W.W. GAY
FIRE & INTEGRATED SYSTEMS, INC.

A DIVISION OF:
sciens
Building Solutions

FIRE PROTECTION MATERIAL SUBMITTALS

FOR:

Belmont Academy

1476 SW Walter Ave
Lake City, FL 32024

Date:	11/10/2020
Our Project Number:	FP-269450
Project Manager:	Anas Salameh
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The materials submitted represent the quality of materials specified. All materials may be substituted at this contractor's discretion for like equivalent materials.

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904-387-7973 / 352-380-0317

Data Sheet

Cerberus PRO

252-Point and 504-Point Addressable (FIRE-Only) Control Panel
Models FC922 and FC924

ARCHITECT AND ENGINEER SPECIFICATIONS

Addressable fire alarm control panel (FACP) intended for mid-size building applications

Comprised of the following system components:

- Operating units
- Periphery boards
- Power supplies
- System enclosures

System features:

- Supports 252-to-504 addressable devices:
  One (1) to four (4) 'Class B'; one (1) to two (2) 'Class A' for Model FC922
  One (1) to eight (8) 'Class B'; one (1) to four (4) 'Class A' for Model FC924
- Includes one (1) 'Class A' or two (2) 'Class B' notification appliance circuits (NACs)
- Resettable and non-resettable 24VDC, [nominal] auxiliary power
- Connectivity to a leased-line / city-tie module
- Releasing module supports activation of releasing valves in pre-action / deluge systems / agent release
- Off-normal warning message prior to reset
- Fast and easy set-up with auto-configuration feature
- Cerberus® DMS Danger Management Station can monitor and control up to 32 Models FC922 and FC924 FACPs
- Digital alarm communication transmitter (DACT)

®UL 864 9th Edition Listed, ®ULC Listed; FM, CSFM & NYC Fire Department Approved

Cerberus PRO Two-Height-Unit (2HU) Enclosure with two (2) cutouts

Product Overview

The Cerberus PRO 252-point (Model FC922) / 504-point (Model FC924) addressable FACP is designed to meet the fire-protection needs of mid-size buildings.

This advanced FACP offers features typically required in mid-size buildings in a package that is easy to install and competitively priced. Additionally, Models FC922 and FC924 are networkable, allowing the systems to fulfill the growing fire-protection needs of the building. The programming software for the 252 / 504-point fire systems is held in flash electrically erasable programmable read-only memory (EEPROM).

The following Cerberus PRO system components are used in the 252-point / 504-point FACP:

- Operating units
- Periphery boards
- Power supplies
- System enclosures

Other options are available to meet specific needs. Models FC922 and FC924 are FM (#3010); CSFM (#7165-0067:0259) and FDNY (#6104) Approved.

Specifications

Operating Interface Unit

The Operating Interface Unit (Model FCM2018-U3 or Model FCM019-U3) functions as the operating interface and central microprocessor for Models FC922 and FC924.

Either operating interface unit provides multi-use capability for each end-user to efficiently 'Acknowledge' events; to quickly control the NACs of the FACP, and to permit a manual reset of the respective system. Detailed data about the nature and location of the events can also be displayed, via a backlit, 2" –x– 4-3/4" (5.1 cm. –x– 12.1 cm.) LCD screen and the four-way navigation push button at the top of the FACP.

Periphery Boards

The periphery boards (Models FCI2016-U1 and FCI2017-U1) serve as the main operating components for the 252 / 504-point FACP. Each module operates and monitors input-device identity; as well as controls the signaling-line circuits that communicate with smoke detectors and other field devices (i.e. – C-NET).

Specifications – (continued)

Power Supplies

All functions are supported by the power supplies (Model FP2011-U1 or Model FP2012-U1), which therefore eliminate the need for external power supplies.

Further, the 170-Watt power supply (Model FP2011-U1) and 300-Watt power supply (Model FP2012-U1) provide primary, 24VDC nominal power for normal operation to Models FC922 and FC924. Both power supplies are filtered and regulated. Model FP2011-U1 is rated at 6.5 Amps, and the rating for Model FP2012-U1 is 11.5A.

The 170-Watt power supply 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 the FACP enclosure, and there are no serviceable Cerberus PRO parts to be maintained.

The 300-Watt power supply incorporates two (2) 6.3A replaceable, non-resettable slow-blow fuses on the primary input and includes a built-in AC line filter for surge and noise suppression. Model FP2012-U1 mounts in the FACP's enclosure, and there are no serviceable Cerberus PRO parts to be maintained.

System Enclosures

The Cerberus PRO fire-alarm enclosures and their accessories provide a complete set of hardware for mounting all Cerberus PRO main-system and remote terminal cards and modules.

The hardware allows this Cerberus PRO system to be configured for a variety of applications, as well as for future system upgrades. Included in the enclosure series are back box and door sets; removable mounting plates and clear lenses, as well as blank plates for use with the enclosure doors.

All enclosures come with ground straps for the inner and outer doors, shield termination lugs, grounding lugs, and tie wrap lances for securing wire. All Cerberus PRO height-unit enclosures can also mount system back-up batteries up to 33AH in capacity.

Models FC922 and FC924 utilize a two-height-unit enclosure. The following components comprise a complete two-height-unit enclosure:

- One (1) back box, (Model FHB2002-U1 / R1)
- One (1) or two (2) inner doors, (Models FHD2004-U1 or FHD2005-U1)
- One (1) outer door, (Model FHD2002-U3 / R3 or FHD2003-U3 / R3)
- One (1) or two (2) clear windows, (Model FHD2006-U1)

Note: One (1) window is installed for Model FHD2002-U3 / R3 outer door, and two (2) windows are required for Model FHD2003-U3 / R3.

The approximate size for each two-height-unit enclosure is: 27.5" (70cm.) high; 21.5" (54.6cm.) wide, and 5.75" (14.6cm.) deep. The weight, without any attached components, is approximately 6.3 Lbs. (2858 g).

Additionally, the two-height-unit enclosure supports the following optional components:

- Enclosure trim kit (for flush-mounting)
- Battery bracket (to comply with seismic certification)
- DIN rail kit (provides connection between internal-system wiring and field wiring)

Optional Accessories

Digital Alarm Communication Transmitter (DACT)

The DACT is used to provide communication between Models FC922 and FC924 and with either a central or remote monitoring station.

The Model FCA2015-U1 module mounts directly on the back enclosure and connects to the periphery boards. The DACT enables remote transmission of alarms and events via a public telephone line.

Releasing Module

The releasing module (Model XCI2001-U1) supports activation of releasing valves in pre-action / deluge systems (including double-interlock pre-action systems, or Sinorix® Engineered Fire Suppression systems). Activation can be event-controlled or performed by addressable manual pull stations. The releasing module is installed on the periphery board, and supports `Class B' releasing circuits.

When installed on Models FC922 / FC924, the releasing module contains an integral manual-disconnect switch for releasing circuits. This essential feature protects the releasing circuits from accidental discharge during maintenance.

Battery Disconnect Module

The Battery Disconnect Module (Model FCA2032-U1) is specifically designed to disconnect the backup battery on the Cerberus PRO 252 / 504-point addressable FACP when its voltage drops below 19VDC. Model FCA2032-U1's cut-off capability prevents the battery from operating beyond its normal power level for basic system operation.

Hardware Migration Kit

Model FHA2056-series kits are specifically designed for the seamless transition of an existing Siemens FS-250 (FireSeeker) control panel into a fully operational 252 or 504-point addressable Cerberus PRO fire-alarm FACP, [FC922 or FC924, respectively]. Each shipment of the Model FHA2056-series kits contains the following:

- One (1) outer door
- One (1) inner door
- One (1) hinge-assembly bracket
- One (1) back plate
- One (1) inner-door bracket

Note: The five (5) items that comprise one (1) Model FHA2056-series hardware-migration kit cannot be ordered individually.

Specifications — (continued)

Network Module

The C-WEB network module (Model FN2001-U1) is used to network up to 16 FACPs, or one (1) fire terminal, via the C-NET system bus. Model FN2001-U1 is plugged into the Operating Unit (or an Operating Unit with built-in LEDs).

Model FN2001-U1, which connects to a system input / output bus, has ground-fault monitoring, as well as an integrated degrade-mode feature. Redundant networking is done with one (1) network module per FACP [Simple-Loop Trouble]. There is electrical isolation between the system bus and FACP.

Remote Display Terminals

The Remote Display Terminals (Models FT2014-U3 / R3 and FT2015-U3 / R3) are remote annunciators that show the existing status of Models FC922 / FC924.

Light-emitting diodes (LEDs) will illuminate for any given *Alarm*, *Supervisory* and *Trouble* Cerberus PRO-system event. A LCD screen will give details of the event in alphanumeric form. The display screen can be scrolled, via the four-way navigation button, to reveal additional events.

Model FT2014-U3 / R3 is a display-only remote annunciator that has one (1) button used to silence the local sounder. Model FT2015-U3 / R3 has three (3) control buttons for 'acknowledging' events, 'silencing' audible circuits and 'resetting' the system. Additionally, there are three (3) user-programmable buttons available. Model FT2015-U3 / R3 has an integral key switch that enables the control buttons to operate.

The remote display terminals are remotely connected to Models FC922 and FC924, via the RS–485 interface. Models FC922 and FC924 require the Model FCA2016-U1 RS–485 module to provide communication to the remote display terminals. Model FCA2016-U1 supports Style 4 or Style 6 wiring. Up to eight (8) modules can be supported on a RS–485 bus.

The remote display terminals require 24VDC [nominal] power, and the necessary power can be provided from this Cerberus PRO FACP or from another ®UL Listed, 24VDC power source.

Note: A Model FHD2012-U1 inner door can be optionally purchased in ®UL markets. The inner door mounts with the optional Model FT201*x*-series Remote Display terminals. Having a Model FHD2012-U1 inner door installed can assist in preventing unauthorized access to the RDT.

S-series License Keys

The S1 license key (Model FCA2033-A1) allows for virtual monitoring and control between a 252 / 504-point addressable fire-only panel and a personal computer.

The S2 license key (Model FCA2034-A1) is a BACnet output, and is used for monitoring-only purposes by a 3rd-party system for life-safety objects.

The S3 license key (Model FCA2035-A1) is a combination license key that allows for virtual monitoring and control, as well as for distribution of BACnet (monitoring-only) communications. A four-digit personal identification number (PIN) must be used in order to prevent unauthorized access.

Tabular Annunciators

Tabular annunciators allow system events sent from Cerberus PRO 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 96 LEDs for 32 zones. Up to two (2) light-emitting diodes (LEDs) can be used per zone.

Tabular annunciators provide outputs for system and zone status, and are orderable in either **black** or red.

LED Annunciator Driver

The Model FT2007-U1 LED Annunciator Driver provides custom graphic annunciators on addressable Cerberus PRO FACPs. This optional system module provides 96 highly programmable outputs to drive LED indicators.

