Smithsonian Institution

Office of Planning, Design & Construction

SPECIFICATIONS

PROJECT NO.: 1812105

PROJECT TITLE: NMAI Mall - Replace Fire Alarm Panels
Volume 2

FACILITY: National Museum of the American Indian
4th St & Independence Ave SW, Washington, DC 20560

DATE: February 14, 2020

This project is approved as being in conformance with applicable provisions of the Smithsonian Directive (SD) 410.

Michael J. Carrancho, P.E., Deputy Director Date

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PROJECT MANUAL – VOLUME 2

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APPENDIX A

BASIS OF DESIGN

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1. Overview

The National Museum of the American Indian (NMAI) was chartered in Congress in 1989 at the 16th museum of the Smithsonian Institution. The NMAI museum on the National Mall is located at Independence Avenue and Maryland Avenue SW in Washington, DC. The museum is a five-story, 250,000-square-foot is the only national museum dedicated to the Native peoples of North, South and Central America. The educational mission is to preserve, present, and celebrate the Native cultures of the Americas.

The existing fire alarm control panels in the facility are Siemens MXL family fire alarm panels. The Siemens MXL family fire alarm panels were phased out in 2018, which means the spare parts will be difficult to obtain. Siemens will no longer be supporting the MXL series past 2018, so providing proper maintenance for this sysem will become problematic. Therefore, the Smithsonian Institution has implemented a fire alarm replacement project to replace the current panels to the Siemens Desigo Fire Safety Modular family fire alarm system.

2. Applicable Codes & Standards:

The following codes and standards are applicable to the installation of the fire protection and fire alarm systems:

A. Referenced Codes and Standards

1. International Building Code (IBC), 2018 edition
2. International Existing Building Code (IEBC), 2018 edition
3. International Mechanical Code (IMC), 2018 edition
4. International Fire Code (IFC), 2018 edition

B. National Fire Protection Association

1. NFPA 13 - Standard for the Installation of Sprinkler Systems, 2019 edition
2. NFPA 70 - National Electric Code, 2017 edition
3. NFPA 72 - National Fire Alarm, 2019 edition
4. NFPA 101 - Life Safety Code, 2018 edition
5. NFPA 75 - Standard for the Protection of Information Technology Equipment, 2017 edition
6. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilation Systems, 2018 edition
7. NFPA 909 - Code for The Protection of Cultural Resource Properties, 2017 edition

C. Smithsonian Institution

1. Smithsonian Institution Special Conditions for Architect/Engineer Services, July 2018
2. Smithsonian Institution OFEO Codes, Standards and Guidelines, February 2012
3. Smithsonian Institution OSHEM Fire Protection & Life Safety Design Manual, September 2014

4. Smithsonian Facilities Design Standards, January 2012
5. Smithsonian Directive 111 - Smithsonian Metrication Policy, March 2008
6. Smithsonian Directive 215 - Accessibility for People with Disabilities Policy, May 1994
7. Smithsonian Directive 418 - Smithsonian Historic Preservation Policy, May 2015.
8. Smithsonian Directive 419 - SI Safety and Health Program, April 2018
9. Smithsonian Guidelines for Accessible Design, March 2011

D. Other

1. Accessibility Standards: Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG) – 2010 w/ Supplements
2. ASCE/SEI 7 - Minimum Design Loads for Buildings and Other Structures, 2016 edition
3. ANSI/ASME A17.1 - Safety Code for Elevators and Escalators, 2016

3. Fire Protection

A. Fire Alarm Scope of Work

The scope of work for this project includes removal of the existing Siemens MXLV fire alarm control panels and replacing them with Siemens Desigo Fire Safety Modular addressable voice fire alarm and evacuation fire alarm control panels. In addition, all addressable initiating devices (detectors, monitor modules, relays, etc.) are also being replaced one for one with new Desigo Fire Safety Modular series devices as the current detectors installed in the facility will be discontinued in May 2020.

There are 14 existing Siemens Desigo Fire Safety Modular fire alarm control panels that are located throughout the building. The main fire alarm control panel is located in Security Control Room 0101 on the Baseemnt Level, with a mirrored panel located in the Fire Command Room located on the First Floor. The remaining fire alarm panels are distributed throughout the building and are located in electrical/telecommunication closets located on each floor.

These panels primarily serve the following equipment:

- Addressable manual pull stations
- Addressable automatic smoke & heat detection
- Addressable duct smoke detectors
- Interface with other equipment air handling devices, elevators
- Fire protection valve supervision and water flow switch supervision
- Notification appliances, consisting primarily of visual notification appliance (strobes) and audible notification appliances (speakers).

The Siemens MXL fire alarm control panels have reached the end of their useful life as of September 30, 2018, as the manufacturer will be discontinuing support of the product, which will result in difficulty in obtaining spare/replacement parts in the future. As such, the goal of this project is to bring all fire alarm systems within the building up to current technology.

1. Proposed Work

The goal of this project is to replace the existing MXLV fire alarm control equipment with new Siemens Desigo Fire Safety Modular addressable fire alarm and voice evacuation systems. In addition, the project also includes a one for one replacement of all MXL compatible addressable initiating devices (detectors, monitor modules, relays, etc.) with Desigo Fire Safety Modular compatible devices, due to the discontunating of the MXL detectors in May 2020. All existing wiring/circuits are existing to remain, as well as all other field devices such a visual and audible notification appliances and strobe power supply panels. These existing devices will be connected to the new Desigo Fire Safety Modular series panels.

Replacement of the MXL panels with Desigo Fire Safety Modular equipment is relatively simple from a hardware standpoint, as each system is addressable and for the most part uses comparable equipment.

Each of the MXL panels in general contains the same equipment, and includes addressable loop modules for signaling line circuits, notification appliance circuit panels, voice amplifiers, and network cards.

The Desigo Fire Safety Modular system has comparable modules that can support each of the circuits provided by the existing Desigo Fire Safety Modular systems:

- Signaling Line Circuits – Use DLC device loop cards to support the signaling line circuits that will be provided with new Desigo Fire Safety Modular compatible initiating devices.

- Notification Appliance Circuits – Use ZIC-8B or ZIC-2C zone indicating modules to serve the existing notification appliance circuits.

- Amplifiers – Use ZAM zone amplifier modules to serve any existing audio notification appliance circuits.

- Network – Use NIC-C network interface card for networking of the new Desigo Fire Safety Modular systems.

- Audio Riser: One portion of the migration from the MXL system to the Desigo Fire Safety Modular system that is identified by Siemens as not being fully compatible is the audio network riser. The MXL system utilized a single pair of twisted shielded wire for the audio riser. According to Siemens, the Desigo Fire Safety Modular system uses two pairs of unshielded twisted wire. As a result, new wiring for the fire alarm audio riser will need to be provided as part of this project.

As can be seen above, the Desigo Fire Safety Modular equipment is easily capable to support the existing MXL fire alarm equipment that is not being replaced as part of this project. The challenge in the migration from the Siemens MXL to the Desigo Fire Safety

Modular system will be the requirements to keep the fire alarm system active and in service while the migration is taking place.

The goal of the project is to have the new Desigo Fire Safety Modular equipment located in the same location as the existing MXL equipment.

Where possible, if there is available wall space near the current location of the MXL equipement, the new the new Desigo Fire Safety Modular control equipment will be temporarily be mounted in this location during the initial installation, and moved into its final location upon final acceptance of the system and removal of the existing MXL equipment.

In areas where there are space constraints and there is no available wall space, the new Desigo Fire Safety Modular panel will be provided on a temporary rack during the initial instllation, and moved into its final location upon final acceptance of the system and removal of the existing MXL equipment. It was decided that the new Desigo Fire Safety Modular panels would be put on the temporary stands rather than the MXL panels, due to the ponential for damaging MXL parts which may not be obtainable with the end of life cycle of the product. This will require a large amount of coordination by the contractor to ensure that all circuits are properly identified and prepared for the for the migration of the circuits from the MXL to the Desigo Fire Safety Modular panel, as well as relocation of the Desigo Fire Safety Modular panel from the temporary rack/stand, to its final location. Due to the complexity of this process, this will be a multi-step process that will need to take place over a number of system outages in order to migrate the circuits successfully.

There was a request from the SI Fire Shop to possible reduce the number of fire alarm panels in the buiding and consolidate as much as possible without having to provide any significant modifications to the existing field circuiting. As part of the design, the potential to consolidate panels was evaluated. Based upon the existing fire alarm system arrangement, as well as conversations with Siemens, it has been determined that the the only panel consolidation that can occur is at the sub-node locations where the amplifiers can be consolidated into a single cabinet with the other fire alarm modules. For the main fire alarm nodes, the amplifiers will remain in a separate cabinet.

In addition to the replacement of the fire alarm control panels, there are two existing remote annunciators located on the First Floor the building that will be replaced modified as needed to function with the new Desigo Fire Safety Modular series control equipment. There are also two smoke control panels located in the Fire Command Room on the First Floor that will also need to be modified to be compatible with the new fire alarm control equipment.

There is also a existing Siemens NCC workstation that is installed within the Security Control Room 0101. As part of this project, the NCC workstation will be replaced with a UL-listed UL-listed Siemens Desigo CC workstation. This will provide the ability for the fire alarm system to be integrated into a future mass notification system when such a system is implemented at NMAI.

APPENDIX B

CONSTRUCTION SCHEDULE

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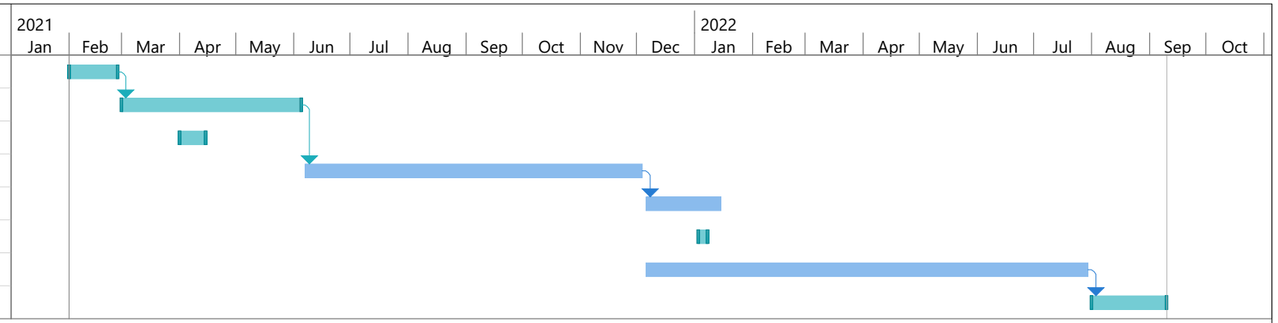
ID	Task Name	Duration	Start	Finish	Resource Names
1	Bidding/GMP	4 wks	Mon 2/1/21	Fri 2/26/21	
2	Base Bid - Award / Mobilization/ Submittals	14 wks	Mon 3/1/21	Fri 6/4/21	
3	Base Bid - Existing Conditions Testing	2 wks	Thu 4/1/21	Wed 4/14/21	
4	Base Bid - On-site Installation	26 wks	Mon 6/7/21	Fri 12/3/21	
5	Base Bid - Final Testing/As-Builts/Closeout	6 wks	Mon 12/6/21	Fri 1/14/22	
6	Intelligibility Testing	1 wk	Mon 1/3/22	Fri 1/7/22	
7	Option 1 - On-Site Installation	34 wks	Mon 12/6/21	Fri 7/29/22	
8	Option 1 - Final Testing/As-Builts/Closeout	6 wks	Mon 8/1/22	Fri 9/9/22	



Project: NMAI-Mall Upgrade Fire Alarm Panels
Date: Tue 2/11/20

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	

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APPENDIX C

FIRE ALARM CUT SHEETS

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SIEMENS

Ingenuity for life

Innovative protection that combines power and flexibility

Desigo® Fire Safety Modular outpaces industry standards and includes cutting-edge detection and communication capabilities

usa.siemens.com/desigo-fs-modular

Intelligent fire detection for large or complex applications

The Desigo Fire Safety Modular system adds many new innovative features and capabilities available for the Desigo Fire Safety portfolio including I/O modules with built-in isolation and addressable notification appliance booster (PAD-5). The modular system is programmed, operated, and configured in the exact same manner as the FireFinder XLS and offers seamless migration for MXL. These are just some of the advances in the long-term plan of uniting large and mid-Size Desigo Fire Safety panels on the same platform.

Key Benefits:

- Class X Isolation I/O Modules with improved performance and reduced power consumption
- PAD-5 with expanded flexibility in designing multi-floor systems and features like isolator device capability, all NACs have Siemens patented Boost Technology
- 8-Channel audio system supporting 300 digital messages that exceed government and Mass Notification System (MNS) specifications
- High-level interface with most VESDA Detection
- Compatible with the full line of detectors and peripherals that meet the latest codes & standards including a 520Hz model Low Frequency detector audible base and speakers suitable for sleeping areas

Simple to Sophisticated

No project is too small or too big for Desigo Fire Safety Modular!

