CITY OF PORTLAND

BUILDING PERMIT

This is to certify that
PROTECTION PROFESSIONALS
325 US Route One
FALMOUTH, ME 04105

For installation at
197 PINE ST
WEST END COMMONS

Job ID: 2012-07-4475-FAFS

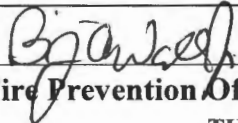**CBL: 063- E-006-011**

has permission to install master box fire alarm system
provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of
the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of
the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.	A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be

_____ (58)
Fire Prevention Officer

_____
Code Enforcement Officer / Plan Reviewer

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
PENALTY FOR REMOVING THIS CARD

BUILDING PERMIT INSPECTION PROCEDURES
Please call 874-8703 or 874-8693 (ONLY)
or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**

- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**

- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

Final Fire

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

Job ID: 2012-07-4475-FAFS
install master box fire alarm system

For installation at:
197 PINE ST
WEST END COMMONS

CBL: 063- E-006-011

Conditions of Approval:

Fire

The installation shall comply with the following:

City of Portland Chapter 10, Fire Prevention and Protection;

NFPA 1, *Fire Code* (2009 edition), as amended by City Code;

NFPA 101, *Life Safety Code* (2009 edition), as amended by City Code;

City of Portland Fire Department Rules and Regulations;

NFPA 72, *National Fire Alarm and Signaling Code* (2010 edition), as amended by Fire Department Rules and Regulations;

NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment* (2009 edition), as amended by Fire Department Rules and Regulations; and

NFPA 70, *National Electrical Code* (2011 edition) as amended by the State of Maine.

The fire alarm system shall be certified by a master fire alarm company and have a new fire alarm inspection sticker.

In field installation shall be installed per code as conditions dictate.

Dwelling units without audible alarm devices shall have public mode and sleeping area audible requirements verified with an calibrated meter and the results specifically documented in the compliance letter.

All smoke detectors and smoke alarms shall be photoelectric.

System CO detectors shall be located on the ceiling in the same room as permanently installed fuel-burning appliances and centrally located on every habitable level and in every HVAC zone of the building per NFPA 720:5.5.5.3.1. System CO detectors shall activate an audible alarm at the detector and FACP, and send an alarm signal to the remote station. It shall not trip a/the master box.

The Natural Gas detector is being installed in the gas meter room. It shall be supervisory only and installed in accordance with the manufacturer's instructions including, but not limited to:

(1)   Do not install any other fire alarm device on the same circuit as the gas detector;

(2)   The gas detector shall be connected to a U.L. Listed audible device providing a distinctive audible signal with at least 85 DB sound output; and

(3)   Mounted **about** one foot down from the ceiling for natural gas detection.

Records cabinet, FACP, annunciator(s), and pull stations shall be keyed alike.

Central Station monitoring for addressable fire alarm systems shall be by point.

All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS".

Installation of a Fire Alarm system requires a Knox Box to be installed per city ordinance.

System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.

Fire Alarm system shall be maintained. If system is to be off line over 4 hours a fire watch shall be in place. Dispatch notification required 874-8576.

A master box connection and drill switch is required. AES Zones shall be:

1. Not assigned

2. Not assigned

3. Pull stations and detectors

4. City Disconnect: Pull stations and detectors

5. Not assigned

6. Not assigned

7. Not assigned

8. AES tamper switch

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No: **2012-07-4475-FAFS**	Date Applied: **7/17/2012**	CBL: **063- E-006-011**	
Location of Construction: **197 PINE ST**	Owner Name: **WEST END COMMONS**	Owner Address: **197 PINE STREET PORTLAND, ME 04102**	Phone:
Business Name: **West End Commons**	Contractor Name: **PROTECTION PROFESSIONALS - Pearson Electric**	Contractor Address: **325 US ROUTE ONE FALMOUTH MAINE 04105**	Phone: **(207) 839-3223**
Lessee/Buyer's Name:	Phone:	Permit Type: **FIRE ALARM**	Zone: **R-4**

Past Use: **31 Residential condominiums**	Proposed Use: **Same: 31 residential Condos – To install fire alarm system**	Cost of Work: **$380,000.00**	CEO District:
		Fire Dept: 7/19/12 Signature: Bjankel · (58) _X_ Approved w/ conditions ___ Denied ___ N/A	Inspection: Use Group: Type: Signature:

Proposed Project Description: **Fire alarm**	Pedestrian Activities District (P.A.D.)

Permit Taken By: Gayle	**Zoning Approval**

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building Permits do not include plumbing, septic or electrial work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.

Special Zone or Reviews	Zoning Appeal	Historic Preservation
___ Shoreland	___ Variance	___ Not in Dist or Landmark
___ Wetlands	___ Miscellaneous	___ Does not Require Review
___ Flood Zone	___ Conditional Use	___ Requires Review
___ Subdivision	___ Interpretation	___ Approved
___ Site Plan	___ Approved	___ Approved w/Conditions
	___ Denied	___ Denied
___ Maj _ Min ___ MM Date: 7/17/12	Date:	Date:

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the appication is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE	DATE	PHONE

2012 04 4475 GG

Fire Alarm Permit

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

Installation address: **197 Pine Street** CBL: **063 E 006011**

Exact location: (within structure) _____

Type of occupancy(s) (NFPA & ICC): **Condominium (31 units)** 31 res Condos

Building owner: **West End Commons**

System Designer (point of contact): _Must be_ **Rich Brobst, Jr**

Designer phone: **775-5755** E-mail: _____

Installing contractor: **Pearson Electric** Certificate of Fitness No: **M1001**

Contractor phone: **839-3223** E-mail: _____

This is a new application: YES ● NO ○ New AES Master Box: YES ● NO ○
(Include Master Box approval form)

Amendment to an existing permit: YES ○ NO ○ Permit no: _____

The following documents **shall** be provided with this application:

☑ Floor plans ☑ Scope of Work

☑ Wiring diagram ☑ 11 ½ x 17s

☑ Annunciator details ☑ pdf copy (may be e-mailed)

☑ Input/ Output Matrix ☑ Designer qualifications

☑ Equipment data sheets ☑ Battery/ voltage drop calcs

☑ Electrical Permit Pulled (check alarm/com)

Master box approval only: YES ○ NO ○
(If yes check _New AES Master Box_ above)

COST OF WORK: **$37,380.00**

PERMIT FEE: **$400.00**
($10 PER $1,000 + $30 FOR THE FIRST $1,000)

RECEIVED

JUL 17 2012

Dept. of Building Inspections
City of Portland Maine

The **designer** shall be the responsible party for this application. Download a new copy of this application at
www.portlandmaine.gov/fire **for every submittal. Submit all plans in electronic PDF in addition to readable 11 ½ x 17s to the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.**

Prior to acceptance of any fire alarm system, a complete commissioning and acceptance test must be coordinated with all fire system contractors and the Fire Department, and proper documentation of such test(s) provided.

All installation(s) must comply with the _City of Portland Technical Standard for Signaling Systems for the Protection of Life and Property_, available at www.portlandmaine.gov/fire .

Applicant signature: _Doug Hanson_ Date: **7-15-12**

Master Box Approval

Applicant: Protection Professionals

App Phone #: 207-775-5755

Building Name: West End Commons

Building Address: 197 Pine St

Occupancy: 31 unit apartment building
Assembly OL>300, 20 unit apartment building, etc.

Emergency Contact: Chuck Homler

Emergency phone #: 207-571-3061

Date of Application: 7/5/12

Billing Address: West End Commons
c/o Phoenix Property Management
PO Box 759, Portland, ME 04101

Comments:

Applicant completes red box and submits with Fire Alarm Permit

1

FIRE PREVENTION: ☑ Approved   ☐ Denied

_7_ / _19_ / _12_   _BJaWalleJr._
   Date   Fire Prevention Officer

Zone 1: Unassigned _____   Zone 2: Unassigned _____

Zone 3: Pulls and detectors _____   Zone 4: City disconnect – Pulls and Detectors ____

Zone 5: Unassigned _____   Zone 6: Unassigned _____

Zone 7: Unassigned _____   Zone 8: AES Tamper switch _____

Modify City Box response to alarm sounding in CAD: ☐ YES ☑ NO

2

FIRE ALARM: Box #: _____

3

ELECTRICAL DIVISION: ☐ Approved   ☐ Denied

Box Type: AES Radio Box / _____
                 New   Other

Test Date: _____ / _____ / _____   In Service Date: _____ / _____ / _____
                                                              _____
AES / Circuit if applicable: Fire Alarm Technician

4

FIRE ALARM: Same Running Assignment As Box: _____

Notifications: ☐ All Stations   ☐ Run Books   ☐ Digitizer   ☐ Computer   ☐ Cad Box Test

☐ South Portland   ☐ _____   _____
                           Other   Dispatcher

5

BILLING: ☐ Entered   _____
                              Financial Officer

PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • www.portlandmaine.gov

Receipts Details:

Tender Information: Check , BusinessName: Protection Proffesionals, Check Number: 11341
Tender Amount: 400.00

Receipt Header:

Cashier Id: gguertin
Receipt Date: 7/17/2012
Receipt Number: 46022

Receipt Details:

Referance ID:	7276	Fee Type:	BP-Constr
Receipt Number:	0	Payment Date:	
Transaction Amount:	400.00	Charge Amount:	400.00
Job ID: Job ID: 2012-07-4475-FAFS - Fire alarm			
Additional Comments: 197 Pine St. Protection Proffesional			

Thank You for your Payment!

Protection Professionals

325 US Route 1
Falmouth, ME 04105
Ph 207-775-5755
Fax 207-781-2064

Device List   No.   4161

List Date
7/3/2012

Bill To Name / Address
Phoenix Property Management Attn: Accounts Payable P.O. Box 759 Saco, ME 04072

Job Site
West End Commons 197 Pine Street Portland, ME 04102

CHANGING THIS DEVICE LIST DOES NOT ALTER THE ORIGINAL ESTIMATE
Attach copy to Purchase Order for accounting

Estimate No.

Item	Description	Qty To Order	Qty Ordered
Miscellaneou Materials	Vista 250-FB fire alarm panel kit including a dialer and an annunciator	1	
Bat 12-18	Battery	2	
5881ENHC	Wireless receiver for commercial burglary and 5800 devices	2	
06-SSU00672	Fire Document box 12 inches wide X 13.1 inches high X 2.25 inches deep, CAT 30 keyed	1	
SF-STI7510E	Keypad cover with lock set	1	
8085	Ademco cam lock assembly	2	
AD-TG7FS	Fire Alarm Communicator, cell based	1	
Bat 12-7	12V 7AH Batteries	1	
7788F	Wireless fire subscriber for City of Portland	1	
Bat 12-7	12V 7AH Batteries	1	
7220-25-N	Cable ; 25 Ft. RG-58 BNC male--N male	1	
1640	16.5 Volt AC 40 VA Class 2 Transformer	1	
7210-6-UC	6 dB Omni , High Gain, Mast, In/Outdoor, 4.5 ft, UHF Antenna	1	
Miscellaneou Materials	Bypass switch	1	
GI-TSW01S	Tamper Switch for master boxes	1	
D8004	UL TRANSFORMER KIT	2	
5193SD	Addressable Smoke Detectors	45	
5140MPS-1	Manual Pull Station	15	
4193sn	Interface device (v-plex)	15	
5809	Wireless Heat Detector, 135 fixed temperature and rate of rise	175	
MA-GD-2A	GAS DETECTOR	1	
BK-CO1224	Carbon Monoxide Detector with alarm and trouble contacts, 20ma standby and 40ma in alarm, 12/24 VDC	7	
D2212BEC220A	D2212BE W/D220A LED KEYPAD (CO Detector panel)	1	
Bat 12-7	12V 7AH Batteries SEC-1075	1	
4193sn	Interface device (v-plex)	2	

Ordered By: _____   Date: _____

Received By: _____   Date: _____

Protection Professionals

325 US Route 1
Falmouth, ME 04105
Ph   207-775-5755
Fax 207-781-2064

Device List   No.   4161

List Date
7/3/2012

Bill To Name / Address	Job Site
Phoenix Property Management Attn: Accounts Payable P.O. Box 759 Saco, ME 04072	West End Commons 197 Pine Street Portland, ME 04102

CHANGING THIS DEVICE LIST DOES NOT ALTER THE ORIGINAL ESTIMATE
Attach copy to Purchase Order for accounting

Estimate No.

Item	Description	Qty To Order	Qty Ordered
AX-AL1002ULADA	NAC power supply, 10 amps, two Class A and four Class B circuits at 2.5 amps/circuit, 1 amp Aux power	1	
Bat 12-7	12V 7AH Batteries	2	
Miscellaneou Materials	Addressable relay 4204 module	2	
WH-HSR	Horn Strobe, red, wall mount	11	
WH-STR	Strobe, Red, wall	4	
500-648445FA	9552 - DOOR HOLDER SEMI-FLUSH WALL MT. 120/24AC/DC	10	
BK-5603	SYSTEM SENSOR 135 Fixed Temperature heat detector, one circuit	4	
4193sn	Interface device (v-plex)	4	
4101	Knox Box, large size, hinged cover	1	
	State of Maine Sales Tax		

Ordered By: _____   Date: _____

Received By: _____   Date: _____

Vista 250

Quantity	Part #	Description	Standby	Alarm	Total standby	Total alarm
1	V250	Fire Panel (maximum)	0.305	0.485	0.305	0.485
1	6160CR	Annunicator	0.150	0.150	0.150	0.150
	4208SN	Expander	0.001	0.033	0.000	0.000
			1.000	0.000	0.000	0.000
		Pull Station	0.000	0.000	0.000	0.000
2	2W	Smoke	0.000	0.130	0.000	0.260
	4W	Smoke	0.020	0.023	0.000	0.000
		heat	0.000	0.000	0.000	0.000
45		Addressable smoke	0.001	0.001	0.045	0.045
		Motion	0.015	0.022	0.000	0.000
		Duct Detector	0.001	0.001	0.000	0.000
		Duct smoke	0.001	0.001	0.000	0.000
		Duct relay	0.001	0.001	0.000	0.000
		Duct Remote	0.001	0.001	0.000	0.000
		Remote light	0.001	0.001	0.000	0.000
			0.000	0.000	0.000	0.000
1		NAC Trigger only	0.000	0.001	0.001	0.001
		NAC power maximum (24V)	0.000	3.400	0.000	0.000
		NAC power maximum (12V)		2.300	0.000	0.000
					0.000	0.000
					0.000	0.000
		Miscellaneous			0.000	0.000
TOTAL			1.497	6.550	0.501	0.941

	Hours	Standby current				Total	
	24		0.5011			12.026	
Minutes		Alarm current					
5	0.08333333		0.9410			0.078	
		Battery Capacity					
	10%		12.1048			13.315	

VISTA-250FBP/V250FBP-24

COMMERCIAL PARTITIONED FIRE AND
BURGLARY ALARM CONTROL PANEL

Now UL864 9th Edition Approved

Designed to integrate seamlessly with CCTV, access control and Honeywell's full range of fire and burglary components, the new VISTA-250FBP provides the ultimate protection of life and property. The UL Listed commercial fire and burglary control panel supports up to eight partitions and up to 250 zones/points using hardwired, wireless and V-Plex®

addressable technologies. A diverse line of Honeywell initiating devices, notification circuits, communication devices, keypads, RF receivers and relays are also supported. The VISTA-250FBP has been designed to mount quickly and easily in an attack resistant cabinet, and is available in 12V and 24V models.

FEATURES

- Comes standard with eight hardwired zones, expandable to 242 V-Plex addressable points/zones or 250 wireless points/zones

- Can control eight separate areas independently (eight partitions)

- Supports commercial wireless fire and burglary devices

- Stores up to 1,000 events

- Supports V-Plex addressable VistaKey access control (up to 15 doors)

- Accommodates 150 user codes and up to 500 access card holders using VistaKey

- Two on-board notification (bell) circuits delivering 2.3A @ 12V or 3.4A @ 24V

- Automatic smoke detector sensitivity maintenance testing

- Four-wire smoke reset using onboard J2 output trigger

- Supports Dynamic Signaling for AlarmNet communicators used in conjunction with the phone line

- Supports remote control via AlarmNet Total Connect Services*

- Supports Internet Alarm Reporting*

- Notification Appliance Circuits (two):
  – Programmable
  – Individually silenceable

- Programmable on-board auxiliary relay

- False alarm reduction features:
  – Exit error logic
  – Exit delay reset
  – Cross zoning
  – Call waiting defeat
  – Recent close report

- Hardwired zones:
  – Provides eight style B hardwired zones
  – Supports N.O. or N.C. sensors
  – Individually assignable to any partition – Up to 32 two-wire smoke detectors each on zones one and two (64 total)
  – Up to 50 two-wire glassbreak detectors on zone eight
  – EOLR supervised for Fire and UL burglary installations

- Listed to UL864 9th Edition

- Upload/download via Ethernet*

- Carbon Monoxide (CO) zone support

*When used with AlarmNet devices.

VISTA-250FBP/ V250FBP-24

COMMERCIAL PARTITIONED FIRE AND
BURGLARY ALARM CONTROL PANEL

Honeywell

ADDITIONAL FEATURES

- Patented addressable polling
  loop technology
  - Supports 242 two-wire zone points

  - Global polling technology for
    faster processing

  - Supervised by panel

  - Zones individually assignable to
    partitions, notification circuit (bell)
    output or auxiliary relay

  - 4,000 ft. capability without the use
    of shielded cable

  - Extender/Isolation bus modules

  - Eight zone – Class A and B
    expander module

  - Eight zone – Class B
    expander module

  - One zone supervised contact
    monitor module

- UL Listed wireless expansion
  - Supports up to 250 wireless
    zones/points

  - Supervised by control for
    check-in signals

  - Tamper protection for transmitters

  - Individually assignable up to
    eight partitions

- Access Control Integration
  - Full integration with PassPoint
    Access Control System

- Up to 15 doors using VistaKey
  Access Control

- Event reporting

- Local printer of access or
  VISTA related events

- Communication
  - Phone mapping by zone
    response type

  - Panel operation during download

Applications

Supported by a diverse line of Honeywell
initiating devices, the VISTA-250FBP is
the ideal integrated fire and burglary
control for applications where a high
level of security is necessary. Some
examples of applications include:
medical and professional buildings,
supermarkets, churches, synagogues,
schools, universities, strip malls,
factories, warehouses, and larger
residences.