There are 16 inputs to accommodate user-system commands: *Silence*, *Unsilence*, *Reset*, *Acknowledge* and *Lamp Test*. Model FT2007-U1 is supervised via a RS–485 interface. A maximum eight (8) modules are allowed on each RS–485 communication bus.

NAC Expansion Module

The NAC expansion module (Model FCI2011-U1) provides either of the following additional NACs to a Cerberus PRO 252 / 504-point FACP:

- one (1) 'Class A', or
- two (2) 'Class B' NACs

Each NAC is rated at 3 Amps. Each NAC expansion module is monitored for open-line and short-circuit conditions.

Details for Ordering

Model	Part Number	Description
FCI2016-U1	S54400-A55-A1	Periphery Board, 252-pt. FACPs
FCI2017-U1	S54400-A56-A1	Periphery Board, 504-pt. FACPs
FCM2018-U3	S54400-C40-A2	Operating Interface Unit
FCM2019-U3	S54400-C41-A2	Operating Interface Unit with LEDs
FHB2001-U1	S54400-B47-A1	1HU Back Box, **Black**
FHB2001-R1	S54400-B47-A2	1HU Back Box, Red
FHB2002-U1	S54400-B48-A1	2HU Back Box, **Black**
FHB2002-R1	S54400-B48-A2	2HU Back Box, Red
FHD2001-U3	S54400-B45-A1	1HU Outer Door, **Black**
FHD2001-R3	S54400-B40-A1	1HU Outer Door, Red
FHD2002-U3	S54400-B32-A1	2HU Outer Door w/ 2 Windows, **Black**
FHD2002-R3	S54400-C53-A1	2HU Outer Door w/ 1 Window, Red
FHD2003-U3	S54400-C42-A1	2HU Outer Door w/ 2 Windows, **Black**
FHD2003-R3	S54400-B46-A1	2HU outer door w/ 2 windows, Red
FHD2004-U1	S54400-B52-A1	Inner Door, **Black**
FHD2005-U1	S54400-B53-A1	Inner Door, **Black** (full plate)
FHD2006-U1	S54400-C46-A1	Clear-Lens Window
FP2011-U1	500-450222	170-Watt Power Supply
FP2012-U1	S54400-Z60-A1	300-Watt Power Supply

Details for Ordering — (continued)

Optional Accessories

Model	Part Number	Description
FCA2015-U1	S54400-A63-A1	Digi Alarm Comm Transmitter [DACT]
FCA2016-U1	S54400-A39-A1	RS-485 Interface Module
FCA2018-U1	S54400-A65-A1	Remote Peripheral Module
FCA2032-U1	S54400-B145-A1	Battery Disconnect Module
FCA2033-U1	S54400-P154-A1	S_1 License Key
FCA2034-U1	S54400-P155-A1	S_2 License Key: BACnet monitoring
FCA2035-U1	S54400-P156-A1	S_3 License Key: Rem. View w/ BACnet
FCI2011-U1	S54400-A54-A1	NAC Expansion Module
FCI2020-U1	S54400-A57-A1	Leased-Line / City-Tie Module
FCM2022-U3	S54400-C44-A2	Blank Option Module
FCM2023-U3	S54400-C45-A2	LED Option Module: [RED / GREEN bi-color LED; one (1) YELLOW LED]
FCM2034-U3	S54400-C138-A1	LED Option Module: [RED / YELLOW bi-color LED; one (1) YELLOW LED]
FHA2056-U1	S54400-B18-A1	Hardware Migration Kit, **Black**
FHA2056-R1	S54400-B19-A1	Hardware Migration Kit, Red
FHD2012-U1	S54400-C145-A1	Inner Door, **Black** (optional, ®UL markets)
FN2001-U1	S54400-A60-A1	C-WEB Network Module
FN2006-U1	S54400-A61-A1	Single-Mode Fiber-Optic Module
FN2007-U1	S54400-A62-A1	Multi-Mode Fiber-Optic Module
FT2007-U1	S54400-A142-A1	LED Annunciator Driver
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
FT2014-U3	S54400-B80-A1	Remote Display Terminal, **Black**
FT2014-R3	S54400-B73-A1	Remote Display Terminal, Red
FT2015-U3	S54400-B88-A1	Display Terminal with key, **Black**
FT2015-R3	S54400-B16-A1	Display Terminal with key, Red
FTI2001-U1	S54400-A58-A1	Fire Terminal Board
XCI2001-U1	S54400-A69-A1	Releasing Module

Related Documentation

Product	Data Sheet Number
Cerberus PRO operating units	9801
Cerberus PRO periphery boards	9802
Cerberus PRO fire terminals	9803
Cerberus PRO DACT	9804
C-WEB / C-NET Network Module	9805
Cerberus PRO power supplies	9806
Cerberus PRO enclosures	9807
NAC expansion module	9808
Cerberus PRO releasing module	9809
Leased-Line / city-tie module	9810
Remote periphery module	9811
Remote display terminals	9812
Single / multi-mode fiber modules	9814
LED / Blank option modules	9816
Battery disconnect module	9819
S-series license keys	9820
Marine-specific equipment	9822
LED annunciator driver	9824
16 & 32-zone tabular annunciators	9825
Hardware Migration Kit	9826

Electronics Packages

Model	Part Number	Description
FC922-US	S54400-C14-A1	252-Point Fire System with 170 Watt Power Supply and standard operator interfaces Includes: FP2011-U1 (1 Qty.), FCI2016-U1 (1 Qty.), FCM2018-U3 (1 Qty.)
FC924-US	S54400-C15-A1	504-Point Fire System with 170 Watt Power Supply and standard operator interfaces Includes: FP2011-U1 (1 Qty.), FCI2017-U1 (1 Qty.), FCM2018-U3 (1 Qty.)
FC922-UE	S54400-C16-A1	252-Point Fire System with 170 Watt Power Supply and standard operator interfaces (with 24-zone LEDs) Includes: FP2011-U1 (1 Qty.), FCI2016-U1 (1 Qty.), FCM2019-U3 (1 Qty.)
FC924-UE	S54400-C17-A1	504-Point Fire System with 170 Watt Power Supply and standard operator interfaces (with 24-zone LEDs) Includes: FP2011-U1 (1 Qty.), FCI2017-U1 (1 Qty.), FCM2019-U3 (1 Qty.)
FT924-US	S54400-C18-A1	Network Terminal w/ standard operator interface Includes: FTI2001-U1 (1 Qty.), FCM2018-U3 (1 Qty.)
FT924-UE	S54400-C19-A1	Network Terminal w/ standard operator interface (with 24-zone LEDs) Includes: FTI2001-U1 (1 Qty.), FCM2019-U3 (1 Qty.)
FC922-UT	S54400-C20-A1	252-Point Fire System with 300 Watt Power Supply and standard operator interfaces Includes: FP2012-U1 (1 Qty.), FCI2016-U1 (1 Qty.), FCM2018-U3 (1 Qty.)
FC924-UT	S54400-C21-A1	504-Point Fire System with 300 Watt Power Supply and standard operator interfaces Includes: FP2012-U1 (1 Qty.), FCI2017-U1 (1 Qty.), FCM2018-U3 (1 Qty.)
FC922-UF	S54400-C22-A1	252-Point Fire System with 300 Watt Power Supply and standard operator interfaces (with 24-zone LEDs) Includes: FP2012-U1 (1 Qty.), FCI2016-U1 (1 Qty.), FCM2019-U3 (1 Qty.)
FC924-UF	S54400-C23-A1	504-Point Fire System with 300 Watt Power Supply and standard operator interfaces (with 24-zone LEDs) Includes: FP2012-U1 (1 Qty.), FCI2017-U1 (1 Qty.), FCM2019-U3 (1 Qty.)

Temperature and Humidity Range

Models FC922 and FC924 are ®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).

SIEMENS Cerberus® PRO

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Building Technologies Division
SII – Fire Safety
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DTK-HW Series

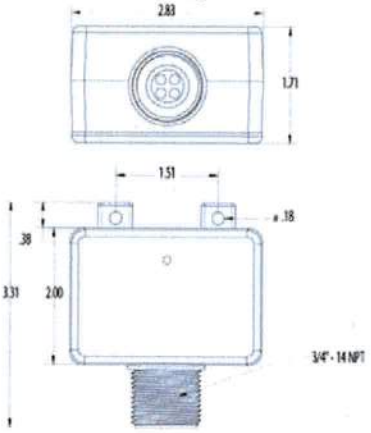
Equipment Panel/Dedicated Circuit Surge Protective Device General Product Specifications

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

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

Data Sheet

Cerberus PRO

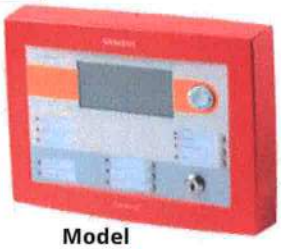
Remote Display Terminals (with RS—485 interface)

Models FT2014-U3 / R3 and FT2015-U3 / R3 (with Model FCA2016-U1)

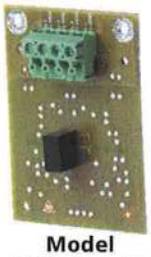
ARCHITECT AND ENGINEER SPECIFICATIONS

Models FT2014-U3 / R3 and FT2015-U3 / R3:

- 2" –x– 4-¾" backlit LCD screen
- Event and audible-status LEDs
- Supports Style 4 or Style 6 wiring
- Built-in transient protection
- Mounts in its own enclosure
- Optional system control
- Downloadable firmware
  - Built-in flash electrically erasable programmable read-only memory (EEPROM)
- Scroll buttons to view additional events
- Local sounder
- ®UL 864 9th Edition, ULC Listed; FM, CSFM & NYC Fire Dept. Approved



Model FT2015-R3



Model FCA2016-U1

Model FCA2016-U1:

- RS–485 module provides communication to Remote Display Terminals
- Dual, standardized RS–485 interface
- Supports 'Class B' (Style 4) and 'Class A' (Style 6) wiring configurations
- Up to eight (8) devices on the RS–485 Style 6 loop Universal Fire Protocol (UFP) limitation
- Electrical isolation between the RS–485 interfaces and the panel
- Ground-fault monitoring
- ®UL 864 9th Edition Listed, ULC Listed; FM, CSFM & NYC Fire Dept. Approved

Product Overview

The Remote Display Terminals (Models FT2014-U3 / R3 and FT2015-U3 / R3) are remote light-emitting diode (LED) / liquid-crystal display (LCD) units that show the existing status of a Cerberus PRO 252 / 504-point system.

A LED will illuminate for any given *Alarm*, *Gas Alarm*, *Supervisory* and *Trouble* Cerberus PRO-system event. A 2" –x– 4-3/4" 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 RDTs (as well as Model FCA2016-U1) are FM (#3010); CSFM (#7165-0067:0259) and FDNY (#6104) Approved.

Specifications

Each RDT has separate LEDs for *Alarm*, *Gas Alarm*, *Supervisory*, and *Trouble* events on a Cerberus PRO FACP. Each LED will flash when 'unacknowledged' events are present. The LED will change to 'steady', upon acknowledgment of the event.