Desigo Fire Safety FC2005
Standalone 50 Point

Desigo Fire Safety FC2025/2025V
Standalone up to 250 Point & Network (32) with Integrated Fire, Voice, MNS, and Migration

Desigo Fire Safety FC2050/2050V
Standalone up to 500 Point & Network (32) with Integrated Fire, Voice, MNS, and Migration

Desigo Fire Safety Modular
Standalone 500 – 2,500 Point & Network (64) with Integrated Fire, Voice, MNS, Smoke Control, Phones, and Migration

Desigo CC

Sinorix 1230 & 227

Complexity

Performance

Key Benefits for Universities

- Flexible network configurations
- Conventional and intelligent release options

Detection & Suppression:
- ASAtechnology provides a no false alarm guarantee
- CO detectors keep students safe where they live

Evolves with Facility:
- Developed to network with other buildings/ panels
- Changes detectors by type or setting according to space utilization

Key Benefits for High Rises

- Send targeted and varied messages simultaneously
- Upgrade fire alarm software without taking system offline

Multi-Criteria Detection:
- Add value to residential areas with combination fire/CO detector
- ASAtechnology detectors eliminate false alarms caused by cigarette smoke or burnt food

Centralized Control:
- Integrate building systems for simplified building management
- Management station allows customization of views and control

Premier Life Safety:
- 300 custom messages enable precise announcements by floor

Key Benefits for Hospitals

- Desigo Fire Safety Modular anchors multimodal life safety system
- Multicriteria detectors support area-specific detection; CO detection for patient room
- Life safety management station provides centralized control of networked systems

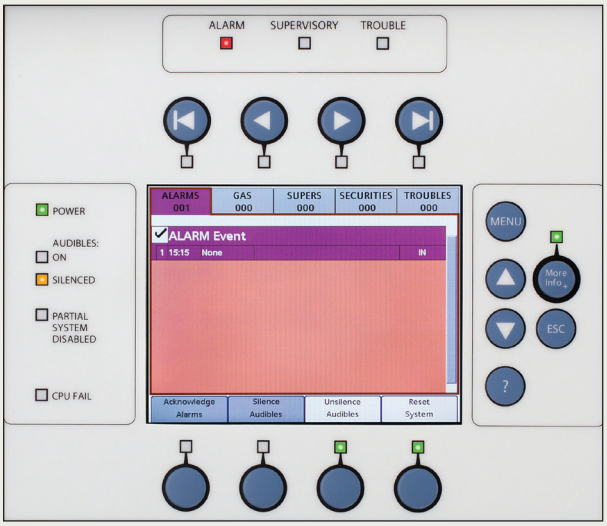
Control & Communicate:
- Fire panel supports 300 custom messages providing event specific information to emergency responders
- Management station provides integrated cameras for live visual event confirmation

Key Benefits for Data Centers

- A complete solution for early detection, alarm and suppression protection at the highest levels
- Building and life safety management systems give real time, customized views of networked systems
- Industry leading flexibility for fire detection

Very Early Warning Fire Detection:
- Highly sensitive ASAtechnology detection from Siemens that complies with NFPA 720, NFPA 76 (Telco), and UL 2075
- Desigo Fire Safety Modular provides a cost efficient and high level interface with most VESDA Net devices

Designed with advanced features and options



High-Performance Full-Color Operator Interface

6" touchscreen provides a central point of annunciation and control for networked Desigo Fire Safety Modular and MXL panels.

- Displays, reports, and responds to alarm signals, trouble alerts, diagnostics, security signals, hazardous or dangerous conditions, and other system information
- Full-color LED display efficiently and visually communicates a wide range of alarm types or system conditions to facility staff and first responders
- The screen is color-coded according to the event type and is customizable by user preference
- Event types support include typical fire events, as well as mass notification, gas and maintenance events
- Touch-sensitive keys are physically responsive, helping users confirm their entries through tactile feedback. Every signal offers a deep "drill-down" path to report many levels of detail about the signal or event
- Can be programmed to display messages in multiple languages including traditional Chinese, Korean, Spanish, Portuguese, French and Hebrew

Advanced Features

XDLC Loop Card

- Full Line of Detection and Peripherals
- I/O Modules with built-in Isolation
- Addressable PAD-5 NAC Extender
- PAD-5 remote releasing capability
- PAD-5 Conventional zone inputs

Hardware and Software Compatibility

Industry leading data connection options for faster, more versatile data transfer and management options.

- USB connections make programming, data transfer, and database management tools convenient and easily accessible for authorized personnel
- High-speed Ethernet port
- SD slot, backup SD card slot, and SD card that remains with panel and keeps critical system and configuration information at hand
- Hot swap SD card file transfer without powering down the system

External References

Coordinate increasingly complex end-to-end life safety functions into one single system by accommodating up to 2,500 functions in a single node.

- Supports up to 1,000 external references, or signals from networked panels and devices
- Desigo Fire Safety Modular can activate and manage a complex smoke control for Mass Notification System functions and other external panel and facility control responses to fire system alarms or events

XDMC Digital Message Card

300 message capacity allows 100 minutes of recording time and enables multi-layered and pinpoint specific messaging.

- Supports MP3 and WAV files
- Can broadcast two different messages simultaneously
- Includes a complete phrase library for building custom phrases by linking single message components together into a full sentence or paragraph for specific conditions or locations
- Expanded messaging functions support all types of emergency communications, such as fire, acts of terrorism, weather events, and other emergency conditions

Composer Configuration Laptop Tool

300 message capacity meets your immediate needs and supports future expansion, including Mass Notification Systems (MNS) messaging capability.

Create up to 300 different voice or audio messages with a total of 100 minutes of message time.

- Allows recording, editing, and integration of customized messages using standard recording and audio applications like Microsoft's Voice Recorder

Advanced Detection Support

Supports a full range of Siemens detector technologies, from cost-competitive single-function optical and thermal only detectors to sophisticated multi-criteria and variable setting detectors.

- High performance multi-criteria ASAtechnology detectors with or without optional CO detection
- Audible signal patterns for carbon monoxide life safety events, such as the Temporal Four coded signal
- Very Early Warning Fire Detectors (VEWFD) comply with NFPA 76 (Telecommunication Standard), UL 2075, and NFPA 720

MXL Loop Card (MLC)

Allows customers to upgrade their system to take advantage of the faster processor and advanced features in the Desigo Fire Safety Modular while keeping their investment in existing MXL devices.

- Upgrade a system loop without requiring a completely new installation, saving time and money
- Preserve investment in wiring and devices

Network Ring Card

Creates a true ring topology and replaces redundant pairs to lower the cost of installation and provide a higher degree of survivability in system communications.

- Provides a true ring topology by simply connecting the last panel to the first in the network
- No more double conduit runs from separate directions
- Mix copper and fiber in segments

Full Integration with VESDA / High-Level Interface Support

Reads a full range of VESDA alarm and status signals for highly sensitive smoke detection and pinpoint diagnostics – all fully compliant with NFPA 76 standards.

- Full integration with most VESDA aspiration detectors eliminates the need for separate relays and bulky, extra wiring
- Recognizes and reports on four alarm levels per detector
- Specific trouble signals provide key information of the type of trouble condition rather a general "fail" signal
- Reports alarms and system status at the panel
- Reset the VESDA detectors right from the Desigo Fire Safety Modular

Offering innovation, excellence, partnership, and customer choice

Siemens provides decision makers with effective solutions, products, and service provider options for their fire & life safety needs – now or in the future! Our approach to market through a dual brand strategy provides the most comprehensive market coverage to meet your needs.

Our Commitment
Siemens market approach provides world class customer choice. No matter the project scope or need – we offer the right solutions, products, and service provider choice for the entire lifecycle of your fire & life safety system.

Our nationwide network of Siemens offices and solution partners are Siemens fire technology certified to service and support any Siemens fire system.

Desigo Fire Safety
Desigo is the complete portfolio delivered by Siemens branches offering a total building solution. Desigo offers a comprehensive portfolio of fire panels, detection, mass notification, and integrated building management systems that create an intelligent infrastructure to protect your building and its occupants. It provides the right systems, solutions, and platforms to meet your comfort, security, and life safety needs for any application.

Contact customer service to find the Siemens Field Office in your region!

To start your next fire & life safety project, and learn about which solution is best for your needs, contact Siemens Customer Service today. Call us at (800) 262-7976, or email inquiries to fpkcustomerservice.industry@siemens.com.

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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract. The document contains a general product overview. Availability can vary by country. For detailed product information, please contact the company office or authorized partners.

Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming, and resource shortages. Maximum efficiency has top priority – and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

"We are the preferred partner for energy-efficient, safe, and secure buildings and infrastructure."

Desigo® CC

Fire Safety Management Station

Version 4.0

SIEMENS

Ingenuity for life

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 252/504
- ☐ Monitors and controls up to 63 fire panels per Desigo Fire Safety Modular, FireFinder® XLS, MXL network
- ☐ Up to 32 Desigo Fire Safety 252/504 panels per network
- ☐ Support CO detection with ASA*technology*™
- ☐ Automatic or manual Remote Notification (ReNo) 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)
- ☐ 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 and ULC recognized as an ancillary annunciator when used with a non-UL864 / ULC-S537-11 Listed computer that is connected to a Desigo 252 / 504-point addressable, FireFinder or Desigo Fire Safety Modular FACP
- ☐ 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 Desigo Fire Safety Modular, FireFinder® XLS, MXL, and Desigo Fire Safety 252/504.

Desigo CC

Key Features

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
- Remote 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.

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

Key Features – (continued)

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

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 7 64-bit / MS Windows 10 64-bit (Professional | Enterprise) MS Windows Server 2012 R2 64-bit / 2016 64-bit / 2019 64-bit
Web Clients and Windows App Clients	MS Windows 7 64-bit / 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 (Standard | Express | Enterprise) NOTE: 2014 R2 Express is free and included with the product
Microsoft (MS) Office	
Desigo CC Server, FEP, and Installed Clients	MS Office 365 / MS Office 2016 / MS Office 2013 MS Office 2010 / MS Office 2007 (Standard | Small Business | Professional | Enterprise)

Virus Scanners	
Desigo CC Server, FEP, and Installed Clients	Microsoft Windows Defender Antivirus (UL/ULC listed) Kaspersky (© 1997-2017 Kaspersky Lab) Avira (© 2017 Avira Operations GmbH & Co. G.) McAfee (© 2003-2017 McAfee, LLC) Bitdefender (© 1997-2017 Bitdefender) Kaspersky (© 1997-2017 Kaspersky Lab) Trend Micro Office Scan(© 1997-2017) AVG (© 2017 Avast)
Firewalls	
Desigo CC Server, FEP, and Installed Clients	Microsoft Windows Firewall (UL/ULC listed) Norton Security (© 1995-2017 Symantec Corporation) Comodo Firewall (© 2017 Comodo Group, Inc.) Kaspersky TOTAL Security (© 1997-2017 Kaspersky Lab) Bitdefender TOTAL Security (© 1997-2017 Bitdefender) McAfee (© 2017 McAfee, Inc.) ZoneAlarm (ZoneAlarm 2017 Extreme Security) Dell SonicWALL security (© 2017 SonicWALL L.L.C.) Check Point Next Generation Firewalls (© 2017 Check Point Software Technologies Ltd.) Cisco PIX Firewall Software

Supported Sub-Systems and Protocols

Fire Safety	
Desigo Fire Safety Modular	MP1.0 | MP1.1 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 252/504 systems (FC20-series / FV20-series)	MP1.x | MP2.0 | MP2.1 | MP2.2 Up to four (4) fire or voice networks Up to 16 panels per SafeDLINK or 32 panels per FCnet
FireFinder XLS	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 /V	MXL 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	MP1.0 | MP1.1 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 maximum of 24 XNET networks per system Up to 63 panels per XNET network
Cerberus PRO 252/504 systems (FC92-series / FV92-series	MP1.x | MP2.0 | MP2.1 | MP2.2 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 (11.2) | 2018 R3 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 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) 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
SIMATIC	S7-300 /400 /1200/1500
Open System Standard Protocols	
BACnet:	Building Automation Control network, Revision 1.15
OPC Server	OLE for Process Control OPC DA 2.05, 3.0
OPC Client	OLE for Process Control OPC DA 2.0
Modbus	Modbus IP communication protocol
SNMP	SNMP Agents monitoring (V1 and V2)
IEC 61850	protocol for electrical substations and devices
Notification Protocols and Devices	
Email	POP3/IMAP/SMTP with SSL/TSL
Pager	ESPA 4.4.4; Ascom
Mobile	SMS
3G GSM Modem	EHS6T USB modem from Gemalto HT63E, HT910E and HT910G modems from Telic

Technical Data

UL / ULC Listed Computers

	Hardware Category A	Hardware Category B
MODEL NUMBER:	• UHW-CATA-01 • UHW-CATA-PKG-SM	• 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:	**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.	**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.) **Onboard Intel HD Graphics: 4600** • 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 2016 | 64-bit | 5 CAL	Microsoft Windows Server 2016 | 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 Resolution: 4096 –*x*- 2160 @ 30Hz Display Port 4096 –*x*- 2160 @ 60Hz Display Port, (max. of three)	Matrox C680 PCIe x16, 2GB RAM Resolution: 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 3.0; 2x – USB 2.0 on Rear Panel 2x – USB 2.0 on Front Panel	2x – USB 3.0; 2x – USB 2.0 on Rear Panel 2x – USB 2.0 on Front 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** • one (1) Hardware Category A Computer: Model UHW-CATA-01 • one (1) 22" (56 cm) LCD Monitor: Model UHW-0000-22L-L • one (1) Serial Network Card for XNET connection: Model SNC
UHW-CATB-PKG-SM	S54465-C82-A2	**Items relative to Model UHW-CATB-PKG-SM** • one (1) Hardware Category B Computer: Model UHW-CATB-01 • one (1) 22" (56 cm) LCD Monitor: Model UHW-0000-22L-L • one (1) Serial Network Card for XNET connection: Model SNC
UHW-CATB-PKG-LM	S54465-C83-A1	**Items relative to Model UHW-CATB-PKG-LM** • one (1) Hardware Category B Computer: Model UHW-CATB-01 • one (1) 42" (107 cm) LCD Monitor: Model UHW-0000-42L-L • one (1) Serial Network Card for XNET connection: Model SNC
Computers Only		
UHW-CATA-01	S54465-C73-A1	**Items relative to Model UHW-CATA-01** • 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 / 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 / ULC Listed Hardware Category C Computer with Windows Server 2016 • 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 / ULC Listed Hardware Category D Computer with Windows Server 2016 • 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: Model MOSA Includes: • 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 ▪ 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* 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* 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:** • 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:** • 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:** • 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:** • 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:** • valid for all client types
CCA-MAX-CL	P55802-Y120-A200	**License to allow for maximum number of clients:** • 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 • 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.