SPECIFICATIONS

Electrical

- Primary power: 18VAC @ 72VA ADEMCO No. 1451

- Control Panel quiescent current draw: 300mA

- Backup battery:
  - 12VDC, 12AH min to 34.4AH max
  - Lead acid battery (gel type)

- Alarm power: 12VDC, 1.7A max for each notification (bell) circuit output Total 2.3A @ 12V

- Aux. standby pwr: 12VDC, 1A max

- Total power: 2.3A at 12VDC, 3.4A at 24VDC from all sources

- Standby time: 24 hours with 1A standby load using 34.4AH battery

- Fusing: Battery input, aux. and notification (bell) circuit outputs are protected using PTC circuit protectors. All outputs are power limited

- Optional 24-volt power supply, PS 24 supplies two 24 VFW, 1.7A full wave rectified, unfiltered outputs

Main Dialer

- Line seize: Double Pole

- Ringer equiv.: 0.7B

- Formats: ADEMCO Low Speed, ADEMCO 4+2 Express, ADEMCO High Speed, ADEMCO Contact ID, Sescoa and Radionics

- Dual phone line capability (using 5140DLM module)

Cabinet Dimensions

- 18" H X 14.5" W X 4.3" D

Environmental

- Storage temp:
  14° F to 158° F
  (-10° C to 70° C)

- Operating temp:
  32° F to 122° F
  (0° C to 50° C)

- Humidity: 85% RH

- EMI: Meets or exceeds the following requirements:
  - FCC Part 15, Class B Device
  - FCC Part 68
  - IEC EMC Directive

Agency Listings

- UL609 Grade A Local Mercantile Premises and Mercantile Safe and Vault

- UL611/1610 Grades A, AA, Central Station

- UL365 Grades A, AA Police Connect

- UL864/NFPA72 Local, Central Station and Remote Station

- UL985

- Factory Mutual

- California State Fire Marshal

- MEA

- CAN/ULC S304 – Central and Monitoring Station Burglar Alarm Unit

- CAN/ULC S527 – Central Unit for Fire Alarm Systems

- CAN/ULC S303 – Local Burglar Alarm Unit

- CAN/ULC S525 – Audible Signal Appliances

VISTA-250FBP/V250FBP-24

COMMERCIAL PARTITIONED FIRE AND BURGLARY ALARM CONTROL PANEL

COMPATIBLE DEVICES

Auxiliary Devices

- 4204 – Relay Module, four form C contacts
- 4204CF – Two supervised output circuits
- 5881 Series RF receiver
- 5883H RF receiver
- 6220S – System printer used with 4100SM serial module
- 6160CR-2 – Red Fire Keypad
- 6160 – Burglary Keypad

Two-Wire Smoke Detectors Conventional

- System Sensor
- ESL
- DSC

Horn/Strobes

- System Sensor
- Wheelock
- Gentex

Manual Pull Stations

- 5140MPS-1
- 5140MPS-2

V-Plex (Addressable) Zone Expanders

- 4101SN Single Relay/Zone Module

- 4190SN Remote Point Module – two zones
- 4193SN Two Zone Serial Interface Module
- 4208SNF Class A/B Expander Module
- 4208U Loop Expansion Module – eight zones
- 4293SN One Zone Serial Interface Module

V-Plex Extender/Isolation Modules

- 4297 Extender/Isolator Module
- VSI Isolator Module

V-Plex Smoke Detectors

- 5193SD
- 5193SDT

V-Plex Passive Infrared Detectors

- 998MX
- IS2500SN
- DT7500SN

V-Plex (Addressable) Contacts

- 4939SN-WH
- 4944SN-WH
- 4959SN

V-Plex Glassbreak Detectors

- FG1625SN

Optional 24V Power Supply

- PS24 – 24V power supply – 3.4A

Commercial Wireless Devices

- 5808W3 – Photoelectric Smoke/Heat Detector
- 5806W3 – Photoelectric Smoke Detector
- 5809 – Wireless Heat Detector
- 5817CB – Wireless Commercial Transmitter
- 5869 – Hold up Transmitter
- 5881ENHC – RF Receiver
- 5883H – RF Receiver

Access Control

- VistaKey V-Plex (addressable) Access Control
- VistaKey-SK Starter Kit
- VistaKey-EX Expansion Kit

Alarm Communications

- 7845i-ENT – Internet/Intranet Communicator
- 7845GSM – Digital Cellular Communicator
- 7845i-GSM – Internet and Digital Cellular Communicator
- GSMCF/iGSMCF – Commercial Fire Communication Kits (when available)

Product specifications subject to change.

ORDERING

V250FBP-9	Commercial Fire and Partitioned Burglary Alarm Control Panel 12V Model
V250FBP9-24	Commercial Fire and Partitioned Burglary Alarm Control Panel 24V Model

For more information: www.honeywell.com/security/hsc

Honeywell

High Security Commercial Key Vault

Dust Cover
Optional Tamper Switch
Optional Multi-use Switch
Warning Label (Do Not Remove)
Hinge
Optional Keywrench/Card Holder
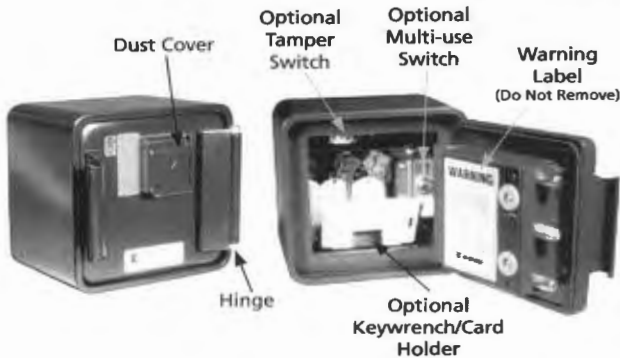
A new Knox-Box that's for those applications where a 3200 Series is too small yet the 4400 Series too large. The high security 4100 Series has a hinged-door allowing for the convenient single-handed operation. The 4100 Series Knox-Vault protects and stores building keys, access cards and the Knox FDC Keywrench allowing departments to keep a keywrench on site.

Features and Benefits

- Holds up to 24 keys in the large interior compartment
- Ensures high security with UL listed Medeco lock(s)
- Includes Knox-Coat® that is four times better than standard powder coat
- Resists moist conditions with a weather resistant silicone door gasket
- Colors: Black, Dark Bronze or Aluminum
- Weight: Surface mount - 17 lbs.
  Recessed mount - 19 lbs.

Options

- Alarm Tamper Switches (U/L listed)
- Recessed Mounting Kit (RMK) for recessed models only
- Dual lock configuration
- Access card holder
- Keywrench holder

FRONT VIEW
6" WIDE

Heavy 1/8" stainless steel lock cover
Hole for tamper seal
1/2" solid steel plate door with gasket
Stainless steel door hinge
6" HIGH
Hinged door (dead bar protected)

4100 Surface Mount

FRONT VIEW
8-1/2" WIDE
8-1/2" HIGH

SIDE VIEW
1/4" steel case, 100% welded
4-1/2"
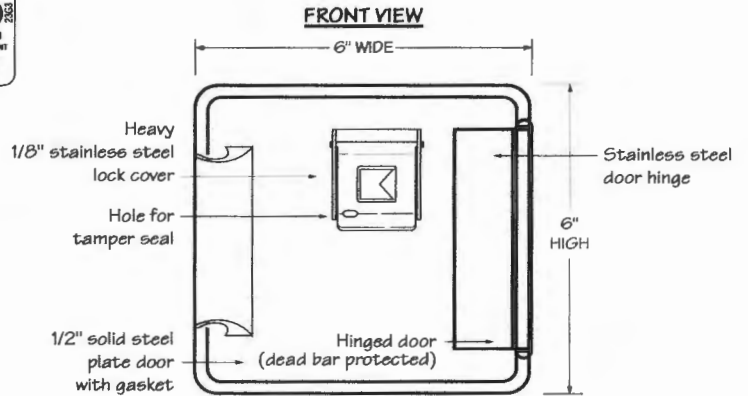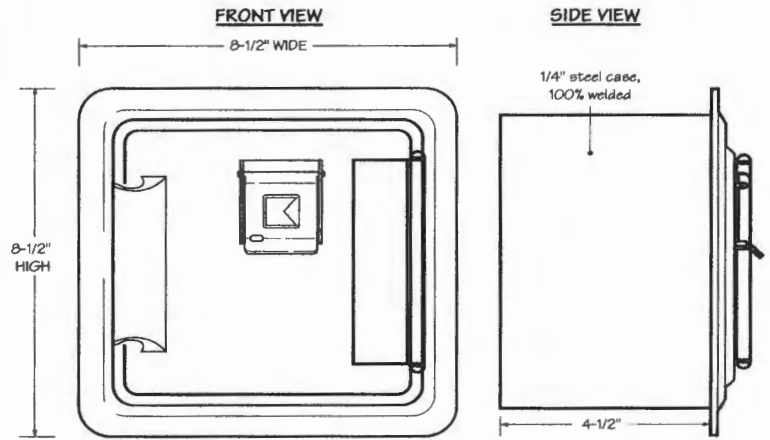
4100 Recessed Mount

Ordering Specifications

To ensure procurement and delivery of the 4100 Series Knox-Vault, it is suggested that the following specification paragraph be used:

KNOX-VAULT surface/recessed mount, with/without UL Listed tamper switches. 1/4" plate steel housing, 1/2" thick solid steel door with interior silicone gasket seal. Lock UL listed. Lock has 1/8" thick stainless steel dust cover with tamper seal mounting capability. Vault has anti-theft re-locking mechanism with drill resistant hard-plate lock protector.

Exterior Dimensions: Surface mount – 6"H x 6"W x 4 1/2"D
  Recessed mount – 8 1/2"H x 8 1/2"W x 4 1/2"D
Lock: UL Listed. Double-action rotating tumblers and hardened steel pins accessed by a proprietary coded biased cut key.
Finish: Knox-Coat® proprietary finishing process
  Finish Color - Black, Dark Bronze or Aluminum
P/N: 4100 Series Knox-Vault (mfr's cat. ID)
Mfr's Name: **KNOX COMPANY**

**Suggested minimum mounting height
6 feet above ground**
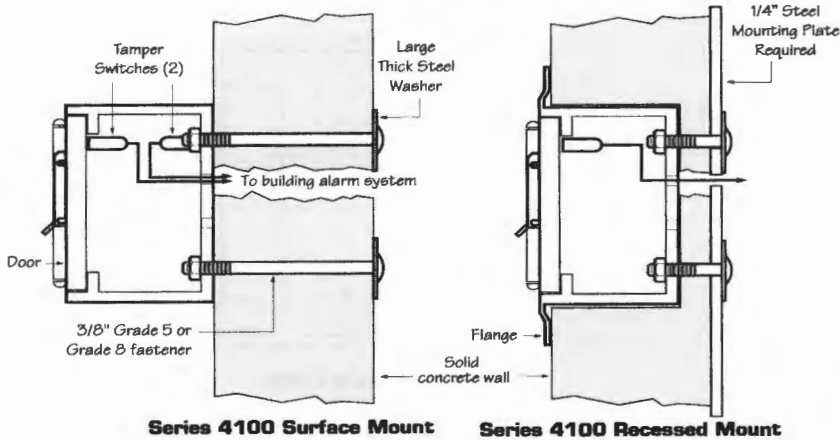
Series 4100 Surface Mount   **Series 4100 Recessed Mount**

INSIDE VIEW

All Mounting Holes are 7/16" Diameter

Optional Tamper Switch Mounting Holes

Alarm Wire Exit Opening

Mounting Holes for Key Hooks

Multi-use Switch Mounting Holes

Extra Mounting Hole or Auxiliary Wire Exit Opening

Optional Keywrench/ Card Holder Mounting Holes

2.25"
1.5" 6" HIGH
1 1/4"
1"

3" — 2" — 1"
6" WIDE
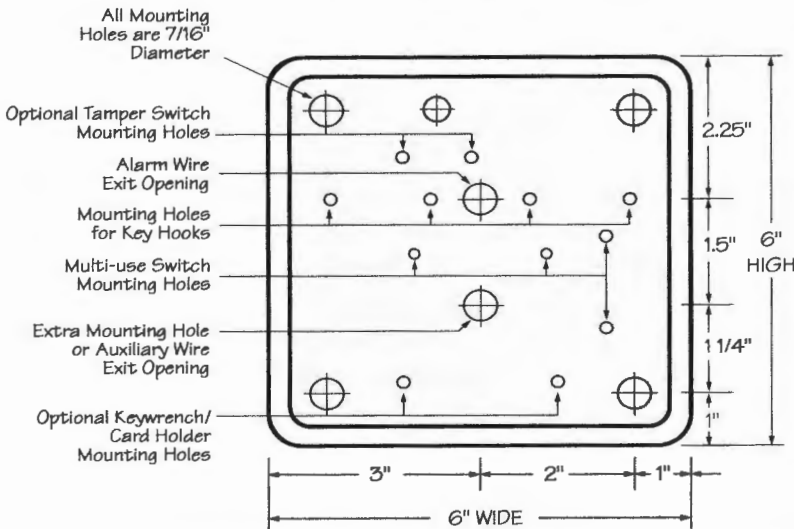
Attention: KNOX-BOX® key box is a very strong device that MUST be mounted properly to ensure maximum security and resist physical attack.

Knox® Rapid Entry System
The Knox Company manufacturers a complete line of high security products including Knox-Box key boxes, key vaults, cabinets, key switches, padlocks, locking FDC caps, plugs and electronic master key security systems. For more information or technical assistance, please call Customer Service at 1-800-552-5669.

Recessed Mounting Kit

The 4100 Recessed Mounting Kit (RMK) is used for recessed models only. It contains a shell housing and mounting hardware to be cast-in-place in new concrete or masonry construction. After construction is completed, the Knox-Vault mounts inside the recessed shell housing. The RMK may only be used in new concrete or masonry construction.

Installation In Cast Concrete
The optional Recessed Mounting Kit is for use in new concrete or masonry construction only. The kit includes a shell housing and mounting hardware to be cast-in-place. The KNOX-VAULT is mounted into the shell housing after construction is completed.

RMK Exterior Dimensions
6 5/8" H x 7 1/4" W x 5 1/4" D

IMPORTANT: Care should be taken to insure that the front of the RMK shell housing, including the cover plate and screw heads, is flush with the finish wall. The RMK must be plumbed to insure vertical alignment of the vault.

Recessed Mounting Using
Recessed Mounting Kit (RMK)
KNOX-VAULT® mounts inside RMK shell after completion of construction

RMK shell is mounted in wall during new construction

Seal top and sides of flange with exterior sealer — leave bottom unsealed for drainage

Trim rebar for tie-in to wall if necessary

Recessed Flange

Mounting studs provided inside RMK shell to accommodate KNOX-VAULT®

Concrete or masonry wall construction

MKT-KBSPEC-0143-B
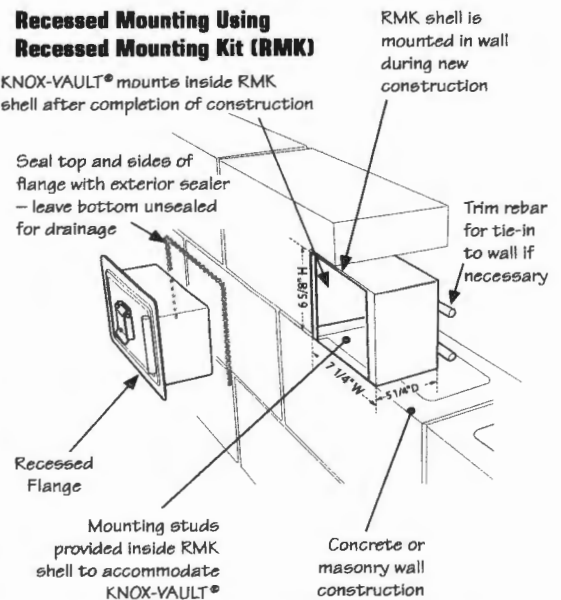
Sequence of Operations

	Audio/visual activation	Activate audible/visual signal at FACP & Annunciator	Device Description at FACP & Annunciator	Shutdown of HVAC equipment	Log event in system history	Activate Elevator Fire Hat	Activate Elevator primary or secondary control	Activate Elevator shunt trip	Silence of audible devices Including FACP & annunciator	Release door holders	Release locked doors	Event acknowledgement	Reset of all system functions and all visual devices	Remote transmission to Central Station A=alarm; T=trouble; S=Supervisory; L = log only	Remote indicator
Manual Pull Stations	X	X	X		X					X	X			A	
Smoke detectors common area	X	X	X		X					X	X			A	
Smoke detectors elevator lobbies	X	X	X		X		X			X	X			A	
Smoke Detectors elevator shaft/machine room	X	X	X		X	X	X			X	X			A	
Duct mounted Smoke Detectors		X	X	X	X									S	X
Heat Detectors common area/inside apartments	X	X	X		X					X	X			A	
Heat Detectors Elevator shaft/machine room	X	X	X		X	X		X		X	X			A	
Sprinkler flow or pressure switches	X	X	X		X					X	X			A	
Sprinkler Tamper, low temp, or low air		X	X		X									S	
Secondary fire panel such as kitchen hood	X	X	X		X					X	X			A	
FACP/annunciator silence button		X	X		X				X					L	
FACP/annunciator acknowledge button		X	X		X							X			
FACP/annunciator reset button		X	X		X								X	L	
Removal of any device		X	X		X									T	
Ground fault		X	X		X									T	
System wiring "open"		X	X		X									T	
AC Power loss		X	X		X									T	
Secondary power loss		X	X		X									T	
Telephone line loss		X	X		X									T	

Fire Alarm sequence of operations.xls

EXCEDER™

Strobe, Horn Strobe, and Horn Notification Appliances

Ceiling

Wall

Description:

The Wheelock® Exceder™ Series of notification appliances feature a sleek modern design that will please building owners with reduced total cost of ownership. Installers will benefit from its comprehensive feature list, including the most candela options in one appliance, low current draw, no tools needed for setting changes, voltage test points, 12/24 VDC operation, universal mounting base and multiple mounting options for both new and retrofit construction.

The Wheelock® Exceder™ Series incorporates high reliability and high efficiency optics to minimize current draw allowing for a greater number of appliances on the notification appliance circuit. All strobe models feature an industry first of 8 candela settings on a single appliance. Models with an audible feature 3 sound settings (90, 95, 99 dB). All switches to change settings, can be set without the use of a tool and are located behind the appliance to prevent tampering. Wall models feature voltage test points to take readings with a voltage meter for troubleshooting and AHJ inspection.