Additionally, the remote display terminals have a LED to indicate system power; a separate ground-fault LED, and four (4) additional user-programmable LEDs. There are also two (2) LEDs that indicate the state of audible circuits on the system:

- One (1) LED to indicate that the circuits are 'active'
- One (1) LED to indicate the circuits have been 'silenced'

When the Cerberus PRO FACP is in its 'normal' state (with no events present), the screen will annunciate the system ID data, and will show the date, time-of-day. When an event has been triggered to the Cerberus PRO panel, the LCD display will show the following:

- Event type and zone
- Custom message for that zone
- Usage of the zone
- 'Unacknowledged' or 'Acknowledged' event

In addition to the aforementioned features, the display will show the total number of all types of events present on the system.

The display has a backlight feature that operates upon receiving any event information or when any operator buttons are pressed.

Specifications – (continued)

The Model FT2014-series display terminal has a local sounder silence button, which operates when any events are displayed on the system. Pressing any operator buttons will silence the local sounder when an event is present.

Each remote display terminal has a navigation button that is used for displaying next-event or previous-event information in the sequence, and has a local sounder silence button.

The Model FT2014-series has one (1) button used to silence the local sounder. The Model FT2015-series has three (3) control buttons for 'acknowledging' events, silencing audible circuits and resetting the system. Additionally, there are three (3) user-programmable buttons available. The Model FT2015-series has an integral key switch that enables the control buttons to operate.

The remote display terminals are remotely connected to the Cerberus PRO FACP, via the RS–485 interface. The Model FC922 and FC924 Cerberus PRO panels require the Model FCA2016-U1 RS–485 module to provide communication to the remote display terminals.

Model FCA2016-U1 supports Style 4 or Style 6 wiring. Up to eight (8) modules can be supported on a RS–485 bus. Input power of 24VDC is required to run the remote display terminals, and can be provided from a Cerberus PRO FACP or other ®UL Listed 24VDC power source.

The remote display terminals have screw terminals capable of supporting 12 to 22 American-Gauge Wires (AWG).

The remote display terminals can be mounted in a (2) two-gang electrical box or a (4) four-inch square electrical box. No flush-trim kit is required. Each unit is approximately 12-1/4"(31.2cm.) wide; 9" (22.9cm.) high; and 2-1/2" (6.4cm.) deep.

Each RS–485 interface is approximately 1.97" (5cm.) wide; 2.76" (7cm.) high; and 0.6" (1.5cm.) deep. The weight of Model FCA2016-U1 is 0.044 Lbs. (20g).

Temperature and Humidity Range

Products are ®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

RS–485 Interface	**Voltage**		3.3VDC
	Operating Current:	▪ **Normal** (Standby mode)	Approx. 75 mA
		▪ ***Alarm***	Approx. 136 mA
	Connection		Bus structure
	Communication mode		Half-duplex
	Number of participants		Eight (8), max.
	Maximum wire length		3,937 ft. (1200 meters)
Connections	**RS–485 Interface:** ▪ **Design**		4-pole screw terminal
	▪ **Cross-section**		12 to 22 American-Gauge Wires (AWG)
	To the operating unit		Plug-in-type connections
Power Requirements	**FT2014-series**		24VDC @ 55mA
	FT2015-series		24VDC @ 55mA

Related Documentation

Product	Data Sheet Number
Remote Peripheral Module	9811
252-point Cerberus PRO system	9815
504-point Cerberus PRO system	
Intelligent Voice Communication system	9821

Details for Ordering

Model	Part Number	Description
FT2014-U3	S54400-B80-A1	Remote Display Terminal
FT2014-R3	S54400-B73-A1	Remote Display Terminal, Red
FT2015-U3	S54400-B88-A1	Remote Display Terminal [with control]
FT2015-R3	S54400-B16-A1	Remote Display Terminal [with control], Red
FCA2016-U1	S54400-A39-A1	RS–485 Interface

SIEMENS Cerberus® PRO

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

May 2017 – Supersedes sheet dated 8/2013
(Rev. 4)

SIEMENS
Ingenuity for life

Desigo® Fire Safety
Addressable Systems
Migration Hardware Kit
Model FHA2056-U1 | FHA2056-R1

Architect & Engineer Specifications

- ☐ Migration of panel hardware into a Desigo Fire Safety control panel:
  - Fire-only panel for up to 50 addressable points, Model FC2005
  - Fire-only panel for up to 252 addressable points, Model FC2025
  - Fire-only panel for up to 504 addressable points, Model FC2050
- ☐ Replacement of internal-system electronics of each Siemens legacy FS-250 (FireSeeker) control panel
- ☐ Each new migration hardware includes the following equipment:
  - one (1) outer door
  - one (1) inner door
  - one (1) hinge-assembly bracket
  - one (1) back plate
  - one (1) inner-door bracket (used only on Model FC2005)
- ☐ Re-use of existing panel's back box
- ☐ Orderable in either **black** or red
- ☐ Migration hardware functions with optional Desigo modules:
  - Digital Alarm Communication Transmitter (DACT), FCA2015-U1
  - Releasing module, XCI2001-U1
  - NAC expansion module, FCI2011-U1
  - Leased Line City-Tie Module, FCI2020-U1
- ☐ Full migration of existing Siemens field devices
  - field devices are fully compatible with migration hardware
- ☐ UL864 9th Edition Listed, ULC-S527 3rd Edition Listed

Product Overview

The Migration Hardware Kit from Siemens — Fire Safety is specifically designed for the seamless transition of an existing Siemens FS-250 (FireSeeker) control panel into a fully operational Desigo Fire Safety fire-alarm control panel (FACP) –

- FACP for up to 50 addressable points, Model FC2005
- FACP for up to 252 addressable points, Model FC2025
- FACP for up to 504 addressable points, Model FC2050

Each shipment of the Model FHA2056-series kits contains the following pieces of equipment:

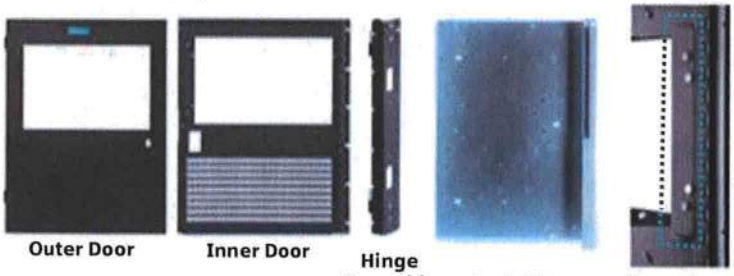
- one (1) outer door
- one (1) inner door
- one (1) hinge-assembly bracket
- one (1) back plate
- one (1) inner-door bracket
  - for use specifically with Desigo Fire Safety 50-point addressable panels

NOTE: The five (5) items that comprise one (1) Model FHA2056-series hardware-migration kit cannot be ordered individually.

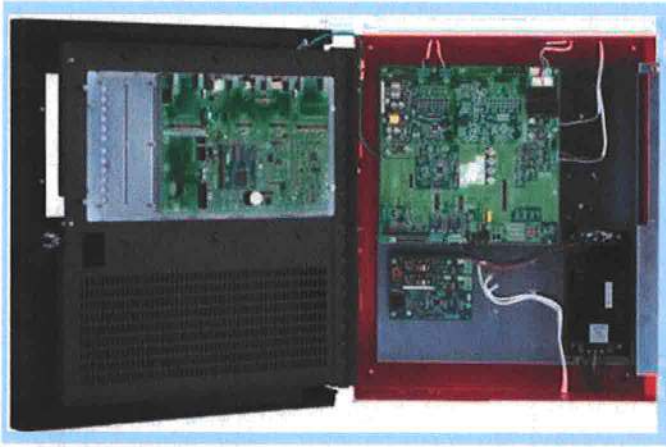
The Siemens field devices currently used with a legacy FS-250 control panel will work seamlessly on new Desigo Fire Safety electronics, since the field devices are fully compatible. There is also no need to order a new back box that had been used on the legacy panel since the design of the outer door (sold as part of Hardware Migration Kit) is designed to fit with either the existing **black** or red back box.

Additionally, migration hardware will function with the following optional Desigo Fire Safety modules:

- the DACT module, Model FCA2015-U1
- the releasing module, Model XCI2001-U1
- the NAC expansion module, Model FCI2011-U1
- the leased line | city-tie module, Model FCI2020-U1

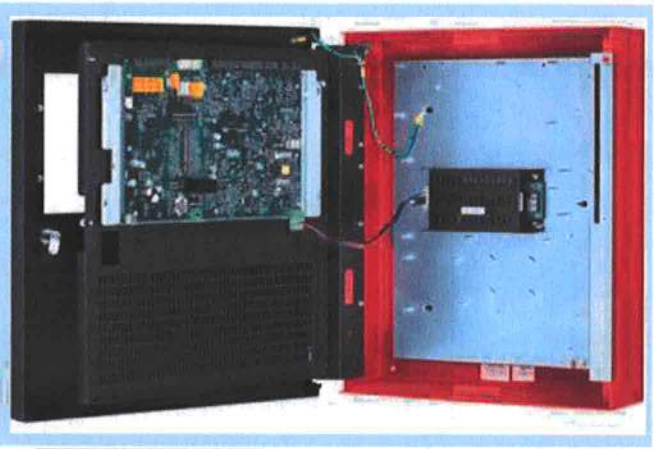


Outer Door | **Inner Door** | **Hinge Assembly Bracket** | **Back Plate** | **Inner Door Mounting Bracket** [specific to 50-pt. panels]



Model FHA2056-U1

Illustration of a fully mounted Desigo 252 / 504-point addressable system connected to legacy back box



Model FHA2056-U1

Illustration of a fully mounted Desigo 50-point addressable system connected to legacy back box

Physical Properties

OUTER DOOR DIMENSIONS: (W –x– H –x– D)	22.55" –x– 20.2" –x– 1.7" (57.2 cm. –x–51.3 cm. –x– 4.3 cm.)
INNER DOOR DIMENSIONS: (W –x– H –x– D)	20" –x– 19.5" –x– 1.0" (50.8 cm. –x– 49.53 cm. –x– 2.54 cm.)
HINGE ASSEMBLY BRACKET DIMENSIONS: (W –x– H –x– D)	3.25" –x– 25" –x– 1.75" (8.26 cm. –x– 63.5 cm. –x– 4.45 cm.)
BACK PLATE DIMENSIONS: (W –x– H –x– D)	18.75" –x– 16.5" –x– 5.2" (47.63 cm. –x– 41.9 cm. –x–13.21 cm.)