Technical Data – (continued)

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)

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® CC

Siemens Industry, Inc.
Smart Infrastructure - Building Products
8 Fernwood Road • Florham Park, NJ 07932
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Rev. (11)

Desigo® Fire Safety Modular system

System-Status Display Series
Model SSD, SSD-C and SSD-C-REM

Architect & Engineer Specifications

- ☐ 4" –x– 40" (10.2 cm. –x– 102 cm.) front-end, backlit liquid-crystal display (LCD) screen
- ☐ Audible and event-status light-emitting diodes (LEDs)
- ☐ Scroll buttons to view additional events
- ☐ Local sounder
- ☐ Supports 'Style 4' or 'Style 7' wiring
- ☐ Built-in transient protection
- ☐ Mounts in its own enclosure or REMBOX-series enclosure
- ☐ Optional local-system control
- ☐ Downloadable firmware
- ☐ UL864 & CAN / ULC-S576 Listed;

Product Overview

The System-Status Display (SSD Series) is a remote light-emitting diode (LED) / liquid-crystal display (LCD) display unit that shows the local status of a Desigo Fire Safety Modular system. A LED will illuminate when Alarm | Supervisory | Trouble and Security events occur on the system. A (4) four-line 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.

Specifications

The SSD Series display has separate LEDs for Alarm | Supervisory | Trouble and Security events on the Desigo Fire Safety Modular system. Each LED will flash when unacknowledged events of that type are present on the system. The LED will change to steady, upon acknowledgment of the event.

Also, there are two (2) LEDs that indicate the state of audible circuits on the system: one (1) LED to indicate that the circuits are active and one (1) LED to indicate the circuits have been silenced.

The LCD display on the Model SSD-series display has four (4) rows – 40 characters for each row. When the Desigo Fire Safety Modular system is in its normal supervisory state with no events present, the display will annunciate the system ID information, the date and the time of day.

When an event occurs on the system, the LCD display will show the event type and address, the time of the event, the custom message for that address, the usage of the device, and whether the event is `acknowledged' or not.

Additionally, the display will show the total number of all types of events present on the system. The display has a backlight feature that operates upon receiving any event information or when any operator buttons are pressed.

Model SSD-C-REM
System-Status Display Series

Model SSD-C
System-Status Display Series

Specifications – (continued)

A local sounder is included with the Model SSD-series display that operates when any events are displayed on the system. The sounder can be optionally disabled through software programming. Pressing any operator buttons will silence the local sounder when an event is present.

The SSD Series display has two (2) display-control buttons that are used to display the next or the previous event information in the sequence, and a local sounder silence button. Programming for the SSD Series display is done with the *Zeus-D* programming tool.

Models SSD-C and Model SSD-C-REM have three (3) additional control buttons for acknowledging events, silencing audible circuits, and resetting the system. Model SSD-C has 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 enabling the control buttons.

The SSD Series display is remotely connected to the H-Net communication bus from any Model NIC-C interface in a Desigo Fire Safety Modular system enclosure using Class B, Style 4 or Class A, Style 7 wiring. 24VDC is required to run the SSD Series display, and can be provided from a Model PSC-12 Power Supply or PSX-12 Power Supply Extender in the Desigo Fire Safety Modular system enclosure. Power from other UL Listed 24VDC power sources is also acceptable.

The SSD Series display has screw terminals capable of supporting 12 to 22-gage wires. The H-Net communication from the Desigo Fire Safety Modular system can be terminated on the SSD Series display, or may pass through for communication with other modules. Diagnostic LEDs on the SSD Series display indicate power and communication status.

Models SSD and SSD-C can be mounted in a (2) two-gang electrical box or a (4) four-inch square electrical box. No flush-trim kit is required. The unit is approximately 10-1/2" (26.7cm.) wide, 6-1/8" (15.2cm.) high, and1-1/2" (3.8cm.) deep.

The Model SSD-C-REM is mounted in a Model REMBOX2 or Model REMBOX4 Remote Lobby Enclosure, or any CAB enclosure inner door. Model SSD-C-REM requires two (2) module spaces in the remote lobby enclosure, and its bracket supports the mounting of four (4) inner door modules (such as Model SCM-8 or Model LCM-8 modules) below the display. The inner door module spaces are arranged in two (2) rows of (2) two-module spaces.

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).

Electrical Ratings

SSD-C	
TYPICAL	200mA (max) at 24 VDC
INPUT VOLTAGE	24 VDC (Nominal) (31 VDC max) filtered

NOTE:
An auxiliary-regulated, power-limited power supply may be used to provide power to Model SSD. The power supply must be UL Listed for Fire-Protection Signaling Application. Be sure to also include Model SSD-C in the battery calculations.

SSD / SSD-INTL	
TYPICAL	200mA (max) at 24 VDC
INPUT VOLTAGE	24 VDC (Nominal) (31 VDC max) filtered

NOTE:
An auxiliary-regulated, power-limited power supply may be used to provide power to Model SSD. The power supply must be UL Listed for Fire-Protection Signaling Application.

SSD-C-REM	
TYPICAL	200mA (max) at 24 VDC
INPUT VOLTAGE	24 VDC (Nominal) (31 VDC max) filtered

NOTE:
An auxiliary-regulated, power-limited power supply may be used to provide power to Model SSD-C-REM. The power supply must be UL / ULC approved for Fire Protection Signaling Application. Be sure to also include Model SSD-C-REM in the battery calculations.

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
SSD	500-034170	System-Status Display
SSD-C	500-648733	System-Status Display [with control]
SSD-C-REM	500-634773	System-Status Display [with control for remote-lobby enclosure]
REMBOX2	500-633772	Small Remote-Lobby Enclosure
REMBOX4	500-633914	Large Remote-Lobby Enclosure
BCM	500-033320	Blank Control Module Plate

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October 2017 – New Issue
(**Rev. 0**)

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
- ☐ Degrade 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.

Line Card (for legacy panel to Desigo Modular panels)

Temperature and Humidity Range

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

Related Documentation

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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Desigo® Fire Safety Modular system

Device Loop Card
Model XDLC

Architect & Engineer Specifications

- ☐ Supports up to 252 addressable points
- ☐ Operates and maintains all devices residing on up to four (4) `Class A', eight (8) `Class B' addressable circuits
- ☐ Compatible with Siemens intelligent, addressable 'X' and 'H'-series devices:
  - Multi-criteria / Carbon Monoxide (CO) Detector with ASA*technology*™
  - Multi-criteria Detector with ASA*technology*™
  - Multi-criteria Detector
  - Thermal (Heat) Detector
  - Input / Output Interface Module
- ☐ Polarity insensitive (in non-isolation mode) via *SureWire*™ technology:
  - Modern technology supports comprehensive system and interface communication
- ☐ Quantity 16 diagnostic light-emitting diodes (LEDs) for easy circuit diagnosis
- ☐ Microchip controls on-board isolators
- ☐ Device Programmer / Tester (Model DPU) programs and verifies device's address:
  - programming capabilities include testing a duct detector, as well as other Siemens addressable devices
- ☐ Supports `Class B' | `Class A' | `Class X' wiring
- ☐ Supports T-Tapping
- ☐ Degrade mode
- ☐ UL864 | CAN / ULC Listed

Product Overview

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

Each Model XDLC plugs into one (1) slot of the Model CC-2 or Model CC-5 card cage. Programming for Model XDLC is accomplished via the Desigo Fire Safety Modular system custom-configuration tool, *Zeus-D*. Model XDLC takes one (1) address on the network, communicating up to a total 252 detectors and devices. Model XDLC has 16 LEDs for diagnostic purposes, and provides ground-fault detection and zone-isolation circuitry.

Specifications

The `Class X' Device Loop Card (Model XDLC) initializes, operates and maintains all devices residing on up to four (4) `Class A', eight (8) `Class B' addressable circuits. Model XDLC communicates all relevant device and event data (`Alarm', `Trouble' and `Supervisory' commands) to a Desigo Fire Safety Modular (Desigo Modular) fire-alarm control panel (FACP), and supervises the device loop circuit.

Model XDLC is polarity insensitive via *SureWire* technology, which greatly reduces commissioning time normally spent tracing down crossed-field wiring. Model XDLC communicates detector data, such as sensitivity of intelligent fire detectors and logic-function information, to the Desigo Modular Operating Unit (Model FCM2041-U2), which is located within a given Desigo Modular system.

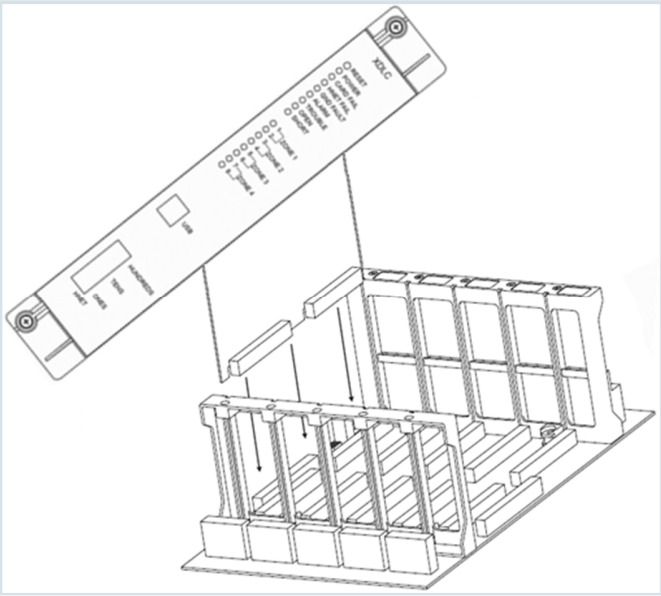
Each device loop card supports four (4) `Class A', eight (8) `Class B' circuits for up to a total of 252 addressable devices – as well as relay and audible bases, remote lamps and duct-detector housings in any combination.

The microprocessor in a Model XDLC controls the on-board isolation, in case there is a fault (short) in any of the circuits, thus allowing the other circuit to continue operating. For continuous protection, the on-board microprocessor continues to operate even in the event of a CPU failure.

NOTE: Refer to installation manual: **P/N – A6V101040156** to ensure Model XDLC compatibility with the Siemens FACPs intended for use in the given application.

Model XDLC
Side View

Model XDLC
Front View



Model XDLC

Diagram of an `Class X' Device Loop Card mounted to a Siemens Card Cage

Temperature and Humidity Range

`Class X' Device Loop Cards are UL Listed | ULC Listed for indoor dry locations within a temperature range of 120+/-3°F (49+/-2°C) to 32+/-3°F (0+/-2°C) and a relative humidity of 93+/-2% at a temperature of 90+/-3°F (32+/-2°C).

Technical Data

24V CURRENT DRAW: [Back Plane]	0
24V CURRENT DRAW: [Screw Terminal]	100mA + 1.4mA per device
6.2V CURRENT DRAW: [Back Plane]	1mA, max.
24V CURRENT DRAW: [Standby]	100mA + 1.4mA per device
DEVICE LOOP: [@ 30 VDC Max.]	500mA, max. (power limited)

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
XDLC	S54430-B8-A1	`Class X' Device Loop Card

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August 2018 – Supersedes sheet dated 10/2017
(Rev. 2)

Desigo® Fire Safety Modular system

Live Voice Module

Model LVM

Architect & Engineer Specifications

- ☐ Dynamic microphone with push-to-talk switch
- ☐ Coil cord
- ☐ Fully supervised
- ☐ Pre-announce tone LED
- ☐ Ready-to-page LED
- ☐ Six (6) programmable, built-in switches
- ☐ Six (6) pairs of built-in LEDs
- ☐ Speaker with volume control
- ☐ Mounts to the inner door of Models CAB 1 | CAB2 | CAB3 or remote lobby enclosure
- ☐ UL864 & CAN / ULC-S576 Listed;

Product Overview

The Live Voice Module (Model LVM) provides a supervised, high-quality and dynamic microphone to give firefighters a means of sending live voice messages to specified audio zones. Model LVM mounts on the inner door of a CAB1 | CAB2 | CAB3 or remote lobby enclosure. Model LVM includes a microphone with a push-to-talk switch and coiled cord. The microphone and push-to-talk switch are fully supervised.

Model LVM also provides a GREEN preannounce LED, which 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 1-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 of LEDs contains one (1) bi-color (RED / GREEN) and one (1) YELLOW LED.

The six (6) switches can be programmed for manual voice functions, as well as generic system functions.

When the switches are used as generic switches, all LEDs can be programmed for ON | OFF or FLASHING.

Model LVM is supervised by the Model DAC-NET card, and is assigned to one (1) of the 99 Model DAC-NET sub addresses (CAN addresses).

Model LVM
Live Voice Module

Temperature and Humidity Range

Model LVM is UL 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).

Electrical Ratings

24V CURRENT	25mA, max.