The Wheelock® Exceder™ Series of wall and ceiling notification appliances feature a Universal Mounting Base (UMB) designed to simplify the installation and testing of horns, strobes, and combination horn strobes. The separate universal mounting base can be pre-wired to allow full testing of circuit wiring before the appliance is installed and the surface is finished. It comes complete with a Contact Cover for protection against dirt, dust, paint and damage to the contacts. The Contact Cover also acts as a shunting device to allow pre-wire testing for common wiring issues. The Contact Cover is polarized to prevent it from being installed incorrectly and prevents the appliance from being installed while it is on the UMB. When the Contact Cover is removed the circuit will show an open until the appliance is installed. The UMB allows for consistent installation and easy replacement of appliances if required. Wall models provide an optional locking screw for extra secure installation, while the ceiling models provide a captivated screw to prevent the screw from falling during installation.

- Save up to **48%** in current draw*

- Up to **9** models now in **1** appliance

- Save up to **14%** cost of installation**

Sleek Modern Aesthetics

Finger Slide Switches

Voltage Test Points

Multiple Voltages

3 Audible Settings
90, 95, 99 dB

8 Candela Settings ***
Wall - 15/1575/30/75/95/110/135/185
Ceiling - 15/30/60/75/95/115/150/177

Universal Mounting Base ***
Ceiling and Wall
Mounts to 5 Backbox Types

Environmentally Friendly
Low Current Draw

Compatibility and Requirements
- Synchronize using the Wheelock® Sync Modules or panels with built-in Wheelock® Patented Sync Protocol
- Compatible with UL "Regulated Voltage" using filtered VDC or unfiltered VRMS input voltage
- Strobes produce 1 flash per second over the "Regulated Voltage" range

* Compared to competitive models   *** Patented
** Compared to previous models

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. VISIT WWW.COOPERNOTIFICATION.COM OR CONTACT COOPER NOTIFICATION FOR THE CURRENT INSTALLATION INSTRUCTIONS. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR 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:

General Notes:
- Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range".
- All candela ratings represent minimum effective strobe intensity based on UL Standard 1971.
- Series Exceder Strobe products are Listed under UL Standards 1971 and 464 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%) UL 464 (85% UL 1971).
- Series Exceder horns are under UL Standard 464 for audible signal appliances (Indoor use only).

Low Current Draw = Fewer Power Supplies

Strobe Ratings per UL Standard 1971

| | | UL Max Current* | | | | | | | | | | | | | |
| | | 24 VDC / 24 FWR | | | | | | | | | | | | 12 VDC | |
Model	Regulated Voltage Range VDC	15	15/75	30	60	75	95	110	115	135	150	177	185	15	15/75
ST	8.0-33.0	0.057	0.070	0.085		0.135	0.163	0.182		0.205			0.253	0.110	0.140
STC	8.0-33.0	0.061		0.085	0.103	0.135	0.163		0.182		0.205	0.253		0.110	

Horn Strobe Ratings per UL 1971 & Anechoic at 24 VDC

| | | UL Max Current* at Anechoic 99 dBA | | | | | | | | | | | | | |
| | | 24 VDC | | | | | | | | | | | | 12 VDC | |
Model	Regulated Voltage Range VDC	15	15/75	30	60	75	95	110	115	135	150	177	185	15	15/75
HS	8.0-33.0	0.082	0.095	0.102		0.148	0.176	0.197		0.242			0.282	0.125	0.159
HSC	8.0-33.0	0.082		0.102	0.141	0.148	0.176		0.197		0.242	0.282		0.125	

| | | UL Max Current* at Anechoic 95 dBA | | | | | | | | | | | | | |
| | | 24 VDC | | | | | | | | | | | | 12 VDC | |
Model	Regulated Voltage Range VDC	15	15/75	30	60	75	95	110	115	135	150	177	185	15	15/75
HS	8.0-33.0	0.073	0.083	0.087		0.139	0.163	0.186		0.230			0.272	0.122	0.153
HSC	8.0-33.0	0.073		0.087	0.128	0.139	0.163		0.186		0.230	0.272		0.122	

| | | UL Max Current* at Anechoic 90 dBA | | | | | | | | | | | | | |
| | | 24 VDC | | | | | | | | | | | | 12 VDC | |
Model	Regulated Voltage Range VDC	15	15/75	30	60	75	95	110	115	135	150	177	185	15	15/75
HS	8.0-33.0	0.065	0.075	0.084		0.136	0.157	0.184		0.226			0.267	0.120	0.148
HSC	8.0-33.0	0.065		0.084	0.120	0.136	0.157		0.184		0.226	0.267		0.120	

Horn Ratings per UL Anechoic

Model	Regulated Voltage Range VDC	99 dB	95 dB	90 dB
HN	16-33.0	0.064	0.044	0.022
HNC	16-33.0	0.084	0.044	0.022
HN	8.0-17.5	0.047	0.026	0.017
HNC	8.0-17.5	0.047	0.026	0.017

* UL max current rating is the maximum RMS current within the listed voltage range (16-33 VDC for 24 VDC units). For strobes the UL max current is usually at the minimum listed voltage (16 VDC for 24 VDC units). For audibles the max current is usually at the maximum listed voltage (33 VDC for 24 VDC units). For unfiltered ratings, see installation instructions.

Specification & Ordering Information

Model	Strobe Candela	Sync w/ DSM or Wheelock Power Supplies	12/24 VDC*		Mounting Options
Horn Strobes					
HSR	15/1575/30/75/95/110/135/185	X	X		UMB**
HSW	15/1575/30/75/95/110/135/185	X	X		UMB**
HSRC	15/30/60/75/95/115/150/177	X	X		UMB**
HSWC	15/30/60/75/95/115/150/177	X	X		UMB**
Strobes					
STR	15/1575/30/75/95/110/135/185	X	X		UMB**
STW	15/1575/30/75/95/110/135/185	X	X		UMB**
STRC	15/30/60/75/95/115/150/177	X	X		UMB**
STWC	15/30/60/75/95/115/150/177	X	X		UMB**
Horn					
HNR			X	X	UMB**
HNW			X	X	UMB**
HNRC			X	X	UMB**
HNWC			X	X	UMB**

Left vertical label: Easy to remember model codes

Column label (Strobe Candela area): 8 candelas on 1 device

Right vertical label (Mounting Options area): 1 gang, 2 gang, 4" sq, 3.5" octal & 4" octal boxes

*12 VDC models feature 15 & 15/75 settings

**UMB = Universal Mounting Base

Model Legend

HN = Horn
ST = Strobe
HS = Horn Strobe
C = Ceiling Mount
W = White
R = Red

A = Agent Lettering (Strobes only)
AL = Alert Lettering (Strobes only)
N = No Lettering (Strobes only)

Example 1: STRC = Strobe, Red, Ceiling Mount
Example 2: HSR = Horn Strobe, Red, Wall Mount
Example 3: HSW = Horn Strobe, White, Wall Mount
Example 4: STW-AL = Strobe, White, Wall Mount, Alert Lettering

Example: HSR

Example: HSWC
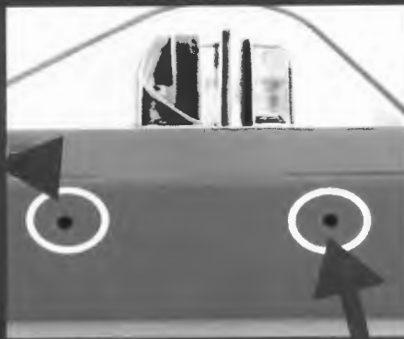
Voltage test points for quick troubleshooting and easy spot checking (wall models only)

8 candela settings

*UMB

Common base for wall and ceiling with 5 mounting options

Contact Cover

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

Architects and Engineers Specifications

The notification appliances shall be Wheelock® Exceder™ Series HS Audible Strobe appliances, Series ST Visual Strobe appliances and Series HN Audible appliances or approved equals. The Series HS and ST Strobes shall be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service. The Series HS and HN Audibles shall be UL Listed under Standard 464 (Fire Protective Signaling). All Series shall meet the requirements of FCC Part 15 Class B. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP) with the ability to operate from 8 to 33 VDC. Indoor wall models shall incorporate voltage test points for easy voltage inspection.

The Series HS Audible Strobe and ST Strobe appliances shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens. The Series shall be of low current design. Where Multi-Candela appliances are specified, the strobe intensity shall have 8 field selectable settings at 15, 15/75, 30, 75, 95, 110, 135, 185 candela for wall mount and 15, 30, 60, 75, 95, 115, 150, 177 candela for ceiling mount. The selector switch for selecting the candela shall be tamper resistant. The 15/75 candela strobe shall be specified when 15 candela UL Standard 1971 Listing with 75 candela on-axis is required (e.g. ADA compliance). Appliances with candela settings shall show the candela selection in a visible location at all times when installed.

The audible shall have a minimum of three (3) field selectable settings for dBA levels and shall have a choice of continuous or temporal (Code 3) audible outputs.

The Series HS Audible Strobe, ST Strobe and Series HN Audible shall incorporate a patented Universal Mounting Base that shall allow mounting to a single-gang, double-gang, 4-inch square, 3.5-inch octal, 4-inch octal or 100mm European type back boxes. Two wire appliance wiring shall be capable of directly connecting to the mounting base. Continuity checking of the entire NAC circuit prior to attaching any notification appliances shall be allowed. Product shall come with Contact Cover to protect contact springs. Removal of an appliance shall result in a supervision fault condition by the Fire Alarm Control Panel (FACP). The mounting base shall be the same base among all horn, strobe, horn strobe, wall and ceiling models. All notification appliances shall be backwards compatible.

The Series HS and ST wall models shall have a low profile measuring 5.24" H x 4.58" W x 2.19" D. Series HN wall shall measure 5.24" H x 4.58" W x 1.6" D. The Series HSC and STC shall been round and have a low profile with a diameter of 6.68" x 2.63" D. Series HNC ceiling shall have a diameter of 6.68" x 1.50" D.

When synchronization is required, the appliance shall be compatible with Wheelock®'s DSM Sync Modules, Wheelock® Power Supplies or other manufacturer's panels with built-in Wheelock® Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync protocol fails to operate, the strobe shall revert to a non-synchronized flash-rate and still maintain (1) flash per second over its Regulated Voltage Range. The appliance shall also be designed so that the audible signal may be silenced while maintaining strobe activation when used with Wheelock® synchronization protocol.

Wall Appliances – UL Standard 1971, UL Standard 464, California State Fire Marshal (CSFM), ULC, FM
Ceiling Appliances – UL Standard 1971, UL Standard 464, California State Fire Marshal (CSFM), ULC, FM

WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
3 YEAR WARRANTY

Exceder - Spec Sheet 6/11

Cooper Notification is **Wheelock®** **MEDC** **SAFEPATH** **WAVES**

COOPER Notification

Altronix®
AL602ULADA, AL802ULADA, AL1002ULADA NAC Power Extenders

Overview

The AL602ULADA, AL802ULADA and AL1002ULADA are extremely cost effective voltage regulated remote NAC Power Extenders. They may be connected to any 12 or 24 volt Fire Alarm Control Panel (FACP). Primary applications include Notification Appliance Circuit (NAC) expansion (supports ADA requirements) and will provide auxiliary power to support system accessories.

AL602ULADA
- 24VDC or 12VDC rated @ 6.5 amp max.
- Two (2) Class A or four (4) Class B outputs.

AL602ULADAJ
- Larger enclosure.

AL802ULADA
- 24VDC or 12VDC rated @ 8 amp max.
- Two (2) Class A or four (4) Class B outputs.

AL802ULADAJ
- Larger enclosure.

AL1002ULADA
- 24VDC rated @ 10 amp max.
- Two (2) Class A or four (4) Class B outputs.

AL1002ULADAJ
- Larger enclosure.

Specifications

- Two (2) Class A or two (2) Class B FACP inputs.
- Two (2) NC dry contact trigger inputs (AL802ULADA and AL1002ULADA only)
- Two (2) Class A or four (4) Class B indicating circuits.
- Two (2) Class B outputs may be paralleled for more power on an indicating circuit.
- One (1) Aux. Power Output @ 1 amp supply current (w/battery back up).
- Signal Circuit Trouble Memory - facilitates quickly locating intermittent system trouble and eliminates costly and unnecessary service calls. LED's indicate a prior fault (short, open, ground) has occurred on one or more signaling circuit outputs.
- 2-wire Horn/Strobe Sync mode allows audible notification appliances (Horns) to be silenced while visual notification appliances (Strobes) continue to operate.
- Horn/Strobe sync protocols include: Gentex®, System Sensor®, Faraday, Amseco.

- Temporal Code 3 Mode.
- Steady Mode.
- Input to Output Follower Mode (maintains synchronization of notification appliance circuits).
- March Time.
- Compatible with 24VDC or 12VDC fire panels.
- Common trouble inputs and outputs.
- Ground fault detection.
- Input 115VAC.
- AC fail supervision (form "C" contacts).
- Low battery supervision (form "C" contacts).
- Battery presence supervision (form "C" contacts).
- Power supply, logic board, red enclosure, cam lock, transformer & battery leads.
- Enclosure:
  - Combination knockouts re 1/2" and 3/4"
  - Accommodates up to two (2) 12VDC/12AH batteries.

Agency Approvals

UL Listed Control Units and Accessories for Fire Alarm Systems (UL 864), UL Listed Standard for Safety for Fire Protective Signaling Systems (UL 1481).

California State Fire Marshal Approved.

MEA Approved NYC Department of Buildings Approved.

FM Factory Mutual Approved.

Enclosure Dimensions

AL602ULADA, AL802ULADA and AL1002ULADA: 15.5"H x 12"W x 4.5"D
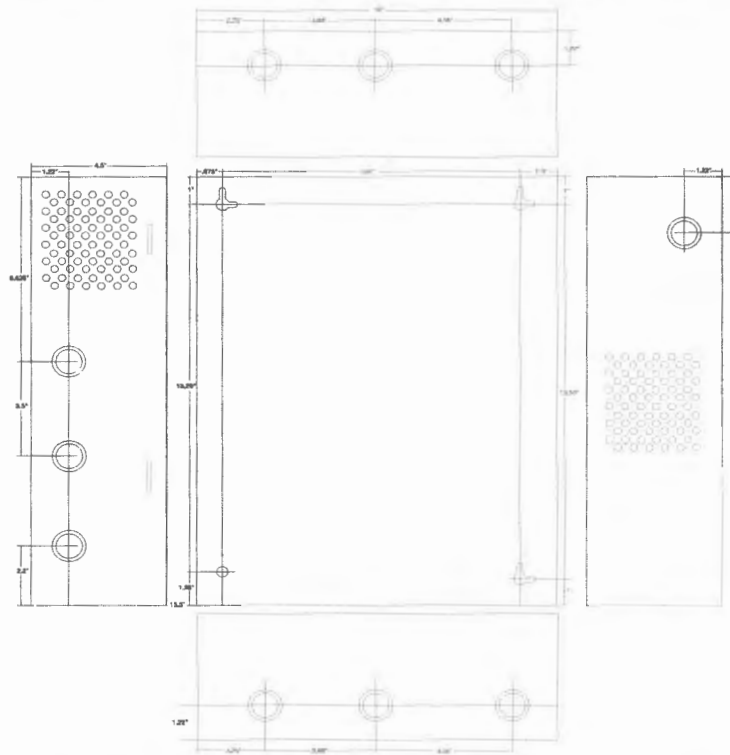
AL602ULADAJ, AL802ULADAJ and AL1002ULADAJ: 18"H x 14.5"W x 4.625"D
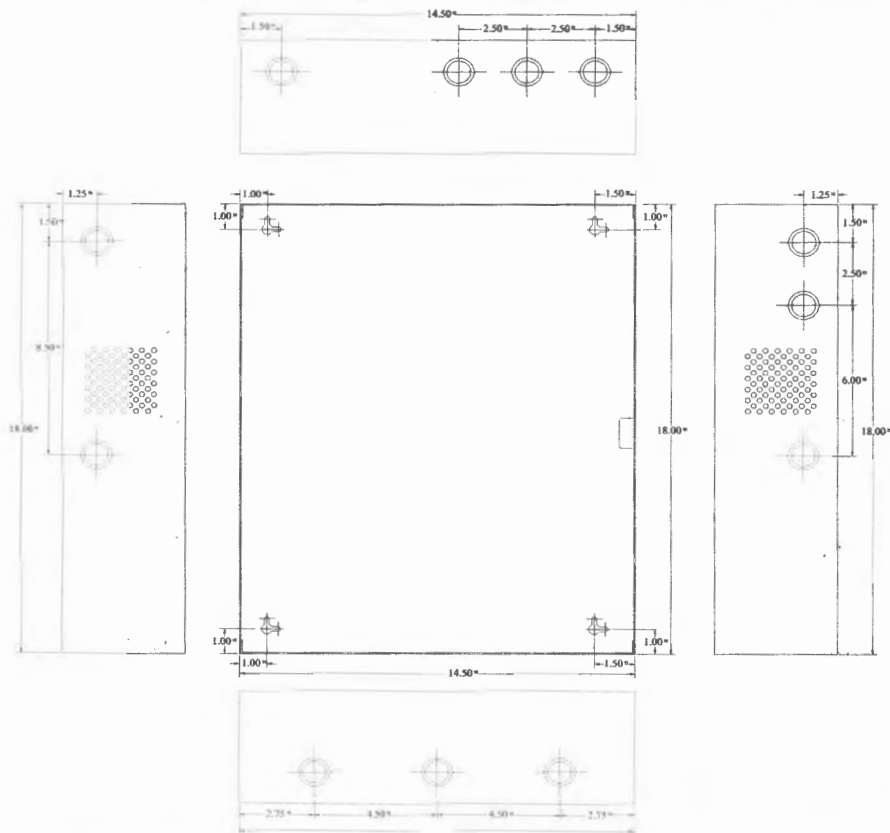
TELGUARD

TG-7FS | CELLULAR ALARM COMMUNICATOR

🔥 COMMERCIAL FIRE

PRODUCT FEATURES

- ⊩ Meets UL 864 requirements for sole, primary or backup path communications.

- ⊩ Supports virtually all alarm formats for universal panel compatibility.

- ⊩ Connects to your central station's PSTN or IP receivers.

- ⊩ Saves your customers money by replacing landline costs.

