LETTER OF TRANSMITTAL

Date: 10/28/2025

PROJECT INFORMATION

Name: RON JOHNSON
Client: CITY OF LEE'S SUMMIT
Company: CITY OF LEE'S SUMMIT
Job Name: NASPO CITY OF LEE'S SUMMIT – FA UPDATE
Project No: 103479
Job Address: 1971 SE HAMBLIN ROAD
Submitted By: BENJAMIN MCELROY
Building / Room:
PO Number: PO-1843
City / State / Zip: LEE'S SUMMIT / MO / 64063
Spec Number: NA

TRANSMITTING:

- ☐ Shop Drawings
- ☒ **Prints Submittal**
- ☐ Re-Submittal
- ☐ Samples
- ☐ O&M

THESE ARE TRANSMITTED:

- ☒ **For Approval**
- ☐ For Your Use
- ☐ As Requested
- ☐ For Review and Comment

DATE	COPIES	DESCRIPTION
10.28.2025	1	AVAILABLE DATASHEETS AND PRINTS

- ECC submittals require written acknowledgment prior to equipment procurement or labor being expended on the project.
- Please provide reasonable promptness as to cause no delay and/or unnecessary expense to the project.

ECC

LINCOLN
HEADQUARTERS
6501 N 70TH ST
LINCOLN, NE 68507
402-466-8274

OMAHA
11501 CENTENNIAL RD #100
LA VISTA, NE 68128
402-341-2780

KANSAS CITY
6020 PARRETTA DR
KANSAS CITY, MO 64120
816-561-6800

WICHITA
OK LICENSE #246227
9809 E ORME ST #102
WICHITA, KS 67207
316-265-7878

SPRINGFIELD
2335 E CHESTNUT EXPY #B116
SPRINGFIELD, MO 65802
417-413-2505

PROJECT:	**NASPO CITY OF LEES SUMMIT – FA UPDATE**
LOCATION:	**1971 SE HAMBLIN ROAD, LEE'S SUMMIT, MO 64063**
ECC PROJECT #:	**103479**
SPEC #:	**NA**
SYSTEM:	**FIRE ALARM**
SUBMITTED TO:	**RON JOHNSON**
SUBMITTED BY:	**ECC — KANSAS CITY**
PROJECT ENGINEER:	**ZACHARY HALL | ZHALL@ECCOINC.COM**
PROJECT MANAGER:	**BEN MCELROY | BMCELROY@ECCOINC.COM**
SUBMITTED ON:	**10/28/2025**

ECC

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PROJECT: NASPO CITY OF LEES SUMMIT – FA UPDATE

LOCATION: 1971 SE HAMBLIN ROAD, LEE'S SUMMIT, MO 64063

SUBMITTAL LIST FOR: FIRE ALARM

MANUFACTURER	PART NUMBER	DESCRIPTION
DIVERSIFIED TECHNOLOGIES	DTK-120HW	120VAC, 20A PARALLEL PROTECTOR UL1449 LISTED SPD TYPE 1
INTERSTATE BATTERY	SLA1075	12V 8AH .187 BATTERY
SIEMENS	DB-11	6" DETECTOR BASE ASSY
SIEMENS	FC901-U3	50 PT ELECTRONIC KIT – MAIN BOARD - 170W PS
SIEMENS	FDBZ492	DUCT HOUSING - 2 WIRE WITHOUT RELAY
SIEMENS	FH901-U3	50 PT SYSTEM BLACK ENCLOSURE
SIEMENS	OOHC941	DUAL OPTICAL / HEAT / CARBON MONOXIDE DETECTOR
SIEMENS	OP921	OPTICAL SMOKE DETECTOR
SIEMENS	PAD-4-6A	COMPLETE 6 AMP PAD-4 KIT (ENCLOSURE, BOARD, 170W POWER SUPPLY)

SIEMENS	SLE-MAX2-CFB	STARLINK COMMUNICATOR DUAL SIM VERIZON & AT&T 24VDC WITH METAL ENCLOSURE
SIEMENS	ST-50	ST-50 5 FT SAMPLING TUBE
SIEMENS	TSM-1X	TSM-1X INTEL REMOTE TEST SWITCH, LED WITH BUILT-IN ISOLATOR
SIEMENS	XMS-D	XMS-D ADDRESS, DOUBLE ACT MPS ISOLATION
SIEMENS	XTRI-D	DUAL INPUT MONITOR MODULE, WITH BUILT-IN ISOLATOR
SIEMENS	XTRI-R	SINGLE INPUT MONITOR MODULE WITH RELAY WITH BUILT-IN ISOLATOR
SPACE AGE ELECTRONICS	SSU00691	DOCUMENT BOX

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DTK-HW Series

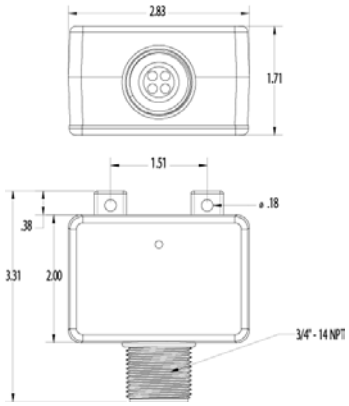
Equipment Panel/Dedicated Circuit Surge Protective Device
General Product Specifications

DITEK's HW series of surge protectors are designed and manufactured to meet the exacting standards of the life safety industry. These compact parallel mount surge protectors are widely used to protect fire alarm panels and other dedicated branch circuit loads.

DTK-120HW **DTK-120/240HW**

Product Features

- Available for Popular 120V and 120/240V systems
- DTK-120HW approved for 20A circuit breakers
- Diagnostic LED indicates ground presence, system power and SPD function
- Weatherproof enclosure
- Small footprint enables installation in a variety of locations
- Available for popular 120V, and 120/240V systems
- Complies with ANSI/IEEE C62.41 and C62.45 Category B standards
- Ten Year Limited Warranty



Specifications

Agency Approvals: UL 1449, 3rd Edition, cUL
IEEE Location Category: Category B
Protector Type: SPD Type 2
Protection Modes: L-G, L-N, N-G
Response Time: <1ns
Temperature Range: -40°F – 185°F (-40°C – 85◦C)
Maximum Humidity: 95% non-condensing
Operating Frequency: 0Hz – 400Hz
Dimensions: 2.93" x 2.83" x 1.68"
(74.4mm x 71.9mm x 42.7mm)
Connection: ¾" diameter threaded fitting
Weight: .5lb. (227g)
Housing: ABS

Model Selection: DTK-	Service Wiring	Peak Surge Current	MCOV	UL 1449, 3rd Ed. V.P.R.	Short Circuit Current Rating	UL1449, 3rd Ed. I_n Rating
120HW	Single Φ (2W + G), 120VAC	19,500A	130V	700V L-N, L-G; 600V N-G	10,000A	3,000A
120/240HW	Split Φ (3W + G), 120/240VAC	13,000A/ Phase 6,500A/ Mode	130/260V	700V L-N, L-G; 600V N-G; 1200V L-L	10,000A	3,000A

One DITEK Center
1720 Starkey Road
Largo, FL 33771

1-800-753-2345
Technical Support: 1-888-472-6100
www.ditekcorp.com

Document: SPS-100057-001 Rev 10 9/13

Power Patrol® Batteries

Specification Sheet

Sealed Lead-Acid Batteries — SLA1075

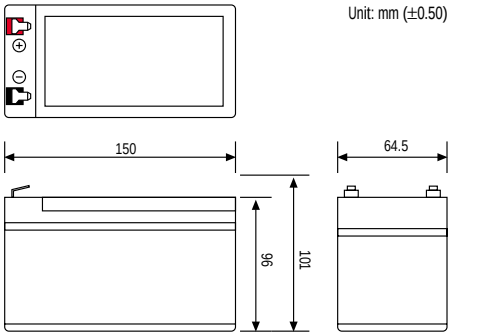
Capacity Specifications

Cut-off Voltage	20 Hr Rate (0.36 A)		7.2 Ah
1.75 v/c @ 25°C	10 Hr Rate (0.65 A)		6.5 Ah
1.70 v/c	5 Hr Rate (1.14 A)		5.7 Ah
1.55 v/c	1 Hr Rate (4.1 A)		4.1 Ah
		Bloc	Per Cell
Charge Voltage *(constant)*	Float	13.5~13.8	2.25~2.30
	Cycle	14.4~14.7	2.40~2.45
Discharge Current Amps *(5 seconds maximum)*	80		
Discharge Current Amps *(maximum continuous)*	50		
Max. Charge Current		2.16 A	
Approx Final Charge Current *(2.25 v/c Float)*		0.014 (14 mA)	
Approx Final Charge Current *(2.45 v/c Cycle)*		0.07 (70 mA)	
Terminal Type		Type A / (G optional)	
Self Discharge		9 months @ 21°C	
Case Material		ABS – Gray* or Black	

Due to changes in the manufacturing processes, specifications may change without notice.
*Gray option is Flame Retardant ABS.

Technical Specifications

Nominal Voltage		12V
Nominal Capacity		7.2 Ah (20 Hr Rate)
Dimensions	Length:	150 mm
	Width:	64.5 mm
	Height:	95 mm
Total Height/Terminal:		101 mm
Weight		Approx 2.75 Kg



Actual Wattage / Ampere Capacity at Various Discharge Times (Volt per Cell @ 25°C)

Cut Off Voltage \ Time		5 Min.	10 min.	15 min.	30 min.	45 min.	60 min.
1.75 v/c	W	45.4	30.77	23.28	12.9	10.31	8.07
25°C	A	25.94	17.58	13.3	7.37	5.89	4.61
1.67 v/c	W	47.76	31.4	23.9	13.09	10.04	8.07
25°C	A	28.6	18.8	14.31	7.84	6.01	4.83
1.60 v/c	W	49.28	31.52	24.0	13.3	9.3	7.79
25°C	A	30.8	19.7	15.0	8.31	5.81	4.87

Data Sheet

Specialized Detection Devices

'DB' Series Detector Bases

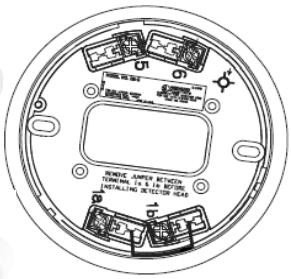
Models DB2-HR, DB-11 and DB-11E

ARCHITECT AND ENGINEER SPECIFICATIONS

- **Each detector base is compatible with Model 'H', "11" and "121" series of conventional detectors**
  - All bases compatible with optional Model LK-11 detector-locking kit
- **Each detector base also functions with the addressable Model 'H' series, as well as Models OH921, OP921, OOH941, OOHC941 and HI921 intelligent detectors**
  - Model DB2-HR is also compatible with ASA*technology*™ detectors
  - Model DB2-HR has backwards compatibility with Siemens Model 'H'-series intelligent detectors
- **Models DB-11 and DB-11E mount on a 4-inch octagon, square or single-gang electrical box**
  - Model DB-11 has plugs to cover the outer-mounting screw holes
- **Model DB2-HR mounts on a 4"-square, double-gang electrical box**

Model DB-11

Model DB2-HR



Model DB-11E

- **UL268 Listed, ULC-S529 Listed; FM, CSFM and NYC Fire Department Approved**

Product Overview

The detector bases are low-profile, surface mounting bases used on various Siemens — Fire Safety conventional and addressable detectors.

Model DB2-HR, which is a redesign of Model DB-HR, is compatible with the standard, addressable type of intelligent detectors, as well as those detection devices that operate with ASA*technology*™.

Additionally, Model DB2-HR is backward compatible with the Siemens Model 'H'-series intelligent detectors and detector-assigned FACPs. Model DB2-HR can also operate with Siemens' 50-point addressable; 252-point addressable; 504-point addressable, and FireFinder® XLS fire systems. A relay output from the fire detector base for signaling other devices is provided by Model DB2-HR.

The detector bases use screw-clamp contacts for electrical connections and self-wiping contacts for better reliability. Further, the bases can be used with the optional Model LK-11 detector locking kit, which contains 50 detector locks and an installation tool, to prevent unauthorized removal of the detector head.

Specifications

Models DB-11 and DB-11E are standard bases for Model 'H'-series "11" and Model "121"-series conventional detectors, as well as the Model 'H'-series addressable detectors. Model DB-11 has a 6" (15.2 cm) diameter, and the diameter for Model DB-11E is 4.5 inches (11.4 cm).

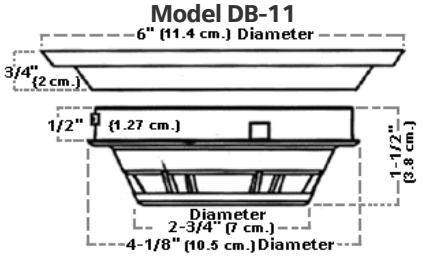
Specifications — (continued)

Moreover, Models DB-11 and DB-11E mount on a 4"-square, (10.2 cm) octagon or single-gang box. Model DB-11 has integral, decorative plugs to cover the outer screw holes.

However, Model DB2-HR mounts on a double-gang, 4-inch (10.2 cm.) square electrical box.

Dimensions

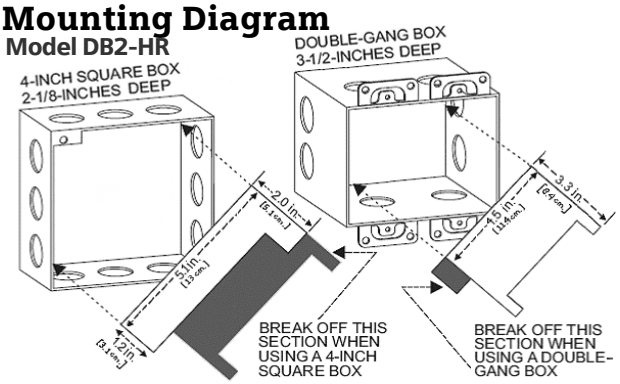
Model DB-11



Note: The Model DB-11E base detector has a diameter dimension of 4.5" (11.4 cm).

Mounting Diagram

Model DB2-HR



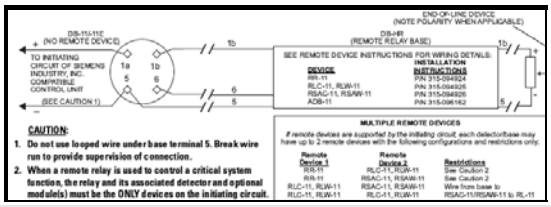
9907

Model 'DB' Series of Detector Bases

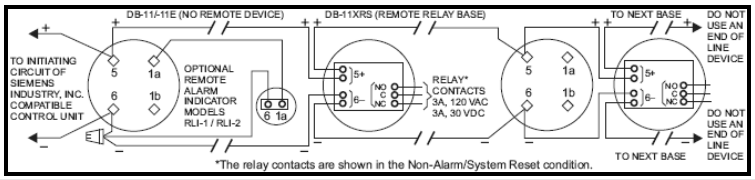
Cerberus™ PRO

Fire Safety & Security Products

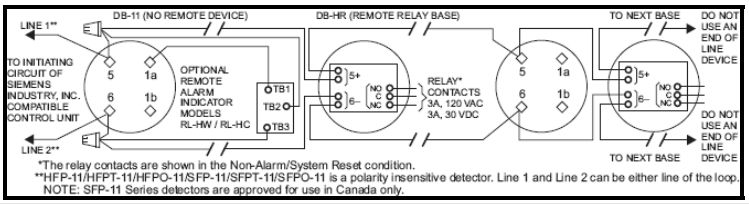
Wiring Diagrams



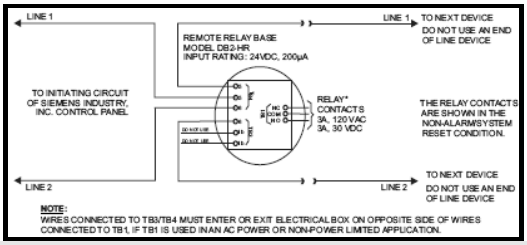
Note: The illustration above is typical wiring for Models DB-11 and DB-11E (using Models PE-11, PE-11T, DT-11, OH121, OP121, and HI121 detectors.)



Note: The illustration above is typical wiring for Models DB-11 and DB-11E (using Models FP-11, FPT-11, FS-DP, FS-DPT, and FS-DT detectors.)



Note: The illustration above is typical wiring for Models DB-11 and DB-11E (using Models HFP-11 Series and SFP-11 Series detectors.)



Note: The illustration above is typical wiring for Model DB2-HR for polarity-insensitive detectors.)

