS733

MEA

291-91-E, Vol VI



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California
State Fire
Marshal

7165-0085:164



- Map any output circuit to any input circuit in nonvolatile program memory.
- Enable/Disable per circuit from front panel switches.
- Small size permits semi-flush mounting between 16" center wall studs.
- RMS regulated notification circuit power.
- Integral charger for 7.0 AH to 17 AH battery options (use BB-17 when over 12 AH batteries).
- Ground fault detection and battery supervision.
- Silence inhibit timer (program option).
- RS-485 serial port for high-speed data communication with remote annunciators. May be used for remote ACKNOWLEDGE, SIGNAL SILENCE, and SYSTEM RESET.

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information, contact:

**Security Services Inc.**1750 Clint Moore Road, Boca Raton, FL 33431
Phone: (561) 988-3600 FAX: (561) 241-1923

Made in the U.S.A.



Unimode 4-16

Fire Alarm Control Panel

A2-450

Section: Conventional

February 19, 1998

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- March Time, Temporal Code, or Steady selectable per notification circuit or control relay.
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- Two-stage alert/evacuation option meets Canadian and U.S. requirements.
- All initiating and notification circuits are power-limited for use with limited-energy cable.
- Resound of subsequent alarms, troubles, or supervisory signals, each with a distinct local audible indication.
- Each initiating zone may be programmed for normal, water-flow, or supervisory operation.
- Field-programmable supervisory complies with NFPA standards requiring distinction between supervisory condition and open-circuit trouble conditions.



S232



CS118/CS733

MEA

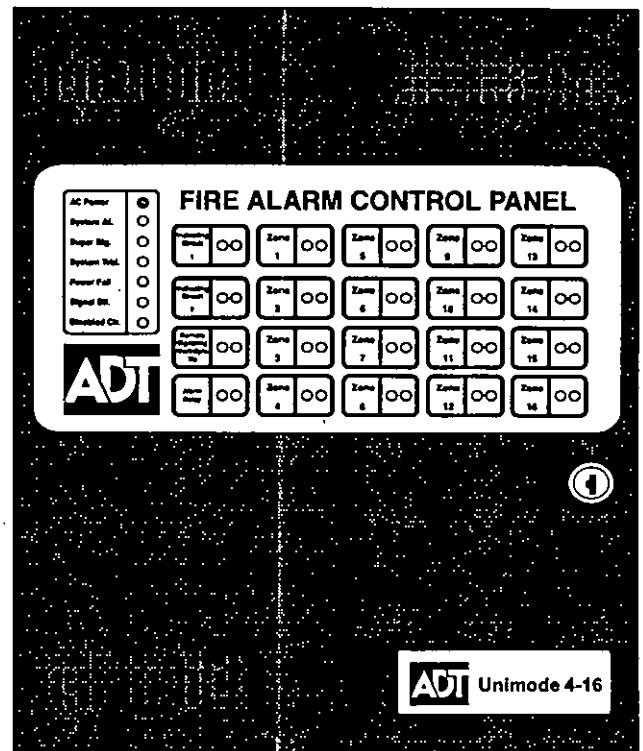
291-91-E, Vol VI



0V7A0.AY

California
State Fire
Marshal

7165-0085:164



- Map any output circuit to any input circuit in nonvolatile program memory.
- Enable/Disable per circuit from front panel switches.
- Small size permits semi-flush mounting between 16" center wall studs.
- RMS regulated notification circuit power.
- Integral charger for 7.0 AH to 17 AH battery options (use BB-17 when over 12 AH batteries).
- Ground fault detection and battery supervision.
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- RS-485 serial port for high-speed data communication with remote annunciators. May be used for remote ACKNOWLEDGE, SIGNAL SILENCE, and SYSTEM RESET.

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Made in the U.S.A.

