

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND

Please Read
Application And
Notes, If Any,
Attached

BUILDING INSPECTION PERMIT

PERMIT ISSUED
Permit Number: 061100
AUG 11 2006
CITY OF PORTLAND

This is to certify that FRANKLIN & SOMERSET PORTLAND ME LLC/East Coast Secu

has permission to Install a fire alarm system

AT 160 FOX ST 024 D001001

provided that the person or persons who accept this permit shall comply with all of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and when permission proceeds before this building or part thereof is started or service closed-in. 4 HOUR NOTICE REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. _____

Health Dept. _____

Appeal Board _____

Other _____
Department Name

[Signature]
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application

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

Permit No: 06-1100	Issue Date: PERMIT ISSUED AUG 1 2006	BL: 024 D001001
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Location of Construction: 160 FOX ST	Owner Name: FRANKLIN & SOMERSET PORT	Owner Address: 550 BOWIE ST	Phone: CITY OF PORTLAND
Business Name:	Contractor Name: East Coast Security Service INC	Contractor Address: 66 Stiles Rd	Phone: 86523
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	Zone: B7

Past Use: Commercial - <i>Whole Foods</i>	Proposed Use: Commercial Install a fire alarm system	Permit Fee: \$380.00	Cost of Work: \$36,000.00	CEO District: 1
Proposed Project Description: Install a fire alarm system		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied <i>Contact Ben Diaz @ 874-8489</i> Signature: <i>Ben Diaz</i>	INSPECTION: Use Group: <i>FIRE</i> Type: <i>APR 11</i> Signature: <i>[Signature]</i>	
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.) Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Signature: _____ Date: _____				

Permit Taken By: dmartin	Date Applied For: 07/24/2006	Zoning Approval		
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<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..</p>	<p>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p><i>OK</i> Date: <i>7/28/06</i> <i>ABM</i></p>	<p>Zoning Appeal</p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date: _____</p>	<p>Historic Preservation</p> <p><input checked="" type="checkbox"/> Not in District or Landmark</p> <p><input type="checkbox"/> Does Not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p><i>ABM</i> Date: _____</p>
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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 application 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

SCOPE OF PROTECTION

ADDRESSABLE FIRE ALARM SYSTEM AT **WHOLE FOODS MARKET** **2 SOMERSET STREET** **PORTLAND, MAINE**

The building is a concrete block and steel building structure being built for a new Whole Foods Market Store. Owners are installing a new addressable fire alarm system and communications as well as full sprinkler system for complete coverage to comply with NFPA 72 and Portland Fire Department.

Protection is to be afforded with an addressable fire alarm control panel as manufactured by Siemens Cerberus. The panel is a MXL-IQ MR and all compatible devices will be located per NFPA-72. Horn strobes will be installed to provide occupants with visual and audio notification in accordance with ADA. Stand by power for 24hrs with 5min ring down with 2- 12vlt 35amp batteries. All work to be done with workmanship like standards with certified technicians in strict accordance with NEC, NFPA and local code requirements. Fire signals to be transmitted via Gamewell M34-72 Masterbox communicator to Portland Fire dispatch.

Action to be upon alarm activation of any initiating device in buildings the horn strobes (indicating devices) will sound and FACP will trip zone in main building panel and exterior horn strobe to flash on building of activation for quick reference for fire department. Panel will indicate alarm by zones by device type (pull, smoke or sprinkler). Masterbox to trip and send alarm signal to Portland Fire dispatch center for action.

City of Portland, Maine - Building or Use Permit

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

Permit No: 06-1100	Date Applied For: 07/24/2006	CBL: 024 D001001
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Location of Construction: 160 FOX ST	Owner Name: FRANKLIN & SOMERSET PORT	Owner Address: 550 BOWIE ST	Phone:
Business Name:	Contractor Name: East Coast Security Service INC	Contractor Address: 66 Stiles Rd "C" Salem	Phone (603) 898-6523
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	

Proposed Use: Commercial Install a fire alarm system	Proposed Project Description: Install a fire alarm system
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Dept: Zoning **Status:** Approved **Reviewer:** Ann Machado **Approval Date:** 07/28/2006
Note: **Ok to Issue:**

Dept: Building **Status:** Approved with Conditions **Reviewer:** Mike Nugent **Approval Date:** 08/03/2006
Note: **Ok to Issue:**

1) Must comply with NFPA 72

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Cptn Greg Cass **Approval Date:** 08/03/2006
Note: **Ok to Issue:**

1) Connection to the Masterbox shall be coordinated by the Fire Alarm Div. 874-8489



General Building Permit Application

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

160 FOX ST

Location/Address of Construction: <u>2 SUMMER STREET PORTLAND ME</u>		
Total Square Footage of Proposed Structure		Square Footage of Lot
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# <u>24 D 001</u>	Owner: <u>WHELE FOODS MKT</u>	Telephone: <u>—</u>
Lessee/Buyer's Name (If Applicable)	Applicant name, address & telephone: <u>EAST COAST SEC SERV INC.</u> <u>68 STILES RD "C"</u> <u>SALEM, NH 03079</u>	Cost Of Work: \$ <u>36,000</u> Fee: \$ <u>380⁰⁰</u> C of O Fee: \$ _____
Current Specific use: <u>SUPER MARKET FOOD STORE</u> If vacant, what was the previous use? _____ Proposed Specific use: <u>FOOD STORE SUPER MARKET</u>		
Project description: <u>NEW SPECIALTY FOOD STORE - NEW ADDRESSABLE FIRE ALARM SYSTEM</u> <u>EAST COAST SECURITY SERVICES WORKING AS SUB</u> <u>UNDER PROFESSIONAL GUIDANCE</u>		
Contractor's name, address & telephone: Who should we contact when the permit is ready: <u>MIKE BISHOP</u> Mailing address: _____ Phone: <u>603-898-6823</u>		

Please submit all of the information outlined in the Commercial Application Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information visit us on-line at www.portlandmaine.gov, stop by the Building Inspections office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant: _____

Date: 7/19/06

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME

This is not a permit, you may not commence ANY work until the permit is issued.

JUL 24 2006

RECEIVED



New Commercial Permit Application Checklist

All of the following information is required and must be submitted. Checking off each item as you prepare your application package will ensure your package is complete and will help to expedite the permitting process.

One (1) complete Set of construction drawings must include:

Note: Construction documents for costs in excess of \$50,000.00 must be prepared by a Design Professional and bear their seal.

- Cross sections w/framing details
- Detail of any new walls or permanent partitions
- Floor plans and elevations
- Window and door schedules
- Foundation plans with rebar specifications and required drainage and damp proofing (if applicable)
- Detail egress requirements and fire separations
- Insulation R-factors of walls, ceilings, floors and U-factors of windows as per the IEBC 2003
- Complete the Accessibility Certificate and The Certificate of Design
- A statement of special inspections as required per the IBC 2003
- Complete electrical and plumbing layout.
- Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment, HVAC equipment (air handling) or other types of work that may require special review.
- Reduced plans or electronic files in PDF format are required if originals are larger than 11" x 17".

Separate permits are required for internal & external plumbing, HVAC and electrical installations.

Nine (9) copies of the minor (< 10,000 sf) or major (> 10,000 sf) site plan application is required that includes:

- A stamped boundary survey to scale showing north arrow, zoning district and setbacks to a scale of $\geq 1'' = 20'$ on paper $\geq 11'' \times 17''$
- The shape and dimension of the lot, footprint of the proposed structure and the distance from the actual property lines. Photocopies of the plat or hand draw footprints not to scale will not be accepted.
- Location and dimensions of parking areas and driveways, street spaces and building frontage
- Finish floor or sill elevation (based on mean sea level datum)
- Location and size of both existing utilities in the street and the proposed utilities serving the building
- Existing and proposed grade contours
- Silt fence (erosion control) locations

Fire Department requirements.

The following shall be submitted on a separate sheet:

- Name, address and phone number of the project architect.
- Proposed use of structure (NFPA and IBC classification)
- Square footage of proposed structure (NFPA and IBC classification)
- Existing and proposed fire protection of structure.
- Separate plans shall be submitted for
 - a) Suppression system
 - b) Detection System (separate permit is required)
- A separate Life Safety Plan must include:
 - a) Fire resistance ratings of all means of egress
 - b) Travel distance from most remote point to exit discharge
 - c) Location of any required fire extinguishers
 - d) Location of emergency lighting
 - e) Location of exit signs
 - f) NFPA 101 code summary

For questions on Fire Department requirements call the Fire Prevention Officer at (207) 874-8405.

Please submit all of the information outlined in this application checklist. If the application is incomplete, the application may be refused.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information visit us on-line at www.portlandmaine.gov, stop by the Building Inspections office, room 315 City Hall or call 874-8703.

Permit Fee: \$30.00 for the first \$1000.00 construction cost, \$10.00 per additional \$1000.00 cost

This is not a Permit; you may not commence any work until the Permit is issued.



East Coast Security Services
68 Stiles Road, Unit "C"
Salem, NH 03079
(603) 898-6823

MXL-IQ
Battery
Calculations

WHOLE FOODS MARKET PORTLAND MAINE

Module	Quantity	Standby 24 VDC Module Current (See Note 1)	Load Current Per Device		
			End of Line Device	Device Current	Total Standby 24 VDC
SMB-2	1	175mA			0.175
	0		12mA per NAC		0
	65			1.1mA per Device	0.0715
PSR-1	0	70mA	0	0	0
MKB-4	1	5mA	0	0	0.005
RCC-1/1F	1	75mA	0	0	0.075
TSP-40	0	70mA	0	0	0
CSM-4	1	10mA		0	0.01
	0		12mA per NAC		0
CRM-4	0	15mA			0
	0			15mA per active relay	0
CZM-4	0	55mA	0		0
	0			3mA	0
ALD-2I	0	105mA	0		0
	0			1.1mA per device	0
XLD-1	0	215mA	0		0
	0			1.5mA per device	0
CMI-300	0	30mA	0	0	0
NET-4	0	5mA	0	0	0
NET-7	0	30mA	0	0	0
NET-7M	0	30mA	0	0	0
NIM-1R	0	70mA	0	N/A	0
REP-1	0	40mA	0	0	0
PS-5A	0	1/4 of 5V load	0	0	0
PS-5N7	0	150mA + 1/4 of 5V load	0	0	0
MOI-7	0	120mA	0	0	0
MOD-16	0	2mA	0	0	0
MID-16	0	2mA	0	0	0
CZM-1 NAC	0	6mA			0
	3		5mA	1.5mA	0.0045
ICP	0	18mA	10K	0	0
PIM-1	0	10mA	0	N/A	0
PIM-2	0	(See Note 2)	0	N/A	0
PAL-1	0	(See Note 2)	0	N/A	0
D2300CP	0	50mA	0	0	0
MDACT	1	220mA	0	260mA	0.06
ACM-1	0	85mA	0	0	0
TMM-1	0	71mA	(See Note 3)	0	0
VSM-1/VLM-1	0	17mA	0	0	0
VFM-1	0	17mA	0	0	0
ASC-1	0	22mA	0	0	0
ASC-2	0	39mA	(See Note 3)	0	0
OCC-1	0	17mA	0	0	0
BTC-1	0	44mA	0	0	0
RCM-1	0	150mA	0	0	0
ZAC-30	0	160mA	0	0	0
ZC1-8B	0	19mA	(See Note 3)	0	0
ZC2-4AB	0	19mA	(See Note 3)	0	0
ZC2-8B	0	19mA	(See Note 3)	0	0
ZC3-4AB	0	18mA	(See Note 3)	0	0
ZCT-8B	0	34mA	(See Note 3)	0	0
EL-410D	0	200mA	0	0	0

NOTES

The following Modules draw no 24 VDC current and do not need to be included in the battery calculations:

- OMM-1
- OMM-2
- MOM-2
- MOM-4
- MMM-1
- PLC-4
- TBM-2
- TSW-2

1. Use this column for battery size calculations.
2. Power is supplied by a separate UPS.
3. EOL Currents Included.

Enter "1" if Selected	0
	1

Total System Supervisory Current (Amps)	0.401
Total System Alarm Current (Amps)	3.66
NFPA Local (D65, Proprietary (72D), UL 1076 (MMB-2 only) - Total AH x 24 =	0.00
NFPA Municipal Tie (72B), Remote Station (72C) - Total AH x 60 =	24.06
FM Approved Deluge/Pre-Action - Total AH x 90 =	0.00
Minutes of Alarm Reserve =	15
Battery Size (with Alarm Reserve Correction) =	25.08
Battery Size Provided =	35

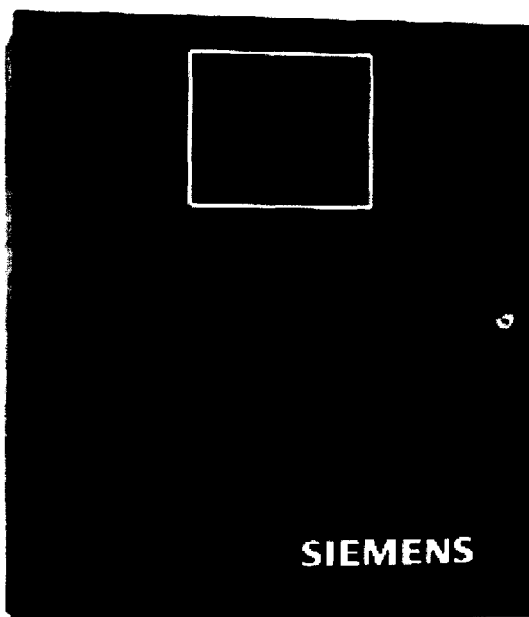
SIEMENS MXL-IQ

Fire Safety

Advanced Life Safety System

ENGINEER AND ARCHITECT SPECIFICATIONS

- **FirePrint™** Application Specific Fire Detection
- Capacity for up to 240 Intelligent Analog Detectors
- Expandable Up to a Stand Alone System Capacity of 998 Input and Output Points
- Dynamic Supervision of Intelligent Devices
- Security Device Monitoring
- Sprinkler Supervision
- Intelligent/Analog Detection Circuits, Style 6 (Class A) or Style 4 (Class B)
- Detector Sensitivity Read-out/Printout per NFPA 72 Chapter 7
- Style D (Class A) or Style B (Class B) Conventional Initiating Circuits
- Style Z (Class A) or Style Y (Class B) Notification Appliance Circuits
- Degrade Mode Operation
- Distributed Processing
- 80 Character Backlit Alphanumeric Display
- Supervised Remote Printer
- 32 Character Device Custom Messages
- Multiple Command Stations
- **Compare System Software**
- Fully Field Programmable Via Laptop Computer
- Menu Driven Operator Commands
- Central Architecture
- 800 Event History Logging With On Line & Off Line Reports
- User Help Screens
- Multiple Levels of Password Protection
- One Person Walk Test by Zone or System
- Automatic Environmental Compensation for Smoke Detectors



- Alarm Verification by Device or Zone
- Logic Controlled Output Functions
- Time Base Controlled Output Functions
- Holiday Schedule
- City Tie/Lease Line
- Coded Outputs
- Supervised Serial Annunciator Driver/Input Interface
- Interactive VDT - Monochrome & Color
- Color Graphics Option
- Complies with NFPA 72
- NEC 760 Power Limited Circuits (UL 864 Compliant)
- 16 Gauge Steel Enclosure
- Pre-action Releasing and Deluge (NFPA 13)
- **FM** Approved for Intrinsically Safe Applications
- **FM** Approved for Sprinkler and Deluge Applications
- Pre-alarm Operation
- Halon and Sinorix™ Releasing Approval (NFPA 12A and NFPA 2001)
- Intelligent Link to Air Sampling Detection Systems
- Multi-Language Display
- Intelligent Interface to Building Management Systems
- Operates as an Interactive Peer with Other MXL-IQs, MXLs or MXLVs in a LifeLINK Network
- CXL Command Center Monitoring
- **UL** Listed, ULC Listed, FM, CSFM, NYMEA, and City of Chicago Approved
- FireFinder Graphics

Description

The MXL-IQ is a microprocessor based advanced Life Safety system. Its use of unique multiprocessor "Network" design along with its ability to utilize both intelligent analog and conventional detection devices make it the most flexible and reliable system in the life safety field. The MXL-IQ is the system for projects such as schools, nursing homes, small office buildings, strip malls, hotels, apartment buildings and dormitories.

MXL-IQ is designed for stand alone or networked special hazard applications that call for extinguishing agent releasing (Sinorix™, Halon, Pre-Action Sprinkler or Deluge). MXL-IQ provides the earliest detection possible via its intelligent link to air sampling detection systems. It complies with the requirements of NFPA 72. It is UL 864 and UL 1076 security listed. It is also UL listed for agent releasing per NFPA 12A and NFPA 13.

CATALOG NUMBER **5054**

The basic MXLIQ control unit consists of the following subassemblies: SMB-2 Main Control Board; MPS-6 Power Supply; MKB-4 Annunciator and Keyboard; MSE-3L Enclosure. Optional modules which can be installed with the MXLIQ System include: MPS-12 Power Supply; MOM-2 or MOM-4 Expansion Card Cage; CRM-4 Controllable Relay Module; CZM-4 Conventional Zone Module; CSM-4 Controllable Signal Module; PIM-1 Peripheral Interface Module; CMI-300 CXL Modem Interface Module; NIM-1R LifeLINK Network Interface Module; MOD-16 Output Driver; MOI-7 Network Interface; MID-16 Input Module; MXLVDT Interactive Video Display Terminal; MXLG Color Graphic; MXLGT Color Terminal; a full range of intelligent/analog detectors and devices (see table 1).

SMB-2 Main Control Board

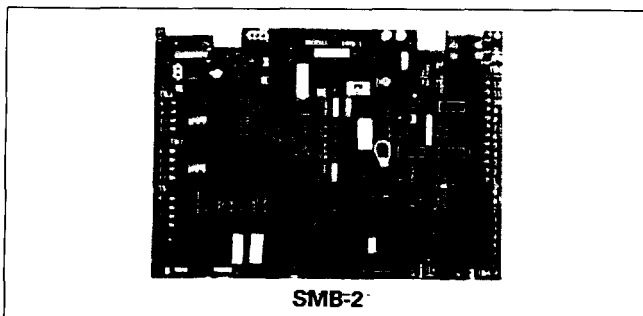
The function control of the MXLIQ is contained on the SMB-2 Main Control Board. The on board 16 bit microprocessor along with nonvolatile EPROM and Flash memory allow the system to be custom configured to meet a wide range of customer requirements. The SMB-2 controls operating sequences and monitors input device identity, detector sensitivity, network communication and operator commands entered through the MKB-4 Annunciator/Keyboard. The SMB-2 also provides 2 ALD (Analog Loop Driver) circuits. Each ALD loop can be configured as Style 4 (Class B) or Style 6 (Class A) and can monitor and control up to 60 Siemens Fire Safety intelligent input devices and 60 programmable device output relays.

The SMB-2 is equipped with 2 programmable and codeable Style Y (Class B) or Style Z (Class A) notification appliance circuits. Each circuit can activate up to 1.5 amps of listed audible or visual notification appliances.

Auxiliary relays are provided for external monitoring for Common System Alarm, and Common System Trouble.

The SMB-2 includes a built-in battery charger and transfer circuit. The charger is microprocessor controlled and incorporates a brown out circuit which switches the system to optional standby batteries during loss or reduction of the primary source AC. Upon command, the system is capable of displaying the real time battery voltage, AC voltage, charge current and other power data on the MKB-4 Alphanumeric display. It also includes a 1 Amp, 24 VDC, output.

The SMB-2 is fully FIELD PROGRAMMABLE off line using a laptop computer. Complete system configuration can be easily uploaded, downloaded or edited using CSGM custom programming software. Program options include but are not limited to smoke detector environmental compensation, Detector Pre-alarm, History Logging, Output Control by Event; Check and Change Time Based



Control, Detector Sensitivity, Alarm Verification by Device or Zone, 32 Character Custom Alphanumeric Messages per device, System Operation Passwords and NAC Coding. The SMB-2 provides a port for connection of the programming laptop computer.

