SIEMENS

Cerberus PRO

50-Point Addressable Fire Alarm Control Panel(FACP)

Model FC901

Architect and Engineer Specifications

☐ Fire alarm control panel (FACP) for up to 50 addressable points that is comprised of the following three (3) system components:

- Main board (Model FCM901-U3)
- 6.5 Amps (170-Watt power supply Model FP2011-U1)
- System enclosure (Model FH901-U3 / R3)

☐ System features:

- Supports 50 addressable devices on one (1) `Class A', or two (2) `Class B' circuits
- Includes one (1) `Class A', or two (2) `Class B' notification appliance circuits (NACs)
- Built-in digital alarm communication transmitter (DACT)
- Supports releasing scenarios
- Supports isolation devices such as PAD-5, X-Series I / Os and XMS (pull stations)
- Supports Carbon Monoxide (CO) detection (not approved for use in Canada)
- Downloads, prints system-event history & detector sensitivity

☐ System features :
- Supervised remote printer (Model FCA2018-U1)
- Optional connectivity to a leased-line / city-tie module (Model FCI2020-U1)
- Built-in RS—485 connection for remote annunciators
- Resettable and non-resettable 24VDC auxiliary power
- Off-normal warning message prior to reset
- User programmable front panel control
- Fast and easy set-up with custom-configuration tool
- Supports a 182-character display

☐ Alphanumeric keypad
- for manual configuration

☐ UL 864 10th Edition Listed, ULC- S527 3rd Edition Approval

☐ FM, CSFM & NYC Fire Department Approved

☐ City of Chicago, Class 1 Approval

Product Overview

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

Small and compact in design, Model FC901 is ideal for small fire-protection applications using less than 50 addressable devices. Typical usages include retail outlets, strip malls, medical offices, restaurants, banks, etc.

Model FC 901

With its built-in DACT and two (2) NACs, Model FC901 is powerful enough to economically meet the needs of these applications.

Each 50-point FACP has City of Chicago, Class 1 Approval, as well as being FM (#3010); CSFM (#7165-0067: 0259); FDNY (#6104) and UL (864 10th Edition) and ULC (S527 3rd Edition) approved.

Specifications

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

Main Board

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

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

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

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

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

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

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

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

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

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

The main board supports four (4) 'Form C' relays for Alarm, Trouble, Supervisory and User Programmable events. Each relay is rated at 2 Amps at 30VDC maximum, resistive. The main board supports two (2) auxiliary 24VDC connections.

Upon system reset, one (1) connection interrupts the power for five seconds for use with (4) four-wire conventional detectors. Each auxiliary-power output is 24VDC, nominal — rated at 0.75 Amps.

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

(For compatibility with each Model FC901 FACP, see the *Central Station Receiver Compatibility Table* on page 4)

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

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

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

50-Point Addressable System Enclosure

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

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

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

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

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

50-Point Power Supply

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

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

— Optional Accessories —

Leased-Line / City-Tie Module

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

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

50-Point Remote Annunciator (not approved for use in Canada)

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

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

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

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

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

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

When Model PAL-1 is used with the remote peripheral module, Model FCA2018-U1 supervises the printer for **ON, OFF Line | POWER ON | PAPER OUT | PAPER JAM,** and wiring-fault conditions, as required by UL for NFPA 72 proprietary systems.

The following are the dimensions based upon connection to a one-height-unit enclosure (1HU) for Model FC901:
> *Approximate size:* 16.5" (41.9 cm.) [H]
> 18.13" (46.1 cm.) [W]
> 5.11" (13 cm.) [D]

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

LED Annunciator Driver: 32 Outputs | 16 Inputs

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

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

Tabular Annunciator Drivers: 16 Zones | 32 Zones

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

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

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

There are also a series of No-Control Tabular annunciators (FT2018/FT2019) which are identical to the control versions but have no buttons or key switch for control.