Duct Smoke Detector— Ion or Photo Type

Model DH400ACDCI, DH400ACDCP (4-Wire)

Features

- 24 VAC/VDC or 120/220 VAC OPERATION
- 4-WIRE CONFIGURATION
- LOW PROFILE
- ACCOMMODATES ION OR PHOTO HEADS
- POWERED OUTPUTS FOR REMOTE SOUNDER
- TWO FORM-C AUXILIARY CONTACTS
- SIMPLE HEAD CHANGE, TWIST-IN, TWIST-OUT REMOVAL
- AIR VELOCITY RATING FROM 300-4000 FT./MIN. (1.5-20 m/sec)
- POWERED OUTPUTS FOR REMOTE LED
- REMOTE TEST STATION OPTION
- MOUNTS TO ROUND OR RECTANGULAR DUCTS FROM 1'-12' (0.3m-3.6m) WIDE
- CLEAR POLYCARBONATE COVER FOR CONVENIENT VISUAL INSPECTION
- HOUSING IS RUGGED NORYL

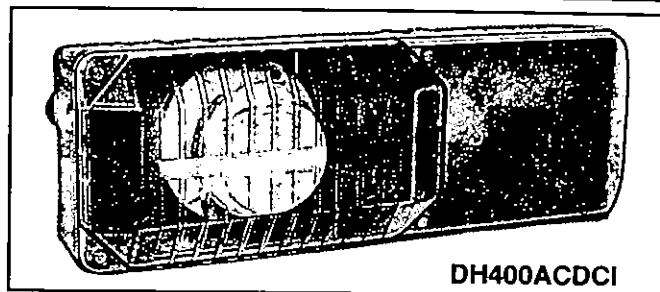
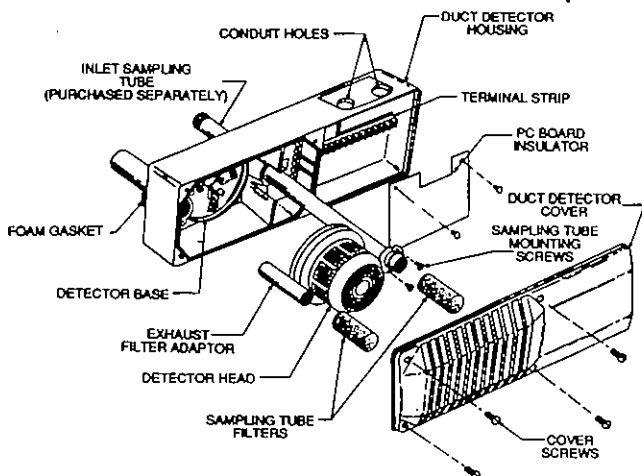
Description

The DH400ACDC 4-Wire Duct Detector and Housing will accommodate either the 1451DH Ionization sensor or the 2451 Photoelectric sensor. The twist-in, twist-out detector heads allow easy removal for quick cleaning and maintenance, or a change in application without removing the duct housing. The DH400ACDC samples air currents passing through a duct and gives dependable performance for management of fans, blowers and air conditioning systems, preventing the spread of toxic smoke and fire gases through the protected area.

Listings

UL, CSFM, Listings pending - ULC, FM, BSA

Exploded View of DH400ACDC Duct Detector Components



Ordering Information

MODEL #	DESCRIPTION
DH400ACDCI	4-Wire Ionization Duct Detector ✕
DH400ACDCP	4-Wire Photoelectric Duct Detector
1451DH	Replacement Ionization Sensor Head
2451	Replacement Photoelectric Sensor Head
ST-1.5	Metal Sampling Tube Duct Widths 1'-2' (0.3m-0.6m) ✕
ST-3	Metal Sampling Tube Duct Widths 2'-4' (0.6m-1.2m)
ST-5	Metal Sampling Tube Duct Widths 4'-8' (1.2m-2.4m)
ST-10	Metal Sampling Tube Duct Widths 8'-12' (2.4m-3.6m)
ACCESSORIES	
APA451	Annunciator with Piezo, Alarm and Power LEDs
RTS451 ✕	Remote Test Station (24 Vdc power required)
MOD400	Sensitivity Test Kit
PA400	Piezo Sounder
RA400 ✕	Remote Annunciator Alarm LED
CRT400	Ion Cover Removal Tool
F36-05-00	Replacement Air Filters (two per package)
MO2-04	Test Magnet
P48-21-00	End cap for metal Sampling Tubes
RS14	Ion Replacement Screen
RS24	Photo Replacement Screen
R-59-18-00	Calibrated test card (for Photo units only)