Product Compatibilities

MODEL OR TYPE	DATA SHEET	PANEL
BP-61; BT-series and BTX-series	3361	Desigo Fire Safety system battery sets
FCM201-series	6801	Desigo 252 / 504-point Operating Units
FCI201-series	6802	Desigo Fire Safety Periphery Boards
FCA2015-U1	6804	Digital Alarm Communication Transmitter
FP2011-U1	6806	Desigo Fire Safety 170W power supply
Enclosures, equipment	6807	Desigo Fire Safety control panel hardware
FCI2011-U1	6808	NAC Expansion Module
XCI2001-U1	6809	Desigo Releasing Module
FC2005	6813	Desigo Fire Safety 50-point addressable (fire)
FC2025	6815	Desigo Fire Safety 252-point addressable (fire)
FC2050		Desigo Fire Safety 504-point addressable (fire)

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
FHA2056-U1	S54400-B18-A1	Desigo Fire Safety Hardware Migration Kit, **black**
FHA2056-R1	S54400-B19-A1	Desigo Fire Safety Hardware Migration Kit, red

Desigo Fire Safety FACPs' kits:

MODEL OR TYPE	PART NUMBER	PRODUCT
FC2005-U2	S54433-C103-A1	Desigo Fire Safety 50-point addressable panel kit
FC2025-US	S54400-C4-A1	Desigo Fire Safety 252-point addressable panel kit
FC2050-US	S54400-C5-A1	Desigo Fire Safety 504-point addressable panel kit

NOTE: Refer to Installation Operation Manual, IOM: A6V101004423, for more information.

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Desigo® Fire Safety

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August 2017 – New Issue

SIEMENS
Ingenuity for life

Notification Appliances

'SL' Series – Horns | Strobes | Horn- Strobes

Applications: Indoor, Wall-Only

Architect & Engineer Specifications

- ☐ Sophisticated series of notification appliances that meets fire-industry codes and regulations for commercial-building applications
- ☐ Compatible with the Siemens 50-point, 252-point and 504-point addressable fire alarm control panels (FACPs), and with:
  - Siemens Modular FACPs
  - Siemens PAD-series of NAC extenders
  - FireFinder® XLS / XLSV FACPs
  - Siemens dual-sync control (DSC) modules
- ☐ Innovative LED strobe technology provides an energy-efficient means for a significantly reduced current draw
  - Capability to have existing Xenon and new LED strobes in the same field-of-view
  - Fewer power supplies required, smaller wire gage, reduced wire runs
- ☐ Straightforward installation coupled with compact, modern design
  - No visible mounting screws
  - Manual (index finger) slide-setting adjustor
  - Four (4) field-selectable settings in one (1) device: 15cd | 30cd | 75cd | 110cd
- ☐ Faceplates ship in four (4) distinctive types:
  - "FIRE" | "ALERT" | "AGENT" | (blank)
- ☐ Two (2) audible settings in each notification appliance
  - Temporal or steady horn output
  - High or Low setting
- ☐ UL (2034 | 1971 | 464) and ULC Listed (ULC-S525 | - S526)
  - ADA | NFPA | FCC | ANSI | OSHA compliant

Product Overview

Formed as the `SL'-series, Siemens is now offering horns, strobes, and horn-strobes with LED based strobes to its notification-appliances portfolio. With the `SL'-series, Siemens offers a full range of products with low and high candela settings that makes these sophisticated notification appliances ideal for new installs and retrofit applications.

Innovative light-emitting diode (LED) strobe technology provides an energy-efficient means for a significantly reduced current draw.

The strobe portion of these appliances meets the 20 millisecond light-pulse-duration requirements of the 2016 edition of NFPA 72. This feature allows existing Xenon and the new LED devices to be used in the same field-of-view.

In a single device, the `SL'-series can provide alarm-signaling tones for dual applications. All strobe models in the series feature multi-Candela settings (15 | 30 | 75 | 110cd) on a single appliance.

Additionally, there are two (2) modes of operation for the audible portion of these notification appliances:

- T3 (coded)
- Continuous

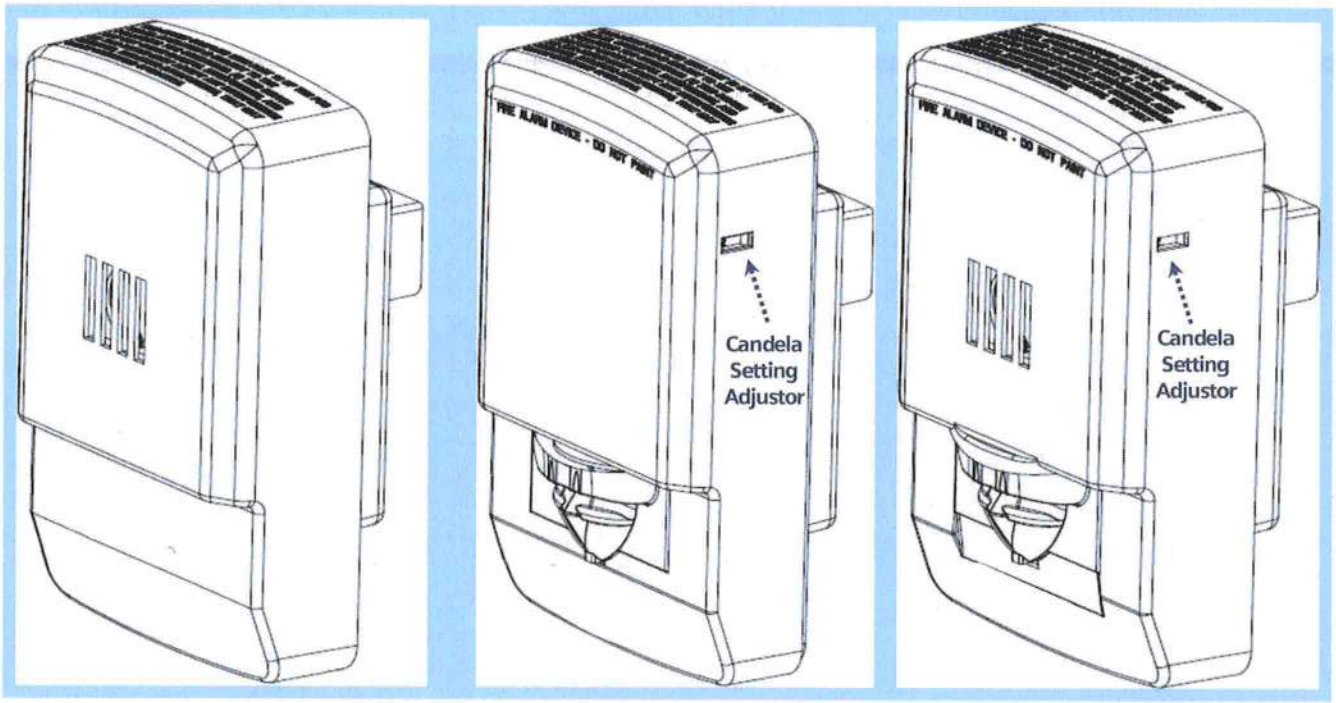
The `SL'-series of horns, strobes and horn-strobes devices are produced in a sleek, modern design. Its single-gang form factor provides high-quality energy efficiency in an aesthetically pleasing, low-profile design that is consistent to the look of the interior composition of the building application.

The `SL'-series is apt for indoor wall-mount applications. The Model `SLH'-series horn appliances work in either 12V or 24VDC, whereas the Series `SLSW' and `SLHSW' strobe and horn-strobe devices are specifically for 24V operation.

Model SLHR-N
Horn

Model SLSWW-ALA
Strobe

Model SLHSWR-F
Horn-Strobe



`SLHW' Series
Horn

TRIMPLATE DIMENSIONS:
5.25 inches (13.34 cm.) {H};
4.58 inches (11.6 cm.) {W};
0.32 inches (0.81 cm.) {D}

`SLSW' Series
Strobe

MOUNTING OPTIONS INCLUDE:
- Model SLSBBR or SLSBBW to any single-gang backbox
- 4" (10.2 cm.) square backboxes with the Model SLESB-KIT-R or SLESB-KIT-W adapter kit

`SLHSW' Series
Horn-Strobe

Specifications

In terms of composition and functionality, Models `SLHW'-series, `SLSW'-series, and `SLHSW'-series provide added value to the installer for the types of applications for operation:

- Compact | sleek | low-profile design
- Comprehensive feature list
- Convenient mounting options
- Easy-to-adjust selection-slider switch for Candela settings
  - – No tools required for setting changes
  - – Multi-level settings: 15cd | 30cd | 75cd | 110cd
- High and Low audible outputs
- Reduced current draw, via cutting-edge LED technology

The LED portions of the Siemens `SL'-series of strobes and horn-strobes meet the 20 millisecond light-pulse-duration requirements of the 2016 edition of NFPA 72. By meeting this latest requirement, existing Xenon as well as the new LED-technology devices can now be in the same field-of-view.

The horn, strobe and horn-strobes in this Siemens `SL'-series of notification appliances have received UL / ULC Listed status by attaining compatible testing standards with all of the Siemens fire-alarm control panels (FACPs) and accessories that have been determined to be aligned with existing Siemens strobe-based appliances.

This would include the following existing model-types: `CH'|`HS'|`MTH' |`S-HQ'|`SA'|`SE'|`SEF'|`SET' |`ST' |`STH' |`ZR' and `ZH' Series notification appliances. The regulatory listing also includes the capability for installing the Siemens `SL'-series LED-based strobes in the same notification zone and field-of-view with any existing Siemens Notification Appliance Xenon-based strobes.

All types of these horns, strobes and horn-strobes are UL Listed (for indoor use under Standard 1971 and464), as well as ULC-S525|ULC-S526 Listed. The Siemens `SL'-series sounder-strobes also have ADA | RoHS and ICES approval.

Technical Data

Wall-Mount | Horn-Strobes | Output Current Draw

MODEL `SLHSW' SERIES:*	Current Ratings (HIGH dB | in Amps) 16.0 – 33.0VDC				
	Setting	15cd	30cd	75cd	110cd
	Code 3	0.034	0.046	0.105	0.214
	Continuous	0.042	0.052	0.110	0.217

Wall-Mount | Horn-Strobes | Output Current Draw

MODEL `SLHSW' SERIES:	Current Ratings (LOW dB | in Amps) 16.0 – 33.0VDC				
	Setting	15cd	30cd	75cd	110cd
	Code 3	0.032	0.042	0.102	0.213
	Continuous	0.036	0.044	0.104	0.216

Wall-Mount | Strobe-Only | Output Current Draw

MODEL `SLHW' SERIES:*	Current Ratings (Code 3 | in Amps) RMS Current @ 24VDC		
	Regulated Voltage Range	High	Low
	8.0 – 17.50 VDC	0.024	0.018
	16.0 – 33.0 VDC	0.030	0.022

Wall-Mount | Strobe-Only | Output Current Draw

MODEL `SLSW' SERIES:*	Current Ratings (Code 3 | in Amps) RMS Current @ 24VDC				
	Regulated Voltage Range	15cd	30cd	75cd	110cd
	16.0 – 33.0 VDC	0.030	0.040	0.102	0.201

Wall Mount | Horn | Output Ratings (UL)

MODEL `SLHW'– and – `SLHSW' SERIES:*	UL Sound Output Ratings (dBA) Reverberant per UL464 @ 10 feet					
	Volume	SLHW @ 12VDC			SLHW -and- SLHSW @ 24VDC	
		8.0V	12.0V	17.5V	16.0V	24.0V	33.0V
	Code 3 | High dBA	75	80	83	76	79	81
	Code 3 | Low dBA	73	77	80	75	77	77
	Continuous | High dBA	80	84	87	80	83	86
	Continuous | Low dBA	78	79	84	78	81	81

Wall Mount | Horn | Output Ratings (ULC)

MODEL `SLHW'– and – `SLHSW' SERIES:*	ULC Sound Output Ratings (dBA) Anechoic per ULCS525-16 @ 3.05 meters					
	Volume	SLHW @ 12VDC			SLHW -and- SLHSW @ 24VDC	
		8.0V	12.0V	17.5V	16.0V	24.0V	33.0V
	Code 3 | High dBA	85	89	92	91	95	96
	Code 3 | Low dBA	79	84	87	86	90	91
	Continuous | High dBA	85	89	92	91	94	97
	Continuous | Low dBA	79	84	87	86	90	92

**RMS current ratings are per UL maximum RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16 - 33V for 24V units)*
** For audible appliances, the max current is usually at the maximum listed voltage (16 - 33V for 24V units)*
** For unfiltered FWR ratings, see installation instructions*

GENERAL NOTES:

1. Strobes are designed to flash at 1-flash-per-second minimum over their " Regulated Voltage Range."
2. NFPA-72 specifies a flash rate of 1-to-2 flashes-per-second, and guidelines for the Americans with Disabilities Act (ADA) specify a flash rate of 1-to-3 flashes-per-second.
3. All Candela ratings represent minimum effective Strobe intensity based on UL 1971.