Spare Hardware Kit

The Model FX901-S1 Spare HW Kit includes the following parts :
- Cables
- Screws
- Power Supply MOV(Metal Oxide Vanistor)
- EOL for NAC
- Spacer for City-Tie board

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

Central Station Receiver Compatibility Table

PROTOCOL	MX-8000	SUR-GARD SYSTEM III	SUR-GARD SYSTEM IV	TELGUARD TG7GFS04	SILENT KNIGHT 9800	BOSCH D6600	BOSCH D6100
SIA 8	✔	✔	✔	✔	✔	✔	✔
SIA 20	✔	✔	✔	✔	✔	✔	✔
ADEMCO CONTACT ID	✔	✔	✔	✔	✔	✔	
4/2	✔	✔	✔				
3/1	✔	✔	✔				

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

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

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
FCM901-U3	S54433-B101-A1	Cerberus PRO Main Board [for the 50-point FACP]
FH901-U3	S54433-B103-A3	System Enclosure, Black [for the 50-point FACP]
FH901-R3	S54433-B103-A4	System Enclosure, Red [for the 50-point FACP]
FP2011-U1	500-450222	170-Watt Power Supply
FCA2018-U1	S54400-A65-A1	Remote Peripheral Module
FCI2020-U1	S54400-A57-A1	Leased-Line / City-Tie Module
FCA901-U1	S54433-C106-A1	Wiring Harness [for use with Cerberus PRO Model FC901 control panels]
FHA901-U1	S54433-B107-A1	Battery Bracket
FHA902-U1	S54433-B106-A1	Flush-Mount Trim Kit, Black
FHA902-R1	S54433-B106-A2	Flush-Mount Trim Kit, Red
FSD901-U3	S54433-C102-A1	System Display, Black [specifically for the 50-point FACP]
FSD901-R3	S54433-C102-A2	System Display, Red [specifically for the 50-point FACP]
FT2007-U1	S54400-A142-A1	LED Annunciator Driver [32 Outputs	16 Inputs]
FT2008-U1	S54400-A143-A1	16-Zone Tabular Annunciator, Black
FT2008-R1	S54400-A144-A1	16-Zone Tabular Annunciator, Red
FT2009-U1	S54400-A145-A1	32-Zone Tabular Annunciator, Black
FT2009-R1	S54400-A146-A1	32-Zone Tabular Annunciator, Red
FT2018-U1	S54433-A1-A1	16-Zone Tabular Annunciator, Black, No-Control
FT2018-R1	S54433-A2-A1	16-Zone Tabular Annunciator, Red, No-Control

Details for Ordering (cont.)

MODEL OR TYPE	PART NUMBER	PRODUCT
FT2019-U1	S54433-A3-A1	32-Zone Tabular Annunciator, Black, No-Control
FT2019-R1	S54433-A4-A1	32-Zone Tabular Annunciator, Red, No-Control

Optional Accessories

FX901-S1	S54433-C117-A1	Spare HW Kit

In Canada order:

MODEL OR TYPE	PART NUMBER	PRODUCT
FCM901-L3	S54433-A8-A1	Cerberus PRO Main Board {for the 50-point FACP}

Note: For installation in Canada a Tabular Annunciator (FT2018 or FT2019) and a separate Power Supply (PAD-4 or PAD-5) should be added as part of the complete control unit.

Electronics Package

MODEL OR TYPE	PART NUMBER	PRODUCT
FC901-U3	S54433-C105-A1	Cerberus PRO Kit for the 50-Point Addressable FACP (Includes) :
		170W power supply, Model FP2011-U1 (Qty. 1)
		System main board, Model FCM901-U3 (Qty. 1)

In Canada order:

MODEL OR TYPE	PART NUMBER	PRODUCT
FC901-L3	S54433-C108-A1	Cerberus PRO Kit for the 50-Point Addressable FACP (Includes) :
		170W power supply, Model FP2011-U1 (Qty. 1)
		System main board, Model FCM901-L3 (Qty. 1)

Related Documentation

PRODUCT	DATA SHEET NUMBER
170-Watt power supply	9806
Leased-Line / City-Tie Module	9810
Remote Peripheral Module	9811
50-Point Remote Annunciator	9817
LED Annunciator Driver, FT2007-U1	9824
16-Zone / 32-Zone Tabular Annunciators	9825

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Cerberus PRO