



METRO TORONTO CONVENTION CENTRE SOUTH BUILDING

222 BREMNER BOULEVARD, TORONTO, ON

FIRE ALARM MODERNIZATION

FIRE ALARM SHOP DRAWING PRODUCT SUBMITTAL

DESIGO® FIRE SAFETY MODULAR SYSTEM

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REVISION HISTORY

REV. #	DESCRIPTION	DATE

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DESIGO[®] FIRE SAFETY MODULAR SYSTEM FIRE ALARM ANNUNCIATOR

DATA SHEETS

1	MAIN ANNUNCIATOR - FIREMAN CONTROL ROOM 504
2	MAIN ANNUNCIATOR (ALTERNATE) - NORTH BUILDING CTL RM

Desigo® Fire Safety Modular System

Advanced | Addressable Fire Alarm Control Panel

Architect & Engineer Specifications

- Standard / 2500-point-capacity addressable fire-alarm control panel (FACP)
- Ability to network with other Desigo Fire Safety Modular (Desigo Modular) systems
- Powerful, easy-to-use programming capabilities
 - Multiple levels of password protection
- Fully programmable through use of a Windows operating system
- 6-inch (15.2 cm.), backlit liquid-crystal display (LCD)
 - Multi-language display
- User-friendly system interface
 - Useful diagnostic light-emitting diodes (LEDs) on all cards
- Touch screen for maintenance operations and function keys
- Menu-driven operator commands
 - End-user HELP screens
- 32-character custom messages
 - 40 programmable macro and function buttons – (e.g. – Holiday schedule)
- Global annunciation and control capability
- ‘Alarm’ | ‘Trouble’ | ‘Programmable’, etc. relay commands
- Alarm verification by device, zone
 - Pre-alarm operation
- SureWireL* addressable-loop technology:
 - Patented polarity-insensitive detection circuits
- Supports *FirePrint*® application-specific detection, and single-person ‘Walk Test’
- Coded outputs
- Seismic certified
- Modular assembly
- Distributed processing
- UUKL Listed for smoke control
- Universal AC power input:
 - 120VAC – 240VAC @ 50 / 60Hz
 - 12A of basic system power; expandable to 48A
- Supported by all Desigo® CC Management Stations
- Automatic environmental compensation for smoke detectors
- Peripheral interface to remote printers
 - connected to the communication bus from any NIC-C output in an enclosure
 - Class B (Style 4) or Class A (Style 7) wiring
- Security-device monitoring
 - UL1076 Listed
- Mounts in one (1) electrical back box
 - Optional 4–11/16 inch [12 cm.] and 5–inch [12.7 cm.] square back boxes
- Supports pre-action | deluge | agent releasing
 - sprinkler supervision
- NEC 760 power-limited circuits
- 200 notification-appliance-circuits (NACs) capacity
 - Up to 3A @ 24VDC per NAC
 - Built-in strobe synchronization protocol
- UL 864 10th Edition and UL 2572 Listed, ULC-S527 3rd Edition Listed; FM, CSFM Approved

System Overview

Sold as part of the product line of Siemens – Fire Safety products, Desigo Fire Safety Modular (Desigo Modular) is a microprocessor-based, reliable, and advanced fire-safety system. Each of these addressable panels uses a contemporary operator interface that functions as an operator interface and as a central microprocessor.

Desigo Modular is ideally suited for commercial, institutional, and industrial intelligent detection and notification-appliance applications.

System Overview (cont.)

Each panel complies with the requirements of NFPA Standard 72, and is listed by Underwriters Laboratories under their UL 864 standard and is FM Approved.

Underwriters Laboratories Canada also lists Desigo Fire Safety Modular panels under ULC-S527.

Each panel is additionally UL Listed under the category ‘UUKL for Smoke Control.’

When it comes to Siemens Sinorix® clean-agent systems, Desigo Modular panels are UL | ULC Listed for use in foam or water applications. Each panel is also listed as a Fireman’s Smoke Control Station (in high-rise office buildings | malls | other large structures.



Desigo Fire Safety Modular panel
(with mounted FCM2041-U2 Operator Interface)



System Components

A basic Desigo Fire Safety Modular fire-alarm control panel (FACP) consists of one (1) of the following parts: Operator Interface; power supply (PSC-12M); Class X Device Loop Card (XDLC); Zone Indicating Card (ZIC-4A); five-slot card cage (CC-5); Inner Door Blank Single Plate (ID-SP), and a CAB1, CAB2 or CAB3 system enclosures.

Optional modules that can be installed on a Desigo Fire Safety Modular FACP include: Card Cage (Model CC-2); Network Interface Card (Model NIC-C); 8-Circuit Zone Indicating Card (Models ZIC-8B / ZIC-2C); Output Control Module (Model OCM-16); Switch Control Module (Model SCM-8); LED Control Module (Model LCM-8); Fan Control Module (Model FCM-6); Supervised Input Module (Model SIM-16); Power Supply Extender (Model PSX-12M); Remote Network Interface (Model RNI); Remote Printer Module (Model RPM); System Status Display (Model SSD); Digital Alarm Communicator (Model FCA2015-U1) Multi-Point Digital Alarm Communicator (Model MDACT); Two-Module Remote Enclosure (Model REMBOX2), and the Four-Module Remote Enclosure (Model REMBOX4).

Additionally, Desigo Modular panels are compatible with all of the advanced Siemens field devices in signaling appliances and intelligent, addressable detection.

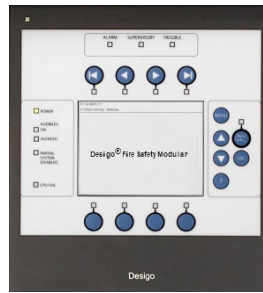


Desigo CC Management Station Desigo Fire Safety Modular

Desigo CC Management Stations compatible with Desigo Fire Safety Modular

Desigo Fire Safety Modular panels are compatible with Siemens Fire Safety Management Stations, which provide integrated and reliable FACP monitoring and control of system events – including: ‘Alarm’ | ‘Trouble’ | ‘Security’ | ‘Supervisory’ commands.

Desigo CC management stations include PC-based, color-graphics software designed for use with the XNET network, offering full control and annunciation. An extensive history log of all system events, as well as extensive report-generation capabilities, is easily maintained. There are also user-programmable electronic buttons that allow for site-specific control functions.



Operator Interface used on Desigo Fire Safety Modular FACP

FCM2041-U2 Operator Interface

The Operator Interface is the primary user interface and central microprocessor for Desigo Modular.

Enhancements to the most current version of the Desigo Modular Operator Interface include go-to-beginning, go-to-end queue buttons; a front-end command screen with ‘Alarm’ | ‘Supervisory’ | ‘Trouble’ light-emitting diodes (LEDs), and three (3) types of alternate-language overlays all orderable under one (1) part.

See: Details for Ordering section in this document for more info.

Desigo Modular panels are controlled and operated from the Operator Interface, which uses large, lighted control buttons to prompt the end-user to the next available, correct system operation shown on the front-end screen. Additionally, the system Operator Interface provides a 6” (15.2 cm.) front-end touch screen comprised of system-status LEDs as well as a liquid-crystal display (LCD) of 1200 –x– 800.

There are language overlays that provide naming in alternate languages for visual indicators found on the front of each Operator Interface. Each overlay is assigned on the outer assembly, respectively, when affixed to the front-end display on the user interface.

The Operator Interface contains the site-specific program configuration in the software too, *Zeus-D*.

ZIC-4A - Zone Indicating Card

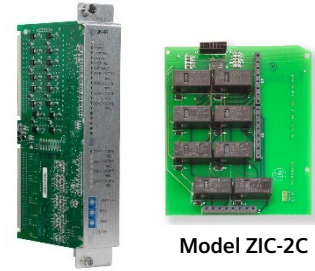
The Zone Indicating Card (Model ZIC-4A) provides four (4) fully supervised, programmable output circuits for use on each Desigo Modular FACP.



Model ZIC-4A supplies four (4) ‘Class B’ (Style Y) or ‘Class A’ (Style Z)-type output circuits, power limited to 3.0A, maximum, per circuit.

Each circuit can be independently programmed for use with agency listed/approved audible or visual notification appliances; emergency audio speakers; municipal-tie boxes; leased lines, or as optional releasing circuits. Model ZIC-4A plugs into one (1) slot in the Model CC-5 or CC-2 card cage, and has on-board LEDs for system status and troubleshooting.

Indication of power, communication, internal operation and ground-fault conditions are provided, as well as indication of circuit activation or ‘Trouble’ conditions.



Model ZIC-8B

Model ZIC-2C

ZIC-8B Zone Indicating Card (with Model ZIC-2C)

Another Zone Indicating Card (Model ZIC-8B) provides eight (8) fully supervised, programmable output circuits for use on Desigo Modular panels. Model ZIC-8B contains eight (8) ‘Class B’ (Style Y)-type output circuits, power limited to 2.0A, max., per circuit. Each circuit can be independently programmed for use with agency-listed/approved audible or visual notification appliances, or emergency audio speakers. Model ZIC-8B plugs into one (1) slot in the Model CC-5 or CC-2 card cage, and has on-board LEDs for system status.

A Model ZIC-2C mounts directly on Model ZIC-8B, and allows each Model ZIC-8B output circuit to be used for two-channel voice applications. Indication of power, communication, internal operation, and ground-fault conditions are provided, as well as indication of circuit activation or ‘Trouble’ conditions.

System Components

XDLC - Device Loop Card

The 'Class X' Device Loop Card (Model XDLC) is the interface used for connecting Siemens addressable, intelligent 'X' as well as 'H'-series devices.

A Model XDLC operates and maintains all devices residing on up to four (4) 'Class A', eight (8) 'Class B' addressable circuits. Additionally, Model XDLC has 16 LEDs for diagnostic purposes, and provides ground-fault detection and zone-isolation circuitry.



NRC - Network Ring Card 2nd Generation

Model NRC is a network ring card that transmits single-mode or multi-mode network communication via fiber-optic or copper lines. Each NRC uses a 'Class A' (Style 7) ring configuration with a Desigo Modular panel.

One (1) Model NRC (per system node) provides XNET, peer-to-peer network communication between panels, allowing 64 (max.), Desigo Modular panels to be networked simultaneously. Model NRC takes one (1) card slot, and mounts in a Model CC-2 or CC-5 card cage inside a Model CAB1, Model CAB2, or Model CAB3 enclosure.



PSFA - Power Supply Filter Assembly

Each Model PSC-12M comes packaged with a module known as the Power Supply Filter Assembly (Model PSFA). Model PSFA is required for operation with Model PSC-12M. Model PSFA filters the power from the incoming AC mains, and distributes it to the Model PSC-12M power supply and the optional Model PSX-12M power-supply extender.

Model PSFA has an optional connector that can be used during system installation, commissioning and service to provide the technician with a place to plug in their laptop PC, if required. Model AC-ADPT is an optional accessory cable that allows connection on one side to Model PSFA, via a keyed connector and on the other end directly into the laptop's transformer.

Most laptop-computer external power transformers have removable AC power cords, which can be replaced by the optional Model AC-ADPT to temporarily provide an AC power source for laptop-PC usage during system installation, service and maintenance calls when needed.

SNU-ASSY - Single-Node Upload (SNU) Module



Typical mounting set-up of a SNU module

The Single-Node Upload (SNU) is an optional system module that provides a solution for having data configuration done remotely.

SNU can easily transmit data from a PC running the custom-configuration tool, *Zeus-D*, to a maximum 64 central processors.

Each SNU module has three (3) connectors: Power, Ethernet and USB. The data transported between the *Zeus-D* tool and SNU is made through a direct 128-bit, Secure Sockets Layer (SSL) connection.

NIC-C Network Interface Card

The Network Interface Card (Model NIC-C) provides HNET or XNET network communications between enclosures.

In addition to HNET or XNET communication, Model NIC-C provides CAN network communication within an enclosure or external to the enclosure.

HNET or XNET communication can be wired Style 4 or Style 7, but the CAN network can be wired Style 4 only.

When used for HNET communications, Model NIC-C provides contact between enclosures on a single system. When NIC-C is used for XNET communications, Model NIC-C provides communication between systems. The maximum of NIC-C cards on a single-panel XNET is one (1) for a total 64 NIC-C cards on a peer-to-peer XNET network.

Model NIC-C has diagnostic LEDs that indicate: 'Card Fail', 'CAN Fail', 'HNET Fail', 'XNET Fail', 'Ground Fault', 'Loop 'A' Fail' and 'Loop 'B' Fail'. This card also has LEDs to indicate 'Power', 'Style' and 'Active Networks'.



PSC-12M - Power Supply Charger Module

The Power Supply Charger Module (Model PSC-12M) is an addressable-intelligent, microprocessor-controlled module that communicates its status to the operator interface. Additionally, PSC-12M is a high-current power supply that provides primary, regulated (at 24VDC) system power.

Model PSC-12M is rated at 12Amps ('Alarm') / 5Amps (Standby), and has a built-in battery charger, capable of charging up to 100 AH batteries.

Intelligent Control Point Module

Model HCP is designed to be used with the Siemens – Fire Safety Alarm Signaling Devices product line.

Model HCP can be set as an independent, remotely located telephone zone, speaker zone or notification-appliance circuit. Model HCP communicates through analog loop of Model DLC.

Model HCP can be wired either 'Class B' (Style Y) or 'Class A' (Style Z). The 24 Volts DC power input is from either the control panel or from any UL Listed power-limited, auxiliary power supply.



Model HCP

PSX-12M - Power Supply Charger Module

The Power Supply Extender (Model PSX-12M) is a high-current, auxiliary power supply that expands the main Model PSC-12M power supply and battery charger to an additional 24VDC of system power. Model PSX-12M is rated at 12 Amps.





DACT - Digital Alarm Communications Transmitter

The Digital Alarm Communications Transmitter (Model FCA2015-U1) optionally provides a means for communication between either a Desigo Modular system; one (1) Fire Terminal (Model FT2050), and with either a central or remote monitoring station. Available communication protocols include: SIA DCS 8 | SIA DCS 20 | Ademco Contact ID. Additionally, each DACT can sync with IP and GSM communication technology.

XDACT-ASSY - XDACT Assembly

The XDACT Assembly (Model XDACT-ASSY) is the blank plate used for holding the optional Digital Alarm Communication Transmitter (DACT) Model FCA2015-U1 on Desigo Modular Systems. Model XDACT-ASSY can be mounted on all CAB-series enclosures. Each assembly must be located in the Global Operator Interface cabinet for global configurations.



Model SSD-C

SSD Series - System Status Display

The System Status Display (SSD-series model displays) is a remote LED / LCD display that shows the local status of a Desigo Modular system. An LED illuminates when `Alarm` | `Supervisory` | `Trouble`, and `Security` events occur on the system. A (4) four-line liquid-crystal display (LCD) will give details of the event in alphanumeric form.

The display can be toggled to display additional events. Optional remote system control capabilities are available. Models SSD-C, SSD-C-INT, and Model SSD-C-REM have three (3) additional control buttons to acknowledge events; silence audible circuits, and reset the system.

Models SSD-C and SSD-C-INT have an integral key-switch that enables these control buttons to operate. Model SSD-C-REM is located within a locked cabinet. So, no additional key-switch is required for manual activation of the control buttons.

RPM - Remote Printer Module

The Remote Printer Module (Model RPM) provides a means of connecting a Desigo Modular system to a printer, such as Model PAL-1, for creating a hard copy of system status and configuration reports.



Concurrently, Model RPM provides an output port that can be configured to communicate with external systems.



VNTPC - Virtual Network Tunnel

The Virtual Network Tunnel (VNT) is an efficient means for real-time communication, as well as providing support to HNET, XNET and DNET monitoring and supervision – when used as part of a Fire Command Center or a Building network. Each Model VNTPC is a fanless, headless industrial computer, receiving its operating power from a Desigo Modular panel.



Model SIM-16



Model OCM-16

SIM-16 - Supervised Input Module

The Supervised Input Module (Model SIM-16) is a remotely located, general-purpose input module. Model SIM-16 provides 16 input circuits for remote system monitoring. Each input can be individually programmed as supervised (dry-contact only) or unsupervised (general-purpose input.) Model SIM-16 has two (2) `Form C` relays. The relays and inputs are programmed using the system software-programming tool, *Zeus-D*.

OCM-16 - Output Control Module

The Output Control Module (Model OCM-16) is a remotely located, general-purpose output module that provides 16 open-collector outputs to drive LEDs, incandescent lamps or external relays.

There is an additional output for a local audible and two (2) inputs for momentary lamp test, as well as local, audible silence switches.

Model OCM-16 is mounted in a separate enclosure from the main control panel.



C900V2 - Dialer-Capture Ethernet Module

The Dialer-Capture Ethernet Module (Model C900V2) links the data output of Model MDACT from the Desigo Modular FACP to an Ethernet connection – on a local-area network (LAN) or wide-area network (WAN) – for communication to a central station over the Internet.

Model C900V2 also allows Model MDACT to be optionally linked to the public switched telephone network (PSTN) for communication to a central station, via telephone lines.



MDACT - Multi-Point Digital Alarm Communicator Transmitter

The Multi-Point Digital Alarm Communicator Transmitter (Model MDACT) is used in Desigo Modular systems where point identification of system events is required at Central or Remote Receiving Stations. An intelligent RS-485 communications protocol transmits all system information to Model MDACT.

The installer selects the specific event or groups of events that are set to transmit from Model MDACT over phone lines to listed receiving station equipment.

In turn, Model MDACT can transmit point information, via the Ademco Contact ID and the SIA protocol. A mounting plate (Model MOM2-XMP), MOM-2 card cage, and an XMI Interface Card are required for installation.



Model CC-2 Model CC-5

CC-5 / CC-2 - Card Cages

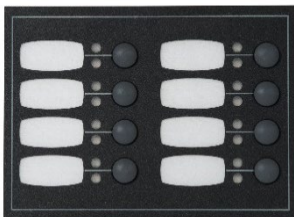
The Model CC-5 / CC-2 card cages provide the physical mounting location and all wiring connection points for all fire-and-voice system options cards to each Desigo Fire Safety Modular system. Model CC-5 has five (5) slots, while Model CC-2 has two (2) slots.

All cards plugged into each CC-5 / CC-2 card cage communicate with other Desigo Modular system modules via a common data bus. Connectors are provided on the left and right side of the CC-5 to connect a 60-pin cable for communications with the Desigo Modular operator interface, power supplies and amplifiers modules.

Field wiring to devices and circuits terminates on the Models CC-5 / CC-2 card cages. All cards designed for use with the Models CC-5 / CC-2 route their field wiring terminations to the 'top' of the Model CC-5 / CC-2 card cages. These connections are all power limited. Internal wiring connections distribute 24VDC to cards or high-level audio signals (depending on application used) connect to the 'bottom' of the Model CC-5 / CC-2 card cages. These connections are all non-power limited.

All wiring connections to the Model CC-5 / CC-2 card cages are to removable terminal blocks. Terminal blocks are rated for use with wire sized 12 American Wire Gauge (AWG) to 24AWG. Each connector is numbered to make wiring terminations to the correct position on the terminal block simple in order to reduce potential system-wiring errors.

SCM-8 - Switch Control Module

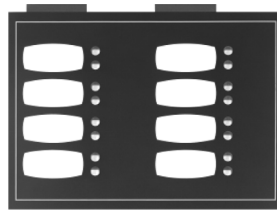


The Switch Control Module (Model SCM-8) is a Desigo Modular system option module that provides manual control of the Emergency Voice Evacuation System or manual fire system control. Each Model SCM-8 module has eight (8) momentary push-button switches and 16 LEDs to indicate their status. Each switch is assigned two (2) LEDs and a label to indicate the Model SCM-8 switch is in use.

The label slides behind a clear, protective covering, and one of the LEDs assigned to each switch is a dual-color LED used to indicate what type of signal is active. Each Model SCM-8 and switch is fully programmable, and may be used to control speaker circuits and a wide range of general-system functions such as: 'All Call' | 'All Evac' | 'Speaker' | etc.

Any number of circuits may be grouped and controlled by a single switch. Switch usage and zone groupings are assigned using the Desigo Fire Safety Modular system-programming tool, *Zeus-D*.

Model SCM-8 is mounted on a hinged panel, as part of the Desigo Modular Command Console (C.C.) enclosure.

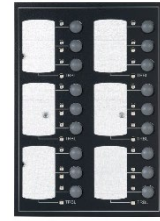


LCM-8 - LED Control Module

The LED Control Module (Model LCM-8) is a Desigo Modular system option module that provides LED annunciation for system activity. Each Model LCM-8 module contains eight (8) groups of two (2) LEDs – each of which can be assigned to desired outputs, via the Desigo Fire Safety Modular system-programming tool, *Zeus-D*.

Eight (8) LEDs are dual-color capable of emitting either in RED or GREEN – 'Flashing' or 'Steady'. The remaining LEDs are AMBER – 'Flashing' or 'Steady'. There is a space provided for labeling of LED functions. The label slides behind a clear, protective membrane.

Model LCM-8 dimensions are identical to Model SCM-8, and the LED control module is mounted on the same hinged panel, as part of the Desigo Fire Safety Modular C.C. enclosure.



FCM-6 - Fan Control Module

The Fan | Motor | Dampers Control Module (Model FCM-6) is a Desigo Modular system command-console option module that provides manual control of the fans, motors, and dampers used in building heating | ventilation | air-conditioning (HVAC) systems.

Each Model FCM-6 module provides six (6) sets of three (3) push-button switches for manual-system control. Each switch has three (3), associated LEDs to indicate Fan / Damper / Motor status: OFF (RED LED); ON (GREEN LED), 'Trouble' (YELLOW LED). When manually switched to the ON position, the GREEN LED will flash, indicating the output circuit used to turn on the Fan / Damper has activated. The GREEN LED will light to a steady green to indicate positive feedback of the Fan / Damper actually turning on (via a monitored input).



IIC - Interface Isolation Card

The Interface Isolation Card (Model IIC) is designed to isolate network signals when used with a Desigo Modular Command Console (C.C.) ring configuration, via the network-ring card, Model NRC. Model IIC executes the aforementioned isolation by removing the backplane network signals from each Model CC-2 card cage. Model IIC also provides one (1) end of CAN termination on each side of Model CC-2.

Two (2) 60-pin interfaces are contained in each Model IIC: the male-ribbon-cable receptacle accepts the data from the cable of the previous Model CC-2 card cage, and the female-ribbon-cable receptacle plugs into the 60-pin receptacle of the next-in-line Model CC-2 card cage.



CAB1 - Single Row Enclosure

Model CAB 1, the smallest of the Desigo Modular system enclosures, can house a single Model CAB-MP cabinet mounting plate for mounting card cages; power supplies, and bulk amplifiers. Model CAB1 also has four (4) mounting slots on the inner door for mounting the Desigo Modular operator interface and Model ID-MP switch module brackets.

Model CAB1 comes complete with a **black** back box; **black** inner and outer doors; a single lock and key set on the outer door; a single, installed cabinet mounting plate (Model CAB-MP), and a single, installed outer door lens plate (Model OD-LP). A **red** version (Model CAB1-R) is also available.

Approximate size: 27" (68.6cm.) high; 26" (66cm.) wide, and 8" (20.3cm.) deep.

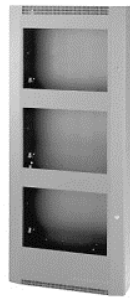


CAB2 - Two-Row Enclosure

The Two-Row Enclosure (Model CAB2) is the mid-sized Desigo Modular system enclosure capable of housing up to two (2) Model CAB-MP cabinet mounting plates. The inner door has two (2) rows of four (4) mounting slots.

The outer door has space for mounting two (2) outer door plates (Models OD-LP, OD-BP or OD-GP), and can be configured to open from either side. Model CAB2 consists of the **black** Model CAB2-BB back box, the Model CAB2-BD **black** inner and outer door package, and one (1) Model OD-LP lens plate. The outer door has a single lock and key set installed. A **red** version (Model CAB2R) is also available, and a CAB2-RB back box is used with Model CAB2R.

Approximate size: 45" (114.3cm.) high, 26" (66cm.) wide, and 8" (20.3cm.) deep.



CAB3 - Three-Row Enclosure

Model CAB3, the largest Desigo Modular system enclosure available, can house a maximum three (3) Model CAB-MP cabinet mounting plates in the enclosure, and three (3) rows of inner-door mounting slots.

The outer door can be configured to open from either side. Model CAB3 consists of the Model CAB3-BB back box, the Model CAB3-BD **black** inner and outer door package, and one (1) Model OD-LP lens plate. The outer door has two (2) locks and key sets installed. A **red** version (Model CAB3R) is also available.

Approximate size: 63" (160cm.) high, 26" (66.4cm.) wide, and 8" (20.3cm.) deep.

REMOBOX - Remote System Enclosures

Models REMBOX2 and REMBOX4 are Desigo Modular system enclosures that are used for remotely mounting inner-door modules, which include: the Desigo Modular operator interface and switch-control modules (Model SCM series).

Models REMBOX2 and REMBOX4 are thinner than regular Model CAB-series of enclosures – just 5" (12.7cm.) deep overall, and are perfect for mounting in limited-space areas (e.g. – office-complex lobbies or behind a receptionist's desk).

No card cages, power supplies or bulk amplifiers can be mounted in a given Model REMBOX-series enclosure due to their smaller depth. However, the Desigo Modular operator interface and some modules (e.g. – the remote network interface module [Model RNI]; the output control module [Model OCM-16], and the supervised input module [Model SIM-16]) can be mounted in a given Model REMBOX-series enclosure.

Due to the depth of Models LVM and FMT, no Model OCM-16 or Model SIM-16 modules can be used simultaneously with Model LVM or Model FMT. Model REMBOX2 and Model REMBOX4 are designed for flush mounting with no trim kit required. Both enclosures also come with a clear lens plate on the cover.



REMOBOX2 - Two-Module Remote Enclosures

Model REMBOX2 has two (2) inner-door module spaces, and can hold a single Desigo Modular operator interface, as well as up to two (2) switch-module brackets.

Model REMBOX2 can also mount a single RNI remote network interface on a bracket included in the backbox. A bracket, known as Model REMBOX2-MP, can be used to mount up to four (4) Model OCM-16 output control modules or SIM-16 supervised input modules.

A Model REMBOX2-MP must be purchased separately.

Approximate size: 18-1/2" (47cm.) high; 14-1/2" (36.8cm.) wide, & 5" (12.7cm.) deep.

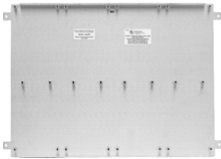


REMOBOX4 - Four-Module Remote Enclosures

Model REMBOX4 has space for mounting four (4) inner-door modules. Any combination of an operator interface (two-module spaces); switch module brackets; Model LVM, or Model FMT (one-module space each) can be used. Unused module spaces can be covered with Model ID-SP blank plates. Model REMBOX4 can also mount a single, remote network interface (Model RNI) on a bracket included in the backbox.

A separately orderable bracket known as Model REMBOX4-MP can be used to mount up to eight (8) output control modules (Model OCM-16) or supervised input modules (SIM-16).

Approximate Size: 24" (61cm.) wide, 18-1/2"(47cm.) high and 5" (2.7 cm) deep.



CAB-MP - Cabinet Mounting Plate

The cabinet-mounting plate for Desigo Modular systems, Model CAB-MP, provides mounting for a single row of system modules housed in a Desigo Modular system enclosure. Up to four (4) module spaces are available on one (1) Model CAB-MP plate.

Each of these mounting plates is used to mount the Model CC-5 Card Cage; the Model CC-2 Card Cage; the Model PSC-12M power supply, and the Model PSX-12M power-supply extender for Desigo Modular fire-only systems.



ID-MP - Inner Door Mounting Plate

The inner-door mounting plate (Model ID-MP) is mounted on the inner door of any given Model CAB-series enclosure. Each Model ID-MP plate is used to mount switch-control modules (Model SCM-8); LED control modules (Model LCM-8), or fan-control modules (FCM-6).