Technical Data

General Properties

	MODEL `SL'-series
OPERATING TEMPERATURE:	- 32°F (0°C) to 122°F (50°C) - for indoor-applications' use only
RELATIVE HUMIDITY:	93%, maximum
OPERATING VOLTAGE RANGES:	- 12 VDC / VFWR → 8 - 17.5 VDC / VFWR; - 24 VDC / VFWR → 16 - 33 VDC/VFWR (12 VDC for Model SLHW only)
STROBE OUTPUT RATING:	- UL 1971, ULC-S526 - Field-selectable 15cd | 30cd | 75cd | 110cd Candela outputs
STROBE FLASH RATE:	Strobes are designed to flash at one-flash-per-second
STROBE SYNCRONIZATION:	- all Siemens addressable panels - Siemens PAD-series NAC extenders - Siemens dual-sync (DSC) modules, which provide the unique Siemens proprietary synchronization protocol
TEMPORAL PATTERN:	- Continuous - Code 3 (½ second on, ½ second off; then ½ second on, ½ second off; followed by ½ second on, 1-½ second off and repeat) NOTES: The Code 3 pattern is specified by ANSI and NFPA 72 for Standard Emergency Evacuation Signaling.

Physical Properties

	MODEL `SL'-series	
MATERIAL:	- White-or-red textured, ultraviolet (UV) stabilized, colored impregnated engineered plastic - Exceeds 94V-0 UL flammability rating	
WEIGHT:	0.35 Lbs. (0.16 Kg.)	
LENS TYPE:	LED strobe situated in a rugged Lexan lens	
DIMENSIONS:	Actual Appliance: 4.53" (11.5 cm.) { H }; 2.76" (7.0 cm.) { W }; 1.27" (3.23 cm.) { D }	Single-Gang Trim Plate: 5.25" (13.3 cm.) { H }; 4.58" (11.6 cm.) { W }; 0.32" (0.81 cm.) { D }

Mounting and Wiring Properties

	MODEL `SL'-series
INDOOR MOUNTING:	- Wall-mount applications - Single-gang (Model SLSBB) backboxes or to 4" (10.2 cm.) square with Model SLESB-KIT-R or SLESB-KIT-W adapter kit
WIRING TYPE:	#12 – #18, American Wire Gauge (AWG)

Details for Ordering

MODEL	PART NUMBER	APPLIANCE TYPE	UL	ULC	MOUNTING TYPE	STROBE TYPE	FACEPLATE COLOR	FACEPLATE LETTERING
SLHWR-N	S54329-F23-A1	Horn	✓	✓	WALL	– None –	RED	– None –
SLHWW-N	S54329-F23-A2		✓	✓	WALL	Clear	WHITE	– None –
SLHSWR-F	S54329-F22-A1	Horn-Strobe	✓	—	WALL	Clear	RED	FIRE
SLHSWW-F	S54329-F22-A2		✓	—	WALL	Clear	WHITE	FIRE
SLHSWR-FB	S54329-F24-A1	Horn-Strobe	—	✓	WALL	Clear	RED	– Pictogram –
SLHSWW-FB	S54329-F24-A2		—	✓	WALL	Clear	WHITE	– Pictogram –
SLHSWR-A	S54329-F31-A2	Horn-Strobe	✓	✓	WALL	Clear	RED	AGENT
SLHSWW-A	S54329-F34-A2		✓	✓	WALL	Clear	WHITE	AGENT
SLHSWR-N	S54329-F34-A1	Horn-Strobe	✓	—	WALL	Clear	RED	– None –
SLHSWW-N	S54329-F37-A1		✓	—	WALL	Clear	WHITE	– None –
SLHSWW-AL	S54329-F35-A1	Horn-Strobe	✓	✓	WALL	Clear	WHITE	ALERT
SLHSWR-AL	S54329-F32-A1		✓	✓	WALL	Clear	RED	ALERT
SLSWR-F	S54329-F25-A1	Strobe	✓	—	WALL	Clear	RED	FIRE
SLSWW-F	S54329-F25-A2		✓	—	WALL	Clear	WHITE	FIRE
SLSWW-FB	S54329-F26-A1	Strobe	—	✓	WALL	Clear	WHITE	– Pictogram –
SLSWR-FB	S54329-F26-A2		—	✓	WALL	Clear	RED	– Pictogram –
SLSWR-A	S54329-F27-A1	Strobe	✓	—	WALL	Clear	RED	AGENT
SLSWW-AL	S54329-F27-A2	Strobe	✓	✓	WALL	Clear	WHITE	ALERT
SLSWR-AL	S54329-F28-A1		✓	✓	WALL	Clear	RED	ALERT
SLSWW-ALA	S54329-F28-A2	Strobe	✓	✓	WALL	Amber	WHITE	ALERT
SLSWR-ALA	S54329-F29-A1		✓	✓	WALL	Amber	RED	ALERT
SLSWR-NA	S54329-F29-A2	Strobe	✓	✓	WALL	Amber	RED	– None –
SLSWW-NA	S54329-F30-A1		✓	✓	WALL	Amber	WHITE	– None –
SLSWW-N	S54329-F30-A2	Strobe	✓	—	WALL	Clear	WHITE	– None –
SLSWR-N	S54329-F31-A1		✓	—	WALL	Clear	RED	– None –
SLSBBR	S54329-F21-A1	Backbox	✓	✓	WALL	– None –	RED	– None –
SLSBBW	S54329-F21-A2		✓	✓	WALL	– None –	WHITE	– None –
SLESB-KIT-R	S54329-F64-A1	Optional Single-Gang Trim Plate	✓	✓	WALL	– None –	RED	– None –
SLESB-KIT-W	S54329-F64-A2		✓	✓	WALL	– None –	WHITE	– None –

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. All 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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October - 2019
(Rev. 3)

SIEMENS
Ingenuity for life

Cerberus® PRO Detectors and Peripherals

Photoelectric Smoke Detector Model OP921

Architect & Engineer Specifications

- ☐ Compatible with Siemens Model `H'-series devices on the same loop (with Cerberus PRO Modular | FireFinder XLS | FC/FV9–series fire-alarm control panels
- ☐ Compatible with Model 8720 | DPU (device programmer / loop tester)
- ☐ Each detector is self-testing:
  - self monitored for sensitivity with UL Listed limits
  - complete diagnostics performed every 10 seconds
- ☐ 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 | FM, 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'
  - FM 3230 (Duct)
  - 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, and provides highly stable and accurate smoke detection.

Model OP921 also uses state-of-the-art microprocessor circuitry with error check; detector self-diagnostics, and supervision programs.

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 and addressable photoelectric smoke detector. Model OH921 is Underwriters' Laboratories Listed [UL268A Listed for direct in-air duct usage].

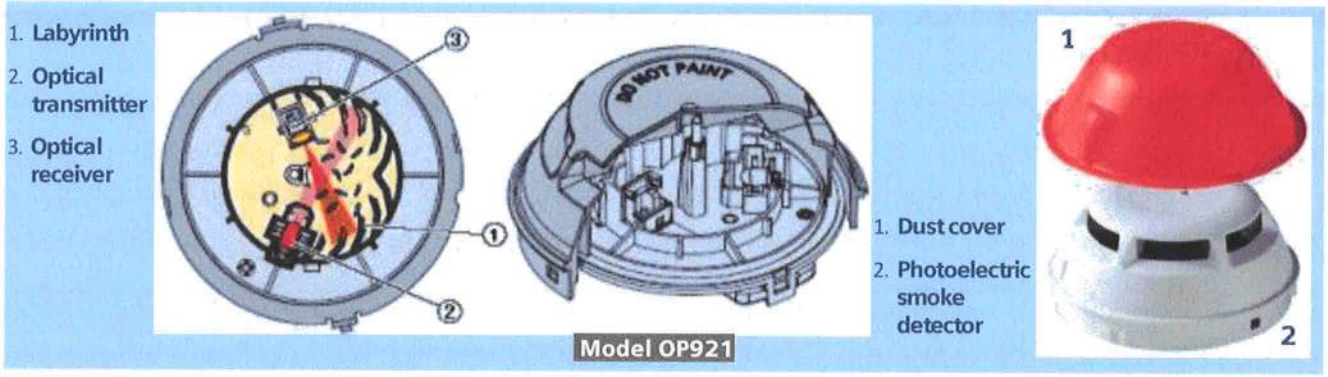
Each detector consists of a dust-resistant photoelectric chamber and microprocessor-based electronics with a low-profile plastic housing. Every Model OP921 fire detector is shipped with a protective dust cover.

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: the computer-graphic images on page 2).

Model OP921
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] –

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

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

- Dust-resistant photoelectric chamber
- Solid-state, non-mechanical thermal sensor
- 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)

Installation of Model OP921 smoke detectors 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 OP921 is polarity insensitive, which can greatly reduce installation and debugging times.

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 and 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 a mechanical-addressing mechanism.