Details for Ordering

Model Number	Part Number	Description
AD2-P	500-649706	Air-Duct Housing
AD2-PR	500-649707	Air-Duct Housing with Relay
DB-11	500-094151	Low-Profile Surface-Mount Base
DB-11C	500-095687	Low-Profile Surface-Mount Base [Canada]
DB-11E	500-094151E	Smaller-Diameter Detector Base
DB-HR	500-033220	Relay Base for 'H'-Series Intelligent Detector
DB2-HR	S54370-F12-A1	Relay base compatible with standard and advanced detectors; backwards compatible with Model 'H'-series intelligent detectors
DT-11	500-095430	135°F {57.2°C}Low-Profile Thermal Detector
DT-11C	500-095983	Low-Profile Thermal Detector [Canada]
HI921	S54320-F5-A2	Thermal (Heat) Detector
OH921	S54320-F6-A2	Addressable Multi-Criteria Fire Detector
OP921	S54320-F4-A2	Photoelectric Smoke Detector
OOH941	S54320-F7-A2	Multi-Criteria Fire Detector with ASA*technology*™
OOHC941	S54320-F8-A2	Multi-Criteria Fire / CO Detector with ASA*technology*™
LK-11	500-695350	Base Locking Kit for Model '11'-series detectors

Model Number	Part Number	Description
FP-11	500-095112	*FirePrint*™ Intelligent Detector
FP-11C	500-095112C	*FirePrint*™ Intelligent Detector [Canada]
FPT-11	500-095918	Thermal Detector
FPT-11C	500-095918C	Thermal Detector [Canada]
HFPO-11	500-034800	FS-250 Addressable Detector
HFP-11	500-033290	*FirePrint*™ Detector
HFPT-11	500-033380	Thermal Detector
HI121	S54372-F3-A1	Heat Detector
OH121	S54372-F2-A1	Multi-Sensor Smoke Detector
OP121	S54372-F1-A1	Photoelectric Smoke Detector
PE-11	500-094150	Conventional Photoelectric Smoke Detector
PE-11T	500-095150	Photoelectric Smoke Detector with 135°F {57.2°C} Thermal Sensor
SFP-11	500-33290C	Photo / Thermal Detector [Canada]
SFPO-11	500-34800C	Photo Detector [Canada]
SFPT-11	500-033380C	Detector Package [Canada]

SIEMENS Cerberus™ PRO

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Building Technologies Division
SII – Fire Safety
[Printed in U.S.A]

September 2012 — Supersedes sheet dated 4/2012
(Rev. 1)

Data Sheet

Cerberus PRO

50-Point Addressable Fire Alarm Control Panel
Model FC901

ARCHITECT AND ENGINEER SPECIFICATIONS

- **Fire alarm control panel (FACP) for up to 50 addressable points that is comprised of the following three (3) system components:**
  - Main board (Model FCM901-U3)
  - 6.5 Amps (170-Watt power supply (Model FP2011-U1)
  - System enclosure (Model FH901-U3 / R3)

- **System features:**
  - Supports 50 addressable devices on one (1) `Class A', or two (2) `Class B' circuits
  - Includes one (1) `Class A', or two (2) `Class B' notification appliance circuits (NACs)
  - Built-in digital alarm communication transmitter (DACT)
  - Supports Carbon Monoxide (CO) detection
  - Downloads, prints system-event history & detector sensitivity
  - Supervised remote printer (Model FCA2018-U1)
  - Optional connectivity to a leased-line / city-tie module (Model FCI2020-U1)
  - Built-in RS–485 connection for remote annunciators
  - Resettable and non-resettable 24VDC auxiliary power
  - Off-normal warning message prior to reset
  - Fast and easy set-up with custom-configuration tool
  - Supports a 182-character display

- **Alphanumeric keypad**
  - for manual configuration

- **®UL 864 9th Edition Listed;**
  FM, CSFM & NYC Fire Department Approved
  City of Chicago, Class 1 Approval

Product Overview

Model FC901 is an intelligent FACP that provides a cost-effective, feature-rich solution for small fire-alarm system applications.

Small and compact in design, Model FC901 is ideal for small fire-protection applications using less than 50 addressable devices:

- Retail outlets / strip malls
- Dry-cleaner shops
- doctors' offices
- restaurants, etc.

With its built-in DACT and two (2) NACs, Model FC901 is powerful enough to economically meet the needs of these applications. Each 50-point FACP has City of Chicago, Class 1 Approval, as well as being FM (#3010); CSFM (#7165-0067:0259) and FDNY (#6104) Approved.

Specifications

The Model FC901 FACP consists of a main board (Model FCM901-U3); a 170-Watt power supply (Model FP2011-U1), and a Model FH901-U3 / R3 system enclosure. The programming software for Model FC901 is held in flash electrically erasable

Main Board

The Model FCM901-U3 main board provides system display and control, as well as connections for system field wiring, via removable terminal blocks.

The 3.5-inch (8.9 centimeters) by 1.5" (3.8 centimeters) liquid-crystal display (LCD) screen shows all system messages and event status. Each screen supports 182 characters: seven (7) lines with 26 characters per line. Each event may have a custom message up to 40 characters that describes the event's location.

The backlit LCD screen illuminates on any system event or manual key press. New, 'unacknowledged' events are indicated by a flashing exclamation point ('**!**'). Once 'acknowledged,' the exclamation point changes to a check mark ('**√** '). A system-status line shows the quantity of events presently active.

Since each main board contains a built-in RS–485 communication bus, Model FCM901-U3 readily supports system-status light-emitting diodes (LEDs) for *Power*, *Alarm*, *Trouble*, *Supervisory* and *Ground Fault* system commands.

Specifications

Main Board — (continued)

There are also LEDs to indicate when audible circuits are 'active' or 'silenced.' The main board supports four (4) system-control buttons, including: *Acknowledge*; *Alarm Silence*; *Unsilence*, and *Reset*.

The system offers an off-normal warning feature, alerting users when active devices are not ready for reset. These active devices may include manual stations that have not been reset; smoke detectors with smoke remaining in the optical chamber, etc.

Additionally, the main board supports an alphanumeric keypad, as well as navigation keys, which are used for scrolling maintenance functions and system configuration.

The main board supports connection for up to 50 addressable devices, via one (1) 'Class A', or two (2) 'Class B' circuits. The loop supports all C-NET devices, including the Cerberus PRO intelligent and Model 'H'-series devices. The main board also supports one (1) 'Class A' or two (2) 'Class B' NACs.

Each NAC supports a maximum 2.5 Amps — with 2.5 Amps, max, allowed between the NACs. Each NAC can be set to a synchronized strobe, for horn-strobe devices, or for audible devices. Audible devices can be set for:

- 'STEADY'
- 'ANSI Temporal 3' / 'ANSI Temporal 4'
- 'March Time 30 / 60 / 120 Codes'

The main board supports four (4) 'Form C' relays for *Alarm*, *Trouble*, *Supervisory* and *User Programmable* events. Each relay is rated at 2 Amps at 30VDC maximum, resistive. The main board supports two (2) auxiliary 24VDC connections. Upon system reset, one (1) connection interrupts the power for five seconds for use with (4) four-wire conventional detectors. Each auxiliary-power output is 24VDC, nominal — rated at 0.75 Amps.

The main board contains a built-in DACT that provides communication between Model FC901 and with the central or remote monitoring station. The built-in DACT supports two (2) separate programmable accounts, as well as two (2) connections to the public-switched telephone network. The connections support RJ31X male connectors.

(For compatibility with each Model FC901 FACP, see the **Central Station Receiver Compatibility Table** on the last page of this data-sheet document.)

The main board contains a battery-charging circuit, providing connection to lead-acid batteries rated at 24VDC, nominal. The main board can charge up to 18 AH batteries.

The main board contains a universal serial bus (USB) connector that supports connection for system configuration and module firmware upload, via the custom-configuration tool.

Model FC901 can be configured using the custom-configuration tool or manually from the alphanumeric keypad on the main board. An auto-configuration feature creates a basic system configuration of all connected devices to accelerate initial system commissioning.

50-Point Addressable System Enclosure

The Model FH901-U3 / R3 enclosure for the 50-point addressable fire system, Model FC901, supports all system modules. The enclosure also supports up to 12AH batteries.

Note: For systems requiring larger than 12AH batteries, use a ®UL Listed battery box.

The Model FH901-U3 / R3 enclosure for the 50-point panel is comprised of a dual-mounting setup that allows the main board to be partially mounted in a lower-to-upper position. When temporarily installed in the lower position, technicians are allowed more space to install field wiring at the time of system set-up. When field-wiring installation is complete, the main board shall be moved to the upper position for standard mounting prior to applying power to the system.

Additionally, the enclosure supports an optional battery bracket (Model FHA901-U1) that can be used to secure batteries up to 12AH. Model FHA901-U1 is required to comply with seismic certification, pursuant to ASC / SEI 7-05, Section 13.2.2.

A flush-mount trim kit (Model FHA902-U1 / R1) is also available for use when flush mounting Model FH901-U3 / R3.

50-Point Power Supply

The Model FCM901-U3 main board also supports connection to the system power supply. The 6.5A (170-Watt) power supply (Model FP2011-U1) incorporates a 4.0A, non-resettable slow-blow fuse on the primary input, and includes a built-in AC-line filter for surge and noise suppression.

Model FP2011-U1 mounts in a standard Siemens – Fire Safety enclosure, and there are no serviceable Siemens – Fire Safety parts to be maintained.

Specifications – (continued)

– Optional Accessories –

Leased-Line / City-Tie Module

The Model FC901 FACP has the capability of operating an optional leased-line, city-tie module (Model FCI2020-U1) that provides a local-energy output for municipal call-box connection.

A wiring harness, Model FCA901-U1, is required for use, and must be ordered separately. The leased-line, city-tie module is installed on the back of the main board of the Model FC901 FACP, and field wiring is connected to the main board.

50-Point Remote Annunciator

The fire-system displays (FSD901-U3 / R3) are remote LED / LCD units that show the existing status of the Model FC901 FACP. The Model FSD901-U3 / R3 optional display supports the following LEDs for system-status conditions:

- *Power*
- *Alarm*
- *Trouble*
- *Supervisory*
- *Ground-Fault*

There are also LEDs to indicate when audible circuits are 'active' or 'silenced.' The main board supports four (4) system-control buttons, including: *Acknowledge*; *Alarm Silence*; *Unsilence*, and *Reset*.

For Model FSD901-U3 / R3, a LED will illuminate for any given *Alarm*, *Supervisory* and *Trouble* Cerberus PRO-system event. A 3.5-inch (8.9 centimeters) by 1.5" (3.8 centimeters) LCD screen will give details of the event in alphanumeric form. The display screen can be scrolled to reveal additional events. Optional remote-system-control capabilities are also available.

The Remote Peripheral Module (FCA2018-U1) provides a means of connecting a Cerberus PRO 50-point addressable panel to a parallel printer for creating a hard copy of system-status events.

This supervised, intelligent module contains built-in transient protection and plain-decimal addressing.

When Model PAL-1 is used with the remote peripheral module, Model FCA2018-U1 supervises the printer for ***On, Off Line | Power On | Paper Out | Paper Jam***, and wiring-fault conditions, as required by ®UL for NFPA 72 proprietary systems.

The following are the dimensions based upon connection to a one-height-unit enclosure (1HU) for Model FC901:

Approximate size: 16.5" (41.9 cm.) [**H**];
18.13" (46.1 cm.) [**W**];
5.11" (13 cm.) [**D**]

The weight (without operating unit or batteries) is approximately 9 pounds [4082 g].

LED Annunciator Driver: 32 Outputs | 16 Inputs

Model FT2007-U1 serves as the main component for allowing custom graphic annunciators to operate on Model FC901 FACPs. There are 16 inputs on each Model FT2007-U1 to accommodate user-defined system commands, which include: *Reset*; *Silence/Unsilence*; *Acknowledge*, and *Lamp Test*. Inputs can also be programmed as ``Generic", which allows additional flexibility for customized functionality.

Shipments of each Model FT2007-U1 driver include two (2) PC boards [PCBs]; one (1) built-in RS–485 interface, and one (1) LED driver. Additionally, one (1) ribbon cable is packaged, allowing connectivity between the two (2) PCBs.

Tabular Annunciator Drivers: 16 Zones | 32 Zones

The Tabular Annunciators allow system events sent from Cerberus PRO 50-point addressable panels to be displayed remotely in real-time.

The Model FT2008 series of tabular annunciators has 16 zones and the Model FT2009 series uses up to 32 zones. Additionally, no more than two (2) light-emitting diodes (LEDs) can be used per zone.

A built-in RS–485 communication bus controls the operation and supervision of the 16-zone and 32-zone Tabular Annunciators, which are available in **black** or red.

Temperature and Humidity Range

Model FC901 is ®UL 864 9th Edition Listed for indoor dry locations within a temperature range of 120 +/- 3°F (49 +/- 2°C) to 32 +/- 3°F (0 +/- 2°C) and a relative humidity of 93 +/- 2% at a temperature of 90 +/- 3°F (32 +/- 2°C).

Related Documentation

Product Data Sheet	Number
170-Watt power supply	9806
Leased-Line / City-Tie Module	9810
Remote Peripheral Module	9811
50-Point Remote Annunciator	9817
LED Annunciator Driver, FT2007-U1	9824
16-Zone (FT2008-U1) / 32-Zone (FT2009-U1) Tabular Annunciators	9825

Central Station Receiver Compatibility Table

The following table shows a list of central station receivers that are compatible with the Cerberus PRO 50-point addressable system, Model FC901 —

Protocol	MX-8000	Sur-Gard System III	Sur-Gard System IV	Telguard TG7GFS04	Silent Knight 9800	Bosch D6600	Bosch D6100
SIA 8	✓	✓	✓	✓	✓	✓	✓
SIA 20	✓	✓	✓	✓	✓	✓	✓
Ademco Contact ID	✓	✓	✓	✓	✓	✓	
4/2	✓	✓	✓				
3/1	✓	✓	✓				

Note: Multiple central station receivers are compatible with the Cerberus PRO 50-point FACP, Model FC901.

Although the table above illustrates central station receivers that have been verified by Siemens with the Model FC901 FACP, additional receivers and formats can also be used with each 50-point addressable system.

After completing the installation, communication between the Digital Alarm Communication Transmitter (Model DACT) and Central Station Receiver must be tested and verified.

Details for Ordering

Model	Part Number	Description
FCM901-U3	S54433-B101-A1	Cerberus PRO Main Board {for the 50-point FACP}
FH901-U3	S54433-B103-A3	System Enclosure, **Black** {for the 50-point FACP}
FH901-R3	S54433-B103-A4	System Enclosure, Red {for the 50-point FACP}
FP2011-U1	500-450222	170-Watt Power Supply

Details for Ordering — (continued)

— Optional Accessories —

Model	Part Number	Description
FCA2018-U1	S54400-A65-A1	Remote Peripheral Module
FCI2020-U1	S54400-A57-A1	Leased-Line / City-Tie Module
FCA901-U1	S54433-C106-A1	Wiring Harness (for use with Cerberus PRO Model FC901 control panels)
FHA901-U1	S54433-B107-A1	Battery Bracket
FHA902-U1	S54433-B106-A1	Flush-Mount Trim Kit, **Black**
FHA902-R1	S54433-B106-A2	Flush-Mount Trim Kit, Red
FSD901-U3	S54433-C102-A1	System Display, **Black** {specifically for the 50-point FACP}
FSD901-R3	S54433-C102-A2	System Display, Red {specifically for the 50-point FACP}
FT2007-U1	S54400-A142-A1	LED Annunciator Driver {32 Outputs | 16 Inputs }
FT2008-U1	S54400-A143-A1	16-Zone Tabular Annunciator, **Black**
FT2008-R1	S54400-A144-A1	16-Zone Tabular Annunciator, Red
FT2009-U1	S54400-A145-A1	32-Zone Tabular Annunciator, **Black**
FT2009-R1	S54400-A146-A1	32-Zone Tabular Annunciator, Red

— Electronics Package —

Model	Part Number	Description	
FC901-U3	S54433-C105-A1	Cerberus PRO Kit for the 50-Point Addressable FACP	
		Includes:	▪ 170W power supply, Model FP2011-U1 (Qty. 1) ▪ System main board, Model FCM901-U3 (Qty. 1)

SIEMENS Cerberus® PRO

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SII – Fire Safety
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Specialized Devices

Air-Duct Housings —> FDBZ Series

Models FDBZ492, FDBZ492-HR, FDBZ492-R and FDBZ492-RP (with FDBZ-WT and FDBZ492-RTL)

ARCHITECT AND ENGINEER SPECIFICATIONS

- Four (4) models available
  - Addressable and conventional (with and without relays)
- Compatible with Siemens – Fire Safety conventional and addressable fire-alarm control panels (FACPs)
- Magnet test feature with the Model OP121 conventional detector
- Design for air-velocity range of 100 to 4,000 feet-per-minute (fpm)
- Robust, compatible conventional remote indicator test switch that incorporates tri-color light-emitting diode (LED)
- Clear housing cover with smoke test port on cover for quick identification of detector type
  - Removable with four (4) captive-thumb screws (no tools required)
  - Includes a smoke / aerosol detector test port
- Optional NEMA 4X-reinforced, stainless-steel and watertight enclosure available, Model FDBZ-WT
- No tools required for cover removal, sampling and exhaust-tube installations
- *Trouble*-event activation upon front-cover removal
- *Alarm* LED visible from front

Remote alarm indicator
(Model FDBZ492-RTL)

FDBZ-series of air-duct housings
(FDBZ492, FDBZ492-HR, FDBZ492-R and FDBZ492-RP)

Watertight housing
(Model FDBZ-WT)

- Self-contained model available with 'on-board' power supply for conventional detectors
- Expanded temperature range
- Relay models available
- ⓊUL268A Listed, ⓊULC-S529 Listed; FM (#3010), CSFM (#3240-0067:0265) Approved

Product Overview

The Siemens — Fire Safety Model 'FDBZ'-series of air-duct-detector housings are designed to be used with the Siemens Model 'H'-series, 'FD'-series and the Model OP121 detectors. Designed for installation directly to heating, ventilating and air-conditioning (HVAC) duct systems, the Model 'FDBZ'-series complies with National Fire Protection Association Standard (NFPA) No.'s 72 and 90A, and is Underwriters' Laboratories Listed.