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
LVM	500-034090	Live Voice Module

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October 2017 – New Issue
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Desigo® Fire Safety Modular system

Controllable Relay Card
Model CRC-6

Architect & Engineer Specifications

- ☐ Six (6) independent, `Form C' single-pole, double-throw (SPDT) contacts
- ☐ 4 Amps @ 30 VDC / 120VAC, resistive
- ☐ 3.5 Amps @ 120 VAC Inductive (0.6 P.F.)
- ☐ Fully programmable
- ☐ Time-based operation
- ☐ Manual or automatic control
- ☐ Supervised coils
- ☐ Built-in status and troubleshooting light-emitting diodes (LEDs)
- ☐ On-board microprocessor
- ☐ UL864 & CAN / ULC-S576 Listed;

Product Overview

The Controllable Relay Card (Model CRC-6), which is used with the Desigo Fire Safety Modular fire-alarm control panels (FACPs), is designed to provide auxiliary control of building functions: door-holder release; elevator capture; smoke control, lock release, etc. Model CRC-6 plugs into one (1) slot in the Model CC-5 or Model CC-2 Card Cage, and provides six (6), fully programmable relays.

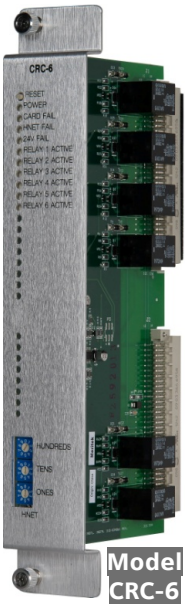
Each relay contains one (1) set of SPDT contacts rated at 4 Amps 30 VDC / 120 VAC resistive and 3.5 amps 120 VAC inductive (0.6 pF). All relay coils are supervised to ensure proper operation. Individual relays can be automatically activated or deactivated through control by event and time-based logic contained in the Operator Interface (OI).

Each relay may also be either manually controlled or `Disarmed'.

The OI will indicate the affected relay, and the `Partial System Disable' indicator will illuminate until the relay is returned to an `Armed' condition. Model CRC-6 has on-board LEDs for system status and troubleshooting.

Indication of power, communication, internal operation, and 24V power source are provided, as well as indication of each relay's operation and status.

Programming for Model CRC-6 is performed using the Desigo Fire Safety Modular systems software configuration tool, *ZEUS-D*.



Controllable Relay Card

Controls and Indicators

RESET SWITCH	Re-initializes the Model CRC-6 card only.
POWER LED	Indicates system power is applied to Model CRC-6.
CARD FAIL LED	Illuminates when the card microprocessor has failed.
HNET FAIL LED	Illuminates when the HNET communication fails and the Model CRC-6 is in the DEGRADE mode.
24V FAIL LED	Illuminates when the 24 VDC supply falls below 18 VDC.
RELAY ACTIVE LEDs	Illuminates steadily to indicate the relay is active, and blinks to indicate relay coil failure. There is one (1) LED for each of the six (6) relays.

Electrical Ratings

24V CURRENT DRAW: [BACKPLANE]	10mA + 20.5mA (per Active Relay)
24V CURRENT DRAW: [SCREW TERMINAL]	0
24V CURRENT DRAW: [STANDBY]	51mA + 20.5mA (per Active Relay)
RELAYS:	4A @ 30VDC 120VAC, resistive 3.5A @ 120VAC (0.6PF)

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
CRC-6	500-033250	Controllable Relay Card

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).

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Desigo® Fire Safety Modular system

Operator Interface
Model FCM2041-U2

Architect & Engineer Specifications

- ☐ Main-operator interface with user-prompted lighted, large buttons for system control, operating sequence
- ☐ Large, 6-inch (15.2 cm) color display
- ☐ Touch-screen driven, system-control menus
  - Context-sensitive `Help' button
  - Navigation buttons and `More Info'
  - Additional tabs , including queues for mass notification (MNS)
- ☐ Go-to-beginning; go-to-end queue buttons
- ☐ Front-end light-emitting diodes (LEDs) for `Alarm' | `Supervisory' | `Trouble' commands
  - Partial-system disable LED
  - Audible Status LEDs (ON and Silenced)
- ☐ Global annunciation and control capability
- ☐ Integrated slots for switch-control (Model SCM-8) and LED-control (Model LCM-8) modules
- ☐ Mounts in any of one (1) of the following enclosures:
  - Model CAB1 (smallest cabinet)
  - Model CAB2 (medium cabinet)
  - Model CAB3 (largest cabinet)
  - Model REMBOX2 (two-module remote enclosure)
  - Model REMBOX4
  - (four-module remote enclosure)
- ☐ 40 software-programmable `User Macro' switches
- ☐ UL864 & CAN / ULC-S576 Listed

Product Overview

The Operator Interface (OI), Model FCM2041-U2, is the central processor and user interface for each Desigo Fire Safety Modular (Desigo Modular) system. Model FCM2041-U2 provides straightforward, front-end access for an end-user to perform system tasks, such as: acknowledge events; control addressable points (e.g. – intelligent detectors | notification appliance circuits [NACs]), and reset the system.

In terms of hardware used for Desigo Modular, Model FCM2041-U2 Operator Interfaces can be mounted in full-size CAB1 | CAB2 | CAB3 enclosures.

Additionally, remote, multi-module-mounted enclosures for Desigo Modular, Models REMBOX2 and REMBOX4, can each house one (1) Model FCM2041-U2 OI.

It is through the custom-configuration software tool, *Zeus-D*, that Model FCM2041-U2 OIs are able to provide programmed logic and panel supervision.

Specifications

Each Desigo Modular Operator Interface contains a full liquid-crystal display (LCD) at the front end. An audible sounds from a Model FCM2041-U2 operator interface when there are unacknowledged events. The display is surrounded by keys that are used to control the displayed information and to navigate through these screens. Keys are also readily available in order for the end user to obtain help information, as well as to enter into the menu features of a Model FCM2041-U2 OI.

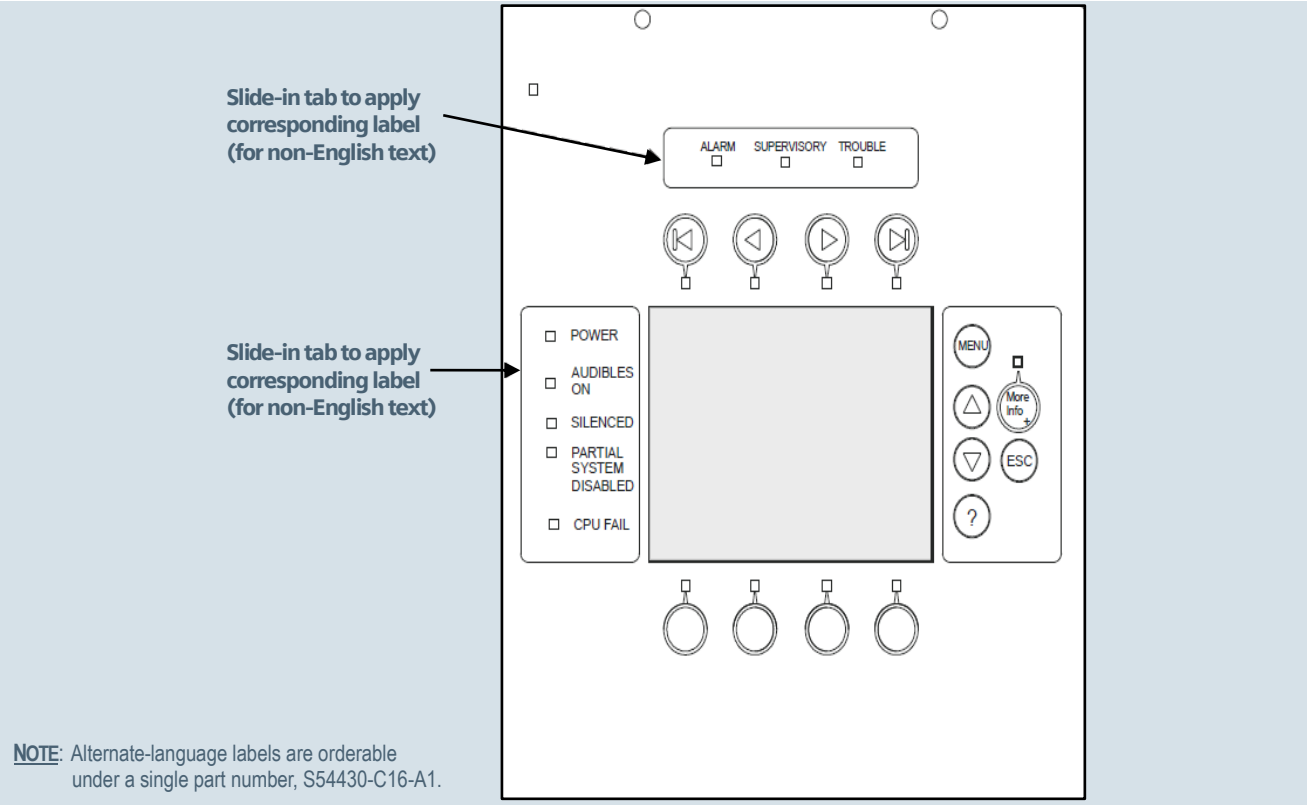
Additional diagnostic displays can be found at the back end of each Model FCM2041-U2 to provide efficiency to the end-user in troubleshooting the Desigo Modular fire-alarm control panel (FACP).

A 40-inch (1.02m) long 60-pin wire cable, **P/N 555-133743**, is used to connect a Desigo Modular Operator Interface, Model FCM2041-U2 to the Siemens five-slot card cage, Model CC-5.

Slide-in labels are orderable under a single part number for applications that require French (Canadian) | Spanish | Portuguese-Brazilian text.

NOTE: Alternate-language labels are ordered separately.

Model FCM2041-U2
Operator Interface Unit mounted in a Model CAB1 enclosure



Model FCM2041-U2
Desigo Modular
Operator Interface

Operation

In normal | standby condition, a Model FCM2041-U2 OI displays the site-specific, customized message; the time and date, and a rundown of the system status.

When an event occurs in the system, the display enters the `Alert' mode. The event is displayed, the local audible sounds, and the tab on the display for the corresponding event queue flashes. If the system-event type is `Alarm' | `Trouble' | `Supervisory', the appropriate LED blinks. If the event caused notification appliances to sound the `Audibles On' indicator illuminates. At the bottom of the screen, an `Acknowledge' button is subsequently displayed.

Pressing this button acknowledges the event and silences the local audible. Once all events are acknowledged, a reset button becomes available in the lower right side of the display. If notification appliances are active, two (2) additional buttons appear at the bottom of the screen.

These buttons subsequently allow the operator to silence or unsilence the notification appliances. When the notification appliances are silenced, the `Audibles Silenced' LED illuminates. The system can only be reset with the notification appliances silenced.

Up to five (5) events can be displayed at a time. For Canadian operation, nine (9) events are shown. When more than five (5) events are present, the up-and-down arrow keys allow the user to vertically scroll the list of events. A progress meter on the side of the list indicates the size of the list of events and the location in the list. New, 'unacknowledged' events are indicated by a flashing exclamation point (**!**). Once acknowledged, the exclamation point changes to a checkmark (✔).

Pressing the `More Info' button will display a screen showing details relating to the selected event. Other buttons also appear at the bottom of this screen. There is an expanded text message available, as well as a selection to show all of the devices associated with the event that are active.

The operator can return to the previous screen by pressing the **ESC** button.

NOTE: Refer to installation manual: **P/N – A6V11231622** for the most detailed information on the Desigo Modular Operator Interface.

Temperature and Humidity Range

Desigo Modular Operator Interfaces are UL Listed | ULC Listed. Environmental operating conditions for each Model FCM2041-U2 operator interface is 32°F (0°C) to 120°F (49°C) with a relative humidity of no greater than 95%, non-condensing.

Electrical Ratings

INPUT POWER:	24V Back Plane Current	195µA
	Screw Terminal 24V Current	0
	6.2V Back Plane Current	0
	24V Standby Current	125µA
OUTPUT POWER:	Each HNET / XNET - and - CAN Network Pair	8V peak-to-peak, max.
		75µA, max. (during message transmission)

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
FCM2041-U2	S54430-C17-A1	Desigo Modular Operator Interface

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July - 2019
(**Rev. 1**)

Desigo® Fire Safety Modular system

Network Interface Card
Model NIC-C

Architect & Engineer Specifications

- ☐ HNET communications
- ☐ XNET communications
- ☐ CAN network communications
- ☐ Supports `Class B' – (Style 4) or `Class A' – (Style 7) wiring for XNET or HNET
- ☐ Supervises the HNET or XNET and CAN networks
- ☐ Diagnostic light-emitting diodes (LEDs)
- ☐ Isolates short circuit faults
- ☐ Ground-fault detection
- ☐ Network repeater
- ☐ Downloadable firmware
- ☐ UL864 | CAN / ULC Listed;

Product Overview

The Network Interface Card (Model NIC-C) provides HNET or XNET network communications between enclosures. In addition to the HNET or XNET communication, Model NIC-C provides CAN network communication within an enclosure or external to the enclosure. The HNET or XNET can be wired `Class B' – Style 4 or `Class A' - Style 7, but the CAN network can only be wired `Class B' - Style 4.

Specifications

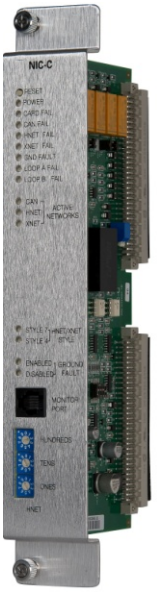
A single Model NIC-C can provide either HNET or XNET communications. The CAN interface is available regardless of the HNET or XNET usage.

When Model NIC-C is used for HNET communications, Model NIC-C provides communication between enclosures within a single system. The maximum HNET Model NIC-C cards on a single system (single node) is 50.

Model NIC-C supervises the HNET network to insure proper operation. Model NIC-C also isolates a short-circuit fault to each individual segment of the HNET network. Model NIC-C provides an electrical repeater for each HNET pair.