MKB-4 Annunciator/Keypad

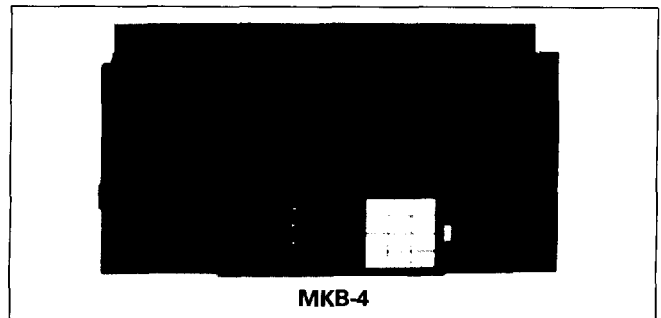
The MKB-4 mounts on a hinged frame in the MSE-3L enclosure and provides an 80 character backlit LCD alphanumeric annunciator which continuously scrolls to display information concerning system status along with 32 character user defined device messages. When multiple events occur, the MKB-4 displays the last event of the highest priority. Additional data can be viewed by depressing the NEXT key. At any time, the display scroll can be stopped by depressing the HOLD button. Switches are provided for acknowledging fire alarms, supervisories, security conditions, and system troubles. An individual switch is also provided for silencing the system notification appliance circuits. A separate switch is used for resetting the control panel.

A 10 digit numeric keypad is supplied to allow entry of the user passwords, as well as perform a wide variety of specific menu driven operation, programming and maintenance functions.

A set of 12 user assignable "Function" keys provide single button access to a variety of system commands. These switches may be used to perform system operation such as "Drill," manual relay control, zone disconnect, etc.

Contained on the MKB-4 annunciator are system status indicator LED's which can function even if the main system microprocessor fails. They provide indication of Main Power On, Fire Alarm, Security Condition, System Trouble, Supervisories, System Audibles Active/Silenced and Partial System Disable.

The MKB-4 Annunciator communicates with the SMB-1 Main Control Board through the system network link.



MPS-6 Power Supply

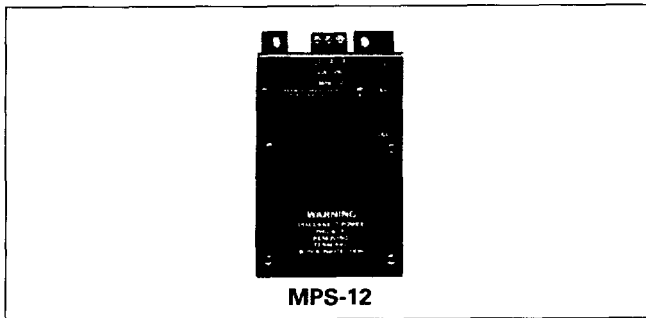
The MPS-6 is a fully supervised power supply which provides the system with primary DC power. It is rated at 6.5 Amps and is unfiltered and unregulated. It supplies the MXLIQ Control Unit and its expansion modules with power required for normal operation. The unit incorporates a resettable circuit breaker on the primary input and includes a built in AC line filter for surge and noise suppression. The MPS-6 mounts in the MXLIQ enclosure backbox. (MSE-3L)



MPS-6

MPS-12 Power Supply

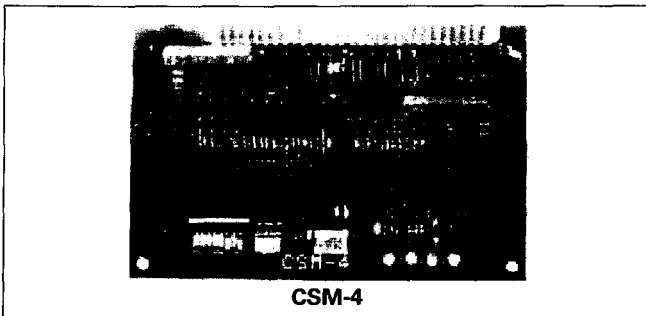
The MPS-12 is a fully supervised power supply which provides the system with primary DC power. It is rated at 12 Amps. and is unfiltered and unregulated. It supplies the MXL-IQ Control Unit and their expansion modules with power required for normal operation. The unit incorporates a resettable circuit breaker on the primary input and includes a built-in AC line filter for surge and noise suppression. The MPS-12 mounts in the MXL enclosure backbox.



MPS-12

CSM-4 Controllable Signal Module

The Controllable Signal Module CSM-4 provides two fully supervised, programmable notification appliance circuits. The CSM-4 supplies two Class B (Style Y) or Class A (Style Z) type output circuits for the supervision and control of listed audible or visual notification appliances such as horns, bells, strobes, etc. Each circuit can provide up to 1.5 Amps (24 VDC) of current to power notification appliances. CSM-4 is also used for pre-action or deluge application as well as for applications that call for municipal tie or leased line operation. Sinorix™ and Halon cylinder solenoid activation is also controlled by the CSM-4.

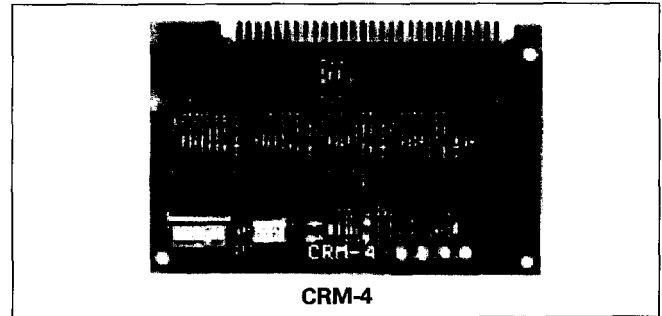


CSM-4

CRM-4 Controllable Relay Module

The Controllable Relay Module CRM-4 is designed to provide auxiliary control of building functions such as door holder release, elevator capture, smoke control, lock release, etc. The CRM-4 plugs into one of the slots in the

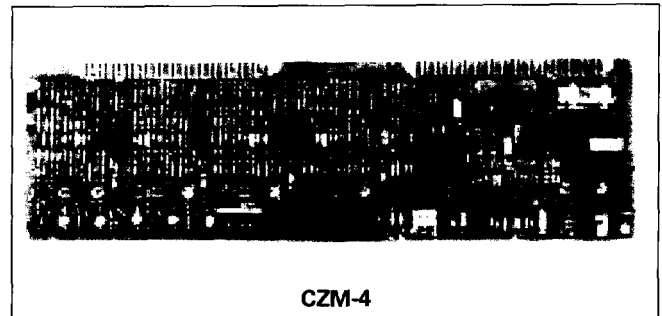
MOM-2 or MOM-4 expansion card cage. It provides four fully programmable relays. Each relay contains one set of SPDT contacts rated at 2 Amps 30 VDC/120 VAC resistive.



CRM-4

CZM-4 Conventional Zone Module

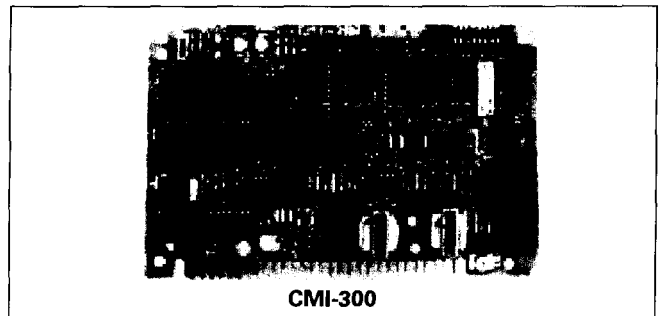
The Conventional Zone Module CZM-4 is used with the MXL-IQ to provide four Class A (Style D) or Class B (Style B) conventional initiating device circuits. Each circuit can monitor up to 30 Siemens Building Technologies, Inc. Fire Safety two wire photoelectric or ionization smoke detectors and an unlimited number of normally open contact devices. Projected Beam Detectors may also be used. The CZM-4 circuits will support the use of detector relay bases, and remote indicator lamps. Activation of any device on a circuit will initiate a zone alarm condition resulting in the operation of programmed functions. The CZM-4 module plugs into one full slot in the MOM-2 or MOM-4 expansion card cage.



CZM-4

CMI-300 CXL/MXL Interface Module

The CMI-300 is an MXL-IQ option module which provides modem communication between an MXL-IQ and a CXL system. The CMI-300 plugs into one of the slots on a MOM-2 or MOM-4 card cage. This interface board translates signals between the MXL-IQ and the CXL and fully supervises the signals.



CMI-300

PIM-1 Interface Module

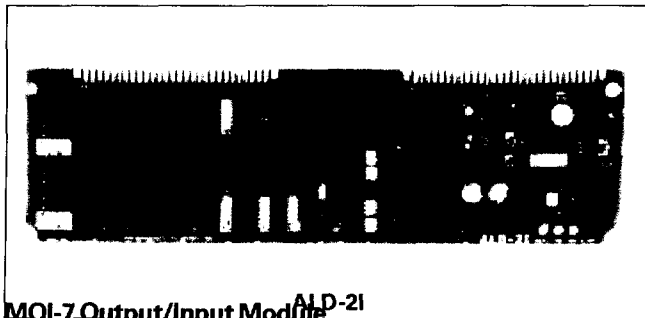
The PIM-1 is an MXLIQ option module which provides a bi-directional isolated RS-232 port for connection to peripheral devices such as printers, CRT's, VDT's, diagnostics, pocket pagers and Color Graphics. The PIM-1 mounts on the MKB-4. It connects to the SMB-1 and provides a screw terminal block for connection of RS-232 devices. A number of supervised and non-supervised formats are available.



PIM-1

ALD-2I Analog Loop Driver

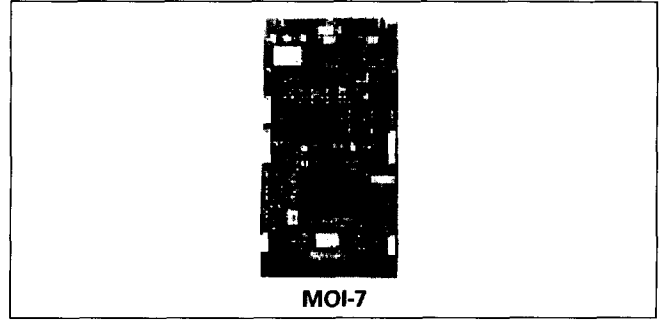
The ALD-2I is an MXLIQ Network option module which supplies two intelligent analog circuits utilizing Fire Safety "I" type intelligent devices. It occupies two addresses on the MXLIQ local network and through the use of a unique communication protocol, devices connected to the ALD-2I circuits are dynamically supervised by the MXLIQ control panel. Up to 60 programmable input and output devices may be connected to each of its two circuits. Each circuit may be wired as Style 4 or Style 6. See Table 1 for a list of compatible devices.



MOI-7 Output/Input Module

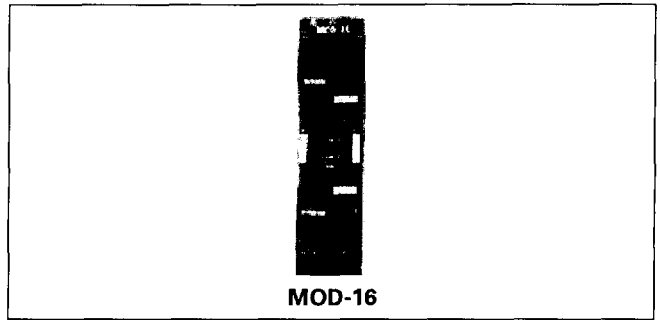
The MOI-7 is an MXLIQ RS-485 Network module which provides a fully programmable serial interface to the MOD-16 output drivers and MID-16 input drivers. When used with the MOD-16's, it provides a serial annunciator or relay driver. When used with MID-16, it provides programmable inputs. Each MOI-7 can operate up to eight MOD-16's and eight MID-16's simultaneously. Each MOD-16 output and MID-16 input is independently programmable via the MXLIQ custom software.

MOD-16 Output Driver



MOI-7

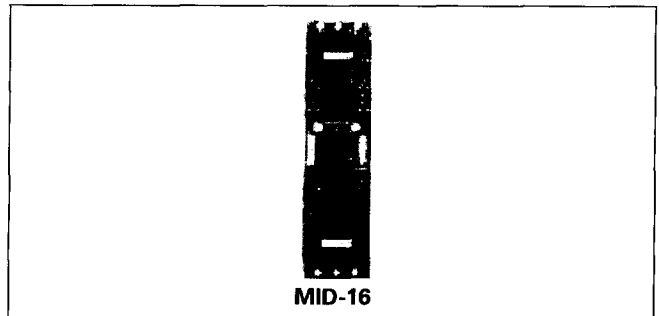
The MOD-16 is an output driver module used in conjunction with the MOI-7 as a part of the Fire Safety MXLIQ System. Up to eight (8) MOD-16s can be connected to an MOI-7 interface module. Each MOD-16 provides 16 open collector current sinking outputs rated at 24VDC, 50mA. MOD-16 outputs are programmable through the MXLIQ custom software.



MOD-16

MID-16 Programmable Input Driver

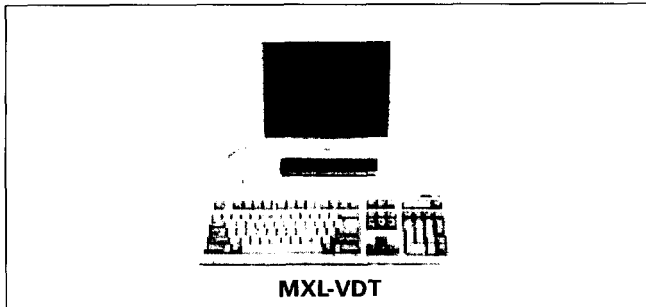
The MID-16 is an input module used in conjunction with the MOI-7 as a part of the Fire Safety MXLIQ System. Up to eight MID-16s can be connected to a single MOI-7 along with eight MOD-16 output driver modules. Each MID-16 provides a non-supervised input which can monitor contact devices. Each individual MID-16 input can be separately used as a part of the MXLIQ custom programming logic. These inputs can be individually set for either Alarm, Supervisory, Trouble, Security or Status usage. They can also be configured to provide supervision for lamps driven by MOD-16 outputs. Screw terminals and connectors are provided on the MID-16 modules for interface to monitored devices.



MID-16

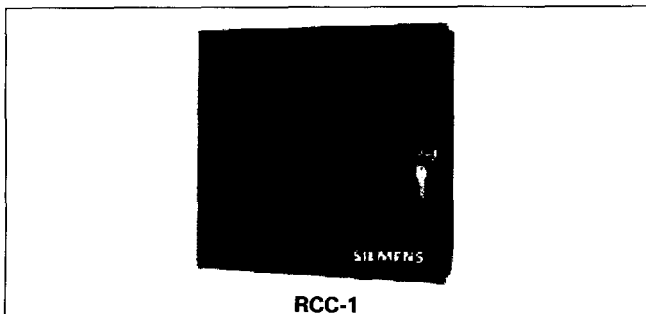
MXL-VDT Interactive Video Display Terminal

The MXL-VDT is a 14" amber monitor with detachable keyboard. It provides an interactive terminal for secondary display of MXL-IQ information, and operation of MXL-IQ functions such as Acknowledge, Silence and Reset, as well as arming and disarming devices. It also provides a means for generating system reports such as listing smoke detector sensitivity settings and voltages, battery and power supply voltages and current and displaying the history event log. An unsupervised printer may be connected to the MXL-VDT.



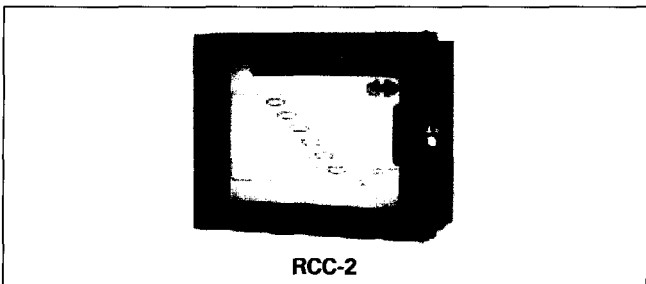
RCC-1 Remote Command Console

The RCC-1 is a remotely located MXL-IQ annunciator display module. The RCC-1 contains an 80 character LCD display and control keypad (MKB) and a PS-5N7 network interface. RCC-1s can be located anywhere that control or annunciation is required. RCC-1 can be programmed for display only or can provide display and system control. If a PIM-1 is added to the RCC-1, remote printers, VDT, or graphics computers can be located throughout a facility.



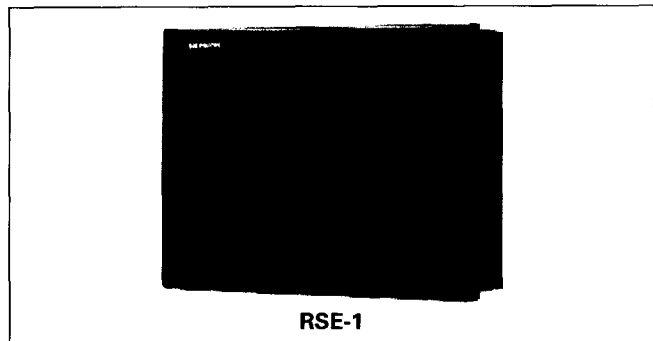
RCC-2 Remote Command Console

The RCC-2 is a remotely located MXL-IQ annunciator display module mounted in a small enclosure (8-1/2" W x 7" H x 2-7/8" D). The RCC-2 can be located anywhere that control or annunciation are required. It contains an 80 character LCD display, a control keypad for system controls, and a PS-5N7 network interface. No function keys are included with the RCC-2. It can be programmed for display and control or display only. If a PIM-1 is added to the RCC-2, remote printers, VDT, or graphics computers can be located throughout a facility.



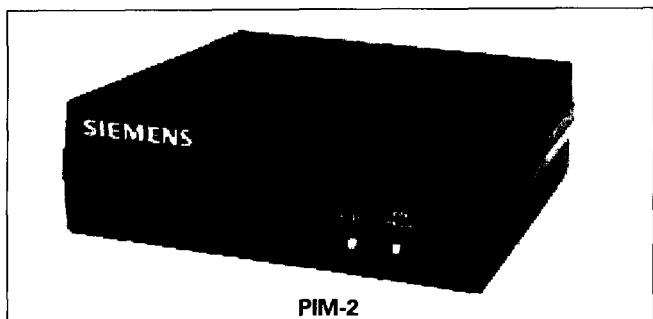
RSE-1 Remote Serial Enclosure

The RSE-1 is a remotely located MXL-IQ module that allows a connection to a printer, video display terminal, alphanumeric pager interface, or remote diagnostic module. It contains an annunciator board and a PS-5N7 interface board, with space in the enclosure for a PIM-1 printer driver board.



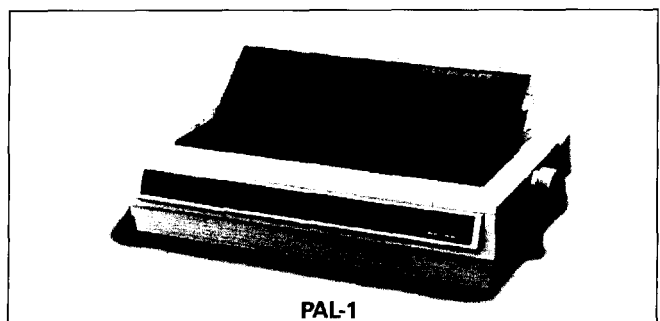
PIM-2 Parallel Printer Interface

The PIM-2 is an MXL-IQ or CXL parallel printer interface module. PIM-2 connects to PIM-1 to allow MXL-IQ connection and supervision of any EDP listed printer.