When equipped, the air-duct detector housing will signal the presence of smoke being carried through the duct system. Air-duct detectors are not intended to be substituted for open-area detection.

Notes: Most conventional time-control equipment guarantee only one (1) detector per zone when the detector's operated relay function is critical. The connection of a remote lamp and a remote relay –per detector – is allowed.
Refer to the installation manual for the respective conventional fire system.

Notes – (cont.'d): With either the Desigo® series or FireFinder® XLS series of FACPs, up to 252-addressable detectors with relays per circuit may be used. The connection of an intelligent remote lamp (ILED) and a remote relay is allowed for each detector simultaneously.

Specifications

The Model 'FDBZ'-series of air-duct housings are uniquely designed to use with the photoelectric detector. Sensitivity of Models PE-11, PE-11C and OP121 detectors can be verified for calibration via LED visual status or a Model RSAW-11, Model RSAC-11 or Model FDBZ492-RTL multi-color remote lamp. A green flash indicates the detector has passed its self test. Amber indicates a *Trouble* condition, and red indicates an *Alarm* event.

Sensitivity range for Models HFP-11, FP-11, SFP-11, HFPO-11, SFPO-11, FDO421, FDOOT441 and FDOOTC441is verified from the multi-color LED of the respective detector, or its sensitivity reading may be printed by command from the corresponding FACP to an optional printer.

Specifications — (continued)

The remote alarm indicator (Model FDBZ492-RTL) allows for manual testing via a key-switch for conventional and addressable detectors, as well as the conventional and addressable air-duct housing with relay. Model FDBZ492-RTL, which mounts remotely from the conventional and addressable air-duct housing, allows for manual relay-output control. The duct-detector remote indicator key-switch also indicates the current state of the detector.

The watertight housing (Model FDBZ-WT), which allows the air-duct detector housing to be installed inside the separate NEMA 4X enclosure, is for installations for either an outdoor area or in environments where excessive moisture is prevalent.

Each detector unit employs a cross-sectional sampling principle of operation. Inlet sampling tubes are available in four (4) lengths (see: Sampling Tube Selection Table). Outlet sampling tubes are one (1) common length and draw. A continuous, cross-sectional sample of air moves through the duct. Stratification or skin affect phenomenon that occurs in the duct can prevent 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 fpm to as high as 4,000 fpm. Each housing comes with three (3) wiring entry ports:

- Two (2) 3/4" conduit knockouts
- One (1) 1/2" conduit opening

The inlet sampling tube length is determined by the width of the air duct being protected. The inlet tube — greater than and nearest to the duct width — should be used (see: Sampling Tube Selection 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 (14cm.), and is supplied with the air-duct housing.

Note: When the use of a remote relay is required, order Model FDBZ492-R for conventional systems; Model FDBZ492-HR for addressable systems. When required, a separate watertight enclosure (Model FDBZ-WT), which is designed to contain the air-duct housings is available.

(For full details, refer to installation instructions for the respective air-duct housing.)

Note: When a self-contained duct detector with power supply is required, order Model FDBZ492-RP.

(For full details, refer to installation instructions part number A6V10330327.)

Sampling Tube Selection Table

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

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

All that is necessary for installation of the air-duct detector is the cutting of three (3) small holes for the Sampling Tube installation (template included), and the drilling of two (2) 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. No mechanical tools are required for removing the cover or connecting the sampling and exhaust tubes to an air-duct housing.

Models ST-50 and ST-100 require support. However, Model ST-100 is shipped in two (2) 5-ft. (152 cm.) pieces with a coupling for field assembly.

Technical Data

Operating Temperature Ranges:	+32°F (0°C) to 120°F (49°C)
Sampling Tube Pressure Range of Differences:	> 0.01 inches; < 1.2 inches of water column
Relative Humidity:	0 – 95%; non-condensing
Air Pressure / Altitude Range:	No effect / No limitations
Air-Duct Velocity:	100 – 4,000 ft. / min (0.51— 20m / sec)
Dimensions:	{H-x-W-x-D} ▪ Rectangular: 14.38" -x- 5" -x- 2.5" (37 cm. -x- 12.7 cm. -x- 6.36 cm.) ▪ Square: 7.75" -x- 9" -x- 2.5" (19.7 cm. -x- 22.9 cm. -x- 6.36 cm.)
Detector Weight:	1.8 Lbs. (0.82 Kg.)

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

For additional electrical specifications, please see the installation instructions of the corresponding air-duct housing.

Operation

Based on the monitoring results, the LED indicator flashes the following colors based on the following conditions:

Flash Color	Condition	Flash Interval (in seconds)
Green*:	Normal supervisory operation. Smoke sensitivity is within rated limits.	10
Yellow:	Detector is in *Trouble* condition, and needs either repair or replacement.	4
Red:	*Alarm* condition.	1
No Flash:	Detector is not powered.	— —

* LED can be turned OFF.
Please follow the corresponding description of the panel used.

Products included with the air-duct housing:

- (1) short-return (outlet) tube
- (1) stopper
- (2) #12 + 3/4" sheet-metal screws
- (1) mounting template

Note: Detector and sampling tube to be purchased separately. Minimum hardware required is: one (1) air-duct housing assembly; one (1) sampling tube and one (1) detector.

Details for Ordering

Model	Part Number	Description
FDBZ492	S54319-B22-A1	A two-wire addressable or conventional duct detector (without relays) designed for direct use on heating, ventilating and air-conditioning (HVAC) air-duct systems. When equipped, the air-duct detector housing will signal the presence of smoke being carried through the duct system. For use with the following Models: – HFP-11 – FDO421 – OP121 – SFP-11 – FDOOT441 – PE-11 – HFPO-11 – FDOOTC441 – PE-11C – SFPO-11 – FP-11
FDBZ492-HR	S54319-B23-A1	A two-wire addressable duct detector (with relays) designed for direct use to HVAC air-duct systems and works with the Remote Test Switch (FDBZ492-RTL). This part has a programmable relay base, and when equipped, the addressable air-duct detector housing will signal the presence of smoke being carried through the duct system. For use with the following Models: – FDO421 – FP-11 – SFP-11 – FDOOT441 – HFP-11 – SFPO-11 – FDOOTC441 – HFPO-11

Details for Ordering – (continued)

Model	Part Number	Description
FDBZ492-R	S54319-B24-A1	A two-wire conventional duct detector with relays designed for direct use on HVAC air-duct systems. This detector has a relay base, and when equipped with conventional air-duct housing, will signal the presence of smoke being carried through the duct system. For use with the following Models: – OP121 – PE-11 – PE-11C
FDBZ492-RP	S54319-B25-A1	A four-wire conventional duct detector with relays and a built-in power supply. Housing is designed for direct use to HVAC air-duct systems. It has a relay base with a built-in power source. When equipped with conventional air-duct housing, this duct detector will signal the presence of smoke being carried through the duct system. For use with the following Models: – OP121 – PE-11 – PE-11C
FDBZ492-RTL	S54319-S27-A1	Device is used for manual testing via a key-switch for duct-housing Models FDBZ492-R, FDBZ492-RP and FDBZ492-HR. Device mounts remotely from the conventional and addressable air-duct housing, allowing for manual relay-output control. The duct-detector remote key-switch also indicates the current state of the detector. For use with the following Models: – FDBZ492-R – FDBZ492-RP – FDBZ492-HR
FDBZ-WT	S54319-B26-A1	An optional, separate watertight NEMA 4X enclosure (Model FDBZ-WT) that provides added watertight protection for any of the Model FDBZ492-series duct housings. The duct housing fits into the separate 4X enclosure. This part allows the air-duct detector housing to be installed in the separate enclosure, and can be used in either an outdoor area or in environments where excessive moisture is prevalent. For use with the following Models: – FDBZ492 – FDBZ492-R – FDBZ492-HR – FDBZ492-RP
ST-10	500-649710	Sampling tube for Ducts 6" to 1'
ST-25	500-649711	Sampling tube for Ducts over 1' to 3'
ST-50	500-649712	Sampling tube for Ducts 3" to 5'
ST-100	500-649713	Sampling tube for Ducts 5' to 10'

Notice: This marketing data sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

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Cerberus PRO 50-Point Fire System

Model FC901

Model FC901 is an addressable FACP that provides a cost-effective solution for simple fire-alarm-system applications. Model FC901 contains one (1) built-in DACT and two (2) NACs.

Small and compact in design, Model FC901 is ideal for small fire-protection applications using no more than 50 addressable points:

- retail outlets / strip malls
- doctors' offices
- dry cleaners
- restaurants
- banks, etc.

The dimensions of Model FC901 (connected to a one-height-unit enclosure) are approximately as follows: 16.25"[41.3 cm.](H) x 18"[46 cm.](W) x 5"[41.3 cm.] (D)

The weight (without operating unit or batteries) is approximately 9 Lbs [4082 g].

50-point System Components

50-Point System Enclosure

Model FH901-R3

The Model FH901-U3 / R3 enclosure for the Model FC901 FACP is available in either black or red, and supports all system modules. The enclosure also supports 12Ah batteries.

Note: For systems requiring larger than 12Ah batteries, use a UL Listed battery box.

When field-wiring installation is complete, the main board shall be moved to the upper position for standard mounting prior to applying power to the system.

50-point System Components (cont.)

50-Point System Enclosure (cont.)

The Model FH901-U3 / R3 enclosure for the 50-point panel is comprised of a dual-mounting setup that allows the main board to be partially mounted in a lower-to-upper position. When temporarily installed in the lower position, technicians are allowed more space to install field wiring at the time of system set-up.

Additionally, the enclosure supports an optional battery bracket (Model FHA901-U1) that can be used to secure batteries up to 12Ah. Model FHA901-U1 is required to comply with seismic certification, pursuant to ASC / SEI 7-05, Section 13.2.2.

A flush-mount trim kit (Model FHA902-U1 / R1) is also available for use when flush mounting Model FH901-U3 / R3.

Remote Annunciator (not approved for use in Canada)

Model FSD901-U3

Used exclusively with the Cerberus PRO 50-point FACP, the Remote Annunciator (Model FSD901-U3 / R3) shows existing status of the Model FC901 FACP.

A built-in RS–485 serves as the interface between the remote annunciator and the Cerberus PRO 50-point FACP. Up to eight (8) remote annunciators are supported for each 50-point fire system. A 3.5-inch (8.9 cm) by 1.5" (3.8 cm) LCD screen will show details of the event in alphanumeric form. The display screen can be scrolled to reveal additional events. Each screen supports 182 characters: seven (7) lines with 26 characters per line

Remote Peripheral Module (with RS—485 interface)

The Remote Peripheral Module (FCA2018-U1) provides a means of connecting a Cerberus PRO panel to a parallel printer for creating a hard copy of system-status and configuration reports. This supervised, intelligent module contains built-in transient protection and plain-decimal addressing.

Model FCA2018-U1 is remotely connected to the Model FCA2016-U1 RS—485 communication bus from any Cerberus PRO system enclosure. Model FCA2018-U1 uses 'Class B' (Style 4) or 'Class A' (Style 6) wiring, and provides two (2) RS—232 (serial) ports and a single parallel port that allow connection to the parallel printer (Model PAL-1).

When Model PAL-1 is used with the remote peripheral module, Model FCA2018-U1 supervises the printer for *On / Off Line, Power On, Paper Out, Paper Jam,* and *wiring-fault* conditions, as required by UL for NFPA 72 proprietary systems. Event and report printing is generated at the operating unit on the main Cerberus PRO system.

SIEMENS
Ingenuity for life

Cerberus® PRO
Detectors and Peripherals

Multi-Criteria Fire | CO Detector [with **ASA***technology*™]
Model OOHC941

Architect & Engineer Specifications

- ☐ UL 268 7th edition Listed, ULC Listed; FM (#3230, #3210), CSFM (#7272-0067:0258) Approved
- ☐ Built-in ISO*technology*™
- ☐ Competitive 10-year CO sensor lifetime
- ☐ Advanced multi-criteria fire detector that has optical thermal and CO sensors
- ☐ Differentiates between deceptive phenomena and an actual fire (nuisance-alarm avoidance)
- ☐ Compatible with Siemens Model `H'-series devices on the same loop (with Cerberus PRO fire-alarm control panels [FACPs])
- ☐ Enhanced detection via forward-and-backward light-scattering technology
- ☐ Supervisory feature for temperature and CO-concentration-threshold monitoring
- ☐ Complies with NFPA 76 (Telco standard) as `VEWFD' high-sensitivity detector
- ☐ UL Listed and FM Approved as a multi-criteria and `VEWFD' fire detector
- ☐ Low-temperature warning for sprinkler systems, per NFPA 25
- ☐ UL 268A Listed for direct air-duct use (4,000 FPM)
- ☐ UL 2075 and NFPA 72 requirements for sensitivity self-monitoring
- ☐ Remote sensitivity-measurement capability
- ☐ Tri-color detector-status light-emitting diode (LED) with 360 ° view
- ☐ Polarity insensitive via *SureWire™*
- ☐ Responds to both flaming and smoldering-fire signatures
- ☐ Supervisory temperature-monitoring feature
- ☐ Automatic environment compensation
- ☐ Meets UL, NFPA 72 requirements for sensitivity self-monitoring
- ☐ Compatible with:
  - Model DB-11_series mounting bases
  - Model DPU (device programmer / loop tester)
- ☐ Restriction of Hazardous Substances (RoHS compliant)

Product Overview

Model OOHC941 is an advanced, multi-criteria fire **|** CO detector that incorporates a redundant optical / thermal sensor. Additionally, Model OOHC941 incorporates **ASA***technology*™ a distinctive forward / backward, light-scattering technology that provides high-tech, unparalleled fire detection to the widest range of fire types allowing the detector to distinguish non-threatening deceptive phenomena.

Each Model OOHC941 unit is UL 268 7th edition listed incorporating advanced built-in **ISO*technology***™ - True Class-X SLC operation (use is optional) greatly improving system reliability and circuit integrity while providing advanced addressable fault finding.

The unit may be programmed as a high-sensitivity detector, with a 0.2 %/ft Pre-Alarm threshold and 1.0 %/ft Alarm threshold thus meeting the requirements of NFPA 76 Standard *for the Fire Protection of Telecommunications Facilities* as a Very Early Warning Fire Detector (VEWFD).

Each OOHC941 detector offers a complete and contemporary solution to meet fire and CO life-safety gas-detection specifications. Multi-Criteria Fire / CO Detector detectors can be field programmed for simultaneous and / or independent functionality, depending upon the precise customer and application requirements.

For example, the detector can simultaneously utilize the optical and heat sensors for enhanced fire detection (multi criteria), as well as provide independent outputs for CO gas life-safety and heat detection. Any combination of the sensors is possible.

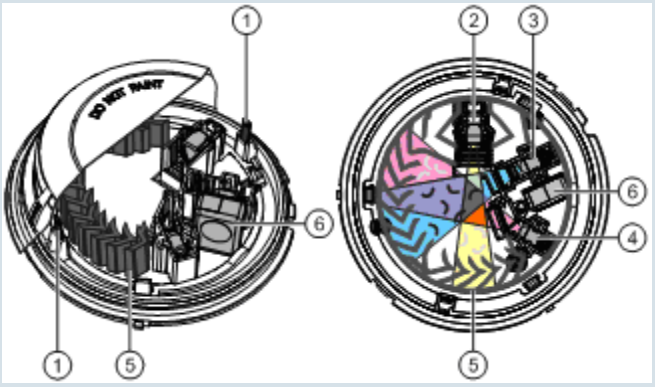
Each detector is very versatile, and meets the following fire-industry standards:

- Multi-criteria fire detector (UL 268 7th edition)
- Carbon Monoxide (CO) gas detector (UL 2075)
- Heat detector (UL 521) with five (5) possible field-selectable temperatures; combined with four (4) rate-of-rise options
- Direct, in-duct (plenum) detector (UL 268A)
- Supervisory monitoring for CO levels and temperature ranges
- NFPA 76 (Telco Standard) as VEWFD
- Low-temperature warning signal at 40°F (4.4°C) for sprinkler systems, per NFPA 25 / NFPA 72

For instance, the signals from the detector's sensors are monitored and processed via the **ASA**–patented algorithm technology, which combines the signals into a neural network to create an intelligent, multi-criteria addressable detector.

Model OOHC941
Multi-Criteria Fire | CO Detector
[with **ASA***technology***]**

1. **Heat sensors**
2. **Receiver**
3. **Backward scatterer**



4. **Forward scatterer**
5. **Labyrinth**
6. **CO sensor**

Model OOHC941

Forward-and-Backward Light-Scattering Technology (with CO sensor)

Product Overview – (continued)

The encompassing result is an intelligent detector that provides enhanced detection capability to a wide range of products of combustion – while offering unsurpassed rejection to nuisance-alarm sources, including: dust | steam | cooking aerosols and other deceptive phenomena that could cause false alarms. It is known at Siemens as the "No-false-alarm guarantee".

Model OOHC941 is a two-wire, addressable device, functioning as a multi-purpose detector – satisfying the revised requirements of UL 268 7th edition using smoke, heat and CO gas detection in a singular, aesthetically pleasing package. Comparable to other multi-functional detectors, Model OOHC941 also serves as a very cost-effective, viable detection solution that saves on product | installation | maintenance costs. The unit's value is multiplied with built-in ***ISOtechnology*** the True Class-X - NFPA 72 compliant SLC isolation feature supporting up to 252 isolation ready devices per loop. When used in mixed mode a maximum of 30 non-isolated devices between isolation devices (wired in polarity-insensitive mode).Each detector fits into one (1) wall-or-ceiling footprint, and only occupies one (1) address on the signal-line circuit (SLC).