The Telguard TG-7FS is the ideal cellular alarm communications solution for commercial fire systems. The TG-7FS transmits alarm signals from the fire panel over the digital cellular network to the designated monitoring station.

Compliant with the 2010 Edition of NFPA 72, the TG-7FS can serve as the sole communications path for the fire alarm system, replacing all of the landlines currently dedicated to the master control unit. On average, cellular monitoring costs the end user significantly less than a dedicated landline. For each landline replaced with a TG-7FS, the monthly communications bill decreases.

By being able to signal failures to the central station within five minutes of an outage, the TG-7FS can be installed as the sole path for commercial fire installations. For existing installations, all landlines can be swapped for a single TG-7FS because of the new five minute supervision mode.

The TG-7FS can also be installed as a backup path, and upgraded to sole path at a later date.

Telguard Online

Telguard makes adopting cellular easy with a secure Internet portal. The straightforward web interface allows security dealers and central stations to quickly and efficiently access Telguard based services 24/7. This advanced tool has multi-level user authorization and provides total account management of UL Listed Telguard cellular alarm communicators.

Telguard Cellular Service

Telguard Cellular Service provides nationwide digital cellular network coverage for all Telguard units. Telguard's Communication Center is UL listed and provides seamless connectivity between the alarm panel, the Telguard family of products and the central station. Telguard Technical Support provides a single point of contact for both cellular service and Telguard product questions.

Advanced Reliability

- Available relay output for tripping the alarm control panel when a trouble condition occurs.

- Automatic self-tests with central station notification ensure the cellular system is operating.

- 128 bit AES (Advanced Encryption Standard) alarm signals ensure authentication and security.

- Features SMS backup to reduce false alarms, providing supervision using SMS if GPRS fails.

TG-7FS | CELLULAR ALARM COMMUNICATOR

Power

- Transmit power: 1.0W-2.0W (maximum allowable).
- Power Consumption:
  60mA (Standby)
  250mA (Transmission).
- Transformer: 12VAC, 800mA UL listed plug-in.

Radio Transceiver

- Dual band cellular and PCS.
- GSM 850MHz: Class 4 (2 watts).
- GSM 1900MHz: Class 1 (1 watt).
- Antenna: 9" dipole with 2dBi gain, 12 ft of cable and universal mounting bracket.
- FCC part 15, 22, 24 and 68 compliant.

Physical Details

- TG-7FS: 7.5" H x 11.5" W x 3.5" D
- Shipping Weight: 8lbs
- Operating Environment: 0°C to +50°C; up to 95% humidity (non-condensing).

Standard Features

- Full data reporting.
- Automatic self-test (5 min. & daily).
- Power supply with battery harness.
- Locking, red metal encloure.
- Two programmable supervisory trip outputs.
- Alarm format support for SIA2, Contact ID, pulse (3x1, 4x2), modem IIe, & IIIa2, DMP.
- Telephone line monitor built-in, with Standard Line Security.
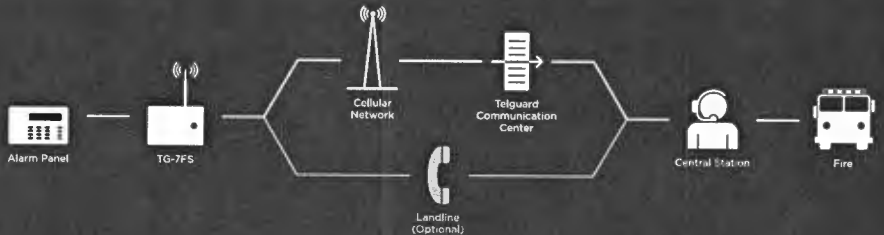
Telguard technology allows full data reporting for unlimited point-to-point signal details and maximum transmitting power for superior in-building penetration.

Telguard products are easy to install, economical, and UL Listed.

Accessories

- ACD 12, ACD 35, ACD 50, ACD 100: 12/35/50/100 feet of low loss, high performance cable.
- HGD-0: High gain directional antenna.
- EXD-0: External antenna.

UL Listings

Commercial Fire
864 · Control units & accessories for fire alarm systems

Commercial Burglary
365 · Police Station connected burglar alarm units and systems
1610 · Central station burglar alarm units

Residential
985 · Household fire warning systems
1023 · Household burglar alarm systems

SYSTEM SENSOR®

5600 Series Mechanical Heat Detectors

System Sensor's 5600 series mechanical heat detectors offer a low-cost means for property protection against fire, and for non-life-safety installations where smoke detectors are inappropriate.

Features

- Multiple configurations for installations:
  - Single- and dual-circuit models
  - Fixed temp and combination fixed- temp/rate-of-rise 135°F or 194°F ratings.
- Plain housing for residential installations (Model 5601P)
- Easy-to-use terminal screws
- A broad range of back box mounting options:
  - Single gang
  - 3.5˝ and 4˝ Octagonal
  - 4˝ square with square to round plaster ring
- Reversible mounting bracket

Multiple configurations. The 5600 series offers a full-line of configurations to accommodate a broad range of applications. Both single- and dual-circuit models are available for low- and high-temperature ratings with either fixed temperature or combination fixed temperature/rate-of-rise (ROR) activation. The ROR element of the fixed/ROR models is restorable to accommodate field-testing.

Installation flexibility. To satisfy a variety of installation needs, the 5600 series easily mounts to single-gang and octagonal back boxes. And these models accommodate four-square back boxes, when used with a square to round plaster ring. The reversible mounting bracket permits both flush- and surface-mount back box installations.

Visual identification. The 5600 series provides clear markings on the exterior of the unit to ensure that the proper detector is being used. Alphanumeric characters identify the activation method, as well as the temperature rating, in Fahrenheit and Celsius degrees. Fixed temperature models are identified FX, while combination fixed/rate-of-rise units are marked FX/ROR. The 5600 series also provides a post-activation indicator in the form of a collector. When the detector is activated, the collector drops from the unit, making it easy to identify the unit in alarm.

Agency Listings

UL LISTED S2101   FM APPROVED 3016008   MEA approved 199-03 E   7270 1209-227

Specifications

Mechanical heat detector shall be a System Sensor 5600 series model number _____, listed to Underwriters Laboratories UL 521 for Heat Detectors for Fire Protective Signaling Systems. The detector shall be either a single-circuit or a dual-circuit type, normally open. The detector shall be rated for activation at either 135°F (57°C) or 194°F (90°C), and shall activate by means of a fixed temperature thermal sensor, or a combination fixed temperature/rate-of-rise thermal sensor. The rate-of-rise element shall be activated by a rapid rise in temperature, approximately 15°F (8.3°C) per minute. The detector shall include a reversible mounting bracket for mounting to 3½-inch and 4-inch octagonal, single gang, and 4-inch square back boxes with a square to round plaster ring. Wiring connections shall be made by means of SEMS screws that shall accommodate 14–22AWG wire. The detector shall contain alphanumeric markings on the exterior of the housing to identify its temperature rating and activation method. The rate-of-rise element of combination fixed temperature/rate-of-rise models shall be restorable, to allow for field-testing. The detectors shall include an external collector that shall drop upon activation to identify the unit in alarm.

Physical/Operating Specifications

Maximum Installation Temperature	5601P, 5603, 5621, and 5623: 100°F (38°C) 5602, 5604, 5622, and 5624: 150°F (65.6°C)
Operating Humidity Range	5 to 95% RH non-condensing
Dimensions with mounting bracket	Diameter: 4.57 inches (11.6cm) Height: 1.69 inches (4.3cm)
Alarm Temperature	5601P, 5603, 5621, and 5623: 135°F (57°C) 5602, 5604, 5622, and 5624: 194°F (90°C)
Weight	6 oz. (170 grams)
Rate-of-Rise Threshold	15°F (8.3°C) rise per minute (models 5601P, 5602, 5621, and 5622 only)
Mounting	3½-inch octagonal back box 4-inch octagonal back box Single gang back box 4-inch square back box with a square to round plaster ring

Electrical Specifications

Operating Voltage / Contact Ratings	6–125VAC / 3A 6–28VDC / 1A 125VDC / 0.3A 250VDC / 0.1A
Input Terminals	14–22 AWG
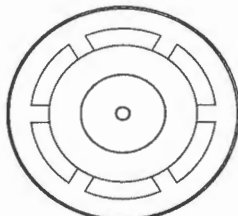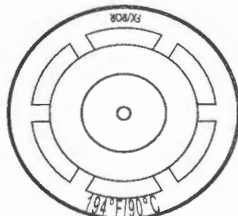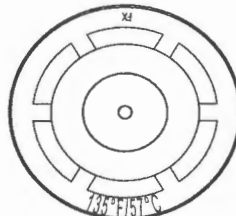
5601P	5602, 5622	5603, 5623	5604, 5624	5621
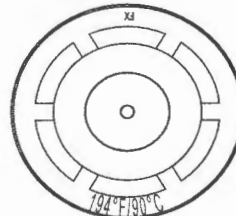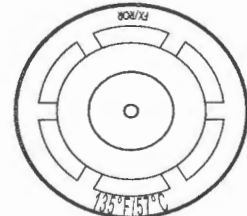
Ordering Information

Model	Circuit	Identification Method on Exterior	Temperature Rating	Activation	UL Protected Spacing – 10 Foot Ceiling*
5601P	Single	None	135°F (57°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5602	Single	Lettering	194°F (90°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5603	Single	Lettering	135°F (57°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)
5604	Single	Lettering	194°F (90°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)
5621	Dual	Lettering	135°F (57°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5622	Dual	Lettering	194°F (90°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5623	Dual	Lettering	135°F (57°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)
5624	Dual	Lettering	194°F (90°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)

*NOTE: Refer to NFPA72 guidelines for spacing reductions when ceiling heights exceed 10 feet.

GAS DETECTION
Macurco inc.

(UL) LISTED

GAS DETECTOR

FOR USE WITH ALARM CONTROL PANELS or for use alone

COMBUSTIBLE GAS DETECTOR
GD-3A
DO NOT PAINT *macurco inc.*

GD-2A

The GD-2A uses a full wave bridge rectifier at its power input, so that it is independent of the polarity of the input power. It can operate on DC or AC voltages between 12 and 24 volts. A switching regulator is used to efficiently match the wide input voltage range to the fixed, internal power system. As a result the power consumption is fairly constant at about 0.75 watts in normal operation, and 1.0 watts in alarm.

The GD-2A has an internal 2 minute time delay, that prevents alarms during the warm-up of the gas sensor. During the warm-up period the green LED light blinks on and off. Once the delay is over, the continuous green light (ARMED) indicates normal operation. The GD-2A has a supervisory circuit of critical functions. A trouble condition, due to failure of a non-reliable component, results in both lights switching on and off and the normally closed trouble relay opening. A power failure also causes the trouble relay to open.

The red LED (ALARM) turns on at the same time the SPDT alarm relay activates, to indicate the alarm condition. The relays are reed type devices that are glass encapsulated, thus are ignition protected.

In the configuration, as shipped from the factory, the GD-2A is self-restoring. When the air clears of gas, the red light turns off and the relay switches to its normal state. A jumper wire on the circuit board can be clipped to allow the unit to latch in upon alarm. Once latched in, power will need to be interrupted to un-latch the alarm condition.

The GD-2A does NOT detect carbon monoxide.

MANUFACTURED BY:

MACURCO INC.
3946 S. Mariposa Street
Englewood, CO 80110
(303) 781-4062   Fax: (303) 761-6640
Website: www.macurco.com

The GD-2A is an all electronic detector of heating type gases (natural and bottle), designed for use alone or for connection to alarm control panels. It can operate on 12 to 24 VDC power from standby or interruptible panel power, or be powered separately.

The attractive two part plastic case allows the GD-2A to be installed over a four inch square or double gang electrical box, providing a near flush mount. Six inch long pigtail leads are provided for connections to the control panel or other devices.

- DETECTS HEATING GASES: PROPANE (LP), NATURAL (METHANE),

- SPDT ALARM AND N.C. TROUBLE RELAYS

- CAN BE SELF-RESTORING OR LATCHING

- ELECTRONIC SENSORS: NO MAINTENANCE OR RECALIBRATION

- TEMPERATURE COMPENSATED

- SIMPLE INSTALLATION AND OPERATION

- FAIL SAFE SYSTEM: SUPERVISED SENSOR

- IGNITION PROTECTED DESIGN

SPECIFICATIONS

SIZE: 4 ½ X 5 X 1 ½ inches

SHIPPING WEIGHT: One pound

VOLTAGE: 12 to 24 VAC or VDC

CURRENT (non-alarm): 60 ma @ 12 VDC, 30 ma @ 24 VDC

CURRENT (in alarm): 83 ma @ 12 VDC, 42 ma @ 24 VDC

COLOR: White

SENSOR MAINTENANCE: Not required

ALARM RELAY RATING: 0.25 Amps, 100V, 3VA

TROUBLE RELAY: 0.50 Amps, 200V, 10 VA

OPERATING TEMPERATURE RANGE: 32° to 120° F

ALARM SET POINT: Per UL 1484 (25% LEL)

DISTRIBUTED BY

TYPICAL CONNECTION OF TWO GD-2A TO AN ALARM CONTROL PANEL
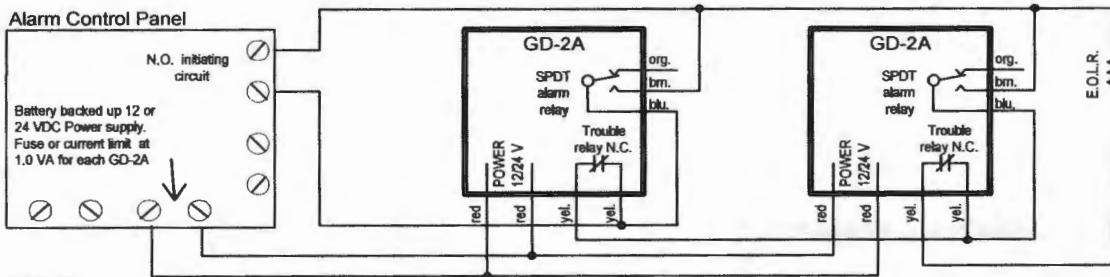
NOTE:

1. The GD-2A is for use with Alarm Control Panels that have 12 to 24 Vdc power and 12 to 24 Vdc alarm initiating circuits, and is a UL Listed Fire Alarm Control Panel or UL Listed Critical Process Management Equipment.

2. The Alarm Control Panel (UL Listed Fire Alarm Control Panel or UL Listed Critical Process Management Equipment) must be dedicated to gas detection or have alarm devices that provide a distinctive alarm for gas detection. Do not connect the GD-2A to Fire Alarm Circuits. A U.L. Listed audible device must be connected that provides at least 85 DB sound output.

3. The GD-2A is intended for installation in buildings in non-hazardous locations such as residences, retail stores, office buildings, and institutional buildings.

4. The GD-2A is NOT intended for use in industrial applications such as refineries, chemical plants, etc.

5. LOCATION: If the gas used is natural gas (methane) mount the GD-2A on a wall about one foot down from the ceiling. If the gas used is propane (LP), mount the GD-2A on a wall or column, one foot above the floor. Do NOT mount the GD-2A in a corner.

6. SPACING: Use the same spacing as for smoke detectors— 30 foot centers, 900 square feet per detector.

7. INSTALLATION

> The GD-2A Gas Detector mounts on a two gang, old work box or a 4 X 4 electrical box, provided by the installer.
> The GD-2A has six inch long pigtail leads to which wire nuts connect to the cables from the control panel.
> A GD-2A is usually located in each room (except kitchens or bathrooms) where gas appliances are located.
> A GD-2A is usually located in each room through which gas pipes pass.

8. The alarm control panel zone inputs must be terminated with end of line resistors (E.O.L.R.), that are provided with the panel.

9. When using the GD-2A with normally closed initiating circuits, use the Com. and N.C. alarm relay connections.

THE GD-2A MAY BE USED ALONE
(The GD-2A has not been evaluated as a stand-alone unit by U.L.)

GD-2A CONTROLLING A REMOTE ALARM

11/99

NO EXCUSES!

FDB

FACU MAINTENANCE RECORDS

NFPA 72 section 6.2.2.1 states, "A record of installed software and firmware version numbers shall be maintained at the location of the fire alarm control unit." The FDB is large enough to hold Operating Manuals, Permits, Shut-Down Instructions and more.

Standard Features:

- Overall Dimensions are:
  12" Wide x 13.1" High x 2.25" Deep
- CAT 30 Secured Locking Door
- Piano Hinged Door w/Notes Sticker
- Removable document holder can hold 1" of 8.5" x 11" paperwork
- Powder Coat Red Finish
- 16 Gauge CRS construction
- Embossed:
  Key Ring Hooks
  Business Card Holder
  CD Case Slot
- 1.4 Oz. can of detector test gas
- Private labeling available

Fire Alarm Control Unit (FACU) Records & Document Box

The Space Age FDB has been developed to be a code compliant solution to a mandated item specified by the National Fire Code (NFPA 72).

An internal galvanized sleeve holds the documents safely and securely. Access to the documents is via a high security CAT 30 Lock Set.

The galvanized sleeve also contains 2 hooks for key rings or thumb drives, a place for several business cards, a cutout for a 1.4 Oz. can of test gas and a slot where a standard CD "jewel" case can be stored.

Held in by two "wing nuts" the sleeve is easily removable to allow storage of a 1.5" 3 ring binder.

The door reads "FACU MAINTENANCE RECORDS" in 1" tall white lettering. Custom Logo and Lock Sets are available upon request.

Key Ring Hooks

Business Card Holder

Canned Smoke

CD Jewel Case

NEMA

NFPA

Made In U.S.A.

ISO 9001 REGISTERED COMPANY

ADA

BOX

Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

No Excuses, Just Solutions!

SPACE AGE
ELECTRONICS, INC.

Specifications:

The Fire Document Box (FDB) shall be constructed of 16 gauge cold rolled steel (CRS), it shall be painted with a durable red powder coat paint. The front door shall be lettered with the words "FACU MAINTENANCE RECORDS" in White indelible letters 1" in height. The door of the FDB shall be locked with a keyed lock (standard shall be CAT 30, but others shall be available along with Private Labeling).

Inside the cabinet shall contain a16 gauge galvanized CRS sleeve. This sleeve shall allow for the storage of 1" of paper, test and inspection records, manuals and other important documents. The sleeve shall also facilitate the hanging of key rings and thumb drives (for data storage) along with business cards and space for a CD 'jewel' case. The unit shall also contain a 1.4oz can of smoke detector test gas. Inside the door shall have a "Notes" label for the recording of valuable information such as AHJ approvals, various system codes and the location of hard to find devices.

