Simplex

*UL Listed**

Datasheet

Foundation Series Fire Alarm Control Unit

2250FS Fire Alarm Control Unit

Features

The 2250FS is an addressable 250 point fire alarm control unit (FACU) that is suitable for both new and retrofit applications.

UI

- A 4 x 40 character display that shows the following key FACU information:
  - Alarm
  - Supervisory
  - Trouble
  - Ground fault
  - System normal
  - Silence
  - Acknowledge
  - Walk test

MX initiating circuit

- Connect up to 250 addressable initiating devices using innovative MX technology on a single loop
- Smoke detectors are UL268 7th edition listed
- One amp of current for each MX loop for powering sounder bases and other devices
- Class B or Class A wiring
- UL listed to 864
- Hard or soft addressing of initiating devices

Compatible devices

- Smoke sensors, heat sensors, combination photo/heat
- Loop powered sounder bases
- Duct detector
- Mini IAM, Relay IAM, Monitor ZAM
- Single action, dual action break glass, and double action pull stations
- Line isolator module

Optional modules

- City circuit module with disconnect switch
- GSM 4G/LTE Cellular modem with antenna extension kit options
- Connected Services Gateway
- Available NAC extender with 4 Class B NACs and 8 A power supply; 120 VAC or 240 VAC versions

Notification appliance circuit

- Four NACs, 3 A maximum for each
- Use TrueAlert non-addressable notification appliances

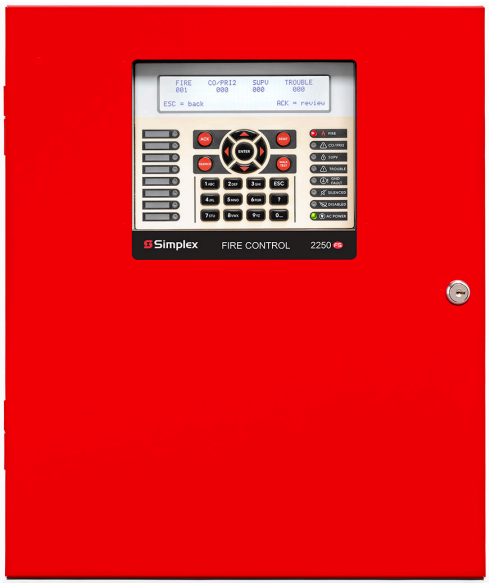
General mechanical:

- Red cabinet

2250FS FACU listings reference:

- UL 864 - Control Units, Systems (UOJZ)
- UL 2017 - Emergency Alarm Control Units (CO detection), FSZI

Figure 1: 2250FS FACU front view



Addressing options

- DIP switch
- Soft addressing
- QR code

Remote LCD annunciator

- Maximum of eight for each 2250FS FACU
- 4 x 40 character display
- Alarm, trouble and supervisory LEDs
- Acknowledge, silence, and Reset switches
- Up, Down and Enter keys for quick menu access
- Key lock switch to prevent tampering

Communication protocols

IP Communicator

The IP Communicator provides the following specific building event information:

- Communicates point status changes, phone line status, and other off normal information to the central station and enterprise server
- Reports up to ten events through a call

The IP Communicator format is CID. You can configure the Communicator as either Per Point or Event Reporting Type.

Central station communication

Central station supported interfaces include the following:

- Dual Line Phone Digital Alarm Communicator Transmitter (DACT) (ADEMCO Contact ID)
- 10/100 Base-T Ethernet (Fibro protocol)
- Cellular (Fibro protocol)

Standards and codes

You can configure central station reporting with one path, or dual paths with a primary path and a secondary path. You can configure paths to use any of the external connections, telephone line, cellular or LAN Ethernet connections.

Antenna extension kits are available for installations with inadequate cellular signal.

* At the time of publication only UL and ULC listings are applicable to ES Net network products. Additional listings may be applicable; contact your local product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

Connected Services Gateway

The Connected Services Gateway (CSG) is an all-in-one interface card that supports central station communication and enables SafeLINC Cloud Services.

The CSG provides wired or wireless central station communication through LAN Ethernet, cellular, and plain old telephone service (POTS)

The CSG enables authorized users to access their managed FACUs remotely through SafeLINC web or mobile app.

Operator interface

The user interface is a 4 x 40 backlit LCD screen, with LEDs and keypad, see 2250FS screens. With the locking door closed, the glass window allows viewing of the display status LEDs.

The LED indicators display the general category of activity and the LCD displays more detail. Authorized users can unlock the door to gain access to the control functions and scroll through the display for additional detail.

Operator interface and software features

- A logical, menu-driven touchscreen display for convenient access to detailed operator information
- Password access control
- Multiple automatic and manual diagnostics for maintenance reduction
- Alarm and Trouble History Logs are available for viewing from the display or downloaded to a service computer
- WALKTEST silent or audible system test performs an automatic self-resetting test cycle and supports up to eight WALKTEST groups

2250FS screens

System normal



Fire



Supervisory



Trouble



Menu



Mechanical description

- Locking door with polycarbonate window
- Modules are power-limited except as noted, such as relay modules
- The bottom battery compartment accepts two batteries, up to 18 Ah, to be mounted in the cabinet without interfering with module space. Charger capacity is up to 25 Ah. You can use batteries up to 25 Ah in a separate battery cabinet. For information about batteries greater than 18 Ah and external battery cabinets, see Module and accessories selection information

Product selection

Table 1: 2250FS FACU product selection

Model	Color	Description	Standby	Alarm
2250-9101	Red	2250FS FACU with 4 x 40 LCD display, single addressable MX initiating loop with 250 devices maximum and 4 conventional NAC circuits	185 mA	225 mA