A patented forward-and-backward, light-scattering technology, which is able to distinguish both small and large products of combustion, operates at the core of each Model OOHC941 intelligent, addressable CO-with-**ASA** detector. Each Model OOHC941 detector provides an eco-friendly solution to legacy ionization detectors - eliminating the need for a radioactive source, along with inevitable HAZMAT-disposal requirements. The powerful **ASA***technology* enables simultaneous detection of both smoldering and flaming fires – all in ecologically efficient manner – and is a valid, RoHS-compliant (Restriction of Hazardous Substances) detection alternative to legacy ionization detectors.

Two (2) thermal sensors, as well as an electromechanical CO sensor, are included, making each Model OOHC941 detector a robust, reliable device suitable for the most challenging applications. Additionally, Model OOHC941 also works as a carbon-monoxide (CO) life-safety gas detector, compliant with NFPA 72 and UL2075.

Operation

Forward-and-Backward Light-Scattering Technology

The high-quality, optical-electronic measuring chamber for each Model OOHC941 houses the following components:

- Two (2) optical transmitters
- One (1) optical receiver
- Two (2) thermal sensors
- One (1) CO sensor

The transmitters illuminate the smoke particles from different angles: one sensor creates forward scatter, and the other sensor creates backward scatter. The scattered light subsequently reaches the receiver (photodiode) and generates a measurable electric signal. The combination of a forward-and-backward scatter facilitates optimum detection, as well as differentiates between light-and-dark particles / particle size.

This type of detection creates standardized, responsive behavior, therefore optimizing the differentiation between wanted signals and deceptive phenomena. Additionally, the heat sensors make it possible to detect fires without smoke generation.

The CO sensor enables faster detection of fires with incomplete combustion, as well as fires with the development of high levels of CO. The combination of optical, thermal and CO signals optimizes detection reliability.

Additionally, this scenario generates the following advantages:

- ✓ Early detection of all fire types of fire – whether they generate light-or-dark smoke, or no smoke
- ✓ The fire detector can be operated at a lower sensitivity level, thus achieving a higher immunity against false alarms that may otherwise be caused by cold aerosols (e.g. – by smoking, electrical welding, etc.)

In the case of an open fire, the smoke sensitivity is heightened by a temperature increase – a detection-reliability level that is comparable to a wide-spectrum smoke detector – that can be achieved and maintained.

Operation – (continued)

Field-Device Programmer / Test Unit

Model OOHC941 is compatible with the Siemens field-device programmer / test unit (Model DPU), which is a compact, portable menu-driven accessory for electronically programming and testing these addressable detectors promptly and reliably. For instance, the field technician selects the accessory's program mode, and enters the desired address.

Model DPU eliminates the need for cumbersome, unreliable mechanical programming methods (e.g. – dials and rotary switches), and reduces installation and service costs by electronically programming and testing the detector prior to installation. When set in `test' mode, Model DPU 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.

Each field-device programmer / test unit operates on AC power or rechargeable batteries, providing flexibility and convenience in the programming / testing of fire-safety equipment from practically any location. Additionally, with the use of a Model DPU unit, there is no longer a cause for concern with any vibration, corrosion and other deteriorating conditions that could negatively affect any electro-mechanical-addressing mechanism.

Field-selectable application profiles

Model OOHC941 provides 26 user-friendly, field-selectable application profiles, identified with universally known names (e.g. — hotel | Telco | office | parking garage | dormitory | data center, etc.) Refer to installation manual: **P/N – A6V10324657** for a complete list and description of application profiles.

Due to generic-name classifications, no cross-reference tables are required as the application name resides in the panel's configuration tool. This user-friendly feature — along with the algorithms provided by **ASA***technology* — provides a reliable, field-configurable detector suitable for an array of applications.

Field-selectable temperature settings

Model OOHC941 provides five (5) field-selectable temperature thresholds, ranging from 135°F to 175°F (57°C to 79°C), with fixed and rate-of-rise options. These ranges provide maximum flexibility to program and to easily adjust the temperature settings that suit multi-application needs with a building or in changing environmental conditions.

Model OOHC941 can be configured to provide a low-temperature warning signal at 40°F (4.4°C). Additionally, Model OOHC941 occupies only one (1) address on the SLC and provides a CO cell end-of-life warning and fault condition meeting NFPA 72 and UL 2075 requirements. This configuration (along with connection to a compatible Cerberus PRO fire-alarm control panel [FACP]) meets NFPA 72 requirements for sprinkler-temperature monitoring, and serves to prevent water freezing inside pipes, relative to water-based suppression systems.

Ambient supervisory feature for temperature-threshold ranges, relative to Carbon Monoxide (CO)

Another significant characteristic for Model OOHC941 CO detectors lies in the supervision of ambient temperatures. A specified, unique warning point at a customized temperature threshold ranging from -4°F to 120°F (-20°C to 49 °C) can be set manually. This feature is practical for monitoring of machinery; special processes, or for environments where maintaining a temperature is critical as an early-warning supervisory signal.

Optionally, Model OOHC941 also provides supervision of the carbon-monoxide (CO) level selected by the customer. The CO supervision is provided in addition to the normal UL2075 and NFPA 72 alarm levels, and is user-customized for special applications. The range for configuration of each Model OOHC941 device to a compatible Siemens FACP is 30 – 600 parts-per-million (PPM).

CO Detection

In addition to the multi-criteria functionality, each Model OOHC941 detector provides an independent CO life-safety signal that meets the requirements of NFPA 72 and UL2075, and meets CO-sensitivity limits under UL2034 Standard. Additionally, Model OOHC941 detectors functions from a reliable electrochemical CO cell, transmitting CO concentration on an independent signal separate from the fire-detection signals to the FACP.

This method is especially useful for any building that uses fossil-burning fuel sources, due to the potential of increased CO intoxication risk. Application examples include: hotel | heating rooms | indoor parking lots and automotive workshops | combustion power plants | chemical labs | production sites.

Self-monitoring for smoke-sensor sensitivity

Model OOHC941 provides an automatic self-monitoring sensitivity check that complies with the NFPA 72 sensitivity requirements. When connected with a compatible FACP, it provides automatic, dynamic sensitivity verification within the agency-listed-and-approved limits. Besides checking for sensor integrity and automatic environmental compensation, Model OOHC941 provides a display and report of sensitivity in percent-per-foot (or percent-per-meter) at the FACP.

Operation – (continued)

Profile Overview

Each Model OOHC941 intelligent detector contains one (1) tri-color LED indicator, capable of flashing any one (1) of three (3) distinct colors: GREEN, YELLOW, or RED. During each flash interval, the microprocessor-based detector monitors the following:

- Smoke in its sensing chamber
- Smoke sensitivity is within the range indicated on the nameplate label
- Internal sensors and electronics

Based on the results of the monitoring, the LED indicator flashes the following:

FLASH COLOR	CONDITION	FLASH INTERVAL [in seconds]
GREEN*:	Normal supervisory operation. Smoke sensitivity is within rated limits.	10
YELLOW:	Detector is in trouble and needs replacement.	4
RED:	*Alarm* condition	1
NO FLASH:	Detector is not powered.	—

* denotes LED can be turned OFF
Please follow the corresponding description of the panel used.

A quick visual inspection of the detector can be done at any time since the appropriate color is displayed via the LED indicator found on the detector's faceplate.

Installation

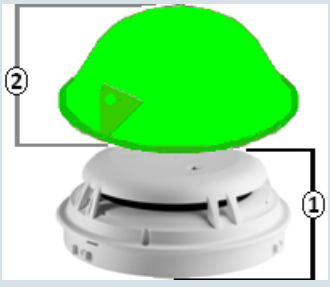
All Model OOHC941 intelligent, addressable detectors use a surface-mounting base (Model DB-11 or DB-11E), which mounts on a 4-inch (10.2 cm.) octagonal, square or single-gang electrical back box. The base utilizes screw-clamp contacts for electrical connections and self-wiping contacts for increased reliability.

The Model DB-11 detector base can be used with the optional Siemens Model LK-11 detector locking kit, which contains 50 detector locks and an installation tool to prevent unauthorized removal of the detector head. Model DB-11 has decorative plugs to cover the outer mounting-screw holes.

Model OOHC941may be installed on the same initiating circuit with the Siemens Model `H'-series detectors [when used with Cerberus PRO FACPs] –

- HFP-11, HFPT-11
- Model `XTRI'-series interfaces
- Model `HTRI'-series interfaces
- Model HCP output-control detection devices
- Model `HMS'-series manual stations
- Model `HZM'-series of addressable, conventional zone modules

1. **Model OOHC941 addressable detector**
2. **Protective dust cover (included)**

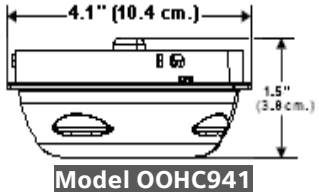


Each detector, which is shipped with a protective dust cover, consists of the following:

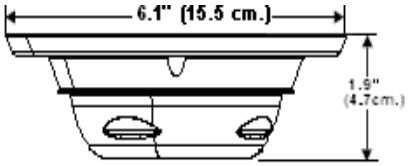
- Dust-resistant photoelectric chamber
- Solid-state, non-mechanical thermal sensor
- CO sensor
- Microprocessor-based electronics with a low-profile plastic housing

All Model OOHC941 intelligent detectors are approved for operation with the Underwriters' Laboratories-specified temperature range of 32° to 120° (0° to 49°C) – depending on heat-detector configuration (see: installation manual **P/N – A6V10324657** for further details).

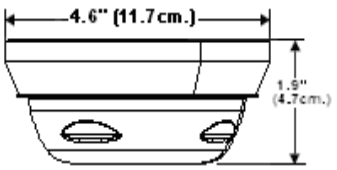
Mounting Diagrams | Dimensions



Model OOHC941



Model OOHC941
[with Model DB-11 detector base]



Model OOHC941
[with Model DB-11E detector base]

Application Data

Installation of Model OOHC941 intelligent, addressable detector requires a two-wire circuit. In many retrofit cases, existing wiring may be used. `T-tapping' is permitted only for Style 4 (Class B) wiring. Model OOHC941 is polarity insensitive, which can greatly reduce installation and debugging times.

Model OOHC941 detectors can be applied within the maximum 30-feet center spacing (900 sq. ft. areas,) as referenced in NFPA 72. This application guideline is based on ideal conditions – specifically, smooth ceiling surface, minimal air movement, and no physical obstructions between potential fire sources and the actual detector. Do not mount detectors in close proximity to ventilation or heating and air conditioning outlets. Exposed joists 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 – Fire Safety distributor or sales office whenever you need assistance applying Model OOHC941 in unusual applications. Be sure to follow NFPA guidelines and UL Listed / ULC Listed installation instructions – included with every Siemens – Fire Safety detector – and local codes as for all fire protection equipment.

Technical Data

OPERATING TEMPERATURE:	+32° – +120°F (0° – +49°C)
HEAT DETECTOR RANGE:	+135° – +175°F (+57° – +79°C)
PROGRAMMABLE SUPERVISORY TEMPERATURE WARNING:	-4° – +120°F (-20° – +49°C) (available with compatible FACPs)
PROGRAMMABLE SUPERVISORY CO-GAS WARNING:	30 – 600 ppm (available with compatible FACPs)
DETECTOR SENSITIVITY RANGE:	UL Listed: 0.88% to 3.35% / ft. NFPA 76 (Telco) VEWFD: 0.2 % / ft. *Pre-Alarm,* 1.0 % / ft. *Alarm*
AIR VELOCITY: Open Area: Direct-in-duct:	0 – 4,000 feet-per-minute (fpm) 0 – 4,000 fpm
AIR PRESSURE:	No effect
ACTIVE, STANDBY CURRENT:	0.75 mA
APPLICATION PROFILES:	26 (field-configurable)
CO CONCENTRATION RESPONSE TIMES	70±5 PPM in 60 – 240 min. 150±5 PPM in 10 – 50 min. 400±10 PPM in 4 – 15 min.
	NOTE: Meets UL2075 Standard, and has been tested to the sensitivity limits defined in UL2034Standard. Additionally complies with NFPA 72 code
RELATIVE HUMIDITY:	0 – 95% (non-condensing)

Approvals | Standards

FACTORY MUTUAL (FM)	3210, 3220	
CALIFORNIA STATE FIRE MARSHAL (CSFM)	7272-0067:0260	
UNDERWITERS LABORATORES (UL | ULC)	UL268	UL2034
	UL268A	UL2075
	UL521	
	ULC-S529	ULC-S530
NATIONAL FIRE PROTECTION AGENCY	NFPA 25	
	NFPA 72	
	NFPA 76	

Thermal Ratings

FIELD-SELECTABLE TEMPERATURE PROFILES	
FIXED TEMPERATURE:	135°F (57.2°C)
	145°F (62.8°C)
	155°F (68.3°C)
	165°F (73.9°C)
	175°F (79.4°C)
FIXED TEMPERATURE + RATE-OF-RISE: (R-O-R)	135°F (57.2°C) + R-o-R, 15°F (-9.4°C)
	175°F (79.4°C) + R-o-R, 15°F (-9.4°C)
	135°F (57.2°C) + R-o-R, 20°F (-6.6°C)
	175°F (79.4°C) + R-o-R, 20°F (-6.6°C)

FIELD-SELECTABLE ALARM-THRESHOLD PROFILES	
THRESHOLD:	2.5% / feet
	3.0% / feet
THRESHOLD, VERIFIED:	2.5% / feet
	3.0% / feet

Panel Compatibilities

MODEL OR TYPE	DATA SHEET	PANEL
XLS	6300	FireFinder (fire)
XLSV	6340	FireFinder (fire w/ voice)
Modular	8300	Cerberus PRO Modular
FC901	9813	Cerberus PRO 50-point addressable
FC922	9815	Cerberus PRO 252-pt. addressable (fire)
FC924		Cerberus PRO 504-pt. addressable (fire)
FV922	9821	Cerberus PRO 252-point addressable (fire w/ Intelligent Voice Communication [IVC])
FV924		504-pt. addressable (fire w/ Intelligent Voice Communication [IVC])

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
OOHC941	S54320-F8-A2	Multi-Criteria Fire | CO Detector with **ASA***technology*™
DB-11	500-094151	Detector Mounting Base
DB-11E	500-094151E	Detector Base, small
DB2-HR	S54370-F12-A1	Detector Mounting Base with Relay
RL-HC	500-033230	Remote Alarm Indicator: 4" (10.2 cm) octagon-box mount, red
RL-HW	500-033310	Remote Alarm Indicator: single-gang box mount, red
FDBZ492	S54319-B22-A1	Addressable Air-Duct Housing
FDBZ492-HR	S54319-B23-A1	Addressable Air-Duct Detector with Relay
LK-11	500-695350	Base Locking Kit

See: www.STI-USA.com for further details on ordering Model STI-9604

In Canada order:

MODEL OR TYPE	PART NUMBER	PRODUCT
DB-11C	500-095687	Detector Mounting Base, ULC Listed

NOTICE – The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice.
The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.

Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product, and are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

SIEMENS

Cerberus® PRO

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February - 2022
(Rev.9)

Cerberus® PRO
Detectors and Peripherals

Photoelectric Smoke Detector [with ISO*technology*™]

Model OP921

Architect & Engineer Specifications

- ☐ UL 268 7th Edition Listed
- ☐ Built-in ISO*technology*™
- ☐ 252 Isolation devices per SLC
- ☐ Each detector is self-testing:
  - Self-monitored for sensitivity with UL Listed limits
  - complete diagnostics performed every 10 seconds
- ☐ Compatible with Model 8720 | DPU (device programmer / loop tester)
- ☐ Polarity insensitive via *SureWire*™ technology
- ☐ Functions with Model DB-11–series mounting bases
- ☐ Tri-color detector-status light-emitting diode (LED) with 360 ° view
- ☐ Field-selectable application-sensitivity profiles
- ☐ Remote sensitivity-measurement capability
- ☐ Utilizes advanced, microprocessor-based signal processing
- ☐ Extended temperature-and-humidity operating range
- ☐ Automatic environment compensation
- ☐ Superior electromagnetic interference (EMI) and radio-frequency interference (RFI) immunity
- ☐ Restriction of Hazardous Substances (RoHS compliant)
- ☐ UL Listed | CSFM Approved
  - UL 268: `Open Area Smoke Detection'
  - UL 268A (Duct) - `In-duct housing' use
  - UL 268A (Duct) - `Direct-in-Duct' use
  - ULC-S531: `Open Area Smoke Detection'
  - CSFM | File: 7272-0067:0258

Product Overview

The Photoelectric Smoke Detector (Model OP921) uses state-of-the-art microcontroller circuitry and surface-mount technology for maximum reliability. Model OP921 incorporates an optical sensor using a light-scattering detection principle. The device utilizes advanced software algorithms to analyze the signals providing highly stable and accurate smoke detection.

Model OP921 is UL 268 7th edition listed incorporating advanced built-in **ISO*technology***™ - True Class-X SLC operation (use is optional) greatly improving system reliability and circuit integrity while providing advanced addressable fault finding.