If so desired, the internal sleeve (held in by 2 wing nuts) may be removed and the space used to insert a 1.5" 3 ring binder.

Notes Sticker inside FDB Door

Ordering Information:

Part #	Description
SSU00672	**FDB Fire Document Box**
SSU00673	**FDB Custom Logo/lock**
(ask for Form FD10498 to order custom box)	
CK1	**Replacement 1.4 Oz Test Gas**

BOSCH
Invented for life

D8004 Transformer Enclosure

The D8004 Transformer Enclosure protects the AC plug-in transformer and ensures that it remains securely fixed to the AC wall outlet. The D8004 Transformer Enclosure may be required for certain applications; the most common being fire alarm.

Certifications and Approvals

Region	Certification	
USA	UL	AMCX: Central Station Alarm Units (UL1610, UL1635), AOTX: Local Alarm Units (UL464, UL609), APAW: Police Station Alarm Units (UL365, UL464), NBSX: Household Burglar Alarm System Units (UL1023), UOXX: Control Unit Accessories, System (UL864, 9th edition), UTOU: Control Units and Accessories - Household System Type (UL985)
	FM	
	CSFM	7167-1615: 100, 7165-1615: 112, 7165-1615: 119
	NYC-MEA	12-92-E, Vol. 12
		12-92-E, Vol. 15

Technical Specifications

Environmental Considerations

Environment: Indoor, dry

Mechanical Properties

Cover

Color: Light gray

Dimensions: 8.8 in. x 4.7 in. x 3.0 in. (22.4 cm x 11.9 cm x 7.6 cm)

Material: Cold-rolled steel, 18 gauge (1.2 mm)

Outlet Box

Dimensions: 8.7 in. x 4.6 in. x 1.7 in. (22.1 cm x 11.7 cm x 4.3 cm)

Material: Galvanized steel, 18 gauge (1.2 mm)

Power Requirements

Voltage (supply): 120 VAC

Ordering Information

D8004 Transformer Enclosure   **D8004**
For applications such as fire alarm that might require a transformer enclosure.

Fire Alarm Accessory Devices – 9552/ 9553/9554/9555

Features
- UL Listed, File S2985
- CSFM Listed, #3550-1039:100
- Double Chrome Plating
- Low Residual Magnetism
- High Holding Force
- Terminal Block Connections
- Dual Voltage Inputs
- Very Low Current Draw
- Surface Units come with Chrome Plated Steel Back Box
- USA Quality Crafted

General
Faraday electromagnetic fire door holders are two-part, low cost, rugged aluminum devices with minimum magnet projection. The door holder is made of durable die-cast metal finished in double chrome plating. The wall portion houses a long-life electromagnet. The door portion includes a stainless steel plate armature, pivotal mounted on a shock absorbing bearing.

Description
Faraday door holders should be installed wherever doors may be effectively used to confine smoke, fire, or where the release of a self-closing door from a remote location is desired for other reasons.

The door holders have an approximate 35 pound min. holding force. The armature portion is mounted on the door, and offers a new installation technique using an adhesive template assuring alignment without secondary adjustments. The electromagnetic portion is mounted on the wall or wall cavity behind the door. The device holds a door open until signaled by a remote Faraday smoke detector, thermal detector, ionization sensor, electrical switch or fire alarm system. When actuated, the device will release doors to close, checking the spread of smoke and flames. If power fails, doors are released to close automatically, but may be opened or closed at any time.

Sample Specifications
Contractor shall install magnetic door holders of the type and voltage as directed on drawings. The units shall have adjustments for alignment to the door and shall have a minimum of 25 lb. holding force. Finish shall be chrome plating with satin finish and be listed by UL. Surface mount back box should be made of chrome plated steel. Holders shall be controlled from the fire alarm control system and release when signals are activated.
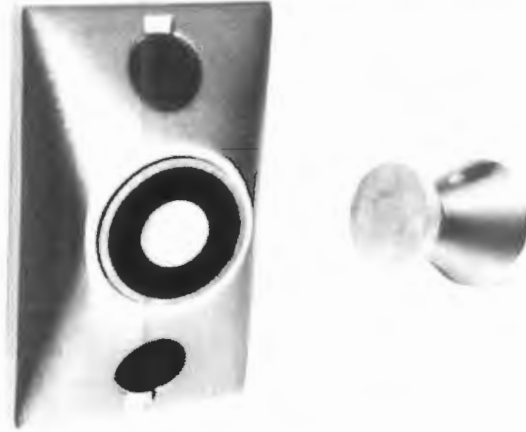
9552 Semi-Flush Door Holder

Ordering Information

Model	Description	Part No.
9552	(DH-24120FC1) Chrome Semi-Flush Wall Mount 120/24 VAC/VDC	500-648445FA
9553	(DH-24120SC1) Chrome Surface Wall Mount w/Surface Box 120/24 VAC/VDC	500-648095FA
9554	(DH-24120GC1) Chrome Single Floor Mount 120/24 VDC/VDC	500-648096FA
9555	(DH-24120GC2) Chrome Double Floor Mount 120/24 VAC/VDC	500-648097FA

Accessories

Model	Description	Part No.
95591	(DHE1C) 1" Chrome Extension Rod	500-648254FA
955915	(DHE15C) 1.5" Chrome Extension Rod	500-648255FA
95593	(DHE3C) 3" Chrome Extension Rod	500-648311FA
95594	(DHE4AC) 4.5" Chrome Extension Rod	500-648562FA
95595	(DHW) Extension Wrench (2 pcs.)	500-648312FA
9556	(DHCPC) Chrome Catch Plate	500-648098FA
9557	(DHSBC) Chrome Swivel Base	500-648099FA
9558	(DHBBC) Chrome Back Box	500-648100FA

9643

Dual Voltage

(rear view shown)
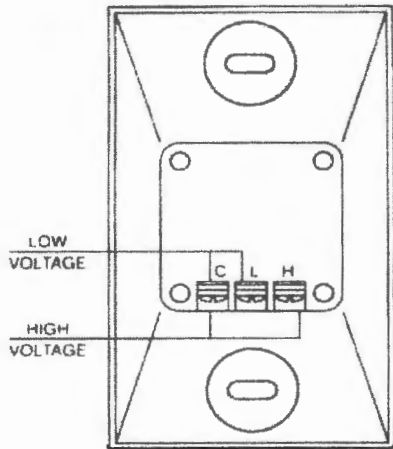
2 3/4"L x 4 5/8"H x 7/8"D

Surface Back Box Mounting

2-3/8" 60 mm.

3-5/16" 84 mm.

4-5/8" 117.5 mm.

1-3/4" 44.5 mm.

2-3/4" 70 mm.

1-1/2" 38 mm.
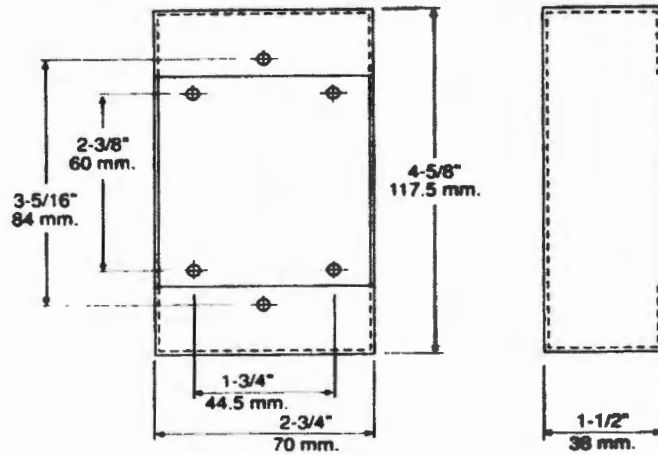
Model	Voltage	*DC/mA	*AC/mA	Terminals	LB.	KG.
9552	24V	30	30	C & L	40	18.1
9553 9554	120V	NA	30	C & H	35	15.8
9555			100	C & L	110	49.8

*Currents are maximum U.L. ratings

Extension Rod Applications
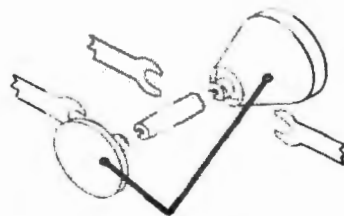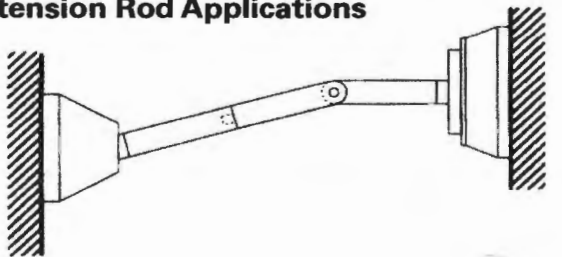
Standard Length Without
Extension Rod is 2 1/4"

Extension Rods

9559-1

1"
25.4mm.

9559-15

1-1/2"
38.1 mm.

9559-3

3"
76.2 mm.

9559-4

4.5"
101.6 mm.

Extension Wrenches

9559-5

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D2212B Control Panel

- ▶ Eight on-board points
- ▶ Up to 24 wired or wireless points
- ▶ Eight users and passcodes with three authority levels
- ▶ Two programmable on-board relay outputs (optional relays required)
- ▶ Alarm memory, two programmable telephone numbers, and flexible routing for event reporting
- ▶ Exit momentarily without turning the entire system off
- ▶ Passcodes for service personnel
- ▶ Text keypads that are easy to use and understand
- ▶ Remote programming with Remote Programming Software (RPS); local programming with keypads or programmers

The 2000 Series D2212B Control Panel collects information from door, window, motion and other sensors located in your office, and communicates unusual activity to a monitoring station. At the monitoring station, professionals can alert the police, fire department, or other emergency response teams if necessary.

The D2212B Control Panel supports wireless motion detectors, contacts and keypads. Wireless devices save money on installation costs by eliminating the need to run wiring to each device. Use a wireless keypad to turn your system on or off from outside the protected premises. Use a wireless key fob to turn the system on or off, send a panic report, open a door, or turn on a light.

The D2212B Control Panel supports one-time passcodes for single-entry visitors such as maintenance workers or other service personnel. Use up to eight different passcodes for regular employees or frequent guests.

System Overview
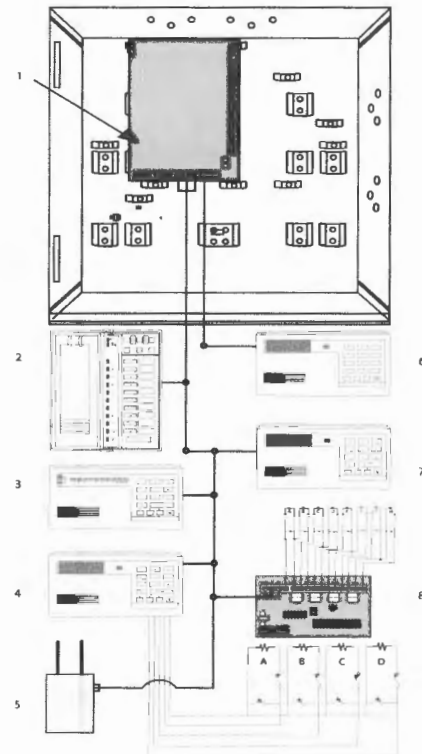
1. D2212B Control Panel
2. D202A Series LED Keypad
3. D220A Series LED Keypad
4. D222A Series LCD Keypad
5. D208RF or D216RF Receiver Expander
6. 200 Series Keypad
   Use the D222A, D222AW, D223A, or D223AW LCD Keypads for local programming.
7. D223A Series LCD Keypad
8. D208 Hard-wire Expander

Functions

Points

The D2212B Control Panel has eight on-board points. It can expand to 24 points using any combination of hard-wired points and wireless devices. Use any combination of the following expanders (four maximum):

- D208 Hardwire Expander supports up to eight hard-wired points.
- D222A/D222AW Keypad supports up to four hard-wired points.
- D208RF Receiver Expander supports up to eight wireless devices.
- D216RF Receiver Expander supports up to 16 wireless devices.

Step Outside

Press the Clear button to temporarily disarm a door when you need open it to receive a delivery or step outside for a moment. Close the door and press the Clear button again to arm it.

Local or Remote Programming

Use keypads for local programming and use RPS for remote programming. Use a portable programmer device to locally download programs. An installer's keypad feature allows quick access to the programming menu. RPS is an account management and control panel-programming utility for the MicrosoftWindows operating system. It is designed to remotely or locally set up and program specific control panels.

Report Routing Destinations

The 2212B Control Panel communicates over two telephone numbers for reporting events. The telephone numbers can have up to 19 digits. You can organize the events into 11 report groups and designate a telephone number as the primary or secondary destination to send reports for different types of events to different locations.

Communications Format

The Modem IIIa^2 communications format adds reporting capabilities such as actual point number, actual user number, bypassed points, and opening or closing reports by up to eight users.

Multiple Users and Passcodes

The D2212B Control Panel supports up to eight users and passcodes. The passcode can range between three to six digits. Assign passcodes one of three authority levels to control the amount of access each user has to system functions.

Outputs

Two programmable on-board relay outputs allow up to 24 preprogrammed output functions.

Certifications and Approvals

Region	Certification	
USA	UL	D2212B: AMCX: Central Station Alarm Units (UL1610, UL1635), AOTX: Local Alarm Units (UL464, UL609), APAW: Police Station Alarm Units (UL365, UL464), APOU: Proprietary Alarm Units (UL1076), NBSX: Household Burglar Alarm System Units (UL1023), UTOU: Control Units and Accessories - Household System Type (UL985)
		D2212BLC: AMCX: Central Station Alarm Units (UL1610, UL1635), AOTX: Local Alarm Units (UL464, UL609), APAW: Police Station Alarm Units (UL365, UL464), APOU: Proprietary Alarm Units (UL1076), NBSX: Household Burglar Alarm System Units (UL1023), UTOU: Control Units and Accessories - Household System Type (UL985)
		D2212BLT: AMCX: Central Station Alarm Units (UL1610, UL1635), AOTX: Local Alarm Units (UL464, UL609), APAW: Police Station Alarm Units (UL365, UL464), APOU: Proprietary Alarm Units (UL1076), NBSX: Household Burglar Alarm System Units (UL1023)
	CSFM	D2212B: 7167-1615: 124 July 2008

Installation/Configuration Notes

Wiring Considerations

- Use a minimum of 1.5 m of 0.8 mm wire (5 ft of 22 AWG) when connecting devices (including keypads) mounted outside the enclosure.
- The maximum combined wire length for all devices connected to the Data and +Aux terminals is 152 m of 0.8 mm wire (500 ft of 22 AWG).

Fire and Fire/Burglary Requirements

Fire installations require a D132A Polarity Reversing Module or a D192C Notification Appliance Circuit Module. The alarm output for Fire or combined Fire/Burglary installations must be supervised. This can be accomplished using a D132A Polarity Reversing Module and compatible smoke detectors or using D192C Notification Appliance Circuit Module.

Compatible Products

Keypads	D202A Series Keypads (D202A and D202AW)
	D220A Series Keypads (D220A and D220AW)
	D222A Series Keypads (D222A and D222AW)
	D223A Series Keypads (D223A and D223AW)
	D279A Independent Zone Control
Detectors	OD850 Series Outdoor TriTech Detectors
	Bosch conventional detectors include Blue Line, seismic, PIR, TriTech PIR Microwave, photoelectric, request-to-exit, and heat, and smoke.
Magnetic Contacts	All Bosch magnetic contacts, including recessed, terminal connection, miniature, overhead door, and surface mount.
Modules	C900V2 Dialer Capture Module
	D127 Reversing Relay
	D132A Polarity Reversing Module
	D133 Single Relay Module
	D134 Dual Relay Module
	D135A Low Battery Cutoff Module
	D168A Remote Telephone Arming Module
	D169 Two-way Voice Verification Module
	D192C Notification Appliance Circuit Module
	D208 Hardwire Expander
Peripheral Hardware	rvm4c Remote Video Module
Programming	D5200 Programmer

SAFECOM Radio Communicators	SC2104 Series Slave Communicators
	SC3100 Series Data Transfer Radio Communicators
	SC4000 Series Full Data Transfer Radio Communicator
Wireless Products	Quik Bridge Learn Mode Loop Receiver 60-660-01-95R
	D208RF Receiver Expander
	D216RF Receiver Expander
	Quik Bridge Learn Mode Repeater 60-615-10-319.5
	Learn Mode Freeze Sensor 60-504-10-319.5
	Learn Mode Wireless Heat Sensor (Alkaline Battery) 60-460-319.5
	Learn Mode Wireless Heat Sensor (Lithium Battery) 60-460-319.5-LB
	Learn Mode Wireless Smoke Sensor (Alkaline Batteries) 60-506-319.5
	Learn Mode Wireless Smoke Sensor (Lithium Batteries) 60-506-319.5-LB
	Wireless PIR Detector 60-511-01-95
	Wireless PIR Detector with Pet Immunity 60-511-02-95
	Learn Mode Single Technology Sound Sensor 60-459-319.5
	Learn Mode Dual Technology Sound Sensor 60-834-95
	Learn Mode Wireless Glass Guard Sensor (White) 60-462-10-319.5
	Learn Mode Wireless Glass Guard Sensor (Brown) 60-462-11-319.5
	Learn Mode Shock Sensors (White) 60-886-95
	Learn Mode Shock Sensors (Brown) 60-886-11-95
	Learn Mode Four-button Keychain Touchpad 60-606-319.5
	Learn Mode Two-button Keychain Touchpad 60-607-319.5
	Learn Mode Single Button Panic Sensor 60-458-10-319.5
	Learn Mode Two-button Panic Sensor 60-457-10-319.5
	Learn Mode Pendant Panic Sensor 60-452-10-319.5
	Learn Mode Water Resistant Pendant Panic Sensor 60-578-10-95
	Learn Mode Fire Pull Station 60-589-319.5

Parts Included

D2212B Components	Quantity
D2212B Board	1
D2203 Enclosure	1
D1640 Transformer	1

Technical Specifications

Communication

Telephone Interface:	RJ31X or RJ38X with D164 phone cord

Environmental Considerations

Relative Humidity:	5% to 85% at +30°C (+86°F) non-condensing
Temperature (Operating):	0°C to +50°C (+32°F to +122°F)

Number of...