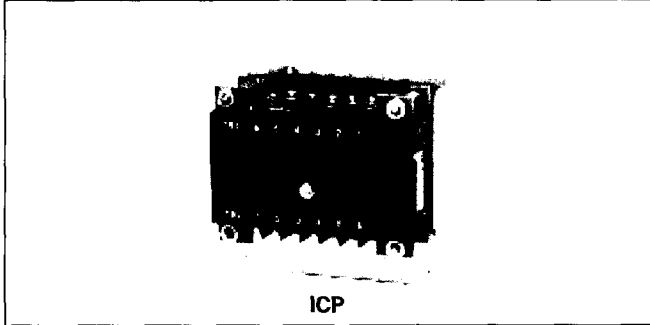
PAL-1 UL Listed Parallel Printer

The PAL-1 is a UL listed supervised parallel system printer for MXL-IQ or CXL. The PAL-1 connects to the PIM-2 and PIM-1 to provide MXL-IQ with a UL listed parallel printer that is supervised.



ICP-B6 Intelligent Control Point

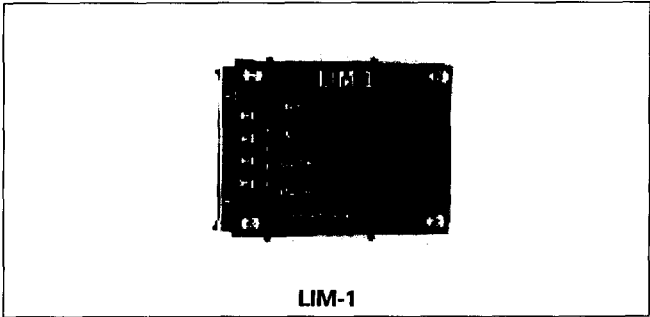
The ICP-B6 is a field mounted output module capable of being programmed to be either a remote bell, horn, or strobe circuit. The ICP-B6 communicates with the MXL-IQ via the ALD loop.



ICP

LIM-1 Line Isolator Module

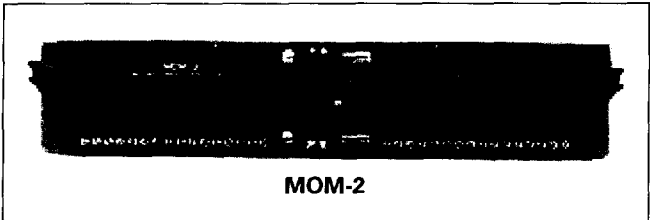
The LIM-1 is a short circuit isolator module for use on the MXL-IQ's analog loops. The LIM-1 is capable of providing Style 4, Style 6 wiring of ALD loops. Multiple short circuit isolators can be used on a single ALD loop to prevent loss of protection in the event of a short circuit.



LIM-1

MOM-2 Network Option Module Card Cage

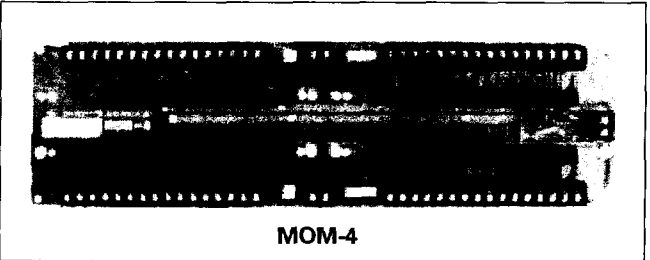
The MOM-2 provides the MXL-IQ main unit with card slots for optional modules. Each MOM-2 provides space for one full-width (ALD-2I, NIM-1W or CZM-4) or two half-width option modules (CSM-4, CRM-4, CMI-300, REP-1).



MOM-2

MOM-4 Network Option Module Card Cage

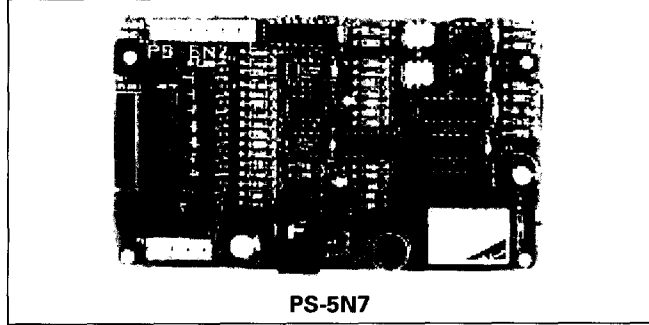
The MOM-4 Card Cage provides the MXL-IQ with card slots for option modules. Each MOM-4 supplies connection space for either two full width option modules (ALD-2I, CZM-4, NIM-1W) or four half width option modules (CSM-4, CRM-4, CMI-300, REP-1) or a combination of one full and two half width modules.



MOM-4

PS-5N7 5 Volt Power Supply/Network Interface

The PS-5N7 is a 5V power supply and MXL-IQ local network interface module. The PS-5N7 is an integral part of the RCC-1.

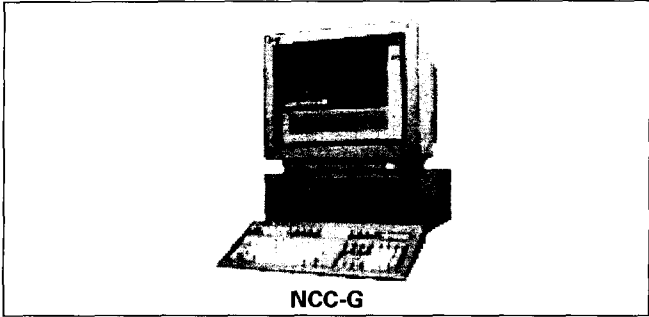


PS-5N7

FireFinder — Network Color Graphics

FireFinder is a PC based color graphics display and control package designed for use with the LifeLINK network and provides full control and annunciation for a LifeLINK network of up to 63 MXL-IQ or MXL systems. The NCC-G is used to monitor and control alarms, troubles, security, supervisory and all system events from one of many MXL series systems. The NCC-G maintains an extensive history log of all system events and has extensive report generation capabilities. User programmable function buttons are programmable to allow site specific control function configuration. Multiple NCC-Gs may be connected to a LifeLINK network.

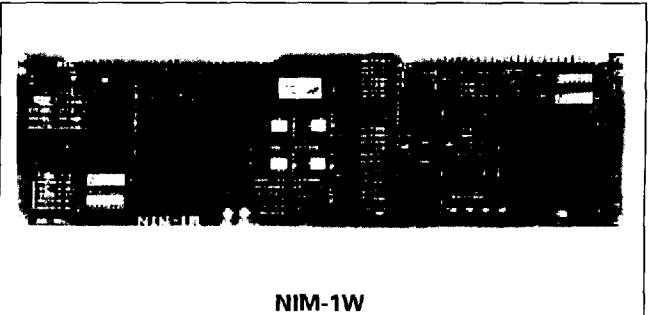
The NCC-GL serves as a graphical command center for a single MXL-IQ system. All of the FireFinder controls utilize a friendly design which intuitively guides the operator through all system conditions.



NCC-G

NIM-1W Network Interface Module

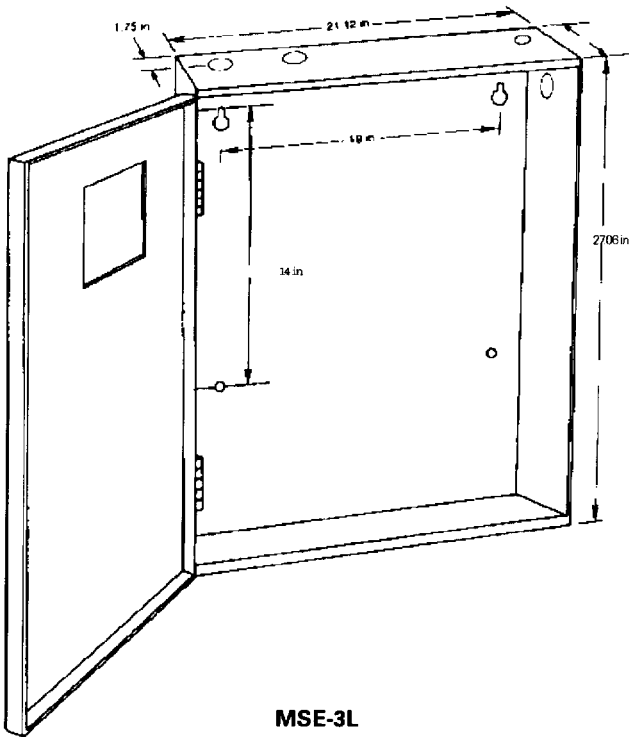
The NIM-1W is a full sized slot MXL-IQ module that allows the interconnection or networking of up to 63 MXL/MXL-IQ systems. The NIM-1W provides an RS-485 communication path in either Style 4 or Style 7 wiring configurations. The NIM-1W allows MXL/MXL-IQs to have interpanel logic and communicate in a peer to peer fashion. The NIM-1W can be programmed via CSGM logic as an FSI (Foreign System Interface) to communicate with external building control and annunciation systems. The NIM-1W is programmable to serve as an intelligent link to the air sampling detection system.



NIM-1W

MSE-3L MXL-IQ Enclosure/Door

The MSE-3L is a sheetmetal backbox for the MXL-IQ system. The MSE-3L supports mounting for the SMB-2, MPS-6, MPS-12, MPS-12-220, MPS-12-240, MKB-4 and either one MOM-2 or one MOM-4 cardcage. The MSE-3L dimensions are 27 $\frac{1}{16}$ "H x 21 $\frac{1}{8}$ "W x 6"D. The IQ-DFL plate (500-695436) is also available for use with the MSE-3L to provide full deadfront construction. The MET-3L (500-695437) flush trim mounting kit is also available for use with the MSE-3L enclosure. The MET-3L provides an optional 1" trim mounting ring around the MSE-3L. The MSE-3L enclosure also has provision for mounting a PSR-1 remote power supply, for use in place of the SMB-2 for MXL and MXLV applications. When the PSR-1 is mounted in the MSE-3L enclosure the IQ-BLANK (500-695438) blank plate is available to cover the cutout in the MSE-3L door. Other versions of the MSE-3L include; MSE-3LR - Red version of the MSE-3L and the MET-3LR - Red version of the MET-3L trim ring kit.



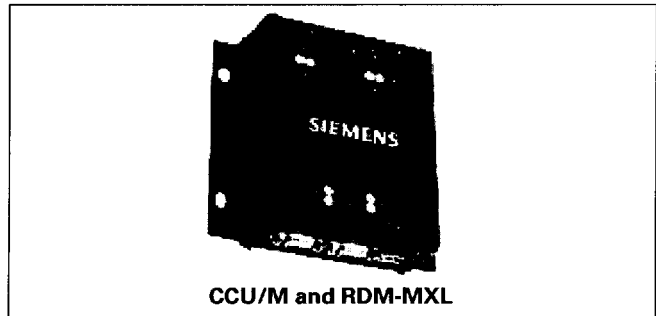
MSE-3L

CCU/M Alphanumeric Pager Interface

The CCU/M is an ancillary module that connects to the PIM-1 to transmit MXL-IQ status information in text message format to an alphanumeric pocket pager. The CCU/M can be connected to an existing phone line and can dial out to a pager using its onboard modem to transmit information via a paging service. The CCU/M can also connect directly to an existing on-site paging system. Through programming the CCU/M can send different types of events to different pagers. Up to 8 different messages can be sent to pagers directly from the CCU/M. Alarms, Troubles, Supervisory, Security, Arm/Disarm, Status Points, Audible Status, and Reset can be directed to all or only certain alphanumeric pocket pagers.

RDM-MXL, RDM-PC

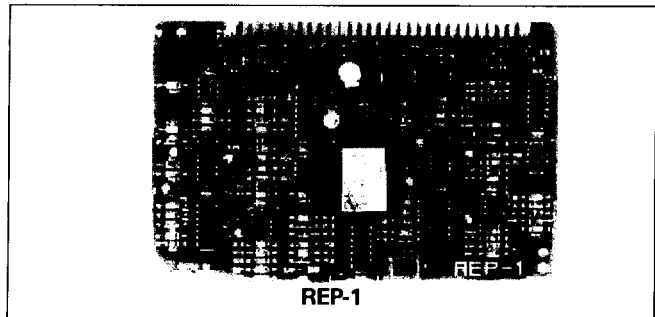
The RDM-MXL in combination with the RDM-PC provides the ability to call up an MXL, MXL-IQ or MXLV system to check on the system status. The RDM-PC connects a remote computer to the MXL equipped with the RDM-MXL. The RDM-PC initiates a call to the MXL's RDM-MXL module. The RDM-MXL answers the call. The RDM-PC identifies itself with the login name. As a built-in security measure, when the login name is recognized by the RDM-MXL, it then hangs up and initiates a call back to verify the login and password. Once the login and password is verified, the operator is on-line with the MXL. The operator can list system status, alarms, troubles, supervisory, and/or security events!



CCU/M and RDM-MXL

REP-1

The REP-1 is an optional MXL module that extends the distance of the MXL's RS-485 network. The REP-1 provides the ability to support various wiring configurations, including series and star configurations. The REP-1 provides the ability to support NFPA Style 4 or Style 7 network communications wiring. The REP-1 can be used to provide network wiring between MXL panels or MXLR panels. The REP-1 is a one-half slot card that plugs into a MOM-4 or MOM-2 cardcage. The REP-1 allows MXL network distances to be expanded to allow greater application flexibility. The REP-1 is an RS-485 repeater module capable of being configured as one Style 7 or two Style 4 network communication lines.



REP-1

Electrical Specifications

SMB-2 Analog Device Loops (TB2 and TB3)

1. Electrical Ratings:

Supervisory 30VDC max, 66mA max.
Alarm 30VDC max, 66mA max.
(60 devices in alarm)

- All wiring must be in accordance with Article 760 of NEC or local building codes.
- Only the following list of devices may be used. A maximum of 60 devices in any combination may be connected to a single analog loop. The UL identifiers for compatibility are the same as the model names specified in Table 1.

**TABLE 1
COMPATIBLE DEVICES**

Compatible Devices	Base	Installation Instructions
CZM 1	-	P/N 315-090725
CZM-186	-	P/N 315-095255
FP-11/FPT-11*	DB-3S with DB-ADPT DB-11	P/N 315-095821 P/N 315-095821
ICP	-	P/N 315-092471
ICP-86	-	P/N 315-095306
ILI 1/1H	DB-3S DB-X3RS	P/N 315-095287
ILI-1A/1A4	DB-3S, DB-X3RS	P/N 315-095287
ILI-1B/1B4	AD-3I AD-3XR†	P/N 315-093234 P/N 315-093235
ILP-1/ILPT-1	DB-3S, DB-X3RS	P/N 315-092594
ILP 1	AD-3ILP AD-3XRILP	P/N 315-093234 P/N 315-093235
ILP 2**	DB-3S, DB-X3RS	P/N 315-095028
ILP 2***	AD-3ILP AD-3XRILP	P/N 315-093234 P/N 315-093235
ILT-1	DB-3S	P/N 315-093306
LIM-1	-	P/N 315-092135
MSI-1G/2D	-	P/N 315-090903
MSI-1GB/2DB	-	P/N 315-093329
MSI-M86	-	P/N 315-093613
TAI-86/86D/86R	-	P/N 315-093315
TAI-86M	-	P/N 315-094547
TAI-S, TAI-D, TPI-H	-	P/N 315-096242

* The FP-11/FPT-11 is only compatible with MXL-IQ Rev. 6.0 or greater firmware.

** The ILP-2 is only compatible with MXL-IQ Rev. 3.0 or greater firmware.

† When the CSG-M is configured, the DUCT application must be selected when the device is used in an air duct housing or in a spot duct application.

- No end of line device is required.
- Both circuits are power limited to NFPA 70/NEC 760. Each detector, or group of detectors, requires a two wire circuit of minimum 18 AWG thermoplastic fixture wire.
- Total circuit resistance must not exceed 100 ohms.
Maximum capacitance: 0.4uF, between loop+ and loop-
0.8uF, between loop+ and chassis
0.8uF, between loop- and chassis
- T-tapping is not allowed on Style 6 loops.
- See P/N 315-092772 for more information on wiring.

SMB-2 AUX Power (TB5, 9-12)

- AUX power is available on TB5 terminals 9-12.
- All wiring must be in accordance with Article 760 of NEC or local building codes.
- Aux power is power limited to NFPA 70/NEC 760.
- Electrical Ratings:** 18-31 VDC, 1A max.
- See P/N 315-092772 for more information on wiring.

SMB-2 Notification Appliance Circuits (TB-5, 1-4 and TB5, 5-8)

- These notification appliance circuits are for alarm notification appliances only (NFPA 72). For Municipal Tie (NFPA 72, Chapter 4), Releasing (NFPA 13) or Leased Line (NFPA 72, Chapter 4), use model CSM-4
- All wiring must be in accordance with Article 760 of NEC or local building codes.
- Both notification appliance circuits are power limited to NFPA 70/NEC 760.
- Electrical Ratings:**
Supervisory 18-31 VDC, 12mA max.
Alarm 18-31 VDC, 1.5A max
- End of Line Device:** Use Siemens Fire Safety EOL 2.2K, 1/2W, P/N 140-820380
- Line Resistance:** Not to exceed 3 ohms total.
- See P/N 315-092772 for more information on wiring.

NOTICE: The use of other than Fire Safety detectors and bases with Fire Safety equipment will be considered a misapplication of Fire Safety equipment and as such void all warranties either expressed or implied with regard to loss, damage, liabilities and/or service problems

Three-Fold Fire Alarm Boxes and Transmitters

Description

Gamewell coded fire alarm boxes and industrial transmitters provide large industries, institutions and communities with the surest and safest means of prompt, effective fire alarm reporting. They are positive and bring help directly to the exact location from which the alarm was sent. They minimize human error in fire reporting. There is no confusion on the part of either sender or receiver; no hazardous, time-consuming confusion between streets, roads and avenues with the same or similar names.

The three-fold fire alarm boxes and transmitters are designed for coded alarm reporting into a normally closed series metallic signaling circuit having a normal DC flow of 0.100 Amp. They transmit signals over this circuit in accordance with their respective code numbers.

These three-fold assemblies are available in numerous variations which can be classified into three major categories as follows:

Three-Fold Manual Fire Alarm Box

Strictly manually operated by moving the pull guard forward which exposes the operating lever. Downward pressure on this lever actuates the code signal mechanism.

Three-Fold Master Fire Alarm Box

Master fire alarm boxes have provisions for electrical actuation in addition to the manual operation. They are designed to provide the connecting link between a principal municipal or industrial fire alarm system and auxiliary type fire alarm systems installed for protection of public buildings, schools, industrial plants etc. With such provisions, any alarm originating from heat detectors, smoke detectors, sprinkler heads, etc. are automatically transmitted through the Three-Fold Master Fire Alarm Box to the central headquarters.

Industrial Three-Fold Master Transmitter

Master transmitters have provisions for electrical actuation but do not have any means for manual operation. They would be used when manual operation is not required such as an un-manned warehouse.

Three-Fold Features

All fire alarm boxes and transmitters incorporate the unequalled Gamewell Three-Fold spring-driven movement. This movement is positive non-interfering, quick succession and also features the unique three-fold automatic grounding capability.



Approvals

U.L. Listed

Features

- Manual activation
- Remote electrical activation
- Manual or remote activation
- Positive non-interfering movement
- Automatic grounding
- Red or blue
- Local energy transmission
- Surface or semi-flush mount

The movement is designed so that should two boxes on a normal line be operated simultaneously, one will be automatically selected to transmit a correct signal for four complete rounds. If a box is operated while another box is in operation, it will not interfere in any way with the transmission of the signal of the first box. The second box will take control of the circuit and transmit its complete four rounds of signal upon the beginning of its next round following the completion of the signal of the first box. This operation, without loss of alarm or interference between simultaneously actuated movements, is possible because of the positive non-interference and quick succession features.

The self-grounding mode of operation is accomplished automatically whenever a three-fold movement is actuated on a circuit which has developed an open. In this mode of operation, signals may be received from transmitters and boxes by properly conditioned receiving circuits at headquarters.