Each detector fits into one (1) wall-or-ceiling footprint, and only occupies one (1) address on the signal-line circuit (SLC)

Model OP921 is a plug-in, two-wire, addressable photoelectric smoke detector whose value is increased with built-in **ISO*technology*** feature. Model OP921 is Underwriters' Laboratories Listed [UL268A Listed for direct in-air duct usage].

Each detector utilizes a dust-resistant photoelectric smoke chamber and microprocessor-based electronics with a low-profile plastic housing. Every Model OP921 fire detector is shipped with a protective dust cover.

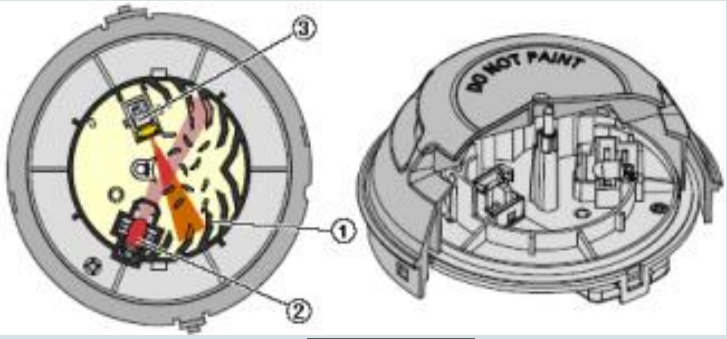
Operation

Model OP921 is a wide-spectrum, photoelectric smoke detector that incorporates an infrared light-emitting diode (IRLED), as well as a 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 (see: images on page 2).

Model OP921
Photoelectric Smoke Detector

1. **Labyrinth**
2. **Optical transmitter**
3. **Optical receiver**



Model OP921

1. **Dust cover**
2. **Photoelectric smoke detector**

Sensitivity Settings

Application Parameter Sets

Model OP921 provides four (4) pre-programmed sensitivity parameter sets that can be selected by the Siemens fire-alarm control panel in order to match the expected application or environmental conditions:

- Sensitive
- Standard
- Robust
- Air-duct

***Sensitive*:** This application parameter set is practically suitable for areas where few misleading sources of false alarm are present, and is appropriate where priority is given to detecting open fires as soon as possible (e.g. – typically a clean application with controlled environmental conditions).

Standard: This application parameter set, which is ideal for normal office | hotel-lobby-type applications, is the default setting.

Robust: This application parameter set offers improved resistance to false alarms in areas where misleading sources, such as cigarette smoke or exhaust fumes, may cause a nuisance alarm.

Air-Duct: This application parameter set is used when the detector is used a UL268A (DI) compliant, direct in-air duct application without a duct housing.

Model OP921 does not require a field sensitivity test. Model OP921 is UL Listed as a self-testing device and complies with NFPA 72 as a self-monitoring detector and control-panel arrangement.
This parameter set is also used when Model OP921 is used in air-duct housings (Models FDBZ492 and FDBZ492-HR).

A quick visual inspection is sufficient to indicate the condition of Model OP921 at any time.
If more detailed information is required, a printed report can be provided from the compatible FACP, indicating the status and settings assigned to each individual detector. When Model OP921 moves to `Alarm' mode, the detector will flash RED and continue flashing until the system is reset at the FACP. At that same time, any user-defined, system-alarm functions programmed into the system are activated.

Model OP921 contains a tri-color LED indicator, capable of flashing any one (1) of three (3) distinct colors: GREEN | YELLOW | RED.
During each flash interval, the microprocessor-based detector monitors the following scenarios:

- Smoke sensitivity is within the range indicated on the nameplate label
- Smoke in its sensing chamber
- Internal sensors and electronics are functional

Sensitivity Settings - (continued)

Based on the results of the monitoring, the LED indicator flashes the following:

FLASH COLOR	CONDITION	FLASH INTERVAL [in seconds]
GREEN*:	Normal supervisory operation. Smoke sensitivity is within rated limits.	10
YELLOW:	Detector is in trouble and needs replacement.	4
RED:	'Alarm' condition	1
NO FLASH:	Detector is not powered.	–

* denotes LED can be turned OFF

Please follow the corresponding description of the panel used.

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 respective Cerberus PRO Modular | FireFinder XLS/V | FC/FV9–series FACP that indicates the status and settings assigned to each individual detector.

Installation

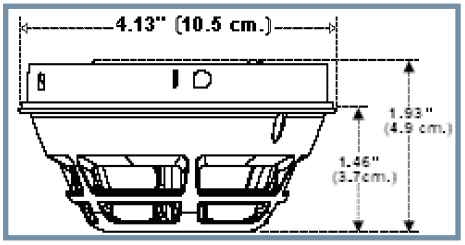
All Model OP921 intelligent, addressable detectors use a surface-mounting base (Model DB-11 or DB-11E), which mounts on a 4-inch (10.2 cm.) octagonal, square or single-gang electrical back box. The base utilizes screw-clamp contacts for electrical connections and self-wiping contacts for increased reliability.

The Model DB-11 detector base can be used with the optional Siemens Model LK-11 detector locking kit, which contains 50 detector locks and an installation tool to prevent unauthorized removal of the detector head. Model DB-11 has aesthetically conducive plugs to cover the outer mounting-screw holes.

Model OP921 may be installed on the same initiating circuit with the Siemens Model `H'-series detectors [when used with Cerberus PRO Modular | FireFinder XLS/V | FC/FV9–series FACPs] –

- XTRI series interface modules
- HTRI series interface modules
- HMS & XMS series manual stations
- HFP-11, HFPT-11 detection devices
- HCP output-control module
- HZM conventional zone module

Dimensional Data



Each detector, which is shipped with a protective dust cover, consists of the following:

- Built-in **ISO*technology*** for True-Class-X SLC performance
- Dust-resistant photoelectric chamber
- Microprocessor-based electronics with a low-profile plastic housing

All Model OP921 intelligent, addressable detectors are approved for operation with the Underwriters' Laboratories-specified temperature range of 32° to 120° (0° to 49°C). (See: installation manual P/N — A6V10323928 for further details)

Application Data

Installation of Model OP921 smoke detectors require a two-wire circuit. In many retrofit cases, existing wiring may be used. `T-tapping' is permitted only for Style 4 (Class B) wiring. Model OP921 is polarity insensitive, which can greatly reduce installation and debugging times. When operating in NFPA 72 Class-X applications SLC polarity must be maintained to support up to 252 isolation ready devices per loop. When used in mixed mode a maximum of 30 non-isolated devices between isolation devices (wired in polarity-insensitive mode). See control panel install document for further details.

Model OP921 detectors can be applied within the maximum 30-feet center spacing (900 sq. ft. areas) as referenced in NFPA 72. This application guideline is based on ideal conditions – specifically, smooth ceiling surfaces, minimal air movement, and no physical obstructions between potential fire sources and the actual detector. Do not mount detectors in close proximity to ventilation or heating and air conditioning outlets. Exposed joists 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 – Fire Safety distributor or sales office whenever you need assistance applying Model OP921 in unusual applications. Be sure to follow NFPA guidelines and UL Listed / ULC Listed installation instructions – included with every Siemens – Fire Safety detector – and local codes as for all fire protection equipment.

Field-Device Programmer / Test Unit

Model OP921 is compatible with the Siemens field-device programmer / test unit (Model 8720 | DPU), which is a compact, portable menu-driven accessory for electronically programming and testing these addressable detectors promptly and reliably. For instance, the field technician selects the accessory's program mode, and enters the desired address.

Model DPU eliminates the need for cumbersome, unreliable mechanical programming methods (e.g. – dials and rotary switches), and reduces installation and service costs by electronically programming and testing the detector prior to installation. When set in `test' mode, Model DPU 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.

Each field-device programmer / test unit operates on AC power or rechargeable batteries, providing flexibility and convenience in the programming / testing of fire-safety equipment from practically any location. Additionally, with the use of a Model DPU unit, there is no longer a cause for concern with any vibration, corrosion and other deteriorating conditions that can accompany the vitality of electro-mechanical-addressing mechanisms.

Each detector fits into one (1) wall-or-ceiling footprint, and only occupies one (1) address on the signal-line circuit (SLC).

Technical Data

OPERATING TEMPERATURE:	+32° – +120°F (0° – +49°C)
RELATIVE HUMIDITY:	0 – 95% (non-condensing)
AIR PRESSURE:	No effect
AIR VELOCITY:	0 – 4,000 feet-per-minute (fpm) (0 – 20 meters-per-second)
INPUT VOLTAGE RANGE:	16VDC – 30VDC
`ALARM' CURRENT, MAX.:	410µA
`STANDBY' CURRENT, MAX.:	250µA
MAXIMUM SPACING:	30–ft. centers (900 sq. ft.), per NFPA 72
DETECTOR WEIGHT:	0.317 Lbs. (0.144 kg.)
MECHANICAL PROTECTION GUARD:	UL and ULC Listed (with STI Guard Model STI-9604)
SENSITIVITY RANGE:	1.41 - 3.76 % ft obs. (Nominal 2.0% / ft. obs.)

Panel Compatibilities

MODEL OR TYPE	DATA SHEET	PANEL
XLS	6300	FireFinder® (fire)
XLSV	6340	FireFinder (fire w/ voice)
Cerberus PRO Modular	8300	System Overview
FC901	9813	Cerberus PRO 50-point addressable
FC922	9815	Cerberus PRO 252-pt. addressable (fire)
FC924		Cerberus PRO 504-pt. addressable (fire)
FV922	9821	Cerberus PRO 252-point addressable (fire w/ Intelligent Voice Communication [IVC])
FV924		504-pt. addressable (fire w/ Intelligent Voice Communication [IVC])

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
OP921	S54320-F4-A2	Photoelectric Smoke Detector

Compatible Devices:

MODEL OR TYPE	PART NUMBER	PRODUCT
DB-11	500-094151	Detector Mounting Base
DB-11E	500-094151E	Detector Base, small
DB2-HR	S54370-F12-A1	Detector Mounting Base with Relay
RL-HC	500-033230	Remote Alarm Indicator: 4" (10.2 cm) octagon.-box mount, red
RL-HW	500-033310	Remote Alarm Indicator: single-gang box mount, red
FDBZ492	S54319-B22-A1	Addressable Air-Duct Housing
FDBZ492-HR	S54319-B23-A1	Addressable Air-Duct Detector with Relay
LK-11	500-695350	Base Locking Kit

See: www.STI-USA.com for further details on ordering Model STI-9604

In Canada order:

MODEL OR TYPE	PART NUMBER	PRODUCT
DB-11C	500-095687	Detector Mounting Base, ULC Listed

NOTICE – The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice.
The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.

Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product, and are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

SIEMENS

Cerberus® PRO

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February - 2021
(Rev. 10)

SIEMENS

FACP Accessories

PAD-4 Distributed Power Supply Unit

Notification Appliance Circuit Extender

Models PAD-4-MB I PAD-4-ENCL (with FP2011-U1 / FP2012-U1 Power Supplies)

Architect and Engineer Specifications

- ☐ Four (4) 'Class B', power-limited notification appliance circuits (NACs)
- ☐ 'Class A', field-selectable wiring
  - Each unit can support an optional module (Model PAD-4-CLSA) that converts two (2) built-in 'Class A' NACs into four (4) 'Class A' NACs
- ☐ Up to 3 Amps of auxiliary-power output
- ☐ Optional built-in strobe synchronization
  - Supports coded audible signals, including Temporal 3, Temporal 4 patterns
- ☐ Battery supervision and control
- ☐ 'Form C' general Trouble / AC Fail monitoring contact
- ☐ Power supplies support NAC power
  - Up to 6A used with Model FP2011-U1
  - Up to 9A used with Model FP2012-U1
- ☐ 24VDC output voltage
- ☐ Ground-fault detection
- ☐ Advanced microprocessor control
- ☐ Uses Flash memory-based system firmware
  - Optional system-diagnostic and firmware-upgrade tool
- ☐ Multi-module mounting in System 3™ enclosures
  - Multiple modules share battery set
- ☐ ADA Compliant
- ☐ UL 864 9th Edition Listed, UL 1481 Listed
- ☐ FM (#3010), CSFM (#7315-0067:0268) Approved

Product Overview

Used with Siemens Fire Safety fire alarm control panels (FACPs), the Distributed Power Supply PAD-4 Unit is a NAC expander with a built-in, auxiliary-power output. Each PAD-4 unit distributes additional power in buildings for audible and visual indicators that conform to the Americans with Disabilities Act (ADA). PAD-4 also has the following features:

- NACs
- Signal-input circuits
- Battery-charging circuit
- *Trouble* relays for remote monitoring
- Diagnostic light-emitting diodes (LEDs)
- Alternating Current (AC) power connection

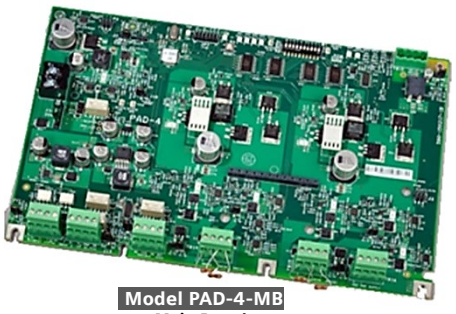
The Siemens NACs, which connect with alarm signaling devices, have been designed to provide the highest level of reliability and performance. Signal coding on the circuits is accomplished through integrated circuits (rather than relays), which eliminates mechanical wear on the output circuits.

The PAD-4 unit provides consistent 24VDC output voltage to each NAC – independent of voltage fluctuations on the primary or secondary power source. As a result, a larger voltage drop and a greater wire length for each NAC are supported by each PAD-4.

Specifications

This version of the Siemens Distributed Power Supply Unit can be configured in the following manner that makes the outputs easily programmable:

- 'STEADY' outputs
- Synchronized strobe outputs
- American National Standards Institute (ANSI) Temporal 3
- ANSI Temporal 4 [for carbon monoxide (CO) alarm signal]



Model PAD-4-MB
Main Board

Model PAD-4-ENCL
PAD-4 Unit Enclosure

Specifications (cont.)

There are also two (2) inputs used to control the activation of the four (4) outputs. Programming can be set so one (1) input will silence the audible signal on Siemens Models 'AS'-series, 'NS'-series, or 'ZH'-series horn and horn-strobes while the strobes remain active.

Operation of each PAD-4 unit is controlled by firmware stored in Flash memory on the main board, as well as the storage of a 10-event log, which can be viewed via Model PAD-4-FDT. In the event that an upgrade to the system firmware is required, the firmware can be transferred to the system without the replacement of firmware chips.

An optional firmware-download software tool, Model PAD-4-FDT, can be used for system diagnostic testing of the following:

- Primary-power voltage readouts
- Current draw for power charger
- Configuration switch settings
- Firmware version
- Battery voltage

When the tool is in communication with Model PAD-4-MB, the 'Test Mode' LED is illuminated. Model PAD-4-LUA is a USB serial port adapter that is required for tool-kit operation.

Each NAC extender supervises a variety of functions including:

- Low AC power
- Battery-voltage level
- Earth ground-fault conditions

All power can be directed to two (2) 'Class A' or four (4) 'Class B' power-limited NACs. Each NAC supports up to 3 Amps per circuit. Either one (1) or two (2) inputs can control four (4) outputs, which are compatible with all Siemens Fire Safety 24VDC alarm signaling devices.

In cases where 'Class A' circuits are used, an optional Model PAD-4-CLSA module can be added, providing two (2) additional 'Class A' outputs to each PAD-4 unit.
Each NAC extender is also capable of operating other parts of a Siemens fire alarm system, such as door holders, via 3 Amps@ 24VDC max of power-limited auxiliary output. When the output activated, the total power available cannot exceed 6 Amps when used with Models FP2011-U1 or 9 Amps when used with FP2012-U1.

Trouble conditions are monitored through each unit's two (2) inputs. In addition, one (1) *'Form C' Trouble* contact is provided for monitoring each unit that is connected through the input of a Siemens FACP. Therefore, the user has the option of connecting a PAD-4 NAC extender unit into a NAC of a Siemens FACP, or the unit may be monitored with a Model TRI-series monitoring module on a Siemens intelligent fire system. A separate *'Form C' Trouble* contact is used exclusively with each NAC extender to indicate AC Fail Trouble events on the NAC extender.

Each unit is packaged in its own sheet-metal enclosure with sufficient space to house up to 7AH battery sets. The enclosure (Model PAD-4-ENCL) is available in red.
The battery charger used in each unit can energize batteries of up to 18AH. Though, when battery sets greater than 7AH are required, the battery set must be housed in a System 3 enclosure or a separate UL Listed battery enclosure.
System 3 enclosures may also be used to house multiple Model PAD-4 units in a single enclosure, via the Model S3AP Adapter Plate. Two (2) units are capable of sharing the same battery set when mounted in the same enclosure. Model S3AP can also be used to mount the PAD-4 main board and 170-Watt power supply (Model FP2011-U1) into a PAD-3 enclosure.

Each Model PAD-4 unit complies with seismic certification, pursuant to the following:

- ASCE Standard 7, 2005 Edition
- International Building Code, 2006 Edition
- California Building Code, 2007 Edition
- ICC-ES AC 156, effective 2007
- OSHPD preapproved, under: OSP-0057-10
  - OSHPD CAN 2-1708A.5, Rev. 3

Each Model PAD-4-series unit also complies with seismic certification, pursuant to ASC / SEI 7-05, Section 13.2.2, when used with the PAD-4 battery bracket (Model PAD4-BATT-BRKT).