When Model NIC-C is used for XNET communications, communication is provided between systems. The maximum XNET Model NIC-C cards for a single-node system is one (1), totaling 59 XNET Model NIC-C cards on a peer-to-peer, networked system. The XNET Model NIC-C card must reside in the same enclosure as the Operator Interface (OI).

Model NIC-C supervises the XNET network to ensure proper operation. Model NIC-C also isolates a short-circuit fault to each individual segment of the XNET network. Model NIC-C provides an electrical repeater for each XNET pair. MXL systems may also reside on the same XNET with Desigo Fire Safety Modular systems.



Model NIC-C
Network Interface Card

Specifications – (continued)

Each Desigo Fire Safety Modular system will report events over the XNET to the Network Command Center for display. The following commands are displayed on Model NCC-G: `Trouble' | `Acknowledge' | `Alarm-Silence | `System-Reset, which are also each initiated at Model NCC. Model NCC can also be used to perform maintenance commands on an individual Desigo Fire Safety Modular system on the XNET communications bus.

Each Model NIC-C Card takes one (1) card slot and mounts in a Model CC-2 or Model CC-5 Card Cage inside a Model CAB-1 | Model CAB-2 | Model CAB-3 enclosure.

Model NIC-C also comprises the CAN network, which supports Model LCM-8 | SCM-8 | FCM-6 | OCM-16 | SIM-16 CAN modules. Up to 99 CAN module addresses are available per enclosure.

The Network Interface Card has diagnostic LEDs that indicate Card Fail | CAN Fail | HNET Fail | XNET Fail | Ground Fault | `Loop A' Fail, and `Loop B' Fail. Each Model NIC-C also has LEDs to indicate Power | Style and Active Networks.

Temperature and Humidity Range

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

Electrical Ratings

INPUT POWER	
24V BACK PLANE CURRENT	120mA
24V CURRENT (SCREW TERMINAL)	0
6.2V BACK PLANE CURRENT	0
24V CURRENT (STANDBY)	120mA

OUTPUT POWER	
EACH HNET / XNET AND CAN NETWORK PAIR	8V, peak-to-peak, max
	75mA, max. (during message transmission)

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
NIC-C	500-033240	Network Interface Card

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Desigo® Fire Safety Modular system

Output Control Module
Model OCM-16

Architect & Engineer Specifications

- ☐ Provides 16 open-collector outputs to drive light-emitting diodes (LEDs), incandescent lamps or external relays
- ☐ Contains output for local audible
- ☐ Provides two (2) inputs for module 'Lamp Test' and 'Local Audible Silence'
- ☐ All circuits are power-limited
- ☐ Logic controls output activation
- ☐ Mounts remotely from fire-alarm control panel (FACP)
- ☐ UL864 & CAN / ULC-S576 Listed

Product Overview

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 inputs for momentary lamp test – as well as local, audible silence switches.

Specifications

Model OCM-16 is mounted in an enclosure that is remotely located from the main-control panel. Communication between Model OCM-16 and Model NIC-C is through the Control Area Network (CAN) bus.

Each Model OCM-16 has two (2), 10-position rotary switches that are used to set the board address on the CAN, which is a sub-address of Model NIC-C. The 16 outputs of Model OCM-16 are controlled by messages received from the NIC-C over the CAN bus.

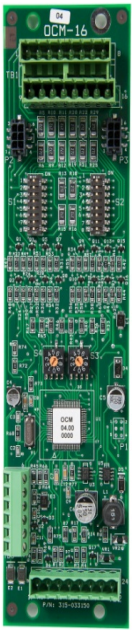
A CAN message can activate any or all of the 16 open-collector outputs to drive LEDs, incandescent 24-volt lamps or relays.

Whenever any of the outputs are activated, (LEDs, lamps or relays are 'ON') the local audible (if installed) will sound, until acknowledged. If the outputs are de-activated before the alarm is acknowledged, the alarm will silence.

The lamp test and audible-silence switch on multiple Model OCM-16 modules can be connected to a single switch – one for each function. A single audible can also be used with multiple Model OCM-16 modules.

Model OCM-16 may be installed in a REMBOX2, REMBOX4 or in any other UL 864 9th Edition Listed enclosure. If using REMBOX2 or REMBOX4, mount Model OCM-16 in one (1) space on the REMBOX2-MP or REMBOX4-MP.

Up to four (4) Model OCM-16 modules will mount in REMBOX2.
Up to eight (8) Model OCM-16 modules will mount in REMBOX4.
Model OCM-16 fits in a single System 3 module footprint.



Model OCM-16
Output Control Module

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).

Electrical Ratings

INPUT POWER	
24V CURRENT DRAW [Back Plane]	0
24V CURRENT DRAW [Screw Terminal]	14mA, max + 10mA (per active LED)
6.2V CURRENT DRAW [Back Plane]	0
24V CURRENT DRAW [Standby]	14mA, max + 10mA (per active LED)

OUTPUT POWER	
CAN NETWORK PAIR	8V, peak-to-peak, max
	75mA, max. (during message transmission)

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
CCL	599-634214	CAN CABLE – 3 Ft. (0.91 cm.) {L}, Required
OCM-16	500-033150	Output Control Module
REMBOX2	500-633772	Small Lobby Enclosure
REMBOX4	500-633914	Medium Lobby Enclosure

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Desigo® Fire Safety

Power Supply Charger | Power Supply Extender | Power Termination Board

Models PSC-12 | PSX-12 | PTB

Architect & Engineer Specifications

- ☐ Model PSC-12 is the main-system power supply
- ☐ Model PSX-12 is the optional, system-power-expansion module
  - Up to three (3) Model PSX-12s connected to one (1) Model PSC-12
- ☐ PSC-12 and PSX-12 each include a Power Termination Board (Model PTB) for AC field connections
- ☐ Model PSC-12 has a built-in charger for up to 100AH batteries
- ☐ Main and optional power supply each has a universal AC power input: 120VAC – 240VAC @ 50 / 60Hz
- ☐ Filtered and regulated, total output power for each power-supply type is output 12 Amps @24VDC
  - 24VDC and 6.2VDC power contact between panel and to all power modules via a 60-pin connector
  - Provides 12A | non-power-limited | 24VDC output (internal use)
  - 4-Amp, power-limited 24VDC output (external use)
  - Common `Alarm' and `Trouble' relays (Form `C' rated @ 2A)
  - Two (2) programmable relays (`Form C' rated @ 2A)
- ☐ Any of the three (3) modules mount on back box or optional Model CAB-MP in one (1) module space
- ☐ Ground-fault-detection circuitry for all three (3) power-equipment types
- ☐ UL864 & CAN / ULC-S576 Listed

Product Overview

Main-Power Supply Charger –> Model PSC-12

The Model PSC-12 Power-Supply Charger is a high-current power supply that provides a Desigo Fire Safety Modular (Desigo Modular) panel with primary, regulated 24VDC power to operate at 12 Amps (`Alarm' mode) / 5 Amps (`Standby').

With its built-in battery charger – capable of charging up to 100AH batteries, Model PSC-12 is an addressable-intelligent, microprocessor-controlled power module that communicates its status to the Desigo Modular Operator Interface (OI), Model FCM2041-U2. Moreover, the panel's OI is able to query the status of the power supply to obtain data regarding system-charging current | terminal-loading information | ground fault-conditions and more.

Model PSC-12 is a universal power supply; accepting AC power-input levels from 120VAC – 240VAC @ 50 / 60Hz. No special configuration is required: Model PSC-12 is designed to operate across these AC input ranges. A 60-pin connector is used for communication between a Model PSC-12 charger and other system cards and modules. The communication transmission (of which has variables of 6.2VDC and 24VDC), is referred as `back-plane current'.

Each Model PSC-12 provides 12 Amps of Desigo Modular system output power @ 24VDC. Two (2) separate power-output terminals are available: one (1) power limited with 4A max @ 24VDC capacity, as well as one (1) non-power limited with 12A max @24VDC capacity (the total not to exceed 12A). Model PSC-12 also provides two (2) connection points for the 60-pin power / data bus. Additionally, the 24VDC outputs found a Model PSC-12 provide auto-resettable current protection circuits for overload and short-circuit panel conditions.

In event of a Desigo Modular system power failure, backup batteries are used. Though when main-system power is active, Model PSC-12 is able to charge back-up batteries that carry the following current: up to 15AH | 31AH | 75AH and up to 100AH batteries. The battery sizes that are used in a given Desigo Modular panel are entered into the custom-configuration software tool, *Zeus-D*, and the power charger (Model PSC-12) has three (3) modes – dependent upon condition: Bulk (full) Charge State | Trickle Charge State and Float (maintenance) State. Model PSC-12 subsequently is able to monitor the condition of the batteries automatically, determining which of the charging modes to activate.

NOTE: Model PSC-12 can only charge lead-acid batteries.

Model PSC-12
Desigo Modular
Power Supply Charger

Model PSX-12
Desigo Modular
Power Supply Extender

Product Overview – (continued)

Main-Power Supply Charger –> Model PSC-12

Model PSC-12 mounts on one (1) of four (4) available module spaces directly on the back box or optional Model CAB-MP module mounting plate, which then mounts inside of Models CAB-1 | CAB-2 or CAB-3 system enclosures.

Additionally, Model PSC-12 has four (4) Form `C' relays rated at 2 Amps each. A relay is dedicated to automatically operate on `**Any System Alarm**' – this is the Common Alarm Relay. Another is dedicated to automatically operate on `**Any System Trouble**' - this is the Common `Trouble' Relay. Two (2) additional relays are available for programming and activation, based upon system-control logic. When a door-tamper switch is required in any of the Desigo Modular CAB-series enclosures, the Model HTSW-1 tamper switch can be optionally connected to a Model PSC-12 to provide this functionality.

Model PSC-12 has diagnostics LEDs to indicate `Power On', `Module Failure' (internal module failure), `H-NET Failure' (network-communication failure), `Ground Fault' (internal to enclosure or on any 24VDC output circuits), `24VDC | 12A Fail', and `24VDC | 4A Fail.' Model PSC-12 module is addressed using plain, decimal-address switches, which clearly state the address of the module. As an option, an extender cable (Model PSC-ISO-CBL) allows use for two (2) Desigo Modular power supplies (Model PSC-12) in one (1) Model CAB-series enclosure.

Power Termination Board –> Model PTB

The Power Termination Board comes packaged with a module known as Model PTB. Model PTB is the Power Termination Board, and is required for operation with the Power Supply Charger (Model PSC-12). Model PTB must be mounted in the lower-right corner of the CAB enclosures. Mounting studs are provided in all enclosures to mount to Model PTB.

Model PTB contains screw terminals for the usage of AC-input power. Model PTB contains an AC-line filter and AC-line power breaker rated at 5A. From another connector on Model PTB, AC power is connected directly to Model PSC-12, via a keyed-cable harness. Each Model PTB supports building AC-power-connection circuits for two (2) power supplies – either one (1) for Model PSC-12 and one (1), optionally, for the Power Supply extender (Model PSX-12.) When more than one (1) Model PSX-12 Power Supply extender is used, a second Model PTB is required, and must be ordered separately.

Model PTB 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 computer, if required. Model AC-ADPT is an optional accessory cable that allows connection on one side to Model PTB, via a keyed connector, and on the other end directly into to the laptop's transformer. Most PC external power transformers have removable AC power cords which can be replaced by Model AC-ADPT to temporarily provide an AC power source for PCs used during system installation, service and maintenance calls, when needed.

Product Overview – (continued)

Power Supply Extender –> Model PSX-12

The Power Supply Extender is a high-current, auxiliary-power supply that expands the main Model PSC-12 power supply and battery charger for the Desigo Modular system with an additional 24VDC power. Model PSX-12 is rated at 12 Amps.

Model PSX-12 is an addressable intelligent microprocessor-controlled module that communicates its status to the system-operator interface (OI) to report fault conditions. Model FCM2041-U2 is able to query the status of the power supply to obtain information regarding terminal-loading information, ground-fault conditions and more.

Model PSX-12 is a universal power supply; accepting AC power-input levels from 120VAC – 240VAC, and has an off-line, switch-mode power converter and power-factor-correction circuit to improve conductive RF emissions at low frequency. No special configuration is required.

Additionally, Model PSX-12 works with the panel's communication protocol in order to work with other system cards and modules, via the system's common 60-pin power/data bus. Model PSX-12 provides a full 12 Amps of power @ 24VDC. There are two (2) separate power-output terminals: one of which is power-limited with 4A max @24VDC capacity. The other terminal is non-power-limited with 12A max @24VDC capacity (total is not to exceed 12A).

Similar to Model PSC-12, each Desigo Modular Power Supply Extender mounts to one (1) of four (4) available module spaces on the back box or optional Model CAB-MP module mounting plate, which subsequently mounts inside a Models CAB1, CAB2 or CAB3 system enclosure.

Model PSX-12 has diagnostics LEDs to indicate `Power On'; `Module Failure' (internal module failure); `H-NET Failure' (network communication failure); `Ground Fault' (internal to enclosure or on any 24VDC output circuits), 24VDC 12A fail and 24VDC 4A fail. Model PSX-12 is addressed using plain, decimal-address switches, which clearly state the address of the module.

Temperature and Humidity Range

Desigo Modular power supplies are UL Listed | ULC Listed. Environmental operating conditions for each powering module is 32°F (0°C) to 120°F (49°C) with a relative humidity of no greater than 95%, non-condensing.