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:	1.08 - 2.72% / 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

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Rev. 8

SIEMENS
Ingenuity for life

Cerberus® PRO Detectors and Peripherals

Thermal (Heat) Detector Model HI921

Architect & Engineer Specifications

- ☐ Compatible with Siemens Model `H'-series devices on the same loop (with Cerberus PRO Modular | FireFinder XLS/V | FC9–series fire-alarm control panels)
- ☐ Contains seven (7) field-selectable settings in a temperature range of 135°F – 174°F (57.2°C – 78.9°C)
- ☐ Provides a low-temperature warning of 40°F (4.4°C)
- ☐ Field programmable as rate-of-rise or fixed temperature
- ☐ Tri-color detector-status light-emitting diode (LED) with 360 ° view
- ☐ Compatible with Model 8720 | DPU (device programmer / loop tester)
- ☐ Utilizes advanced, microprocessor-based signal processing
- ☐ Each detector is self-testing:
  - complete diagnostics performed every 10 seconds
- ☐ Polarity insensitive via *SureWire™* technology
- ☐ Functions with Model DB-11–series mounting bases
- ☐ Superior electromagnetic interference (EMI) and radio-frequency interference (RFI) immunity
- ☐ Restriction of Hazardous Substances (RoHS compliant)
- ☐ UL 521 Listed, ULC Listed; FM (#3230, #3210), CSFM (#7272-0067:0258) Approved

Product Overview

The Intelligent Thermal (Heat) Detector (Model HI921) provides an advanced method of detection, address programming supervision – combined with sophisticated FACP communication. Model HI921 uses a state-of-the-art thermistor, microprocessor and advanced signal analysis, providing high reliability and accuracy.

Additionally, Model HI921 is a cost-effective, two-wire / addressable thermal detector that provides a distinctive, advanced feature: seven (7) field-selectable temperature settings specially tailored for application-specific detection needs.

The temperature-range settings for each Model HI921 detector is between 135°F (57°C) – 174°F (79°C) with fixed and rate-of-rise programmability. This variance provides the customer with maximum flexibility to program the temperature settings to suit multiple application needs and changing environmental conditions.

Model HI921 can be configured to provide a low-temperature warning signal at 40°F (4.4°C). This feature – along with a compatible FACP (Cerberus PRO Modular | FireFinder XLS/V or with Cerberus PRO FC/FV922 or FC/FV924 FACPs) – serves as prevention of water freezing in pipes for sprinkler systems, meeting NFPA 72

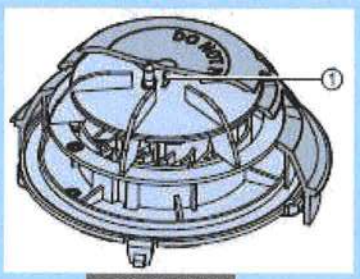
Operation

Model HI921 also utilizes a modern, accurate and shock-resistant thermistor to sense significant changes in temperature.

Each Model HI921 detector has seven (7) pre-programmed parameter sets that can be selected by the Siemens FACP.

Model HI921
Thermal (Heat) Detector

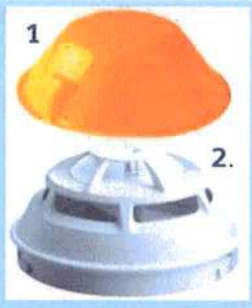
1. **Thermistor**



Model HI921

1. **Dust cover**
2. **Thermal (heat) detector**

NOTE: Each detector consists of a dust-resistant chamber, a solid state, functional internal sensor, and microprocessor-based electronics with a low-profile plastic housing.
Every Model HI921 fire detector is shipped with a protective dust cover.



Detector Supervision and Testing

Model HI921 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 fire-system conditions:

- Temperatures reaching programmed thresholds
- Internal sensors and electronics are functional

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

FLASH COLOR	CONDITION	FLASH INTERVAL (in seconds)
GREEN*:	Normal supervisory operation. Temperature has not reached programmed alarm thresholds or set points.	10
YELLOW:	Detector is not operating at normal capacity 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 or Model FC9-series FACPs that indicates the status and settings assigned to each detector.

Installation

All Model HI921 detectors use a surface-mounting base, Model DB2-HR | DB-11 or Model DB-11E, which mounts on a 4-inch (10.2 cm.) octagonal, square or single-gang electrical 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 HI921 may be installed on the same initiating circuit with the Siemens Model 'H'-series detectors [when used with Cerberus PRO Modular | Model FC9-series | FireFinder XLS/V FACPs] –

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

Application Data

Installation of Model HI921 intelligent, addressable thermal detectors 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 HI921 is polarity insensitive, which can greatly reduce installation and debugging times.

Model HI921 can be applied within the maximum 50-feet (15.24 m.) center spacing (2,500 sq. ft. [232.3 sq. m.]) per Underwriters' Laboratories. This application guide 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 heating | ventilation | air-conditioning (HVAC) 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 HI921 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 for all fire-protection equipment.

Specifications

Model HI921 is a plug-in, (2) two-wire thermal (heat) detector, compatible with Cerberus PRO Modular | FireFinder XLS/V and Model FC9-series FACPs. Each Model HI921 detector has microcomputer-chip technology and highly stable, solid-state electronic circuitry. Model HI921 detectors utilize a modern, accurate and shock-resistant thermistor to sense temperature changes. This electronic-sensing method virtually eliminates thermal lag associated with mechanical temperature-sensing devices, and provides almost instantaneous temperature status to the FACP.

Model HI921 provides seven (7) field-selectable, pre-programmed temperature settings:

- Fixed 135°F (57°C)
- Fixed 145°F (63°C)
- Fixed 155°F (68°C)
- Fixed 165°F (74°C)
- Fixed 174°F (79°C)

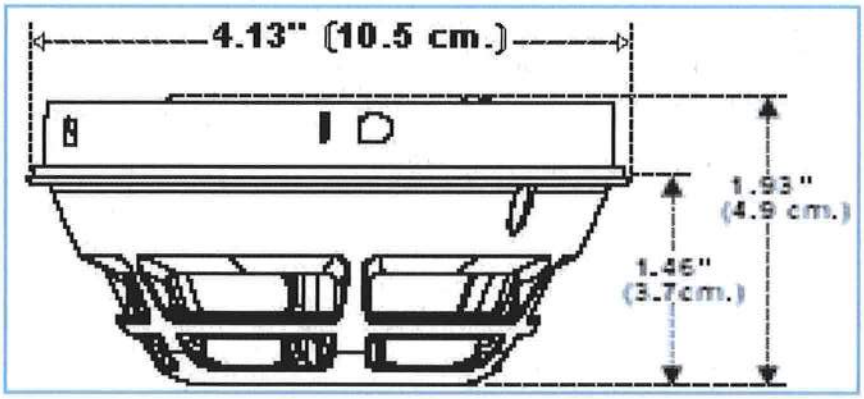
- Rate-of-Rise: 15°F / min. (8.3°C) at fixed 135°F (57°C)
- Rate-of-Rise: 15°F / min. (8.3°C) at fixed 174°F (79°C)

Additionally, the Model HI921 detector has the following optional feature:

- Model HI921 provides indication of potential water freezing for sprinkler systems, via configuration for reporting a low-temperature warning of 40°F (4.4°C).

  This feature is compatible with Cerberus PRO Modular systems, as well as with FireFinder XLS/V and Cerberus PRO FC/FV922 or FC/FV924 FACPs.

Dimensionsal Data



Field-Device Programmer / Test Unit

Model HI921 is compatible with the Siemens field-device programmer / test unit (Model 8720 | DPU), which is a compact, portable and 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 a mechanical-addressing mechanism.

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 | aerosols and other deceptive phenomena that could cause false alarms.

Technical Data

Operating Temperature:	+32° – +120°F (0° – +49°C) [with 145°F (63°C) | 155°F (68°C) | 165°F (74°C) and 174°F (79°C) alarm-threshold settings] +32° – +100°F, (0° – +38°C) [with 135°F (57°C) alarm threshold setting]
Thermal Rating:	Model HI921 provides seven (7) field-selectable, pre-programmed temperature settings: • Fixed 135°F (57°C) • Fixed 145°F (63°C) • Fixed 155°F (68°C) • Fixed 165°F (74°C) • Fixed 174°F (79°C) • Rate-of-Rise: 15°F / min. (8.3°C) at fixed 135°F (57°C) • Rate-of-Rise: 15°F / min. (8.3°C) at fixed 174°F (79°C)
Relative Humidity:	0 – 95% (non-condensing)
Air Pressure:	No effect
Input Voltage Range:	16VDC – 30VDC
'Alarm' Current, Max.:	410µA
'Standby' Current, Max.:	250µA
Maximum Spacing:	50–ft. (15.24 m.) centers (2500 sq. ft. | 232.3 sq. m.), per NFPA 72 and ULC-S524
Detector Weight:	0.317 Lbs. (0.144 kg.)

Panel Compatibilities

Model or Type	Data Sheet	Panel
XLS	6300	FireFinder® (fire)
XLSV	6340	FireFinder (fire w/ voice)
CERBERUS PRO MODULAR	8300	Cerberus PRO Modular (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
HI921	S54320-F5-A2	Thermal (Heat) Detector

Compatible Devices:

Model or Type	Part Number	Product
ABHW-4B	S54320-F13-A1	Sounder base with Loop-Power Option
ABHW-4S	S54320-F14-A1	Sounder base for Sleeping Areas
ADB-BOX	500-698360	Surface Mount Adapter Box for Audible Base
DB2-HR	S54370-F12-A1	Relay base compatible with Siemens standard and advanced detectors
DB-11	500-094151	Detector Mounting Base
DB-11E	500-094151E	Detector Base, small
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
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.

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(Rev. 8)

SIEMENS
Ingenuity for life

Intelligent Initiating Devices

HMS-Series

Models HMS-D I HMS-S I HMS-DZ I HMS-SZ

Architect & Engineer Specifications

- Durable metal design
- Shock and vibration resistant
- Single-action (Model HMS-S | -SZ) and double-action (Model HMS-D | -DZ) stations
- Pull-down lever is down, until manually reset
  - Reset with Allen Key
  - No break rods necessary
- Custom microcomputer-chip technology
- Polarity insensitive via SureWireTM technology
- Dynamic supervision to the fire-alarm control panel (FACP)
  - Device Programmer Unit (Model DPU) programs and verifies address and tests functionality of each device
- Electronic-address programming (EEPROM) is easier, as well as more efficient, dependable
- Surface or semi-flush installation
- Two-wire
- Americans with Disabilities Act (ADA) Compliant
- UL Listed;

  USCG (161.002/60/0),

  FM (#3015946 & 3052621),

  CSFM (#7150-0067:0036) and

  NYC Fire Dept. (#202-12E, Vol. 1)

  Approved

Product Overview

The Siemens intelligent manual fire-alarm boxes (Models HMS-S | HMS-SZ and HMS-D | HMS-DZ) provide the most advanced method of address programming and supervision.

Each Model HMS-series manual box achieves the state of an 'intelligent-initiating device' by incorporating custom microcomputer-chip technology with sophisticated, bi-directional communication capabilities with the panel, which include Siemens Modular, as well as Siemens 50-point, 252-point and 504-point addressable FACPs.

The Model HMS- series manual fire-alarm boxes are also included in US Coast Guard (USCG) approval for use in marine and other harsh environments, when used with the Siemens 252-point and 504-point USCG approved addressable system.

Specifications

Models HMS-S | HMS-SZ and HMS-D | HMS-DZ are constructed of durable, molded polycarbonate material that is matte finished in red with raised white lettering. The housing accommodates a 'pull-down' lever, which — when operated — locks into position; indicating the fire-alarm box has been activated.