Specifications

Length	14.5" (37 cm)
Width	5.0" (13 cm)
Depth	4.0" (10 cm)
Weight	7 lbs. (3.2 kg)
Temperature Range	32° - 120°F (0°-49°C)
Humidity	10% - 93%, non-condensing
Air Duct Velocity	300 - 4000 ft./min. (1.5-20 m/sec)

Application

WARNING: Duct smoke detectors have specific limitations. DUCT DETECTORS ARE

- NOT a substitute for an open area smoke detector.
- NOT a substitute for early warning detection.
- NOT a replacement for a building's regular fire detection system.

Refer to NFPA 90A for additional duct detector application information. Refer to "Guide for Use of Smoke Detectors in Duct Applications" for additional information (P/N 156-473-00).

Installation

The DH400ACDC series duct detector must be connected to a standard 4-Wire class B (style BIDC) circuit on one of the following traditional zone modules: ZB8-2, ZB8-5, ZB8-8, RZB12-6, M500MF or M501MF. When Class A (style D IDC) configuration is required a ZA4-2 circuit card or a M500MF is required.

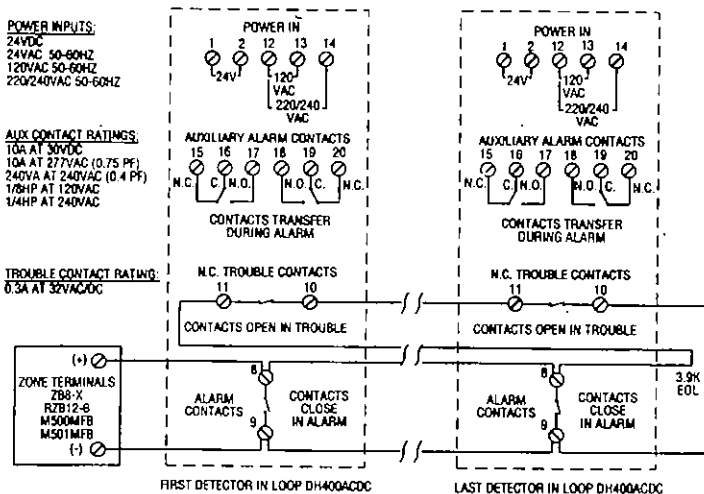
Electrical Ratings DH400ACDC

Power supply voltage	20-29 VDC	24 VAC 50-60 Hz	120 VAC 50-60 Hz	220/240 VAC 50-60 Hz
Power Requirements (using no accessories)				
Max. standby current	25 mA	35 mA AC avg.	65 mA AC avg.	30 mA AC avg.
Max. standby power	1 Watt	1.1 Watts avg.	3.1 Watts avg.	3 Watts avg.
Max. alarm current	110 mA	155 mA AC avg.	55 mA AC avg.	30 mA AC avg.
Max. alarm power	4 Watts	5.1 Watts avg.	6.2 Watts avg.	5.1 Watts avg.
Power requirements (at Maximum accessory load - 100 mA in standby, 150 mA in alarm)				
Max. standby current	125 mA	180 mA AC avg.	70 mA AC avg.	35 mA AC avg.
Max. standby power	4 Watts	6 Watts avg.	7.7 Watts avg.	6 Watts avg.
Max. alarm current	260 mA	370 mA AC avg.	100 mA AC avg.	50 mA AC avg.
Max. alarm power	8 Watts	11 Watts avg.	13 Watts avg.	10 Watts avg.
Contact Ratings				
Alarm initiation contacts (SPST)	2.0 @ 30 VAC/DC (0.6 power factor)			
Alarm auxiliary contacts (DPDT)	10A @ 30 VDC 10A @ 277 VAC (0.75 power factor) 240 VA @ 240 VAC (0.4 power factor) 1/8 HP @ 120 VAC 1/4 HP @ 240 VAC			
Trouble contacts (SPST)	0.3A @ 32 VDC (resistive)			