Four (4) mounting plates are included with one (1) order of Model ID-MP. Each mounting plate has four (4) spaces for control modules, and can hold either four (4) Model SCM-8 modules: one (1) control-module space for each actual module, or two (2) fan-control modules: two (2) module spaces per each Model FCM-6.

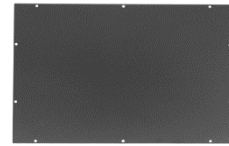
Mounting combinations are possible. Blank spaces found in Model ID-MP plates can be covered using the blank-control module plate (Model BCM). Up to four (4) modules can be mounted on a single row of the inner door.



Blank Control Module Plate

BCM - Blank Control Module Plate

Blank Control Module Plates (Model BCM) can be mounted on a single ID-MP. Four (4) blank module plates are included with each order of Model BCM.



OD-BP - Outer Door Blank Plate

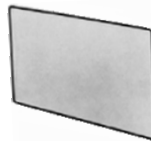
The outer-door blank plate (Model OD-BP), which mounts on the outer door of a Desigo Modular enclosure, entirely covers an unused row found on a Desigo Modular system cabinet.



ID-SP - Inner Door, Single (blank) Plate

The inner door, single blank plate (Model ID-SP) is used to cover any single-module blank spaces within the inner door where no Desigo Modular operator interface or Model ID-MP is being used. Up to four (4) Model ID-SP modules can be mounted in a single row on the inner door. Two (2) blank plates are included with each order of Model ID-SP.

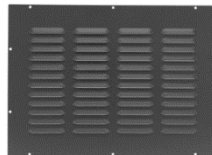
OD-LP - Outer Door Lens Plate



The outer-door lens plate (Model OD-LP) is a clear, plastic lens plate mounted on the outer door of a system cabinet.

Model OD-LP is used to allow operators to see the system interface and controls mounted on the inner door, but restricts access to unauthorized users. The plate covers an entire row on the outer door.

One (1) single lens plate is included with each order of Model OD-LP.



OD-GP - Outer Door Grill Plate

The outer-door grill plate (Model OD-GP) covers an entire row on the outer door of a system cabinet, but has four (4) rows of ventilation louvers on it.

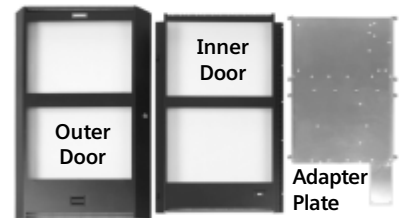
Model OD-GP is mounted in front of system bulk amplifiers, card amplifiers, or other modules that generate heat. Using Model OD-GP will permit airflow across these modules to aid in heat dissipation. One (1) grill plate is included with each order of Model OD-GP.



XLS-MSE2/R-ADPT - Enclosure Adapter

Model XLS-MSE2-ADPT, which must be used in conjunction with Model CAB-MP plates, is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL Model MSE-2-series small black enclosures.

Model XLS-MSE2R-ADPT, which must be used in conjunction with Model CAB-MP plates, is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL Model MSE-2R small red enclosures.



XLS-MME3/R-ADPT - Enclosure Adapter

Model XLS-MME3-ADPT, which must be used in conjunction with Model CAB-MP plates, is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL Model MME-3-series or Model MBR-2 medium black enclosures.

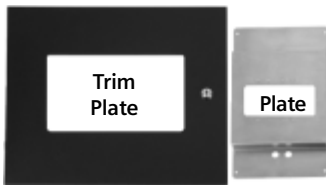
Model XLS-MME3R-ADPT, which must be used in conjunction with Model CAB-MP plates, is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL Model MME-3R medium red enclosures.



XLS-MSE3/R-ADPT - Enclosure Adapters

Model XLS-MSE3-ADPT is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL-IQ Model MSE-3L or Model MSE-3M **black** enclosure.

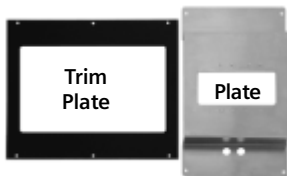
Model XLS-MSE3R-ADPT is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL-IQ Model MSE-3LR or Model MSE-3MR **red** enclosure.



XLS-RCC13F/R-ADPT - Enclosure Adapter

Model XLS-RCC13F-ADPT is an adapter that allows the Desigo Modular Model SSDI-C series remote annunciator to be mounted in older-generation Model RCC-1F or Model RCC-3F **black**, flush-mount enclosure.

Model XLS-RCC13FR-ADPT is an adapter that allows the Model SSDI-C series to be mounted in older-generation RCC-1FR and RCC-3FR, **red** flush-mount enclosure.



XLS-RCC-1-ADPT - Enclosure Adapter

Model XLS-RCC1-ADPT is an adapter that allows the Desigo Modular Model SSDI-C series remote annunciator to be mounted in older-generation Model RCC-1 surface-mount enclosure.



CAB2-XBD

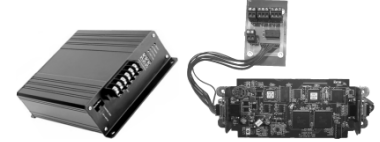
Remote Transponders

Desigo Modular systems can use remote transponders for mounting additional modules such as amplifiers without requiring a Desigo Modular operator interface or any control switches. Special doors are available for systems using Model CAB-2 or Model CAB-3 remote transponders. These doors (Models CAB2-XBD and CAB3-XBD) omit the unused inner door, and come complete with ventilation louvers built into the door.

Model CAB2-XBD fits into Model CAB2-BB, and Model CAB3-XBD fits into Model CAB3-BB. Model CAB2-XBD and CAB3-XBD are supplied in **black**. **Red** versions (Models CAB2-XRD and CAB3-XRD) are also available. Complete box and door kits are available, Models CAB2-X and CAB3-X.

Enclosure Trim Kits

Trim kits are available for all Desigo Modular system enclosures for semi-flush mounting applications. Model CAB1-TK (for black enclosures) and the Model CAB1R-TK (for red enclosures) fit inside the Models CAB1 and CAB1-R enclosures. Similarly, Models CAB2-TK and CAB-2R-TK fit inside the Model CAB-2 enclosure, while Models CAB3-TK and CAB3R-TK fit the Model CAB-3 enclosure.



Model VPM

Model VESDA-HLI-KIT

VESDA High Level Interface

The Very Early Smoke Detection Aspiration (VESDA) Peripheral Module (Model VPM) and the VESDA High-Level Interface Kit (Model VESDA-HLI-KIT) are optional system modules that work in conjunction to provide bi-directional communication between the Modular FACP and multiple VESDA detection networks for the following types of VESDA detectors:

- LaserCOMPACT
- LaserFOCUS
- LaserPLUS
- LaserSCANNER

Model VPM allows each Desigo Modular FACP to announce 'Alert,' 'Action,' 'Fire 1,' and 'Fire 2' levels, as well as provide 'faults' from any zone on a connected VESDA network.

The VPM Mounting plate (Model VPM-MP) allows mounting one (1) Model VPM and two (2) of Model VESDAHLI-KIT inside a standard Model CAB1, Model CAB2 or Model CAB3 enclosure.

Model VPM-MP utilizes two (2) module spaces on a single row of each enclosure.



Model FT-GLS

FT-GLS — Replacement Glass

Additional replacement glass for Model FC300S is orderable as Model FT-GLS.



XDMC - Digital Message Card

The Digital Message Card (Model XDMC) provides the capability of programming and sounding custom voice messages for Evacuation, Alert, Tornado Warning, System Testing and other emergency and non-emergency building notifications.

Model XDMC, which serves as a Desigo Modular option module, plugs into an available expansion slot in the Model CC-2 / CC-5 card cage. Up to two (2) Model XDMC modules can be supported on a single Desigo Modular panel. Each Model XDMC can be programmed for up to 300 different custom messages.



ALCC - Audio Level Conversion Card

The Audio Level Conversion Card (Model ALCC) provides the capability of conducting a global-emergency page across multiple, remote Desigo Modular panels with each audio riser holding a maximum of 63 nodes.

The emergency page originates at a Desigo Modular global paging station, where it is broadcast at 70VRMS over an audio riser, in conjunction with the 40W Amplifier Card, Model ZAC-40.

Remote Telephone Stations

Remote telephone stations for the emergency telephone system consist of a handset-with-hook assembly; a wall-mounted back box, and a locked door with a breakable glass panel.

Models FTS | FTS-P | FTS-C | FTS-CL | FTS-PLC - Remote Telephone Stations consist of a handset; a black plate; handset cradle with magnetic switch mounted to the back plate, and a connection cable from the handset to the back plate.



Model FTS-P

The -P designates that a momentary, push-to-talk button is included in the handset. The -C designates that an armored cable is used in place of a coiled, retractable cord between the handset and the back plate. The -L designates that a LED is mounted to the back plate to indicate two-way contact is established between the telephone and Model FMT.

The remote telephone station must be used with either remote telephone-station back box, Models FB-300 or FB-301S. Model FB-300 is used for flush-mount configurations, and Model FB-301S is used for surface-mount configurations.

The remote station / back-box assembly also requires the Model FC-300S cover with key-lock door and breakable glass.



Model FJ-303

Remote Telephone Jacks

Remote Telephone Jacks, (Models FJ-303 | FJ-303SS | FJ-304 | FJ-304SS) are connected to the emergency telephone system. The jacks are wired to the telephone zone circuits, via the Model TZC-8B Telephone Zone Card located in the Desigo Modular system enclosure.

There is no limit to the number of remote telephone jacks that can be connected to a single telephone zone circuit. The remote telephone jacks are mounted to a single-gang electrical box. Models FJ-303 and FJ-303SS have flying leads connected to the phone jack, while Models FJ-304 and FJ-304SS have screw terminals.

Models FJ-303 and FJ-304 have a red-baked, enamel finish with a white silk-screened telephone handset icon, and Models FJ303SS and FJ-303SS have a

brushed, stainless-steel finish with the handset icon.



Model PFT-P

Portable Firefighters' Telephones

Portable Firefighters' Telephones (Models PFT and PFT-P) are available for field connection to the emergency telephone system. Each phone consists of a rugged, high-impact plastic handset with a red, coiled phone cord attached to the PFT. A 1/4" (0.64 cm.) phone-plug assembly is attached to the end of the phone cord for connection to the field-mounted phone jacks.

Model PFT-P includes a momentary spring-action, push-to-talk switch mounted in the handset. The push-to-talk switch subsequently allows users to depress the button to activate the mouthpiece of the handset when speaking.

The Model MTE-2 Telephone Enclosure includes the enclosure and door with clear lens, and can be used to store a maximum six (6) PFT or PFT-P telephone handsets in a locked cabinet.



AIC - Audio Input Card

The Audio Input Card (Model AIC) provides two (2) external, isolated analog inputs to the Desigo Modular fire-with-voice systems. Model AIC also provides two (2) dry-contact inputs, used to separately activate the two (2) audio inputs.

The two (2) external, isolated analog inputs connect to the panel for functionality of external sources that use a TRS connector (e.g. – external handheld audio players | receivers; portable compact-disc players).



TZC-8B - Firefighters' Telephone Zone Card

The firefighters' telephone zone card provides a way for emergency-response personnel located throughout a building to speak to one another during emergency situations.

Model TZC-8B is a Desigo Modular option module that plugs into a Model CC-2 or CC-5 card cage, providing eight (8) firefighters telephone zones. The zones have an off-hook 'acknowledge' tone, as well as a command-console 'busy' tone.

Each telephone zone uses a single pair of wires, and is individually supervised in a 'Class B' type mode. Field wires are connected to one or more phone jacks or stations. Zones are also individually power limited, per NEC 760, and each zone also contains transient protection.

A maximum five (5) telephone stations may be off-hook simultaneously in a conferencing-line mode with no loss of audio quality.

FMT - Replacement Glass

Model FMT provides firefighters with an emergency telephone system for communication with remote locations.

Model FMT mounts to the rear of the inner door of a Model CAB 1, Model CAB2, Model CAB3, or Model REMBOX4 Enclosure.

Model FMT includes a handset for the operator of the telephone system.

The firefighters' telephone unit is designed for maximum performance in communication. The circuitry for Model FMT allows the master telephone and at least five (5) telephone stations to be off-hook simultaneously with no degradation of audio quality.



Model FMT also supports a 'warden's page' function, which allows live voice announcements from any remote telephone. Telephone zone call-ins are annunciated on the appropriate Model SCM-8 switch module.

Remote stations receive an 'Acknowledge' tone when dialing into the command center prior to the call being answered, indicating a call-in in progress and a 'busy' tone if calling into the command center and another telephone zone is already online.

Diagnostic LEDs are located on the back of Model FMT in order to simultaneously indicate power has been applied to the module, as well as failure of the card, CAN communication or telephone.



ZAC-40 - Zone Amplifier Card (40 Watt)

Model ZAC-40 is a combination 40-Watt, amplifier / speaker zone for use with Desigo Modular. Style 'Y', 'Z' or 'A' / 'B' speaker-zone wiring configurations are supported. Model ZAC-40 is power limited, and can be configured to provide 40 Watts of audio at 25VRMS or 70VRMS. Model ZAC-40 is a plug-in card that mounts in a Model CC-5 or CC-2 card cage.

Model ZAC-40 is capable of amplifying any of the eight (8) digital audio channels that are transmitted from Model DAC-NET, via the Audio Serial Interface, Model ASI.

Model ZAC-40 is supervised for functionality, and provides a single, 40-Watt speaker zone that supports two (2) speaker circuits. Model ZAC-40 can be used for (1) one-to-eight (8) channel applications, or as a bulk amplifier for (1) one-or-two (2) channel applications — feeding high-level audio to Models ZIC-4A and ZIC-8B. Model ZAC-40 can also be used for single-channel applications feeding high-level audio to Model HCP.

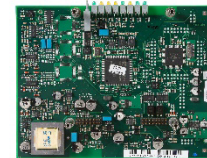
ZAM-180 - Zone Amplifier Module (180 Watt)

Model ZAM-180 is a combination 180-Watt, amplifier / speaker zone for use with Desigo Modular. Style 'Y', 'Z' speaker-zone wiring is supported, as well as split-zone or ('A' / 'B') speaker-zone-wiring configuration on Style 'Y'.



Model ZAM-180 can be configured to provide 150 Watts of audio at 25VRMS or 180 Watts of audio at 70VRMS. Model ZAM-180 mounts in one (1) module space directly on the back box or optional Model CAB-MP mounting plate.

Model ZAM-180 is capable of amplifying any one (1) of the eight (8) digital-audio channels that are transmitted from Model DAC-NET (Digital Audio Card), via the digital audio bus: Model ASI (Audio Serial Interface). Model ZAM-180 amplifier is supervised for functionality. Model ZAM-180 can be used as a single 180 Watt speaker zone for (1) one-to-eight (8) channel applications or as a bulk amplifier for (1) one-or-two (2) channel applications feeding high-level audio to Model ZIC-4A or Model ZIC-8B.



LPB - Local Page Board

The Local Page Board (Model LPB) is used to connect the microphone — mounted inside the Live Voice Module (Model LVM) — and the voice-internal telephone system. Model LPB is a plug-on board to Model DAC-NET, and converts the two (2) analog input signals into the system's internal digital format.

Up to five (5) Model LVMs can be connected to Model LPB. Additionally, Model LPB provides one (1) analog output to connect to the monitor speaker, which is mounted inside Model LVM. The one (1) analog output is one (1) of eight (8) voice-internal audio channels selectable at the Modular panel.

Voice-Related Components – (continued)



DAC-NET - Digital Audio Card

Model DAC-NET provides the audio source for the Desigo Modular Voice Evacuation System, as well as D-NET network communication to and from the Desigo Modular operator interface and between enclosures.

Model DAC-NET transmits eight (8) digital channels of audio, via two (2) pairs of wire. One (1) Model DAC-NET is required in each Desigo Modular enclosure.

A maximum 32 Model DAC-NET cards are allowed on a single Desigo Modular panel. Model DAC-NET can be wired `Class A' (Style 7) (four [4] pairs of wires) or `Class B' (Style 4) (two [2] pairs of wires). Model DAC-NET card plugs into one (1) slot in the Model CC-5 or CC-2 card cage, and has on-board LEDs for system status and troubleshooting.

Indication of power, communication, internal operation, ground fault, and trouble conditions are provided. Model DAC-NET Card contains an on-board microprocessor that provides communication with switch modules, LED modules, microphone, telephone zone cards, and zone amplifiers across the Control Area Network CAN Bus.

Model DAC-NET can supervise up to 99 CAN address modules, and contains on-board tones and pre-recorded EVAC and ALERT messages. Custom messages or tones can also be downloaded to Model DAC-NET using the Desigo Modular software tool, *Zeus-D*, for a total of five minutes of storage memory.

LVM - Live Voice Module

Model LVM provides a supervised, high-quality and dynamic microphone as a means of sending live voice messages to specified audio zones. Model LVM mounts on the inner door of a Model CAB1, Model CAB2, Model CAB3 or remote lobby enclosure.



Model LVM includes a microphone with a push-to-talk switch and retractable coiled cord. The microphone and push-to-talk switch are fully supervised.

Model LVM also provides a green pre-announce LED that indicates the pre-announce signal is active at the selected zones and a green ready to page LED, which indicates selected zones are ready to be paged. The pre-announce signal can be programmed as a tone or message and the duration is adjustable from 0 to 10 seconds in one-second increments.

A built-in speaker with volume control allows the monitoring of the audio channels.

The front panel of Model LVM contains six (6) switches and six (6) pairs of LEDs. Each pair contains one (1) dual-color (RED / GREEN) and LED. These switches can be programmed for manual voice functions as well as for generic system commands. When the switches are used as generic switches, all LEDs can be programmed for ON | OFF or FLASHING.

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
AC-ADPT	500-633992	Technician Laptop-Power Connector
AIC	500-035300	Audio-Input Card
ALCC	500-650127	Audio-Level Conversion Card
BCM	500-033320	Blank Control Module Plate [Four (4) per package]
C900V2	S54430-C13-A2	Dialer-Capture Ethernet Module
CAB1	500-633007	Complete Single-Row Cabinet, black
CAB1R	500-633728	Complete Single-Row Cabinet, red
CAB1-TK	500-633013	Single-Row Trim-kit Cabinet, black
CAB1R-TK	500-633729	Single-Row Trim-kit Cabinet, red
CAB2-BB	500-633009	Two-Row Back Box, black
CAB2-RB	500-634941	Two-Row Back Box, red
CAB2-BD	500-633008	Two-Row Inner & Outer Door Set, black
CAB2-RD	500-633755	Two-Row Inner & Outer Door Set, red

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
CAB2-TK	500-633014	Two-Row Trim-kit Cabinet, black
CAB2R-TK	500-633753	Two-Row Trim-kit Cabinet, red
CAB2-XBD	500-633768	CAB2 Transponder Door
CAB2-XRD	500-633792	Medium-Enclosure Transponder Door [mounts to Model CAB2-RB]
CAB3-BB	500-633011	Three-Row Back Box, black
CAB3-RB	500-634942	Three-Row Back Box, red
CAB3-BD	500-633010	Three-Row Inner & Outer Door Set, black
CAB3-RD	500-633757	Three-Row Inner & Outer Door Set, red
CAB3-TK	500-633015	Three-Row Trim-kit Cabinet, black
CAB3R-TK	500-633754	Three-Row Trim-kit Cabinet, red
CAB3-XBD	500-633769	CAB3 Transponder Door
CAB3-XRD	500-633793	Large-Enclosure Transponder Door [mounts to Model CAB3-RB]
CAB-MP	500-633012	Module Mounting Plate
CAB-55-BRKT	S54430-B1-A1	Bracket to hold down 55AH batteries in CAB-BATT enclosure
CAB-100-BRKT	S54430-B2-A1	Bracket to hold down 100AH batteries in CAB-BATT enclosure
CCL	599-634214	CAN Cable 3 ft. (91.4 cm.) Length required for: SCM / LCM / FCM modules from Models CC-5 / CC-2 Inner Doors, and from row-to-row on Model CAB-series Inner Doors
CC-2	500-633440	Two-Slot Card Cage
CC-5	500-633037	Five-Slot Card Cage
CDC-4	500-034200	Conventional Detector Card
COM-BRK	S54430-B7-A1	Communications Bracket
CRC-6	500-033250	Controllable Relay Card
CSB	500-033150	CAN Sounder Board
DAC-NET	500-035100	Digital Audio Card
DCT-P	500-699291	MDOACT Programmer
ENCL-01	S54465-C63-A1	SNU Enclosure (w/ key-lock)
FB-300	500-680587	Remote Telephone Stations
FCM-6	500-033140	Fan-Control Module Switches [ON OFF AUTO]
FCM2041-U2	S54430-C17-A1	Operator Interface for Desigo Fire Safety Modular
FJ-304	500-692670	Remote Telephone Jacks
FMT	500-034100	Fireman's Main Telephone

Details for Ordering – (cont.)

MODEL OR TYPE	PART NUMBER	PRODUCT
GPMI-3	S54430-C25-A1	Global Operator Interface (V3)
GPMI-HW-KEY	S54430-C22-A1	Hardware key for Modular Global Operation
HCP	500-034860	Intelligent Control Point
HLIM	500-033170	Line Isolator Module
ID-MP	500-633027	Inner-Door Enclosure Mounting Plate [four (4) per package]
ID-SP	500-633028	Single-Door Inner-Door Enclosure Mounting Plate [two (2) per package]
IIC	500-850328	Interface Isolation Card
LCM-8	500-033100	LED Annunciator Module [ON OFF AUTO]
LPB	500-035200	Local Page Board
LVM	500-034090	Live Voice Module
MDACT	500-699254	Multi-Point Digital Alarm Communication Transmitter
MLC	S54431-B4-A1	MXL Addressable-Device Line Card
NIC-C	500-033240	Network Interface Card
NRC	S54430-A2-A1	Network Ring Card: 2 nd Generation
PMI-1 UPLD-CBL	S54430-A4-A1	Serial Adapter Cable for USB-to-serial-converter connection between single-node upload assemblies and 1 st - version central processors
PS-5A	500-492369	Aux (5V) Power Module
PSC-12M	S54430-C26-A1	Power Supply Charger
PSC-IS0-CBL	S54430-K4-A1	Optional Cable Extender [for use with two (2) Model PSC-12Ms]

MODEL OR TYPE	PART NUMBER	PRODUCT
PSX-12M	S54430-C27-A1	12A Pwr. Supply Extender
PSFA	S54430-A13-A1	Power Supply Filter Assy
SCM-8	500-033040	Switch Module [eight (8) switches]
SIM-16	500-034060	Supervised Input Module
SNU-ASSY	S54430-A3-A1	SNU Processor with USB cables (w/ SNU IOM)
SNU-KIT	S54430-C19-A1	Single-Node Upload (SNU) Kit
SSD	500-034170	System-Status Display
SSD-C	500-648733	System-Status Display with control
SSD-INT	500-034740	System-Status Display [w/ multi-lingual overlays]
SSD-C-INT	500-034750	System-Status Display with control [w/ multi-lingual overlays]
SSD-C-REM	500-634773	System-Status Display w/ control [for remote lobby enclosure]
TZC-8B	500-034110	Firefighter's Telephone Zone Card
VESDA-HLI-KIT	S54430-F99-A2	VESDA High-Level Interface Kit
VNTPC	500-650490	Virtual Network Tunnel
VPM	S54430-F93-A2	VESDA Peripheral Module
VPM-MP	S54430-F95-A2	Mounting Plate for the VESDA Peripheral Module
ZAC-40	500-035400	40W Zone-Amplifier Card
ZAM-180	500-035600	180W Zone-Amp. Card
XDACT-ASSY	S54430-A5-A1	XDACT Mounting Plate (with cable)
XDLC	S54430-B8-A1	Device Loop Card
XDMC	S54430-B5-A1	Digital Message Card

MODEL OR TYPE	PART NUMBER	PRODUCT
XLS-EXT-CABLE-PKG	S54430-K1-A1	5 ft. (1.5m) 60-pin cable 5 ft. (1.5m) CAN cable Long ground-strap cable
XLS-MLE6-ADPT	S54430-C9-A1	MLE-6 Enclosure Adapter, black
XLS-MLE6R-ADPT	S54430-C9-A2	MLE-6R Enclosure Adapter, red
XLS-MME3-ADPT	S54430-C8-A1	MME-3 and MBR-2 enclosure adapters, black
XLS-MME3R-ADPT	S54430-C8-A2	MME-3 and MBR-2 encl. adapters, red
XLS-MSE2-ADPT	S54430-C7-A1	MSE-2 enclosure adapter, black
XLS-MSE2R-ADPT	S54430-C7-A2	MSE-2 enclosure adapter, red
XLS-MSE3-ADPT	S54430-C14-A1	MXL-IQ MSE-3L & MSE-3M enclosure adapters, black
XLS-MSE3R-ADPT	S54430-C14-A2	MXL-IQ MSE-3L & MSE-3M enclosure adapters, red
XLS-RCC1-ADPT	S54430-Z14-A1	RCC-1 enclosure adapter, black
XLS-RCC13F-ADPT	S54430-Z13-A1	RCC-1F RCC-3F enclosure adapter, black
XLS-RCC13FR-ADPT	S54430-Z13-A2	RCC-1F RCC-3F enclosure adapter, red
ZIC-2C	500-648671	Two-Channel Adapter Card (via Model ZIC-8B)
ZIC-4A	500-033050	Four-Circuit-Zone Indicating Card
ZIC-8B	500-648670	Eight-Circuit-Zone Indicating Card

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

Desigo® Fire Safety

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Smart Infrastructure - Building Products
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February - 2023
(Rev. 8)



LP Series-General Purpose

LP12-60(12V60Ah)

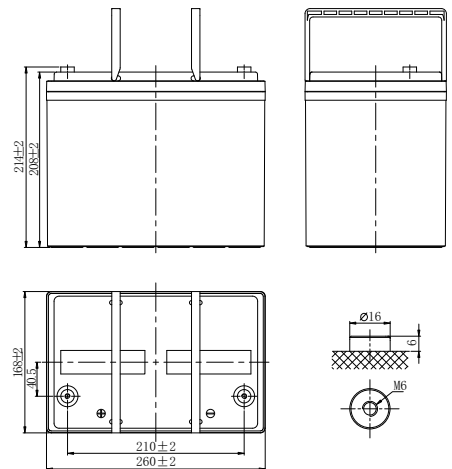


Specifications

Rated Voltage	12V	
Nominal Capacity	60.0Ah	(C ₁₀ , 1.80V/cell)
Dimension	Length	260±2mm (10.2 inches)
	Width	168±2mm (6.61 inches)
	Container Height	208±2mm (8.19 inches)
	Total Height	214±2mm (8.43 inches)
Approx Weight	18.4 Kg (40.5 lbs)	
Terminal	M6	
Container Material	ABS	
Rated Capacity (25°C)	62.4 Ah	(20hr, 3.12A, 1.80V/cell)
	60.0 Ah	(10hr, 6.00A, 1.80V/cell)
	54.0 Ah	(5hr, 10.8A, 1.75V/cell)
	49.2 Ah	(3hr, 16.4A, 1.75V/cell)
	37.9Ah	(1hr, 37.9A, 1.60V/cell)
Max. Discharge Current	600A (5s)	
Internal Resistance (25°C)	Approx 7.4mΩ	
Operating Temp. Range	Discharge	-15 ~ 50°C (5 ~ 122°F)
	Charge	-20 ~ 40°C (-4 ~ 104°F)
	Storage	-15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 18.0A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
	Standby Use	
Effect of temp. to Capacity	Initial Charging Current less than 18.0A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
	40°C (104°F)	103%
	25°C (77°F)	100%
Self Discharge	0°C (32°F)	86%
	LP series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