The pull-down lever remains down / in the 'locked' position, until the fire-alarm box is manually reset. The manual fire alarm box can only be reset by opening the hinged housing cover with an Allen key; followed by closing and locking the cover. Models HMS-S | -SZ and HMS-D | -DZ operate with Siemens — Fire Safety FACPs. The microcomputer chip to the manual fire-alarm box has the capacity of storing — in memory — identification and important operating-status data.

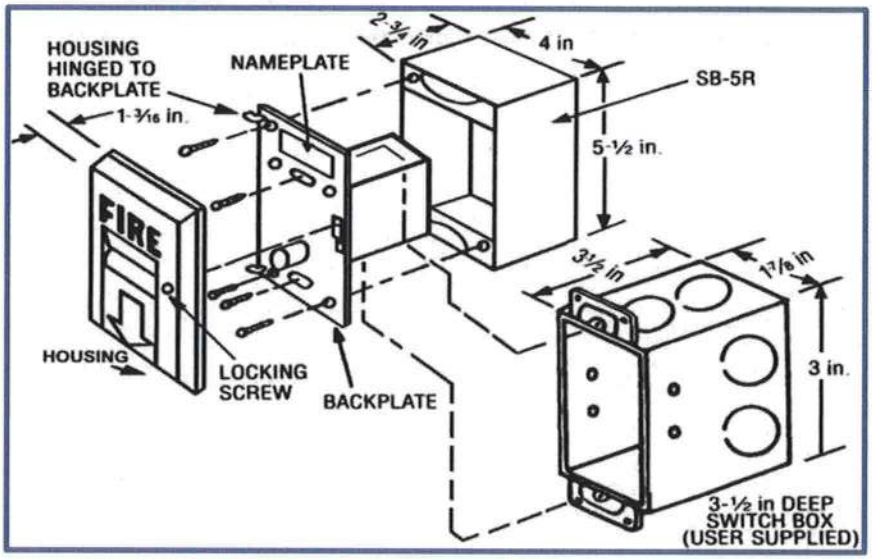
Models HMS-S | -SZ and HMS-D | -DZ are fitted with screw terminals for connection to an addressable circuit, and can be either surface or semi-flush mounted.

The Model HMS-series manual fire-alarm boxes derive their power, communicate information and receive commands over a single pair of wires. Each box is compatible on the same circuit with all Model `H'-series detectors, interfaces or addressable, conventional zone modules.

Model HMS-D | -DZ
Dual-Action Station

Model HMS-S | -SZ
Single-Action Station

Mounting Diagram



Device / Programmer Tester – Model DPU

Innovative technology from Siemens — Fire Safety also allows all Model HMS-series intelligent manual fire-alarm boxes to be programmed via the Device Programmer / Test Unit (Model DPU). The programmer / tester is a compact, portable and menu-driven accessory that makes programming and testing of a manual fire-alarm box device faster, easier and more dependable than previous methods.

Model DPU eliminates the need for mechanical-addressing mechanisms of a device because Model DPU electronically sets the address of the manual fire-alarm box into its microcomputer chip, non-volatile memory. Therefore, vibration, corrosion and other conditions -- which can compromise the functionality of mechanical-addressing mechanisms – are no longer an issue.

Technical Data

ELECTRICAL	
Current Draw (Active or Standby)	0.9mA

INDOOR / DRY CONDITIONS	
Operating Temperature Range	32° — 100°F (0° — 38°C)
Operating Humidity Range	0 — 93%, non-condensing

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT	SHIPPING WEIGHT	
HMS-D	500-033400	Addressable Manual Fire Alarm Box, Dual Action	2.5 Lbs.	1.13 0z.
HMS-DZ	S54321-F5-A1	Addressable Manual Fire Alarm Box, Dual Action [C.O.O.+ – USA]		
HMS-S	500-033200	Addressable Manual Fire Alarm Box, Single Action	2.0 Lbs.	0.9 0z.
HMS-SZ	S54321-F6-A1	Addressable Manual Fire Alarm Box, Single Action [C.O.O.+ – USA]		
LTP	500-620490	Reset Tool Package [contains two (2) tools]	0.5 Lb.	0.23 0z.
SB-5R	310-019860	Surface-Mounting Box	1.5 Lbs.	0.7 0z.

+ denotes (C)ountry (O)f (O)rigin

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. All 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.

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July - 2019
(Rev. 10)

SIEMENS

Data Sheet
Fire Safety Products

HTRI-Series Interface Modules

Models HTRI-D/-DZ, HTRI-R/-RZ and HTRI-S/-SZ (and USCG-HPLATE for Marine installs)

ARCHITECT AND ENGINEER SPECIFICATIONS

- Interfacing and supervising normally open (N.O) or normally closed (N.C) contacts
- Integral single-pole, double-throw (SPDT) relay on Model HTRI-R | -RZ (up to 4 amps)
- Dual input on Model HTRI-D | -DZ, using a single address
- Polarity insensitive with *SureWire*™ technology
- Dynamic supervision
- Two-wire operation
- 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
- Easy front access to programming port and wiring terminals
- Comes with 5"-*x*- 5" (12.7 -*x*- 12.7 cm.) plastic faceplate
  - Separate metal cover plate required for use in Marine installations
- Electronic address programming is easy and dependable
- Device Programmer / Tester (Model DPU) programs and verifies address of the device and tests for proper functionality

- Electronic address programming is easy and dependable
- ®UL Listed & ®ULC Listed; FM, CSFM and NYCFD Approved

Product Overview

The Siemens – Fire Safety HTRI-series Intelligent interface modules are designed to provide the means of interfacing direct shorting devices to the fire-alarm control panel (FACP) loop circuit.

The HTRI-series modules provide the most advanced method of address programming and supervision on the market – combined with sophisticated control panel communication. Each HTRI-series interface module incorporates a microcomputer chip, and each interface module achieves the state of an `intelligent device' through its microcomputer-chip technology, combined with its sophisticated, bi-directional communication capabilities with the FACP.

Specifications

The Siemens Mode HTRI-series intelligent interface modules are available in three (3) types: Model HTRI-D | -DZ, as well as Models HTRI-S | -SZ and HTRI-R | -RZ, which are both designed to monitor a (N.O) or (N.C) dry contact. The interface module reports the status of the (N.O) or (N.C) contact to the control panel.

Model HTRI-S | -SZ can only monitor and report the status of the contact, while Model HTRI-R | -RZ incorporates an addressable 'Form C' relay.

The Model HTRI-R | -RZ relay and contact device input are controlled at the same address. For the FACP, the relay and input contact can be controlled as a separate function. The relay is typically used where control or shunting of external equipment is required.

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

Model HTRI-D | -DZ flashes twice – once for each address, and Model HTRI-R | -RZ LED indicates a change of state in the relay. The device's microcomputer chip has the capacity of storing, in memory, identification information; as well as important operating-status data.

SIEMENS Industry, Inc.
Building Technologies Division

Specifications (continued)

Each Model HTRI device has a multi-color LED that flashes GREEN when operating in Normal; AMBER if unit is in *Trouble* condition, and RED to indicate a change of state.

Field-Device Programmer – Model DPU

Siemens — Fire Safety innovative technology allows HTRI-series intelligent interface modules to be programmed via the Device Programming / Test Unit: a compact, portable and menu-driven accessory that makes programming and testing an interface device faster, easier and more dependable than previous methods.

The programmer / tester eliminates the need for mechanical addressing mechanisms, such as: program jumpers, DIP switches or rotary dials, since Model DPU electronically sets the HTRI-series interface address into the non-volatile memory of the interface microcomputer-chip.

Vibration, corrosion and other conditions that deteriorate mechanical addressing mechanisms are no longer a cause for concern.

The HTRI-series is fitted with screw terminals for connection to an addressable circuit, and is fully compatible on the same Siemens FACPs with Siemens Model 'H'-series intelligent detectors; Model 'HMS'-series addressable manual stations, or any other addressable intelligent modules (e.g. – Model HZM | -Z or Model HCP | -Z).

Temperature and Humidity Range

Model HTRI-series intelligent interface modules are ®UL Listed. Environmental operating conditions for HTRI-D | -DZ, HTRI-R | -RZ and HTRI-S | -SZ modules are 32°F (0°C) to 120°F (49°C) with a relative humidity of no greater than 93%, non-condensing.

Electrical Ratings

Current Draw (Active or Standby)	1.3mA

Relay Ratings, Model HTRI-R | -RZ

Resistive:	4 Amps, 125 VAC
	4 Amps, 30 VDC

Electrical Ratings

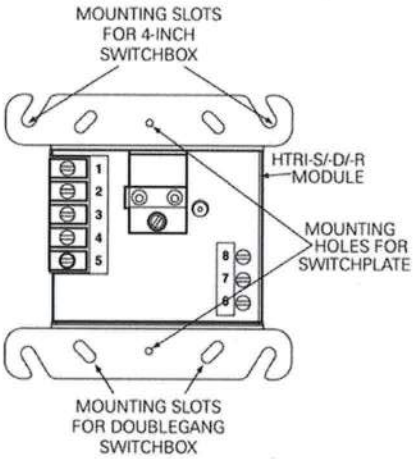
Relay Ratings, Model HTRI-R | -RZ – (cont.'d)

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

Mounting Diagram

Models HTRI-D | -DZ, HTRI-R | -RZ and HTRI-S | -SZ mount directly into a 4-inch (10.2 cm.) square, 2-¼" (5.7 cm.)-deep box back box, or to a user-supplied double-gang back box. A 5" (12.7 cm.) square, off-white faceplate is included with each HTRI-series module.

NOTE: For Marine installations, a metal cover faceplate (Model USCG-HPLATE) is available separately. The faceplate must be used to protect Siemens HTRI-series interface modules from receiving radio-frequency interference (RFI).