Temperature and Humidity Range

Each PAD-4 Distributed Power Supply Unit is UL 864 9th Edition Listed for indoor dry locations within a temperature range of 120+/-3°F (49+/-2°C) to 32+/-3°F (0+/-2°C) and a relative humidity of 93+/-2% at a temperature of 90+/-3°F (32+/-2°C)

Technical Data

***AC Fail Trouble* Contact Rating: 'Form A' – Normally Closed**	2.0A @ 30VDC, max. [resistive]
Basic *Trouble* Contact Rating: 'Form C'	2.0A @ 30VDC, max. [resistive]
***Alarm* Current: (for NACs and auxiliary power)**	3.0A per circuit, max.
	6A, max. (via Model FP2011-U1)
	9A, max. (via Model FP2012-U1)
Ambient Temperature:	32° — 120° F (0° — 49° C)
Relative Humidity:	Up to 93% @ 86° F (30° C) non-condensing
Auxiliary Power Circuit:	One (1) circuit @ 3A max.
Battery Charging Capacity:	18AH
Input Circuits / Configurations:	Two (2) 'Class B' supervised or Two (2) 'Class A' supervised
Input Current:	7.0mA, max.
Input Voltage Range:	16 — 33VDC / VFW
Installation Environment:	Indoor, dry
NACs:	Supervised, power-limited
	1.0mA standby current, max.
	Four (4) circuits
	2K ohms (+), 8K ohms (-)
Total Output Power:	24VDC @ 6 Amps (with Model FP2011-U1);
	24VDC @ 9 Amps (with Model FP2012-U1)
Output Circuits / Configurations:	▪ Two (2) 'Class A' [Up to four (4) 'Class A' via Model PAD-4-CLSA]
	▪ Four (4) 'Class B'
	▪ One (1) Class A / Two (2) Class B

Physical Properties

PAD-4 Enclosure	
Single-Unit Dimension: (W -x- H -x- D)	13.5" —x— 18.75" —x— 3.25" (34.3 cm. -x- 47.6 cm. -x- 8.3 cm.)
Color:	Red

LED Indicators

COLOR	CONDITION
GREEN:	AC Power ON
YELLOW:	AUX / PS:
YELLOW:	Ground Fault
YELLOW:	Output 1 *Trouble*
YELLOW:	Output 2 *Trouble*
YELLOW:	Output 3 *Trouble*
YELLOW:	Output 4 *Trouble*
YELLOW:	Test Mode

Configuration Options

Option	Input[s]	Output Controls	Circuit Types
1	Input 1	All outputs	'Class B' circuits
2	Input 1	All outputs	'Class B' circuits
	Input 2*	Silences horns on Output 1	—
3	Input 1	Outputs 1 and 2	'Class B' circuits
	Input 2	Outputs 3 and 4	
4	Input 1	Output 1	'Class B' circuits
	Input 2	Outputs 2, 3 and 4	
5	Input 1	Outputs 1 through 4	'Class A' circuit pairs
6	Input 1	Outputs 1 through 4	'Class A' circuit pairs
	Input 2*	Silences horns on Output 1	—
7	Input 1	Outputs 1 and 2	'Class A' circuit pairs
	Input 2	Outputs 3 and 4	

**denotes when used with Siemens Model AS, NS or ZH-Series horn / strobe NAC Devices*

Details for Ordering

System Kits

MODEL OR TYPE	PART NUMBER	PRODUCT
PAD4-6A	S54339-A1-A1	**6A PAD-4 kit** ▪ One (1) Unit Enclosure, PAD-4-ENCL ▪ One (1) Main Board, PAD-4-MB ▪ One (1) 170W power supply
PAD4-6A-CLSA	S54339-A2-A1	**6A PAD-4 kit** ▪ One (1) Unit Enclosure, PAD-4-ENCL ▪ One (1) Main Board, PAD-4-MB ▪ One (1) 170W power supply ▪ One (1) 'Class A' Adapter Card, PAD-4-CLSA
PAD4-9A	S54339-A3-A1	**9A PAD-4 kit** ▪ One (1) Unit Enclosure, PAD-4-ENCL ▪ One (1) Main Board, PAD-4-MB ▪ One (1) 300W power supply, FP2012-U1
PAD4-9A-CLSA	S54339-A4-A1	**9A PAD-4 kit** ▪ One (1) Unit Enclosure, PAD-4-ENCL ▪ One (1) Main Board, PAD-4-MB ▪ One (1) 300W power supply, FP2012-U1 ▪ One (1) 'Class A' Adapter Card, PAD-4-CLSA

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
PAD-4-ENCL	500-050081	PAD-4 unit enclosure
PAD-4-MB	500-650217	PAD-4 unit main board
FP2011-U1	500-450222	170-Watt power supply
FP2012-U1	S54400-Z60-A1	300-Watt power supply

Optional Accessories

MODEL OR TYPE	PART NUMBER	PRODUCT
PAD4-BATT-BRKT	S54430-B4-A1	Battery bracket for NAC expander
PAD-4-LUA	S54389-C1-A1	PAD-4 Laptop-Upload Adapter
PAD-4-CLSA	500-850254	'Class A' Adapter Card
S3AP	500-650257	PAD-4 NAC expander Adapter Plate

NOTICE – The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice.
The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.

Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product, and are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

SIEMENS

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Smart Infrastructure - Building Products
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May - 2024
(Rev. 8)

StarLink FIRE MAX 2

AT&T + verizon

DUAL SIM/DUAL PATH
AT&T and VERIZON
Cell &/or IP UNIVERSAL 5G
COMMERCIAL FIRE LTE-M COMMUNICATORS

AT&T + verizon NAPCO

StarLink Fire MAX 2: SLE-MAX2-Series
The Power of 2: Dual SIM, Dual Path by Napco

- **Dual SIM, Dual Path** Universal full data 5G LTE-M cellular &/or IP commercial fire alarm reporting from any panel brand, virtually anywhere nationwide
- One Model to Stock: Provides both Verizon® & AT&T® Cell Networks plus either sole or dual path cell/IP reporting (selectable by plan)
- Auto-Network-Select by Site – Upon power up, the signal-strength provided by each cell carrier is analyzed at the site, and the unit will lock-in the best carrier automatically, ie., AT&T or Verizon. Thereafter, it's periodically reviewed and dynamically swapped when needed.
- **EZ Cell-Network ID- Red or Blue Indicators –** Inside the unit, the Carrier Indicators will light Blue for AT&T or Red for Verizon connection (also test button indicates signal strength on each for manual check)
- See /Set SIM Status Remotely - using a PC or smart device, the StarLink Network Operations Center (NOC), in Napco Headquarters, NY, can be accessed allowing you used to set parameters or view current status, Dual SIM status of accounts
- **Supports 12V-24V FACUs,** No Panel Reprogramming with those that communicate using Contact ID and 4/2 (such as on legacy panels), as primary or backup.
- **UL & NFPA Code-compliant, replaces 2 POTs lines per FACU** saves thousands of dollars per year over the leased landlines. (Show accounts savings -Free Sales Tool /Calculator App left)
- **Proven StarLink Reliability & Best 5G LTE-M Performance – Works where others can't -** Signal Boost™ Circuitry & unique dual-diversity twin antennas, maximizing signal acquisition and eliminating the multiphase-effect signal-clash/drop-outs single-antenna units are prone to.

- **Easiest installation, powered by panel, NO extra power supply, NO extra conduit.** (Excludes Metal Direct AC-Powered Model, shown below.)
- **Labor-Saving Supervision Features Save Time & Money -** Uniquely including 4 supervised, programmable EOLR zone inputs; 2 Form C Relay outputs (no extra supervision modules to buy or install); plus, 2 Telephone style jacks for easy FACU-connection. Self-supervised on 4 wires.
- ***Easy-Repeat* Account Templates -** Save your typical account setup and reuse for goof-proof communicator programming & fast deployment.

- **Free StarLink FACU-Saver App -** Smartphone Pro sales tool for calculating/demonstrating account's cellular cost-savings with dealer by number of lines & locations vs. copper POTs lines leased from phone co. ***FREE download*** on Apple Store or Google Play.

- **Pro Incentive Instant Rebate Program -** Dealers save on new and retrofit installations, replacing POTs, old radios, sunset networks and even new installations. (Nothing to mail in/fill out; Service credit automatically applied upon valid plan activation. See details online; scan QR code on back)
- **UL & NFPA 72 Fire Code-Compliant,** the StarLink Max2 Fire Series Wireless Commercial Fire Alarm Sole Path & Dual Path Communicators provide universal support for any brand 12V to 24V fire alarm control panel (FACU), reporting in Contact ID and 4/2. With broadest nationwide coverage footprint, Verizon or AT&T, using proven StarLink circuitry, they are also available in locking metal models.
- **Over-the-Air Upgradeable Firmware** for updates without a truck-roll.

SLE-MAX2-FIRE

Universal Panel-Powered Commercial Fire FACU Communicator: Dual SIM for 2 Networks; Dual Path Cell or Cell/IP all in One Model

verizon + AT&T

SLE-MAX2-CFBPS

SLE-MAX2-CFB

Dual SIM/Dual Path StarLink Fire MAX 2 also available in Metal enclosures with or without power supply

verizon + AT&T

One Dual SIM Dual Path Model is Both Verizon and AT&T and Sole or Dual Path with Cellular + Internet Option. StarLink Fire provides full data reporting, in sole & dual path, as a primary or backup, to any central station of your choice, w/o requiring any special equipment on premises. The units are very easily activated, plans for dual or sole path & check-in periods are selected, and 24/7 account management is provided all through www.napcocomnet.com.

Easy, Universal Installation at Every Application; standardly w/ Panel- Powered Technology™ or metal units with choice of power source. StarLink Fire Communicators are easily connected to any 12V to 24V panel or Fire Alarm Control Panel (FACU) using easy Quick-Connect FACP modular jacks. For any application, StarLink Max Fire 2 Series comes in standard, ABS plastic Panel-Powered Technology™ (powered by the panel), models, or in metal housings w/ or w/o & choice of power options, i.e., direct-connect 120VAC or Plug-in transformer. ***Quick Tip: Using StarLink Fire Max 2 with Power Supply models (suffix -PS) eliminates the need to do recalculations on the fire system being retrofitted as well.***

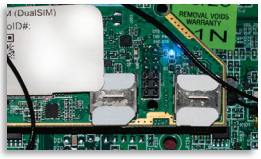
StarLink Fire is End-to-End UL 864 Listed to protect signal reliability, speed & performance for critical life and safety alarm reports for maximum life safety & liability protection. **UL-Listed from the UL 864 StarLink Fire Max 2 communicator, to Napco's NY UL 864 Network Operations Center** (shown below in map), **to any Central Station's UL Listed Receiver.** (It is also backed by Disaster Recovery NOC in PA for immediate, mirrored emergency switchover.)

STARLINK: ALL SIGNALS, ALWAYS IN THE USA

StarLink 2 FIRE MAX

AT&T + verizon

SLE-MAX2 SERIES Fire Dual SIM/Dual Path Commercial Fire Alarm Cell Communicators



- **Dual SIM models auto-select optimal cell carrier - and Red or Blue LED Indicators inside signal Verizon or AT&T respectively, shown right.**
- **LED Status /Trouble Indicators** 3 Radio Status LED Indicators (visible from outside standard model housing) - Green, Signal Strength; Amber- Busy/Activation; Red-Trouble. (Additional internal LEDs, not visible with cover closed, i.e., for troubleshooting and for AT&T or Verizon network selection, status). Power LED indicator viewable on outer metal enclosure models.
- **Sole or Dual Path 5G LTE-M Cell Commercial Fire Alarm Communicator in One -** Simply select Cell or Cell/IP Service Plan & check-in period: 5 minutes, 60 minutes, 6 hours or 24 hours.
- **Signal Boost and Patented Switching Dual Diversity Antenna** for maximum signal acquisition & null /signal-clash avoidance, receiving signals on both antennas (2 supplied, nothing extra to buy.)
- **"Return Receipt" Fully-Supervised Communication Path** between premise & central station, keeping channel open until *kiss-off* is received from Central Station receiver

SPECIFICATIONS: (Apply to all models unless otherwise stated)

SLE-MAX2-FIRE & SLE-MAX2-CFB:

Electrical Ratings for +12V / 24V (Models w/o Power Supply)

- Input Voltage: 10-24VDC regulated (power-limited output from UL Certified FACU/panel Aux/Remote Fire Power).
- Input Current: 24VDC standby: 85mA

SLE-MAX2-CFBPS:

Electrical Ratings for 120VAC, 60Hz (Models with Power Supply)

- Input Voltage: 120VAC nominal
- Input Current: 200mA maximum
- Maximum Charging Current: 200mA

Electrical Ratings Fire Input 1:

- Input Voltage: 9-25VDC
- Max Input Current: Up to 2mA from FACU NAC circuit

Electrical Ratings for Inputs 2 to 5 (Class B)**:**

- Maximum Loop Voltage: 25VDC
- Maximum Loop Current: 1.2mA (metal models); 1.7mA (plastic)
- End of Line Resistor (EOLR) Value: 10K

Electrical Ratings for PGM3 Output:

- Open Collector Output: Max Voltage 3V when active; 25V max. when not.
- PGM Max Sink Current: 50mA (up to 15VDC), 25mA (15.1VDC -25VDC)

Physical & Environmental

- Plastic Housing: 8 x 5½ x 1½ "(WHD) + antennas (2ea, supplied) 8¼" H
- Metal Housing: 11½ x 9½ x 3½"(WHD) + antennas (2ea, supplied) 8¼" H
- Housings: 2 Keyholes for wall mount
- Operating Temp. 32 to 120°F , 93% Humidity Max.

COMPLIANCES:

NFPA 72 Eds: 2022, 2019, 2016, 2013, 2010; UL 2610, UL 985, UL1023, UL864 10th Ed., CSFM, NYC FD, LAFD Napco US Network Operations Center (NOC) UL 864 10th Ed.,UL 1610, UL 1635

ORDERING INFORMATION

Model	Description	Dual SIM/ Dual Path	Verizon ✓	AT&T	Sole Path Cell	Dual Path Cell/IP	Low Current Draw, Standby (@24V)	Current Draw, Peak (@24V)
SLE-MAX2-FIRE	Universal Fire Communicator, Dual SIM, Dual Path, Panel-Powered Technology, ABS Plastic Housing	✓	✓	✓	✓	✓	85mA	325mA
SLE-MAX2-CFB	Universal Fire Communicator, Dual SIM, Dual Path, Panel-Powered Technology	✓	✓	✓	✓	✓	85mA	325mA
SLE-MAX2-CFBPS	Universal Fire Communicator, Dual SIM, Dual Path, Direct AC Power 120VAC Metal Housing w/ Provision. For Plug-in TRF12 XFormer, 16VAC, 20VA (w/ provision for backup battery)	✓	✓	✓	✓	✓	200mA	200mA

NFPA UL verizon + AT&T *Coming soon for Canada*

OPTIONS/ACCESSORIES:

SLE-WIFI-MODULE: Optionally connects supported dual path models to Internet via WiFi, eliminating Ethernet cable connection. Requires 7AH battery. (see WI2191)

SLE-ANTEXT30: StarLink Omni-X Optional Extended Range Marine-Grade Complete Antenna Kit, w/ 30' of ultra low-noise LMR 300 cable, all hardware & ground fault isolator plate.

SLE-ANTEXT50: as above, 50' cable

SLE-ANTEXT75: as above, 75' cable

SLE-ANTEXT100: as above, 100' cable

SLE-ANTEXT04: as above, 4' cable

SLE-FIRE-VR: FACU Voltage Drop Kit, maintains safe input voltage < 27.5VDC

TRF12: Plug in AC Transformer, used w/ SLE-MAX2-CFBPS model, 16.5V / 20VA (use subject to local code).

GEM-TAMPERKIT: Tamper switches and screws to protect metal housing where required.

SLE-ULPS-R: Power Supply, for installations where FACU cannot provide Aux Power.

SLE-FMBB: Opt.Metal Cable Management Backbox for surface mounting plastic StarLink communicator models adjacent to FACUs on same plane. Radio easily snaps in on 4 stand-offs, no rewiring. Red metal enclosure w/ ¾" cable knockouts; 2 Connectors & 4" Conduit, supplied.

Also See FireLink FACUs with built-in StarLink Communicators & LCD Touchpads on Door, addressable & conventional, cloud-programmable.

NAPCO

www.StarLinkFire.com

Addressable, Conventional Fire Alarm Systems & Leading Commercial Fire Cellular Communications

FOR MORE

SIEMENS

Catalog Sheet
Fire Safety & Security Products

Air-Duct Housings and Detectors

Air-Duct Housings — AD2 Series

Models AD2-P, AD2-PR, AD2-XHR, AD2-4W, ST(s): 10, 25, 50 and 100

ARCHITECT AND ENGINEER SPECIFICATIONS

- For use with Series 11 detectors
- Relay models available
- Design for air-velocity range of 100 to 4,000 fpm
- Alarm LED visible from front
- Self-contained model available with 'on-board' power supply
- Clear housing cover for quick identification of detector type; removable with only four (4) captive screws
- ULUL and ULCULC Listed; FM, CSFM & NYMEA Approved

Product Overview

The Siemens Industry, Inc. — Fire Safety Air-Duct Detector Housings are designed to be used with the Series 11 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, the air-duct detector housing will signal the presence of 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, which are utilized to operate any supplementary equipment when smoke is detected.