Layout



Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	119.8	85.2	76.2	59.9	53.6	38.8	33.2	24.0	20.2	14.8	11.6	10.1	8.90	6.85	5.67	3.01
1.80V/cell	136.3	96.7	86.3	67.7	58.3	41.1	34.4	24.9	20.9	16.1	12.4	10.6	9.56	7.20	6.00	3.12
1.75V/cell	148.0	104.9	93.5	73.1	59.5	42.6	36.1	26.1	22.0	16.4	12.7	10.8	9.64	7.24	6.03	3.15
1.70V/cell	158.3	111.8	99.3	77.5	60.7	43.4	36.8	26.7	22.4	16.7	12.9	11.0	9.69	7.35	6.06	3.18
1.67V/cell	163.8	115.4	102.2	79.7	61.6	44.1	37.3	27.1	22.7	16.9	13.1	11.2	9.73	7.45	6.14	3.22
1.60V/cell	169.6	119.3	105.3	81.7	62.5	44.7	37.9	27.4	23.1	17.0	13.2	11.4	9.80	7.55	6.21	3.26

Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	223.8	160.3	149.4	118.0	106.0	74.6	66.5	48.3	40.7	30.0	23.6	20.6	17.6	14.1	11.7	6.20
1.80V/cell	250.4	179.3	167.1	132.0	114.5	78.5	68.5	49.7	41.8	32.4	25.1	21.6	18.8	14.8	12.2	6.42
1.75V/cell	267.2	191.4	178.3	140.9	115.9	80.8	71.5	52.0	43.9	33.0	25.5	21.9	18.9	14.8	12.3	6.48
1.70V/cell	280.9	201.2	187.5	148.1	117.3	81.9	72.6	52.8	44.6	33.5	25.9	22.2	19.0	15.0	12.4	6.54
1.67V/cell	285.5	204.5	190.5	150.5	118.1	82.6	73.2	53.3	45.0	33.6	26.2	22.5	19.0	15.2	12.6	6.61
1.60V/cell	289.5	207.3	193.2	152.6	118.6	83.0	73.8	53.7	45.4	33.8	26.4	22.8	19.1	15.3	12.7	6.68



LP Series-General Purpose LP12-60(12V60Ah)



Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system

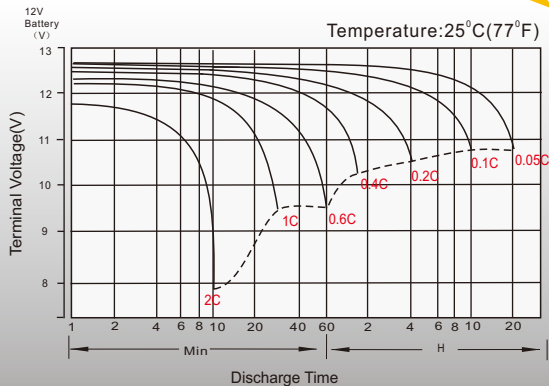
General Features

- 10 years design life(25°C)
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- High purity raw material: ensure low self discharge rate

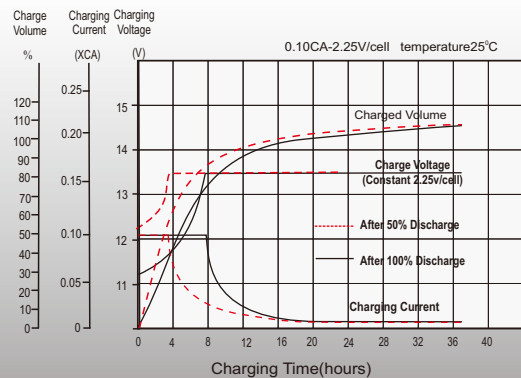
Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch®IATF 16949, ISO45001, ISO 9001 and ISO 14001 certified production facilities

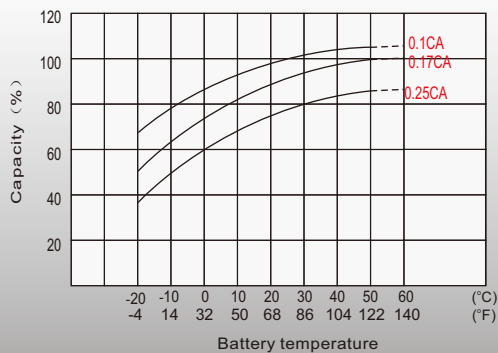
Discharge Characteristics



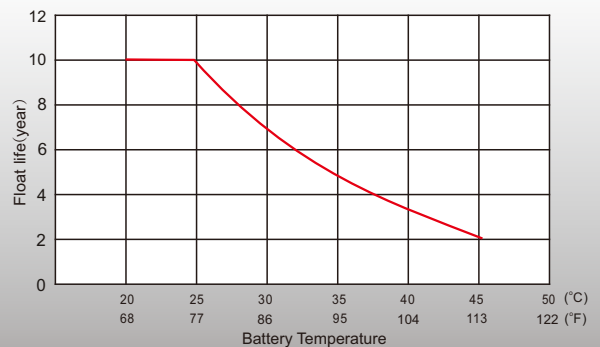
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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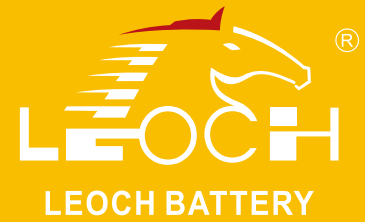
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LPL Series-Long Standby Life LPL12-75(12V75Ah)



Applications

- UPS and EPS
- Emergency light
- Railway signal and aircraft signal system
- Marine and power stations
- Alarm and security system
- Electronic apparatus and equipment
- Communication power supply, DC power supply

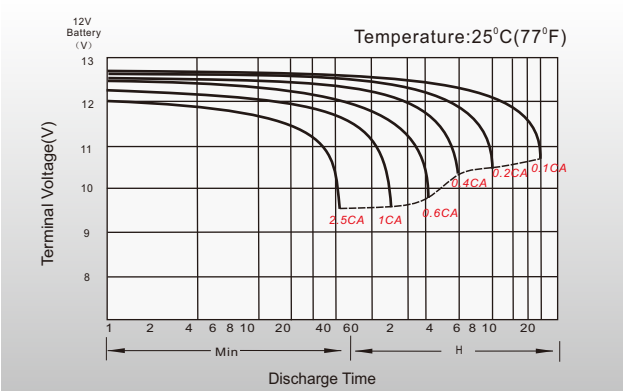
General Features

- 12 years design life (25°C)
- Grid refining technology and the thicker plates are used to extend the battery standby life and reduce the plate grid corrosion speed
- Using oxygen recombination technology: maintenance-free
- Unique vent valve design: control water losing, prevent air and spark going inside

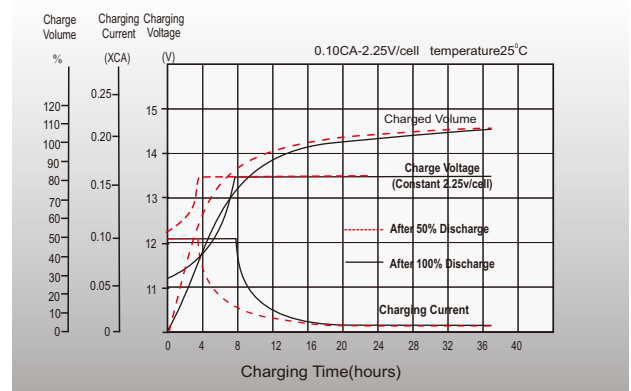
Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch@IATF16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

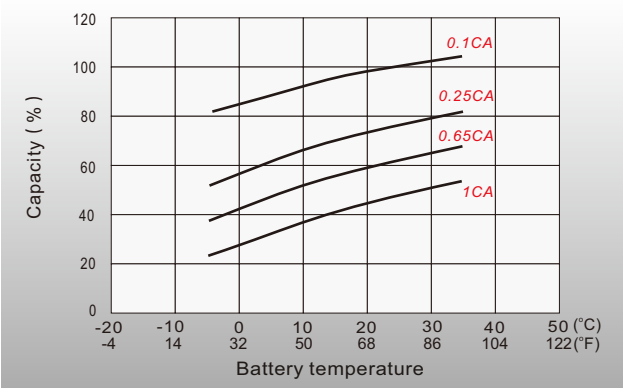
Discharge Characteristics



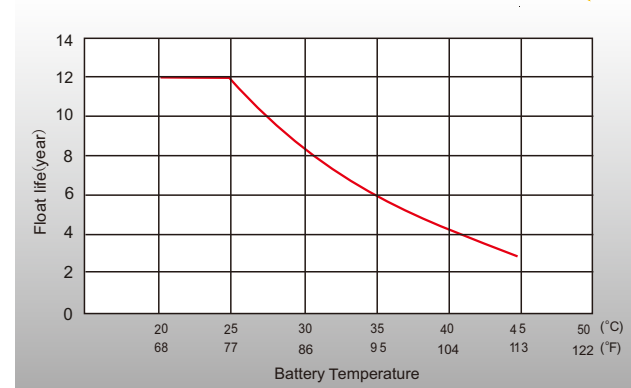
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Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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Publication No.: LB-LPL12-75-PD-EN-V2.1-202110



DESIGO[®] FIRE SAFETY MODULAR SYSTEM FIRE ALARM TRANSPONDER

DATA SHEETS

1	TRANSPONDER L1-E - ELECTRICAL ROOM 613
2	TRANSPONDER L1-S - ELECTRICAL ROOM 614
3	TRANSPONDER L1-W - ELECTRICAL ROOM 626
4	TRANSPONDER L2-NE - ELECTRICAL ROOM 724A
5	TRANSPONDER L2-NW - ELECTRICAL ROOM 725

Desigo® Fire Safety Modular System

Advanced | Addressable Fire Alarm Control Panel

Architect & Engineer Specifications

- Standard / 2500-point-capacity addressable fire-alarm control panel (FACP)
- Ability to network with other Desigo Fire Safety Modular (Desigo Modular) systems
- Powerful, easy-to-use programming capabilities
 - Multiple levels of password protection
- Fully programmable through use of a Windows operating system
- 6-inch (15.2 cm.), backlit liquid-crystal display (LCD)
 - Multi-language display
- User-friendly system interface
 - Useful diagnostic light-emitting diodes (LEDs) on all cards
- Touch screen for maintenance operations and function keys
- Menu-driven operator commands
 - End-user HELP screens
- 32-character custom messages
 - 40 programmable macro and function buttons – (e.g. – Holiday schedule)
- Global annunciation and control capability
- ‘Alarm’ | ‘Trouble’ | ‘Programmable’, etc. relay commands
- Alarm verification by device, zone
 - Pre-alarm operation
- SureWireL* addressable-loop technology:
 - Patented polarity-insensitive detection circuits
- Supports *FirePrint*® application-specific detection, and single-person ‘Walk Test’
- Coded outputs
- Seismic certified
- Modular assembly
- Distributed processing
- UUKL Listed for smoke control
- Universal AC power input:
 - 120VAC – 240VAC @ 50 / 60Hz
 - 12A of basic system power; expandable to 48A
- Supported by all Desigo® CC Management Stations
- Automatic environmental compensation for smoke detectors
- Peripheral interface to remote printers
 - connected to the communication bus from any NIC-C output in an enclosure
 - Class B (Style 4) or Class A (Style 7) wiring
- Security-device monitoring
 - UL1076 Listed
- Mounts in one (1) electrical back box
 - Optional 4–11/16 inch [12 cm.] and 5–inch [12.7 cm.] square back boxes
- Supports pre-action | deluge | agent releasing
 - sprinkler supervision
- NEC 760 power-limited circuits
- 200 notification-appliance-circuits (NACs) capacity
 - Up to 3A @ 24VDC per NAC
 - Built-in strobe synchronization protocol
- UL 864 10th Edition and UL 2572 Listed, ULC-S527 3rd Edition Listed; FM, CSFM Approved

System Overview

Sold as part of the product line of Siemens – Fire Safety products, Desigo Fire Safety Modular (Desigo Modular) is a microprocessor-based, reliable, and advanced fire-safety system. Each of these addressable panels uses a contemporary operator interface that functions as an operator interface and as a central microprocessor.

Desigo Modular is ideally suited for commercial, institutional, and industrial intelligent detection and notification-appliance applications.

System Overview (cont.)

Each panel complies with the requirements of NFPA Standard 72, and is listed by Underwriters Laboratories under their UL 864 standard and is FM Approved.

Underwriters Laboratories Canada also lists Desigo Fire Safety Modular panels under ULC-S527.

Each panel is additionally UL Listed under the category ‘UUKL for Smoke Control.’

When it comes to Siemens Sinorix® clean-agent systems, Desigo Modular panels are UL | ULC Listed for use in foam or water applications. Each panel is also listed as a Fireman’s Smoke Control Station (in high-rise office buildings | malls | other large structures).



Desigo Fire Safety Modular panel
(with mounted FCM2041-U2 Operator Interface)



System Components

A basic Desigo Fire Safety Modular fire-alarm control panel (FACP) consists of one (1) of the following parts: Operator Interface; power supply (PSC-12M); Class X Device Loop Card (XDLC); Zone Indicating Card (ZIC-4A); five-slot card cage (CC-5); Inner Door Blank Single Plate (ID-SP), and a CAB1, CAB2 or CAB3 system enclosures.

Optional modules that can be installed on a Desigo Fire Safety Modular FACP include: Card Cage (Model CC-2); Network Interface Card (Model NIC-C); 8-Circuit Zone Indicating Card (Models ZIC-8B / ZIC-2C); Output Control Module (Model OCM-16); Switch Control Module (Model SCM-8); LED Control Module (Model LCM-8); Fan Control Module (Model FCM-6); Supervised Input Module (Model SIM-16); Power Supply Extender (Model PSX-12M); Remote Network Interface (Model RNI); Remote Printer Module (Model RPM); System Status Display (Model SSD); Digital Alarm Communicator (Model FCA2015-U1) Multi-Point Digital Alarm Communicator (Model MDACT); Two-Module Remote Enclosure (Model REMBOX2), and the Four-Module Remote Enclosure (Model REMBOX4).

Additionally, Desigo Modular panels are compatible with all of the advanced Siemens field devices in signaling appliances and intelligent, addressable detection.

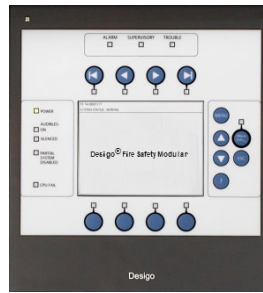


Desigo CC Management Station Desigo Fire Safety Modular

Desigo CC Management Stations compatible with Desigo Fire Safety Modular

Desigo Fire Safety Modular panels are compatible with Siemens Fire Safety Management Stations, which provide integrated and reliable FACP monitoring and control of system events – including: ‘Alarm’ | ‘Trouble’ | ‘Security’ | ‘Supervisory’ commands.

Desigo CC management stations include PC-based, color-graphics software designed for use with the XNET network, offering full control and annunciation. An extensive history log of all system events, as well as extensive report-generation capabilities, is easily maintained. There are also user-programmable electronic buttons that allow for site-specific control functions.



Operator Interface used on Desigo Fire Safety Modular FACP

FCM2041-U2 Operator Interface

The Operator Interface is the primary user interface and central microprocessor for Desigo Modular.

Enhancements to the most current version of the Desigo Modular Operator Interface include go-to-beginning, go-to-end queue buttons; a front-end command screen with ‘Alarm’ | ‘Supervisory’ | ‘Trouble’ light-emitting diodes (LEDs), and three (3) types of alternate-language overlays all orderable under one (1) part.

See: Details for Ordering section in this document for more info.

Desigo Modular panels are controlled and operated from the Operator Interface, which uses large, lighted control buttons to prompt the end-user to the next available, correct system operation shown on the front-end screen. Additionally, the system Operator Interface provides a 6” (15.2 cm.) front-end touch screen comprised of system-status LEDs as well as a liquid-crystal display (LCD) of 1200 –x– 800.

There are language overlays that provide naming in alternate languages for visual indicators found on the front of each Operator Interface. Each overlay is assigned on the outer assembly, respectively, when affixed to the front-end display on the user interface.

The Operator Interface contains the site-specific program configuration in the software too, *Zeus-D*.

ZIC-4A - Zone Indicating Card

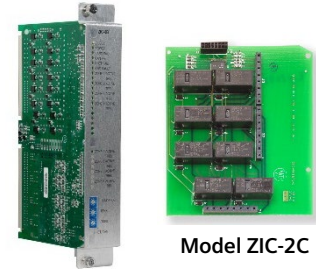
The Zone Indicating Card (Model ZIC-4A) provides four (4) fully supervised, programmable output circuits for use on each Desigo Modular FACP.



Model ZIC-4A supplies four (4) ‘Class B’ (Style Y) or ‘Class A’ (Style Z)-type output circuits, power limited to 3.0A, maximum, per circuit.

Each circuit can be independently programmed for use with agency listed/approved audible or visual notification appliances; emergency audio speakers; municipal-tie boxes; leased lines, or as optional releasing circuits. Model ZIC-4A plugs into one (1) slot in the Model CC-5 or CC-2 card cage, and has on-board LEDs for system status and troubleshooting.

Indication of power, communication, internal operation and ground-fault conditions are provided, as well as indication of circuit activation or ‘Trouble’ conditions.



Model ZIC-8B

Model ZIC-2C

ZIC-8B Zone Indicating Card (with Model ZIC-2C)

Another Zone Indicating Card (Model ZIC-8B) provides eight (8) fully supervised, programmable output circuits for use on Desigo Modular panels. Model ZIC-8B contains eight (8) ‘Class B’ (Style Y)-type output circuits, power limited to 2.0A, max., per circuit. Each circuit can be independently programmed for use with agency-listed/approved audible or visual notification appliances, or emergency audio speakers. Model ZIC-8B plugs into one (1) slot in the Model CC-5 or CC-2 card cage, and has on-board LEDs for system status.

A Model ZIC-2C mounts directly on Model ZIC-8B, and allows each Model ZIC-8B output circuit to be used for two-channel voice applications. Indication of power, communication, internal operation, and ground-fault conditions are provided, as well as indication of circuit activation or ‘Trouble’ conditions.

System Components

XDLC - Device Loop Card

The 'Class X' Device Loop Card (Model XDLC) is the interface used for connecting Siemens addressable, intelligent 'X' as well as 'H'-series devices.

A Model XDLC operates and maintains all devices residing on up to four (4) 'Class A', eight (8) 'Class B' addressable circuits. Additionally, Model XDLC has 16 LEDs for diagnostic purposes, and provides ground-fault detection and zone-isolation circuitry.



NIC-C Network Interface Card

The Network Interface Card (Model NIC-C) provides HNET or XNET network communications between enclosures.

In addition to HNET or XNET communication, Model NIC-C provides CAN network communication within an enclosure or external to the enclosure.

HNET or XNET communication can be wired Style 4 or Style 7, but the CAN network can be wired Style 4 only.

When used for HNET communications, Model NIC-C provides contact between enclosures on a single system. When NIC-C is used for XNET communications, Model NIC-C provides communication between systems. The maximum of NIC-C cards on a single-panel XNET is one (1) for a total 64 NIC-C cards on a peer-to-peer XNET network.

Model NIC-C has diagnostic LEDs that indicate: 'Card Fail', 'CAN Fail', 'HNET Fail', 'XNET Fail', 'Ground Fault', 'Loop 'A' Fail' and 'Loop 'B' Fail'. This card also has LEDs to indicate 'Power', 'Style' and 'Active Networks'.



Intelligent Control Point Module

Model HCP is designed to be used with the Siemens – Fire Safety Alarm Signaling Devices product line.

Model HCP can be set as an independent, remotely located telephone zone, speaker zone or notification-appliance circuit. Model HCP communicates through analog loop of Model DLC.

Model HCP can be wired either 'Class B' (Style Y) or 'Class A' (Style Z). The 24 Volts DC power input is from either the control panel or from any UL Listed power-limited, auxiliary power supply.



Model HCP

NRC - Network Ring Card 2nd Generation

Model NRC is a network ring card that transmits single-mode or multi-mode network communication via fiber-optic or copper lines. Each NRC uses a 'Class A' (Style 7) ring configuration with a Desigo Modular panel.

One (1) Model NRC (per system node) provides XNET, peer-to-peer network communication between panels, allowing 64 (max.), Desigo Modular panels to be networked simultaneously. Model NRC takes one (1) card slot, and mounts in a Model CC-2 or CC-5 card cage inside a Model CAB1, Model CAB2, or Model CAB3 enclosure.



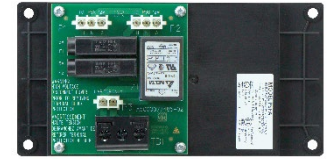
PSC-12M - Power Supply Charger Module

The Power Supply Charger Module (Model PSC-12M) is an addressable-intelligent, microprocessor-controlled module that communicates its status to the operator interface. Additionally, PSC-12M is a high-current power supply that provides primary, regulated (at 24VDC) system power.

Model PSC-12M is rated at 12Amps ('Alarm') / 5Amps (Standby), and has a built-in battery charger, capable of charging up to 100 AH batteries.

PSX-12M - Power Supply Charger Module

The Power Supply Extender (Model PSX-12M) is a high-current, auxiliary power supply that expands the main Model PSC-12M power supply and battery charger to an additional 24VDC of system power. Model PSX-12M is rated at 12 Amps.



PSFA - Power Supply Filter Assembly

Each Model PSC-12M comes packaged with a module known as the Power Supply Filter Assembly (Model PSFA). Model PSFA is required for operation with Model PSC-12M. Model PSFA filters the power from the incoming AC mains, and distributes it to the Model PSC-12M power supply and the optional Model PSX-12M power-supply extender.

Model PSFA has an optional connector that can be used during system installation, commissioning and service to provide the technician with a place to plug in their laptop PC, if required. Model AC-ADPT is an optional accessory cable that allows connection on one side to Model PSFA, via a keyed connector and on the other end directly into the laptop's transformer.

Most laptop-computer external power transformers have removable AC power cords, which can be replaced by the optional Model AC-ADPT to temporarily provide an AC power source for laptop-PC usage during system installation, service and maintenance calls when needed.

SNU-ASSY - Single-Node Upload (SNU) Module



Typical mounting set-up of a SNU module

The Single-Node Upload (SNU) is an optional system module that provides a solution for having data configuration done remotely.

SNU can easily transmit data from a PC running the custom-configuration tool, *Zeus-D*, to a maximum 64 central processors.

Each SNU module has three (3) connectors: Power, Ethernet and USB. The data transported between the *Zeus-D* tool and SNU is made through a direct 128-bit, Secure Sockets Layer (SSL) connection.



DACT - Digital Alarm Communications Transmitter

The Digital Alarm Communications Transmitter (Model FCA2015-U1) optionally provides a means for communication between either a Desigo Modular system; one (1) Fire Terminal (Model FT2050), and with either a central or remote monitoring station. Available communication protocols include: SIA DCS 8 | SIA DCS 20 | Ademco Contact ID. Additionally, each DACT can sync with IP and GSM communication technology.

XDACT-ASSY - XDACT Assembly

The XDACT Assembly (Model XDACT-ASSY) is the blank plate used for holding the optional Digital Alarm Communication Transmitter (DACT) Model FCA2015-U1 on Desigo Modular Systems. Model XDACT-ASSY can be mounted on all CAB-series enclosures. Each assembly must be located in the Global Operator Interface cabinet for global configurations.



Model SSD-C

SSD Series - System Status Display

The System Status Display (SSD-series model displays) is a remote LED / LCD display that shows the local status of a Desigo Modular system. An LED illuminates when `Alarm` | `Supervisory` | `Trouble`, and `Security` events occur on the system. A (4) four-line liquid-crystal display (LCD) will give details of the event in alphanumeric form.

The display can be toggled to display additional events. Optional remote system control capabilities are available. Models SSD-C, SSD-C-INT, and Model SSD-C-REM have three (3) additional control buttons to acknowledge events; silence audible circuits, and reset the system.

Models SSD-C and SSD-C-INT have an integral key-switch that enables these control buttons to operate. Model SSD-C-REM is located within a locked cabinet. So, no additional key-switch is required for manual activation of the control buttons.

RPM - Remote Printer Module

The Remote Printer Module (Model RPM) provides a means of connecting a Desigo Modular system to a printer, such as Model PAL-1, for creating a hard copy of system status and configuration reports.



Concurrently, Model RPM provides an output port that can be configured to communicate with external systems.



VNTPC - Virtual Network Tunnel

The Virtual Network Tunnel (VNT) is an efficient means for real-time communication, as well as providing support to HNET, XNET and DNET monitoring and supervision – when used as part of a Fire Command Center or a Building network. Each Model VNTPC is a fanless, headless industrial computer, receiving its operating power from a Desigo Modular panel.



Model SIM-16



Model OCM-16

SIM-16 - Supervised Input Module

The Supervised Input Module (Model SIM-16) is a remotely located, general-purpose input module. Model SIM-16 provides 16 input circuits for remote system monitoring. Each input can be individually programmed as supervised (dry-contact only) or unsupervised (general-purpose input.) Model SIM-16 has two (2) `Form C` relays. The relays and inputs are programmed using the system software-programming tool, *Zeus-D*.

OCM-16 - Output Control Module

The Output Control Module (Model OCM-16) is a remotely located, general-purpose output module that provides 16 open-collector outputs to drive LEDs, incandescent lamps or external relays.

There is an additional output for a local audible and two (2) inputs for momentary lamp test, as well as local, audible silence switches.

Model OCM-16 is mounted in a separate enclosure from the main control panel.



C900V2 - Dialer-Capture Ethernet Module

The Dialer-Capture Ethernet Module (Model C900V2) links the data output of Model MDACT from the Desigo Modular FACP to an Ethernet connection – on a local-area network (LAN) or wide-area network (WAN) – for communication to a central station over the Internet.

Model C900V2 also allows Model MDACT to be optionally linked to the public switched telephone network (PSTN) for communication to a central station, via telephone lines.



MDACT - Multi-Point Digital Alarm Communicator Transmitter

The Multi-Point Digital Alarm Communicator Transmitter (Model MDACT) is used in Desigo Modular systems where point identification of system events is required at Central or Remote Receiving Stations. An intelligent RS-485 communications protocol transmits all system information to Model MDACT.

The installer selects the specific event or groups of events that are set to transmit from Model MDACT over phone lines to listed receiving station equipment.

In turn, Model MDACT can transmit point information, via the Ademco Contact ID and the SIA protocol. A mounting plate (Model MOM2-XMP), MOM-2 card cage, and an XMI Interface Card are required for installation.



Model CC-2 Model CC-5

CC-5 / CC-2 - Card Cages

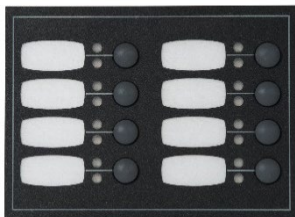
The Model CC-5 / CC-2 card cages provide the physical mounting location and all wiring connection points for all fire-and-voice system options cards to each Desigo Fire Safety Modular system. Model CC-5 has five (5) slots, while Model CC-2 has two (2) slots.

All cards plugged into each CC-5 / CC-2 card cage communicate with other Desigo Modular system modules via a common data bus. Connectors are provided on the left and right side of the CC-5 to connect a 60-pin cable for communications with the Desigo Modular operator interface, power supplies and amplifiers modules.

Field wiring to devices and circuits terminates on the Models CC-5 / CC-2 card cages. All cards designed for use with the Models CC-5 / CC-2 route their field wiring terminations to the 'top' of the Model CC-5 / CC-2 card cages. These connections are all power limited. Internal wiring connections distribute 24VDC to cards or high-level audio signals (depending on application used) connect to the 'bottom' of the Model CC-5 / CC-2 card cages. These connections are all non-power limited.

All wiring connections to the Model CC-5 / CC-2 card cages are to removable terminal blocks. Terminal blocks are rated for use with wire sized 12 American Wire Gauge (AWG) to 24AWG. Each connector is numbered to make wiring terminations to the correct position on the terminal block simple in order to reduce potential system-wiring errors.

SCM-8 - Switch Control Module

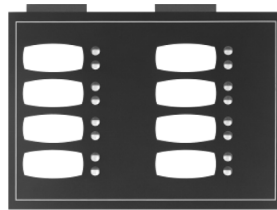


The Switch Control Module (Model SCM-8) is a Desigo Modular system option module that provides manual control of the Emergency Voice Evacuation System or manual fire system control. Each Model SCM-8 module has eight (8) momentary push-button switches and 16 LEDs to indicate their status. Each switch is assigned two (2) LEDs and a label to indicate the Model SCM-8 switch is in use.