Engineering Specifications

The air duct smoke detector shall be an EST Model DH400ACDC Series Smoke Duct Detector. The detector housing shall be UL listed per UL 268A specifically for use in air handling systems. The detector shall operate at velocities of 300-4000 ft./min. (1.5-20 m/sec.). The detector housing shall be equipped with an integral mounting base capable of accommodating either a photoelectric or ionization detector head. It shall be capable of local testing via magnetic switch or remote testing using the RTS451 Remote Test Station. The duct detector housing shall incorporate an airtight smoke chamber in compliance with UL 268A, Standard for Smoke Detectors for Duct Applications. The housing shall be capable of mounting to either rectangular or round ducts without adapter brackets. An integral filter system shall be included to reduce dust and residue effects on detector housing, thereby reducing maintenance and servicing. Sampling tubes shall be easily installed after the housing is mounted to the duct by passing through the duct housing. Terminal connections shall be of the strip and clamp method suitable for 14-18 AWG (1.5mm² - 0.75mm²) wiring.

System Wiring Diagram for DH400ACDC 4-Wire Duct Detectors Using A UL Listed Control Panel



Duct Smoke Detector— Ion or Photo Type

Model DH400ACDCI, DH400ACDCP (4-Wire)

Features

- 24 VAC/VDC or 120/220 VAC OPERATION
- 4-WIRE CONFIGURATION
- LOW PROFILE
- ACCOMMODATES ION OR PHOTO HEADS
- POWERED OUTPUTS FOR REMOTE SOUNDER
- TWO FORM-C AUXILIARY CONTACTS
- SIMPLE HEAD CHANGE, TWIST-IN, TWIST-OUT REMOVAL
- AIR VELOCITY RATING FROM 300-4000 FT./MIN. (1.5-20 m/sec)
- POWERED OUTPUTS FOR REMOTE LED
- REMOTE TEST STATION OPTION
- MOUNTS TO ROUND OR RECTANGULAR DUCTS FROM 1'-12' (0.3m-3.6m) WIDE
- CLEAR POLYCARBONATE COVER FOR CONVENIENT VISUAL INSPECTION
- HOUSING IS RUGGED NORYL

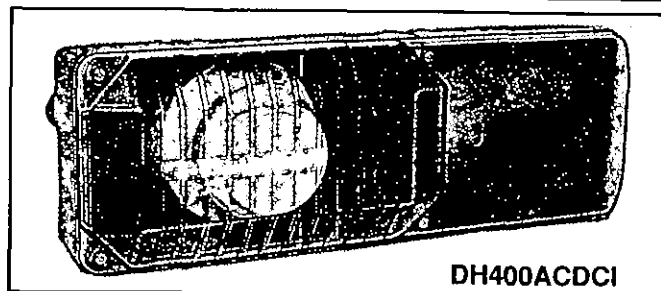
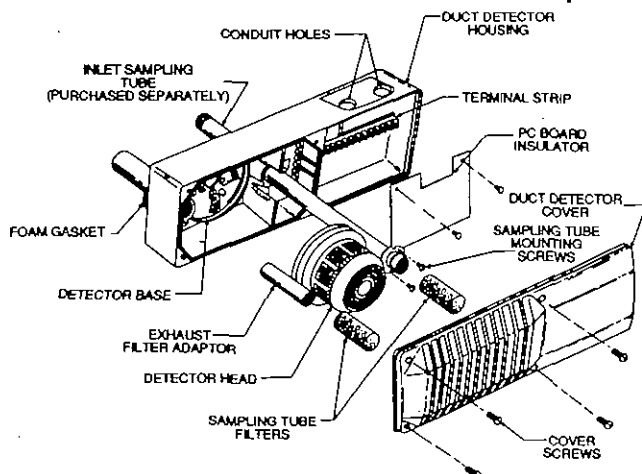
Description

The **DH400ACDC 4-Wire Duct Detector and Housing** will accommodate either the 1451DH Ionization sensor or the 2451 Photoelectric sensor. The twist-in, twist-out detector heads allow easy removal for quick cleaning and maintenance, or a change in application without removing the duct housing. The DH400ACDC samples air currents passing through a duct and gives dependable performance for management of fans, blowers and air conditioning systems, preventing the spread of toxic smoke and fire gases through the protected area.