Electrical Ratings

	MODEL PSC-12	MODEL PSX-12
INPUT VOLTAGE:	120VAC @ 50 / 60 Hz. 220VAC @ 50 / 60 Hz. 240VAC @ 50 / 60 Hz.	120VAC @ 50 / 60 Hz. 220VAC @ 50 / 60 Hz. 240VAC @ 50 / 60 Hz.
INPUT CURRENT:	3.5A, max. @ 120VAC 2.5A, max. @ 220VAC 2.0A, max. @ 240VAC	3.5A, max. @ 120VAC 2.5A, max. @ 220VAC 2.0A, max. @ 240VAC
24VDC BACK PLANE CURRENT:	2.0A, max.	Not Applicable
SCREW TERMINAL, 24V CURRENT:	**Power Limited:** 4.0A, max. **Non-Power Limited:** 12A, max.	**Power Limited:** 4.0A, max. **Non-Power Limited:** 12A, max.
6.2VDC BACK PLANE CURRENT:	2.0A, max.	Not Applicable
24V STANDBY CURRENT:	150mA + 20mA per active relay	150mA
OUTPUT CURRENT [Each HNET / XNET and CAN Network Pair]	8V Peak-to-peak max. 75mA, max. during msg. transmission	8V Peak-to-peak max. 75mA, max. during msg. transmission

MODEL PTB	
AC MAINS RATING	**EACH MODEL PSC-12 | PSX-12**
120VAC @ 50 / 60 Hz.	3.5A, max.
220VAC @ 50 / 60 Hz.	2.5A, max.
240VAC @ 50 / 60 Hz.	2.0A, max.

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
AC-ADPT	500-633992	Technician Laptop-Power Connector
BP-61	175-387194	15 AH @ 24VDC Battery
BTX-1	175-083897	Set of 31AH @ 12V Batteries
BTX-2	175-083898	Set of 55AH @ 12V Batteries
BTX-3	599-034220	Set of 100AH @ 12V Batteries
CAB-BATT	500-633917	Battery Enclosure for 75AH or 100AH Batteries
HTSW-1	500-033350	Door Tamper Switch
PSC-12	500-033340	Power Supply and Battery Charger (12A @24VDC)
PSC-ISO-CBL	S54430-K4-A1	Optional Extender Cable (used for holding two [2] Model PSC-12 power supplies in one [1] Model CAB-series enclosure
PSX-12	500-034120	Power Supply Extender (12A @24VDC)
PTB	500-033390	Power Termination Board [only required for applications with more than two (2) Model PSX-12 extenders]

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The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.
Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product, and are available from the Manufacturer.

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

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

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September 2017 – New Issue
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Desigo® Fire Safety Modular system

Digital Message Card
Model XDMC

Architect & Engineer Specifications

- ☐ Custom digital message player for Desigo Fire Safety Modular system
- ☐ Up to 300* unique custom messages per Model XDMC card
  - Plays two (2) messages simultaneously
  - Up to 100 minutes of phrase storage
- ☐ No external inputs required to activate messages
- ☐ Custom software-programmable messages for events:
  - `Evacuation'
  - `Emergency Notification'
  - `Tornado Warning'
  - `System Testing'
  - `Alert'
- ☐ Several combinations of messages and tones available:
  - Slow `Whoop'
  - 900 Hz
  - Chime
  - Temporal Code 3
  - `Wail'
  - Horn
- ☐ `Live Voice' custom-message recording
- ☐ Specific-message programming of each device
- ☐ Spoken 'Walk Test' / zone coding
- ☐ Selectable message priorities (1-10)
- ☐ Selectable-message repeat counts (1 – 15 or continuous)
- ☐ Mounts in either Model CC-2 or Model CC-5 card cage
- ☐ UL864 & CAN / ULC-S576 Listed;

Product Overview

Model XDMC from Siemens – Fire Safety provides the end-user the ability to program and sound custom spoken voice messages for `Evacuation' | `Alert' | `Tornado Warning' | `System Testing' and other emergency and non-emergency building-notification requirements.

Model XDMC is an optional Desigo module designed to meet the requirements of voice evacuation systems that require the ability to sound pre-recorded spoken messages. Model XDMC plugs into an available expansion slot in the Model CC-2 / CC-5 card cage. The Desigo Fire Safety Modular system can support a maximum two (2) Model XDMC modules.

Communication and supervision of Model XDMC is performed by Model DAC-NET. If a failure should occur in Model XDMC, the on-board tone[s] will automatically provide back-up to Model XDMC.

Each module can be programmed for up to 300* different custom messages. Model XDMC can play two (2) messages simultaneously. The messages are programmed using the Desigo Fire Safety Modular system's custom-configuration tool, *Zeus-D*.

The custom messages can be established from a pre-recorded library of more than 130 digitally recorded words, phrases and tones. Users can add their own custom phrases, too. A maximum 16 words, tones and phrases can be used in any combination, creating up to 300* unique messages that can be assigned to sound:

- by device
- by floor / zone
- by building, or
- by any group desired

The phrase library contains six (6) different tones that can be selected to meet requirements that call for combinations of spoken messages and tones.

The available tones are:

- Slow Whoop
- Temporal Code 3
- 900 Hz
- Chime
- Wail
- Horn

Model XDMC
Digital Message Card

* **Although one (1) Model XDMC can support 300 messages, the maximum each panel can handle is 300.**

Moreover, the maximum messages allowed remains at 300, even though it is possible to have two (2) Model XDMC cards on a single Desigo Modular panel.

Product Overview – (continued)

Model XDMC also supports recording user-specified messages in – .MP3, – .WAV file formats that comprise of phrases not contained in the on-board phrase library. The total of phrase time supported on Model XDMC – for both the pre-recorded phrase library and the custom recorded phrases – is 100 minutes.

For example, if a general evacuation message needs to sound in two (2) different languages:

> *"May I have your attention please... a fire emergency has been reported in the building, while this is being investigated, please leave the building by the nearest exit. Do not use the elevators."*

...the message could be selected directly from the pre-recorded phrase library of Model XDMC, using the custom-programming tool, *ZEUS–D*. Additionally, the same message can be used for playback in a non-English language, via a – .MP3 or – .WAV file format.

When an Alarm event occurs, the message can be played back in English and in the recorded non-English language – alternating and repeating as many times as required, or playing continuously until the system is silenced and reset.

This additional recording time can also be broken down into custom phrases that may be used in multiple messages.

Model XDMC programming allows up to 10 different message-priority levels to be assigned, as well as the number of rounds to repeat a particular message (1-15 or continuous). High-priority messages will override low-priority messages. Messages of the same priority activated simultaneously will alternate between the messages.

A Model SCM switch can optionally be programmed to manually override the operation of Model XDMC.

Controls and Indicators

The front side of Model XDMC contains the following:

- One (1) RESET switch
- Nine (9) diagnostic LEDs to indicate operation
- One (1) Ethernet port (RJ45 jack)
- Two (2) 10-digit CAN address switches

The reset switch is located at the top of the front side of each Model XDMC card. Pushing the reset switch re-initializes operation of Model XDMC.

Two (2) 10-position switches at the front-bottom part of each Model XDMC card are used to set the CAN network address of Model XDMC.

POWER – (Green)
Normally ON.
When illuminated, indicates the power for Model XDMC is applied to the card.

CARD FAIL – (Yellow)
Normally OFF.
When illuminated, indicates hardware failure on the card or unsuccessful firmware upload.

CAN FAIL – (Yellow)
Normally OFF.
When illuminated, indicates the CAN communication has terminated and the card enters degrade mode failure on Models XDMC; DAC-NET; the backplane of Model CC-5, or other CAN Cards.

ASI FAIL – (Yellow)
Normally OFF.
When illuminated, indicates ASI communication has stopped and the card enters degrade-mode failure on Models XDMC, DAC-NET, the backplane of Model CC-5, or other ASI Cards.

TROUBLE – (Yellow)
Normally OFF.
When illuminated, indicates a Model XDMC software database error at that can be corrected by a technician.

CHANNEL 1 ACTIVATED – (Green)
Normally OFF.
When illuminated, indicates Channel 1 is active in playing a message.

CHANNEL 1 TROUBLE – (Yellow)
Normally OFF.
When illuminated, indicates a *Trouble* event with Channel 1.

CHANNEL 2 ACTIVATED – (Green)
Normally OFF.
When illuminated, indicates Channel 2 is active in playing a message.

CHANNEL 2 TROUBLE – (Yellow)
Normally OFF.
When illuminated, indicates a *Trouble* event with Channel 2.

Technical Data

OPERATING TEMPERATURE RANGE:	32°F to 120°F [0°C to 49°C]
MOUNTING:	Model XDMC mounts in one (1) of four (4) available slots in the Model CC-2 or Model CC-5 card cage
SUPERVISION:	Internally supervised by the Desigo Modular via communication with the Desigo Modular main audio processor, Model DAC-NET
24V CURRENT DRAW: [Max.]	50mA @5VDC
24V CURRENT DRAW: [Back Plane]	140mA
24V CURRENT DRAW: [Screw Terminal]	0mA
6.2V CURRENT DRAW: [Back Plane]	120mA + 20mA, per active channel
MESSAGE ACTIVATION METHOD:	Via internal Desigo Fire Safety Modular system logic or Model SCM-8 switches (no external inputs required)
NUMBER OF MESSAGES: [for each Model XDMC Message Card]	300* messages, max.
CUSTOM MESSAGE RECORDING TIME:	100 minutes
WIRING:	The only wiring required is internal in the Desigo Fire Safety Modular system enclosure from the Model CC-2 / CC-5 card cage in which Model XDMC is mounted (no external wiring required).

*** Although one (1) Model XDMC can support 300 messages, the maximum each panel can handle is 300.**

Moreover, the maximum messages allowed remains at 300, even though it is possible to have two (2) Model XDMC cards on a single Desigo Modular panel.

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
XDMC	S54430-B5-A1	Desigo Fire Safety Modular system Digital Message Card

Installation and Operation Manual

[IOM]

MODEL OR TYPE	PART NUMBER	PRODUCT
XDMC	A6V10346036	Desigo Fire Safety Modular system Digital Message Card

Temperature and Humidity Range

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

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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.

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October 2017 – New Issue
(**Rev. 0**)

Desigo® Fire Safety Modular system

Zone-Amplifier Module (180-Watt)
Model ZAM-180

Architect & Engineer Specifications

- ☐ 180-Watt audio amplifier
- ☐ Selectable audio levels:
  - 25VRMS, 150 Watts
  - 70VRMS 180 Watts
- ☐ Local audio input
- ☐ Speaker lines supervised when active or inactive
- ☐ Style ``Y" or ``Z" wiring
  - Split-zone (A / B) wiring on Style ``Y"
- ☐ Takes one (1) module space, mounting directly on back box or optional Model CAB-MP mounting plate
- ☐ Supports and switches up to eight (8) digital audio channels
- ☐ Internal amplifier supervision
- ☐ Backup amplification available
- ☐ UL864 & CAN / ULC-S576 Listed;

Product Overview

The Model ZAM-180 is a combination 180-watt, amplifier / speaker zone for use with Desigo Fire Safety Modular systems. Style ``Y" or ``Z" speaker-zone wiring is supported, as well as split-zone, (A / B) speaker-zone wiring configurations 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 takes one (1) module space, and mounts directly on back box or optional Model CAB-MP mounting plate. Model ZAM-180 is capable of amplifying any of the eight (8) digital audio channels that are transmitted from Model DAC-NET; via the digital audio bus audio serial Interface (Model ASI).

Model ZAM-180 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. The speaker lines are supervised for open, short-circuit and ground-fault applications, and are supervised in both the active and inactive states.

To provide amplifier backup, additional Model ZAM-180 modules can be used to achieve the desired amplifier backup ratio of 1-to-1, or 1-to-many.

Model ZAM-180 takes one (1) sub-address of Model DAC-NET, and receives control and communication data from Model DAC-NET, via the CAN Bus on the DAC-NET.

Model ZAM-180 contains an inherent degrade-mode backup tone (Slow Whoop), which serves as a secondary backup to the primary backup tone or digital message provided by Model DAC-NET. Additionally, local audio input is provided to connect an external audio source.

The local audio input is activated, via an external contact. The local-audio input has the lowest priority of all signals.

Model ZAM-180
Zone - Amplifier Module

Application Note

Model ZAM-180 meets the UL464 requirement for 520 Hz low-frequency signal tone, as described in the section for **Determination of Low Frequency Signal Format** in the **Standard for Audible Signal Appliances** – when used with Models 'SEH' and 'SEFH' series of Siemens high-fidelity notification appliances.

Typical Applications

Emergency

- Fire Evacuation
- Tornado Alert
- Terror Alert
- Building Emergency

Non-Emergency

- Convenience Paging
- Background Music

Temperature and Humidity Range

Model ZAM-180 is UL 864 9th Edition Listed for indoor dry locations within a temperature range of 120 +/- 3°F (49 +/- 2°C) to 32 +/- 3°F (0 +/- 2°C) and a relative humidity of 93 +/- 2% at a temperature of 90 +/- 3°F (32 +/- 2°C).

Electrical Ratings

INPUT POWER		
24V BACK PLANE CURRENT		0mA
24V CURRENT [SCREW TERMINAL]	@ 190W	9.5A
	@ 90W	4.9A
	@ 45W	2.7A
	@ 0W	0.3A
6.2V BACK PLANE DRY CONTACT		0mA
24V CURRENT (STANDBY)		300mA

MAXIMUM OUTPUT POWER	
@ 190W	150V
@ 90W	190V
@ 45W	165V
6.2V Back Plane Current	24V @ 10A power limited

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
ZAM-180	500-035600	180-Watt Zone Amp.