The label slides behind a clear, protective covering, and one of the LEDs assigned to each switch is a dual-color LED used to indicate what type of signal is active. Each Model SCM-8 and switch is fully programmable, and may be used to control speaker circuits and a wide range of general-system functions such as: 'All Call' | 'All Evac' | 'Speaker' | etc.

Any number of circuits may be grouped and controlled by a single switch. Switch usage and zone groupings are assigned using the Desigo Fire Safety Modular system-programming tool, Zeus-D.

Model SCM-8 is mounted on a hinged panel, as part of the Desigo Modular Command Console (C.C.) enclosure.

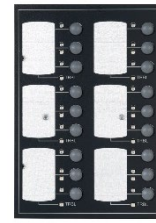


LCM-8 - LED Control Module

The LED Control Module (Model LCM-8) is a Desigo Modular system option module that provides LED annunciation for system activity. Each Model LCM-8 module contains eight (8) groups of two (2) LEDs – each of which can be assigned to desired outputs, via the Desigo Fire Safety Modular system-programming tool, Zeus-D.

Eight (8) LEDs are dual-color capable of emitting either in RED or GREEN – 'Flashing' or 'Steady'. The remaining LEDs are AMBER – 'Flashing' or 'Steady'. There is a space provided for labeling of LED functions. The label slides behind a clear, protective membrane.

Model LCM-8 dimensions are identical to Model SCM-8, and the LED control module is mounted on the same hinged panel, as part of the Desigo Fire Safety Modular C.C. enclosure.



FCM-6 - Fan Control Module

The Fan | Motor | Dampers Control Module (Model FCM-6) is a Desigo Modular system command-console option module that provides manual control of the fans, motors, and dampers used in building heating | ventilation | air-conditioning (HVAC) systems.

Each Model FCM-6 module provides six (6) sets of three (3) push-button switches for manual-system control. Each switch has three (3), associated LEDs to indicate Fan / Damper / Motor status: OFF (RED LED); ON (GREEN LED), 'Trouble' (YELLOW LED). When manually switched to the ON position, the GREEN LED will flash, indicating the output circuit used to turn on the Fan / Damper has activated. The GREEN LED will light to a steady green to indicate positive feedback of the Fan / Damper actually turning on (via a monitored input).



IIC - Interface Isolation Card

The Interface Isolation Card (Model IIC) is designed to isolate network signals when used with a Desigo Modular Command Console (C.C.) ring configuration, via the network-ring card, Model NRC. Model IIC executes the aforementioned isolation by removing the backplane network signals from each Model CC-2 card cage. Model IIC also provides one (1) end of CAN termination on each side of Model CC-2.

Two (2) 60-pin interfaces are contained in each Model IIC: the male-ribbon-cable receptacle accepts the data from the cable of the previous Model CC-2 card cage, and the female-ribbon-cable receptacle plugs into the 60-pin receptacle of the next-in-line Model CC-2 card cage.



CAB1 - Single Row Enclosure

Model CAB 1, the smallest of the Desigo Modular system enclosures, can house a single Model CAB-MP cabinet mounting plate for mounting card cages; power supplies, and bulk amplifiers. Model CAB1 also has four (4) mounting slots on the inner door for mounting the Desigo Modular operator interface and Model ID-MP switch module brackets.

Model CAB1 comes complete with a **black** back box; **black** inner and outer doors; a single lock and key set on the outer door; a single, installed cabinet mounting plate (Model CAB-MP), and a single, installed outer door lens plate (Model OD-LP). A **red** version (Model CAB1-R) is also available.

Approximate size: 27" (68.6cm.) high; 26" (66cm.) wide, and 8" (20.3cm.) deep.

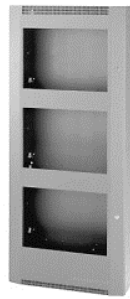


CAB2 - Two-Row Enclosure

The Two-Row Enclosure (Model CAB2) is the mid-sized Desigo Modular system enclosure capable of housing up to two (2) Model CAB-MP cabinet mounting plates. The inner door has two (2) rows of four (4) mounting slots.

The outer door has space for mounting two (2) outer door plates (Models OD-LP, OD-BP or OD-GP), and can be configured to open from either side. Model CAB2 consists of the **black** Model CAB2-BB back box, the Model CAB2-BD **black** inner and outer door package, and one (1) Model OD-LP lens plate. The outer door has a single lock and key set installed. A **red** version (Model CAB2R) is also available, and a CAB2-RB back box is used with Model CAB2R.

Approximate size: 45" (114.3cm.) high, 26" (66cm.) wide, and 8" (20.3cm.) deep.



CAB3 - Three-Row Enclosure

Model CAB3, the largest Desigo Modular system enclosure available, can house a maximum three (3) Model CAB-MP cabinet mounting plates in the enclosure, and three (3) rows of inner-door mounting slots.

The outer door can be configured to open from either side. Model CAB3 consists of the Model CAB3-BB back box, the Model CAB3-BD **black** inner and outer door package, and one (1) Model OD-LP lens plate. The outer door has two (2) locks and key sets installed. A **red** version (Model CAB3R) is also available.

Approximate size: 63" (160cm.) high, 26" (66.4cm.) wide, and 8" (20.3cm.) deep.

REMOBOX - Remote System Enclosures

Models REMBOX2 and REMBOX4 are Desigo Modular system enclosures that are used for remotely mounting inner-door modules, which include: the Desigo Modular operator interface and switch-control modules (Model SCM series).

Models REMBOX2 and REMBOX4 are thinner than regular Model CAB-series of enclosures – just 5" (12.7cm.) deep overall, and are perfect for mounting in limited-space areas (e.g. – office-complex lobbies or behind a receptionist's desk).

No card cages, power supplies or bulk amplifiers can be mounted in a given Model REMBOX-series enclosure due to their smaller depth. However, the Desigo Modular operator interface and some modules (e.g. – the remote network interface module [Model RNI]; the output control module [Model OCM-16], and the supervised input module [Model SIM-16]) can be mounted in a given Model REMBOX-series enclosure.

Due to the depth of Models LVM and FMT, no Model OCM-16 or Model SIM-16 modules can be used simultaneously with Model LVM or Model FMT. Model REMBOX2 and Model REMBOX4 are designed for flush mounting with no trim kit required. Both enclosures also come with a clear lens plate on the cover.



REMOBOX2 - Two-Module Remote Enclosures

Model REMBOX2 has two (2) inner-door module spaces, and can hold a single Desigo Modular operator interface, as well as up to two (2) switch-module brackets.

Model REMBOX2 can also mount a single RNI remote network interface on a bracket included in the backbox. A bracket, known as Model REMBOX2-MP, can be used to mount up to four (4) Model OCM-16 output control modules or SIM-16 supervised input modules.

A Model REMBOX2-MP must be purchased separately.

Approximate size: 18-1/2" (47cm.) high; 14-1/2" (36.8cm.) wide, & 5" (12.7cm.) deep.

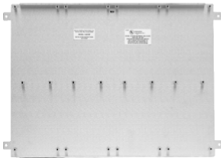


REMOBOX4 - Four-Module Remote Enclosures

Model REMBOX4 has space for mounting four (4) inner-door modules. Any combination of an operator interface (two-module spaces); switch module brackets; Model LVM, or Model FMT (one-module space each) can be used. Unused module spaces can be covered with Model ID-SP blank plates. Model REMBOX4 can also mount a single, remote network interface (Model RNI) on a bracket included in the backbox.

A separately orderable bracket known as Model REMBOX4-MP can be used to mount up to eight (8) output control modules (Model OCM-16) or supervised input modules (SIM-16).

Approximate Size: 24" (61cm.) wide, 18-1/2"(47cm.) high and 5" (2.7 cm) deep.



CAB-MP - Cabinet Mounting Plate

The cabinet-mounting plate for Desigo Modular systems, Model CAB-MP, provides mounting for a single row of system modules housed in a Desigo Modular system enclosure. Up to four (4) module spaces are available on one (1) Model CAB-MP plate.

Each of these mounting plates is used to mount the Model CC-5 Card Cage; the Model CC-2 Card Cage; the Model PSC-12M power supply, and the Model PSX-12M power-supply extender for Desigo Modular fire-only systems.



ID-MP - Inner Door Mounting Plate

The inner-door mounting plate (Model ID-MP) is mounted on the inner door of any given Model CAB-series enclosure. Each Model ID-MP plate is used to mount switch-control modules (Model SCM-8); LED control modules (Model LCM-8), or fan-control modules (FCM-6).

Four (4) mounting plates are included with one (1) order of Model ID-MP. Each mounting plate has four (4) spaces for control modules, and can hold either four (4) Model SCM-8 modules: one (1) control-module space for each actual module, or two (2) fan-control modules: two (2) module spaces per each Model FCM-6.

Mounting combinations are possible. Blank spaces found in Model ID-MP plates can be covered using the blank-control module plate (Model BCM). Up to four (4) modules can be mounted on a single row of the inner door.



Blank Control Module Plate

BCM - Blank Control Module Plate

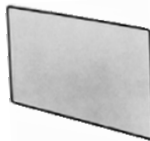
Blank Control Module Plates (Model BCM) can be mounted on a single ID-MP. Four (4) blank module plates are included with each order of Model BCM.



ID-SP - Inner Door, Single (blank) Plate

The inner door, single blank plate (Model ID-SP) is used to cover any single-module blank spaces within the inner door where no Desigo Modular operator interface or Model ID-MP is being used. Up to four (4) Model ID-SP modules can be mounted in a single row on the inner door. Two (2) blank plates are included with each order of Model ID-SP.

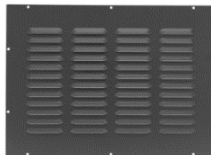
OD-LP - Outer Door Lens Plate



The outer-door lens plate (Model OD-LP) is a clear, plastic lens plate mounted on the outer door of a system cabinet.

Model OD-LP is used to allow operators to see the system interface and controls mounted on the inner door, but restricts access to unauthorized users. The plate covers an entire row on the outer door.

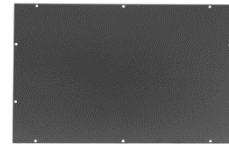
One (1) single lens plate is included with each order of Model OD-LP.



OD-GP - Outer Door Grill Plate

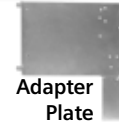
The outer-door grill plate (Model OD-GP) covers an entire row on the outer door of a system cabinet, but has four (4) rows of ventilation louvers on it.

Model OD-GP is mounted in front of system bulk amplifiers, card amplifiers, or other modules that generate heat. Using Model OD-GP will permit airflow across these modules to aid in heat dissipation. One (1) grill plate is included with each order of Model OD-GP.



OD-BP - Outer Door Blank Plate

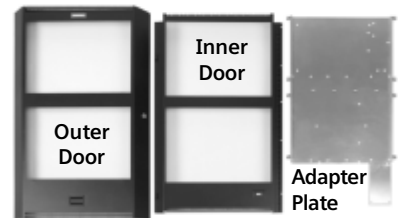
The outer-door blank plate (Model OD-BP), which mounts on the outer door of a Desigo Modular enclosure, entirely covers an unused row found on a Desigo Modular system cabinet.



XLS-MSE2/R-ADPT - Enclosure Adapter

Model XLS-MSE2-ADPT, which must be used in conjunction with Model CAB-MP plates, is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL Model MSE-2-series small black enclosures.

Model XLS-MSE2R-ADPT, which must be used in conjunction with Model CAB-MP plates, is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL Model MSE-2R small red enclosures.



XLS-MME3/R-ADPT - Enclosure Adapter

Model XLS-MME3-ADPT, which must be used in conjunction with Model CAB-MP plates, is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL Model MME-3-series or Model MBR-2 medium black enclosures.

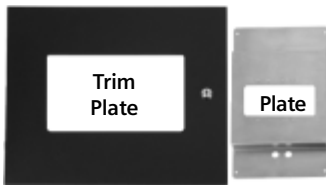
Model XLS-MME3R-ADPT, which must be used in conjunction with Model CAB-MP plates, is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL Model MME-3R medium red enclosures.



XLS-MSE3/R-ADPT - Enclosure Adapters

Model XLS-MSE3-ADPT is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL-IQ Model MSE-3L or Model MSE-3M **black** enclosure.

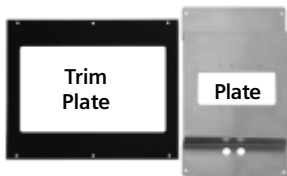
Model XLS-MSE3R-ADPT is an adapter that allows Desigo Modular cards to be mounted in older-generation MXL-IQ Model MSE-3LR or Model MSE-3MR **red** enclosure.



XLS-RCC13F/R-ADPT - Enclosure Adapter

Model XLS-RCC13F-ADPT is an adapter that allows the Desigo Modular Model SSDI-C series remote annunciator to be mounted in older-generation Model RCC-1F or Model RCC-3F **black**, flush-mount enclosure.

Model XLS-RCC13FR-ADPT is an adapter that allows the Model SSDI-C series to be mounted in older-generation RCC-1FR and RCC-3FR, **red** flush-mount enclosure.



XLS-RCC-1-ADPT - Enclosure Adapter

Model XLS-RCC1-ADPT is an adapter that allows the Desigo Modular Model SSDI-C series remote annunciator to be mounted in older-generation Model RCC-1 surface-mount enclosure.



CAB2-XBD

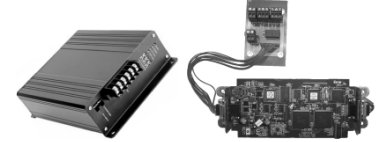
Remote Transponders

Desigo Modular systems can use remote transponders for mounting additional modules such as amplifiers without requiring a Desigo Modular operator interface or any control switches. Special doors are available for systems using Model CAB-2 or Model CAB-3 remote transponders. These doors (Models CAB2-XBD and CAB3-XBD) omit the unused inner door, and come complete with ventilation louvers built into the door.

Model CAB2-XBD fits into Model CAB2-BB, and Model CAB3-XBD fits into Model CAB3-BB. Model CAB2-XBD and CAB3-XBD are supplied in **black**. **Red** versions (Models CAB2-XRD and CAB3-XRD) are also available. Complete box and door kits are available, Models CAB2-X and CAB3-X.

Enclosure Trim Kits

Trim kits are available for all Desigo Modular system enclosures for semi-flush mounting applications. Model CAB1-TK (for black enclosures) and the Model CAB1R-TK (for **red** enclosures) fit inside the Models CAB1 and CAB1-R enclosures. Similarly, Models CAB2-TK and CAB-2R-TK fit inside the Model CAB-2 enclosure, while Models CAB3-TK and CAB3R-TK fit the Model CAB-3 enclosure.



Model VPM

Model VESDA-HLI-KIT

VESDA High Level Interface

The Very Early Smoke Detection Aspiration (VESDA) Peripheral Module (Model VPM) and the VESDA High-Level Interface Kit (Model VESDA-HLI-KIT) are optional system modules that work in conjunction to provide bi-directional communication between the Modular FACP and multiple VESDA detection networks for the following types of VESDA detectors:

- LaserCOMPACT
- LaserFOCUS
- LaserPLUS
- LaserSCANNER

Model VPM allows each Desigo Modular FACP to announce 'Alert,' 'Action,' 'Fire 1,' and 'Fire 2' levels, as well as provide 'faults' from any zone on a connected VESDA network.

The VPM Mounting plate (Model VPM-MP) allows mounting one (1) Model VPM and two (2) of Model VESDAHLI-KIT inside a standard Model CAB1, Model CAB2 or Model CAB3 enclosure.

Model VPM-MP utilizes two (2) module spaces on a single row of each enclosure.



Model FT-GLS

FT-GLS — Replacement Glass

Additional replacement glass for Model FC300S is orderable as Model FT-GLS.



XDMC - Digital Message Card

The Digital Message Card (Model XDMC) provides the capability of programming and sounding custom voice messages for Evacuation, Alert, Tornado Warning, System Testing and other emergency and non-emergency building notifications.

Model XDMC, which serves as a Desigo Modular option module, plugs into an available expansion slot in the Model CC-2 / CC-5 card cage. Up to two (2) Model XDMC modules can be supported on a single Desigo Modular panel. Each Model XDMC can be programmed for up to 300 different custom messages.



ALCC - Audio Level Conversion Card

The Audio Level Conversion Card (Model ALCC) provides the capability of conducting a global-emergency page across multiple, remote Desigo Modular panels with each audio riser holding a maximum of 63 nodes.

The emergency page originates at a Desigo Modular global paging station, where it is broadcast at 70VRMS over an audio riser, in conjunction with the 40W Amplifier Card, Model ZAC-40.

Remote Telephone Stations

Remote telephone stations for the emergency telephone system consist of a handset-with-hook assembly; a wall-mounted back box, and a locked door with a breakable glass panel.

Models FTS | FTS-P | FTS-C | FTS-CL | FTS-PLC - Remote Telephone Stations consist of a handset; a black plate; handset cradle with magnetic switch mounted to the back plate, and a connection cable from the handset to the back plate.



Model FTS-P

The -P designates that a momentary, push-to-talk button is included in the handset. The -C designates that an armored cable is used in place of a coiled, retractable cord between the handset and the back plate. The -L designates that a LED is mounted to the back plate to indicate two-way contact is established between the telephone and Model FMT.

The remote telephone station must be used with either remote telephone-station back box, Models FB-300 or FB-301S. Model FB-300 is used for flush-mount configurations, and Model FB-301S is used for surface-mount configurations.

The remote station / back-box assembly also requires the Model FC-300S cover with key-lock door and breakable glass.



Model FJ-303

Remote Telephone Jacks

Remote Telephone Jacks, (Models FJ-303 | FJ-303SS | FJ-304 | FJ-304SS) are connected to the emergency telephone system. The jacks are wired to the telephone zone circuits, via the Model TZC-8B Telephone Zone Card located in the Desigo Modular system enclosure.

There is no limit to the number of remote telephone jacks that can be connected to a single telephone zone circuit. The remote telephone jacks are mounted to a single-gang electrical box. Models FJ-303 and FJ-303SS have flying leads connected to the phone jack, while Models FJ-304 and FJ-304SS have screw terminals.

Models FJ-303 and FJ-304 have a red-baked, enamel finish with a white silk-screened telephone handset icon, and Models FJ303SS and FJ-303SS have a

brushed, stainless-steel finish with the handset icon.



Model PFT-P

Portable Firefighters' Telephones

Portable Firefighters' Telephones (Models PFT and PFT-P) are available for field connection to the emergency telephone system. Each phone consists of a rugged, high-impact plastic handset with a red, coiled phone cord attached to the PFT. A 1/4" (0.64 cm.) phone-plug assembly is attached to the end of the phone cord for connection to the field-mounted phone jacks.

Model PFT-P includes a momentary spring-action, push-to-talk switch mounted in the handset. The push-to-talk switch subsequently allows users to depress the button to activate the mouthpiece of the handset when speaking.

The Model MTE-2 Telephone Enclosure includes the enclosure and door with clear lens, and can be used to store a maximum six (6) PFT or PFT-P telephone handsets in a locked cabinet.



AIC - Audio Input Card

The Audio Input Card (Model AIC) provides two (2) external, isolated analog inputs to the Desigo Modular fire-with-voice systems. Model AIC also provides two (2) dry-contact inputs, used to separately activate the two (2) audio inputs.

The two (2) external, isolated analog inputs connect to the panel for functionality of external sources that use a TRS connector (e.g. – external handheld audio players | receivers; portable compact-disc players).



TZC-8B - Firefighters' Telephone Zone Card

The firefighters' telephone zone card provides a way for emergency-response personnel located throughout a building to speak to one another during emergency situations.

Model TZC-8B is a Desigo Modular option module that plugs into a Model CC-2 or CC-5 card cage, providing eight (8) firefighters telephone zones. The zones have an off-hook 'acknowledge' tone, as well as a command-console 'busy' tone.

Each telephone zone uses a single pair of wires, and is individually supervised in a 'Class B' type mode. Field wires are connected to one or more phone jacks or stations. Zones are also individually power limited, per NEC 760, and each zone also contains transient protection.

A maximum five (5) telephone stations may be off-hook simultaneously in a conferencing-line mode with no loss of audio quality.

FMT - Replacement Glass

Model FMT provides firefighters with an emergency telephone system for communication with remote locations.

Model FMT mounts to the rear of the inner door of a Model CAB 1, Model CAB2, Model CAB3, or Model REMBOX4 Enclosure.

Model FMT includes a handset for the operator of the telephone system.

The firefighters' telephone unit is designed for maximum performance in communication. The circuitry for Model FMT allows the master telephone and at least five (5) telephone stations to be off-hook simultaneously with no degradation of audio quality.



Model FMT also supports a 'warden's page' function, which allows live voice announcements from any remote telephone. Telephone zone call-ins are annunciated on the appropriate Model SCM-8 switch module.

Remote stations receive an 'Acknowledge' tone when dialing into the command center prior to the call being answered, indicating a call-in in progress and a 'busy' tone if calling into the command center and another telephone zone is already online.

Diagnostic LEDs are located on the back of Model FMT in order to simultaneously indicate power has been applied to the module, as well as failure of the card, CAN communication or telephone.



ZAC-40 - Zone Amplifier Card (40 Watt)

Model ZAC-40 is a combination 40-Watt, amplifier / speaker zone for use with Desigo Modular. Style 'Y', 'Z' or 'A' / 'B' speaker-zone wiring configurations are supported. Model ZAC-40 is power limited, and can be configured to provide 40 Watts of audio at 25VRMS or 70VRMS. Model ZAC-40 is a plug-in card that mounts in a Model CC-5 or CC-2 card cage.

Model ZAC-40 is capable of amplifying any of the eight (8) digital audio channels that are transmitted from Model DAC-NET, via the Audio Serial Interface, Model ASI.

Model ZAC-40 is supervised for functionality, and provides a single, 40-Watt speaker zone that supports two (2) speaker circuits. Model ZAC-40 can be used for (1) one-to-eight (8) channel applications, or as a bulk amplifier for (1) one-or-two (2) channel applications — feeding high-level audio to Models ZIC-4A and ZIC-8B. Model ZAC-40 can also be used for single-channel applications feeding high-level audio to Model HCP.

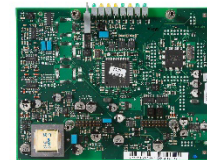
ZAM-180 - Zone Amplifier Module (180 Watt)

Model ZAM-180 is a combination 180-Watt, amplifier / speaker zone for use with Desigo Modular. Style 'Y', 'Z' speaker-zone wiring is supported, as well as split-zone or ('A' / 'B') speaker-zone-wiring configuration on Style 'Y'.



Model ZAM-180 can be configured to provide 150 Watts of audio at 25VRMS or 180 Watts of audio at 70VRMS. Model ZAM-180 mounts in one (1) module space directly on the back box or optional Model CAB-MP mounting plate.

Model ZAM-180 is capable of amplifying any one (1) of the eight (8) digital-audio channels that are transmitted from Model DAC-NET (Digital Audio Card), via the digital audio bus: Model ASI (Audio Serial Interface). Model ZAM-180 amplifier is supervised for functionality. Model ZAM-180 can be used as a single 180 Watt speaker zone for (1) one-to-eight (8) channel applications or as a bulk amplifier for (1) one-or-two (2) channel applications feeding high-level audio to Model ZIC-4A or Model ZIC-8B.



LPB - Local Page Board

The Local Page Board (Model LPB) is used to connect the microphone — mounted inside the Live Voice Module (Model LVM) — and the voice-internal telephone system. Model LPB is a plug-on board to Model DAC-NET, and converts the two (2) analog input signals into the system's internal digital format.

Up to five (5) Model LVMs can be connected to Model LPB. Additionally, Model LPB provides one (1) analog output to connect to the monitor speaker, which is mounted inside Model LVM. The one (1) analog output is one (1) of eight (8) voice-internal audio channels selectable at the Modular panel.



DAC-NET - Digital Audio Card

Model DAC-NET provides the audio source for the Desigo Modular Voice Evacuation System, as well as D-NET network communication to and from the Desigo Modular operator interface and between enclosures.

Model DAC-NET transmits eight (8) digital channels of audio, via two (2) pairs of wire. One (1) Model DAC-NET is required in each Desigo Modular enclosure.

A maximum 32 Model DAC-NET cards are allowed on a single Desigo Modular panel. Model DAC-NET can be wired `Class A' (Style 7) (four [4] pairs of wires) or `Class B' (Style 4) (two [2] pairs of wires). Model DAC-NET card plugs into one (1) slot in the Model CC-5 or CC-2 card cage, and has on-board LEDs for system status and troubleshooting.

Indication of power, communication, internal operation, ground fault, and trouble conditions are provided. Model DAC-NET Card contains an on-board microprocessor that provides communication with switch modules, LED modules, microphone, telephone zone cards, and zone amplifiers across the Control Area Network CAN Bus.

Model DAC-NET can supervise up to 99 CAN address modules, and contains on-board tones and pre-recorded EVAC and ALERT messages. Custom messages or tones can also be downloaded to Model DAC-NET using the Desigo Modular software tool, *Zeus-D*, for a total of five minutes of storage memory.

LVM - Live Voice Module

Model LVM provides a supervised, high-quality and dynamic microphone as a means of sending live voice messages to specified audio zones. Model LVM mounts on the inner door of a Model CAB1, Model CAB2, Model CAB3 or remote lobby enclosure.



Model LVM includes a microphone with a push-to-talk switch and retractable coiled cord. The microphone and push-to-talk switch are fully supervised.

Model LVM also provides a green pre-announce LED that indicates the pre-announce signal is active at the selected zones and a green ready to page LED, which indicates selected zones are ready to be paged. The pre-announce signal can be programmed as a tone or message and the duration is adjustable from 0 to 10 seconds in one-second increments.

A built-in speaker with volume control allows the monitoring of the audio channels.

The front panel of Model LVM contains six (6) switches and six (6) pairs of LEDs. Each pair contains one (1) dual-color (RED / GREEN) and LED. These switches can be programmed for manual voice functions as well as for generic system commands. When the switches are used as generic switches, all LEDs can be programmed for ON | OFF or FLASHING.

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
AC-ADPT	500-633992	Technician Laptop-Power Connector
AIC	500-035300	Audio-Input Card
ALCC	500-650127	Audio-Level Conversion Card
BCM	500-033320	Blank Control Module Plate [Four (4) per package]
C900V2	S54430-C13-A2	Dialer-Capture Ethernet Module
CAB1	500-633007	Complete Single-Row Cabinet, black
CAB1R	500-633728	Complete Single-Row Cabinet, red
CAB1-TK	500-633013	Single-Row Trim-kit Cabinet, black
CAB1R-TK	500-633729	Single-Row Trim-kit Cabinet, red
CAB2-BB	500-633009	Two-Row Back Box, black
CAB2-RB	500-634941	Two-Row Back Box, red
CAB2-BD	500-633008	Two-Row Inner & Outer Door Set, black
CAB2-RD	500-633755	Two-Row Inner & Outer Door Set, red

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
CAB2-TK	500-633014	Two-Row Trim-kit Cabinet, black
CAB2R-TK	500-633753	Two-Row Trim-kit Cabinet, red
CAB2-XBD	500-633768	CAB2 Transponder Door
CAB2-XRD	500-633792	Medium-Enclosure Transponder Door [mounts to Model CAB2-RB]
CAB3-BB	500-633011	Three-Row Back Box, black
CAB3-RB	500-634942	Three-Row Back Box, red
CAB3-BD	500-633010	Three-Row Inner & Outer Door Set, black
CAB3-RD	500-633757	Three-Row Inner & Outer Door Set, red
CAB3-TK	500-633015	Three-Row Trim-kit Cabinet, black
CAB3R-TK	500-633754	Three-Row Trim-kit Cabinet, red
CAB3-XBD	500-633769	CAB3 Transponder Door
CAB3-XRD	500-633793	Large-Enclosure Transponder Door [mounts to Model CAB3-RB]
CAB-MP	500-633012	Module Mounting Plate
CAB-55-BRKT	S54430-B1-A1	Bracket to hold down 55AH batteries in CAB-BATT enclosure
CAB-100-BRKT	S54430-B2-A1	Bracket to hold down 100AH batteries in CAB-BATT enclosure
CCL	599-634214	CAN Cable 3 ft. (91.4 cm.) Length required for: SCM / LCM / FCM modules from Models CC-5 / CC-2 Inner Doors, and from row-to-row on Model CAB-series Inner Doors
CC-2	500-633440	Two-Slot Card Cage
CC-5	500-633037	Five-Slot Card Cage
CDC-4	500-034200	Conventional Detector Card
COM-BRK	S54430-B7-A1	Communications Bracket
CRC-6	500-033250	Controllable Relay Card
CSB	500-033150	CAN Sounder Board
DAC-NET	500-035100	Digital Audio Card
DCT-P	500-699291	MDOACT Programmer
ENCL-01	S54465-C63-A1	SNU Enclosure (w/ key-lock)
FB-300	500-680587	Remote Telephone Stations
FCM-6	500-033140	Fan-Control Module Switches [ON OFF AUTO]
FCM2041-U2	S54430-C17-A1	Operator Interface for Desigo Fire Safety Modular
FJ-304	500-692670	Remote Telephone Jacks
FMT	500-034100	Fireman's Main Telephone

Details for Ordering – (cont.)