Listings

UL, CSFM, Listings pending - ULC, FM, BSA

Exploded View of DH400ACDC Duct Detector Components



Ordering Information

MODEL #	DESCRIPTION
DH400ACDCI	4-Wire Ionization Duct Detector ✕
DH400ACDCP	4-Wire Photoelectric Duct Detector
1451DH	Replacement Ionization Sensor Head
2451	Replacement Photoelectric Sensor Head
ST-1.5	Metal Sampling Tube Duct Widths 1'-2' (0.3m-0.6m) ✕
ST-3	Metal Sampling Tube Duct Widths 2'-4' (0.6m-1.2m)
ST-5	Metal Sampling Tube Duct Widths 4'-8' (1.2m-2.4m)
ST-10	Metal Sampling Tube Duct Widths 8'-12' (2.4m-3.6m)
ACCESSORIES	
APA451	Annunciator with Piezo, Alarm and Power LEDs
RTS451 ✕	Remote Test Station (24 Vdc power required)
MOD400	Sensitivity Test Kit
PA400	Piezo Sounder
RA400 ✕	Remote Annunciator Alarm LED
CRT400	Ion Cover Removal Tool
F36-05-00	Replacement Air Filters (two per package)
MO2-04	Test Magnet
P48-21-00	End cap for metal Sampling Tubes
RS14	Ion Replacement Screen
RS24	Photo Replacement Screen
R-59-18-00	Calibrated test card (for Photo units only)

Specifications

Length	14.5" (37 cm)
Width	5.0" (13 cm)
Depth	4.0" (10 cm)
Weight	7 lbs. (3.2 kg)
Temperature Range	32° - 120°F (0°-49°C)
Humidity	10% - 93%, non-condensing
Air Duct Velocity	300 - 4000 ft./min. (1.5-20 m/sec)

Application

WARNING: Duct smoke detectors have specific limitations. DUCT DETECTORS ARE

- NOT a substitute for an open area smoke detector.
- NOT a substitute for early warning detection.
- NOT a replacement for a building's regular fire detection system.

Refer to NFPA 90A for additional duct detector application information. Refer to "Guide for Use of Smoke Detectors in Duct Applications" for additional information (P/N 156-473-00).

Installation

The DH400ACDC series duct detector must be connected to a standard 4-Wire class B (style BIDC) circuit on one of the following traditional zone modules: ZB8-2, ZB8-5, ZB8-8, RZB12-6, M500MF or M501MF. When Class A (style D IDC) configuration is required a ZA4-2 circuit card or a M500MF is required.