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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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July - 2019
(Rev. 1)

Desigo® Fire Safety Modular system

Zone-Indicating Cards

Model ZIC-8B (with Model ZIC-2C mounted)

Architect & Engineer Specifications

- ☐ Operates audible or visual notification appliance circuits (NACs)
- ☐ Three (3) unique signals from each circuit
  - Operates 25V or 70VRMS audio speakers
- ☐ One (1) or (2) two-channel voice operation
- ☐ Eight (8) `Class B' (Style Y) circuits
- ☐ Fully programmable
- ☐ Coded audibles available
- ☐ On-board microprocessor
- ☐ Automatic / manual control
- ☐ Selectable degrade operation
- ☐ March time / Uniform `Code 3'
- ☐ Built-in strobe synchronization
- ☐ Built-in, ground-fault detection
- ☐ Circuits power limited, per NEC 760
- ☐ Silence / non-silence option
- ☐ Output power rated 2.0 Amps @ 24 VDC per circuit
- ☐ UL 864 9th Edition Listed & ULC Listed

Product Overview

The Zone-Indicating Card (Model ZIC-8B) provides eight (8) fully-supervised, programmable output circuits for use on each Desigo Fire Safety Modular system fire-alarm control panel (FACP).

Model ZIC-8B supplies eight (8) 'Class B'-type (Style Y) output circuits; power limited to 2.0 amps maximum per circuit. Each circuit can be independently programmed for use with listed audible or visual notification appliances, or listed emergency-audio speakers.

With the use of the Model EBA2004-A1 booster amplifier, Model ZIC-8B can also send audio to additional speaker zones.

Model ZIC-8B plugs into one (1) slot in the Model CC-5 or Model CC-2 Card Cage, and has on-board light-emitting diodes (LEDs) for system status and troubleshooting. Model ZIC-2C mounts directly onto Model ZIC-8B, and allows each of the Model ZIC-8B output circuits to be used for (2) 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. All system status conditions are also reported to the system Operating Interface (OI).

Each circuit or output may be time-based, as well as controlled automatically with Desigo Modular system logic via the programmable custom-configuration tool, *ZEUS-D*. Manual setting is accomplished from the OI keypad found at the front of the Desigo Fire Safety Modular system.

Automatic control may also be time based. Each circuit or output can be manually `Armed' or `Disarmed' through the keypad of the OI.

Model ZIC-8B
Zone Indicating Card

When any circuit or output has been 'Disarmed,' the display for the OI will indicate the affected circuit or output, and the 'Partial-System Disable' LED will illuminate, until the circuit or output has been returned to the `Armed' condition. Model ZIC-8B circuits can also be manually energized or de-energized when in the `Disarmed' state, via use of the OI.

Model ZIC-2C

Product Overview – (continued)

Model ZIC-8B contains an on-board microprocessor, which allows notification-circuit outputs to function in a degrade mode – even if the main Desigo Modular processor or the local-network-communication link has failed.

In degrade mode, Model ZIC-8B will respond to an `Alarm' or `Trouble' command from any intelligent, addressable initiating device or conventional-zone initiating device connected in the same local enclosure.

Standard NAC Zone – Each of the eight (8) circuits on ZIC-8B can be configured for use as a standard NAC. The NAC output can be used as a steady, coded, horn / strobe synchronized, horn / strobe synchronized with silence-able horn, strobe synchronized, or unsynchronized strobe output.

The available coding includes ANSI Temporal, March Time 120 pulse per minute (PPM), March Time 60 PPM, March Time 30 PPM, Canadian Two-stage 30 PPM, Canadian Two-stage 120 PPM and custom coding.

Using the horn / strobe synchronized setting for the outputs allows Siemens horns, strobes and horn / strobes to synchronize all horns in a temporal pattern. The horn / strobe synchronized setting for the outputs also allow all strobes to flash simultaneously. The silenceable setting will allow the operator to silence the horns, while keeping the strobes active.

Outputs may be programmed through logic to transmit – up to three (3) different signal types – depending on event priority. For instance, the same circuit can be programmed to transmit the ANSI Temporal pattern for evacuation, March Time 120 PPM for tornado notification, and a custom code for recall.

Standard Speaker Zone – Each of the eight (8) circuits on Model ZIC-8B can be configured for use as a standard-speaker circuit in single or dual-channel systems. Dual-channel operation requires the optional Model ZIC-2C module, which is mounted to a connector directly on Model ZIC-8B.

No additional mounting space is required for the ZIC-2C. Model ZIC-8B can be used with the Model ZAM-80/180 bulk amplifier or the Model ZAC-40 amplifier card. Model ZIC-8B is limited to 25 Watts max. / zone at 25V (when the zone is active.)
At 70V, Model ZIC-8B is limited to 30 Watts max. / zone.

Controls and Indicators

RESET SWITCH	Re-initializes only Model ZIC-8B
POWER LED	Indicates power is applied to the Model ZIC-8B card
CARD-FAIL LED	Illuminates when the card microprocessor has failed
HNET-FAIL LED	Illuminates when the HNET communication fails, and Model ZIC-8B is in degrade mode.
GND-FAULT LED	Indicates the detection of a ground-fault condition (either negative or positive) on Model ZIC-8B's field wiring.
ZONE-ACTIVE LEDs	Illuminates to indicate that the zone has been activated either automatically or manually. There is one (1) LED for each zone.
TROUBLE LEDs	Indicates the presence of a `Trouble' condition (either an open circuit or a short circuit) on the zone. There is one (1) LED for each zone.

Electrical Ratings (Model ZIC-2C)

24V CURRENT DRAW: [Back Plane]	17mA, per active output
	0mA
	(ZIC-8B S1 in "BP POWER" position)
	(ZIC-8B S1 in "EXT POWER" position)
24V CURRENT DRAW: [Screw Terminal]	17mA, per active output
	0mA
	(ZIC-8B S1 in "EXT POWER" position)
	(ZIC-8B S1 in "BP POWER" position)
24V CURRENT DRAW: [Back Plane]	0mA
24V CURRENT DRAW: [Standby]	0mA

Electrical Ratings (Model ZIC-8B)

24V BACK PLANE OR CURRENT DRAW: [External Power]	(See Note Below)
24V CURRENT DRAW: [Screw Terminal]	Total Device Current
6.2V CURRENT DRAW: [Back Plane]	0
24V CURRENT DRAW: [Standby]	105mA

NOTE: The 24V current is dependent on the usage and wiring type of each ZIC circuit. Listed in the left hand column of the next page are the required current draws for each zone's usage and wiring type:

ZIC-8B Current Requirements Per Output Zone	
ZONE USAGE	**OUTPUT CURRENT REQUIREMENT**
NOT USED	0
NAC	17mA
STROBE – SYNC.	17mA
STROBE – UNSYNC.	17mA
TWO (2) CHANNEL SPEAKER ZONE	34mA
ONE (1) CHANNEL SPEAKER ZONE	17mA
NAC – CODED	17mA

ZIC-8B Standby Current = 91mA

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).

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
ZIC-8B	500-648670	(8) Eight-Circuit Zone Indicating Card
ZIC-2C	500-648671	(2) Two-Channel Adapter Card

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SIEMENS

Desigo® Fire Safety

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October 2017 — New Issue
(**Rev. 0**)

Peripheral and Detection Devices
Initiating Devices

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

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Ingenuity for life

Architect & Engineer Specifications

- ☐ Built-in dual isolators:
  - Modern technology supports comprehensive system-and-interface communication
  - Allows up to 190 isolators per loop and 30 devices between isolators
- ☐ 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.
- ☐ Meets Class X (Style 7) survivability requirements
- ☐ Low current draw
- ☐ Polarity insensitive (in non-isolation mode) via *SureWire™* technology:
  - Modern technology supports comprehensive system and interface communication
- ☐ Multi-color light-emitting diode (LED) indicates system status:
  - GREEN | AMBER | RED
- ☐ Mounts in a 4-inch (10.2 cm.) square, 2–¼" (5.7 cm.) deep single-gang or double-gang back box
- ☐ Non-obstructive front-end access to programming port and wiring terminals
- ☐ Device Programmer | Test Unit programs and verifies address, as well as tests device functionality
- ☐ Restriction of Hazardous Substances (RoHS) compliant
- ☐ UL864 | UL2572 | UL2017 Listed; CAN/ULC-S527 & CAN/ULC-S576 Listed
  - File S24304, Vol. 3

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) loop circuit. All modules take up one (1) address on the loop.

Each XTRI-series interface module provides built-in, intelligent dual isolation, and meets Class X (Style 7) wiring requirements. Up to 190 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 configurable, built-in dual isolators. Additionally, an XTRI-series interface module has Class X (Style 7) survivability requirements for shorts while providing reliable alarm communication to the Siemens FACP. The isolation feature found on the XTRI-series Intelligent Interface Modules gives information as to the location of the fault. When a short occurs, the panel can identify the fault automatically, and the module recognizes the short location (in front of the device or behind the device).

Overall, the built-in isolators improve the diagnostics and location of the problem, including a short.

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

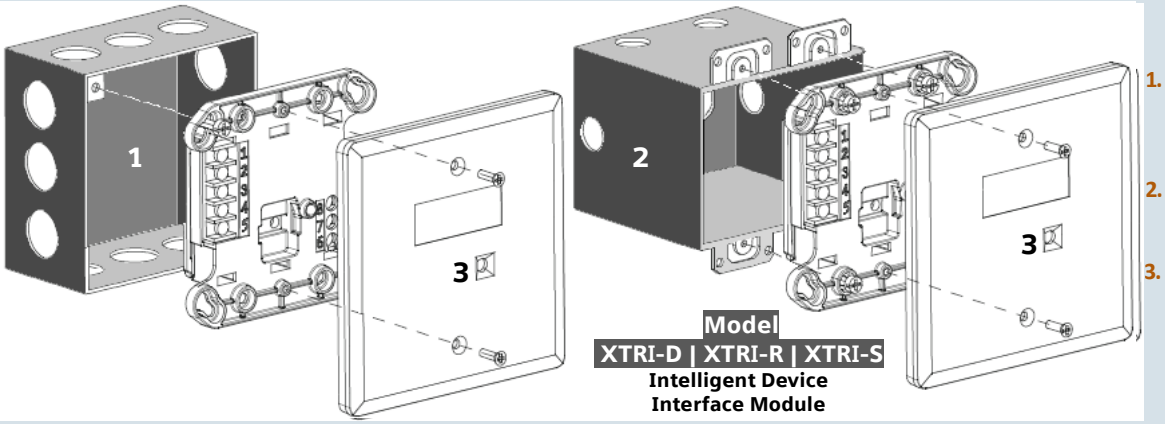
Advanced troubleshooting is provided by compatible panels by identifying when a XTRI-series interface module is configured as an isolator, but is wired incorrectly in a polarity-insensitive mode.

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

Model XTRI-S

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

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



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

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

Specifications – (continued)

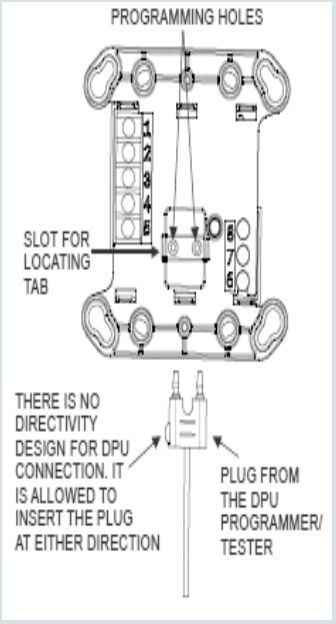
Model XTRI-R

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.

Mounting Data



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

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

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

Operation

Field-Device Programmer / Test Unit

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

Vibration, corrosion and other conditions that deteriorate mechanical-addressing mechanisms are no longer a cause for concern. 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 can accompany the vitality of a 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 o 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.

Electrical Ratings

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

Electrical Ratings

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.	—

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)

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

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

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April 2019 –
Rev. 1

SIEMENS
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Cerberus® PRO
Detectors and Peripherals

Photoelectric Smoke Detector
Model OP921

Architect & Engineer Specifications

- ☐ Compatible with Siemens Model `H'-series devices on the same loop (with Cerberus PRO Modular | FireFinder XLS | FC/FV9–series fire-alarm control panels
- ☐ Compatible with Model 8720 | DPU (device programmer / loop tester)
- ☐ Each detector is self-testing:
  - self monitored for sensitivity with UL Listed limits
  - complete diagnostics performed every 10 seconds
- ☐ Polarity insensitive via *SureWire™* technology
- ☐ Functions with Model DB-11–series mounting bases
- ☐ Tri-color detector-status light-emitting diode (LED) with 360 ° view
- ☐ Field-selectable application-sensitivity profiles
- ☐ Remote sensitivity-measurement capability
- ☐ Utilizes advanced, microprocessor-based signal processing
- ☐ Extended temperature-and-humidity operating range
- ☐ Automatic environment compensation
- ☐ Superior electromagnetic interference (EMI) and radio-frequency interference (RFI) immunity
- ☐ Restriction of Hazardous Substances (RoHS compliant)
- ☐ UL Listed | FM, CSFM Approved
  - UL 268: `Open Area Smoke Detection'
  - UL 268A (Duct) - `In-duct housing' use
  - UL 268A (Duct) - `Direct-in-Duct' use
  - ULC-S531: `Open Area Smoke Detection'
  - FM 3230 (Duct)
  - CSFM | File: 7272-0067:0258

Product Overview

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

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

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

Model OP921 is a plug-in, two-wire and addressable photoelectric smoke detector. Model OH921 is Underwriters' Laboratories Listed [UL268A Listed for direct in-air duct usage].