The Gamewell Three-Fold Boxes and Transmitters are capable of making approximately 26 attempts to command a circuit. If at the end of that time an actuated unit is still unable to get a clear line, it will automatically "take over" (bulldog) the circuit to transmit four rounds of its signal before it is wound down. The mechanism is capable of transmitting signals at varying rates of speed ranging from electrical impulses at 3.25 second intervals to .25 second intervals and has provisions for adjusting speeds within this range.

When the main spring is run-down so there is insufficient capacity left for transmission of four complete rounds of the signal, the mechanism is locked to prevent further operation until the spring is rewound, so as to prevent transmission of a fragment of a signal or stopping of the mechanism in a position which might hold the circuit open.

If the main spring breaks or runs down, the circuit will be grounded. Thus, by the testing means provided at headquarters, the location of the faulty box may be determined.

Operation

Manual Pull

The manual Three-Fold Boxes and Three-Fold Master Boxes are provided with means for manual actuation. These boxes are of the quick action type and require only the opening of the quick action pull down guard and depressing of the lever to trip the mechanism. Once tripped, no further manipulation of the lever has any effect on the mechanism. When the box is operated in a normal metallic circuit, four rounds of the box number will be transmitted to headquarters. If another box has control of the line, the box operated will wait until the line is clear and then transmit its signal to headquarters.

Test Features

In addition to transmitting emergency signals for fire alarm purposes, the fire box is equipped with a telegraph key so that authorized persons may transmit manually formulated code signals and receive audible indication, via tap bell, of the transmission of all code signals on the circuit.

The test block is provided so that all functions of the box can be tested without the transmission of any signal over the circuit and without impairing the transmission over the circuit of signals from other sources. Means for cutting the box out of service or grounding either side of the circuit as required are also provided.

Frequently, the many advantages of the Three-Fold operation are desired without all of the other features of a standard Gamewell Fire Alarm Box. Accordingly, we offer the MODIFIED version of the standard units. It is basically the same as the popular Three-Fold Box which has had an excellent service record for decades. The difference is that the MODIFIED Three-Fold Boxes do not have the inner case, tap bell, telegraph key and test block.

Construction

Signaling Mechanism

The signaling mechanism is carefully assembled with all parts precision-manufactured. All parts are plated or treated to resist rust and corrosion, and the mechanism is completely enclosed in a dust tight transparent plastic cover, fastened to the mechanism mounting panel of heavy duty moulded plastic.

Three-Fold Fire Alarm Boxes

All of the working parts are mounted in an *inner case which is installed in the familiar "Signal Red" weatherproof cottage shell. Both the inner and outer cases are constructed of aluminum, suitably treated and finished, the outer case being painted red and the inner case white. A white guard panel is installed on the outer door to protect and highlight the starting lever. Both narrow sides of the box have a "Scotch-Lite" reflective "FIRE" sign in red letters with white background. The outer case is provided with a threaded .5" conduit connection at the top and a clearance hole for .5" conduit at the bottom.

* The inner case is not included with Modified Boxes.

Industrial Master Transmitter

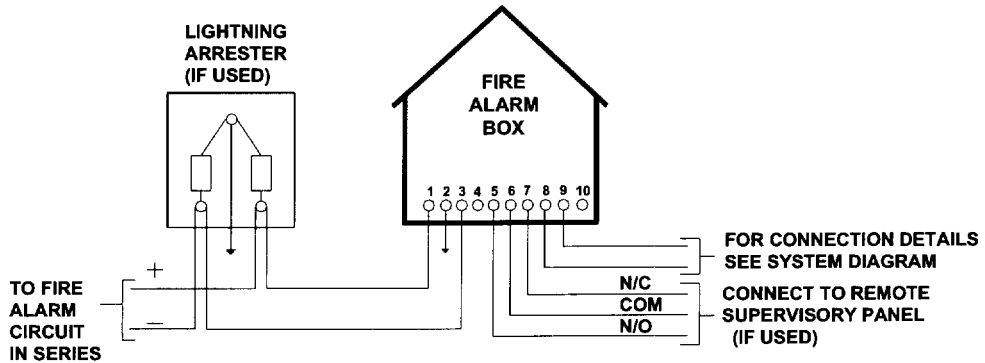
This transmitter utilizes the standard Three-Fold Mechanism and auxiliary tripping attachment mounted in a sheet metal enclosure with a locked, hinged door. The box code number plate is mounted on the outside or the door. The transmitter dimensions are: 12" high x 12" wide x 6" deep. This unit is designed for surface mounting.

Installation Information

Although the Gamewell Master Fire Alarm Box is designed for connection to auxiliary systems inside buildings, the National Fire Protection Association recommends that the Master Box be placed outside of but convenient to the building protected. Installation on a pole or wall nearby preferably using a mounting bracket, reduces the fire hazard to the circuit wires of the main fire alarm system. It is recommended that the lead-in wires from the main circuit to the Master box be placed underground, but if aerial wire construction is used, adequate lightning protection should be provided at the Master box. A Gamewell 44551-01 lightning arrester is suitable for the purpose. Three conductors, of #14 or #16 gauge wire, are recommended for connection between the Master box and the Reset Supervisory Panel. This panel may be installed inside the building, preferably in some location where it will be visible a major portion of the time to certain of the building personnel. This applies to the shunt trip type master box. Where the local energy type is used, requiring local power source for auxiliary operation, the supervisory panel may not be necessary as many interior system control panels are arranged to perform this function if specifically designed to operate the local energy type master box.

Typical Wiring Connections

GAMEWELL MASTER FIRE ALARM BOX



1. All wires shall be installed in accordance with National Electric Code.
2. Auxiliary circuit wires must be installed in rigid conduit.

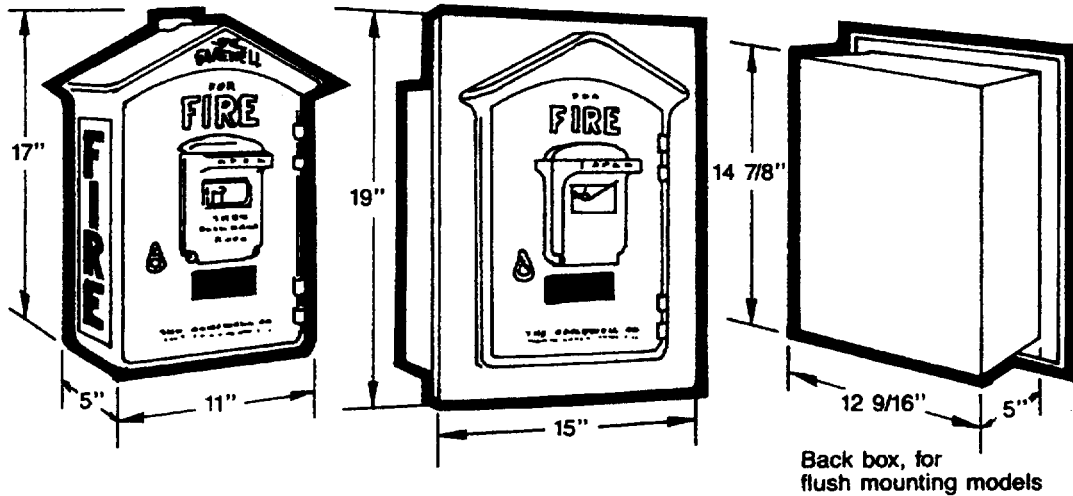
For Shunt Type Master Box

1. Connect initiating devices in series with auxiliary circuit. Devices must be normally closed and must open on alarm.
2. Auxiliary circuit loop resistance must not exceed 30 OHMS.
3. Supply voltage of circuit in which Master F. A. Box is connected should not be less than 30 volts.

For Local Energy Type Master Box

1. Auxiliary circuit normal operating (alarm) current should be .250 ampere DC or .380 ampere 60 HZ AC.
2. Auxiliary circuit supervisory current should be not more than .050 ampere DC or .070 ampere 60 HZ AC.
3. Nominal volts across coil = 3.65VDC or 50VAC 60 HZ. Use series resistor for higher voltages.
4. Max. safe current in trip coil 125% of nominal values given.
5. Coil, wiring, and terminals insulated for 125VAC (1250VAC breakdown test).

Dimension Data for Master Boxes



Ordering Information

<u>Part Number</u>	<u>Description</u>
Three-Fold Manual Boxes (For interior or exterior use)	
M34-52	Surface Mounting, Cottage Shell
M34-73	Surface Mounting, Cottage Shell (less inside case, test block, tap key & bell)
M34-89	Flush Mounting, Gasketed cast frame
M34-90	Flush Mounting, Gasketed cast frame (less inside case, test block, tap key & bell)
Three-Fold Master Boxes (Shunt type)	
M34-53	Shunt Trip, Surface Mounting, Cottage Shell
M34-103	Same as M34-53 with plain door painted blue
M34-104	Same as M34-53 with plain door painted red
M34-105	Same as M34-53 with plain door painted yellow
M34-91	Shunt Trip, Flush Mounting, Gasketed
M34-106	Same as M34-91 with plain door painted blue
M34-107	Same as M34-91 with plain door painted red
M34-74	Shunt Trip, Surface Mounting, Cottage Shell (less inner case, test block tap key & bell)
M34-108	Same as M34-74 with plain door painted blue
M34-109	Same as M34-74 with plain door painted red
M34-71	Shunt Trip, Sheet Metal Housing, plain door (less test block, tap key & bell)

<u>Part Number</u>	<u>Description</u>
Local Energy Type	
M34-56	Local Energy Trip, Surface Mount, Cottage Shell
M34-110	Same as M34-56 with plain door painted blue
M34-111	Same as M34-56 with plain door painted red
M34-112	Same as M34-56 with plain door painted yellow
M34-92	Local energy Trip, Flush Mounting, Gasketed cast frame for interior or exterior use
M34-113	Same as M34-92 with plain door painted blue
M34-114	Same as M34-92 with plain door painted red
M34-75	Local Energy Trip, Surface Mount Cottage Shell (less inner case test block, tap key & bell)
M34-115	Same as M34-75 with plain door painted blue
M34-116	Same as M34-75 with plain door painted red
M34-72	Local Energy Trip, Sheet Metal Housing (less test block, tap key & bell) Plain door

Optional Features for Three-Fold Manual and Master Boxes

<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>	<u>Description</u>
	Manual Box Micro Switch Kits		Easy Mount Bracket consisting of:
	To operate from Manual pull only	28268	Loose parts
MD-99	Outer door mounting. Cottage Shell (for boxes sold before July 1966)	28295	Cross brackets
		28296	Side brackets (2 required)
MD-99-2	Outer door mounting, Cottage Shell (for boxes sold after July 1966)	28297	Flexmount bracket consisting of:
		28298	Horizontal bracket
		27853	Vertical bracket
	Master Box Micro Switch Kits		Loose parts
	To operate from Manual pull and remote trip		Grounding Assembly
27687	Inner Door Mounting, Cottage Shell	30118	Complete Grounding Assembly consisting of:
		44630	- Ground rod .5" x 8'
		44631	- Clamp and Staples
20947-7	Accessories	30119	- Grounder 3/8" x 5' with clamping nuts and staples
30834	Universal Lock to replace standard lock		Supervisory Panel
	Key for universal lock. Must specify city for proper cutting		Supervisory or Local Alarm
25673	Number plate	30496	Panel Two Gang Plate
25672	Code Wheel, cut		120/220 Vac 60 Gz.
9836	Break glass 3" x 2-22/32"	30259	24 VDC Supervisory Panel - single gang plate
	Break Glass Kit		
27663	For all current 3-Fold Boxes		

Specifications and wiring information are provided for information only and are believed to be accurate. Gamewell assumes no responsibility for their use. Data and design are subject to change without notice. Installation and wiring instructions shipped with the product shall always be used for actual installation. For more information, contact Gamewell.



The Gamewell Company
60 Pleasant St.
Ashland, MA 01721

Voice (508) 231-1400
888-FIREBOX • (888) 347-3269
FAX (508) 231-0900
www.gamewell.com

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SIEMENS

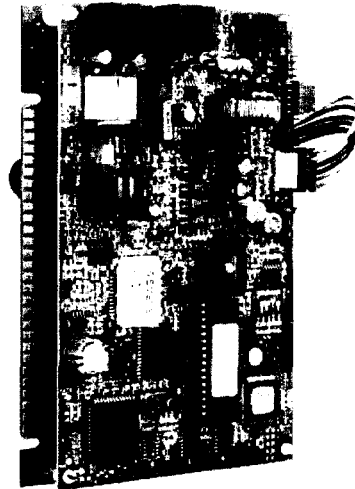
Fire Safety

MDACT

MXL Multi-Point Digital Alarm Communicator Transmitter

ENGINEER AND ARCHITECT SPECIFICATIONS

- UL 864 Listed. Meets NFPA Chapter 4 Central/Remote Station Monitoring
- Contact ID and SIA Communication Protocols
- 2040 Point Capacity
- Dual Phone Line Interface
- Line-Fault Monitoring
- Automatic 24-hour Test
- Five Supervised Discrete Point Inputs
- Built-in Clock for Time Management
- Multiple Diagnostic LED's



Description

The Siemens Building Technologies, Fire Safety Division Multi-Point Digital Alarm Communicator is used in MXL systems where point identification of alarm, supervisory, status and trouble events is required at Central or Remote Stations. An intelligent RS-485 communications protocol transmits all system information to the MDACT. The installer selects the specific events, or groups of events, that are to be transmitted from the MDACT over phone lines to listed receiving station equipment.

Every device in a single MXL system can be assigned an individual group number and custom message. Alternatively, multiple devices of similar event type can be assigned the same group number. The group number, event type and time of event are transmitted to the receiving station where the custom message is attached to the event. In this way an individual device can be reported at the receiving station with a custom message. Alternatively a group of devices, such as all smoke detectors in one floor, can report at the receiving station with the same message.

Group numbers and custom messages are programmed in the MXL custom-software generating tool (CSG-M). Account and phone numbers, along with other dialer specific options, are programmed in the dialer via the DCT-P Programmer.

Communications

The MDACT can transmit point information via Ademco Contact ID and the SIA protocol. Contact ID can transmit events for up to 999 individual points. SIA can transmit each of the 2040 points available in an MXL if desired. The Central Station must have the capability to receive point information from the MDACT.

The MDACT uses two supervised phone lines in accordance with typical system requirements. It follows all UL requirements for monitoring and testing those lines. It also follows requirements for properly transmitting signals in the event of a line failure. The module is equipped with phone line seizure for shared phone line service.

The MDACT is supervised by the MXL system. Troubles in the MDACT will be reported on the MXL and transmitted to the central station on one of the phone lines. The MDACT does not include a separate audible device for trouble annunciation. It does include on-board trouble LED's for heartbeat, system trouble and individual phone line trouble.

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Installation

The MDACT is installed in one half of a MOM-2/4 slot (MXL card cage). It can be installed in either MXL or MXL-IQ systems. The two phone lines are landed on phone jacks mounted on the MDACT. No other connections are required to complete the installation.

The MDACT obtains all required power from the MXL through the MOM card cage. The MXL assumes the responsibility for monitoring AC power. In the event of AC power failure the MXL will create a local trouble signal. The signal transmission to the Central Station will be delayed as required by UL, typically 6 hours for Central Station Service.

The dialer includes 5 discrete point inputs. These can be used during installation for simple alarm monitoring until the custom programming for the installation is completed. The required cables are included with the MDACT.

Ordering Information

Model	Description	Part Number
MDACT	MXL Multi-Point Digital Alarm Communicator Transmitter	500-699254
DCT-P	Programmer - MDACT	500-699291

Refer to Installation Instructions 315-099351 and Programming Manual 315-099378.

Electrical Ratings

Standby Current Draw: 220 mA @ 24 VDC
Alarm Current Draw: 260 mA @ 24 VDC

MDACT Compatibility


MXL Firmware Revision 10.14 or higher
MXL-IQ Revision 6.14 or higher
CSG-M Software Revision 11.07 or higher

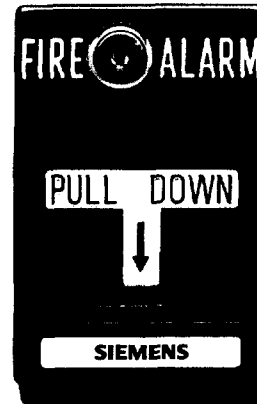
SIEMENS MSM SERIES

Fire Safety

Metal Manual Fire Alarm Box

ENGINEER AND ARCHITECT SPECIFICATIONS

- Rugged Die-Cast Metal Housing
- Reset Key Matches Control Panel
- Optional Break Glass Operation
- Single-Gang Semi-Flush Mount
- Optional Surface Mount Backbox
- Double-Action Institutional, Weather-Proof and Explosion-Proof Models Available
-  UL Listed



Standard Model
Or Weatherproof



Institutional Model

Description

The MSM Series manual stations feature a rugged die-cast metal housing that satisfies both architectural and code requirements for manual fire alarm box initiation devices. The MSM-Series box features keyed reset using the same key as the control panels.

The MSM Series models are low-profile with all surfaces either painted or plated to inhibit corrosion. These boxes have raised lettering and are shipped with two reset keys and a break glass rod (use of rod is optional.) Options include: double action, institutional, weatherproof, and explosion-proof.

These stations are equipped with a S.P. S.T. switch rated at 10amps @ 120 VAC and all connections are made to a terminal block. The explosion-proof model has a D.P. D.T. switch. **Both the weatherproof and explosion-proof models are shipped complete with backbox.** (Backbox is optional with other models, or you can mount to standard single-gang box.)

These models are intended for use with all Siemens Building Technologies, Fire Safety Division conventional zones, but can also be used with addressable zones when used in conjunction with a TRI-Series addressable module.

Dimensions

Station

Width 3.20 in.
 Height 4.75 in.
 Depth 1.20 in. (2.30 in. overall, including back of switch)

Station w/Double Action

Width 3.33 in.
 Height 4.57 in.
 Depth 1.50 in. (2.60 in. overall, including back of switch)

Weatherproof Model

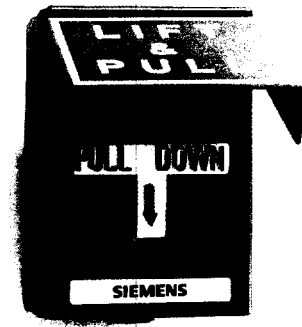
Width 3.20 in.
 Height 4.75 in.
 Depth 2.75 in.

Explosion-proof Model

Width 3.20 in.
 Height 4.75 in. (6.00 in. overall, including mounting ears)
 Depth 3.50 in.

Ordering Information

Model	Description	Part Number
MSM-K	Manual Station, Metal w/Key	500-698215
MSM-KD	Manual Station, Metal w/Key, Double Action	500-698216
MSM-K-WP	Manual Station, Metal w/Key, Weatherproof	500-698217
MSM-KD-WP	Manual Station, Metal w/Key, Weatherproof, Double Action	500-698218
MSM-EXP	Manual Station, Metal w/Key, Explosion-proof	500-698219
MSM-INST	Manual Station, Metal w/Key, Institutional	500-698220
MSM-BOX	Surface Backbone for MSM-series Manual Stations	500-698221



Double Action Model




Explosion-proof Model

FP-11 FirePrint™ Detector

Intelligent Fire Detector for MXL, MXL-IQ, and MXLV Control Panels

ENGINEER AND ARCHITECT SPECIFICATIONS

- Most Sophisticated "Detector Intelligence" available today
- Multi-Criteria fire detection for the price of a photoelectric detector
- FirePrint™ Technology to discriminate between deceptive phenomena and an actual fire
- Easily programmed to match specific hazard profiles from the control panel
- Pre-Alarm reporting based on fire profile selected
- Remote sensitivity measurement capability
- System logic activation based on any of three inputs from detector (smoke, heat or neural network)
- Field cleanable chamber with replaceable chamber parts available
- Multi-color detector status LED
- Two-wire operation
- Compatible with Model DPU or FPI-32 field programmer/tester
- Supports EnviroLINK software based automatic environmental compensation
- Backward compatible with older MXL systems (Rev. 2 and above)
- Optional fully programmable relay base, audible base, and duct housing
-  UL Listed, ULC Listed, CSFM, FM, NYMEA Approved



Introduction

The FP-11 Intelligent Fire Detector provides the life safety industry with the most highly evolved detection system available today. The FP-11 utilizes advanced detection technology that allows the detector to distinguish nonthreatening deceptive phenomena, such as cigarette smoke, from actual fire hazards, while optimizing detection for the area in which it is installed. No other detection system available today offers a higher level of protection or nuisance alarm immunity. The FP-11 uses state-of-the-art microprocessor circuitry with error check, detector self-diagnostics and supervision programs.