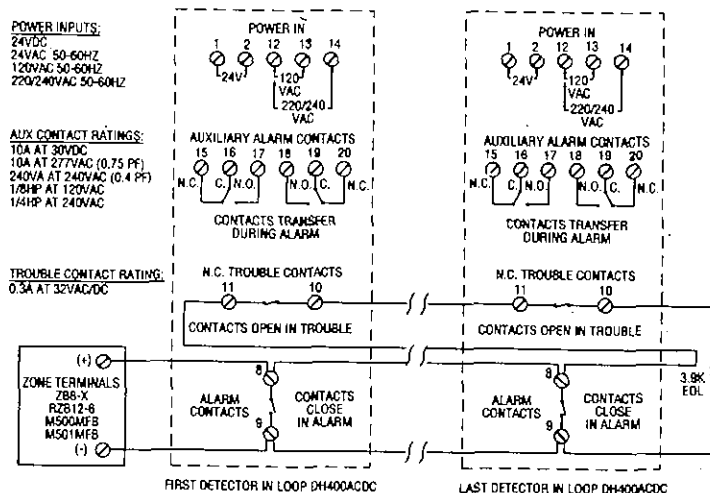
Electrical Ratings DH400ACDC

Power supply voltage	20-29 VDC	24 VAC 50-60 Hz	120 VAC 50-60 Hz	220/240 VAC 50-60 Hz
Power Requirements (using no accessories)				
Max. standby current	25 mA	35 mA AC avg.	65 mA AC avg.	30 mA AC avg.
Max. standby power	1 Watt	1.1 Watts avg.	3.1 Watts avg.	3 Watts avg.
Max. alarm current	110 mA	155 mA AC avg.	55 mA AC avg.	30 mA AC avg.
Max. alarm power	4 Watts	5.1 Watts avg.	6.2 Watts avg.	5.1 Watts avg.
Power requirements (at Maximum accessory load - 100 mA in standby, 150 mA in alarm)				
Max. standby current	125 mA	180 mA AC avg.	70 mA AC avg.	35 mA AC avg.
Max. standby power	4 Watts	6 Watts avg.	7.7 Watts avg.	6 Watts avg.
Max. alarm current	260 mA	370 mA AC avg.	100 mA AC avg.	50 mA AC avg.
Max. alarm power	8 Watts	11 Watts avg.	13 Watts avg.	10 Watts avg.
Contact Ratings				
Alarm initiation contacts (SPST)	2.0 @ 30 VAC/DC (0.6 power factor)			
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Trouble contacts (SPST)	0.3A @ 32 VDC (resistive)			

Engineering Specifications

The air duct smoke detector shall be an EST Model DH400ACDC Series Smoke Duct Detector. The detector housing shall be UL listed per UL 268A specifically for use in air handling systems. The detector shall operate at velocities of 300-4000 ft./min. (1.5-20 m/sec.). The detector housing shall be equipped with an integral mounting base capable of accommodating either a photoelectric or ionization detector head. It shall be capable of local testing via magnetic switch or remote testing using the RTS451 Remote Test Station. The duct detector housing shall incorporate an airtight smoke chamber in compliance with UL 268A, Standard for Smoke Detectors for Duct Applications. The housing shall be capable of mounting to either rectangular or round ducts without adapter brackets. An integral filter system shall be included to reduce dust and residue effects on detector housing, thereby reducing maintenance and servicing. Sampling tubes shall be easily installed after the housing is mounted to the duct by passing through the duct housing. Terminal connections shall be of the strip and clamp method suitable for 14-18 AWG (1.5mm² - 0.75mm²) wiring.

System Wiring Diagram for DH400ACDC 4-Wire Duct Detectors Using A UL Listed Control Panel





Unimode® System fire alarm monitor & control

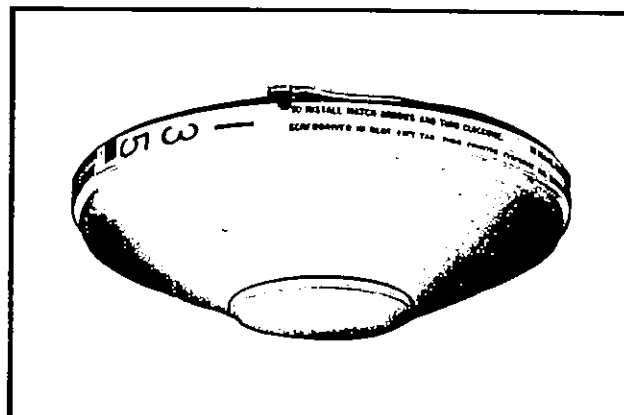
Heat Detectors 4220/4222 Series

California State Fire Marshal
U.L., U.L.C. Listed/FM Approved

The *Heat Detectors* react to abnormal heat by closure of normally-open contacts. The 4220 is a combination rate-of-rise and fixed-temperature detector. The 4222 is a fixed-temperature detector only.

Detector Features

- Attractive low profile blends with any decor.
- Reliable low-cost operation.
- Double-screw terminals for supervised connections.
- Mounting flexibility using unique twist-lock plate.
- Operated Indicator Disc.



DESCRIPTION

The *Heat Detectors* low profile and white finish are suitable to any decor scheme. A unique mounting plate (supplied) permits installation directly on a ceiling for approved open wiring or to a 3½" (or 4") octagonal, or 3¼" square, outlet box for conduit wiring. Both detectors are available in 135°F or 197°F ratings. The working parts are protected against dirt, dust, moisture, and other normal environmental hazards.

OPERATION

The 4220 is suitable for use in most locations except those with sudden temperature changes or extreme hazardous or corrosive atmospheres. The

detector initiates an alarm when (1) the surrounding air temperature rises too quickly, activating its rate-of-rise pneumatic mechanism, or (2) the rated temperature is reached, causing its fusible fixed-temperature element to open. The rate-of-rise mechanism is self-restoring upon dissipation of the heat or with constant temperature prevailing. The fusible element is coupled to a spring-loaded disc which pops down, dangling from a tether, when the melting point of the element is reached. The dangling disc indicates the detector must be replaced.