Keypads:	8
Points:	• 8 on-board • 2 unsupervised • Expandable to 24

Power Outputs

Alarm Power:	1.35 A maximum at 10.2 VDC to 13.9 VDC output. Output may be steady or pulsed depending on programming.
Auxiliary Power:	1.0 A maximum at 10.2 VDC to 13.9 VDC for devices powered at the Aux⁺ terminal (140 mA for Fire and combined Fire/Burglary systems).
Continuous Power:	To comply with UL985 and UL864 for fire alarm applications, continuous power output is limited to 140 mA.
Total Power:	To comply with UL985 and UL864 for fire alarm applications, the total combined continuous and alarm current draw for the system during alarm conditions must be limited to 860 mA provided by the primary power supply (rectified AC).

Power Requirements

Operating Voltage:	16.5 VDC
Primary Voltage Input:	16.5 VAC, 40 VA provided by a Class 2, plug-in transformer (D1640)
Secondary Voltage Input:	12 VDC, 7 Ah sealed lead-acid rechargeable battery

Trademarks

Trademark names are used throughout this document. In most cases, these designations are claimed as trademarks or registered trademarks in one or more countries by their respective owners. Rather than placing a trademark symbol in every occurrence of a trademark name, Bosch Security Systems, Inc. uses the names only in an editorial fashion and to the benefit of the trademark owner with no intention of infringing the trademark.

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D2212B Kit Ordering Information

Components	Kits						
	D2212BLC	D2212BLT	D2212BM	D2212BC202A	D2212BC202AW	D2212BC220A	D2212BC220AW
D2212B Board	1	1	1	1	1	1	1
Universal Enclosure		1		1	1	1	1
D2402 Mounting Skirt			1				
D1640 Transformer				1	1	1	1
D202A Keypad				1			
D202AW Keypad					1		
D220A Keypad						1	
D220AW Keypad							1

Components	Kits			
	D2212BC222A	D2212BC222AW	D2212BC223A	D2212BC223AW
D2212B Board	1	1	1	1
Universal Enclosure	1	1	1	1
D1640 Transformer	1	1	1	1
D222A Keypad	1			
D222AW Keypad		1		
D223A Keypad			1	
D223AW Keypad				1

Ordering Information

D2212B Control Panel — D2212B
Includes one printed circuit board (PCB), one transformer, assorted literature, and assorted hardware.

D2212B Kit without Enclosure — D2212BLC
Includes one PCB and assorted hardware. Requires an enclosure.

D2212B Kit without Transformer — D2212BLT
Includes on PCB, one universal enclosure, and assorted hardware. Requires a transformer.

D2212B Kit with Mounting Skirt — D2212BM
Includes one PCB, one mounting skirt, assorted literature, and assorted hardware.

D2212B Kit with Vertical LED Keypad — D2212BC202A
Includes one PCB, one enclosure, one transformer, and one vertical D202A LED Keypad.

D2212B Kit with Vertical LED Keypad — D2212BC202AW
Includes one PCB, one enclosure, one transformer, and one vertical D202AW LED Keypad.

D2212B Kit with LED Keypad — D2212BC220A
Includes one PCB, one enclosure, one transformer, and one LED D220A Keypad.

D2212B Kit with LED Keypad — D2212BC220AW
Includes one PCB, one enclosure, one transformer, and one D220AW LED Keypad.

D2212B Kit with LCD Keypad — D2212BC222A
Includes one PCB, one enclosure, one transformer, and one D222A LCD Keypad.

D2212B Kit with LCD Keypad — D2212BC222AW
Includes one PCB, one enclosure, one transformer, and one D222AW LCD Keypad.

Ordering Information

D2212B Kit with LCD Keypad — D2212BC223A
Includes one PCB, one enclosure, one transformer, and one D223A LCD Keypad.

D2212B Kit with LCD Keypad — D2212BC223AW
Includes one PCB, one enclosure, one transformer, and one D223AW LCD Keypad.

Accessories

ICP-EZTS Dual Tamper Switch — ICP-EZTS
Combination tamper switch with a wire loop for additional tamper outputs.

D101 Lock and Key Set — D101

D126 Standby Battery (12 V, 7 Ah) — D126
Sealed lead-acid standby and auxiliary rechargeable power supply.

D160 Telephone Cord — D160

D166 Telephone Jack — D166

D1218 Battery (12 V, 18 Ah) — D1218
A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors

D1640 Transformer — D1640

D2203 Enclosure — D2203
Grey steel enclosure with a lock. Accepts an optional tamper switch. Measures 37 cm x 34 cm x 8.9 cm (14.6 in. x 13.4 in. x 3.5 in.).

D2402 Mounting Plate — D2402
Required for mounting control panels in D8103, D8108A, or D8109 enclosures.

D8103 Enclosure — D8103

Ordering Information

D8108A Attack Resistant Enclosure   D8108A

Grey steel enclosure measuring 41 cm x 41 cm
x 9 cm (16 in. x 16 in. x 3.5 in.). UL Listed.
Includes lock and key set. Requires the D2402
Mounting Plate.

D8109 Fire Enclosure   D8109

Red steel enclosure measuring 40.6 cm x
40.6 cm x 8.9 cm (16 in. x 16 in. x 3.5 in). UL
Listed. Includes a lock and key set.

D1625 Transformer   D1625

A 16 VAC, 25 VA transformer required to pow-
er the D2212B and D2212BE Control Panels.

D2803 Enclosure   D2803

Grey steel enclosure measuring 25.4 cm x
22.8 cm x 7 cm (10 in. x 9 in. x 2.8 in.)

Software Options

RPS Kit (LPT)   D5500C-LPT

Account management and control panel-pro-
gramming software with LPT connection.

RPS Kit (USB)   D5500C-USB

Account management and control panel-pro-
gramming software with USB connection.

![System Sensor logo] **SYSTEM SENSOR®**

CO1224
Carbon Monoxide
Detector

System Sensor's CO1224 provides early warning when

its electrochemical sensing technology accurately

measures carbon monoxide levels in the air.

Carbon monoxide is an odorless, colorless, tasteless and highly toxic gas that is produced when fuels, such as wood, gasoline, charcoal and oil, are burned with insufficient air. The majority of residential and commercial fatalities caused from these fuels come from heating systems, power tools and charcoal grills.

If carbon monoxide is detected, the CO1224 will alert residents by sounding and flashing a temp-4 signal alarm. Protection is guaranteed 24/7 by a central station, regardless of whether residents are away from home, sleeping or already suffering from the effects of CO.

The CO1224 is specifically designed for system operation. This means the detector is fully listed to UL 2075, offering a code required trouble relay, which sends a sensor failure or end-of-life signal to the control panel and the central station, as well as SEMS-type terminal Philips-head screws, which provide a quicker and more positive wiring connection and code required wiring supervision. Also, the CO1224 offers a low current draw, allowing more detectors to be connected to the panel without having to purchase a more expensive panel or an extra power supply.

Because the CO1224 is a 12/24 VDC detector, it will operate on most industry security or fire alarm control panels.

Features

- Full compliance with UL 2075
- A code required trouble relay
- Wiring supervision with SEMS terminals
- A six-year end-of-life timer
- 12/24 VDC
- A current draw of 20mA in standby and 40mA in alarm
- Versatile mounting for wall and ceiling
- Electrochemical sensing technology

Agency Listings

![UL Listed 2075 mark]
LISTED
2075

Specifications

Carbon monoxide detector shall be a System Sensor model number CO1224, listed to Underwriters Laboratories UL 2075 for Gas and Vapor Detectors and Sensors. The detector shall be equipped with a sounder and a trouble relay. The detector's base shall be able to mount to a single-gang electrical box or direct (surface) mount to the wall or ceiling. Wiring connections shall be made by means of SEMS screws. The detector shall provide dual color LED indication, which blinks to indicate normal standby, alarm, or end-of-life. When the sensor supervision is in a trouble condition, the detector shall send a trouble signal to the panel. When the detector gives a trouble or end-of-life signal, the detector shall be replaced.

Electrical Specifications

Operating Voltage	12/24 VDC
Audible Signal	85 dB in alarm
Standby Current	20 mA
Alarm Current	40 mA (75 mA test)
Alarm Contact Ratings	0.5 A @ 30 VDC
Trouble Contact Ratings	0.5 A @ 30 VDC

Physical Specifications

Size	Length: 5.1″, Width: 3.3″, Height: 1.3″
Approximate Weight	7 oz
Operating Temperature Range	0° – 40° C (32° – 104° F)
Operating Humidity Range	22 – 90% RH
Input Terminals	14 – 22 AWG
Mounting	Single-gang back box; surface mount to wall or ceiling

Operation Modes

Operation Mode	Green LED	Red LED	Sounder
Normal (standby)	Blink 1 per minute	—	—
Alarm	—	Blink in temp 4 pattern	Sound in temp 4 pattern

Hush Feature: Pushing the Test/Hush button will silence the sounder for 5 minutes.

Trouble Feature: When the detector is in a trouble condition, it will send a trouble signal to the panel.

End-of-life Timer: After the sensor inside the detector has reached the end of its useful life, a trouble signal will be sent to the panel. This will indicate that it is time to replace the detector. An electrochemical carbon monoxide detector lifespan is approximately six years, and the detector must be replaced by the date marked on the inside of the product.

Ordering Information

Part No.	Description
CO1224	12/24 volt, 4-wire system-monitored carbon monoxide detector

SYSTEM SENSOR

Photoelectric Smoke Detectors

System Sensor's i³™ series smoke detectors represent

significant advancement in conventional detection.

The i³ family is founded on three principles: installation

ease, intelligence, and instant inspection.

Features

- Plug-in detector line, mounting base included
- Large wire entry port
- In-line terminals with SEMS screws
- Mounts to octagonal and single-gang backboxes, 4-square backboxes, or direct to ceiling
- Stop-Drop 'N Lock attachment to base
- Removable detector cover and chamber
- Built-in remote maintenance signaling
- Drift compensation and smoothing algorithms
- Simplified sensitivity measurement
- Wide angle, dual color LED indication
- Loop testing via EZ Walk feature
- Built-in test switch

Installation ease. The i³ line redefines installation ease with its plug-in design. This allows an installer to pre-wire the bases included with the heads. The large wire entry port and in-line terminals provide ample room for neatly routing the wiring inside the base. The base accommodates a variety of back box mounting methods, as well as direct mounting with drywall anchors. To complete the installation, i³ heads plug in to the base with a simple Stop-Drop 'N Lock™ action.

Intelligence. i³ detectors offer a number of intelligent features to simplify testing and maintenance. Drift compensation and smoothing algorithms are standard with the i³ line to minimize nuisance alarms. Two-wire i³ detectors needing cleaning can generate a remote maintenance signal, when connected to the 2W-MOD2 loop test/maintenance module, or to a panel equipped with the i³ protocol. This signal is indicated by LEDs located at the module and the panel. The SENS-RDR, a wireless device, displays the sensitivityof i³ detectors in terms of percent per-foot-obscuration.

Instant inspection. The i³ series provides wide-angle red and green LED indicators for instant inspection of the detector's condition: normal standby, out-of-sensitivity, alarm, or freeze trouble. When connected to the 2W-MOD2 loop test/maintenance module or a panel with the i³ protocol, the EZ Walk loop test feature is available on two-wire i³ detectors. This feature verifies the initiating loop wiring by providing LED status indication at each detector.

Agency Listings

| UL LISTED S911 | FM APPROVED 3011446 | 7272-1209:210 | MEA approved 290-01-E | MSFM approved 2093 |

i³ Smoke Detector Specifications

Smoke detector shall be a System Sensor i³ Series model number_____, listed to Underwriters Laboratories UL 268 for Fire Protection Signaling Systems. The detector shall be a photoelectric type (Model 2W-B, 4W-B) or a combination photoelectric/thermal (Model 2WT-B, 4WT-B) with thermal sensor rated at 135°F (57.2°C). The detector shall include a mounting base for mounting to 3½-inch and 4-inch octagonal, single gang, and 4-inch square back boxes with a plaster ring, or direct mount to the ceiling using drywall anchors. Wiring connections shall be made by means of SEMS screws. The detector shall allow pre-wiring of the base and the head shall be a plug-in type. The detector shall have a nominal sensitivity of 2.5 percent-per-foot nominal as measured in the UL smoke box. The detector shall be capable of automatically adjusting its sensitivity by means of drift compensation and smoothing algorithms. The detector shall provide dual color LED indication which blinks to indicate power up, normal standby, out of sensitivity, alarm, and freeze trouble (Model 2WT-B, 4WT-B) conditions. When used in conjunction with the 2W-MOD2 module, 2-wire models shall include a maintenance signal to indicate the need for maintenance at the alarm control panel, and shall provide a loop testing capability to verify the circuit without testing each detector individually.

Electrical Specifications

Operating Voltage	Nominal: 12/24V non-polarized Minimum: 8.5V Maximum: 35V
Maximum Ripple Voltage	30% peak to peak of applied voltage
Standby Current	2-wire: 50 µA maximum average; 4-wire: 50 µA maximum average
Maximum Alarm Current	2-wire: 130 mA limited by control panel; 4-wire: 20 mA @12V, 23mA @ 24V
Peak Standby Current	2-wire: 100 µA; 4-wire: n/a
Alarm Contact Ratings	2-wire: n/a; 4-wire: 0.5 A @ 30V AC/DC

Physical Specifications

Dimensions (including base)	5.3 inches (127 mm) diameter; 2.0 inches (51 mm) height
Weight	6.3 oz. (178 grams)
Operating Temperature Range	2W-B and 4W-B: 32°F–120°F (0°C–49°C); 2WT-B and 4WT-B: 32°F–100°F (0°C–37.8°C)
Operating Humidity Range	0 to 95% RH non-condensing
Thermal Sensor	135°F (57.2°C) fixed
Freeze Trouble	2WT-B and 4WT-B only: 41°F (5°C)
Sensitivity	2.5%/ft. nominal
Input Terminals	14–22 AWG
Mounting	3½-inch octagonal back box 4-inch octagonal back box Single gang back box 4-inch square back box with a plaster ring Direct mount to ceiling

LED Modes

LED Mode	Green LED	Red LED
Power up	Blink every 10 seconds	Blink every 10 seconds
Normal (standby)	Blink every 5 seconds	off
Out of sensitivity	off	Blink every 5 seconds
Freeze trouble	off	Blink every 10 seconds
Alarm	off	Solid

Power Up Sequence for LED Indication

Condition	Duration
Initial LED status indication	80 seconds

Ordering Information

Model	Thermal	Wiring	Alarm Current
2W-B	No	2-wire	130 mA max. limited by control panel
2WT-B	Yes	2-wire	130 mA max. limited by control panel
4W-B	No	4-wire	20 mA @ 12V, 23mA @ 24V
4WT-B	Yes	4-wire	20 mA @ 12V, 23mA @ 24V

Accessories

2W-MOD2	2-wire loop test / maintenance module	RT	Removal / replacement tool
SENS-RDR	Sensitivity reader	A77-AB2	Retrofit adapter bracket, 6.6 in. (16.76cm) diameter

7744F/7788F ◢◢AES|*IntelliNet*
CORPORATION | For Alarm Monitoring

UL Listed

RF Subscriber Unit
UL Fire, AA Burglary and NFPA-72 Compliant

UL Listed

UL Listed Central Station

Remote Station

864 Ed. 9, 827, 1610, 365, 681

CSFM

NFPA RF Section 8.6.3.5

- **Options for Full Data for Fire and Burglary**

- **Available in 7744F & 7788F Zone Configurations**

- **Built-in Power Supply and Battery Charger**

- **Local Annunciation Options on Board**

Advanced Wireless Alarm Monitoring

The 7744F/7788F smart subscriber unit links an alarm panel to an alarm monitoring central station. This 2-way transceiver and repeater in one is housed in a full size locking steel cabinet for superior performance. The 7744F/7788F supports a wide range of inputs such as NO/NC/EOL and direct voltage. It automatically senses wire and antenna cuts, and monitors battery and AC power status. Advanced status reporting, self-diagnostics and a built-in power supply make the 7744F/7788F the first choice for all wireless alarm communication needs.

Full Data for Fire and Burglary

Use with the optional Firetap for full fire data or the IntelliTap for full fire and burglary data.

Available Configurations	Available Options
7744F – 4 reversing polarity inputs plus 4 programmable EOL inputs	FireTap 7770
	IntelliTap 7067
	NEMA 4 Enclosure
7788F – Programmable EOL inputs with 8 zones	High Gain Antenna
	Additional Back Up Battery
	Available in Burglary Beige or Fire Red

Wireless mesh networking is an innovative technology adopted by many industries with applications that need to communicate data over a large geographic area with a high level of reliability at a low total cost of ownership.

The advanced design and 2-way communications capability provides easy installation, expansion, and management when compared to alternative communication methods, both wired and wireless.

7744F/7788F
RF Subscriber Unit

Technical Specifications

Radio
Standard CSAA frequency ranges: 450-470 MHz and 130-174 MHz, VHF and UHF. Others available

Standard Output Power
2 watts (requires FCC license)

Power Input
16.5 VAC, 40VA UL listed
Class II transformer required

Voltage
12 VDC nominal

Current
175mA standby; 800mA transmit

Alarm Signal Inputs
- 4 individually programmable Zones: NO/NC/EOL, trouble restore
- RS-232
- Reversing voltage (7744F only) 12 or 24 VDC

Operating Temperature Range
0° to 50°C, 32° to 122°F

Storage Temperature Range
-10° to 60°C, 14° to 140°F

Relative Humidity Range
0-85% RHC non-condensing

Back up Battery
12V, 7.5 AHr

Low Battery Reporting
22.5-minute test cycle

AC Status
Reports to central station after approximately 60 minutes without AC power, reports power restored after approximately 60 minutes of restored power. programmable from 60 to 180 minutes

Antenna Cut (local reporting)
Form 'C' Contact 1 AMP

Size
13.25"H x 8.5"W x 4.3"D
34cm x 21.5cm x 11cm

Weight
6.4 lbs, 2.9 Kilograms
(excluding battery)

Colors
Available in standard
Burglary Beige or Fire Red
Please specify when ordering

Available Options
- 7788F RF subscriber unit with 8 EOL inputs
- 7744F RF subscriber unit with 4 EOL inputs and 4 reverse polarity inputs
- 7770 - FireTap
- 7067 - IntelliTap
- NEMA 4 Enclosure

Please specify when ordering

Available configurations
- 7788F, 8 EOL inputs
- 7744F, 4 EOL inputs w/4 reverse polarity inputs

AES-*IntelliNet*™ is the industry leader in delivering high quality wireless mesh networks to the fire and security industry in commercial, corporate, government, and educational applications with its broad line of products and advanced network management tools. Users of AES-*IntelliNet* networks have gained significant revenue, communications, and cost advantages while meeting the high standards of reliability required for the fire and security industry. AES-*IntelliNet* alarm monitoring systems are deployed at hundreds of thousands of locations in over 130 countries.