Notes: Most conventional time-control equipment guarantee only one (1) 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.

Notes - (cont.'d): 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 simultaneously.

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 (ILED) and a remote Relay is allowed for each detector simultaneously.

Air-duct housings (see: **Details for Ordering**) are Underwriters' Laboratories, Inc. listed.

Specifications

The air-duct housings are uniquely designed to use with the photoelectric detector. Sensitivity of PE-11 detectors can be checked by viewing the LED or a 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.

SIEMENS Industry, Inc.
Building Technologies Division

Specifications — (continued)

The detector unit employs a cross-sectional sampling principle of operation. Inlet sampling tubes are available in four (4) lengths (see: **Sampling Tube Selection Table**). Outlet sampling tubes are one (1) common length and draw. A continuous, cross-sectional sample of air moves through the duct. Stratification or skin affect phenomenon that occurs in the duct can prevent 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 10- feet-per-minute to as high as 4,000-feet-per-minute. Each housing comes with three (3) wiring entry ports:

- Two (2) 3/4" conduit knockouts
- One (1) 1/2" conduit opening

The inlet sampling tube length is determined by the width of the air duct being protected. The inlet tube — greater than and nearest to the duct width — should be used (see: **Sampling Tube Selection 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 (14cm.), and is supplied with the air-duct housing.

Note: 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.)

Note: When a self-contained duct detector with power supply is required, order model AD2-4W.

(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 1' to 3'	ST-25
For duct widths 3' to 5' (requires support)	ST-50
For duct widths 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 (3) small holes for the Sampling Tube installation (template included), and the drilling of two (2) 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.

(For full details, refer to installation instructions part number 315-049708-4.)

ST-50 and ST-100 require support. ST-100 is shipped in two (2) 5-ft. (152 cm.) 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 - 4,000 Ft. /Min.
Sampling Tube Pressure Range of Differences:	Greater than 0.01 inches; less than 1.2 inches of water column

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

Details for Ordering

Model Number	Part Number	Description
AD2-P	500-649706	Air-Duct Housing for use with FP-11, HFP-11, HFPO-11 and PE-11
AD2-PR	500-649707	Air-Duct Housing for use with PE-11 relay
AD2-XHR	500-649708	Air-Duct Housing for use with FP-11, HFP-11 and HFPO-11, with relay
AD2-4W	500-649709	Self-contained Air-Duct Housing with 'on board' power supply and relay
ST-10	500-649710	Sampling tube for Ducts 6" to 1'
ST-25	500-649711	Sampling tube for Ducts over 1' to 3'
ST-50	500-649712	Sampling tube for Ducts 3" to 5'
ST-100	500-649713	Sampling tube for Ducts 5' to 10'

Product Includes:

- (1) short-return (outlet) tube
- (1) stopper
- (2) #12 + 3/4" sheet-metal screws
- (1) mounting template

Note: Detector and sampling tube to be purchased separately. Minimum hardware required is: one (1) air-duct housing assembly; one (1) sampling tube and one (1) detector.

Notice: This marketing catalog sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

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SFS
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(Rev. 2)

Peripheral and Detection Devices
Initiating Device

Intelligent Test Switch and Status Indicator
Model TSM-1X

Architect & Engineer Specifications

- ☐ Intelligent test-switch module with momentary, normally open (N.O.) turn-key activated (T45) switch
- ☐ Dual, built-in isolators
- ☐ Meets Class X (Style 7) survivability requirements
- ☐ Multi-color light-emitting diode (LED) indicates system status:
  - GREEN | AMBER | RED
- ☐ Low current draw
- ☐ Restriction of Hazardous Substances (RoHS) compliant
- ☐ Mounts in a single-gang box:
  - 3.5 inches (8.9 cm.) deep
- ☐ Device Programmer / Tester (Model DPU) programs and verifies device's address:
  - programming capabilities include testing a duct detector, as well as other Siemens addressable devices
- ☐ Capability of being installed anywhere on a communication loop, or on the wiring of that loop
- ☐ UL864 | UL2572 | UL2017 Listed; CAN/ULC-S527 & CAN/ULC-S576 Listed
  - File S24304, Vol. 3

Product Overview

The Siemens – Fire Safety Intelligent Test Switch Module (Model TSM-1X) is a key-activated (T-45), addressable normally open (N.O.) momentary switch with a tri-color light-emitting diode (LED) indicator. The tri-color LED mimics the status of the associated Siemens smoke detector or compatible device(s). Each Model TSM-1X switch can be configured to test and monitor group of devices, using one (1) address on the fire-alarm control panel (FACP) loop.

Model TSM-1X provides a valid test of a Siemens duct detector – even the detectors found in inconspicuous, inaccessible areas – and will test associated logic functions of duct housings and other modules. Other common applications include: fan-restart switch; drill switch; recall switch, and remote Arm/Disarm switch.

NOTE: Refer to installation manual: **P/N – A6V101055486** to ensure Model TSM-1X compatibility with the Siemens FACPs intended for use in the given application.

Overall, Model TSM-1X is an economical solution since each X-series Test Switch seamlessly provides combined, pre-packaged functionality of Siemens In/Out modules (TRI-S); Siemens status indicators (ILED-series), and T-45 test switches. Therefore, there is no longer the need of having to buy individual parts and configuring them in the field. Additionally, Model TSM-1X is modernized through its capability to provide built-in isolation, which shows the location of a short.

Specifications

Model TSM-1X is designed for use with addressable duct detectors or other intelligent devices on a Device Loop Circuit (DLC) of Siemens compatible Fire Alarm Control Panels (FACP). Turn-key activation will cause all associated logic functions to be tested. Typical applications in which key activation is used include: intelligent duct detectors | hidden or inaccessible smoke detectors | Fan, Recall, Restart, Drill and remote Arm/Disarm switches. This alarm condition will cause all logic associated with the duct detector to activate. The TSM-1X is mounted in a 3.5-inch (8.9 cm.) deep single-gang back box, which is supplied-by-others (BO).

Model TSM-1X supports two (2) operation methods:

- Polarity insensitive mode
- Isolator mode

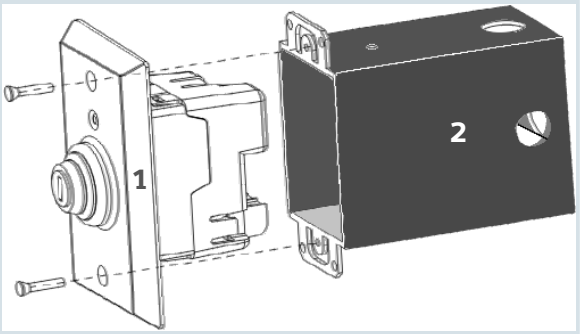
The module can be wired in either mode and configured by the compatible Siemens FACP. While in isolation, the built in dual isolators will work at both sides of the module to isolate a line short in front or behind the module.

Model TSM-1X provides intelligent built-in, dual isolation, meeting Class X (Style 7) survivability requirements for shorts while providing reliable alarm communication to the Siemens FACP. Additionally, Model TSM-1X allows up to 190 isolators per loop, and up to 30 devices between isolators (wired in polarity insensitive mode). The devices between isolators can either be pre-existing `H'-series or later `X' generation devices.

Model TSM-1X
Duct Detector Test Switch

NOTES: The single-gang electrical box, seen in this CGI depiction, is supplied-by-others (BO).

1. **TSM-1X faceplate**
2. **Single-gang switchbox (user supplied)**



Specifications – (continued)

The isolation feature found on a Model TSM-1X Test Switch provides a location of the fault (short). When a short occurs, the Siemens FACP can identify the fault automatically and the module recognized the short location (in front of the device or behind the device). Overall, the built-in isolators improve the diagnostics and location of the short and report when a Class X module is misconfigured.

Each Test Switch Module is configurable by a Siemens compatible panel(s) in an isolator (polarity sensitive) or non-isolator (polarity insensitive) mode. When Model TSM-1X is configured as an isolator, it may serve a dual purpose by simultaneously functioning as a test switch and status indicator and isolator. Advanced troubleshooting is provided by compatible Siemens FACPs (via identification for when a Model TSM-1X Test Switch is configured as an isolator, but is wired incorrectly in a polarity insensitive mode).

Operation

Field-Device Programmer / Test Unit

Each Test Switch is programmed with the Siemens field-device programmer / test unit (Model DPU), which is a compact, portable and menu-driven accessory for electronically programming and testing Siemens peripheral modules and devices promptly and reliably. For instance, the field technician selects the accessory's program mode, and enters the desired address. Vibration, corrosion and other conditions that deteriorate mechanical-addressing mechanisms are no longer a cause for concern. Each remote alarm lamp is connected to Model DPU with the programming cable provided with the tester. This programming cable **(P/N 110-694927)** utilizes two (2) clip connectors to attach to the module.

NOTE: Since Model TSM-1X Test Switches are advanced initiating devices, the latest Model DPU firmware update is required.

When set in `test' mode, Model DPU 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.

Each field-device programmer / test unit operates on AC power or rechargeable batteries, providing flexibility and convenience in the programming / testing of fire-safety equipment from practically any location. Additionally, with the use of a Model DPU unit, there is no longer a concern with any vibration, corrosion and other deteriorating conditions that compromises the vitality of a mechanical-addressing mechanism. Model DPU electronically sets the interface address for each Model TSM-1X into the non-volatile memory of the interface microcomputer-chip.

Each Model TSM-1X module is fitted with screw terminals for connection to an addressable circuit with compatible Siemens FACPs.

NOTE: Refer to installation manual: **P/N – A6V101055486** to ensure Model TSM-1X compatibility with the Siemens FACPs intended for use in the given application.

Application Data

The Model TSM-1X from Siemens is an intelligent, key-activated device that tests detectors for associated logic functions for proper functionality. A Model TSM-1X Test Switch operates with any Siemens intelligent fire, smoke and duct detector used on a compatible Siemens FACP. Other applications include the testing of logic functions of inconspicuous, inaccessible smoke detectors | Fan, Recall, Restart, Drill and remote Arm/Disarm switches.

When the TSM-1X momentary switch is activated, a signal is transmitted to the Siemens compatible FACP, resulting in the Siemens detector on the configuration network to go into `Alarm' mode. In turn, the `Alarm' event will activate all functions programmed to follow the detector. For this reason, Model TSM-1X provides a valid, accurate test of Siemens duct detectors used on Siemens FACPs, therefore meeting the requirement found in local fire-safety jurisdictions.

Every Model TSM-1X Test Switch mounts in a single-gang electrical back box.
Additionally, each shipment includes a cover plate.

Compatibilities

The `X'-series modules may be used, along with Model `H'-series intelligent detectors; Model `HMS'-series addressable manual stations, or any other `H'-series addressable intelligent module (e.g. Model HZM or Model HCP).

Interspersing Siemens `X' and `H'-series detection devices on the same loop is mostly permitted, but there are exceptions: Models HLIM (isolation module) and SBGA-34 (audible base) cannot be used with `X' devices on the same loop.

Temperature and Humidity Range

Duct Detector Test Switches are UL Listed | ULC Listed. Environmental operating conditions for each Model TSM-1X module is 32°F (0°C) to 120°F (49°C) with a relative humidity of no greater than 95%, non-condensing.

Technical Data

OPERATING VOLTAGE RANGE:	13VDC – 32VDC
RELATIVE HUMIDITY:	0 – 95% (non-condensing)
`ACTIVE' OR `STANDBY' CURRENT, MAX.:	500µA
LINE SIZES AMERICAN WIRE GAUGE (AWG)	14 AWG, max. 18 AWG, min.

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
TSM-1X	S54370-B7-A1	Intelligent Test Switch | Status Indicator | Wall Plate | Isolator
DPU	500-033260	Device Programmer / Test Unit

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Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

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September 2017 — New Issue
(Rev. 0)

SIEMENS

Peripheral and Detection Initiating Devices

XMS-Series Manual Pull Stations

Addressable & Conventional Models

Architect & Engineer Specifications

- ☐ Single & Dual-Action models
- ☐ Built-in ISO*technology*™
  - Complies with NFPA 72 Class X (Style 7) survivability requirements.
  - Supports up to 252 X-Series isolation peripherals per SLC / DLC
  - Supports up to 30 addressable devices between isolator devices
- ☐ Compatible with current Siemens Fire Alarm Control Units (FACU's)
- ☐ Low current draw
- ☐ Polarity insensitive (in non-isolation mode) via SureWire technology
- ☐ Multi-color status LED
- ☐ T-45 reset key
- ☐ Model XMS-2S:
  - Two stage operation via unique activation key
  - T-45 reset key for device reset
- ☐ Minimal mounting depth allowing compatibility with standard single gang electrical boxes in retrofit sites
- ☐ Trouble indication during service and maintenance
- ☐ Single action, Dual-action, and metal versions available
- ☐ French, Portuguese, and Spanish versions available
- ☐ UL38 Listed
- ☐ ULC-S528 Listed
- ☐ RoHS compliant

Product Overview

The XMS-Series of manual pull stations are a complete addressable and conventional pull station portfolio including single action, dual-action, 2-Stage, and metal versions. The addressable versions feature built-in Class X (Style 7) isolation capability for increased system survivability. All models feature a T-45 reset key to match the fire alarm panel enclosure. Addressable models also feature a tri-color status LED to indicate normal, alarm, and trouble status. All models utilize one address.

The manual stations can be commissioned to operate in non-isolation (polarity insensitive) or isolation with Class X mode of operation.

Specifications

Models XMS-S, XMS-D, XMS-DA, XMS-2S, and XMS-M are compatible with Siemens FACPs. The Model XMS-S is a single action pull station in a plastic housing that requires one action by the user to initiate the alarm. Models XMS-D, XMS-2S, and XMS-DA are dual-action pull stations in a plastic housing that require two actions by the user to initiate an alarm. The Model XMS-M is a single action pull station in a metal housing that requires one action by the user to initiate the alarm. These models are field installed addressable devices containing advanced control panel communication technology.

The XMS-Series manual pull stations feature a "maintenance trouble" that places the fire alarm panel into a trouble condition if an XMS is accidentally left in an armed status when the cover is removed for maintenance work.

This technology provides bi-directional communication with the connected control panel. To reset the stations, insert the Siemens T-45 key provided into the key lock and turn the key 10-15 degrees counterclockwise as the arrow shows. The cover will move upward to the normal position. Rotate the key clockwise and remove key from the lock. At Normal position the top of the Cover is flush with the top surface of the Base. Reset the Fire Alarm Control Panel to clear the alarm.

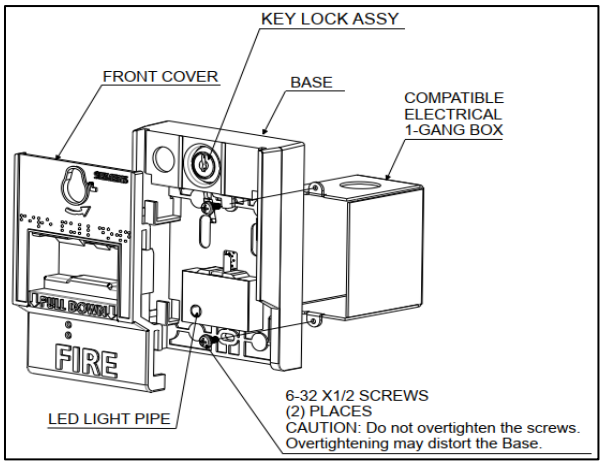
Model XMS-D

The addressable XMS pull station variants are compatible with all current models of Desigo Fire Safety & Cerberus PRO commercial fire alarm control panels. These devices can be wired in either Isolation Mode or Polarity Insensitive Mode Wiring.

The XMS-S & XMS-M manual station front cover has a recess pocket to pull down and locks in position after the alarm is initiated. The XMS-D, XMS-DA & XMS-2S manual stations have an additional lever labeled "PUSH HERE THEN" to get access to the front cover pocket to initiate the alarm.