MODEL OR TYPE	PART NUMBER	PRODUCT
GPMI-3	S54430-C25-A1	Global Operator Interface (V3)
GPMI-HW-KEY	S54430-C22-A1	Hardware key for Modular Global Operation
HCP	500-034860	Intelligent Control Point
HLIM	500-033170	Line Isolator Module
ID-MP	500-633027	Inner-Door Enclosure Mounting Plate [four (4) per package]
ID-SP	500-633028	Single-Door Inner-Door Enclosure Mounting Plate [two (2) per package]
IIC	500-850328	Interface Isolation Card
LCM-8	500-033100	LED Annunciator Module [ON OFF AUTO]
LPB	500-035200	Local Page Board
LVM	500-034090	Live Voice Module
MDACT	500-699254	Multi-Point Digital Alarm Communication Transmitter
MLC	S54431-B4-A1	MXL Addressable-Device Line Card
NIC-C	500-033240	Network Interface Card
NRC	S54430-A2-A1	Network Ring Card: 2 nd Generation
PMI-1 UPLD-CBL	S54430-A4-A1	Serial Adapter Cable for USB-to-serial-converter connection between single-node upload assemblies and 1 st - version central processors
PS-5A	500-492369	Aux (5V) Power Module
PSC-12M	S54430-C26-A1	Power Supply Charger
PSC-IS0-CBL	S54430-K4-A1	Optional Cable Extender [for use with two (2) Model PSC-12Ms]

MODEL OR TYPE	PART NUMBER	PRODUCT
PSX-12M	S54430-C27-A1	12A Pwr. Supply Extender
PSFA	S54430-A13-A1	Power Supply Filter Assy
SCM-8	500-033040	Switch Module [eight (8) switches]
SIM-16	500-034060	Supervised Input Module
SNU-ASSY	S54430-A3-A1	SNU Processor with USB cables (w/ SNU IOM)
SNU-KIT	S54430-C19-A1	Single-Node Upload (SNU) Kit
SSD	500-034170	System-Status Display
SSD-C	500-648733	System-Status Display with control
SSD-INT	500-034740	System-Status Display [w/ multi-lingual overlays]
SSD-C-INT	500-034750	System-Status Display with control [w/ multi-lingual overlays]
SSD-C-REM	500-634773	System-Status Display w/ control [for remote lobby enclosure]
TZC-8B	500-034110	Firefighter's Telephone Zone Card
VESDA-HLI-KIT	S54430-F99-A2	VESDA High-Level Interface Kit
VNTPC	500-650490	Virtual Network Tunnel
VPM	S54430-F93-A2	VESDA Peripheral Module
VPM-MP	S54430-F95-A2	Mounting Plate for the VESDA Peripheral Module
ZAC-40	500-035400	40W Zone-Amplifier Card
ZAM-180	500-035600	180W Zone-Amp. Card
XDACT-ASSY	S54430-A5-A1	XDACT Mounting Plate (with cable)
XDLC	S54430-B8-A1	Device Loop Card
XDMC	S54430-B5-A1	Digital Message Card

MODEL OR TYPE	PART NUMBER	PRODUCT
XLS-EXT-CABLE-PKG	S54430-K1-A1	5 ft. (1.5m) 60-pin cable 5 ft. (1.5m) CAN cable Long ground-strap cable
XLS-MLE6-ADPT	S54430-C9-A1	MLE-6 Enclosure Adapter, black
XLS-MLE6R-ADPT	S54430-C9-A2	MLE-6R Enclosure Adapter, red
XLS-MME3-ADPT	S54430-C8-A1	MME-3 and MBR-2 enclosure adapters, black
XLS-MME3R-ADPT	S54430-C8-A2	MME-3 and MBR-2 encl. adapters, red
XLS-MSE2-ADPT	S54430-C7-A1	MSE-2 enclosure adapter, black
XLS-MSE2R-ADPT	S54430-C7-A2	MSE-2 enclosure adapter, red
XLS-MSE3-ADPT	S54430-C14-A1	MXL-IQ MSE-3L & MSE-3M enclosure adapters, black
XLS-MSE3R-ADPT	S54430-C14-A2	MXL-IQ MSE-3L & MSE-3M enclosure adapters, red
XLS-RCC1-ADPT	S54430-Z14-A1	RCC-1 enclosure adapter, black
XLS-RCC13F-ADPT	S54430-Z13-A1	RCC-1F RCC-3F enclosure adapter, black
XLS-RCC13FR-ADPT	S54430-Z13-A2	RCC-1F RCC-3F enclosure adapter, red
ZIC-2C	500-648671	Two-Channel Adapter Card (via Model ZIC-8B)
ZIC-4A	500-033050	Four-Circuit-Zone Indicating Card
ZIC-8B	500-648670	Eight-Circuit-Zone Indicating Card

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

SIEMENS

Desigo® Fire Safety

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February - 2023
(Rev. 8)

Desigo® Fire Safety Modular System

MXL Line Card Model MLC

Architect & Engineer Specifications

- ❑ Capability to report 'Alarm' | 'Trouble' | 'Supervisory' | 'Security' | 'Status' system commands
- ❑ Two (2) intelligent analog device circuits
 - 60 intelligent devices per circuit
- ❑ Independent control of detector relays
 - Up to 60 relays per circuit
- ❑ Accepts remote conventional-zone modules
- ❑ On-board microprocessor
- ❑ On-board, ground-fault detection
- ❑ Programmable Input / Output module
- ❑ Short-circuit isolation with Model LIM-1
- ❑ Remote smoke-detector-sensitivity adjustor
- ❑ Intelligent contact monitoring devices
- ❑ 'Class B' (Style 4) or 'Class A' (Style 6) wiring positions
 - Supports T-Tap wiring for 'Class B' circuits Approved
- ❑ Degradate mode
- ❑ Supports audible bases
- ❑ UL864 | CAN / ULC Listed

Product Overview

The MXL Line Card (Model MLC) is an optional card for the Desigo Fire Safety Modular (Desigo Modular) fire alarm control panel (FACP) that supplies two (2) intelligent analog circuits, utilizing the Model 'I'-series; Model 'ID'-series; Model 'IL'-series or Model 'FP'-series type intelligent devices.

Model MLC occupies two (2) addresses on the HNET network, and — through the use of a unique communications protocol — devices connected to the Model MLC circuits are dynamically supervised by a Desigo Modular system.

Smoke detectors are monitored for sensitivity | obscuration, and notification is given when the sensitivity | obscuration is outside normal parameters.

Specifications

Each of the Model MLC circuits supports the use of up to 60 'Alarm' | 'Trouble' | 'Security' | 'Status' and 'Supervisory'-type devices. Additionally, remote conventional initiating-device zone modules (Model CZM-1B6); intelligent monitoring devices, and intelligent control points (Model ICP-B6) are supported by Model MLC circuits.

Sensitivity of certain smoke detectors can be queried and adjusted at the Desigo Modular system control panel. Further, sensitivity / obscuration, as well — as other device information — can be displayed and printed at the Desigo Modular system.

Model MLC supports the use of relay bases and audible bases (independently controllable). To provide analog-loop, short-circuit isolation, the Model LIM-1 module can be used to prevent a single short circuit from interrupting loop-device communication.

Each Model MLC circuit can be wired in either a 'Class B' (Style 4) or 'Class A' (Style 6) configuration. When using the (Style 4) method, T-Tap wiring is permitted with no loss of supervision.

Model MLC has an on-board microprocessor, which provides the ability to function in a degrade mode and initiate alarm conditions, even if the Desigo Modular system main central-processing unit (CPU) fails. Model MLC plugs into one (1) card slot in the Model CC-5 or Model CC-2 card cage.



Model MLC
Line Card



Temperature and Humidity Range

Model MLC is UL 864 10th 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

MODEL OR TYPE	DATA SHEET	PANEL
DESIGO MODULAR	7300	Desigo Modular (overview)

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
MLC	S54431-B4-A1	Addressable Line Card – from Siemens legacy panel into a Desigo Fire Safety Modular system

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February - 2023
(Rev. 1)



LP Series-General Purpose

LP12-60(12V60Ah)

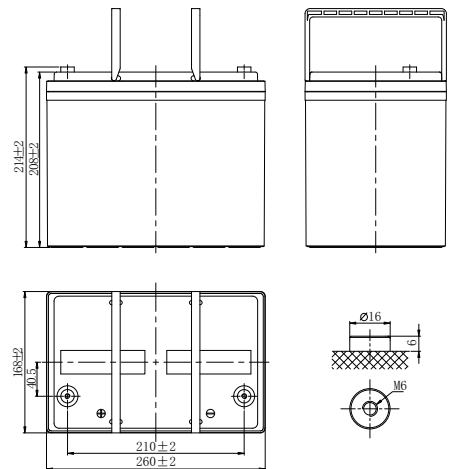


Specifications

Rated Voltage	12V	
Nominal Capacity	60.0Ah	(C ₁₀ , 1.80V/cell)
Dimension	Length	260±2mm (10.2 inches)
	Width	168±2mm (6.61 inches)
	Container Height	208±2mm (8.19 inches)
	Total Height	214±2mm (8.43 inches)
Approx Weight	18.4 Kg (40.5 lbs)	
Terminal	M6	
Container Material	ABS	
Rated Capacity (25°C)	62.4 Ah	(20hr, 3.12A, 1.80V/cell)
	60.0 Ah	(10hr, 6.00A, 1.80V/cell)
	54.0 Ah	(5hr, 10.8A, 1.75V/cell)
	49.2 Ah	(3hr, 16.4A, 1.75V/cell)
	37.9Ah	(1hr, 37.9A, 1.60V/cell)
Max. Discharge Current	600A (5s)	
Internal Resistance (25°C)	Approx 7.4mΩ	
Operating Temp. Range	Discharge	-15 ~ 50°C (5 ~ 122°F)
	Charge	-20 ~ 40°C (-4 ~ 104°F)
	Storage	-15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 18.0A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
	Standby Use	
Effect of temp. to Capacity	Initial Charging Current less than 18.0A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
	40°C (104°F)	103%
	25°C (77°F)	100%
Self Discharge	0°C (32°F)	86%
	LP series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



Layout



Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	119.8	85.2	76.2	59.9	53.6	38.8	33.2	24.0	20.2	14.8	11.6	10.1	8.90	6.85	5.67	3.01
1.80V/cell	136.3	96.7	86.3	67.7	58.3	41.1	34.4	24.9	20.9	16.1	12.4	10.6	9.56	7.20	6.00	3.12
1.75V/cell	148.0	104.9	93.5	73.1	59.5	42.6	36.1	26.1	22.0	16.4	12.7	10.8	9.64	7.24	6.03	3.15
1.70V/cell	158.3	111.8	99.3	77.5	60.7	43.4	36.8	26.7	22.4	16.7	12.9	11.0	9.69	7.35	6.06	3.18
1.67V/cell	163.8	115.4	102.2	79.7	61.6	44.1	37.3	27.1	22.7	16.9	13.1	11.2	9.73	7.45	6.14	3.22
1.60V/cell	169.6	119.3	105.3	81.7	62.5	44.7	37.9	27.4	23.1	17.0	13.2	11.4	9.80	7.55	6.21	3.26

Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	223.8	160.3	149.4	118.0	106.0	74.6	66.5	48.3	40.7	30.0	23.6	20.6	17.6	14.1	11.7	6.20
1.80V/cell	250.4	179.3	167.1	132.0	114.5	78.5	68.5	49.7	41.8	32.4	25.1	21.6	18.8	14.8	12.2	6.42
1.75V/cell	267.2	191.4	178.3	140.9	115.9	80.8	71.5	52.0	43.9	33.0	25.5	21.9	18.9	14.8	12.3	6.48
1.70V/cell	280.9	201.2	187.5	148.1	117.3	81.9	72.6	52.8	44.6	33.5	25.9	22.2	19.0	15.0	12.4	6.54
1.67V/cell	285.5	204.5	190.5	150.5	118.1	82.6	73.2	53.3	45.0	33.6	26.2	22.5	19.0	15.2	12.6	6.61
1.60V/cell	289.5	207.3	193.2	152.6	118.6	83.0	73.8	53.7	45.4	33.8	26.4	22.8	19.1	15.3	12.7	6.68



LP Series-General Purpose LP12-60(12V60Ah)



Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system

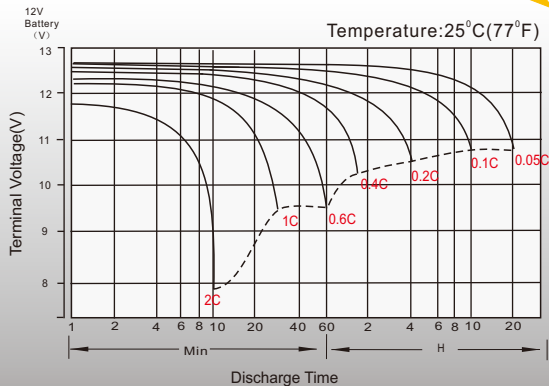
General Features

- 10 years design life(25°C)
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- High purity raw material: ensure low self discharge rate

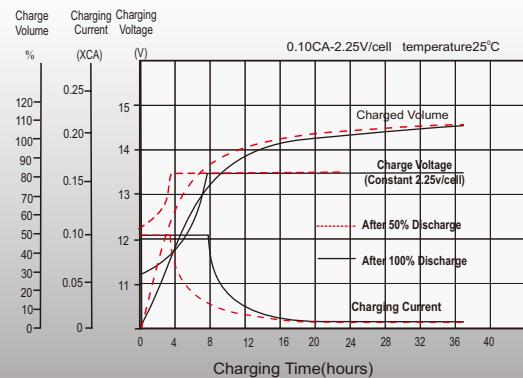
Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch®IATF 16949, ISO45001, ISO 9001 and ISO 14001 certified production facilities

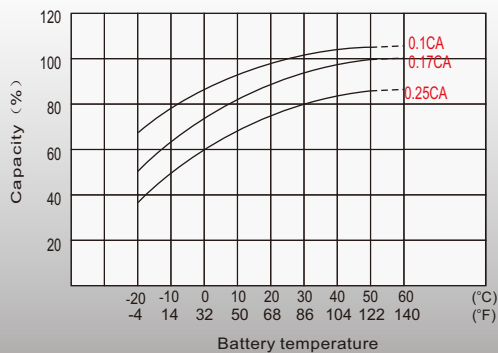
Discharge Characteristics



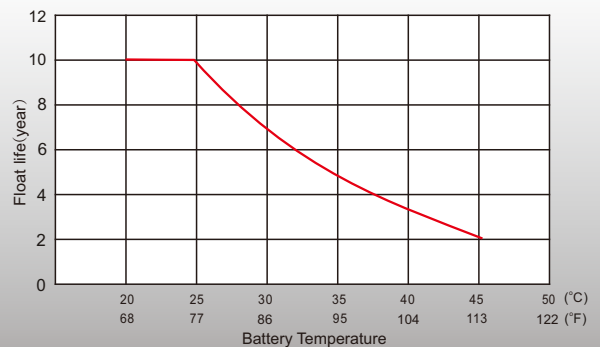
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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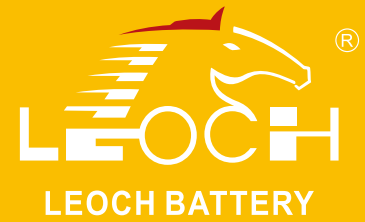
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Publication No.: LB-LP12-60-PD-EN-V2.1-202110



LPL Series-Long Standby Life

LPL12-75(12V75Ah)

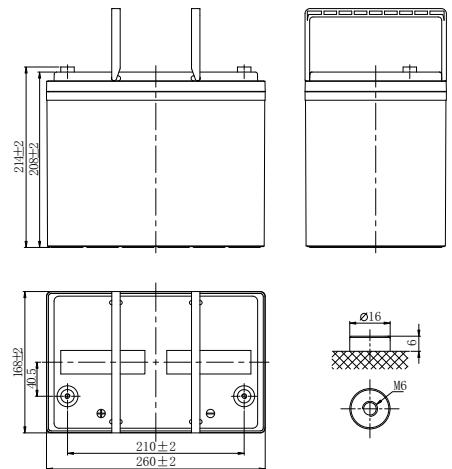


Specifications

Rated Voltage	12V	
Nominal Capacity	75.0Ah	(C ₁₀ , 1.80V/cell)
Dimension	Length	260±2mm (10.2 inches)
	Width	168±2mm (6.61 inches)
	Container Height	208±2mm (8.19 inches)
	Total Height	214±2mm (8.43 inches)
Approx Weight	22.7 Kg (50.05 lbs)	
Terminal	M6	
Container Material	ABS	
Rated Capacity (25°C)	78.0 Ah	(20hr, 3.90A, 1.80V/cell)
	75.0 Ah	(10hr, 7.50A, 1.80V/cell)
	67.5 Ah	(5hr, 13.5A, 1.75V/cell)
	61.5 Ah	(3hr, 20.5A, 1.75V/cell)
	47.3 Ah	(1hr, 47.3A, 1.60V/cell)
Max. Discharge Current	750A (5s)	
Internal Resistance (25°C)	Approx 7.5mΩ	
Operating Temp. Range	Discharge	-15 ~ 50°C (5 ~ 122°F)
	Charge	-20 ~ 40°C (-4 ~ 104°F)
	Storage	-15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 22.5A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
	Initial Charging Current less than 22.5A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Standby Use	Initial Charging Current less than 22.5A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	LPL series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



Layout



Constant Current Discharge (Amperes) at 25 °C (77°F)

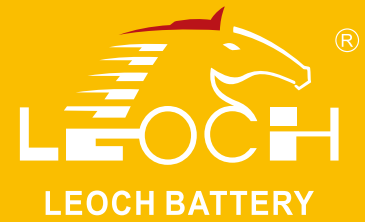
F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	109.8	95.2	74.9	67.0	49.0	41.5	25.3	18.5	14.5	12.6	11.1	8.56	7.09	3.76
1.80V/cell	124.7	107.9	84.7	72.9	51.9	43.0	26.1	20.1	15.5	13.3	12.0	9.00	7.50	3.90
1.75V/cell	135.2	116.8	91.4	74.4	53.8	45.1	27.5	20.5	15.8	13.5	12.0	9.05	7.52	3.94
1.70V/cell	144.2	124.1	96.9	75.9	54.8	46.0	28.0	20.9	16.1	13.7	12.1	9.19	7.57	3.98
1.65V/cell	148.7	127.7	99.6	77.0	55.6	46.7	28.4	21.1	16.3	14.0	12.2	9.32	7.67	4.03
1.60V/cell	153.8	131.7	102.1	78.1	56.4	47.3	28.8	21.3	16.5	14.2	12.2	9.44	7.76	4.07

Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	206.7	180.3	142.5	128.0	94.2	80.2	49.2	36.2	28.5	24.9	22.0	17.0	14.1	7.49
1.80V/cell	231.2	201.7	159.4	138.2	99.1	82.6	50.5	39.1	30.3	26.0	23.5	17.8	14.7	7.75
1.75V/cell	246.7	215.3	170.1	140.0	102.1	86.3	53.0	39.8	30.8	26.4	23.6	17.9	14.9	7.82
1.70V/cell	259.4	226.3	178.8	141.6	103.4	87.6	53.8	40.4	31.2	26.8	23.7	18.1	15.0	7.89
1.65V/cell	263.6	230.0	181.7	142.6	104.3	88.4	54.4	40.6	31.6	27.2	23.8	18.3	15.2	7.98
1.60V/cell	267.3	233.2	184.2	143.2	104.8	89.0	54.8	40.8	31.8	27.5	23.7	18.5	15.3	8.06



LPL Series-Long Standby Life LPL12-75(12V75Ah)



Applications

- UPS and EPS
- Emergency light
- Railway signal and aircraft signal system
- Marine and power stations
- Alarm and security system
- Electronic apparatus and equipment
- Communication power supply, DC power supply

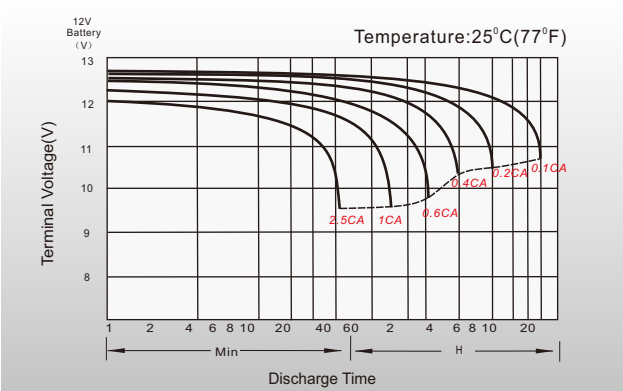
General Features

- 12 years design life (25°C)
- Grid refining technology and the thicker plates are used to extend the battery standby life and reduce the plate grid corrosion speed
- Using oxygen recombination technology: maintenance-free
- Unique vent valve design: control water losing, prevent air and spark going inside

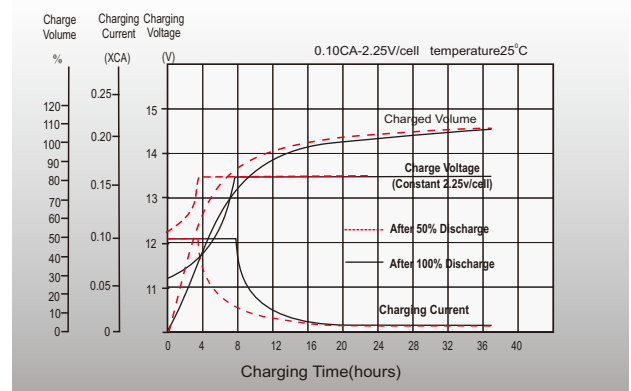
Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch@IATF16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

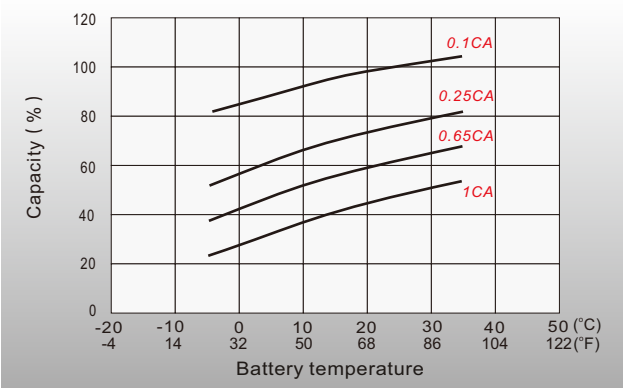
Discharge Characteristics



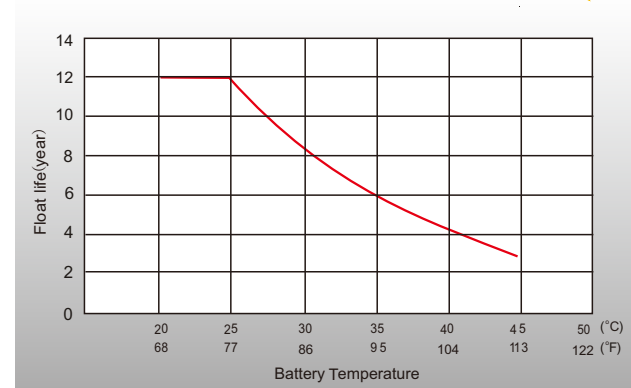
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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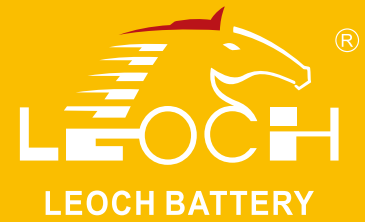
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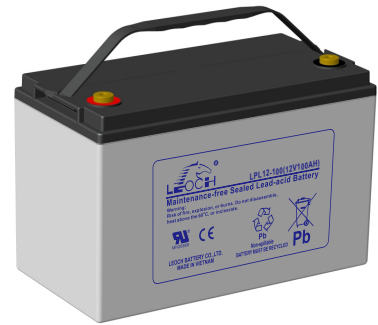
LPL Series-Long Life Standby

LPL12-100(12V100Ah)

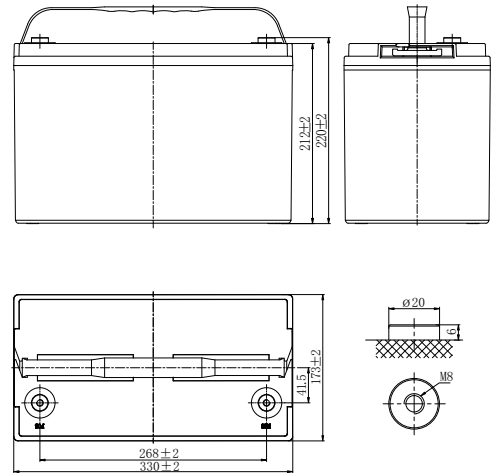


Specifications

Rated Voltage	12V	
Nominal Capacity	C ₁₀ , 1.80V/cell	100Ah
Dimension	Length	330±2mm (13.0 inches)
	Width	173±2mm (6.81 inches)
	Container Height	212±2mm (8.35 inches)
	Total Height	220±2mm (8.66 inches)
Approx Weight	30.5kg (67.2 lbs)	
Terminal	M8	
Container Material	ABS	
Rated Capacity(25°C)	105.0 Ah	C20(5.25A, 1.80V/cell)
	100.0 Ah	C10(10.0A, 1.80V/cell)
	84.5 Ah	C5(16.9A, 1.75V/cell)
	77.1 Ah	C3(25.7A, 1.75V/cell)
Max. Discharge Current	1000A (5s)	
	Internal Resistance(25°C)	Approx 5.0mΩ
Operating Temp. Range	Discharge	-15 ~ 50°C (5 ~ 122°F)
	Charge	-20 ~ 40°C (-4 ~ 104°F)
	Storage	-15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Standby Use	Initial Charging Current less than 30A. Voltage 2.23V~2.27V at 25°C(77°F)Temp. Coefficient -3mV/°C	
Equalization Use	Initial Charging Current less than 30A. Voltage 2.35V~2.40V at 25°C(77°F)Temp. Coefficient -4mV/°C	
Cycle Use	Initial Charging Current less than 30A. Voltage 2.40V~2.50V at 25°C(77°F)Temp. Coefficient -5mV/°C	
	40°C (104°F)	103%
	25°C (77°F)	100%
Effect of temp. to Capacity	0°C (32°F)	86%
	LPL series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	
Self Discharge		