The FP-11 intelligent fire detector is compatible with the Siemens Building Technologies, Fire Safety Division, Model DPU or FPI-32 field programmer/tester, which is a compact, portable, menu-driven accessory for electronically programming and testing detectors, easily and reliably. The DPU or FPI-32 eliminates the

need for cumbersome, unreliable mechanical programming methods and reduces installation and service costs by electronically programming and testing the detector prior to installation.

The FP-11 fire detector is compatible with the MXL family of control panels including the MXL, MXL-IQ, and MXLV.

The FP-11 detector is Underwriters Laboratories and Underwriters Laboratories of Canada Listed.

Description

The FP-11 is a plug-in, two-wire, multi-sensor detector with both photoelectric and thermal inputs and is compatible with the MXL family of control panel systems. Each detector consists of a dust resistant, field cleanable photo chamber, a solid state

non-mechanical thermal sensor, microprocessor based electronics with a low-profile plastic cover and base. The FP-11 utilizes state-of-the-art ASIC and surface mount technology for maximum reliability. Every FP-11 fire detector is shipped with a protective dust cover.

The FP-11 fire detector utilizes an infrared light emitting diode (IRLED), and light sensing photodiode. Under normal conditions, light transmitted by the LED is directed away from the photodiode and scattered through the smoke chamber in a controlled pattern. The smoke chamber is designed to manage light dissipation and extraneous reflections from dust particles or other non-smoke airborne contaminants in such a way as to maintain stable, consistent detector operation. When smoke enters the detector chamber, light emitted from the IRLED is scattered by the smoke particles and is received by the photodiode.

The FP-11 also utilizes a modern, accurate, shock-resistant thermistor to sense temperature changes. The "on-board" FirePrint technology allows the detector to gather smoke and thermal data, and to analyze this information in the detector's "neural network." By comparing data received with the common characteristics of fires, or fire fingerprints, the FP-11 can compare these "Fire Prints" to those of deceptive phenomena that cause other detectors to alarm. The advanced FirePrint technology allows the FP-11 to accurately determine a true fire hazard from a nonthreatening deceptive phenomena WITHOUT needing to use alarm delaying verification and confirmation techniques, which can increase the probability of losses due to fire.

The FP-11 provides the highest level of detector intelligence available today with a detector/control panel link that allows the user to program the detector for the specific hazard profile. Detectors are optimized by selecting one of the following applications:

- Office/Retail
- Lobby
- Computer Room
- Dormitory
- Healthcare
- Parking Garage
- Utility/Transformer Room
- Hostile Environment
- Precious Storage
- Air Duct
- Warehouse/Light Manufacturing

The software does the rest; no guessing on detector sensitivities or alarm verification; the control panel programs the FP-11 detector for the protected area without hassle and without confirmation delays. Once optimized for the hazards in the protected area, the FP-11 provides the best detection you can buy. Should the operator or installer forget to program the detector, the FP-11 will revert to a default setting that allows it to operate as a standard photoelectric or photothermal detector.

The FP-11's FirePrint technology monitors input from both the photo chamber and the thermal sensor,

evaluating this information with sophisticated mathematical formulas, or algorithms, comparing this input to characteristics of both threatening fires and deceptive phenomena that would "fool" any ordinary detector. This technology was developed over years of research and reviewing the results of over 20 years of fire test data in one of the world's most advanced fire research centers. The results of this research are the mathematical models that form the algorithms used in FirePrint. No other fire detector has this level of intelligence or this amount of research and development supporting its design.

The microprocessor's software can identify and disregard false input caused by radio frequency (RFI) and electromagnetic (EMI) interference, and validates all trouble conditions before annunciating or reporting to the control panel. The FP-11 detector's microprocessor uses an integral EEPROM to store the detector's address and other critical operating parameters which include the assigned program values for alarm and trouble thresholds. Communications within the detector itself and between the FP-11 and the control panel, or with the FPI-32 field programmer/tester, are supervised and safeguarded against disruption by reliable, microprocessor based error checking routines. Additionally, the microprocessor supervises all EEPROM memory locations and provides a high degree of EEPROM failure fault tolerance.

In MXL(V) applications, the FP-11 determines its operating status to be normal, in alarm, or in trouble depending on the difference between the alarm threshold values stored in the detector's memory and the detector's latest analog measurement. The detector then communicates changes in its status to the control panel.

In addition, the MXL(V) control panel will sample the value of the FP-11's analog signal over a period of time in order to determine if those values indicate excessive buildup in the photo chamber; if so, the MXL(V) will indicate that the particular detector requires maintenance.

The FP-11 is listed as a self-testing device. The FP-11's visible light emitting diode (LED) flashes green every 4 seconds to indicate it is communicating with the control panel and that it has passed its internal self-test. Should the detector sense a fault or failure within its systems, the LED will flash amber and the detector will transmit that information to the control panel. A quick visual inspection is sufficient to indicate the condition of the detector at any time. If more detailed information is required, a printed report can be provided from the MXL panel indicating the status and settings assigned to each individual detector.

When the FP-11 moves to the alarm mode, it will flash amber and transmit that information to the control panel. When the MXL(V) confirms the detectors condition, the panel will instruct the FP-11 to flash red and to continue flashing until the system is reset at the control panel. At that same time, any user defined

system alarm functions programmed into the system are activated. Each FP-11 detector can operate one remote alarm indicator, one auxiliary relay, or one audible base.

Detector sensitivity, calibration, and identification are dynamically supervised by the control panel. Detector sensitivity and pre-alarm levels are a function of the application chosen at the control panel and are controlled by the panel. If an alternate, non-FirePrint mode is selected, then the sensitivity can be changed from the control panel.

The DPU or FPI-32 Program/Test accessory is used to program and verify the detector's address. The technician selects the accessory's program mode to enter the desired address. The DPU or FPI-32 automatically sets and verifies the address and tests the detector. It also allows the user to change the device ID from that of an FP-11 to an older detector ID such as an ILP-1, ILPT-1, ILP-2, ID-60P or ID-60PT to allow for easy replacement of older detectors without the need of reprogramming the control panel.

The FPI-32 operates on AC power or rechargeable batteries, providing flexibility and convenience in programming and testing equipment almost anywhere. When in the test mode, the DPU or FPI-32 will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the detector is operating properly.

The FP-11 fire detector may be installed on the same initiating circuit with IL or ID series detectors (Photo-electric, thermal, or ionization), MSI series manual stations, TRI series interfaces, ICP output control devices, or CZM series of addressable, conventional zone modules.

All FP-11 detectors can be cleaned in the field, when required, by simply removing the detector cover and unsnapping the photo chamber. There is also the option of cleaning the interior of the detector with a clean, soft cloth or brush, or replacing the labyrinth and bug screen included in the detector maintenance kit, model DMK-11.

The FP-11 uses the low profile surface mounting base, model DB-11. This base mounts on a 4-inch octagon, square, or a single gang electrical box. The base utilizes screw clamp contacts for electrical connections and self-wiping contacts for increased reliability. The base can be used with the optional LK-11 detector locking kit which contains 50 detector locks and an installation tool, to prevent unauthorized removal of the detector head. The DB-11 base has integral decorative plugs to cover the outer mounting screw holes.

The FP-11 is electrically compatible with existing MXL detector accessories including relays, remote lamps, duct housings, and audible bases. With duct housings, a base adapter and new detector housing cover are required (order AD-11UK upgrade kit). To use existing DB-3S base or audible base, the FP-11 requires a DB-ADPT base adapter.

All FP-11 detectors are approved for operation within the UL specified temperature range of 32 to 100 degrees F (0 to 38 degrees C).

Application Data

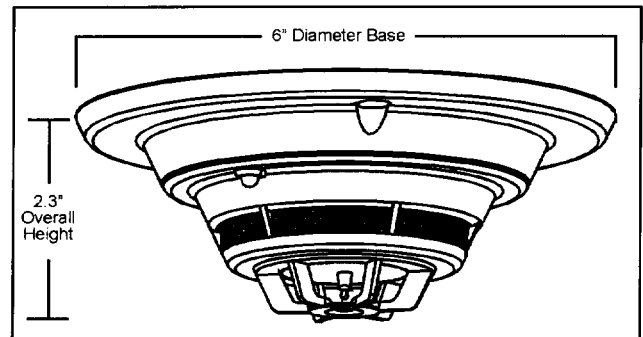
Installation of the FP-11 series of fire detectors requires a two-wire circuit of 18 AWG (minimum) thermoplastic fixture wire enclosed in conduit, or 18 AWG limited energy, shielded cable without conduit, if permitted by local codes. Field wiring should conform to local and National Electric Codes and the control panel wiring specifications.

"T-tapping" is permitted only for Style 4 (Class B) wiring.

FP-11 fire detectors can be applied within the maximum 30 foot center spacing (900 sq. ft. areas) as referenced in NFPA 72. This applications guideline is based on ideal conditions, specifically, smooth ceiling surfaces, minimal air movement, and no physical obstructions between potential fire sources and the detector. Do not mount detectors in close proximity to ventilation or heating and air conditioning outlets. Exposed joints or beamed ceilings may also affect safe spacing limitations for detectors. Should questions arise regarding detector placement, observe NFPA 72 guidelines.

Good fire protection system engineering and common sense dictate how and when fire detectors are installed and used. Contact your local Siemens Building Technologies, Fire Safety Division authorized sales outlet whenever you need assistance applying FirePrint in unusual applications. Be sure to follow NFPA guidelines, UL/ULC approved installation instructions, which are included with every detector, and local codes as for all fire protection equipment.

Dimensions



Technical Specifications

Current Requirements: Normal 750 μ A Alarm 750 μ A

Operating Temperature: +32°F (0°C) to 100°F (38°C)
per UL 268/268A

Humidity: 0-93% Relative Humidity
Non-Condensing

Ordering Information

Model	Description	Part Number
FP-11	Addressable FirePrint Fire Detector	500-095112
DB-11	Detector Mounting Base for Series 11	500-094151
DB-11E	Detector Base (Small)	500-094151E
AD2-P	Air Duct Housing for use with FP-11, HFP-11, HFPO-11, PE-11	500-649706
AD2-XHR	Air Duct Housing for use with FP-11, HFP-11, HFPO-11 with relay	500-649708
ADBX-11	Audible Base	500-096181
DB-X11RS	Relay Base for Series 11 Intelligent Detectors	500-096125
RLI-1	Remote (red) alarm indicator- 4" octagon box mount	500-390673
RLI-2	Remote (red) alarm indicator- single gang box mount	500-390674
LK-11	Base Locking Kit for Series 11 detectors	500-695350
DMK-11	Series 11 Maint Kit (replacement labyrinth and bug bug screen)	500-695338
DB-ADPT	Base Adapter to DB-3S Base	500-094187
In Canada Order:		
FP-11C	Addressable FirePrint Fire Detector (ULC)	500-095112C
DB-11C	Detector Mounting Base for Series 11 (ULC)	500-095687
AD-11PC	Air Duct Housing (ULC)	500-095984
DB-X11RSC	Relay Base for Series 11 Intelligent Detectors (ULC)	500-096125C
ADBX-11C	Audible Base for Series 11 Intelligent Detector (ULC)	500-096181C


SIEMENS

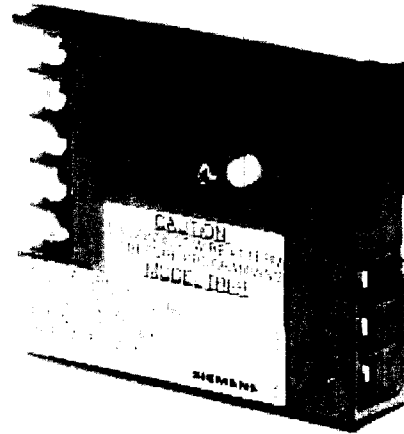
Fire Safety

TRI Series

Intelligent Initiating Devices Interface Modules for MXL Fire Detection Panels TRI-S, TRI-D, TRI-R

ENGINEER AND ARCHITECT SPECIFICATIONS

- Interfaces and Supervises Normally Open Contacts
- Integral SPDT Relay (up to 4 amps) on TRI-R Model
- Dual Input on TRI-D Model
- Multi-color L.E.D. indicates status (green, amber, red)
- Easy front access to programming port and wiring terminals
- Mounts in 4 inch square 2¼ deep box, or double gang box
- Dynamic Supervision
- Comes with 5x5 inch faceplate
- Two wire operation
- Model DPU or FPI-32 Programs and Verifies Device's Address and Tests Device's functionality
- Electronic Address Programming is Easy and Dependable
-  UL Listed, ULC Listed
CFSM, FM, NYMEA Approved



Introduction

The TRI Series Intelligent interface modules are designed to provide the means of interfacing direct shorting devices to the MXL system's ALD loop circuit.

The TRI Series Intelligent interface modules provide the market's most advanced method of address programming and supervision, combined with sophisticated control panel communication. Each TRI Series interface module incorporates a microcomputer chip. The TRI Series microcomputer chip technology and its sophisticated bi-directional communication capabilities with the control panel, achieve the state of an "Intelligent Device."

Description

The TRI Series Intelligent interface modules are available in three models. The TRI-S and TRI-R are designed to monitor a normally open dry contact. The interface

module reports the contact's status to the control panel. The TRI-S model can only monitor and report the status of the contact, while the TRI-R incorporates an addressable Form C relay. The TRI-R relay and contact device input are controlled at the same address. For the MXL system, the relay and input contact can be controlled as a separate function. The relay is typically used where control or shunting of external equipment is required.

The TRI-D is a dual input module and is designed to supervise and monitor two sets of dry contacts. This interface module requires two address settings. The TRI-D is ideal for monitoring a waterflow switch and its respective valve tamper switch.

The TRI has a multi-color Light Emitting Diode that flashes green when operating normally, amber if unit

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is in trouble condition, and red to indicate a change of state. The TRI-D flashes twice, once for each address, the TRI-R red L.E.D. indicates a change of state in the relay.

The device's microcomputer chip has the capacity of storing, in memory, identification information as well as important operating status information.

Siemens Building Technologies, Fire Safety Division innovative technology allows all TRI Series intelligent interface modules to be programmed by using the model DPU or FPI-32 Programmer/Tester. The Programmer/Tester is a compact, portable, menu driven accessory that makes programming and testing an interface device faster, easier and more dependable than previous methods.

The DPU or FPI-32 eliminates the need for mechanical addressing mechanisms, such as program jumpers, DIP switches or rotary dials, because the Programmer/Tester electronically sets the TRI interface's address into the interface's microcomputer chip nonvolatile memory. Vibration, corrosion and other conditions that deteriorate mechanical addressing mechanisms are no longer a cause for concern.

The TRI Series is fitted with screw terminals for connection to an addressable circuit.

The TRI Series is fully compatible on the same MXL circuit with all intelligent FP, IL and ID-60 Series detectors, MSI Series addressable manual stations or any other addressable intelligent modules, such as the CZM or ICP.

All TRI Series intelligent interface modules are UL listed.

Environmental operating conditions for all TRI Series modules are 32°F (°C) to 120°F (49°C) with a relative humidity of not greater than 93% non-condensating.

Ordering Information

Model	Description	Shipping Wt.	
		Lb.	Kg.
TRI-S	Single Input	7 oz.	.2
TRI-R	Single Input w/Relay	7 oz.	.2
TRI-D	Dual Input	7 oz.	.2

Mounting Data

Addressable interface Model TRI-S, TRI-D, TRI-R mounts directly into a 4 inch square 2¼ deep box or a double gang box (user supplied). A 5 inch square off-white faceplate is included with each TRI.

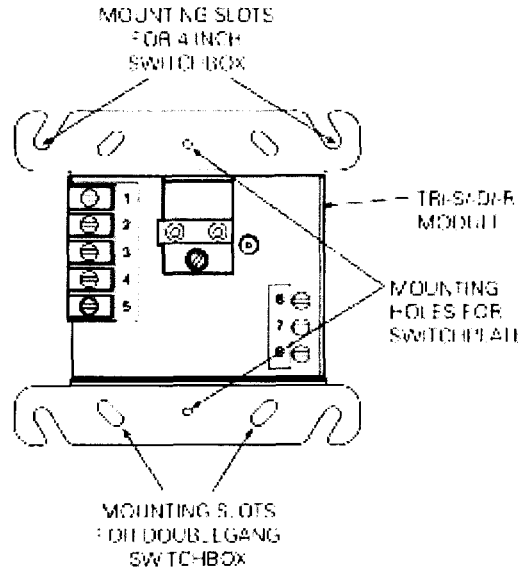


Figure A
Mounting the TRI-S/R/D

Electrical Ratings

Current Draw (Active or Standby): 1.5mA

TRI-R Relay Ratings
Resistive: 4A, 125 VAC
4A, 30 VDC

Inductive: 3.5A, 120 VAC (0.6PF)
3.0A, 30 VDC (0.6PF)
2.0A, 120 VAC (0.4PF)
2.0A, 120 VAC (0.35PF)
2.0A, 30 VDC (0.35PF)


SIEMENS TRI-B6M

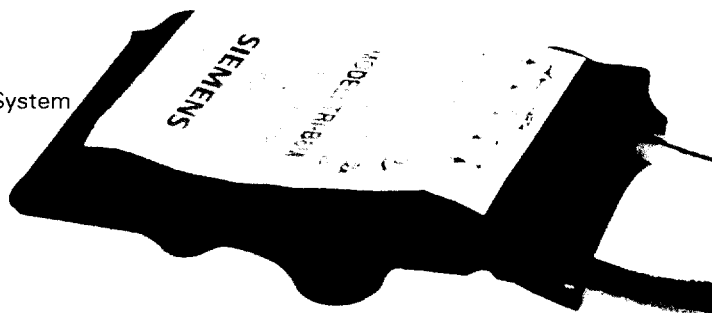
Fire Safety

Intelligent Device Interface Module

ENGINEER AND ARCHITECT SPECIFICATIONS

Intelligent Interface Modules For MXL and IXL Control Panels

- Interfaces and Supervises Normally Open (Fire Detection) or Normally Closed Contacts (Security Detection)
- Compact Size Allows Mounting in Single Gang Box Behind Equipment
- Operates with MXL ALD Loop, MXL XLD Loop or IXL ICon Loop
- Microcomputer Chip Technology
- Innovative Technology Supports Comprehensive System and Interface Communication
- Dynamic Supervision
- Two Wire Operation
- **SensorLINK**, model FPI-32 Programs and Verifies Device's Address and Tests Device's Functionality
- Electronic Address Programming is Easier and More Dependable
-  Listed, ULC Listed, CSFM and NYMEA Approved



Introduction

The TRI-B6M Intelligent interface module is designed to provide the means of interfacing direct shorting devices to the MXL system's ALD loop circuit, MXL XLD loop or the IXL system's ICon loop circuit.

The TRI-B6M Intelligent interface module provides the market's most advanced method of address programming and supervision, combined with sophisticated control panel communication. Each TRI-B6M interface module incorporates microcomputer chip technology and its sophisticated bi-directional communication capabilities with the control panel.

Description

The TRI-B6M is designed to monitor a normally open or closed dry contact and reports the contact's status to the control panel.

The device's microcomputer chip has the capacity of storing, in memory, identification information as well as important operating status information.