Details for Ordering

Model	Part Number	Description
HTRI-R	500-033300	Single Input Module with Relay
HTRI-RZ	S54322-F12-A1	Single Input Module with Relay [C.O.O.+ – USA]
HTRI-D	500-033360	Dual Input Module
HTRI-DZ	S54322-F10-A1	Dual Input Module [C.O.O.+ – USA]
HTRI-S	500-033370	Single Input Module
HTRI-SZ	S54322-F13-A1	Single Input Module [C.O.O.+ – USA]
USCG-HPLATE	S54319-F22-A1	*Metal Cover Plate for HTRI Series Interface Modules

+denotes (C)ountry (o)f (O)rigin **denotes for required use with Marine-only installations / applications*

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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July 2018
Supersedes sheet dated 2/2016
(Rev. 7)

Data Sheet

Cerberus PRO

Remote Peripheral Module (with RS–485 interface)

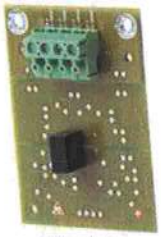
Model FCA2018-U1 (with Model FCA2016-U1)

ARCHITECT AND ENGINEER SPECIFICATIONS

Model FCA2018-U1:

- Provides connection to the external-event printer (Model PAL-1)
  - Provides an interface to remote printers
    - Two (2) serial ports and one (1) parallel
- Mounts remotely from a Cerberus PRO Fire Alarm Control Panel (FACP)
  - Provided in its own enclosure
- Supervised intelligent module
- Supports 'Class B' (Style 4) or 'Class A' (Style 6) wiring
- Fast installation with IN / OUT screw terminals using #12 to #18 AWG wire
- Built-in transient protection
- Downloadable module firmware
  - Built-in flash electrically erasable programmable read-only memory (EEPROM)
- Plain-decimal addressing
- ®UL 864 9th Edition Listed, ®ULC Listed; FM, CSFM & NYC Fire Dept. Approved

Model FCA2018-U1



Model FCA2016-U1

Model FCA2016-U1:

- Dual, standardized RS–485 interface that is used on 252 / 504-point control panels
- RS–485 module provides communication to Model FCA2018-U1 for managing and supervising Model PAL-1
- Supports 'Class B' (Style 4) and 'Class A' (Style 6) wiring configurations
- Up to eight (8) devices on the RS–485 Universal Fire Protocol (UFP) network
- Electrical isolation between the RS–485 interface and a Cerberus PRO FACP
- Ground-fault monitoring
- ®UL 864 9th Edition Listed, ®ULC Listed; FM, CSFM & NYC Fire Dept. Approved

Product Overview

The Remote Peripheral Module (Model FCA2018-U1) provides a means of connecting a Cerberus PRO system 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.

Specifications

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, per ®UL for NFPA 72 requirement for proprietary systems.

Event / report printing, is generated at the operating unit (Model FCM20-series) on the main Cerberus PRO system.

Note: For PAL-1 connectivity with Remote Peripheral Modules on Cerberus PRO 252-point and 504-point addressable systems, a Model FCA2016-U1 (RS–485) interface must be ordered, used.

Model FCA2018-U1 has necessary mounting flanges to allow the module to be mounted unobtrusively under a table or behind a desk. Model FCA2018-U1 runs on required 24VDC, nominal, power, and this source for power can be provided from the auxiliary power connection on the Cerberus PRO system enclosure.

Power from other ®UL Listed 24VDC power sources is also acceptable. Model FCA2018-U1 has screw terminals capable of supporting a 12 to 18 American Wire Gauge (AWG) configuration.

The 252-point addressable system (Model FC922) and the 504-point addressable system (Model FC924) require having a RS–485 interface (Model FCA2016-U1) provide communication to the remote peripheral module.

Models FCA2018-U1 and FCA2016-U1 are FM (#3010); FDNY (#6104) and CSFM (#7165-0067:0259) Approved.

Temperature and Humidity Range

Products are ®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
PAL-1 Printer	5048
Remote Display Terminals	9812
50-point Cerberus PRO System	9813
252-point Cerberus PRO System	9815
504-point Cerberus PRO System	
252-point Cerberus PRO System, ®ULC markets	9815C
504-point Cerberus PRO System, ®ULC markets	

Details for Ordering

Model	Part Number	Description
FCA2018-U1	S54400-A65-A1	Remote Peripheral Module
FCA2016-U1	S54400-A39-A1	RS–485 interface
PAL-1	500-692407	Parallel Printer

Technical Data

RS–485 Interface	**Voltage**		3.3VDC
	Operating voltage while:	▪ **Receiving**	5VDC (peak)
		▪ **Transmitting**	5VDC (peak)
	Communication mode		Half-duplex
	Number of participants		Eight (8), maximum
	Maximum wire length		5000 feet, max.; unshielded / twisted-pair wiring
Connections	**RS–485 Interface:**		Removable Terminal Block
	▪ **Design**		4-pole screw terminal
	▪ **Admissible cross-section cable**		12 to 18 American Wire Gauge (AWG)
	System Interface		Plug-in-type connection
Power Requirement	**Model FCA2018-U1**		24VDC @ 150mA
PHYSICAL PROPERTIES	**Model FCA2018-U1 Dimensions:** { W -x- H -x- D }		9.5" –x– 6.75" –x– 2.5" (24.1 cm. -x- 17.1 cm. -x- 6.4 cm.)
	Model FCA2018-U1 Weight:		1.75 Lbs. (794g)
	Model FCA2016-U1 Dimensions: { W -x- H -x- D }		1.97" –x– 0.6" –x– 2.76" (5 cm. -x- 1.5 cm. -x- 7 cm.)
	Model FCA2016-U1 Weight:		0.044 Lbs. (20g)

SIEMENS Cerberus® PRO

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

May 2016 – Supersedes sheet dated 8/2013
(Rev. 4)

SIEMENS

Data Sheet
Fire Safety & Security Products

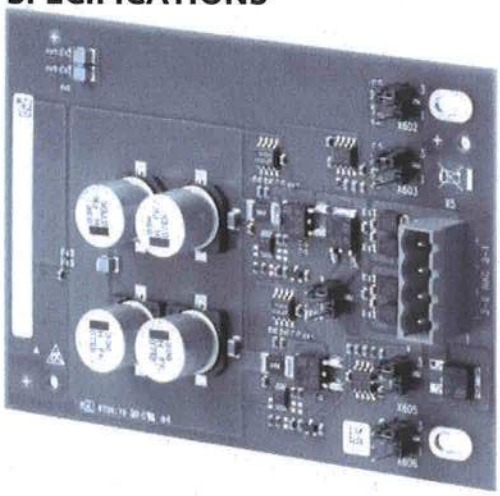
Desigo™ Fire Safety System

NAC Expansion Module

Model FCI2011-U1

ARCHITECT AND ENGINEER SPECIFICATIONS

- Adds notification appliance circuits (NACs) to the Model FC2025 and the Model FC2050 fire alarm control panels (FACPs)
- One (1) 'Class A' or two (2) 'Class B' NACs
- Supports horns, strobes, and horn / strobes synchronization
- Up to 3 Amps load per output
- Monitors for open-line and short-circuit conditions
- ®UL 864 9th Edition Listed, ®ULC Listed; FM, CSFM and NYC Fire Dept. Approved



Product Overview

The notification-appliance circuit (NAC) expansion module (Model FCI2011-U1) is an optional module that is connected to the peripheral boards (Models FCI2016-U1, FCI2017-U1), providing additional NACs to 252-point and 504-point systems, respectively.

One (1) 'Class A' or two (2) 'Class B' NACs are provided with the following Desigo systems:

- Model FC2025 (252-point)
- Model FC2050 (504-point)

Each NAC is rated at 3 Amps.

Each NAC expansion module, which is monitored for open-line and short-circuit conditions, is FM (#3010); FDNY (#6104) and CSFM (#7165-0067:0259) Approved.

The programming software is also held in flash electrically erasable programmable read-only memory (EEPROM).

Temperature and Humidity Range

Model FCI2011-U1 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
Desigo Periphery Board [Model FCI2016-U1]	6802
Desigo Periphery Board [Model FCI2017-U1]	6802

Details for Ordering

Model Number	Part Number	Description
FCI2011-U1	S54400-A54-A1	NAC Expansion Module

SIEMENS Industry, Inc.
Building Technologies Division

Technical Data

Electrical Ratings	***Alarm* current**	3.0A, max. per circuit
	***Supervisory* current**	1mA, max., typical
	NAC rating	for 'Special Application'
	Voltage	24VDC, nominal
Connection Terminals	**Design**	Removable terminal blocks
	Admissible cable cross-section	12 – 18 American Wire Gauge (AWG)
Physical Properties	**Model FCI2011-U1 Dimensions:** { W -x- H -x- D }	4.72" -x- 3.23" -x- 0.71" (12 cm. -x- 8.2 cm. -x- 1.8 cm.)
	Model FCI2011-U1 Weight:	0.75 Lbs. (341 g)

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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February 2013
Supersedes sheet dated 4/12
(Rev. 2)

PART NUMBER 729100

UL Listed and Rated Type FPLR Multi-Conductor Non-Shielded Non-Plenum Fire Alarm

SMARTWIRE GLIDE TECHNOLOGY

CABLE SPECIFICATIONS

DESCRIPTION	14 AWG 2 Conductor Bare Copper, Twisted, Non-Shielded Non-Plenum Fire Alarm, FPLR (UL)
CONDUCTOR	14 (Solid Bare Copper)
INSULATION	PVC .010"
COLOR CODE	Black/Red
LAY LENGTH	3.75" LHL (approx. 3.2 TPF)
SHIELD	N/A
DRAIN WIRE	N/A
JACKET	PVC .018"
JACKET COLOR	Red Jacket
MARKING	FIRE/LIFE SAFETY CONTROL CABLE INIT. / IND. DEVICE / ZONE A B C D E 0 1 2 3 4 5 6 7 8 9 14 AWG FPLR (UL) 75C ROHS MADE IN THE USA
OVERALL DIAMETER	.206" Nom.
CABLE WEIGHT	45 Lbs/Mft.
CAPACITANCE	26 pF/Ft. Nom.
IMPEDANCE	72 Ohms
DC RESISTANCE	2.57 Ohms/Mft @ 20 deg. C
TEMPERATURE RATING	0 C to 75 C / 300 Volt

INDUSTRY STANDARDS

AGENCY APPROVALS	NEC Article 760; FPLR (UL), RoHS Compliant, Made in the USA

All specifications referenced are nominal measurements unless otherwise noted.

PART NUMBER 714100

UL Listed and Rated Type FPLR Multi-Conductor Shielded Non-Plenum Fire Alarm

■ 0275/0725 FT ● FIRE/LIFE SAFETY CONTROL CABLE INIT/IND DEVICE/ZONE ABCDE0123456789

SMARTWIRE GLIDE TECHNOLOGY

CABLE SPECIFICATIONS

DESCRIPTION	18 AWG 2 Conductor Bare Copper, Twisted, Shielded Non-Plenum Fire Alarm, FPLR (UL)
CONDUCTOR	18 (Solid Bare Copper)
INSULATION	PVC .010" Nom.
COLOR CODE	Black/Red
LAY LENGTH	2.5" LHL (4.8 TPF)
SHIELD	Aluminum Mylar
DRAIN WIRE	22 AWG Solid Tinned Copper
JACKET	PVC .018"
JACKET COLOR	Red Jacket
MARKING	FIRE/LIFE SAFETY CONTROL CABLE INIT. / IND. DEVICE / ZONE A B C D E 0 1 2 3 4 5 6 7 8 9 18 AWG FPLR (UL) 75C ROHS MADE IN THE USA
OVERALL DIAMETER	.158" Nom.
CABLE WEIGHT	22 Lbs/Mft.
CAPACITANCE	60 pF/Ft. Nom.
IMPEDANCE	31 Ohms
DC RESISTANCE	6.52 Ohms/Mft @ 20 deg. C
TEMPERATURE RATING	0 C to 75 C / 300 Volt

INDUSTRY STANDARDS

AGENCY APPROVALS	NEC Article 760; FPLR (UL), RoHS Compliant, Made in the USA

MADE IN AMERICA

All specifications referenced are nominal measurements unless otherwise noted.