Layout

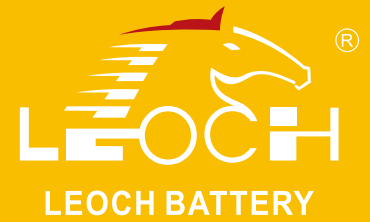


Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	197.7	140.5	121.9	78.8	58.9	50.9	37.7	31.7	23.2	18.2	15.8	13.9	10.7	9.55	5.07
1.80V/cell	224.8	159.5	138.1	85.8	62.4	52.7	38.9	32.7	25.2	19.4	16.6	15.0	11.3	10.0	5.25
1.75V/cell	244.2	173.0	149.5	87.6	64.6	55.3	40.9	34.4	25.7	19.8	16.9	15.1	11.3	10.1	5.30
1.70V/cell	261.0	184.5	158.8	89.3	65.9	56.4	41.7	35.1	26.2	20.2	17.2	15.2	11.5	10.2	5.36
1.65V/cell	270.1	190.3	163.4	90.7	66.9	57.3	42.4	35.6	26.4	20.5	17.6	15.2	11.7	10.3	5.42
1.60V/cell	279.7	196.8	168.5	92.0	67.9	58.1	43.0	36.1	26.7	20.7	17.8	15.3	11.8	10.5	5.49

Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	5min	10min	15min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	369.1	264.4	230.7	150.7	113.2	98.5	73.0	61.6	45.4	35.7	31.1	27.5	21.3	19.0	10.1
1.80V/cell	412.9	295.8	258.1	162.7	119.2	101.4	75.1	63.3	49.0	38.0	32.6	29.5	22.3	19.9	10.4
1.75V/cell	440.7	315.7	275.4	164.8	122.7	106.0	78.6	66.3	49.9	38.6	33.1	29.6	22.4	20.0	10.5
1.70V/cell	463.3	331.9	289.6	166.7	124.3	107.5	79.8	67.4	50.6	39.1	33.5	29.7	22.7	20.2	10.6
1.65V/cell	470.9	337.2	294.3	167.9	125.4	108.5	80.6	68.1	50.9	39.6	34.1	29.8	23.0	20.4	10.7
1.60V/cell	477.4	342.0	298.4	168.6	126.1	109.3	81.2	68.6	51.1	39.9	34.4	29.9	23.2	20.6	10.9



LPL Series-Long Life Standby LPL12-100(12V100Ah)

Applications

- UPS and EPS
- Emergency light
- Railway signal and aircraft signal system
- Marine and power stations
- Alarm and security system
- Electronic apparatus and equipment
- Communication power supply, DC power supply

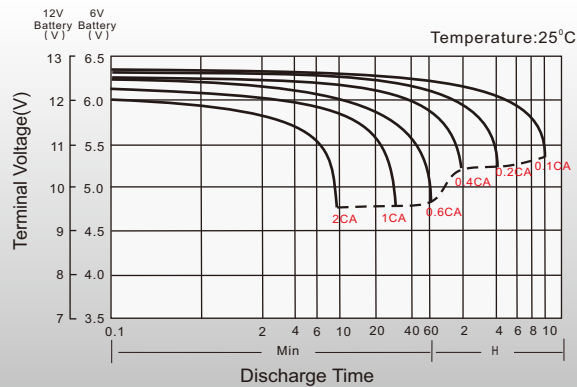
General Features

- 10 years design life(25°C)
- Grid refining technology and the thicker plates are used to extend the battery standby life and reduce the plate grid corrosion speed
- Using oxygen recombination technology: maintenance-free
- Unique vent valve design: control water losing, prevent air and spark going inside

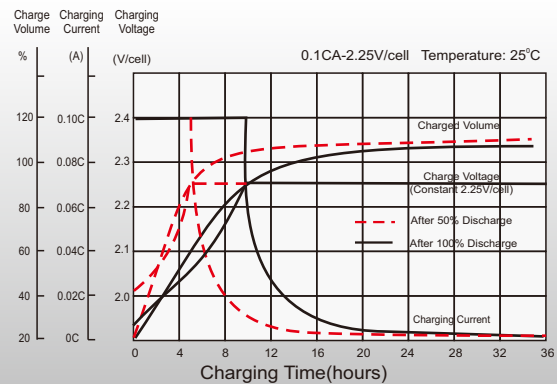
Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch@IATF16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

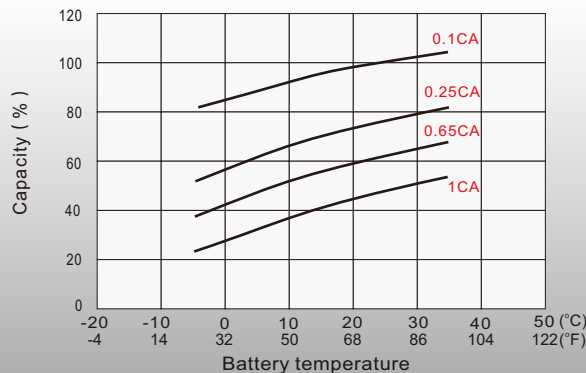
Discharge Characteristics



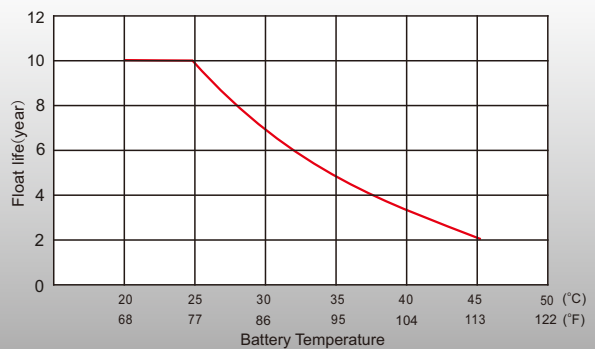
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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**NETWORK COMMAND CENTER
DESIGO CC (COMMAND CENTRE)
FIRE SAFETY MANAGEMENT STATION
DATA SHEETS**

1	FIREMAN CONTROL ROOM 504
----------	---------------------------------

Desigo[®] CC

Fire Safety Management Station Version 5.0

Architect & Engineer Specifications

- Industry-leading, pane-based management station that provides critical data in a single view
 - Constant display of all active events
 - Highest priority events are highlighted
 - User Interface (UI) can be configured to support basic-to-advanced needs
 - User profiles can be created, based on various end-user needs
- Built on a robust Siemens platform that is used worldwide in critical installations
- Full integration of fire-safety, building-automation, video surveillance and access control systems
 - One (1) platform to learn and maintain
- Smart system that anticipates needed data and provides the information automatically
 - Enables faster, more accurate response to critical events
- Integrates multiple fire networks: Desigo Fire Safety Modular, FireFinder[®] XLS, MXL, and Desigo Fire Safety Compact
- Monitors and controls up to 63 fire panels per Desigo Fire Safety Modular, FireFinder[®] XLS, MXL network
- Up to 32 Desigo Fire Safety Compact panels per network
- Support CO detection with ASAt[®] technology
- Automatic or manual Notification of events via email | text message | pager
- Supports leading open standards: BACnet | OPC | Modbus and SNMP
- UL Listed to 864 10th Edition Standard for Control Units & Accessories (for Command & Control)
- Listed to UL 864 UOJK - Building System Interface Unit (BSIU) - Desigo CC software approved for monitoring and control on an off-the-shelf computer
- ULC Listed to ULC-S527 Standard for Control Units and Fire Alarm systems 2nd & 3rd Edition (for 'Command and Control') and ULC-S559 for Equipment for Fire Signal Receiving Centre and Systems – 3rd Edition
- UL & ULC approvals apply to fire-only systems and multi-discipline systems that include building automation, Security, Energy Management, Lighting & Shading, and more.
- UL and ULC recognized as an ancillary annunciator when used with a non-UL864 / ULC-S537-11 Listed computer that is connected to a Desigo Fire Safety Modular, FireFinder[®] XLS, MXL, and Desigo Fire Safety Compact
- CSFM (#7165-0067:0267) for Fire Alarm Control Unit Accessories
- Agency-listed for remote access (monitoring only) via a Virtual Private Network (VPN) connection

Introduction

The Desigo CC Fire Safety Management Station provides an integrated, useful approach to managing and controlling facilities from a flexible, easy-to-use interface. Desigo CC also provides facility-wide efficiencies, cost-effective data sharing, faster event management, and better decision-making.

Desigo CC software operates on UL / ULC Listed hardware that has passed rigorous performance and environmental tests.

Desigo CC, which is ideally suited for monitoring and controlling both Fire Only and Fire and Voice, Desigo Fire Safety Modular, FireFinder[®] XLS, MXL, and Desigo Fire Safety Compact.



Desigo CC



Client-Server Design

Desigo CC has a flexible, full-system design that integrates and enables customized workflow configurations. Desigo CC can be installed on a single computer, providing complete client / server system compatibility.

The server hosts all data for the management station. Full control of a Desigo CC can be transferred from the server to a client.

User Interface

A Desigo CC User Interface (UI) displays all critical data in a single view, therefore providing faster, more accurate response to events. Additionally, it makes Desigo CC easy-to-use, learn. The following components comprise an UI:

Summary Bar

The Summary Bar serves as an important source of data for Desigo CC event management, and highlights current system status with clear indication of current-event priorities. Event lamps for Alarm | Supervisory | Trouble | Status events are highlighted with different colors when events occur.

Pane-Based Workflow

The User Interface has well-defined, pane-based workflow that keeps essential data in front of each end-user with no overlapping windows. End users can navigate the system through Systems Manager or via graphical interface. Panes can be tailored to the user-specified requirements for a specific building or facility.

Pane-based workflow provides the following features:

System Manager – used for navigating Desigo CC to view and control conditions; to analyze historical operation, as well as to configure Desigo CC. The System Manager uses a common, consistent workflow for all system navigation.

Additionally, the System Manager allows the end user to either select from traditional applications in 'Applications View', or permits user-specified navigation in 'Management View', guiding the end-user to the most relevant data (e.g. – selecting a certain part of the building for further detail, analysis).

Primary Pane –

The Primary Pane is used to show data that is critical to event response. This includes device data; key graphics of a part of an edifice (e.g. – campus layout) and floor-layout plans that show the location of selected devices or those that are in 'Alarm' mode.

Secondary Pane – The Secondary Pane is used to display additional critical data, including:

- Video camera feeds
- Reports
- Notification

Related-Items Pane – Items such as operating procedures and other information that has been linked to specific devices are listed in this pane.

When a device is selected – either by the operator or by Desigo CC (based upon an active event in the management station), all of the data that has been linked to that device is displayed and made available in the Related Items pane.

Text Pane – The Text Pane provides a summary of the current value and status of any selected object without any prior system configuration. This is a convenient feature for obtaining an overview of system and / or device status.

Investigative Treatment for Event Management – Desigo CC provides rapid response to system events through Investigative Treatment. When a system event occurs, Desigo CC will find the device that is the event source in System Manager, and will populate data associated with that device, including graphics and specific information about the device.

Operating & Engineering Modes

The Desigo CC Manager provides two (2) separate modes for system use: Operation and Engineering.

In Operating Mode, the end-user has the ability to monitor and control the system; address events, and analyze current and historical data. Configuration changes, on the other hand, are possible via Engineering Mode.

Additionally, every user who is granted access privileges for system configuration can toggle Desigo CC into Engineering Mode, where system parameters can be set and user accounts can be managed. This is a powerful feature that should be limited to only a few advanced users.

Event List

The Event List provides a full, easy-to-filter list of all active events in the system. The Event List gives clear indication of each event's source and current status. Custom messages and suggested action steps are displayed to the end-user, via the use of text, color and icon representations.

System events can be Acknowledged | Silenced / Unsilenced | Reset, via the Event List.

Node Map

The Node Map feature provides operators immediate and clear situational awareness of the status of the fire system.

A large panel icon is displayed for each fire panel configured and connected to a Desigo CC. Additionally, each panel icon provides a visual indication of the active panel events, panel-connection status as well as a detailed count of each type of event active on the panel.

Control buttons are provided to obtain control of the panels, disconnect / connect panels, create/edit panel groups, and more. The Node Map panel icons are automatically added to the node map when the panel configuration file is imported into Desigo CC.

Schedules

Schedules are automatically associated to systems they operate, in order for the end-user to quickly navigate to schedules related to any selected object.

Graphics

Desigo CC graphics are built using smart objects. Smart objects allow you to create graphics by simply dragging and dropping objects onto a page without manually binding the object to graphical symbols.

Desigo CC also provides a powerful AutoCAD-import tool for selecting and operating layers of AutoCAD drawings during and after the import process.

Addressable fire panel devices can be automatically placed on floor plan graphics when AutoCAD files containing the panel address for each device are provided as input to Desigo CC.

The following file types are supported: .DWG | .DXF | .PNG | .BMP | .GIF | .JPG | .JPEG | .TIF | .TIFF | .RLE | .ICO

Notification

A Desigo CC can be configured to automatically or manually send email, SMS messages, or pages to first-level responders with Notification.

Escalated notification – when necessary – can also be sent to second-tier responders.

Mobile App

The Desigo CC Mobile App is designed for the Android and iOS operating systems enabling the user to remotely view events and object status based on user privileges. Users receive event notifications when new events are available.

The Mobile App can optionally provide commanding of events and objects based on user privileges. The commanding capabilities of the Mobile App are not Agency listed or approved for commanding fire systems. The use of event commanding must be reviewed with and permitted by the local authority having jurisdiction (AHJ) or equivalent.

Fire Wide-Area Network (WAN)

The fire Wide-Area Network (WAN) topology allows Desigo CC to monitor and control stand-alone (i.e., single panel / non-networked) Desigo Fire Safety Modular and FireFinder XLS/XLSV MP12 fire panels via a point-to-point connection between Desigo CC and each fire panel by using HUB-4 communication cards with either RS-485 or Modem connectivity. A maximum of 256 panel can be connected on the Desigo CC WAN.

Video

The Video surveillance -integration feature supports the workflows of System Manager and Event Treatment – as well as enhances these workflows with video-specific workflows and video support that are fully integrated into the Desigo CC UI experience.

Live streams and recordings can be displayed in the primary and secondary pane. In the contextual pane video operations (e.g. – Pan-Tilt-Zoom | Start / Stop recording) can be executed from both the video control and operations tabs.

Other Desigo CC applications are able to execute video events and actions on events of video device supervision. The video integration is based on Siveillance® VMS or Milestone XProtect.

Access Control

The Access Control option works with Siemens SiPass® integrated, and adds access control event monitoring and control capabilities to a Desigo CC.

Events from Access Control devices, doors, and areas are seamlessly incorporated into the Desigo CC event treatment workflows.

The user can view door and In / Out status data in graphics and operations tabs, as well as monitor device-connection status with integrated device supervision.

All access control events are available to other Desigo CC applications (e.g. – Reactions, Macros, & Scheduler) providing enhanced cross discipline workflows (e.g. – a card swipe starts recording of nearby camera, activates lighting, and resets temperatures).

Remote Access

A Desigo CC User Interface can be accessed from remote, non-UL / ULC computers solely for monitoring, via the available Web Client. This Remote Access feature enables up to 20 key stakeholders to have the same view of the User Interface as those operating the system from a remote computer – provided Desigo CC is installed on an intranet site – therefore enabling faster sharing of critical data over a wide area.

Assisted Treatment

Assisted Treatment provides the ability to pre-define a sequence of steps or actions, allowing the end-user to optionally implement when responding to a system event. Each Assisted Treatment step provides instructions and operation tools (e.g. – view the graphic of the object in `Alarm`; view a related live video stream; fill-in a treatment form, or automatically print out system-event information).

End-User Profiles

To ensure proper level of event-management support by Desigo CC for any system-event situation, pre-defined profiles can be established for each end-user or workstation that provide the correct level of event management for that user or workstation.

Macros

Macros are pre-defined lists of events that enable a user to send out a group of events to specified devices with a single action. Macros can be started manually or automatically based on schedules defined for time-based functions or automatic reactions.

Macro Viewer

The Macro Viewer provides simplified execution of Desigo CC macros and fire-panel pseudo point commands by displaying one big icon button for each macro and pseudo point. Access to macros and pseudo point commands can be controlled with user privileges.

Reports

The Desigo CC reporting tool includes standard reporting templates. The Reports feature also allows the development of fully configurable reports with custom logos | headers | footers and layouts that include tabular and graphical system data.

Reports can be scheduled and saved in .CSV or .PDF file extensions for future use.

Reaction Processor

The Reaction Processor option allows Desigo CC to automatically execute given actions when some conditions are verified. Conditions can be any of the following: time-based (e.g. – every Monday at 7:00 a.m.); event-based (e.g. – when technical equipment is in fault); a change of values (e.g. – when the temperature of a room is higher than a predefined value), or on a variation of any or all of the above. When conditions are met, the Reaction Processor executes a pre-configured list of events (e.g. – switch on the lights).

Multiple Installed Clients

Desigo CC can support up to 10 installed clients. Control of the fire-safety system can also be transferred to these clients – provided the clients' accounts been configured to assume control.

Document Viewer

The Document Viewer displays object-related data sheets, operating manuals or other information contained in document file (e.g. – a data sheet for a detector or sensor or web page).

Log Viewer

Log Viewer provides a log / history of system events and end-user programming for further analysis.

The Detailed Log within the Contextual Pane provides a log of the most recent user and system events and activities, relative to an individually selected object. For example, the system logs user intervention to a set point with `Previous` | `New Value` | `Timestamp` and `Username`. Data displayed within the `Detailed Log` can be further analyzed, via sorting and filtering functionality – similar to that of the Log Viewer.

Specifications

Desigo CC is a full, flexible client / server architecture for fire-safety applications offering configurations from small, single-seat to large, multi-user installations.

Desigo CC can be installed completely on one (1) computer, with full server and client functionality. Additional clients (e.g. – dedicated, browser, and Windows desktop application) can be also be added. Additional system connections can be made through systems installed with a Desigo CC Front End Process (FEP) configuration.

A Desigo CC can also be configured with multiple servers in a distributed system configuration. Distributed servers can be used to distribute processing power, to segregate systems geographically or departmental boundaries, or to separate servers used for different disciplines – most frequently to isolate UL / ULC Listed fire systems from other disciplines such as building automation or security.

Servers are connected to one another in order for an end-user to seamlessly navigate the objects in the system independently. This means the client computer is not reliant of any specific server to which it is connected.

Microsoft IIS server for Browser Clients and Desktop Application downloads can be installed on the server or on a separate installation.

The server hosts all the data for the system, while the clients are only for the visualization and the user interaction. The clients provide a high-resolution interface to all the relevant server data needed for monitoring and commanding the system. Control of the fire-safety system can be transferred from one client to another client if desired.

Microsoft (MS) Operating Systems	
Desigo CC Server, FEP, and Installed Clients	MS Windows 10 64-bit (Professional Enterprise) MS Windows Server 2012 R2 64-bit / 2016 64-bit / 2019 64-bit
Flex Clients, Windows App Clients, and Web Clients	MS Windows 10 64-bit (Professional Enterprise) NOTE: Web Clients are compatible only with Microsoft Internet Explorer 11
Microsoft (MS) SQL Server Database	
Desigo CC Server, FEP, and Installed Clients	MS SQL Windows Server 2012 / 2014 / 2016 / 2017 / 2019 (Standard Express Enterprise) NOTE: 2019 R2 Express is free and included with the product
Microsoft (MS) Office	
Desigo CC Server, FEP, and Installed Clients	MS Office 365 / MS Office 2019, 2016, 2013, 2010, 2007 (Standard Small Business Professional Enterprise)

Virus Scanners	
Desigo CC Server, FEP, and Installed Clients	Microsoft Windows Defender Antivirus
	Kaspersky
	Avira
	McAfee
	Bitdefender
Desigo CC Server, FEP, and Installed Clients	Kaspersky
	Trend Micro Office Scan
	Avast AVG
Firewalls	
Desigo CC Server, FEP, and Installed Clients	Microsoft Windows Firewall
	Norton Security
	Comodo Firewall
	Kaspersky TOTAL Security
	Bitdefender TOTAL Security
	McAfee End Point Security
	ZoneAlarm
	Dell SonicWALL security
	Check Point Next Generation Firewalls
	Cisco PIX Firewall Software

Supported Sub-Systems and Protocols

Fire Safety	
Desigo Fire Safety Modular	MP1.x Up to four [#] (4) XNET networks per server or FEP Up to five (5) Front End Processors (FEP) for a maximum of 24 XNET networks per system Up to 63 panels per XNET network
Desigo Fire Safety Compact (FC20-series / FV20-series)	MP1.x MP2.x MP3.0 Up to four (4) fire or voice networks Up to 16 panels per SafeDLINK or 32 panels per FCnet
FireFinder XLS and XLSV	MP8 MP10 MP11 MP12 Up to four [#] (4) XNET networks per server or FEP Up to five (5) Front End Processors (FEP) for a maximum of 24 XNET networks per system Up to 63 panels per XNET network
MXL / MXLV	MXL/MXLV system with Model MMB-3 running firmware 35.06J and CSGM 18 Up to four [#] (4) XNET networks per server or FEP Up to five (5) Front End Processors (FEP) for a maximum of 24 XNET networks per system Up to 63 panels per XNET network
Cerberus PRO Modular	MP1.x Up to four [#] (4) XNET networks per server or FEP Up to five (5) Front End Processors (FEP) for a maximum of 24 XNET networks per system Up to 63 panels per XNET network
Cerberus PRO Compact (FC92-series / FV92-series)	MP1.x MP2.x MP3.0 Up to four (4) fire or voice networks Up to 16 panels per SafeDLINK or 32 panels per C-WEB
NOTIFIER Onyx Series	Monitoring only integration for NFS/NFS2 series panels

Security	
Video	Siveillance VMS50 VMS100 VMS200 VMS200 (embedded), and VMS300 Milestone XProtect Essential+ Express+ Professional+ Expert, and Corporate Supported versions: 2017 R2 (v11.2a) up to 2020 R2 (v20.2a) Up to 128 cameras for UL / ULC applications Up to 1000 cameras for non-UL / ULC applications Up to 16 independent video streams per client
Access Control	SiPass integrated 2.7 SP1 2.75 2.76 SP1 & SP2 2.80 Up to 25 SiPass integrated servers Up to 1,000 doors
Building Automation	
APOGEE	BACnet PXC, MBC, MEC controllers (firmware 3.2.4- 3.5.2) BACnet FLN DXR, PTEC, PXC UEC, PPM P2 PXC, MBC, MEC controllers P2 Ethernet (firmware 2.8.10-2.8.18) and RS-485 via AEM (firmware 2.8) P1 FLN TEC, Point Expansion Modules, PXC Compact on P1, P1 BIM, DEM, P1 Drivers, and P1 VFDs
Open System Standard Protocols	
BACnet:	Building Automation Control network, Revision 1.15
OPC DA	OLE for Process Control OPC DA 2.05, 3.0
Modbus TCP	Modbus IP communication protocol
SNMP	SNMP Agents monitoring (V2 and V3)
Notification Protocols and Devices	
Email	POP3/IMAP/SMTP with SSL/TLS
Pager	ESPA 4.4.4; Ascom
Mobile	SMS

[#] The maximum number of XNET networks per server or FEP is determined by the "Hardware Category" computer selected. Refer to the "Technical Data" section below for max. number of XNET Interface cards per computer

Technical Data

UL / ULC Listed Computers

Hardware Category A

Hardware Category B

MODEL NUMBER:	<ul style="list-style-type: none"> UHW-CATA-01 UHW-CATA-PKG-SM 	<ul style="list-style-type: none"> UHW-CATB-01 UHW-CATB-PKG-SM UHW-CATB-PKG-LM
RECOMMENDED USE:	Client, Small FEP Small Server Not recommended as Video Surveillance Client	Medium Server Client Server Large FEP
APPROX. MAX. # OF FIRE POINTS: **	8,000	19,000
OPERATING SYSTEM:	Microsoft Windows 10 Enterprise 64-bit	Microsoft Windows 10 Enterprise 64-bit
POWER SUPPLY:	120-240VAC Input; 24VDC output-power brick	650 Watts; 100-240V @ 50 - 60 Hz
RECOVERY SOLUTION:	Recovery DVD	Recovery DVD
PROCESSOR:	Intel Core i7-4700QE 2.4 GHz., (four [4] cores w/ eight [8] threads); Maximum turbo frequency 3.4GHz	Intel Core i7-4700QE, 2.4 GHz., (four [4] cores w/ eight [8] threads); Maximum turbo frequency 3.4GHz
CHIPSET:	Intel QM87 chipset	Intel QM87 chipset
MEMORY:	16GB (two (2) 204-pin DDR3 1333/1600 MHz / SODIMM up to 16GB, w / o ECC support)	32GB (four [4] DDR3L 1333 / 1600 DIMMs)
PRIMARY DISK DRIVE:	1x 240GB SSD, SATA III	1x 240GB SSD, SATA III
SECONDARY DISK DRIVE:	None	1x 2TB HDD, SATA III
GRAPHICS CARD:	<p>Onboard Intel HD Graphics 4600 Shared Video Memory, up to 1.7GB Max. DVI Resolution: 1920 -x- 1200 Max. HDMI Resolution: 4096 -x- 2160 Max.</p>	<p>Matrox C680 PCIe x16, 2GB RAM Display Outputs: Six (6) Mini Display Ports Two (2) mini Display Port to DVI adapters included Resolution: 4096 -x- 2160 Max. @ 30Hz (Display Port) Resolution: 4096 -x- 2160 Max. @ 60Hz (Display Port, three [3] max.)</p> <p>Onboard Intel HD Graphics: 4600</p> <ul style="list-style-type: none"> Shared Video Memory: up to 1.7GB DVI Resolution: 1920 x 1200 Max. HDMI Resolution: 4096 x 2160 Max.
VIDEO INTERFACES:	1x - VGA Port 1x - HDMI Port 1x - DVI Port	6x Mini Display Ports 2x DVI Port 1x VGA Port
OPTICAL DISK DRIVE:	DVD-RW	DVD-RW
AUDIO INTERFACE:	Audio Line In / Out, Mic. In	Audio Line In / Out, Mic. In
ETHERNET INTERFACE:	2x - Intel 82574L GigaLAN	2x - Intel 82574L GigaLAN
MONITORING CARD:	Fan Monitoring & Watchdog card	Fan Monitoring & Watchdog card
XNET INTERFACE CARD:	1x - Siemens SNC; up to two (2) of Model SNC	1x - Siemens SNC; up to four (4) of Model SNC
PARALLEL PORTS:	None	2x
SERIAL PORTS:	2x - RS-232 ports	2x - RS-232, serial; 2x - PS/2
USB PORTS:	2x - USB 2.0 Ports; 4x - USB 3.0 Ports	2x - USB 3.0; 4x - USB 2.0 Note: 2x are behind the door
KEYBOARD:	USB keyboard; 104 key, black	USB keyboard; 104 key, black
MOUSE:	USB optical mouse, black	USB optical mouse, black
CHASSIS:	Compact Form Factor Aluminum Semi-gloss black	All-metal Enclosure Lockable front-door protects power switch Reset switch black
CHASSIS MOUNT OPTIONS:	Vertical wall mount or under mount with Four (4) mounting screws (#8). Desktop mount not recommend due to fan location	Desktop (horizontal or vertical); Rack Mount shelf available
DIMENSIONS:	13.1" (34 cm.) {H} -x- 8.5" (21.6 cm.) {D} 4.2" (10.7 cm.) {D}	16.8" (42.7 cm.) {W} -x- 7" (17.8 cm.) {H} 17.6" (44.7 cm.) {D}
WEIGHT:	8.5 Lbs. (3.9 kg.)	39 Lbs. (17.5 kg.)
CERTIFICATIONS:	UL864 ULC-S527-11 UL 2572, FCC Class A, RoHS, CE	UL864 ULC-S527-11 UL 2572, FCC Class A, RoHS, CE

* Refer to System Dimensioning Guide if 1) within 1000 points of limit, or move to the next Hardware Category, 2) designing a multi-discipline server.

+ Higher number of points is possible for systems that only connect to Desigo Modular / XLS panels.