Siemens Building Technologies, Fire Safety Division innovative technology allows all TRI-B6M intelligent interface modules to be programmed by using the **SensorLINK** model FPI-32 Programmer/Tester. The FPI-32 Programmer/Tester is a compact, portable, menu driven accessory that makes programming and testing an interface device faster, easier and more dependable than previous methods. The FPI-32 eliminates the need for mechanical addressing mechanisms, such as program jumpers, DIP switches or rotary dials, because it electronically sets the TRI-B6M interface's address into the interface's microcomputer chip non-volatile memory. Vibration, corrosion and other conditions that deteriorate mechanical addressing mechanisms are no longer a cause for concern. This TRI-B6M is connected to the programmer/tester with the programming cable provided with the tester. This cable utilizes two (2) alligator clip connectors, to attach to the TRI-B6M. (P/N 110-694927)

The TRI-B6 Series has five leads, one for grounding, which are wired to the system with user supplied wire nuts.

CATALOG NUMBER **6170**

The TRI-B6M is fully compatible on the same MXL circuit with all intelligent IL and ID-60 Series detectors, MSI Series addressable manual stations or any other addressable intelligent modules, such as the CZM or ICP. The TRI-B6M is also fully compatible on the IXL (ICon) circuit with all intelligent IL and ID-60 detectors and MSI manual stations.

All TRI-B6M intelligent interface modules are UL and ULC listed.

Environmental operating conditions for all TRI-B6M modules are 32°F (°C) to 120°F (49°C) with a relative humidity of not greater than 93% non-condensating.

Engineer & Architect Specifications

The addressable interface module shall incorporate a custom microprocessor based integrated circuit that shall provide communication with its compatible control panel.

The addressable interface module shall be a Fire Safety TRI-B6M that shall be compatible with a IXL or MXL control panel.

The TRI-B6M intelligent interface modules shall provide the means of interfacing direct shorting devices to the control panel's addressable circuits. The interface module shall report the contact's status to the control panel.

The TRI Series devices shall be capable of and listed for interfacing normally closed security switches to the MXL (per UL 1076).

The addressable interface module shall be UL and ULC listed.

The addressable interface module shall be dynamically supervised and uniquely identifiable by the control panel.

The addressable interface module's address shall be programmed with the use of a portable programming accessory. The programming accessory shall be a Fire Safety FPI-32 Programmer/Tester. The portable programmer shall be menu driven. Once the desired address is entered the programmer shall set and verify the address. The programming accessory shall also be capable of testing the interface's functionality. The addressable interface module's address shall be set by electronic means only. No mechanical means such as programming pins, DIP switches or rotary dials shall be required.

The TRI-B6M shall be compatible on the same MXL circuit with other intelligent IL and ID-60 Series detectors, TRI Series addressable interfaces, MSI Series addressable manual stations or any other MXL addressable intelligent module. The TRI-B6M shall be compatible on the same IXL (ICon) circuit as other intelligent IL and ID-60 Series detectors, MSI Series manual stations and TRI Series interfaces.

Ordering Information

Model	Description	Shipping Wt.	
		oz.	Kg.
TRI-B6M	Single Input	3.5	.1
TRI-B6M-C	ULC Model for Canada	3.5	.1

Typical Wiring

(Refer to Figures 1, 2, 3 or 4) Refer to the appropriate wiring diagram below and wire the addressable interface module accordingly.

Note: **Recommended wire size:**
 18 AWG minimum
 14 AWG maximum

Installing A Security Point

WARNING: These circuits intended for 24 hour alarm monitoring only.

UL 1076 requires a TSW-1 tamper switch as well as a TSP-40 printer. A COMMUNICATION FAILURE with a TRI device configured for SECURITY results in a SECURITY ALARM as well as a communication trouble.

When installing a TRI device in the CSG-M, be sure to set the device usage to security. When setting the device address using the FPI-32, select the normally closed alarm causing input.

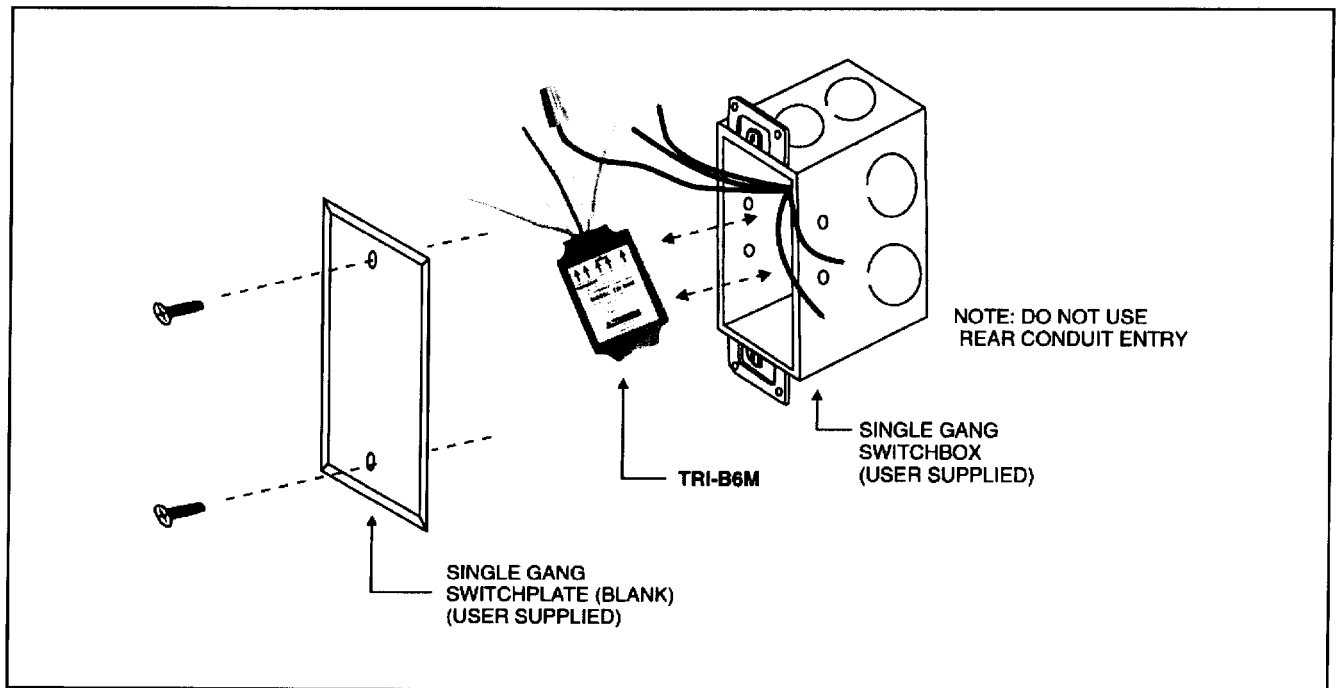
Connect only one switch per TRI input.

Reminder: Proper installation procedure for TRI Devices

As part of the normal installation practice each TRI device must be functionally tested. This includes testing the supervision through the end of the line resistor. The following steps must be followed for each TRI device installed:

1. Open the end of line resistor.
2. Check that the system annunciates the programmed trouble message.
3. Return the resistor to its proper connection.
4. Change the state of the switch to confirm that the system's programmed response is executed.
5. Return the switch to its normal state.

Mounting Diagram



NOTICE: The use of other than Fire Safety detectors and bases with Fire Safety equipment will be considered a misapplication of Fire Safety equipment and as such void all warranties either expressed or implied with regard to loss, damage, liabilities and/or service problems.

Siemens Building Technologies
Fire Safety

Fire Safety
8 Fernwood Road
Florham Park, NJ 07932
Tel: (973) 593-2600
FAX: (973) 593-6670
Website: www.sbt.siemens.com/fis

12/03
10M
SFS-IG
Printed in U.S.A.

Fire Safety
2 Kenview Boulevard
Brampton, Ontario
Canada L6T 5E4
Tel: (905) 799-9937
FAX: (905) 799-9858

December 2003
Supersedes sheet dated 12/01

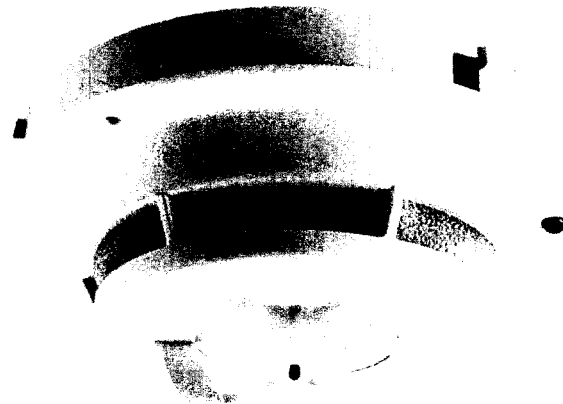
FPT-11

Intelligent Thermal Detector for MXL, MXL-IQ and MXLV Control Panels

ENGINEER AND ARCHITECT SPECIFICATIONS

FPT-11

- Microprocessor Based Design
- Rate of Rise and Fixed Temperature
- Innovative Technology Provides High Speed, Fault Tolerant System/Detector Communications
- Multi-Color Detector Status LED
- Optional Fully Programmable Relay Base and Audible Base
- Two-Wire Operation
- Backward Compatible with Older MXL Systems (Rev 2 and Above)
- Compatible with DPU or FPI-32 Field Programmer/Tester
-  Listed, ULC Listed
CSFM, FM, NYMEA Approved



Introduction

The FPT-11 intelligent thermal detector provides an advanced method of detection, address programming and supervision, combined with sophisticated control panel communication. The FPT-11 detector uses a state-of-the-art thermistor providing 135°F fixed temperature and 15° per minute rate-of-rise alarm points. The user also has the option of disabling the rate-of-rise feature leaving just a fixed temperature sensor.

The FPT-11 intelligent thermal detector is compatible with the DPU and FPI-32 field programmer/testers. These testers are compact, portable, menu-driven accessories which make programming and testing detectors faster, easier and more reliable than other methods. They eliminate the need for cumbersome, unreliable mechanical programming methods and reduce installation and service costs by electronically programming addresses and functionally testing the FPT-11's performance before the detector is installed.

The FPT-11 thermal detector operates with the MXL family of control panels including MXL, MXL-IQ and MXLV.

The FPT-11 intelligent thermal detector is Underwriters Laboratory listed and Underwriters Laboratory of Canada listed.

Description

The FPT-11 is a plug-in, two-wire thermal detector, compatible with the MXL family of control panels. Each FPT-11 has microcomputer chip technology and highly stable solid state electronic circuitry.

The FPT-11 utilizes a modern, accurate, shock-resistant thermistor to sense temperature changes. This electronic sensing method virtually eliminates thermal lag associated with mechanical temperature sensing devices and provides almost instantaneous temperature information to the control panel. The FPT-11, in its default mode, is a combination 135°F fixed temperature and 15° per minute, rate-of-rise detector. It can be programmed from the control panel as a fixed temperature detector without rate-of-rise, at the users option.

The FPT-11 detector's microprocessor uses an integral EEPROM to store the detector's address. Communications within the detector itself and between the FPT-11 and the control panel, or with the FPI-32 field programmer/tester, are supervised and safeguarded against disruption by reliable, microprocessor based error checking routines. Additionally, the microprocessor supervises all EEPROM memory locations and provides a high degree of EEPROM failure fault tolerance.

The FPT-11 is listed as a self-testing device. The FPT-11's visible light emitting diode (LED) flashes green every 4 seconds to indicate it is communicating with the control panel and that it has passed its internal self-test. Should the detector sense a fault or failure within its systems, the LED will flash amber and the detector will transmit that information to the control panel. A quick visual inspection is sufficient to indicate the condition of the detector at any time. If more detailed information is required, a printed report can be provided from the MXL panel indicating the status and settings assigned to each individual detector.

When the FPT-11 moves to the alarm mode, it will flash amber and transmit that information to the control panel. When the MXL(V) confirms the detectors condition, the panel will instruct the FPT-11 to flash red and to continue flashing until the system is reset at the control panel. At that same time, any user defined system alarm functions programmed into the system are activated. Each FPT-11 detector can operate one remote alarm indicator, one auxiliary relay, or one audible base; but only one accessory per detector.

A DPU or FPI-32 programmer/tester is used to program and verify the detector's address. The user selects the Program Mode to enter the desired address. The programmer/tester then automatically sets and verifies the address as well as tests the detector. The programmer/tester has rechargeable batteries, so a detector's address can be programmed by the user from the most convenient location. The user can also separately test the detector for functionality. When the user selects the Test Mode, a series of tests are automatically conducted and the user is informed whether the detector has passed or failed.

The FPT-11 detector is compatible on the same MXL initiating circuit with other IL Series, FP Series or ID-60 Series addressable ionization, photoelectric, or thermal detectors, MSI addressable manual stations, TRI Series addressable interfaces, or CZM Series addressable conventional zone modules.

Each FPT-11 thermal detector is capable of operating one "X" or "I" Series remote alarm indicator or auxiliary relay or audible base. The FPT-11 detectors use a surface mounting base, Model DB-11, which mounts on a 4-inch octagonal, square or single gang electrical box. Relay base Model DB-X11RS mounts to a 4-inch square deep electrical box. Audible base Model ADBX-11 also mounts to a 4-inch square deep electrical box.

The DB-11, and the DB-X11RS and ADBX-11 use screw-clamp terminals for all electrical connections and self-wiping contacts for reliability. The bases also contain a provision for an optional concealed locking mechanism to prevent unauthorized removal of the detector head, Model LK-11.

Application Data

The MXL uses ALD loop circuits with each circuit capable of supporting up to sixty FPT-11 intelligent detectors.

The detector, or group of detectors, require a two-wire circuit of minimum 18 AWG thermoplastic fixture wire enclosed in conduit, or minimum 18 AWG limited energy, shielded cable without conduit if permitted by local building codes. Wiring should conform to local and National Electrical Codes, and to the control panel's wiring specifications. T-tapping is permitted only for Style 4 (Class B) wiring.

Locate the FPT-11 on the ceiling, at least 4 inches from the side walls. For an ideal, smooth ceiling condition, place the detectors at a maximum center spacing of 50 feet (2500 square feet), 25 feet from side walls or room partitions.

Actual job conditions and sound engineering judgement must determine detector spacing. Consider environmental factors including ambient temperature fluctuation, and the nature of the fire hazard. Room or area configuration and ceiling type (sloped or flat, smooth or beamed) also dictates placement.

Should questions arise regarding detector placement, follow the drawings provided and/or approved by Siemens Building Technologies, Fire Safety Division or by its authorized distributors. This is extremely important! The detector placements shown on these drawings were chosen after a careful evaluation of the area being protected. Fire Safety's extensive experience in design of the system assures the best detector placement by following these drawings.

Technical Specifications

Current Requirements: Normal 750 μ a
Alarm 750 μ a

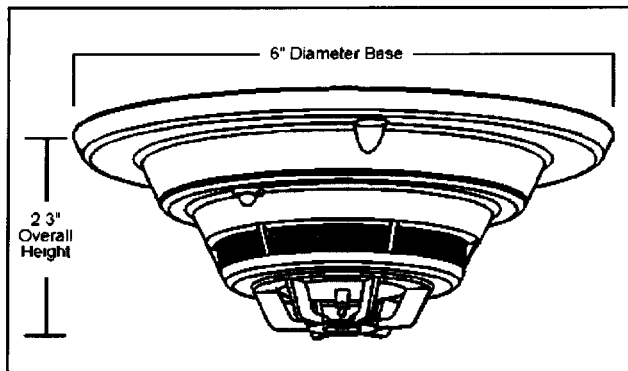
Operating Temperatures: +32°F (0°C) to
100°F (38°C)

Humidity: 0-93% Relative Humidity
Non-condensating

Ordering Information

Model	Description	Part No.
FPT-11	Addressable Thermal Fire Detector	500-095918
DB-11	Detector Mounting Base for Series 11	500-094151
DB-11E	Small 4.5 inch Diameter Detector Base	500-094151E
DB-X11RS	Relay Base for Series 11 Intelligent Detectors	500-096125
ADBX-11	Audible Base for Series 11 Intelligent Detector	500-096181
RLI-1	Remote (red) alarm indicator-octagon box mount	500-390673
RLI-2	Remote (red) alarm indicator-single gang box mount	500-695350
LK-11	Base Locking Kit for Series 11	500-695350
DB-ADPT	Base Adapter to DB-3S Base	500-094187
In Canada Order:		
FPT-11C	Addressable Thermal Fire Detector (ULC)	500-095918C
DB-11C	Detector Mounting Base for Series 11(ULC)	500-095687
DB-X11RSC	Relay Base for Series 11 Intelligent Detectors (ULC)	500-096125C
ADBX-11C	Audible Base for Series 11 Intelligent Detector (ULC)	500-096181C

Dimensions




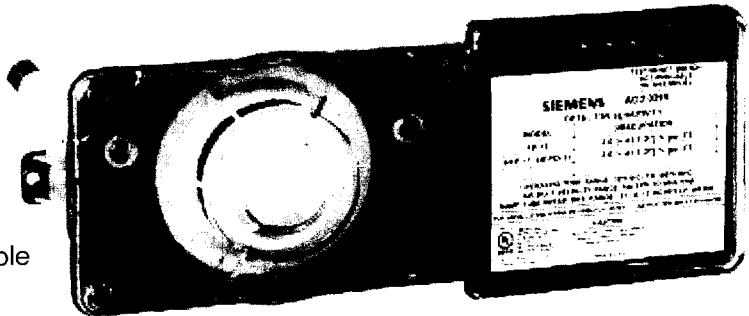
SIEMENS

Fire Safety

Air Duct Housings-AD2 Series

ENGINEER AND ARCHITECT SPECIFICATIONS

- For Series 11 Detectors
- Relay Models Available
- Design for Air Velocity Range of 100 to 4000 fpm
- Alarm LED Visible From Front
- Clear Housing Cover for Quick Identification of Detector Type Removable With Only Four Captive Screws
-  UL Listed



Introduction

The Siemens Building Technologies, Fire Safety Division air duct detector housings are designed to be used with the 11-Series detectors. Designed for installation directly to heating, ventilating and air conditioning duct systems, they comply with National Fire Protection Association Standard No. 90A. When equipped with photoelectric detectors, these units will signal the presence of hazardous quantities of products of combustion or smoke being carried through the duct system. Air duct detectors are not intended to be substituted for open area detection.

Air duct housings can be equipped with optional relays. These relays are utilized to operate any supplementary equipment when smoke or particles of combustion are detected.

Note: Most conventional time control equipment guarantee only one detector per zone when the detector operated relay function is critical. The connection of a remote lamp and a remote relay per detector is allowed with PXL or System 3™ only, other conventional systems may use either a remote lamp or a relay.

With the MXL series of control panels, up to 60 detectors per circuit having relays may be used. The connection of a remote lamp or a remote relay is allowed for each detector but not both.

With the FireFinder XLS series of control panels, up to 252 detectors per circuit having relays may be used. The Connection of an intelligent remote lamp and a remote Relay (ILED), is also allowed.

Air duct housings (see Ordering Information) are Underwriters Laboratories, Inc. listed.

Description

The Fire Safety air duct housing is uniquely designed to use the photoelectric detector.

Sensitivity of PE-11 detectors can be checked by viewing the LED or an RSAW-11 or RSAC-11 multicolor remote lamp. A green flash indicates the detector has passed its self test. Amber indicates a trouble condition, and red indicates an alarm state.

HFP-11, HFPO-11 and FP-11 sensitivity may be viewed from the multi-color LED on the detector or preferably may be printed by command on an optional printer from the MXL control panel.

The detector unit employs a cross-sectional sampling principle of operation. Inlet sampling tubes are available in four lengths (see table on reverse side). Outlet sampling tubes are one common length. A continuous cross-sectional sample of air moving through the duct stratification or skin effect phenomena occurring in the duct that could prevent combustion product or smoke (especially in large ducts) from reaching a spot type detector.

In addition, the unique design of the sampling chamber insures uniform sensitivity in air velocities, ranging from a low of 100 feet per minute to as high as 4000 feet per minute. The housing comes with two ½" conduit

CATALOG NUMBER **6185**

knockouts and one 1/2" conduit opening for a number of 3 wiring entry ports.