AES|*IntelliNet*
CORPORATION | For Alarm Monitoring

For more information
Call 800-AES-NETS (800-237-6387)

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Web www.aes-intellinet.com

STI Polycarbonate Enclosure
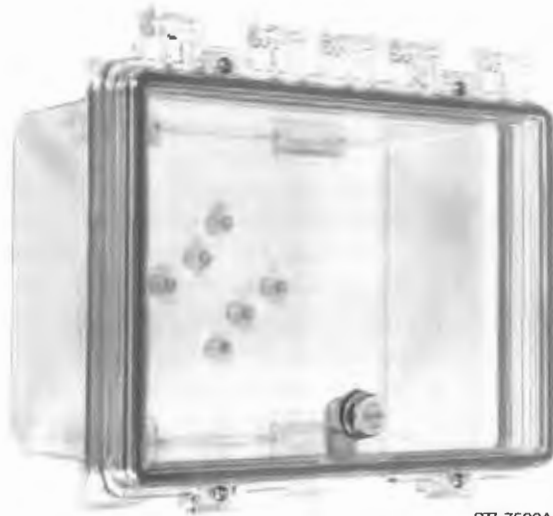
STI-7500A

STI-7511D

PRODUCT OVERVIEW

Multipurpose lockable enclosure for a wide range of larger size devices, components and instruments, such as keypads, annunciators and automated external defibrillators (AEDs) which require protection from vandalism, accidental damage, as well as the elements, such as dirt and grime. Spacers, integrated hinge and covers are formed from super tough polycarbonate material. The polycarbonate enclosures are backed by a lifetime guarantee against breakage and damage in normal use. STI enclosure is lockable with either a key or thumb lock.

FEATURES

- Protection for large units against physical damage, grime and severe environments.
- Key or thumb lock available.
- Mounting hardware and gaskets are included.
- Fast and easy installation.
- Can be used over volume or lighting controls.
- 94V-2 flammability rating.
- Cover, integrated hinge and spacers are formed from super tough polycarbonate material.
- Each protected unit can be clearly seen and quickly identified.
- Typical working properties of polycarbonate are -40° to 250°F (-40° to 121°C).
- Lifetime guarantee against breakage of polycarbonate in normal use.

For more information, call 1-800-888-4784 (4STI) or visit www.sti-usa.com

STI Safety Technology International, Inc.

STI Polycarbonate Enclosure

Dimensions and Technical Information

MODELS AVAILABLE

STI-7500	Cover with key lock and backbox
STI-7501	Cover with thumb lock and backbox
STI-7510	Cover with exterior key lock and backbox
STI-7511	Cover with exterior thumb lock and backbox

NOTE: Select backbox from below

Accessories

18021 NEMA 4X	3/4" ridgid conduit hub for "A" backbox
18054	Replacement key #CH751
SUB-318	Adapter plate used for mounting "A", "B" or "F" backbox to pedestal
SUB-6297B20	3/4" conduit hub for "B", "C" and "F" backboxes
STI-1283	Backplate

BACKBOX DESCRIPTION

A	Enclosed deep backbox
B	Enclosed backbox with double-gang electrical box
C	Open backbox for flush mount applications
D	Open conduit backbox, surface mount applications
E	Open backbox for flush mount applications
F	Enclosed backbox

APPROVALS & WARRANTY

TESTING

The STI-7500 series only has been tested and approved or listed by:
· UL/cUL Listed No. S7255

WARRANTY

Lifetime guarantee against breakage of polycarbonate in normal use.

NOTICE

STI recommends replacement of gaskets every five years for outdoor applications.

		STI-7500/7501					STI-7510/7511		
B		G	H	J	K	L	M	N	P
A	A	8.48	5.40	4.15	6.48	3.40	8.48	6.48	4.59
C	B	8.50	5.40	1.30	5.50	0.55	8.50	5.50	1.74
K	C	7.81	4.80	2.51	5.25	1.76	7.81	5.25	2.95
B	D	7.73	5.40	3.54	5.70	2.79	7.73	5.70	3.98
O	E	7.70	5.40	1.76	5.71	1.01	7.70	5.71	2.20
X	F	8.30	4.80	2.35	5.63	1.60	8.30	5.63	2.79

NOTE: Below pictures illustrate backbox differences.

STI-7500A (KEY LOCK)
STI-7501A (THUMB LOCK)

STI-7500B (KEY LOCK)
STI-7501B (THUMB LOCK)

STI-7500C (KEY LOCK)
STI-7501C (THUMB LOCK)

STI-7500D (KEY LOCK)
STI-7501D (THUMB LOCK)

STI-7500E (KEY LOCK)
STI-7501E (THUMB LOCK)

STI-7500F (KEY LOCK)
STI-7501F (THUMB LOCK)

Honeywell

5817CB
WIRELESS COMMERCIAL TRANSMITTER

The 5817CB is a universal contact-monitoring transmitter that can be used with household and commercial fire and burglary-initiating devices such as door/window contacts, motion and glassbreak detectors, sprinkler water flow switches, tamper switches, post indicator valves, manual pull stations and remote duct detectors. Upon activation, it emits an RF signal to a control panel, sending a burglary or fire alarm to a central station.

FEATURES

- The 5817CB has three unique input loops (zones).

- The first loop (primary loop) is supervised and typically used for high-priority alarm reporting such as commercial fire or burglary.

- The second loop is the built-in, normally closed reed switch used in conjunction with magnet.

- The third loop is another normally closed household burglary loop. All three loops may be used.

- A fourth (automatically enrolled) loop contains two tamper switches to protect the 5817CB.

MOUNTING

1. Remove the transmitter cover by inserting the flat blade of a small screwdriver into the pry-off slot at the bottom end of the unit (on the right side closest to the cover's decorative ribs and twisting).

2. Disengage the supplied mounting plate from the unit by inserting the blade of a small screwdriver into the mounting plate release hole (see Diagram 2) and pushing the locking tab out (see Diagram 1). Slide the mounting plate downward along the case back.

Note: For this application, the alignment guide strip along one edge of the mounting plate serves no function and may be broken away, if desired.

3. If concealed wiring is to be used, feed the wires through the concealed wiring entry hole on one corner of the plate (surface wiring is mentioned in step 5 below).

4. Install the mounting plate, with its caseholding posts pointing up, in the location selected as described in the installation instructions. Use the two flat-head screws supplied. Note: To ensure proper operation of the unit's back tamper (when it is separated from the mountain plate), the screws must be anchored to a wall stud or other solid wood material.

5. Set the DIP switch (after the control panel has enrolled the transmitter's input ID's) for the desired primary loop characteristics, as described in the table on the following page.

5817CB

WIRELESS COMMERCIAL TRANSMITTER

Primary Loop Options Table				
Switch Setting	DIP Switch Position			
	1	2	3	4
On	**Repeating transmission** (every 4 sec.) upon primary loop fault use for high priority alarm, such as fire.	Switch must **always** be in the **on** position	Switch must **always** be in the **on** position	Switch must **always** be In the **off** position
Off	**Single transmission** per primary loop change-of-state			

Notes: a. In order for the control panel to enroll the transmitter, the DIP switches must be Set to OFF-ON-ON-OFF (see Diagram 2).
   b. The auxiliary loops are not affected by the DIP switch settings.

Wiring Connections
Connect the loop wiring to the unit's terminals before installing the battery (see Diagram 2).
Notes: a. Primary loop 1 is a supervised loop and must have an end-of-line (EOL) resistor (470K ohms, supplied) placed across the sensor.
   Additionally, for primary loop 1, a contact device may not be installed more than 20 feet from the transmitter.
   b. If loop 2 is not going to be used, the magnet is not necessary.
   c. If loop 3 is not going to be used, no connection is needed across its terminals. For UL household burglary and fire installations, the loop 3
   contact device (if used) may not be more than 3 feet from the transmitter.

SPECIFICATIONS:

- **Dimensions:**
  - 1-9/16"W x 3-1/2"H x 1-3/16"D
    (40mm x 89mm x 30mm)
  - Battery 3v Lithium
    (see BATTERY INSTALLATION AND REPLACEMENT).

- **UL Listings:**
  - Commercial Fire   UL864
  - Household Fire   UL985
  - Household Burg   UL1023
  - Commercial Burg   UL365, UL609, UL1076, UL1610

Diagram 1. Mounting Plate

Diagram 2. Transmitter, Cover Removed
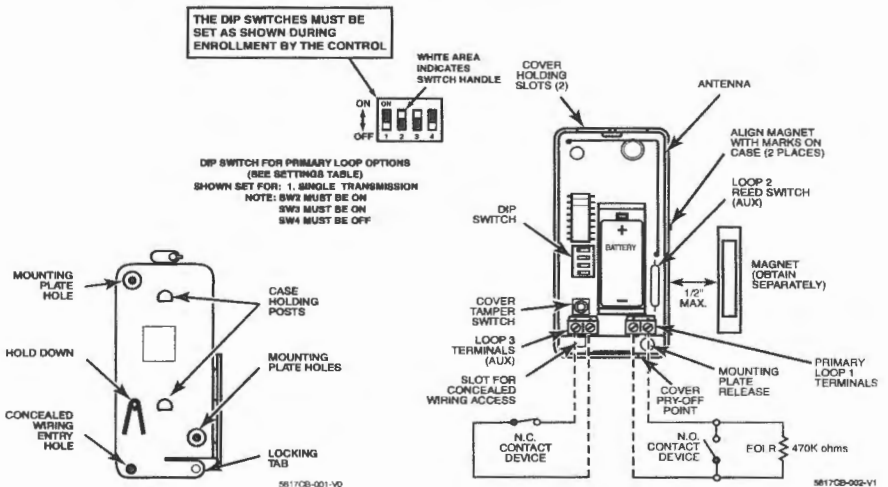
Note: For UL commercial and household fire installations, only one initiating device may be connected to this transmitter. For UL commercial burglary installations, multiple initiating devices may be used as long as the devices all service the same function such as door/window contacts, motion or glassbreak detectors. All initiating devices must be located within the same room.

ORDERING

5817CB   Wireless Commercial/Household Transmitter

Honeywell

5809
WIRELESS HEAT DETECTOR

Honeywell's 5809 wireless fixed heat and rate-of-rise temperature sensor offers expanded fire detection and installation flexibility. It is ideal for hard to wire locations and applications that require more than smoke detection. With no wires to run, the 5809 is fast and easy to install.
The 5809 combines both rate-of-rise and fixed temperature sensors. Fires typically cause a rapid rise in temperature in the surrounding area. The 5809's rate-of-rise thermostat senses the rise in temperature and signals an alarm if the increase is 15° or more per minute. A built-in fixed temperature sensor will also signal an alarm if the environmental temperature rises above 135°F. The 5809 is UL Listed (UL521) and CSFM approved for commercial and residential applications.

FEATURES

- Contains a built-in transmitter which can send alarm, supervisory and battery condition messages to the system's receiver/control unit

- Powered by a three-volt lithium battery. If the battery voltage gets too low, the 5809 sends a low battery signal to the control panel

- Features a tamper switch, which causes a trouble signal to be sent to the control if the unit is removed from the mounting base

- UL Listed for Commercial (when using 5881EH Receiver) or Residential applications

5809
WIRELESS HEAT DETECTOR

SPECIFICATIONS:

• **Power:**
- 3V lithium battery (Duracell DL123A, Panasonic CR123A, Sanyo CR123A, Varta CR123A)
- Operating temperature: 40° to 140°F (6° to 60°C)
- Rate-of-rise temperature: 15°F (8°C) increase per minute (NOTE: Rate-of-rise sensor does not operate above 38°C)

- Fixed temperature: 135°F (57°C)
- Maximum spacing: 50 ft x 50 ft UL, 30 ft x·30 ft FM (refer to National Fire Alarm Code Standard NFPA 72 for application requirements)
- Dimensions: 4.4" diameter/2/2" deep

• **Agency Listings:**
- UL 521 Listed for Commercial (when using 5881EH Receiver) or

Residential applications

• **Wireless Transmission Path Test:**
- A good RF transmission path must be established from the proposed mounting location before permanently installing the detector. To determine that there is a good signal reception from the proposed location, perform the test procedure described in the installation instructions procedure.

MOUNTING THE DETECTOR:

- You can mount the 5809 on a wall or ceiling within the protection area:
- Wall mounting: Mount the detector 4" 6" from the ceiling
Ceiling mounting: Mount the detector at least 4" from any wall. Make sure the normal ceiling temperature will not exceed 100°F (37.8° C).

- Refer to NFPA Standard 72 for detector spacing and other requirements. Maximum spacing for UL installations is 50' x 50'
- Avoid mounting the detector near heat generating devices (e.g. ovens, heat vents, furnaces, boilers)
IMPORTANT: Heat detectors should

be used for property protection. Reliance should not be placed soley on heat detectors for life safety. When life safety is involved, smoke detectors MUST also be used. Detectors must not be painted.

TESTING THE DETECTOR:

The test procedure should be performed to determine a good RF transmission path and again after installation is completed.

CAUTION: The fixed temperature sensor is intended for one-time use. Prolonged heat during testing can damage the unit. If used carefully following the instructions described below, the heat from a portable hair dryer can be used to test the unit. If the round disk on top of the detector detaches, the detector must be replaced.
- Activiate the control panel's test mode

- Use either method (a) or (b) or activate the detector

(a) Press and release the activation button on the PC board assembly OR
(b) Holding a portable hair dryer about 12 to 18 inches away from the detector, turn the dryer on and aim the warm air at the side of the detector.
CAUTION: Aiming the dryer directly at the round disk on the detector can damage the unit to be replaced.
- The system's keypad should beep and the detector's ID should be displayed

- Exit the control's test mode
FCC ID: CFS 8DL 5809

This device complies with part 15 of FCC rules.

Operation is subject to the following conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

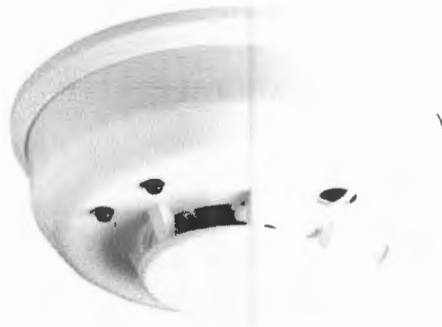## ORDERING

5809   Heat Detector

Honeywell

Honeywell

5808W3

PHOTOELECTRIC SMOKE/HEAT
DETECTOR WITH BUILT-IN
WIRELESS TRANSMITTER

Honeywell's 5808W3 is a 3V lithium powered, photoelectronic smoke/heat detector with a built-in wireless transmitter. It is intended for use with any 5800 Series Wireless Receiver/Transceiver for residential installations (for commercial installations, the 5881ENHC or the 5883H receiver is required).

The transmitter can send alarm, tamper, maintenance (when control panels are equipped to process maintenance signals), and battery condition messages to the system's receiver.

Smoothing algorithms minimize nuisance alarms by smoothing out short term spikes from dust and smoke – virtually eliminating nuisance alarms.

Since there are no holes to drill or wires to run, you can preserve the beauty of the building while protecting it. The 5808W3 is an ideal smoke detector for those difficult to wire locations, applications where room aesthetics are critical, or where hazardous materials exist.

All models also feature a restorable, built-in, fixed temperature (135°F) thermal detector that is also capable of sensing a pre-freeze condition if the temperature is below 41°F.

FEATURES

- **Improved Robust RF Field Strength**
  The distance between the detector and receiver has been significantly increased without the need for a repeater

- **Smoothing Algorithms**
  Mathematical calculations in the detector's software that minimize nuisance alarms by smoothing out short term spikes from dust and smoke

- **Smart Check**
  A signal is sent to the control panel when the detector requires cleaning. This allows a regular, non-emergency service call to clean the detector before it goes into alarm.

- **Drift Compensation**
  Virtually eliminates nuisance alarms from long-term dust build-up by automatically adjusting the detector's sensitivity

- **Removable Detector Cover and Chamber Top**
  The technician is able to quickly and easily clean the detector chamber without disassembling the detector head

- **Approved UL Listings for Residential and Commercial Applications**
  Both residential and commercial installation requirements are met

- **Additional LED Status Indicators**
  Identifying between alarm or trouble conditions is a snap with green and red LED status indicators. A green LED denotes a normal condition while the red LED indicates abnormal conditions.

- **Easy-to-install Mounting Base**
  The sturdy mounting base allows the detector to be more easily installed on uneven surfaces (i.e. stucco). The mounting base has larger mounting ports, which accommodate drywall anchors for easy surface mounting.

ADDITIONAL FEATURES:

- Utilizes one long-life 3V lithium battery

- Microcontroller runs on a 4.0 MHz clock

- Horn operates at 3.3 KHz with sound pressure level of 85 dBA at 10 feet

- Built-in wireless transmitter, temporal code 3 sounder

- Maintenance signal fully complies with the sensitivity test requirement specified in NFPA 72, 7-2.2 and is approved by UL

5808W3
PHOTOELECTRIC SMOKE/HEAT DETECTOR WITH BUILT-IN WIRELESS TRANSMITTER

SPECIFICATIONS

- **Dimensions**
  - Diameter: 5.3"*, Height: 2.30"

- **Weight**
  - 8.5 ounces (without batteries)

- **Operating Temperature**
  - 32–100° F (0–37.8° C)

- **Humidity Range**
  - 0% to 95% RH, non-condensing

- **Air Velocity**
  - 1,000 ft./min. max.

- **Operating Voltage**
  - 2.5–3.6VDC

- **Standby Current**
  - 8.5 mA avg.

- **Alarm Current**
  - 35 mA max.

- **Power Source**
  - One 3V CR123A lithium Battery†

- **Audible Output**
  - 85 dB min. at 10 ft.