UL RoHS ULC COMPLIANT

Mounting Diagram



Technical Data

Operating Voltage Range	13 - 32VDC
Max Average Operating Current @ 24v:	500µA
Operating Temperature Range	32° — 120°F (0° — 49°C)
Operating Humidity Range	0 — 95%, RH

Physical Properties

Construction:	High impact polycarbonate plastic Aluminum
Shipping Weight:	1.0 lbs
Dimensions:	5.50" H x 4.0" W x 1.250" D
Compliance:	ADA
Compatible Electrical Boxes:	2-1/2" deep 1-gang box

Model XMS-DA

Model XMS-2S

Order Details

Model or Type	Part Number	Description
XMS-S	S54321-F7-A1	Addressable Single Action Manual Pull Station with Isolation
XMS-D	S54321-F8-A1	Addressable Dual-Action Manual Pull Station with Isolation
XMS-M	S54321-F19-A1	Addressable Single Action Metal Pull Station with Isolation
XMS-SP	S54321-F9-A1	Addressable Single Action Manual Pull Station with Isolation - Portuguese Text
XMS-DP	S54321-F10-A1	Addressable Dual-Action Manual Pull Station with Isolation - Portuguese Text
XMS-SE	S54321-F11-A1	Addressable Single Action Manual Pull Station with Isolation - Spanish Text
XMS-DE	S54321-F12-A1	Addressable Dual-Action Manual Pull Station with Isolation - Spanish Text
XMH-501	S54321-F18-A1	Conventional Dual-Action Manual Pull Station for Agent Release
XMS-501	S54321-F16-A1	Conventional Dual-Action Manual Pull Station
XMS-51	S54321-F15-A1	Conventional Single Action Manual Station with Auxiliary Relay and Key Switch
SMBOX-XMP	S54321-F20-A1	Surface Mounting Backbox for X-Series Manual Stations
APLT-XMP	S54321-F21-A1	Adapter Plate for X-Series Manual Stations to Legacy Surface Backboxes
4DGBOX- XMP	S54321-F22-A1	Adapter Plate for X-Series Manual Stations to 4" and Double-Gang Backboxes

Specific Details for Canadian Orders

Model or Type	Part Number	Description
XMS-DA	S54321-F13-A1	Addressable Dual-Action Manual Pull Station with Isolation and Auxiliary contact – French Text
XMS-2S	S54321-F14-A1	Addressable 2-Stage Dual-Action Manual Pull Station with Isolation and Auxiliary contact – French Text
XMS-51C	S54321-F23-A1	Conventional Dual-Action Pull Station with Auxiliary contact – French Text

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Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

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June - 2023
(Rev. 2)

SIEMENS

Peripheral and Detection Devices
Initiating Device

Intelligent Device Interface Modules
Model XTRI-D | XTRI-R | XTRI-S

Architect & Engineer Specifications

- ☐ Siemens ISO*technology*™
  - Provides "True Class–X" operation meeting NFPA 72 SLC field wiring requirements
  - Supports 252 ISO*technology* ready devices per loop, and in mixed mode up to 30 devices between isolated devices
- ☐ Dual input on Model XTRI-D, via a single address
- ☐ Integral single-pole, double-throw (SPDT) relay on Model XTRI-R:
  - Up to 4 Amps.
- ☐ Low current draw
- ☐ Polarity insensitive (in non-isolation mode) via *SureWire*™ technology:
  - Modern technology supports comprehensive system and interface communication
- ☐ Multi-color light-emitting diode (LED) indicates system status: GREEN | AMBER | RED
- ☐ Mounts in a 4-inch (10.2 cm.) square, 2–¼" (5.7 cm.) deep single-gang or double-gang back box
- ☐ Non-obstructive front-end access to programming port and wiring terminals
- ☐ Device Programmer | Test Unit programs and verifies address, as well as tests device functionality
- ☐ Restriction of Hazardous Substances (RoHS) compliant
- ☐ UL864 | UL2572 | UL2017 Listed; CAN/ULC-S527 & CAN/ULC-S576 Listed
  - File S24304, Vol. 3
- ☐ FM Approved

Product Overview

The Siemens – Fire Safety XTRI-series Intelligent Interface Modules are designed to provide the means of interfacing direct shorting devices to the fire-alarm control panel (FACP) SLC. All modules take up one (1) address on the loop.

Each XTRI-series interface module provides the "built-in" **ISO*technology*** feature - intelligent dual isolation meeting NFPA 72 Class X (Style 7) wiring requirements. Up to 252 isolators per loop and up to 30 devices between isolators (wired in polarity-insensitive mode). Additionally, the devices between isolators can either be 'H'-series or the more contemporary 'X'-series detection devices.

Specifications

The Siemens – Fire Safety XTRI-series Intelligent Interface Modules are available in three (3) individual types:

- One (1) Dual-Input: XTRI-D
- Two (2) Single-Inputs: XTRI-R (with relay) | XTRI-S
  - The single-input versions are each designed to monitor a normally open (N.O) or (N.C) normally closed dry contact

XTRI-D | XTRI-R | XTRI-S incorporates **ISO*technology*** – the configurable, built-in dual isolator function. Additionally, an XTRI-series interface module supports NFPA 72 Class X (Style 7) survivability requirements for shorts while providing reliable alarm communication to the Siemens FACP. The isolation feature found on the XTRI-series Intelligent Interface Modules gives information as to the location of the fault. When a short occurs, the panel can identify the fault automatically, and the module recognizes the short location (in front of the device or behind the device). Overall, the built-in isolators improve the diagnostics and location of the problem, including a short.

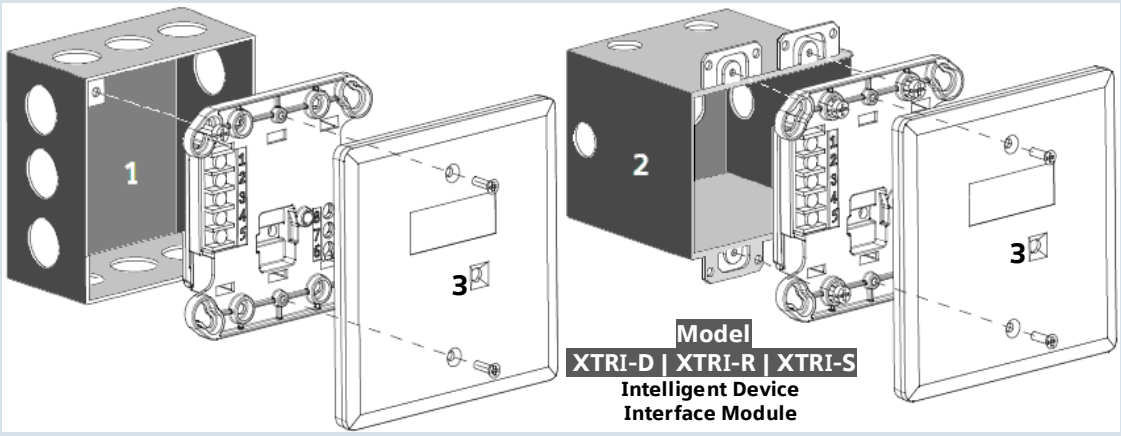
The modules are configurable by a Siemens compatible FACP (or panels) in an isolator (polarity sensitive) or non-isolator (polarity insensitive) mode. When a XTRI-series interface module is configured as an isolator, that module has the capacity of functioning as both an in/out device, as well as an isolator.

Advanced troubleshooting is provided by compatible panels by identifying when a XTRI-series interface module is configured as an isolator, but is wired incorrectly in a polarity-insensitive mode.

Each Model XTRI-series device has a multi-color LED that flashes when GREEN operating in Normal mode; AMBER if the unit is in a `Trouble' condition, and RED to indicate a change of status.

Model XTRI-S
This single-input interface module can only monitor and report the status of a N.O. or N.C. contact.

Model
XTRI-D | XTRI-R | XTRI-S
Intelligent Device Interface Module



Model
XTRI-D | XTRI-R | XTRI-S
Intelligent Device Interface Module

1. **4" (10.2 cm.) square box | 2– 1/8" (5.4 cm.) back box**
2. **3.5" (8.9 cm.) double -gang back box**
3. **5" (12.7 cm.) square switch plate, supplied)**

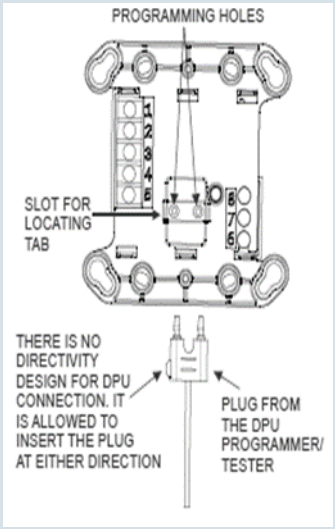
Specifications (cont.)

Model XTRI-R

Through the use of an addressable 'Form C' relay, the Model XTRI-R relay and contact device input are controlled at the same address. The relay and input contact can be controlled as a separate function from a Siemens compatible FACP. The relay is typically used where control or shunting of external equipment is required.

Model XTRI-D

Model XTRI-D is a dual-input module that is designed to supervise and monitor two (2) sets of dry contacts. Model XTRI-D only requires one (1) address, but responds independently to each input. Model XTRI-D is ideal for monitoring a water-flow switch and its respective valve tamper switch.



NOTES:
Each interface module mounts directly to a user-supplied switchbox.
The electrical boxes, seen above, are supplied-by-others (BO).

Models XTRI-D, XTRI-R and XTRI-S mount directly onto a 4-inch (10.2 cm.) square, 2 ¼" (5.7 cm.)– deep box back box, or to a user-supplied double-gang 3 ½" deep back box.

A 5" (12.7 cm.) square, off-white faceplate is included in each shipment of a Siemens Model XTRI-series module.

Operation

Field-Device Programmer / Test Unit

Siemens – Fire Safety innovative technology allows Model XTRI-series intelligent interface modules to be programmed via the Siemens field-device programmer / test unit (Model DPU), which is a compact, portable and menu-driven accessory for electronically programming and testing Siemens peripheral modules and devices promptly and reliably. For instance, the field technician selects the accessory's program mode, and enters the desired address.
Model XTRI-series interface module is connected to Model DPU with the programming cable provided with the tester.

NOTE: Since the XTRI-series of interface modules are advanced initiating devices, the latest Model DPU firmware update is required.

Model DPU eliminates the need for cumbersome, unreliable mechanical programming methods (e.g. – dials and rotary switches), and reduces installation and service costs by electronically programming and testing the module prior to installation. When set in `test' mode, Model DPU will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the module is operating properly.
Each field-device programmer / test unit operates on AC power or rechargeable batteries, providing flexibility and convenience in the programming / testing of fire-safety equipment from practically any location. Additionally, with the use of a Model DPU unit, there is no longer a cause for concern with any vibration, corrosion and other deteriorating conditions that could negatively affect any electro-mechanical-addressing mechanism.

Compatibilities

Siemens `X' modules may be used along with Model `H'-series intelligent detectors; Model `HMS'-series addressable manual stations, or any other `H'-series addressable intelligent module (e.g. Model HZM or Model HCP). Additionally, the X-series modules are compatible with all Desigo and Cerberus Pro detectors and peripherals of the same circuit.

Interspersing `X' & `H'-series devices on the same loop is mostly permitted, but there are exceptions: Models HLIM (isolation module) and SBGA-34 (audible base) cannot be used with `X' devices on the same loop.

Temperature and Humidity Range

Models XTRI-D | XTRI-R | XTRI-S intelligent interface modules are UL Listed | ULC Listed. Environmental operating conditions for each interface module is 32°F (0°C) to 120°F (49°C) with a relative humidity of no greater than 95%, non-condensing.

LED Iindicators

FLASH COLOR	CONDITION	FLASH INTERVALS [in seconds]
GREEN*:	Normal supervisory operation	10
YELLOW:	Device is in trouble and needs to be replaced	4
RED:	Locate | `Alarm'	1
	Output Device (XTRI-R only)	10
NO FLASH:	Power is not being received / Replacement is needed	–

Technical Data

OPERATING VOLTAGE RANGE:	13VDC – 32VDC	
RELATIVE HUMIDITY:	0 – 95% (non-condensing)	
`ACTIVE' OR `STANDBY' CURRENT, MAX.:	500µA	
LINE SIZES AMERICAN WIRE GAUGE (AWG)	14 AWG, max. 18 AWG, min.	
CURRENT DRAW MAX | AVG.	XTRI-S	650µA
	XTRI-R	750µA
	XTRI-D	950µA
RELAY RATINGS: (for Model XTRI-R)		
RESISTIVE:	4 Amps | 125 VAC	
	4 Amps | 30 VDC	
INDUCTIVE:	3.5A, 120 VAC (0.6 pF)	
	3.0A, 30 VDC (0.6 pF)	
	2.0A, 120 VAC (0.4 pF)	
	2.0A, 120 VAC (0.35 pF)	
	2.0A, 30 VDC (0.35 pF)	

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
XTRI-S	S54370-B3-A1	Single Input Module
XTRI-R	S54370-B1-A1	Single Input Module (with relay)
XTRI-D	S54370-B2-A1	Dual Input Module
DPU	500-033260	Device Programmer / Test Unit

NOTE: Refer to installation manual: P/N – A6V101055479 to ensure Model XTRI-D | XTRI-R | XTRI-S compatibility with the Siemens FACPs intended for use in the given application.

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October - 2023
(Rev. 5)

ACEBOX
BY SPACE AGE ELECTRONICS

SDB

System Document Box

FAMILY OWNED
MADE IN USA
SINCE 1963

FEATURES

- Dimensions: 14 1/4” tall, 14 1/3” wide and 3” deep
- Velcro strap and inside edge keep important documents secure
- Standard thumb screw included with a knock-out if lock is needed (sold separately)
- 20 gauge cold rolled steel construction with durable, red powder coat finish
- Lift-a-way hinge door for easy access

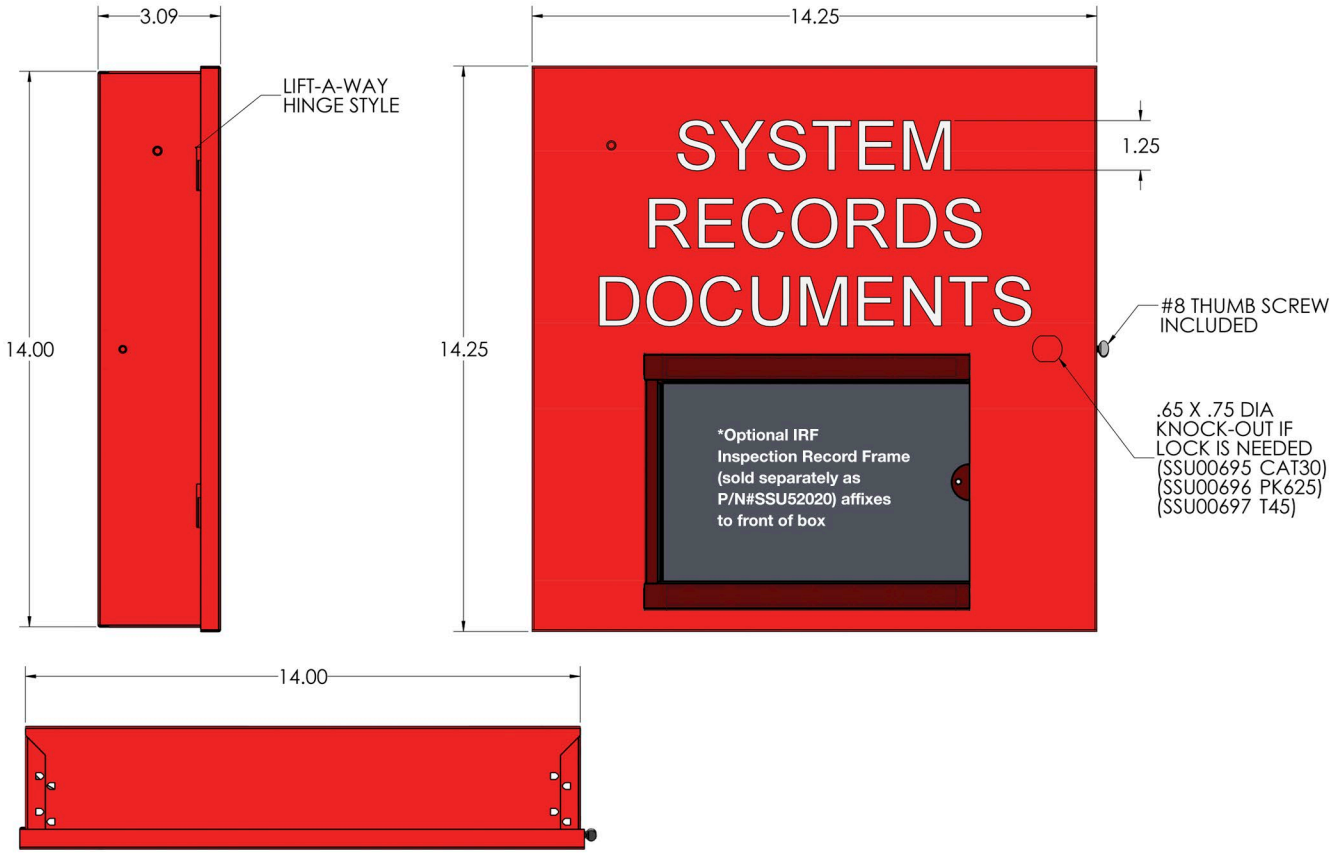
A cost-effective answer for those looking for a durable, code-compliant enclosure to ensure mandated records are maintained at the fire alarm control unit location.

Every durable box is fabricated from 20 gauge steel with a powder coat finish and features a formed lift-a-way hinge. Also included is a Velcro strap and inside edge to keep important documents secure.

SPECIFICATIONS

The SDB System Document Box shall be constructed of 20 gauge cold rolled steel and finished with a durable, red powder coat. Front cover will feature a lift-a-way hinge. Door shall be secured with a standard thumb screw with a knock-out available if a lock is needed. Construction shall include a Velcro strap and inside edge to hold documents in place.

DIMENSIONS

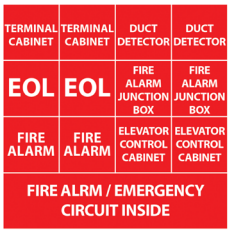


ORDERING INFORMATION

SSU00691 SDB System Document Box

Accessories:

SSU00695	CAT30 Lock kit
SSU00696	PK625 Lock Kit
SSU00697	T45 Lock Kit
SSU03161	Inspection and Maintenance Identification Labels
SSU52020	IRF Inspection Record Frame



Inspection and Maintenance Identification Labels for verification per NFPA 72 Chapter 14 (sold separately)

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