The inlet sampling tube length is determined by the width of the air duct being protected. The inlet tube nearest to but greater than the duct width should be used (see table). The inlet tube can then be trimmed at the job site to the exact width of the duct. The outlet sampling tube for all ducts, irrespective of width, has a fixed length of approximately 5.5 inches and is supplied with the duct housing.

When the use of a remote relay is required, order model AD2-PR for conventional systems; AD2-XHR for addressable systems. When required the WP-2000 weatherproof enclosure for Duct Housing is available. For full details, refer to installation instructions part number 315-049708.

Sampling Tube Selection Table

Duct Width	Sampling Tube Model No.
For duct widths 6" to 1'	ST-10
For duct widths over 1' to 3'	ST-25
For duct widths over 3' to 5' (requires support)	ST-50
For duct widths over 5' to 10' (requires support)	ST-100

Maintenance of the detector is easily accomplished by the removal of the Series 11 duct housing sampling chamber cover. The detector, which plugs into the housing, is easily removed for cleaning by a trained technician.

All that is necessary for installation of the air duct detector is the cutting of three small holes for the sampling tube installation (template included) and the drilling of four holes for mounting the air duct housing. The unit is then easily mounted in place and connection made to the existing wires or terminals if optional accessories are utilized.

ST-50 and ST-100 require support. ST-100 is shipped in two five foot pieces with a coupling for field assembly.

Technical Data

Temperature Range	32°F (0°C) -100°F (38°C)
Altitude Range	No Altitude Limitations
Relative Humidity	10-85% (non-condensing/non-freezing)
Air Duct Velocity Range	100 - 4000 Ft/Min.
Sampling Tube Pressure Range of Differences	Greater than 0.01 amps less than 1.2 inches of water column

Note to Architect: When building codes regulate the location of detectors within ventilating systems, make sure that the number and locations of detectors is in accordance with the code regulations.

Order Information

Model	Description	Part Number
AD2-P	Air Duct Housing for use with FP-11, HFP-11, HFPO-11, PE-11	500-649706
AD2-PR	Air Duct Housing for use with PE-11 with relay	500-649707
AD2-XHR	Air Duct Housing for use with FP-11, HFP-11, HFPO-11, with relay	500-649708
ST-10	Sampling Tube for Ducts 6" to 1'	500-649710
ST-25	Sampling Tube for Ducts over 1' to 3'	500-649711
ST-50	Sampling Tube for Ducts over 3' to 5'	500-649712
ST-100	Sampling Tube for Ducts over 5' to 10'	500-649713

Product Includes

- One Short Return (outlet) Tube
- One Stopper
- Two #12 + 3/4" Sheet Metal Screws
- Mounting Template

Note: Detector and sampling tube to be purchased separately

Note: Minimum hardware required is one Air Duct Housing Assembly, one Sampling Tube and one Detector.

NOTICE: The use of other than Fire Safety detectors and bases with Fire Safety equipment will be considered a misapplication of Fire Safety equipment and as such voids all warranties either expressed or implied in regard to loss, damage, liabilities and/or service problems

Siemens Building Technologies
Fire Safety

Fire Safety
8 Fernwood Road
Florham Park, NJ 07932
Tel: (973) 593-2600
FAX: (973) 593-6670
Website: www.sbt.siemens.com/fis


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5M
SFS-IG
Printed in U.S.A.

Fire Safety
2 Kenview Boulevard
Brampton, Ontario
Canada L6T 5E4
Tel: (905) 799-9937
FAX: (905) 799-9858

April 2006
New Issue

Adapter™ Stand Alone Selectable Strobe

ENGINEER AND ARCHITECT SPECIFICATIONS

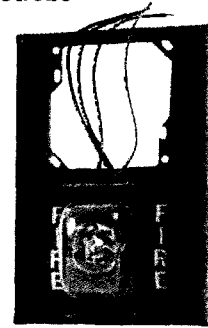
- **The Adapter** feature offers four field selectable candela strobe values – 15/75, 30/75, 75 or 110 for ceiling and wall mount
- Operates in either sync or non-sync mode
- Low current draw
- Integral universal mounting-single gang, double gang or 4" square box
- Colors- red or off-white
- ADA/NFPA/ANSI compliant
-  UL 1971 listed for both wall and ceiling mount-CSFM, FM and ULC Listed
- Made in U.S.A., ISO 9001 certified
- A Dual Sync Control Module or PAD-3 is only required to activate the Instant Sync feature, nothing to set or change at the strobe unit



Agent Release Strobe



Adapter Strobe



Adapter Strobe Bell Plate

Description

The U-MCS series and U-MCS-6090V, U-MCS-6090V-W strobes combine state of the art electronics to provide reliability and low current draw to meet visual life safety applications. The Adapter feature offers four field selectable candela settings - 15/75, 30/75, 75 or 110.



Detail – Adapter selector switch

The integral universal mounting plate of the U-MCS provides for easy installation with single gang, double gang or 4" square box mounting. The lens construction provides high candela output with low current consumption while meeting UL and ADA standards.

The U-MCS-6090V, U-MCS-6090V-W provides the same strobe choices and is constructed of metal for mounting bell or chime devices to the plate.

The U-MCS Series & U-MCS-6090V, U-MCS-6090V-W use a Xenon flashtube with solid state circuitry for maximum reliability and efficiency. Strobes have a rounded dome shape made of clear polycarbonate.

The U-MCS Series uses a terminal block for easy installation and the U-MCS-6090V, U-MCS-6090V-W uses a pigtail (4 wire) connection.

Strobe Synchronization requires the Dual Sync Module or PAD-3.

Engineering Specifications

The visual notification appliances shall be Adapter U-MCS Series or U-MCS-6090V, U-MCS-6090V-W field selectable candela strobe appliance, or approved equal. They shall be listed to UL 1971 (Standard for Safety Signaling Devices for the Hearing Impaired) for indoor applications, and shall be ADA/NFPA/ANSI compliant.

The strobe shall produce a flash rate of one (1) flash per second over the Operating Voltage Range limits of 16 to 32Vdc. The strobe light shall consist of a Xenon flash tube enclosed in a rugged, clear polycarbonate lens. Inputs shall be compatible with standard reverse polarity circuit supervision by an FACP. The Strobe shall be of low current design, and shall provide a minimum of four (4)

CATALOG NUMBER **2550**

field selectable strobe intensity settings, 15/75, 30/75, 75 and 110 candela. All settings shall be UL 1971 listed for both wall and ceiling mount applications. The selector switch shall be tamper-resistant.

It shall not be necessary to remove the strobe from the mounting surface to select the strobe intensity. When synchronization is required, the strobe shall be compatible with the Dual Sync Module, or other source of Siemens Building Technologies, Fire Safety Division Sync Protocol, and shall not drift out of synchronization.

The U-MCS Series Stand-Alone Strobe shall have an integral universal mounting plate that shall allow mounting to single-gang, two-gang, and 4" square backboxes, as well as FBX-S and FBX-F Surface Boxes. A cover trim plate shall be included to enhance appearance. There shall be no mounting holes or screw heads visible.

The Series U-MCS-6090V, U-MCS-6090V-W Strobe Plate shall facilitate the addition of a strobe to a bell installation. The Strobe Plate shall mount to a 4" square backbox for flush mounting.

U-MCS Specifications

Environmental

32°F to 120°F (0°C to 49°C) at 85% RH

Input Voltage

16-32Vdc regulated or FWR

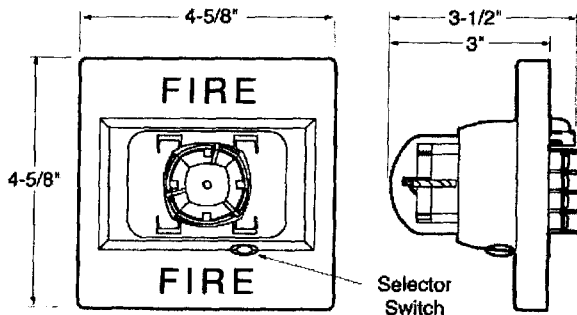
Mounting

Integral universal mounting plate mounts to single gang, double gang or 4" square box.

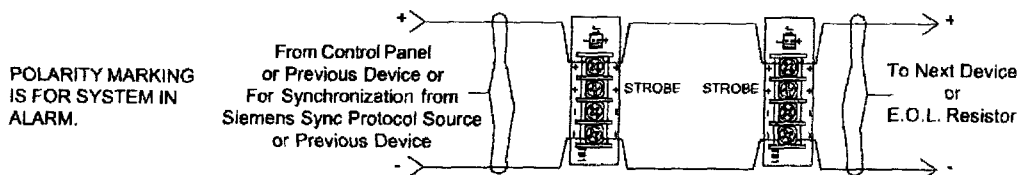
Shipping Weight

9 oz. approx.

U-MCS Dimensions



Typical Wiring



Siemens Building Technologies
Fire Safety

Fire Safety
8 Fernwood Road
Florham Park, NJ 07932
Tel: (973) 593-2600
FAX: (973) 593-6670
Website: www.sbt.siemens.com/fis

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Fire Safety
2 Kenview Boulevard
Brampton, Ontario
Canada L6T 5E4
Tel: (905) 799-9937
FAX: (905) 799-9858

March 2005
Supersedes sheet dated 6/04

NOTE: These notification appliances are UL listed and rated as "special application", which represents appliances which have been investigated to operate as described in the product's installation instructions.

Ordering Information

Stand-Alone Strobes-Wall Mount and Ceiling Mount

Model Number	Description	Part Number
U-MCS	Multicandela Selectable Strobe- Red	500-699701
U-MCS-W	Multicandela Selectable Strobe- White	500-699702

Retro-Plate Wall Mount

Model Number	Description	Part Number
U-MCS-6090V	Retro Plate Multicandela Selectable Strobe- Red	500-699703
U-MCS-6090VW	Retro Plate Multicandela Selectable Strobe- Red	500-699704

Stand-Alone Strobes-Wall Mount and Ceiling Mount - for Agent Release

Model Number	Description	Part Number
U-MCS-AR	Multicandela Selectable Strobe - Red For Agent Release	500-699746

Canadian Ordering Information

Stand-Alone Strobes-Wall Mount and Ceiling Mount

Model Number	Description	Part Number
CU-MCS	Multicandela Selectable Strobe- Red	500-699701C
CU-MCS-W	Multicandela Selectable Strobe- White	500-699702C

Retro-Plate Wall Mount

Model Number	Description	Part Number
CU-MCS-6090V	Retro Plate Multicandela Selectable Strobe- Red	500-699703C
CU-MCS-6090VW	Retro Plate Multicandela Selectable Strobe- Red	500-699704C

Strobe Intensity Setting

15/75 cd
30/75 cd
75 cd
110 cd

Strobe Current Draw

63 mA
84 mA
143 mA
178 mA

Do not Loop, "T" Tap or branch connect signal circuit field wires. Cut wire run to provide Electrical Supervision. Use care when positioning field wires so that minimum stress is on the appliance.

SIEMENS

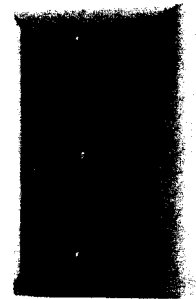
Fire Safety

U-MHU Series

Models U-MHU Electronic Sync/Non-Sync Horn

ENGINEER AND ARCHITECT SPECIFICATIONS

- **The Adapter/U-MCS** feature offers four field selectable candela values – 15/75, 30/75, 75 or 110 for wall & ceiling mount
- Sync strobes and sync temporal horns, with horn silence on 2 wires
- Distinctive temporal horn
- Internally adjustable volume control
- Low current draw
- Single gang and universal mount configurations
- UL 1971 & UL 464 listed - CSFM, ULC, FM & NYMEA
- UL 1971 listed for both wall and ceiling mount
- ADA/NFPA/ANSI compliant
- Screw terminals accept 12 awg wire
- Synchronization requires Dual Sync Control Module or PAD-3
- Made in U.S.A., ISO 9001 quality crafted



Description

The U-MHU-1G, U-MHU-1G-W and U-MHU, U-MHU-W Sync Electronic Horns and U-MHU-MCS, U-MHU-MCS-W Horn Strobes provide synchronous strobes with synchronous temporal tone signals on one pair of wires or temporal or steady tone in a non-sync mode.

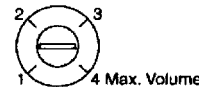
The U-MHU-1G, U-MHU-1G-W mounts to a single gang box, the U-MHU, U-MHU-W and U-MHU-MCS, U-MHU-MCS-W have a universal mounting plate for 1 gang, 2 gang or 4" square box mounting.

Siemens Fire Safety notification appliances are designed with the installer in mind. They are constructed with the electronics in the housing and not in the box. This design eliminates possible ground faults from crowded electrical boxes. The Adapter/U-MCS feature offers four field selectable candela settings – 15/75, 30/75, 75 or 110.



Detail - Adapter selector switch

An internal volume control provides adjustment of dBA output levels.



Detail - Volume adjust (factory set at max. volume)

The U-MHU-MCS, U-MHU-MCS-W strobe construction consists of a Xenon flashtube with solid state circuitry for maximum reliability and efficiency. The strobe has a rounded dome shape made of clear polycarbonate.

CATALOG NUMBER **2560**

Replaces Catalog Sheet Number 2555

The U-MHU-1G, U-MHU-1G-W, U-MHU, U-MHU-W and U-MHU-MCS, U-MHU-MCS-W are used on circuits with steady power or a Dual Sync Control Module or PAD-3. Not for use on coded circuits.

Environmental

32°F to 120°F (0°C to 49°C) with 85% humidity

Operating Voltage Range Limits

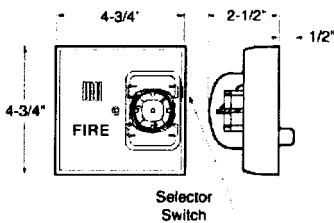
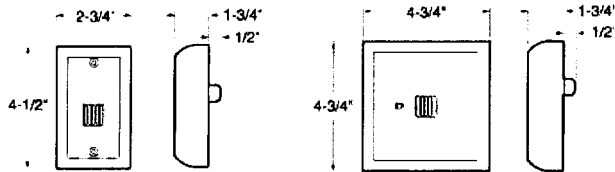
Horn: 16-32Vdc or VFWR
Strobe: 16-32Vdc or VFWR

Typical Horn Ratings at 10 Feet*

Temporal Horn –
Maximum: 95 db @ 54 mA
Minimum: 90 db @ 30 mA

* Typical dBA ratings are frontal sound readings taken with a dB meter with signal mounted on wall.

Dimensions



Listed operating range is 16 to 32VDC/FWR Temporal maximum UL measurements are 83.6 db at 24VDC/FWR. Steady tone maximum UL measurements are 87.8 db at 24 VDC/FWR taken in free air at 360° around the device and averaged. Typical readings are frontal sound readings taken with a dB meter with signal mounted on wall. Rated for indoor use 32°F to 120°F, (0°C to 49°C), at RH 85%. (-W: White)

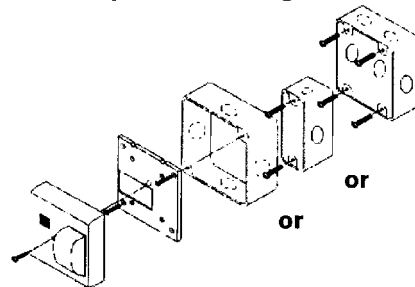
NOTE: These notification appliances are UL listed and rated as “special application”, which represents appliances which have been investigated to operate as described in the product’s installation instructions over the voltage range of 16-32 VDC or VFWR.

Strobe Intensity Setting	Strobe Current Draw
15/75 cd	63 mA
30/75 cd	84 mA
75 cd	143 mA
110 cd	178 mA

Control Module Specifications:

Maximum Current Output: 3 Amps Max. not to exceed NAC rating
DSC Module Operating Voltage: 16 to 32 Vdc or VFWR
DSC Module Operating Current: Non-Silenceable Circuit side 55mA, Silenceable Circuit side .005 Amps.
Maximum Current Output: 3 Amps max. not to exceed Circuit rating

1, 2 or 4 Square Mounting



For wiring diagram for U-MHU Series Horn/Strobes refer to Installation Instruction Sheet

Ordering Information

U-MHU Series Horn Wall Mount

Model Number	Description	Part Number	Low Volume Horn Current	High Volume Horn Current	High Volume dB Rating @10'
U-MHU-1G	ELC Sync/Non-Sync Horn 24 VDC	500-699591	30ma	54ma	95 db
U-MHU-1G-W	ELC Sync/Non-Sync Horn 24 VDC	500-699592	30ma	54ma	95 db
U-MHU	ELC Sync/Non-Sync Horn 24 VDC	500-699594	30ma	54ma	95 db
U-MHU-W	ELC Sync/Non-Sync Horn 24 VDC	500-699593	30ma	54ma	95 db

Model Number	Description	Part Number	Low Volume Horn Current	High Volume Horn Current	High Volume dB Rating @10'
U-MHU-MCS	ELC Sync/Non-Sync Horn w/Strobe (Red)	500-699587	30ma	54ma	95 db
U-MHU-MCS-W	ELC Sync/Non-Sync Horn w/Strobe (White)	500-699588	30ma	54ma	95 db

*All current measurements made at 24VDC

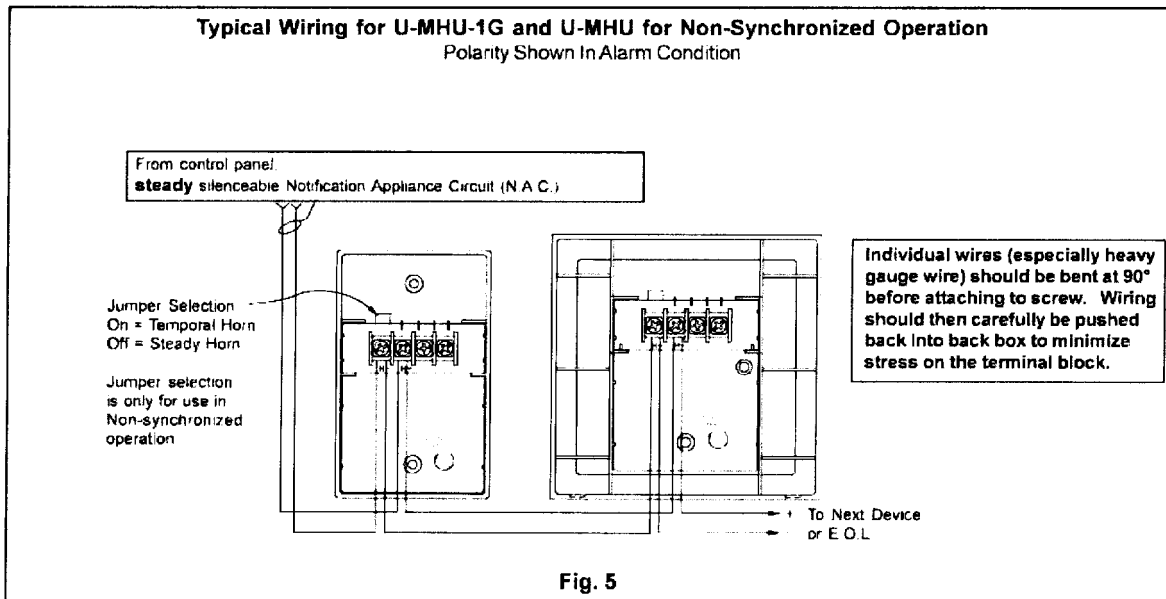
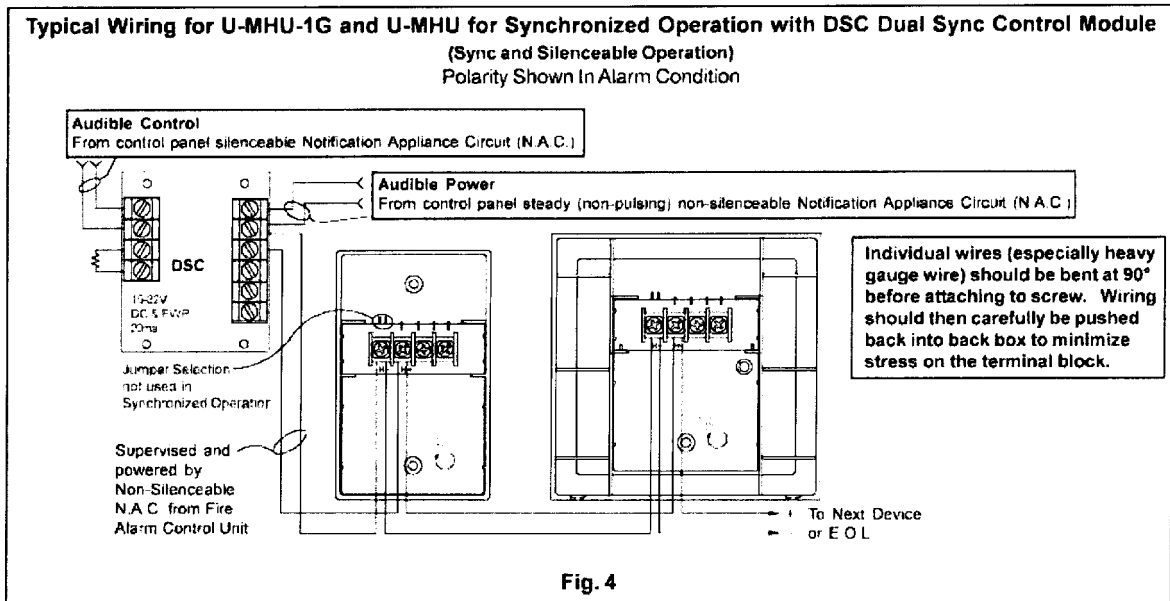
Canadian Ordering Information