Technical Data – (continued)

UL / ULC Listed Computers

Hardware Category C

Hardware Category D

MODEL NUMBER:	UHW-CATC-01	UHW-CATD-01
RECOMMENDED USE:	LARGE Server	EXTRA LARGE Server
APPROX. MAX. # OF FIRE POINTS: **	42,000	66,000
OPERATING SYSTEM:	Microsoft Windows Server 2019 64-bit 5 CAL	Microsoft Windows Server 2019 64-bit 5 CAL
POWER SUPPLY:	650 Watts; 100-240V @ 50 - 60 Hz	650 Watts; 100-240V @ 50 - 60 Hz
RECOVERY SOLUTION:	Recovery DVD	Recovery DVD
PROCESSOR:	1x Intel Xeon E5-2600-v4; 1.7 GHz (eight [8] cores) per processor	2x Intel Xeon E5-2600-v4; 1.7 GHz (eight [8] cores) per processor
CHIPSET:	Intel C612 chipset	Intel C612 chipset
MEMORY:	32GB (four [4] DDR-4 -2133 DIMMs)	64GB (eight [8] DDR-4 -2133 DIMMs)
PRIMARY DISK DRIVE:	1x 240GB SSD, SATA III	1x 240GB SSD, SATA III
SECONDARY DISK DRIVE:	1x 1TB HDD, SATA III	1x 1TB HDD, SATA III
GRAPHICS CARD:	Matrox C680 PCIe x16, 2GB RAM <u>Resolution:</u> 4096 -x- 2160 @ 30Hz Display Port 4096 -x- 2160 @ 60Hz Display Port, (max. of three)	Matrox C680 PCIe x16, 2GB RAM <u>Resolution:</u> 4096 -x- 2160 @ 30Hz Display Port 4096 -x- 2160 @ 60Hz Display Port, (max. of three)
VIDEO INTERFACES:	1x - VGA Six (6) Mini Display Ports two (2) mini Display Port to DVI adapters included	1x - VGA Six (6) Mini Display Ports two (2) mini Display Port to DVI adapters included
OPTICAL DISK DRIVE:	DVD-RW	DVD-RW
AUDIO INTERFACE:	None	None
ETHERNET INTERFACE:	2x - Intel i210 Gigabit 1x - IPMI LAN	2x - Intel i210 Gigabit 1x - IPMI LAN
MONITORING CARD:	Fan Monitoring & Watchdog card	Fan Monitoring & Watchdog card
XNET INTERFACE CARD:	1x – Siemens SNC; up to two (2) of Model SNC	1x – Siemens SNC; up to two (2) of Model SNC
PARALLEL PORTS:	None	None
SERIAL PORTS:	1x – RS-232 ports	1x – RS-232 ports
USB PORTS:	2x – USB 2.0 on Rear Panel	2x – USB 2.0 on Rear Panel
KEYBOARD:	USB keyboard; 104 key, black	USB keyboard; 104 key, black
MOUSE:	USB optical mouse, black	USB optical mouse, black
CHASSIS:	All-metal, 19" (48.3 cm.) 4U Rack Mount Enclosure Mounts w/ 24" Locking Slides Lockable front-door protects Power switch Reset switch HDD & Power LEDs	All-metal, 19" (48.3 cm.) 4U Rack Mount Enclosure Mounts w/ 24" Locking Slides Lockable front-door protects Power switch Reset switch HDD & Power LEDs
CHASSIS MOUNT OPTIONS:	19" (48.3 cm.) rack mount Desktop (horizontal) with provided rubber feet	19" (48.3 cm.) rack mount Desktop (horizontal) with provided rubber feet
DIMENSIONS:	7" (17.8 cm.) {H} -x- 19" (48.3 cm.) {D} 20" (50.8 cm.) {D}	7" (17.8 cm.) {H} -x- 19" (48.3 cm.) {D} 20" (50.8 cm.) {D}
WEIGHT:	45 Lbs. (20.4 kg.)	45 Lbs. (20.4 kg.)
CERTIFICATIONS:	UL864 ULC-S527-11 UL 2572 FCC Class A RoHS CE	UL864 ULC-S527-11 UL 2572 FCC Class A RoHS CE

* Refer to System Dimensioning Guide if 1) within 1000 points of limit, or move to the next Hardware Category, 2) designing a multi-discipline server.

+ Higher number of points is possible for systems that only connect to Desigo Modular / XLS panels.

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
Server Hardware / Software Packages		
UHW-CATA-PKG-SM	S54465-C82-A1	Items relative to Model UHW-CATA-PKG-SM <ul style="list-style-type: none"> one (1) Hardware Category A Computer: one (1) 22" (56 cm) LCD Monitor: one (1) Serial Network Card for XNET connection: Model UHW-CATA-01 Model UHW-0000-22L-L Model SNC
UHW-CATB-PKG-SM	S54465-C82-A2	Items relative to Model UHW-CATB-PKG-SM <ul style="list-style-type: none"> one (1) Hardware Category B Computer: one (1) 22" (56 cm) LCD Monitor: one (1) Serial Network Card for XNET connection: Model UHW-CATB-01 Model UHW-0000-22L-L Model SNC
UHW-CATB-PKG-LM	S54465-C83-A1	Items relative to Model UHW-CATB-PKG-LM <ul style="list-style-type: none"> one (1) Hardware Category B Computer: one (1) 42" (107 cm) LCD Monitor: one (1) Serial Network Card for XNET connection: Model UHW-CATB-01 Model UHW-0000-42L-L Model SNC
Computers Only		
UHW-CATA-01	S54465-C73-A1	Items relative to Model UHW-CATA-01 <ul style="list-style-type: none"> UL / ULC Listed Hardware Category A Computer Windows 10 one (1) Serial Network Card for XNET connection: Model SNC no monitor
UHW-CATB-01	S54465-C73-A2	Items relative to Model UHW-CATB-01 <ul style="list-style-type: none"> UL / ULC Listed Hardware Category B Computer Windows 10 one (1) Serial Network Card for XNET connection: Model SNC no monitor
UHW-CATC-01	S54465-C74-A1	Items relative to Model UHW-CATC-01 <ul style="list-style-type: none"> UL / ULC Listed Hardware Category C Computer with Windows Server 2019 one (1) Serial Network Card for XNET connection: Model SNC no monitor
UHW-CATD-01	S54465-C74-A2	Items relative to Model UHW-CATD-01 <ul style="list-style-type: none"> UL / ULC Listed Hardware Category D Computer with Windows Server 2019 one (1) Serial Network Card for XNET connection: Model SNC no monitor
Monitors Only		
UHW-0000-22L-L	S54465-C8-A2	UL / ULC Listed 22" (56 cm.) LCD Monitor
UHW-0000-42L-L	S54465-C9-A2	UL / ULC Listed 42" (107 cm.) LCD Monitor
XNET Interfaces		
SNC S54400-N1-A1	S54400-N1-A1	XNET Interface Card for Desigo Fire Safety Modular, FireFinder XLS, and MXL
MOSA	S54465-C62-A1	XNET Monitoring-Only Solution Assembly: Includes: <ul style="list-style-type: none"> one (1) Serial Network Card for XNET connection: Model SNC one (1) Exterior enclosure with key-lock: Model ENCL-01 one (1) XNET interface module: Model XND-M one (1) Serial-to-Ethernet Module: Model S2E one (1) up to 5A power supply: Model PS-5A one (1) set of cables: Model CBL-M Cables included in each Model CBL-M shipment <ul style="list-style-type: none"> Two (2) Model S2E power cables (1 red, 1 black) One (1) Model XND-M power cable One (1) Model NIC-C-to-interface (Model XND-M) cable, 10 feet (3m)

Details for Ordering – (continued)

MODEL OR TYPE	PART NUMBER	PRODUCT
Network Switches		
X204-2	500-650537	Multi-mode SCALANCE network switch Model X204-2 4 Ethernet ports, 2 sets of multi-mode fiber ports <ul style="list-style-type: none"> UL* Listed Four (4) Ethernet Ports Two (2) sets of multi-mode fiber ports
X204-2LD	S54430-A6-A1	Single-mode SCALANCE network switch Model X204-2LD <ul style="list-style-type: none"> UL* Listed Four (4) Ethernet Ports Two (2) sets of multi-mode fiber ports
FN2012-A1	S54400-B152-A1	Modular Ethernet Switch Model FN2012-A1 UL/ULC* Listed
VN2001-A1	S54400-A42-A1	♦ Electric Ethernet Module Model VN2001-A1 UL/ULC* Listed
VN2002-A1	S54400-A43-A1	♦ Multi-Mode Ethernet Switch Model VN2002-A1 UL/ULC* Listed
VN2003-A1	S54400-A44-A1	♦ Single-Mode Ethernet Module Model VN2003-A1 UL/ULC* Listed
Licenses		
CCA-STD-FSET	P55802-Y114-A100	Standard Feature License that includes: <ul style="list-style-type: none"> one (1) client license can be extended with Client licenses and point licenses
CCA-CMPT-DMS	P55802-Y110-A100	Fire Safety Management Compact Feature Set license: <ul style="list-style-type: none"> Includes three (3) client licenses and 500 Fire Point licenses can be extended to support up to 2000 Fire Points; no additional clients can be added The Graphics Editor is the only option that can be added
Feature Options for Fire Safety Management Compact Feature Set		
CCA-OP-GRAPH-ED	P55802-Y127-A300	Graphics Editor Option: <ul style="list-style-type: none"> allows end-users to edit graphics (without this option, graphics must be edited using an Engineering License)
CCA-CMPT-DMS-U	P55802-Y110-A500	Upsell license: <ul style="list-style-type: none"> for converting DMS Compact Feature Set into a Standard Feature Set
Clients (Installed Web Windows App)		
CCA-1-CL	P55802-Y119-A200	License for one (1) additional client: <ul style="list-style-type: none"> valid for all client types
CCA-MAX-CL	P55802-Y120-A200	License to allow for maximum number of clients: <ul style="list-style-type: none"> valid for all client types
Fire Points		
CCA-100-FIRE	P55802-Y158-A412	Add 100 fire points
CCA-500-FIRE	P55802-Y158-A452	Add 500 fire points
CCA-5000-FIRE	P55802-Y158-A453	Add 5000 firepoints
CCA-10000-FIRE	P55802-Y158-A414	Add 10000 fire data points
Video Monitors and Cameras		
CCA-V-PLUS	P55802-Y159-A300	Video option Plus for embedded VMS. Includes "SiVMS 200 embedded" license, eight (8) monitors and eight (8) embedded cameras
CCA-V-16MON	P55802-Y160-A401	Add 16 monitors
CCA-V-16EXTC	P55802-Y161-A401	Add 16 external cameras
CCA-V-16EMBC	P55802-Y162-A401	Add 16 embedded cameras
CCA-V-128MON	P55802-Y160-A412	Add 128 monitors
CCA-V-128EXTC	P55802-Y161-A412	Add 128 external cameras
Access Control		
CCA-AC-16EXTD	P55802-Y164-A401	Add 16 doors
CCA-100-SEC	P55802-Y102-A412	Add 100 Access Control I/O points
CCA-500-SEC	P55802-Y102-A452	Add 500 Access Control I/O points

Details for Ordering – (continued)

MODEL OR TYPE	PART NUMBER	PRODUCT
SCADA Points		
CCA-100-SCADA	P55802-Y124-A412	Add 100 SCADA points
CCA-500-SCADA	P55802-Y124-A452	Add 500 SCADA points
CCA-5000-SCADA	P55802-Y124-A453	Add 5000 SCADA points
Connectivity		
CCA-1-INT-TK	P55802-Y180-A410	Add one (1) integration token for 3rd party extension modules <ul style="list-style-type: none"> One or more integration tokens may be required per extension module
Supplementary Licenses		
CCA-DEMO	P55802-Y140-A100	Demo license (12 months)
CCA-STARTUP-BASE	P55802-Y131-A100	Startup license (2 months)
CCA-ENG	P55802-Y130-A100	Engineering license (12 months); required CMD.04 dongle
CMD.04	S55802-Y148	Universal Serial Port (USB) License Hardware key (dongle)

- For **UL Listed** applications, it is advised to order either the Scalance (**X204-2**) Multi-Mode and / or the Scalance (**X204-2LD**) Single-Mode Ethernet Switch.
- For **ULC Listed** applications, the Ethernet Switch (**FN2012-A1**) along with the appropriate pairing of one (1) of the following: Electric Ethernet Module (**VN2001-A1**) | Multi-Mode Ethernet Module (**VN2002-A1**) | Single-Mode Ethernet Module (**VN2003-A1**) are required.

Building System Interface Unit (BSIU) Software

Building System Interface Unit Software for monitoring and control of fire system, requires a fire network interface [Model SNC for Modular, XLS, or MXL panel(s), or suitable dedicated ethernet connection for Compact panel(s)]. Computer not included.

Hardware Requirements

Usage / System Size	Small Server (+) / Client / FEP	Large Server (#)
Operating System	Microsoft Windows 10 (or Microsoft Windows Server 2019 for Small Server)	Microsoft Windows Server 2019
Minimum CPU	Intel Core i7-9700 3.0 GHz	Intel Core i7-7800X 3.5 GHz
Minimum RAM	16 GB	32 GB
Minimum HDD/SDD	256 GB	
Minimum Display	1 HD monitor	
I/O	0-4 internal USB 2.0 headers (*)	
Audio	Integrated Audio and External speakers	
Required Agency Listings	UL60950-1 -or- UL62368-1	

Monitoring-Only Software

Software for monitor only purposes. Requires a fire network interface (Model MOSA, X204-2, or X204-2LD). Computer not included.

Hardware Requirements

Usage / System Size	Small Server (+) / Client / FEP	Large Server (#)
Operating System	Microsoft Windows 10 (or Microsoft Windows Server 2019 for Small Server)	Microsoft Windows Server 2019
Minimum CPU	Intel Core i7-9700 3.0 GHz	Intel Core i7-7800X 3.5 GHz
Minimum RAM	16 GB	32 GB
Minimum HDD / SDD	256 GB	
Minimum Display	1 HD monitor	
I/O	0-4 internal USB 2.0 headers (*)	
Audio	Integrated Audio and External speakers	
Required Agency Listings	UL60950-1 -or- UL62368-1	

(+) Up to 19,000 addressable fire points

(#) Up to 66,000 addressable fire points

(*) One internal USB 2.0 header is required **for each** SNC card to be installed (Required for **BSIU applications only**; not required for Monitoring-only applications)

Product Compatibilities

MODEL OR TYPE	DATA SHEET	PANEL
MXL	5000	MXL (fire-system overview)
MXLV	5035	MXLV (fire w/ voice system overview)
XLS	6300	FireFinder XLS (fire-system overview)
XLSV	6340	FireFinder XLS (fire w/ voice system overview)
DESIGO FIRE SAFETY MODULAR	7300	Desigo Fire Safety Modular (overview)
FC2025	6815	Desigo Fire Safety 252-point addressable (fire)
FC2050		Desigo Fire Safety 504-point addressable (fire)
FV2025	6821	Desigo Fire Safety 252-point addressable (voice)
FV2050		Desigo Fire Safety 504-point addressable (voice)

See: www.siemens.com/fire to view any of the data sheets in the chart above.

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.



Desigo® CC

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 Smart Infrastructure - Building Products
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January - 2023
 (Rev. 15)

SIEMENS

FIRE ALARM PERIPHERALS

INITIATING/CONTROL DEVICES

DATA SHEETS

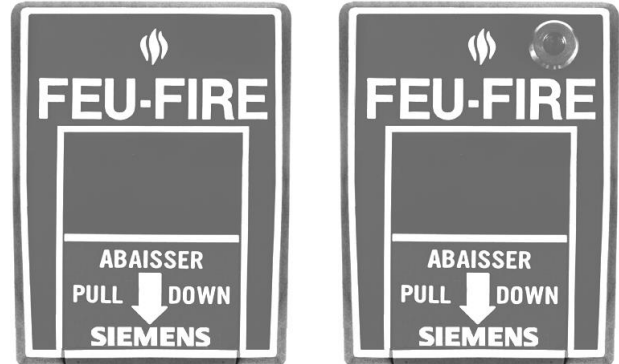
Intelligent Initiating Devices

Manual Stations used with FireFinder® XLS (for **Canada** Only)

Models HMS-SA and HMS-2S

ARCHITECT AND ENGINEER SPECIFICATIONS

- Durable design
- Shock and vibration resistant
- Pull-down lever remains down until reset
- New custom microcomputer-chip technology
- Dynamic supervision
- For Model HMS-2S:
 - Reset with Allen Key
 - Two-wire / two-stage, dual-address operation
- Surface or semi-flush installation
- Model DPU programs and verifies the device addresses tests for functionality
- Electronic address programming is easier and more dependable



- Fitted with screw terminals
- Americans with Disabilities Act (ADA)
- ULC Listed and FM Approved

Product Overview

The Intelligent Manual Stations from Siemens Canada Limited – Fire Safety (Models HMS-SA and HMS-2S), through their sophisticated control-panel communication, provide the most advanced method of address programming and supervision currently available to the fire industry.

Models HMS-SA and HMS-2S are the essence of an intelligent, initiating device through built-in microcomputer-chip technology, as well as each station's sophisticated, bi-directional communication capabilities with FireFinder XLS.

Model HMS-2S is designed for two-stage applications: The first-stage alarm is activated when the pull-down lever is manually triggered; while the second-stage alarm is activated when the key switch is turned to 'ON.'

The pull switch and the second-stage key Switch are fully identifiable, and only one (1) pair of wires is required for Model HMS-2S.

Models HMS-SA and HMS-2S are constructed of durable, molded polycarbonate material, which is matte finished in red with raised white lettering. The housing for each station accommodates a 'pull-down' lever which – when operated – locks in position, indicating the manual station has been activated.

Specifications

Siemens Canada Limited – Fire Safety's innovative technology also allows all Model Models HMS-2S and HMS-SA Intelligent Manual Stations to be programmed via the Model DPU Programmer / Tester, Model DPU.

Model DPU is a compact, portable and menu-driven accessory that makes programming and testing a manual station device more efficient, reliable and quicker than previous methods.

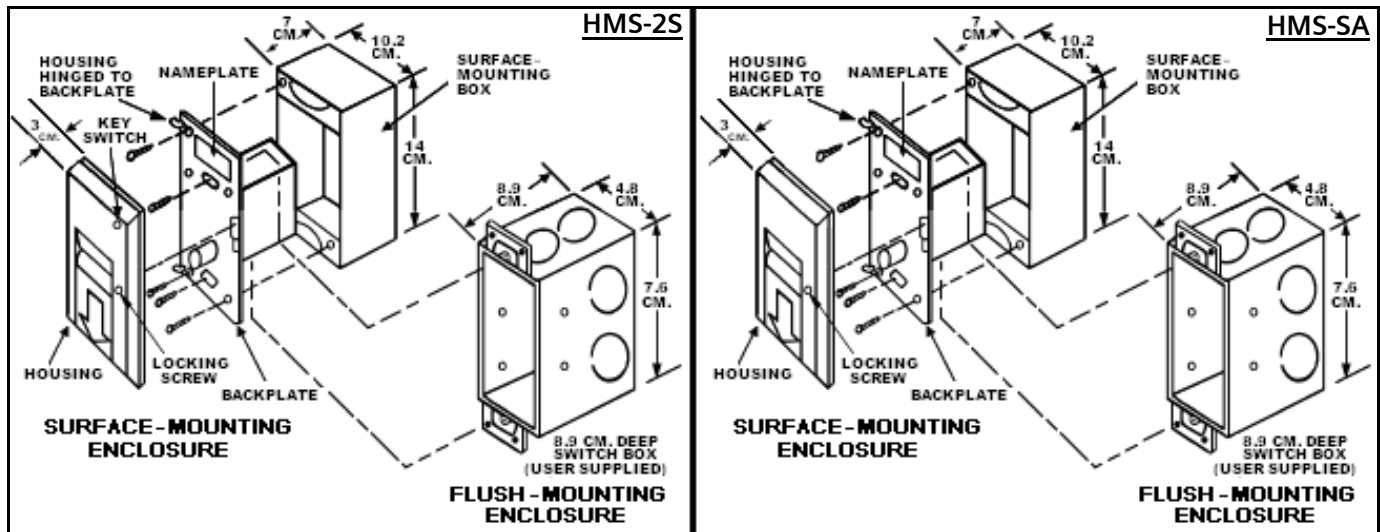
Vibration, corrosion and other conditions, which can deteriorate mechanical-addressing mechanisms, are no longer a cause for concern because Model HMS-2S is fitted with screw terminals for connection to an addressable circuit. Model HMS-2S can either be surface or semi-flush mounted.

The pull-down lever remains down and locked until the manual station is reset, via initially opening the hinged housing cover with an Allen Key, followed by closing and locking the cover.

The microcomputer-chip technology for the manual station has the capacity of storing – in memory – identification information; as well as important operating-status information. Models HMS-2S and HMS-SA have a second set of contacts to release equipment, such as magnetic door holders when the station is pulled.

Canadian-specific Manual Stations **6316C**

Mounting Diagrams



Technical Data

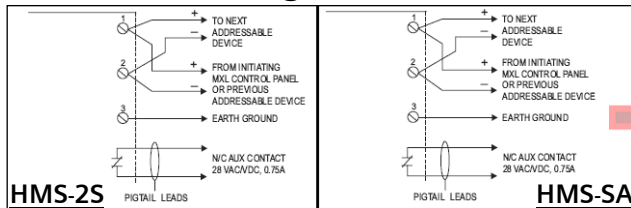
Electrical:

Current Draw (Active or Standby)	0.9mA
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Indoor / Dry Conditions:

Operating Temperature Range	32° – 100°F (0° – 38°C)
Operating Humidity Range	0 – 93%, non-condensing

Wiring Data



Details for Ordering

Model	Part Number	Description
HMS-2S	500-033460	Intelligent Manual Station (Two-Stage, Addressable Intelligent Manual Station)
HMS-SA	500-034150	Intelligent Manual Station (Single-Action Manual Station with auxiliary contacts)

NOTES:

- Recommended wire sizes:
 - 18 AWG minimum, 14 AWG maximum
- Wire larger than 14 AWG can damage the connector.
- When using shielded cable without metal raceway or with nonmetallic raceway, the shields should be terminated at the device ground terminal. If the device box is already grounded by another means – such as being mounted to a grounded structure – then the wire shields should be continuous, and must be grounded solely at the point of origin.

[For example, at the control panel, the device ground terminal shall be connected to the grounded device box.]

- When using shielded cable with metal raceway, the wiring shields shall be continuous and grounded solely at the point of origin. The device ground terminal shall be connected to the grounded device box.
- When using metal raceway without shielded cable, connect the device ground terminal to the grounded device box.
- Metal raceway should be continuously grounded throughout the system.

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.

Desigo® Fire Safety Detectors and Peripherals

Multi-Criteria Fire Detector [with *ASAtechnology™*]

Model FDOOT441

Architect & Engineer Specifications

- UL 268 7th edition Listed, ULC Listed; FM (#3230, #3210), CSFM (#7272-0067:0258) Approved
- Built-in *ISOtechnology™*
- Advanced multi-criteria fire detector that has dual-optical thermal sensors
- Differentiates between deceptive phenomena and an actual fire (nuisance-alarm avoidance)
- Provides enhanced detection via forward-and-backward light-scattering technology
- Complies with NFPA 76 (Telco standard) as 'VEWFD' high-sensitivity detector
- UL Listed and FM Approved as a multi-criteria and 'VEWFD' fire detector
- UL 268A Listed for direct air-duct use (4,000 FPM)
- Supervisory temperature-monitoring feature
- Remote sensitivity-measurement capability
- Automatic environmental compensation
- Up to 22 application profiles
- Tri-color detector-status light-emitting diode (LED)
- Polarity insensitive via *SureWire™*
- Low-temperature warning for sprinkler systems, per NFPA 25
- Meets UL, NFPA 72 requirements for sensitivity self-monitoring
- Compatible with:
 - Model DB-11-series mounting bases
 - Model 8720 / DPU (device programmer / loop tester)
- Restriction of Hazardous Substances (RoHS compliant)
- Responds to both flaming and smoldering-fire signatures

Product Overview

Model FDOOT441 is an advanced, flexible multi-criteria fire detector incorporating a redundant optical / thermal sensor. Additionally, Model FDOOT441 utilizes *ASAtechnology™* a distinctive forward / backward, light-scattering technology that provides high-tech, unparalleled fire detection to the widest range of fire types allowing the detector to distinguish non-threatening deceptive phenomena.

Each FDOOT441 unit is UL 268 7th edition listed incorporating advanced built-in *ISOtechnology™* - True Class-X SLC operation (use is optional) greatly improving system reliability and circuit integrity while providing advanced addressable fault finding.

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

Every FDOOT441 unit is a multi-purpose, addressable detector providing a complete contemporary solution meeting fire detection needs for commercial facilities. Each individual FDOOT441 sensor can be field programmed for simultaneous and / or independent functionality, depending upon the precise customer and application requirements.

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

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

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

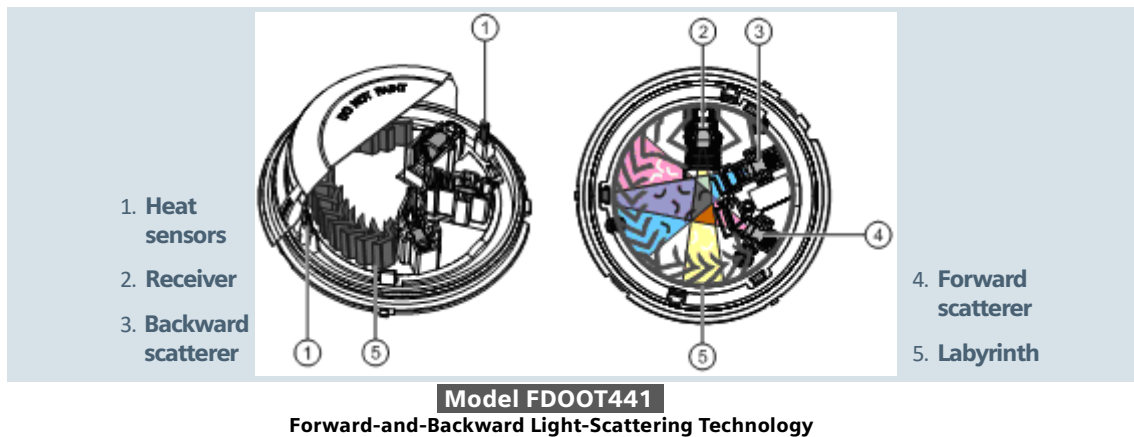
For instance, the signals from the detector's sensors are monitored and processed via the **ASA**-patented algorithm technology, which combines the signals into a neural network to create an intelligent, multi-criteria addressable detector.



Model FDOOT441

Multi-Criteria Fire Detector
[with *ASAtechnology*]





Product Overview – (continued)

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

Since Model FDOOT441 is a two-wire, addressable device, functioning as a multi-purpose detector – satisfying the revised requirements of UL 268 7th edition using smoke-and-heat detection in a singular, aesthetically pleasing package. Comparable to other multi-functional detectors, Model FDOOT441 also serves as a very cost-effective, viable detection solution that saves on product | installation | maintenance costs. The unit’s value is multiplied with built-in **ISOtechnology** the True Class-X - NFPA 72 compliant SLC isolation feature supporting up to 252 isolation ready devices per loop. When used in mixed mode a maximum of 30 non-isolated devices between isolation devices (wired in polarity-insensitive mode). Each detector fits into one (1) wall-or-ceiling footprint, occupying one (1) address on the signal-line circuit (SLC).

A patented forward-and-backward, light-scattering technology, capable of distinguishing both small and large products of combustion, operates at the core of each Model FDOOT441 intelligent, addressable detector. Each Model FDOOT441 detector provides an eco-friendly solution to legacy ionization detectors - eliminating the need for a radioactive source, along with inevitable HAZMAT-disposal requirements. The powerful **ASAtchnology** enables simultaneous detection of smoldering and flaming fires while rejecting nuisance sources in an ecological friendly manner while meeting RoHS - compliant (Restriction of Hazardous Substances) detection alternative to legacy ionization detectors.

Two (2) thermal sensors make each Model FDOOT441 detector a robust, reliable detection device suitable for the most all challenging applications. Additionally, Model FDOOT441 works as a heat detector, compliant with NFPA 72 and UL521.