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

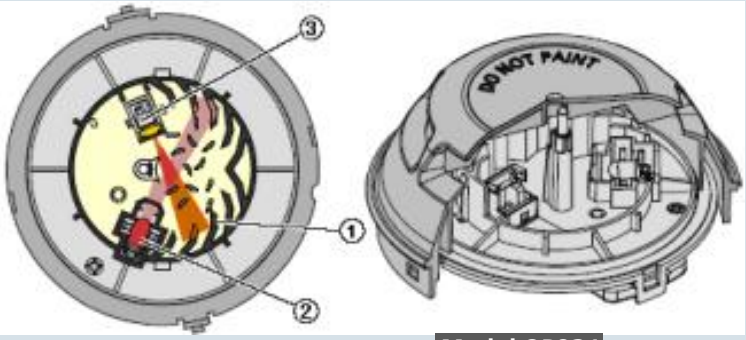
Operation

Model OP921 is a wide-spectrum, photoelectric smoke detector that incorporates an infrared light-emitting diode (IRLED), as well as a light-sensing photodiode. Under normal conditions, light transmitted by the LED is directed away from the photodiode and scattered through the smoke chamber in a controlled pattern.

The smoke chamber is designed to manage light dissipation and extraneous reflections from dust particles or other non-smoke, airborne contaminants in such a way as to maintain stable, consistent detector operation. When smoke enters the detector chamber, light emitted from the IRLED is scattered by the smoke particles, and is received by the photodiode (see: the computer-graphic images on page 2).

Model OP921
Photoelectric Smoke Detector

1. Labyrinth
2. Optical transmitter
3. Optical receiver



Model OP921

1. Dust cover
2. Photoelectric smoke detector

Sensitivity Settings

Application Parameter Sets

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

- Sensitive
- Standard
- Robust
- Air-duct

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

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

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

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

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

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

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

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

Sensitivity Settings - (continued)

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

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

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

A quick visual inspection is sufficient to indicate the condition of the detector at any time.
If more detailed information is required, a printed report can be provided from the respective Cerberus PRO Modular | FireFinder XLS/V | FC/FV9–series FACP that indicates the status and settings assigned to each individual detector.

Installation

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

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

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

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

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

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

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

Installation of Model OP921 smoke detectors requires a two-wire circuit. In many retrofit cases, existing wiring may be used. `T-tapping' is permitted only for Style 4 (Class B) wiring. Model OP921 is polarity insensitive, which can greatly reduce installation and debugging times.

Model OP921 detectors can be applied within the maximum 30-feet center spacing (900 sq. ft. areas) as referenced in NFPA 72. This application guideline is based on ideal conditions – specifically, smooth ceiling surfaces; minimal air movement, and no physical obstructions between potential fire sources and the actual detector. Do not mount detectors in close proximity to ventilation or heating and air conditioning outlets. Exposed joists or beamed ceilings may also affect safe spacing limitations for detectors.

Should questions arise regarding detector placement, observe NFPA 72 guidelines. Good fire-protection-system engineering and common sense dictate how and when fire detectors are installed and used. Contact your local Siemens – Fire Safety distributor or sales office whenever you need assistance applying Model OP921 in unusual applications. Be sure to follow NFPA guidelines and UL Listed / ULC Listed installation instructions – included with every Siemens – Fire Safety detector – and local codes as for all fire protection equipment.

Field-Device Programmer / Test Unit

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

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

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

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

Technical Data

OPERATING TEMPERATURE:	+32° – +120°F (0° – +49°C)
RELATIVE HUMIDITY:	0 – 95% (non-condensing)
AIR PRESSURE:	No effect
AIR VELOCITY:	0 – 4,000 feet-per-minute (fpm) (0 – 20 meters-per-second)
INPUT VOLTAGE RANGE:	16VDC – 30VDC
`ALARM' CURRENT, MAX.:	410µA
`STANDBY' CURRENT, MAX.:	250µA
MAXIMUM SPACING:	30–ft. centers (900 sq. ft.), per NFPA 72
DETECTOR WEIGHT:	0.317 Lbs. (0.144 kg.)
MECHANICAL PROTECTION GUARD:	UL and ULC Listed (with STI Guard Model STI-9604)
SENSITIVITY RANGE:	1.08 - 2.72% / ft obs. (Nominal 2.0% / ft. obs.)

Panel Compatibilities

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

Details for Ordering

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

Compatible Devices:

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

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

In Canada order:

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

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

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

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

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SIEMENS
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Cerberus® PRO
Detectors and Peripherals

Multi-Criteria Fire Detector
Model OH921

Architect & Engineer Specifications

- ☐ Compatible with Siemens Model `H'-series devices on the same loop (with Cerberus PRO Modular | FireFinder XLS/V | FC9–series fire-alarm control panels)
- ☐ Each detector is self-testing:
  - complete diagnostics performed every 10 seconds
  - self-monitored for sensitivity within UL Listed limits
- ☐ Listed, approved as a heat detector:
  - Rate-of-Rise Detection: 15°F / min. (8.3°C / min.)
  - Fixed: 135°F (57°C)
- ☐ Responds to flaming and smoldering fire signatures
- ☐ Field-selectable application profiles
- ☐ Superior electromagnetic interference (EMI) and radio-frequency interference (RFI) immunity
- ☐ Field programmable as rate-of-rise or fixed temperature, per `Alarm Source 2' | Standard parameter
- ☐ Tri-color detector-status light-emitting diode (LED) with 360° view
- ☐ Compatible with Model 8720 | DPU (device programmer / loop tester)
- ☐ Polarity insensitive via *SureWire™* technology
- ☐ Functions with Model DB-11–series mounting bases
- ☐ Restriction of Hazardous Substances (RoHS compliant)
- ☐ Automatic environment compensation
- ☐ UL Listed | FM, CSFM Approved
  - UL 268: `Open Area Smoke Detection'
  - UL 268A (Duct) - `Direct-in-Duct' use
  - UL 521: `Open Area Heat Detection'
  - ULC-S531: `Open Area Smoke Detection'
  - ULC-S539: `Open Area Heat Detection'
  - FM 3230: `Open Area Smoke Detection'
  - FM 3210: `Open Area Heat Detection'
  - CSFM | File: 7272-0067:0258

Product Overview

The Photoelectric | Thermal (Heat) Detector (Model OH921) is an intelligent, addressable multi-criteria detector that incorporates optical and thermal sensors, and uses signals in a neural network to create an intelligent multi-criteria detector. The encompassing result is a detector that provides enhanced detection to a wide range of products of combustion.

Model OH921 utilizes advanced, multi-criteria detection technology. The multi-criteria detector also has state-of-the-art microprocessor circuitry (with error check), as well as detector self-diagnostics and supervision programs that is used on Cerberus PRO Modular | FireFinder XLS/V and on Model FC/FV9-series Cerberus PRO fire-alarm control panels (FACPs).

Additionally, Model OH921 is a plug-in and addressable two-wire multi-criteria detector (with both photoelectric and thermal sensors) that is compatible with Siemens intelligent, addressable systems.

Operation

Model OH921 utilizes an infrared light emitting diode (IRLED),and infrared light-sensing photodiode. Under normal conditions, light transmitted by the LED is directed away from the photodiode and scattered through the smoke chamber in a controlled pattern.

The smoke chamber is designed to manage light dissipation and extraneous reflections from dust particles or other non-smoke, airborne contaminants in such a way as to maintain stable, consistent detector operation. When smoke enters the detector chamber, light emitted from the IRLED is scattered by the smoke particles, and is received by the photodiode.

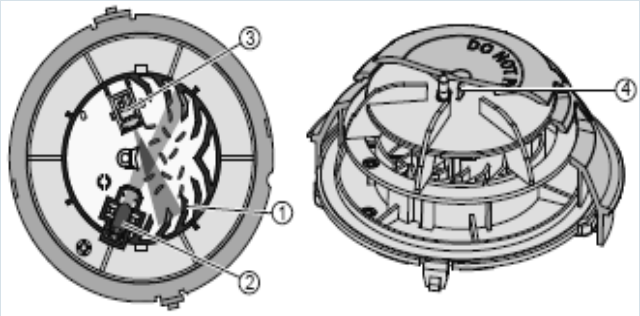
Model OH921 also utilizes a modern, accurate and shock-resistant thermistor to sense temperature changes.

The signal processing with detection algorithms allows the detector to first gather smoke and thermal data, and then analyze this information in the detector's `neural network.' By comparing data received with the common characteristics of fires or fire signatures, Model OH921 can compare these signals to those of deceptive phenomena that cause other detectors to trigger a false alarm.

Model OH921
Multi-Criteria Fire Detector

Each Model OH921 detector provides three (3) pre-programmed parameter sets that can be selected by the FACP.

1. **Labyrinth**
2. **Optical transmitter**
3. **Optical receiver**
4. **Heat sensor**



Model OH921

1. **Dust cover**
2. **Multi-criteria detector**

NOTE: Each detector consists of a dust-resistant photoelectric chamber; a solid state, non-mechanical thermal sensor, and microprocessor-based electronics with a low-profile plastic housing.
Every Model OH921 fire detector is shipped with a protective dust cover.

Profile Overview

Model OH921 provides two (2) different alarm sources that can be selected individually (ON or OFF) by the control panel.

Alarm Source 1 (Neural Network) – Combines smoke (heat) with the following field-selectable profiles:

- Sensitive
- Robust
- Standard

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

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

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

Alarm Source 2 (Thermistor) – Heat only; provides the following:

- Static / fixed at 135°F (57°C), default setting
- Rate-of-Rise detection at 15°F / min. (8.3°C / min.)

If the detector is not programmed, Model OH921 will default to a 'standard' profile setting, which allows operation for a normal office-type environment. Model OH921 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:

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

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

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

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

A quick visual inspection is sufficient to indicate the condition of the detector at any time.
If more detailed information is required, a printed report can be provided from the respective Cerberus PRO Modular | Model FC9-series | FireFinder XLS/V FACPs that indicates the status and settings assigned to each individual detector.

Installation

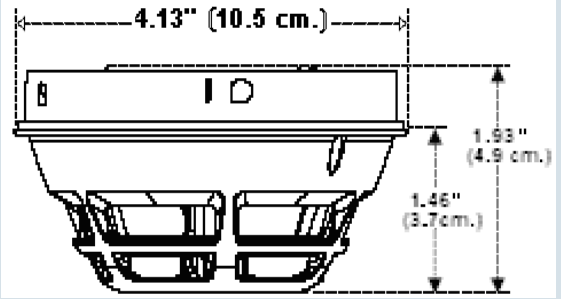
All Model OH921 detectors use a surface-mounting base, Model DB-11 or Model DB-11E, which mounts on a 4-inch (10.2 cm.) octagonal, square or single-gang electrical box. The base utilizes screw-clamp contacts for electrical connections and self-wiping contacts for increased reliability.

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 OH921 may be installed on the same initiating circuit with the following [when used with Cerberus PRO Modular | Model FC9-series | FireFinder XLS/V FACPs] –

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

Dimensional Data



All Model OH921 detectors are approved for operation within the UL-specified temperature range of 32°F to 100°F (0 – 38°C).

Application Data

Installation of Model OH921 intelligent, addressable multi-criteria detectors requires a two-wire circuit. In many retrofit cases, existing wiring may be used. `T-tapping' is permitted only for Style 4 (Class B) wiring. Model OH921 is polarity insensitive, which can greatly reduce installation and debugging times.

Model OH921 can be applied within the maximum 50-feet (15.24 m.) center spacing (2,500 sq. ft. [762 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 positioned near 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 OH921 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 OH921 is a plug-in, (2) two-wire thermal (heat) detector, compatible with Cerberus PRO Modular | Model FC9-series FACPs | FireFinder XLS/V. Each Model OH921 detector has microcomputer-chip technology and highly stable, solid-state electronic circuitry. Model OH921 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 OH921 provides seven (7) field-selectable, pre-programmed temperature settings:

- Fixed 135°F (57°C)
- Rate-of-Rise: 15°F / min. (8.3°C)

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

Field-Device Programmer / Test Unit

Model OH921 is compatible with the Siemens field-device programmer / test unit (Model 8720 | DPU), which is a compact, portable and menu-driven accessory for electronically programming and testing these addressable detectors promptly and reliably. For instance, the field technician selects the accessory's program mode, and enters the desired address.

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

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

The encompassing result is an intelligent detector that provides enhanced detection capability to a wide range of products of combustion – while offering unsurpassed rejection to nuisance-alarm sources, including: dust | steam | aerosols and other deceptive phenomena that could cause false alarms.

Technical Data

OPERATING TEMPERATURE:	+32° – +100°F (0° – +38°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:	30–ft. (9.144 m.) centers (900 sq. ft. | 762 sq. m.), per NFPA 72 and ULC-S524
THERMAL RATING:	• Fixed 135°F (57°C) • Rate-of-Rise: 15°F / min. (8.3°C) at fixed 135°F (57°C)
DETECTOR WEIGHT:	0.317 Lbs. (0.144 kg.)
MECHANICAL PROTECTION GUARD:	UL Listed / ULC Listed with STI Guard Model STI-9604
SENSITIVITY RANGE:	1.22 - 2.74% / ft obs. (Nominal 2.0% / ft. obs.)

Panel Compatibilities

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

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
OH921	S54320-F6-A2	Addressable Multi-Criteria Fire Detector

Compatible Devices:

MODEL OR TYPE	PART NUMBER	PRODUCT
ABHW-4B	S54320-F13-A1	Sounder base with Loop-Power Option
ABHW-4S	S54320-F14-A1	Sounder base for Sleeping Areas
ADB-BOX	500-698360	Surface Mount Adapter Box for Audible Base
DB2-HR	S54370-F12-A1	Relay base compatible with Siemens standard and advanced detectors
DB-11	500-094151	Detector Mounting Base (for Series 11)
DB-11E	500-094151E	Detector Base (small)
RL-HW	500-033310	Remote Alarm Indicator: Single-gang-box mount, red
RL-HC	500-033230	Remote Alarm Indicator: 4" (10.2 cm.) octagon-box mount, red
LK-11	500-695350	Base Locking Kit (for Series 11)

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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