The 4222 has a fusible element only and is used where sudden temperature changes below rated temperature may occur.

APPLICATION DATA

Detector	Description	Temp. Rating (°F)	Max. Ceiling Temp. (°F)	Max Spacing Guide Rating (Note 1)	Contact Ratings	Physical Dimensions
4220-135	Combination Fixed Temperature Rate of Rise	135	100	50' (30')	3.0 amps @ 6-125 VAC 1.0 amp @ 6-28 VDC 0.3 amp @ 125 VDC 0.1 amp @ 250 VDC	4¾" dia. x 1¾" high
4220-197		197	150			
4222-135	Fusible Fixed Temperature	135	100	30' (30')		
4222-197		197	150			

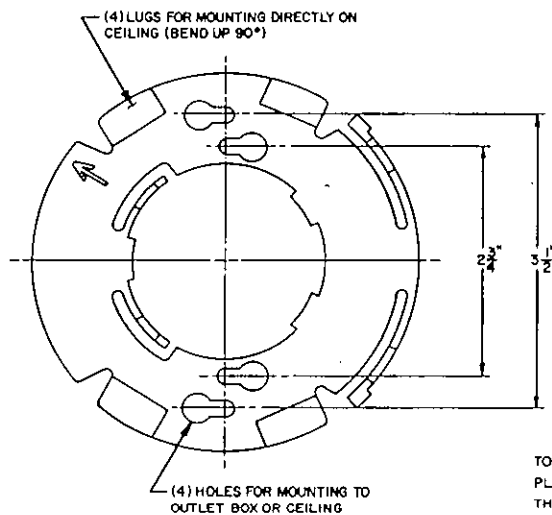
Note: UL(FM) max. spacing ratings are for detectors on smooth ceilings, only. Refer to NFPA-72E for detailed spacing requirements.



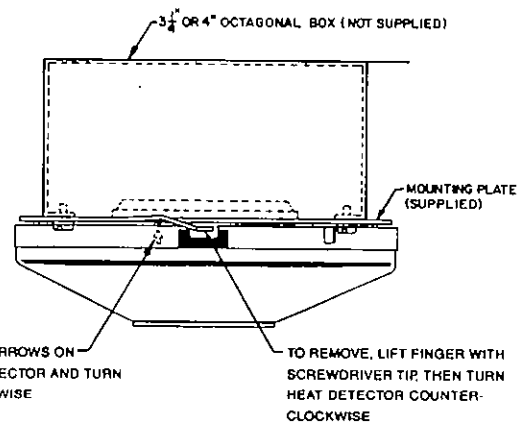
**Unimode®
System**
**fire alarm
monitor & control**

**Heat Detectors
4220/4222 Series**

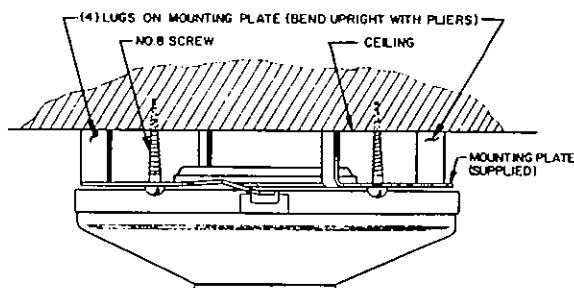
California State Fire Marshal
U.L., U.L.C. Listed / FM Approved



MOUNTING PLATE

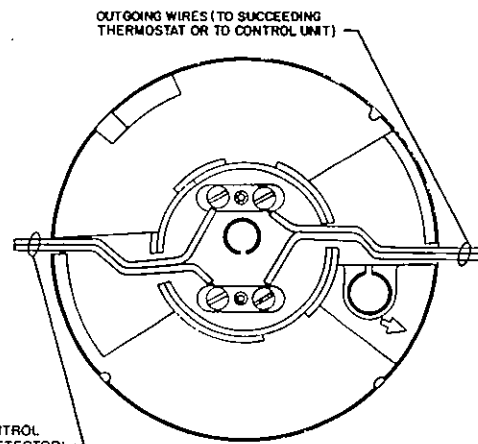


CONDUIT BOX MOUNTING



OPEN WIRING MOUNTING

INCOMING WIRES (FROM CONTROL UNIT OR PRECEDING HEAT DETECTOR)



NOTE: TO ENSURE SUPERVISION, CONNECT EACH WIRE TO A SEPARATE SCREW, AS SHOWN.