Operation

Forward-and-Backward Light-Scattering Technology

The high-quality, optical-electronic measuring chamber for each Model FDOOT441 houses the following components:

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

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

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

Additionally, this scenario generates the following advantages:

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

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

Field-Device Programmer / Test Unit

Every Model FDOOT441 intelligent detection device is compatible with the Siemens field-device programmer / test unit (Model DPU | 8720), which is a compact, portable, menu-driven accessory for electronically programming and testing these addressable detectors promptly and reliably. For instance, the field technician selects the accessory's program mode, and enters the desired address.

Model DPU | 8720 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 | 8720 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 | 8720, there is no longer a cause for concern with any vibration, corrosion and other deteriorating conditions that could negatively affect any electro-mechanical-addressing mechanism.

Field-selectable application profiles

Model FDOOT441 provides 22 user-friendly, field-selectable application profiles, identified with universally known names (e.g. – hotel | Telco | office | parking garage | dormitory | data center, etc.) Refer to installation manual: **P/N – A6V10324655** for a complete list and description of application profiles.

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

Field-selectable temperature settings

Model FDOOT441 provides five (5) field-selectable temperature thresholds, ranging from 135°F to 175°F (57°C to 79°C), with fixed and rate-of-rise options. These ranges provide maximum flexibility to program and to easily adjust the temperature settings that suit multi-application needs with a building or in changing environmental conditions.

Additionally, Model FDOOT441 can be configured to provide a low-temperature warning signal at 40°F (4.4°C). This configuration (along with connection to a compatible fire-alarm control panel [FACP]) meets NFPA 72 requirements for sprinkler-temperature monitoring, and serves to prevent water freezing inside pipes, relative to water-based suppression systems.

Ambient supervisory feature for temperature-threshold ranges

Another highlight for Model FDOOT441 is supervision of ambient temperatures, allowing the end user to set a specified, unique warning point at a customized temperature threshold ranging from -4°F to 120°F (-20°C to 49 °C). This feature is practical for monitoring of machinery; special processes, or for environments where maintaining a temperature is critical as an early-warning supervisory signal.

Self-monitoring for smoke-sensor sensitivity

Model FDOOT441 provides an automatic, self-monitoring sensitivity check that complies with the NFPA 72 sensitivity requirements. When connected with a compatible FACP, it provides automatic, dynamic sensitivity verification within the agency-listed-and-approved limits. Besides checking for sensor integrity and automatic environmental compensation, Model FDOOT441 provides a display and report of sensitivity in percent-per-foot (or percent-per-meter) at the FACP.

Profile Overview

Each Model FDOOT441 intelligent detector contains one (1) tri-color LED indicator, capable of flashing anyone (1) of three (3) distinct colors: **GREEN**, **YELLOW**, or **RED**. During each flash interval, the microprocessor-based detector monitors the following:

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

Operation – (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 and easy visual inspection of the detector can be done at any time since the appropriate color is displayed via the LED indicator found on the detector's faceplate.

Installation

All Model FDOOT441 intelligent, addressable detectors use a surface-mounting base (Model DB-11 or DB-11E), which mounts on a 4-inch (10.2 cm.) octagonal, square or single-gang electrical back box. The base utilizes screw-clamp contacts for electrical connections and self-wiping contacts for increased reliability.

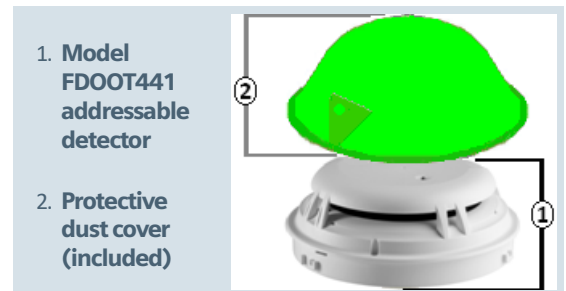
The Model DB-11 detector base can be used with the optional Siemens Model LK-11 detector locking kit, which contains 50 detector locks and an installation tool to prevent unauthorized removal of the detector head. Model DB-11 has decorative plugs to cover the outer mounting-screw holes.

Model FDOOT441 may be installed on the same initiating circuit with the Siemens Model 'H'-series detectors [when used with Desigo Fire Safety FACPs] –

- HFP-11, HFPT-11
- Model 'HMS'-series manual stations
- Model 'HTRI'-series interfaces
- 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 FDOOT441 intelligent detectors are approved for operation with the Underwriters' Laboratories-specified temperature range of 32° to 120° (0° to 49°C) – depending on heat-detector configuration (see: installation manual P/N—A6V10324655 for further details).

Application Data

Installation of Model FDOOT441 detector requires a two-wire circuit. In many retrofit cases, existing wiring may be used. 'T-tapping' is permitted only for Style 4 (Class B) wiring. In standard applications Model FDOOT441 is polarity insensitive, which can greatly reduce installation and debugging times. When operating in NFPA 72 Class-X applications SLC polarity must be maintained – see XDLC module install document for further details.

Model FDOOT441 fire detectors can be applied within the maximum 30-foot center spacing (900 sq. ft. areas,) as referenced in NFPA 72. This application guideline is based on ideal conditions – specifically, smooth ceiling surfaces with minimal air movement, and no physical obstructions between potential fire sources and the actual detector. Do not mount detectors in close proximity of 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 FDOOT441 in unusual applications. Be sure to follow NFPA guidelines and UL Listed / ULC Listed installation instructions – included with every Siemens – Fire Safety detector – and local codes as for all fire protection equipment.

Technical Data	
OPERATING TEMPERATURE:	+32° – +120°F (0° – +49°C)
HEAT DETECTOR RANGE:	+135° – +175°F (+57° – +79°C)
PROGRAMMABLE SUPERVISORY TEMPERATURE WARNING:	-4° – +120°F (-20° – +49°C) (available with compatible FACPs)
DETECTOR SENSITIVITY RANGE:	UL Listed: 0.88 to 3.35 % / ft. NFPA 76 (Telco) VEWFD: 0.2 % / ft. Pre-alarm 1.0 % / ft. Alarm
AIR VELOCITY:	0 – 4,000 feet-per-minute (fpm) Open Area: Direct-in-duct: 0 – 4,000 fpm
AIR PRESSURE:	No effect
APPLICATION PROFILES:	22 (field-configurable)
RELATIVE HUMIDITY:	0 – 95% (non-condensing)

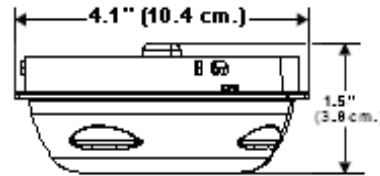
Thermal Ratings	
FIELD-SELECTABLE TEMPERATURE PROFILES	
FIXED TEMPERATURE:	135°F (57.2°C)
	145°F (62.8°C)
	155°F (68.3°C)
	165°F (73.9°C)
	175°F (79.4°C)
FIXED TEMPERATURE + RATE-OF-RISE: (R-O-R)	135°F (57.2°C) + R-o-R, 15°F (-9.4°C)
	175°F (79.4°C) + R-o-R, 15°F (-9.4°C)
	135°F (57.2°C) + R-o-R, 20°F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

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

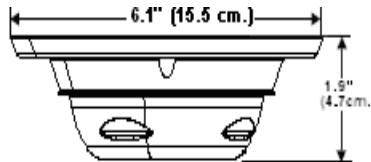
Approvals Standards	
FACTORY MUTUAL (FM)	3210, 3230
CALIFORNIA STATE FIRE MARSHAL (CSFM)	7272-0067:0260
UNDERWITERS LABORATOIRES (UL ULC)	UL268
	UL268A
	UL521
	ULC-S529
	ULC-S530
NATIONAL FIRE PROTECTION AGENCY	NFPA 25
	NFPA 72
	NFPA 76

Electrical Ratings	
INPUT VOLTAGE RANGE:	13 – 32 VDC
ALARM CURRENT:	650 µA, max.
STANDBY CURRENT: (quiescent)	

Mounting Diagrams | Dimensions

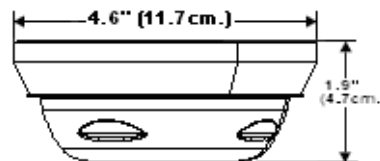


Model FDOOT441



Model FDOOT441

[with Model DB-11 detector base]



Model FDOOT441

[with Model DB-11E detector base]

Details for Ordering		
MODEL OR TYPE	PART NUMBER	PRODUCT
FDOOT441	S54320-F7-A1	Multi-Criteria Fire Detector with ASAtchnology™
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
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

Product Compatibilities		
MODEL OR TYPE	DATA SHEET	PANEL
XLS	6300	FireFinder (fire)
XLSV	6340	FireFinder (fire w/ voice)
Modular	7300	Desigo Modular
FC2005	6813	Desigo Fire Safety 50-point addressable
FC2025	6815	Desigo Fire Safety 252-point addressable (fire)
FC2050		Desigo Fire Safety 504-point addressable (fire)
FV2025	6821	Desigo Fire Safety 252-point addressable (fire w/ Intelligent Voice Communication [IVC])
FV2050		Desigo Fire Safety 504-point addressable (fire w/ Intelligent Voice Communication [IVC])

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

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

SIEMENS

Desigo® Fire Safety

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February - 2023
(Rev. 12)

Desigo® Fire Safety Detectors and Peripherals

Thermal (Heat) Detector Model FDT421

Architect & Engineer Specifications

- Built-in *ISOtechnology™*
- Compatible with Siemens Model `H`-series devices on the same loop (with Desigo Fire Safety Modular | FireFinder XLS/V | FC/FV20-series fire-alarm control panels)
- Contains seven (7) field-selectable settings in a temperature range of 135°F – 175°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 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
- CSFM (#7272-0067:0258) Approved

Product Overview

The Intelligent Thermal (Heat) Detector (Model FDT421) provides an advanced method of detection, address programming supervision – combined with sophisticated FACP communication. Model FDT421 uses a state-of-the-art thermistor, microprocessor and advanced signal analysis, providing high reliability and accuracy.

Additionally, Each Model FDT421 unit is UL listed including advanced built-in *ISOtechnology™* - a “True Class-X” SLC operation (use is optional) greatly improving system reliability and circuit integrity while providing advanced addressable fault finding.

Each model FDT421 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 combined with Class-X SLC operation built-in avoiding additional installation and material cost.

The temperature-range settings for each Model FDT421 detector is between 135°F (57°C) – 175°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 FDT421 can be configured to provide a low-temperature warning signal at 40°F (4.4°C). This feature – along with a compatible FACP (Desigo Fire Safety Modular | FireFinder XLS/V or with Desigo FC /FV2025 or FC /FV2050 FACPs) – serves as prevention of water freezing in pipes for sprinkler systems, meeting NFPA 72.

Operation

Model FDT421 also utilizes a modern, accurate and shock-resistant thermistor to sense significant changes in temperature.

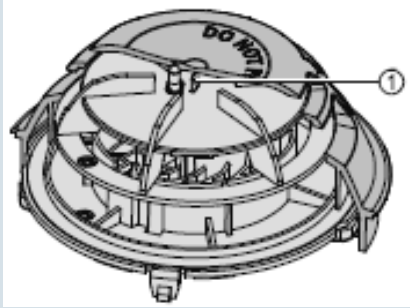
Each Model FDT421 detector has seven (7) pre-programmed parameter sets that can be selected by the Siemens FACP.



Model FDT421
Thermal (Heat) Detector



1. Thermistor



Model FDT421

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.



Thermal (heat) detector

Detector Supervision and Testing

Model FDT421 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 Desigo Fire Safety Modular | FireFinder XLS/V or Model FC20-series FACPs that indicates the status and settings assigned to each individual detector.

Installation

All Model FDT421 detectors use a surface-mounting base, Model 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 FDT421 may be installed on the same initiating circuit with the Siemens Model `H'-series detectors and devices [when used with Desigo Fire Safety Modular | Model FC20-series | FireFinder XLS/V FACPs] –

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

Application Data

Installation of Model FDT421 intelligent, addressable thermal detector requires a two-wire SLC circuit. In many retrofit cases, existing wiring may be used. `T-tapping' is permitted only for Style 4 (Class B) wiring. Model FDT421 is polarity insensitive when not used in Class-X mode, which can reduce installation and debugging times. The unit's value is multiplied with built-in **ISOtechnology** the True Class-X - NFPA 72 compliant SLC isolation feature, supporting up to 252 isolation ready devices per loop. When used in mixed mode a maximum of 30 non-isolated devices between isolation devices (wired in polarity-insensitive mode). Each detector fits into one (1) wall-or-ceiling footprint, and only occupies one (1) address on the signal-line circuit (SLC).

Model FDT421 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 FDT421 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 FDT421 is a plug-in, (2) two-wire thermal (heat) detector, compatible with Desigo Modular | FireFinder XLS/V and Model FC20-series FACPs. Each Model FDT421 detector has microcomputer-chip technology and highly stable, solid-state electronic circuitry. Model FDT421 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 FDT421 provides seven (7) field-selectable, pre-programmed temperature settings:

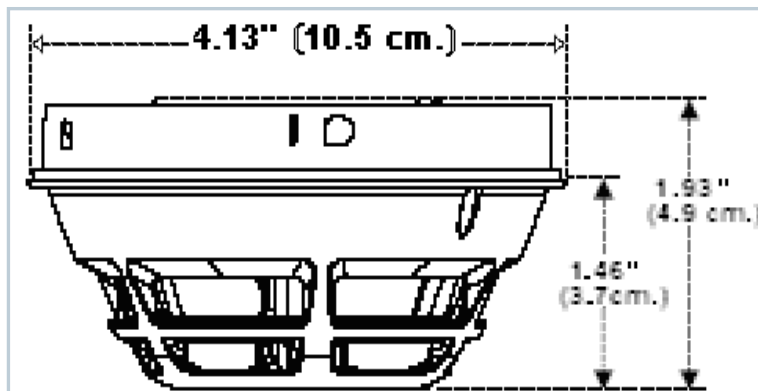
Fixed Temperature set points (5)	Rate of Rise set points (2)
<ul style="list-style-type: none"> Fixed 135°F (57°C) Fixed 145°F (63°C) Fixed 155°F (68°C) Fixed 165°F (74°C) Fixed 175°F (79°C) 	<ul style="list-style-type: none"> <u>Rate-of-Rise</u>: 15°F / min. (8.3°C) at fixed 135°F (57°C) <u>Rate-of-Rise</u>: 15°F / min. (8.3°C) at fixed 175°F (79°C)

Additionally, the Model FDT421 detector has the following optional feature:

- Model FDT421 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 Desigo Modular systems, as well as with FireFinder XLS/V and Desigo FC/FV2025 or FC/FV2050 FACPs.

Mounting Diagrams | Dimensions



Model FDT421

Field-Device Programmer / Test Unit

Model FDT421 is compatible with the Siemens field-device programmer / test unit (Model 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 175°F (79°C) alarm-threshold settings] +32° – +100°F, (0° – +38°C) [With 135°F (57°C) alarm threshold setting]
THERMAL RATING:	Model FDT421 provides seven (7) field-selectable, pre-programmed temperature settings: <ul style="list-style-type: none"> • Fixed 135°F (57°C) • Fixed 145°F (63°C) • Fixed 155°F (68°C) • Fixed 165°F (74°C) • Fixed 175°F (79°C) <ul style="list-style-type: none"> • 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 175°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)
Desigo Modular	7300	Desigo Modular (overview)
FC2005	6813	Desigo Fire Safety 50-point addressable
FC2025	6815	Desigo Fire Safety 252-pt. addressable (fire)
FC2050		Desigo Fire Safety 504-pt. addressable (fire)
FV2025	6821	Desigo Fire Safety 252-point addressable (fire w/ Intelligent Voice Communication [IVC])
FV2050		504-pt. addressable (fire w/ Intelligent Voice Communication [IVC])

Details for Ordering		
MODEL OR TYPE	PART NUMBER	PRODUCT
FDT421	S54320-F5-A1	Thermal (Heat) Detector

Compatible Devices		
MODEL OR TYPE	PART NUMBER	PRODUCT
ABHW-4B	S54320-F13-A1	Buzzer Version Audible Base (standard 3,000 Hz tone)
ABHW-4BZ	S54320-F13-A2	Audible Base
ABHW-4S	S54320-F14-A1	Sleeping Room Version, 520 Hz Low Frequency Audible Base
ABHW-4SZ	S54320-F14-A2	Audible Base
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

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

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

SIEMENS

Desigo® Fire Safety

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November - 2023
(Rev. 11)

Peripheral and Detection Devices Initiating Device

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

Architect & Engineer Specifications

- Siemens *ISOtechnology™*
 - Provides “True Class-X” operation meeting NFPA 72 SLC field wiring requirements
 - Supports 252 *ISOtechnology* ready devices per loop, and in mixed mode up to 30 devices between isolated devices
- Dual input on Model XTRI-D, via a single address
- Integral single-pole, double-throw (SPDT) relay on Model XTRI-R:
 - Up to 4 Amps.
- Low current draw
- Polarity insensitive (in non-isolation mode) via *SureWire™* technology:
 - Modern technology supports comprehensive system and interface communication
- Multi-color light-emitting diode (LED) indicates system status:
GREEN | AMBER | RED
- Mounts in a 4-inch (10.2 cm.) square, 2-1/4” (5.7 cm.) deep single-gang or double-gang back box
- Non-obstructive front-end access to programming port and wiring terminals
- Device Programmer | Test Unit programs and verifies address, as well as tests device functionality
- Restriction of Hazardous Substances (RoHS) compliant
- UL864 | UL2572 | UL2017 Listed; CAN/ULC-S527 & CAN/ULC-S576 Listed
 - File S24304, Vol. 3
- FM Approved

Product Overview

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

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

Specifications

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

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

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

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

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

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

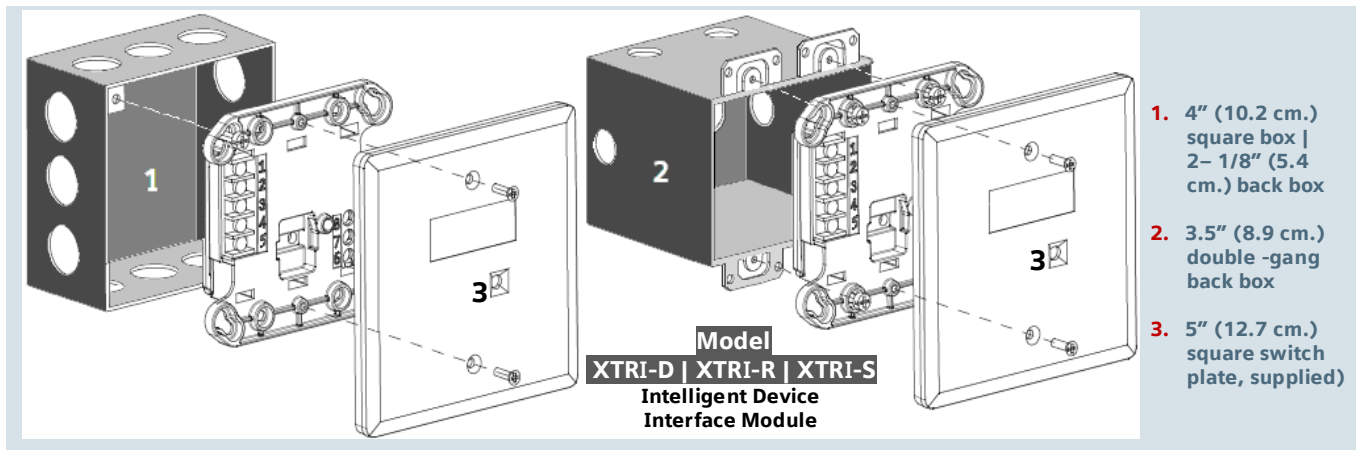
Model XTRI-S

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



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





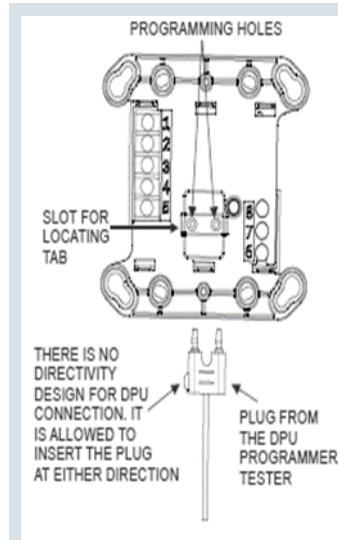
Specifications (cont.)

Model XTRI-R

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

Model XTRI-D

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



NOTES:

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

Models XTRI-D, XTRI-R and XTRI-S mount directly onto a 4-inch (10.2 cm.) square, 2 1/4" (5.7 cm.)-deep box back box, or to a user-supplied double-gang 3 1/2" deep back box.

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

Operation

Field-Device Programmer / Test Unit

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

Model XTRI-series interface module is connected to Model DPU with the programming cable provided with the tester.

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

Model DPU eliminates the need for cumbersome, unreliable mechanical programming methods (e.g. – dials and rotary switches), and reduces installation and service costs by electronically programming and testing the module prior to installation. When set in 'test' mode, Model DPU will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the module is operating properly.

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

Compatibilities

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

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

Temperature and Humidity Range

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

LED Indicators

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

Technical Data

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

Details for Ordering

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

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

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October - 2023
(Rev. 5)

SIEMENS

SUPPLEMENTARY EQUIPMENT

DATA SHEETS

SIEMENS*Ingenuity for life*

Desigo® Fire Safety Modular Remote Firefighters' Telephones and Accessories

Models FB-Series | FC-Series | FJ-Series | FTS-Series |
PCL-Series

Architect & Engineer Specifications

- Portable Firefighters' Telephones – (Models PFT and PFT-P)
- Remote Telephone Jacks – (Models FJ-303 | FJ-303SS | FJ-304, and FJ-304SS)
- PCL Remote Telephone Stations – (Models FTS | FTS-P | FTS-C | FTS-CL and FTS-PCL)
- Remote Telephone Station Boxes – (Models FB-300, FB-301)
- Remote Telephone Station Door (Model FC-300)
- UL864 & CAN / ULC-S576 Listed

Product Overview

Remote firefighters' telephones and accessories are available for use with the emergency telephone system found on Desigo Fire Safety Modular system fire alarm control panels (FACPs). These field-mounted accessories are used in conjunction with the Firefighters' Master Telephone (Model FMT) and the Telephone Zone Card (Model TZC-8B) located within the Desigo Fire Safety Modular system enclosure.

Specifications

The Remote connection to the emergency telephone system on the Desigo Fire Safety Modular system FACP can either be accomplished by plugging a portable firefighters' telephone into a remote jack, or lifting the handset on a remote telephone station. Either action will result in a signal from the main Desigo Fire Safety Modular operator interface (OI).

The system operator can then manually activate the communication signal between the connected telephone and Model FMT. The system supports a minimum of five (5) remote phones active simultaneously on a system without any degradation of the signal.

Portable Firefighters' Telephones

Models PFT and PFT-P Portable Firefighters' Telephones are available for field connection to the emergency telephone system. Each phone consists of a rugged, high-impact plastic handset with a red coiled phone cord attached. A ¼" (0.6 cm.) phone-plug assembly is attached to the end of the phone cord for connection to the field-mounted phone jacks.

Model PFT-P includes a momentary spring-action, push-to-talk switch mounted in the handset. This switch allows users to depress the button to activate the mouthpiece of the handset when speaking, to reduce background noise on the system.



Model PFT-series

The Telephone Enclosure

The Telephone Enclosure (Model MTE-2) includes the enclosure and door with clear lens, and can be used to store up to six (6) Model PFT or PFT-P telephone handsets in a locked cabinet. Firefighters typically take a handset from Model MTE-2 enclosure upon entering a building, and can report back to the main system by plugging into various jacks located throughout the building.

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).



Remote Telephone Jacks

The Remote Telephone Jacks (Models FJ-303, FJ-303SS, FJ-304, and FJ-304SS) are connected to the emergency telephone system. They are wired to the telephone zone circuits on the Telephone Zone Card (Model TZC-8B) located in the Desigo Fire Safety Modular system enclosure. There is no limit to the number of remote telephone jacks that can be connected to a single telephone zone circuit.

The remote telephone jacks are mounted to a single gang electrical box. Models FJ-303 and FJ-303SS have flying leads connected to the phone jack, while Models FJ-304 and FJ304SS have screw terminals. Models FJ-303 and FJ-304 have a red baked-enamel finish with a white, silk-screened telephone handset icon on them, while Model FJ-303SS and FJ-304SS have a brushed, stainless-steel finish with the handset icon.



Model FJ-304

Remote Telephone Stations

Remote telephone stations for the emergency telephone system consist of a handset / hook assembly, a wall-mounted back box, and a locked door with a breakable glass front. Models FTS, FTS-P, FTS-C, FTS-CL, and FTS-PCL Remote Telephone Stations consist of a handset (similar to Model PFT), a back plate, and a handset cradle with magnetic latch mounted to the back plate, and a connection cable from the handset to the back plate.

The **-P** suffix designates that a momentary, push-to-talk button is included in the handset. The **-C** suffix designates that an armored cable is used in place of a coiled cord between the handset and the back plate. The **-L** suffix designates that an integral light-emitting diode (LED) is mounted to the back plate to indicate two-way communication is established between the phone and Model FMT.

Remote telephone stations must be used with either Model FB-300 or FB-301S remote telephone station back box. Model FB-300 is used for flush-mount configurations, and Model FB-301S is used for surface-mount configurations. The remote station / back box assembly requires Model FC-300 cover with key-locked door and breakable glass. Additional replacement glass for Model FC-300 is available as Model FT-GLS.

Remote station / back box assembly requires Model FC-300 cover with key-locked door and breakable glass. Additional replacement glass for Model FC-300 is available as Model FT-GLS.



Model FTS-series

Dimensions

Remote Telephone Stations

- **FB-300 flush-mount box:**
15" {H} -x- 7" {W} -x- 3.5" {D}
38.1 cm. (H) -x- 17.8 cm. (W) -x- 8.9 cm. (D)
- **FB-301 surface-mount box:**
15" {H} -x- 8" {W} -x- 3.62" {D}
38.1 cm. (H) -x- 20.3 cm. (W) -x- 9.2 cm. (D)
- **FC-300 door:**
15" {H} -x- 8" {W}
38.1 cm. (H) -x- 20.3 cm. (W)

Remote Phone Jacks

- **FJ-303 | -303SS | -304 | -304SS:**
4.5" {H} -x- 2.75" {W}
11.4 cm. (H) -x- 7 cm. (W)
- Mounts in a single-gang box

Telephone Storage Enclosure

- **MTE-2:**
13.1" {H} -x- 24.1" {W} -x- 3.3" {D}
33.3 cm. (H) -x- 61.3 cm. (W) -x- 8.4 cm. (D)

Details for Ordering

MODEL OR TYPE	PART NUMBER	DESCRIPTION
FB-300	500-680587	Flush-mount back box for Telephone Station
FB-301	500-624388	Surface-mount back box for Telephone Station
FC-300	500-680588	Key-lock door, Telephone Station
FJ-303	500-690975	Field-Mounted Remote Phone Jack, Red
FJ-303SS	500-698309	Field-Mounted Phone Jack, stainless steel
FJ-304	500-692670	Field Mounted Remote Phone Jack
FJ-304SS	500-698310	Field mounted Phone Jack, term and stainless steel
FTS	500-299448	Firefighters' Telephone Station
FTS-C	500-299450	Firefighters' Telephone Station with armored cable
FTS-CL	500-299453	Firefighters' Telephone Station with armored cable, LED
FTS-P	500-299452	Firefighters' Telephone Station with push-to-talk button
FTS-PCL	500-299451	Firefighters' Telephone Station w/ push-to-talk button; armored cable and LED
FT-GLS	500-624347	Replacement Glass, Telephone Station
MTE-2	599-693291	Telephone-Handset Storage Enclosure (six handsets)
PFT	500-699427	Portable Firefighters' Telephone
PFT-P	500-699430	Portable Firefighters' Telephone with push-to-talk button
In Canada, order :		
FT-GLS	500-646239	French / English Glass For FC-300
FB-300	500-680587-C	Flush-mount back box for Telephone Station
FB-301	500-624388-C	Surface-mount back box for Telephone Station
FC-300	500-680588-C	French / English Door for FB-300

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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