- **Fixed Temperature Heat Sensor**
  - 135° F Fixed

- **Agency Listings**
  - UL268 – Commercial and Residential

* With adapter bracket (4.9" without mounting base)

†Replacement batteries include Duracell DL123A, Sanyo CR123A, Panasonic CR123A, or ADEMCO 466

ACCESSORIES (sold separately)

SENS-RDR Infrared Sensitivity Reader

Reduce testing time with the handheld SENS-RDR infrared sensitivity reader. The reader simplifies sensitivity measurements and displays them precisely in terms of percent per foot obscuration. The SENS-RDR eliminates the need for magnets, voltmeters and ladders.

RT Removal Tool

Simplifies the attachment and removal of the detector head to the mounting base; it may be attached to a threaded extension pole or broom handle thereby eliminating the need for ladders.

ORDERING

5808W3   Photoelectric Smoke/Heat Detector with Built-in Wireless Transmitter

Accessories sold separately:

SENS-RDR   Hand-held Sensitivity Reader

RT   i3 Removal Tool used for easy installation and removal of head from base

L/5808W3DS/D
September 2008
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Honeywell

Honeywell

5193SD/5193SDT
V-PLEX® ADDRESSABLE SMOKE DETECTOR

Honeywell's 5193SD/SDT Addressable Photoelectric Smoke Detector is designed to provide open area protection and to be used with compatible UL-listed Honeywell control panels that support V-Plex technology. The detector incorporates a state-of-the-art optical sensing chamber and an advanced microprocessor. Built-in Drift Compensation algorithms automatically maintain proper operation at factory calibrated detection levels, even when sensitivity is altered due to the presence of contaminates settling into the unit's chamber. The 5193SDT also features a restorable, built-in, fixed temperature (135° F/57.2° C) thermal detector.

FEATURES

- **Easy Installation:** Installation of the 5193SD/SDT detector is simplified by the use of a mounting base that may be pre-wired to the system, allowing the detector to be easily installed or removed for maintenance or service. (See Figure 1).

- **LED Status Indicators:** Two LEDs (green and red) provide local visual indication of the detector's status – including normal operation, alarm, out of sensitivity and trouble conditions.

- **Test button:** This button allows the user to perform periodic testing of the detector's circuitry and verify that the detector is within the sensitivity limits.

- **Versatile Mounting:** Mounting is made simple with the included hardware and the large mounting ports, which accommodate drywall anchors for easy surface mounting. (See Figure 1).

- **Tamper Protection and Tamper Resistance:** The detector contains a built-in tamper switch that can communicate back to the control panel in the event the detector is removed from its base. For an added level of security, the detector also includes a tamper resistant element that prevents removal from the base without the use of tools. (See Figure 1).
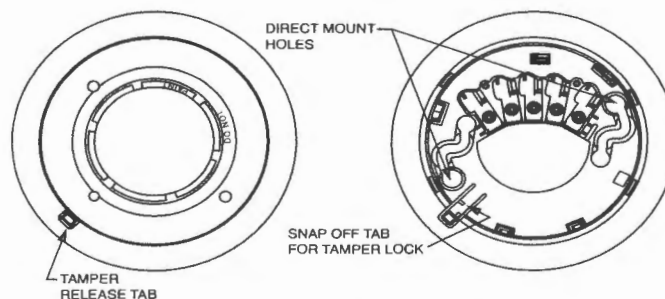

Figure 1: Tamper-Resistant Feature/Wiring

5193SD/5193SDT
V-PLEX® ADDRESSABLE SMOKE DETECTOR

SPECIFICATIONS

- **Heat Sensor:** (Model 5193SDT):
  135° F (57.2° C);
  Fixed Temperature Electronic Thermistors

- **Operating Ambient Temperature Range:**
  32° to 100° F (0° to 38° C)

- **Operating Humidity Range:**
  0 to 95% RH non-condensing

- **Storage Temperature Range:**
  -4° to 158° F (-20° to 70°C)

- **Diameter (including base):** 5.3 inches

- **Height (including base):** 2.0 inches

- **Weight:** 6.3 oz.

- **Agency Listing:** UL-268

- **System Voltage Range:** 7-14V

- **Standby Current** (maximum @ 12V)
  LED off: 1.2mA
  LED on: 2.8mA

ACCESSORY (sold separately)

To measure the detector's sensitivity, the SENS-RDR Infrared Sensitivity Reader tool (sold separately) should be used.
It reduces testing time, simplifies sensitivity measurements and displays them precisely in terms of percent per foot obscuration.
The SENS-RDR eliminates the need for magnets, voltmeters and ladders.
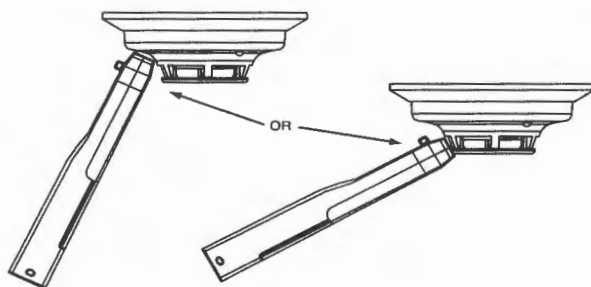
Figure 2: Position of Reader

ORDERING

5193SD	Addressable Photoelectric Smoke Detector
5193SDT	Addressable Photoelectric Smoke Detector with Integral Heat Sensor

Accessory sold separately:

SENS-RDR	Handheld Sensitivity Reader

Automation and Control Solutions
Honeywell Security & Communications
2 Corporate Center Dr. Suite 100
P.O. Box 9040
Melville, NY 11747
www.honeywell.com

Honeywell

5140MPS-1/5140MPS-2
Manual Pull Stations

ADEMCO
COMMERCIAL
SECURITY SOLUTIONS

PRIMARY FEATURES

- ADA COMPLIANT
- KEY TEST OR ALLEN RESET
- KEYED TO ADEMCO CONTROLS
- STYLIZED HIGH TECH DESIGN
- ALUMINUM DIE CAST HOUSING
- TERMINAL BLOCK OR WIRE LEADS
- GOLD CONTACTS
- UL LISTED

GENERAL DESCRIPTION

Ademco's manual fire alarm stations are designed to be non-code single action devices for use in UL listed fire alarm applications. The attractive die-cast aluminum-alloy housing meets ADA pull requirements and has been tested at Underwriter's Laboratory.

For ADA compliance, manual stations must be mounted less than 48" above the floor for front wheelchair access and less than 54" above the floor for side wheelchair access.

A key reset feature on the 5140MPS-1 is designed for positive authorized resetting action. The key is designed to operate and match Ademco controls. The 5140MPS-1 utilizes a terminal block for secure terminations. The 5140MPS-2 is furnished with an Allen hex fitting and is equipped with wire leads.

Two alarm deterrent break tubes are supplied with each manual station; one tube is visible from the front, and the spare is stored in a compartment within the unit.

OPERATION

Pulling the handle down causes the manual stations to latch in the down position and to close the normally open switch. The handle is restored manually by using the key to unlock the station and pivot the station forward for resetting the pull handle to its normal position. The crush tube is then inserted in the cavity and the station assembly is then locked in the normal upright position.

CONSTRUCTION

The 5140MPS-1 and 5140MPS-2 manual stations are constructed of a durable die-cast aluminum-alloy and
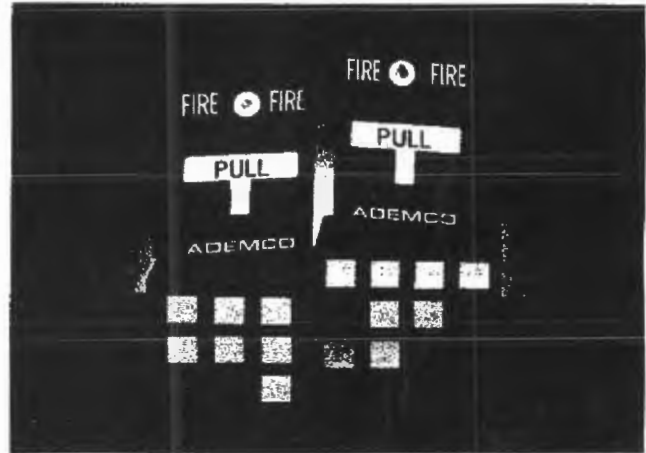
provide a neat and distinctive appearance. The housing is finished in red with white raised lettering and the "T-bar" handle is white with raised red lettering for enhanced visibility. The units are adaptable to both surface and semi-flush mounting configurations.

MOUNTING

SEMI-FLUSH MOUNT
Most semi-flush mount installations can be attached to a standard single-gang switch box using two 6-32 screws inserted through the slots that are centered on the unit's metal mounting plate.

SURFACE MOUNT
Use Ademco Backbox model number 5140MPS-BB for surface mount installations. The Backbox has four pre-drilled mounting holes of 0.187 inch diameter and conduit knockouts. Secure the Backbox to a wall with screws of size 8 or smaller. After the Backbox is in place, attach the conduit.

The housing is locked by using a key or Allen wrench lock. Unlock the housing by turning the key clockwise and swinging down the front of the housing to make the sheet metal mounting plate accessible. Mount the metal plate to the Backbox using the four 1/4" long, 8-32 screws (supplied).

DIMENSIONS

4.75" H x 3.12" W x 2" D

ADEMCO
The Technology Leader

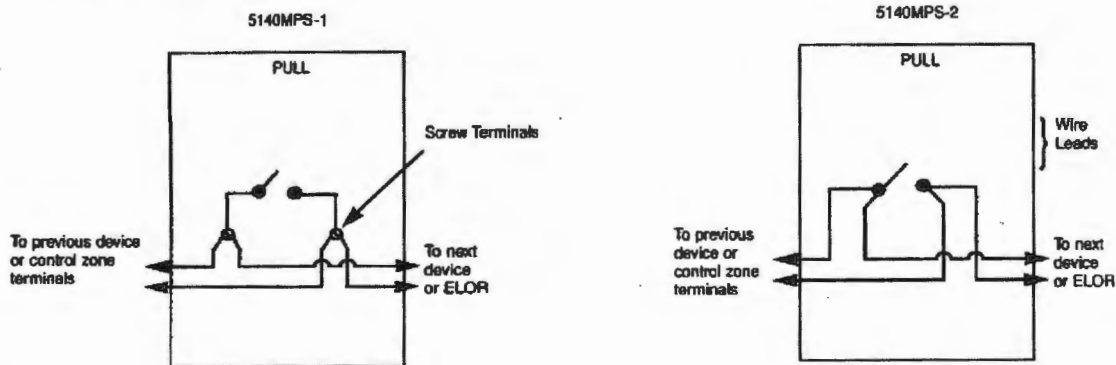## ■ ORDERING INFORMATION

5140MPS-1:   Manual Station
Key Reset Test
and Terminal Block

5140MPS-2:   Manual Station
Hex Allen Reset
Test and Wire Leads

5140MPS-BB: Surface Backbox

■ WIRING DIAGRAM

5140MPS-1

PULL

Screw Terminals

To previous device or control zone terminals

To next device or ELOR

5140MPS-2

PULL

Wire Leads

To previous device or control zone terminals

To next device or ELOR

ARCHITECTURAL/ENGINEERING SPECIFICATIONS

Manual Fire Alarm Station Model 5140MPS-1 (5140MPS-2) shall be non-coded and include a break-type tube operated test-reset lock allowing testing with a key (Allen wrench). They shall be designed so that normal operation cannot be restored after an actual Fire Emergency Operation except by use of a key (Allen wrench). The key shall fit all standard Ademco controls.

An operated station shall automatically condition itself so as to be visually detected, as operated, at a mini-
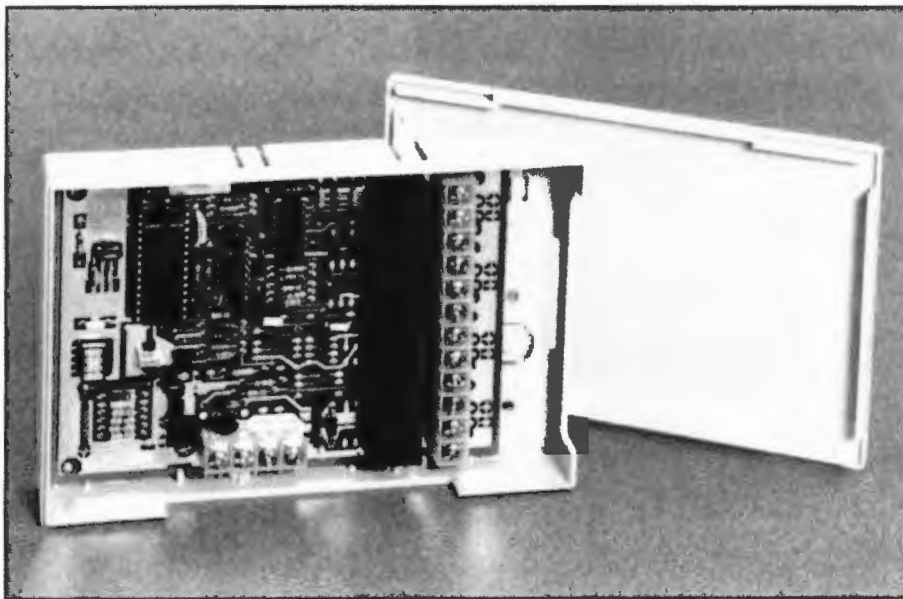
mum distance of one hundred feet, front or side. Manual Stations shall be constructed of die cast aluminum alloy with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in raised letters. Stations shall be suitable for surface mounting on matching Backbox, or semi-flush mounting on a standard single-gang box. Manual Stations shall be Underwriter's Laboratories Listed.

ADEMCO

The Technology Leader

ADEMCO

- Adds 4 programmable relays to selected Vista panels
- Easily wired to control panel
- Fits inside Universal Control Cabinet
- Expand existing security systems with additional output capabilities
- Attractive case design
- Check Control Documentation for compatibility with 4204.

4204 RELAY BOARD

When your installation require-ments call for additional relay outputs, the 4204 is your answer. The 4204 Intelligent Relay Board adds relays which are connected to the Control/Communicator via the control's console wiring. The relay outputs are programmed by the appropriate control for a variety of functions.

The 4204 is ideal for applications that require additional sounding devices, strobe lights or other devices that need or desire to be controlled by the control panel.

The 4204 is housed in a white plastic case for wall mounting and can be mounted in a Universal Can. If the 4204 is remotely mounted, there are provisions to tamper protect the cover, and the unit so that it cannot be disconnected from the console wiring without detection by the control.

SPECIFICATIONS
Physical:

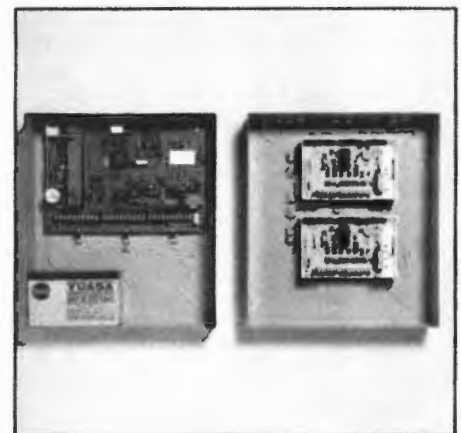|	
Width:	6-1/2" (169mm)
Height:	4-1/4" (108mm)
Depth:	1-1/4" (32mm)

Electrical

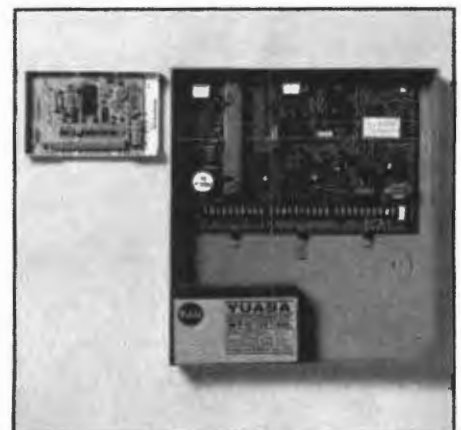Voltage: 12VDC (from control's remote console connection points)

Current: 15mA standby plus 40mA per active relay

Multiple 4204s may be located next to the control in another Universal Can. (See control documentation for compatibility).

Universal Can with 4204 and battery

- Universal Can with console wiring connection to the 4204.
- 4204 may be mounted directly on the wall adjacent and wired to the control panel.

ADEMCO

165 Eileen Way • Syosset, NY 11791

F01/23/93

Installation Instructions

4193SN Serialized Interface Module (SIM)

The 4193SN is a serialized two-zone expander used to connect alarm sensing devices to controls which support serial number polling loop devices (i.e., Vista-40, Vista-50P, and Vista-100).
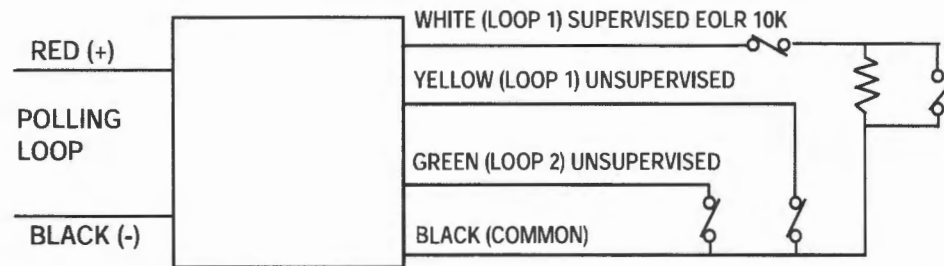
The 4193SN can be configured as one supervised zone (10K EOLR) and one unsupervised zone, or two unsupervised zones (normally closed devices only).

Consult the control panel installation instructions for programming information.

Electrical Specification:

Voltage: 7-11VDC (as supplied from the Ademco control panel for multiplex polling loop)

Current: 1.5mA

Wiring Diagram

UL LISTED S789

For Fire Applications:
The 4193SN must be mounted inside the control panel cabinet or inside a UL-Listed junction box. Loop 1 must be used in the supervised configuration for Fire. Loop 2 may be used for Burglary.

For UL Burglary Applications:
If using an unsupervised zone of the 4193SN, the unit must be mounted within 3 feet of the alarm initiating device, with no intervening barriers.

˚ADEMCO

4193SN Serialized Interface Module (SIM)

- For connecting alarm sensing devices and switches to Ademco multiplex polling loop

Quantity: 1 ea.

**Requires control panel with SERIAL NUMBER device capability
(e.g. Vista-40, etc.)**

Consult control panel instructions for compatibility

$C \epsilon$ (U)L

LISTED
S789