CONNECTION OF WIRES

COMMERCIAL

QTY	STOCK CODE	DESCRIPTION
1	ADT-BE-500	Unimode 4-16 Fire Control Panel
1	ADT-CAB-500	4-16 Cabinet w/backbox, door, lock, & keys
1	IZ-4	4-16 Initiating Zone Module 4 Style B Zones
1	IZ-8	4-16 Initiating Zone Module 8 Style B Zones
1	ADT-LCD-80	80 Character LCD Annunciator for 4-16 or II
3	FCPS-24F	ADA Power Supply/Signal Circuit Expander-Regulator
2	PS-12120	Battery, 12 Volt, 12.0 AH for Unimode II, 4-16, 200)
1	ABS-1	Surface Mount Deep Box for (1) LCD-80 Module
21	MT-24-LSM-VFR	Horn/Strobe interior
27	AS2475C-FW	Wheelock Mutlitone Ceiling mount strobe/speaker
21	IOB-R	Wheelock Surface mounting back box (in/out)
2	HD-601	Heat Detector, 135° Fixed Temp & Rate of Rise
5	ADT-BG-10L	ADT Manual Pull Station w/Keylock, Lexan Dual Act
5	SB-10	Surface Mounting Backbox for BG-10 Series
1		Connection to WaterFlow / GateValve
6	PS-1270	Battery, 12 Volt, 7.0 AH

ADDRESS: BRUCK PLAZA - STE 70 (STEINBACK HILL)

PLUMBING INSPECTION

Contractor _____ Phone (_____) _____
Address _____
Town _____ State _____ Zip _____
LIC # _____ FEDERAL EMP. NO. (or SSN#) _____

FIRE INSPECTION

State NY Zip 14162
FEDERAL EMP. NO. (or SSN) 881514162

ESTIMATED COST OF PLUMBING WORK:

Sewer Size _____

Water Size _____

2000 年 12 月 1 日

TECHNICAL SITE DATA (List all Fixtures)			
NO.	FIXTURE/EQUIPMENT	NO.	FIXTURE/EQUIPMENT
	Water Closet		Steam Boiler
	Urinal / Bidet		Hot Water Boiler
	Bath Tub		Sewer Pump
	Lavatory		Interceptor/Separator
	Shower		Backflow Preventer
	Floor Drain		Grease Trap
	Sink		Water Cooled A.C. or Refrigeration Unit
	Dishwasher		Sewer Connection
	Drinking Fountain		Water Service Connection
	Washing Machine		Active Solar System
	Hose Bibb		Other
	Water Heater		Other
	Fuel Oil Piping		Other
	Gas Piping		

DESCRIPTION OF WORK

COMMENTS _____

- Plan Review: _____
Date: _____ Approved by: _____

CERTIFICATION IN LIEU OF OATH

I HEREBY CERTIFY THAT I AM THE (AGENT OF) OWNER OF RECORD AND AM AUTHORIZED TO MAKE THIS APPLICATION AND PERFORM THE WORK LISTED ON THIS APPLICATION.

SEAL &
SIGNATURE (Contractor's Seal)

FIRE INSPECTION

State NY Zip 14162
FEDERAL EMP. NO. (or SSN) 881514162

ESTIMATED COST OF FIRE PROT. WORK:

NOTICE TO ALL OWNERS OF VEHICLES

WATER SUPPLY SOURCE

Kitchen Hood Exhaust System

DESCRIPTION OF WORK

Plan Review: _____
Date: 4/28/98 _____
Approved by: 

CERTIFICATION IN LIEU OF OATH

ON THIS APPLICATION.
SEAL &
SIGNATURE (Contractor's Seal)