CU-MHU Series Horn Wall Mount

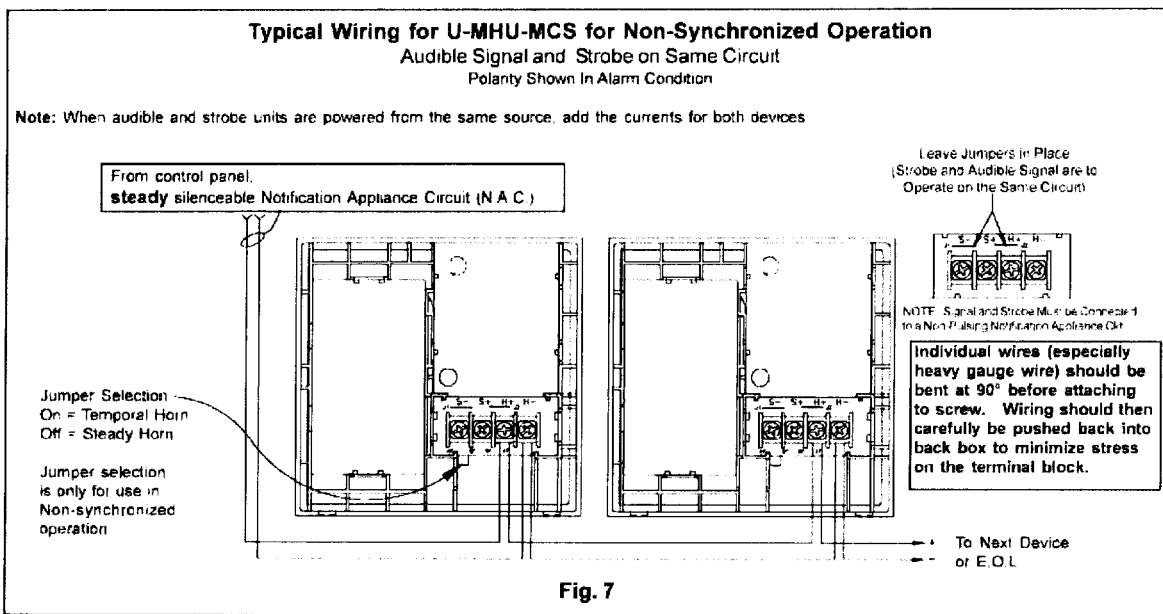
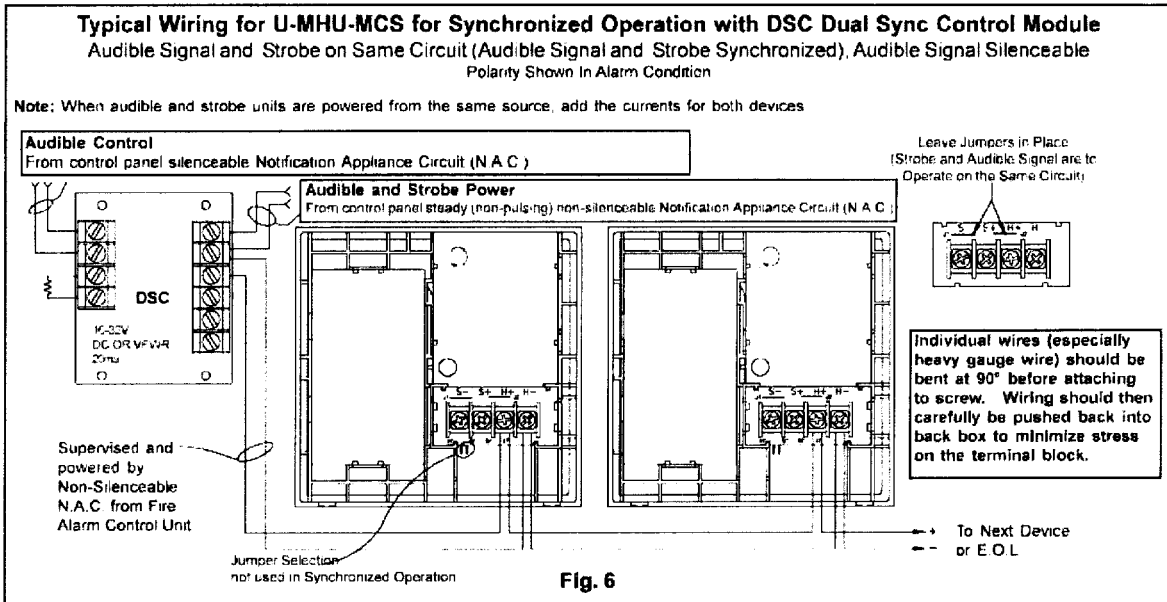
Model Number	Description	Part Number	Low Volume Horn Current	High Volume Horn Current	High Volume dB Rating @10'
CU-MHU-1G	ELC Sync/Non-Sync Horn 24 VDC	500-699591C	17ma	25ma	95 db
CU-MHU-1G-W	ELC Sync/Non-Sync Horn 24 VDC	500-699592C	17ma	25ma	95 db
CU-MHU	ELC Sync/Non-Sync Horn 24 VDC	500-699594C	17ma	25ma	95 db
CU-MHU-W	ELC Sync/Non-Sync Horn 24 VDC	500-699593C	17ma	25ma	95 db

Model Number	Description	Part Number	Low Volume Horn Current	High Volume Horn Current	High Volume dB Rating @10'
CU-MHU-MCS	ELC Sync/Non-Sync Horn w/Strobe (Red)	500-699587C	17ma	25ma	95 db
CU-MHU-MCS-W	ELC Sync/Non-Sync Horn w/Strobe (White)	500-699588C	17ma	25ma	95 db

Wiring Diagrams



Wiring Diagrams





VISUAL SIGNALS



Compaxx® Series Strobes

PLC Compatible Type 4X

114(†)ST Series

FEATURES

- > Type 4X Enclosure
- > Two Mounting Configurations - Surface and Conduit
- > 175,000 peak candela
- > 12 inch (305mm) wire leads
- > Black Impact Resistant Polycarbonate ABS Blend Base
- > Five Lens Colors
- > Available in Quantity Packaging (6)

AGENCY APPROVALS

- > UL 1638 Listed
- > cUL Listed
- > UL Listed Type 4X

SPECIFICATIONS

- > Replaceable Linear Strobe Tube Powered at 1.75 Joules
- > 12 to 48 VDC, 120V AC or 240V AC Operation

The Edwards 114 Series Strobes are designed for applications in industrial, commercial, and institutional applications where reliable and distinctive visual indication is required. The 114 Series is ideal for process control as well as vehicular applications such as tow motors. The strobe units provide a bright visual indication by utilizing a linear strobe tube inside a shatter resistant polycarbonate fresnel lens.

Suitable for indoor or outdoor installation. When mounted outdoors the unit should be mounted with the lens facing up. Two mounting configurations are available:

- ~ The 114S, a surface mount version that utilizes a mounting gasket and locknut to provide a secure surface attachment and seal
- ~ The 114P, a pipe mount version for mounting on 1/2" (13mm) NPT conduit.

Edwards strobe lights are particularly effective in high noise areas where ear protection must be worn and audible signals may not be heard or understood. They can advise personnel in manufacturing, process control and warehouse areas when an operation is starting or stopping or a vehicle is moving. They are also often used to signal equipment malfunction and to warn personnel that they are entering restricted areas.

† Insert "S" for surface mount, "P" for pipe mount

D-04

3-104

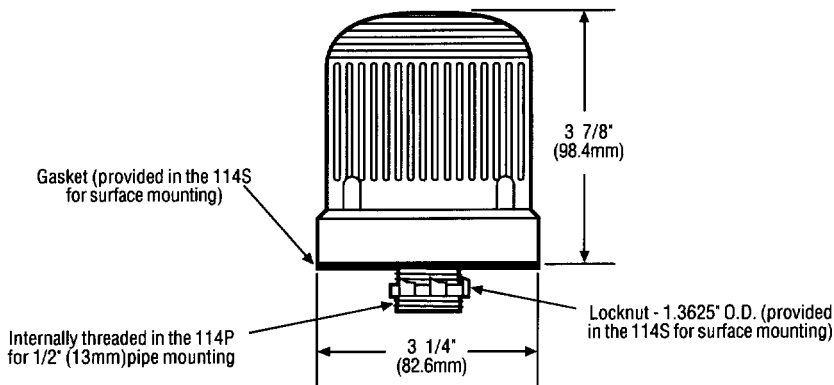
90 Fieldstone Court | Cheshire, CT 06410
 Ph: 203.699.3300 | Fx: 203.699.3108
www.edwards-signals.com

Edwards Signaling & Security Systems®

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TECHNICAL INFORMATION



Cat. No.	Lens Color	Replacement Lens Cat. No.	Strobe Tube	Peak Candlepower	Electrical Ratings	Mounting
114SSTA-EK**	Amber	104-LA	114-ST	175,000	24V DC	Surface
114SSTB-EK**	Blue	104-LB	1,500 hr*		0.350 Amps	Surface
114SSTC-EK**	Clear	104-LC				Surface
114SSTG-EK**	Green	104-LG				Surface
114SSTR-EK**	Red	104-LR				Surface
114PSTA-EK**	Amber	104-LA	114-ST	175,000	24V DC	1/2" NPT Pipe
114PSTB-EK**	Blue	104-LB	1,500 hr*		0.350 Amps	1/2" NPT Pipe
114PSTC-EK**	Clear	104-LC				1/2" NPT Pipe
114PSTG-EK**	Green	104-LG				1/2" NPT Pipe
114PSTR-EK**	Red	104-LR				1/2" NPT Pipe
114SSTA-N5**	Amber	104-LA	114-ST	175,000	120V AC 50/60 Hz	Surface
114SSTB-N5**	Blue	104-LB	1,500 hr*		0.10 Amps	Surface
114SSTC-N5**	Clear	104-LC				Surface
114SSTG-N5**	Green	104-LG				Surface
114SSTR-N5**	Red	104-LR				Surface
114PSTA-N5**	Amber	104-LA	114-ST	175,000	120V AC 50/60 Hz	1/2" NPT Pipe
114PSTB-N5**	Blue	104-LB	1,500 hr*		0.1 Amps	1/2" NPT Pipe
114PSTC-N5**	Clear	104-LC				1/2" NPT Pipe
114PSTG-N5**	Green	104-LG				1/2" NPT Pipe
114PSTR-N5**	Red	104-LR				1/2" NPT Pipe
114SSTA-R5**	Amber	104-LA	114-ST	175,000	120V AC 50/60 Hz	Surface
114SSTB-R5**	Blue	104-LB	1,500 hr*		0.10 Amps	Surface
114SSTC-R5**	Clear	104-LC				Surface
114SSTG-R5**	Green	104-LG				Surface
114SSTR-R5**	Red	104-LR				Surface
114PSTA-R5**	Amber	104-LA	114-ST	175,000	120V AC 50/60 Hz	1/2" NPT Pipe
114PSTB-R5**	Blue	104-LB	1,500 hr*		0.1 Amps	1/2" NPT Pipe
114PSTC-R5**	Clear	104-LC				1/2" NPT Pipe
114PSTG-R5**	Green	104-LG				1/2" NPT Pipe
114PSTR-R5**	Red	104-LR				1/2" NPT Pipe

*Calculated strobe tube life at operating power to 75% efficiency.

** For package quantities of 6 strobes add *-6* to the catalog number. e.g. 114SSTA-EK-6

SIGNAL INPUT LOAD CHARACTERISTICS***


Cat. No.	Operating Voltage	Max. off state leakage current (mA)	Continuous on Current (mA)	Surge (Inrush/duration) Amps/milliseconds
114-EK Series	24V DC	7	350	.45/.02

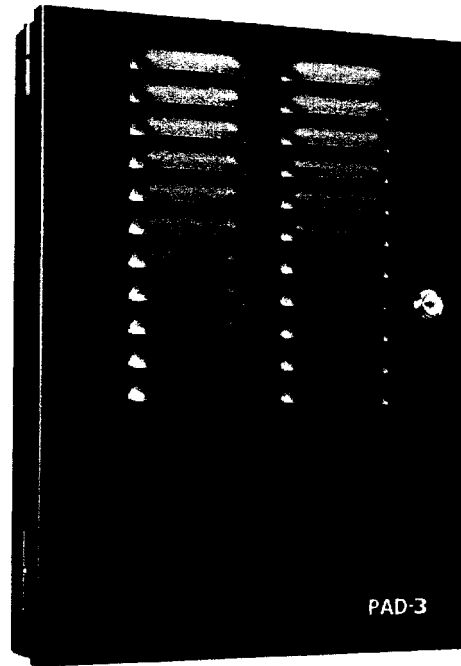
***This device is PLC compatible and may be operated by PLCs with output characteristics that match the input load requirements of this signal.

PAD 3

Auxiliary Power Supply - Notification Appliance Extender

ENGINEER AND ARCHITECT SPECIFICATIONS

- 6 amps of Notification Appliance Power
- Advanced Microprocessor Control
- 24 VDC Output Voltage
- Four Power-Limited Notification Outputs
- Strobe Synchronization Option Built In
- Synchronized ANSI Temporal Pattern
- Class 'A' Selectable
- Ground Fault Detection
- Battery Supervision
- 3 Amp Auxiliary Power Output
- Trouble Contact for Monitoring
- Multiple Module Mounting in System 3 Enclosures
- Multiple Modules Share Battery Set
-  UL, ULC Listed, CSFM, NYMEA and FM Approved



Introduction

The Model PAD-3 (PAD-3C for Canada) is a notification appliance circuit expander with a built-in auxiliary power output. It is designed for use with Siemens Building Technologies, Fire Safety Division fire alarm control panels. This power source is designed to provide the extra power required in buildings conforming to the Americans with Disabilities Act.

Features

The PAD-3 provides 6 amps of 24 VDC power for multiple uses. All 6 amps can be directed to 4 Notification Appliance Circuits (NAC's). Each is rated at 3 amps and is power limited. Either 1 or 2 inputs can control the four outputs. These outputs are compatible with all Fire Safety 24VDC notification appliances.

The PAD-3 can be configured so that the inputs can be programmed as steady outputs, ANSI temporal outputs, or synchronized strobe outputs. It can also be programmed so that one input will silence U-MHU-Series horn/strobe horns while the strobes remain on using one set of wires.

The PAD-3 also offers a 3 amp auxiliary output for driving other portions of your fire alarm system such as door holders. This 24VDC filtered output is power limited. When using this output, the total power available from the PAD-3 will not exceed 6 amps.

A trouble contact is provided for monitoring the PAD-3 with a fire alarm panel through the input. It also has a Form C dry contact for trouble monitoring. Therefore, the user has the option of connecting it to a conventional fire alarm panel's existing notification circuit, or controlling it with a TRI Series device on intelligent fire systems.

The PAD-3 offers battery supervision and management as is required of fire alarm system components. Ground faults are transmitted as are any other trouble conditions. Trouble conditions not only change the state of the trouble contact in the unit, but they also break the notification circuit input to create a trouble signal in the fire alarm control unit.

This product is packaged in its own sheet metal enclosure with enough space to house the 7 amp-hour battery set required for back-up. The enclosure comes in black or red. System 3 enclosures may also be used to house multiple PAD-3 modules in a single enclosure. Two modules are capable of sharing the same battery set when mounted in the same enclosure.

Options

One or both PAD-3 signal inputs control the notification outputs, depending on the specific configuration setup. Possible configurations for the PAD-3 are:

For Option:	These Inputs:	Control These Outputs:	As:
1	Input 1	All Outputs	Class B Circuits
2	Input 1 Input 2*	All Outputs Silences horns on 1	Class B Circuits
3	Input 1 Input 2	Outputs 1 and 2 Outputs 3 and 4	Class B Circuits Class B Circuits
4	Input 1 Input 2	Output 1 Outputs 2, 3 and 4	Class B Circuits Class B Circuits
5	Input 1	Outputs 1-2, 3 and 4	Class A Circuit Pairs
6	Input 1 Input 2*	Outputs 1-2, 3 and 4 Silences horns on 1	Class A Circuit Pairs
7	Input 1 Input 2	Outputs 1 and 2 Outputs 3 and 4	Class A Circuit Pairs Class A Circuit Pairs
8	Input 1 Input 2	Outputs 1-2 Outputs 3 and 4	Class A Circuit Pairs Class B Circuits

*When used with U-MHU-Series horn/strobe units

Supervision

The Model PAD-3 supervises a variety of functions including:

- Low AC power
- Low battery condition
- Earth ground fault
- Auxiliary output power limit condition
- EOL supervision trouble or power limited condition at an output

When a trouble condition occurs, the PAD-3 creates a trouble condition on the fire control signal circuits to which it is connected. It still maintains the ability to be activated by the fire control. In addition, the PAD-3 provides a Form 'C' trouble relay output as an alternative to using the notification circuit trouble.

Electrical Specifications

AC Input: 120VAC @ 2.5 amps
 Output: 24VDC @ 6 amps
 Auxiliary Power Circuit: 1
 Notification Circuits: 4
 Output Configuration: 2 Class A or 4 Class B or
 1 Class A & 2 Class B

Amps per Output

Circuit: 3.0

Notification Circuit

Outputs: 24 VDC at 3.0 amps each,
 24K ohm EOL resistor
 required on each Class
 B circuit

No. of Inputs: 2

Input Configuration: 2 Class B or 2 Class A

Input Voltage Range: 9-32VDC

Maximum Input Current: 0.006 Amps

Battery Charging

Capacity: 15.0 A.H

Trouble contact rating: 2.5A @250 VAC, 30 VDC

Ambient Temperature: 32°F to 120°F

Mechanical Specifications

Single Module Enclosure Model EN-PAD

Dimensions: 12"W x 16"H x 3"D

Color: Black

Indicator Lights

AC Power On: Green

Battery Trouble: Yellow

Ground Fault: Yellow

Auxiliary Trouble: Yellow

Output 1 Trouble: Yellow

Output 2 Trouble: Yellow

Ordering Information

Model	Description	Part Number
PAD-3	Aux. power supply w/black enclosure	599-699189
PAD-3R	Aux. power supply w/red enclosure	599-699190
PAD-3-MB	Aux. power supply - main board only	500-699080
EN-PAD	Black enclosure for PAD-3	310-099073
EN-PADR	Red enclosure for PAD-3	310-099150