Table 2: Add-ons and accessories

PID	Device description	Device type
2975-9812	Trim Ring for Semi-Flush Mounting	Accessories
2250-9800	Connected Services Gateway and IP Communicator Module	Add-on module
2975-9234	Gateway Enclosure, red	Gateway enclosure
734-383	Communication cable for external gateway	Communication cable
2050-9909	City Circuit Module with disconnect switch for addressable panels, with chassis, maximum one for each panel.	Add-on module
2606-9101	LCD Annunciator, a maximum of eight for each 2250FS	Add-on module
2081-9028	Circuit Protection, isolated loop cicuit protector (ILCP). See note.	Surge protector
2081-9044	Circuit Protection, overvoltage protector. See note.	Surge protector
Note: Required if wiring is routed outside the building. For NAC, DACT, Annunciator, City circuits, and Aux Power		

Table 3: Cellular modem and extention kits

PID	Device description
4007-6417	GSM 4G/LTE Cellular module kit
4007-6405	15 ft (4.57 m) antenna extension kit
4007-6406	25 ft (7.62 m) antenna extension kit
4007-6407	50 ft (15.24 m) antenna extension kit

Table 4: MX Sensors and housing

PID	Device description
4098-5291	MX Photo/Heat Sensor with Address Switch, SSD cover
4098-5292	MX Photo Sensor with Address Switch, SSD cover
4098-5293	MX Heat Sensor with Address Switch, SSD cover

Table 5: Devices

PID	Device description
4090-5206	Line Isolator Module, for MX
4090-5258	Mini IAM, with DIP switch
4090-5259	Relay IAM, with DIP switch
4090-5260	Monitor ZAM, with DIP switch
4099-5214	Pullstation Single Action, with DIP switch
4099-5215	Pullstation, DA Break Glass, with DIP switch
4099-5216	Double Action Station, push type

Table 6: Bases

PID	Device description	Device type
4098-5210	4 in. MX Digital Loop LP Sounder Base, 85dB at 10 ft, existing	Sounder base
4098-5207	5 in. Addressable Sensor Base with remote LED output, existing	Standard base
4098-5261	4 in. Detector Base **Note:** Not available for North America because the unit does not fit the standard back box.	Standard base
4098-9799	6 in. Adaptor for 5 in. Base. Also works on a 4 in. octagonal box.	Adaptor for base
4098-5227	5 in. Adaptor for 5210	Adaptor for base
4098-5228	6 in. Adaptor for 5210	Adaptor for base

Table 7: Addressable MX sensors

PID	Device description	Compatible bases			
		4 in. standard	4 in sounder, non-addressable	5 in. standard, existing	6 in. adaptor for 5 in. base
4098-5291	MX Photo/Heat Sensor with Address Switch, SSD Cover	4098-5261	4098-5210	4098-5207	4098-9799
4098-5292	MX Photo Sensor with Address Switch, SSD Cover	4098-5261	4098-5210	4098-5207	4098-9799
4098-5293	MX Heat Sensor with Address Switch, SSD Cover	4098-5261	4098-5210	4098-5207	4098-9799

Table 8: Duct housing

PID	Device description
4098-5214	Duct sensor housing only, addressable. For use with 4098-5292, order separately.

Table 9: Sampling tubes

PID	Device description
STS-2.5	Sampling tube 6 in. to 30 in. (152 mm to 762 mm) duct width
STS-5.0	Sampling tube 30 in. to 60 in. (762 mm to 1,524 mm) duct width
STS-10.0	Sampling tube 60 in. to 120 in. (1,524 mm to 3,048 mm) duct width.

Module and accessories selection information

Table 10: Field installed optional modules

Model	Description	Supv.	Alarm
2606-9101	LCD annunciator. A maximum of eight per panel	40 mA	48 mA
2050-9909	City Circuit Module with disconnect switch	30 mA	60 mA
2250-9800	Connected Services Gateway with IP Communicator	125 mA	125 mA

Table 11: Batteries

Model	Capacity	Battery mounting details
2081-9286	7 Ah	12 V Batteries for cabinet mounting; select one battery model per system standby requirements; order quantity of two; to be wired in series for 24 VDC
2081-9274	10 Ah	
2081-9288	12.7 Ah	
2081-9275	18 Ah	
2081-9287	25 Ah	Requires 4009-9801 external battery cabinet, see Table 12

Table 12: Battery cabinets

Model	Color	Capacity	Dimensions (H x W x D)	Description
4009-9801	Beige	For up to 25 Ah batteries, see note	13 1/2 in. x 16 1/4 in. x 5 3/4 in. (413 mm x 343 mm x 146 mm)	External battery cabinet without charger for mounting close-nippled to the fire alarm control unit cabinet; includes locking solid door. Use battery harness 734-304 for a NAC power supply and harness 734-303 for an IDNAC power supply. Battery harnesses are shipped with the FACU.

Table 13: Accessories

Model	Description
2080-9047	DACT cable, 14 ft (4.3 m) long. RJ45 plug at one end, spade lugs at the other end. Order one per phone line connection required
2975-9802	Red semi-flush box trim; 1 7/16 in. (37 mm) wide, four corners and trim pieces for top, bottom, and sides
4081-9008	10 kohms, 1 W EOL resistor harness for non-addressable NACs
2081-9411	Battery Bracket Addressable, for seismic use

Additional NAC power

For additional NAC power, use the 4009 NAC Extender. Refer to datasheet S4009-0002 for additional information.

Table 14: NAC power accessories

PID	Description
4009-9201	4009 IDNet NAC Extender with 4, Class B NACs and 8 A power supply. 120 VAC input, seismic tested, UL Listed
4009-9301	4009 IDNet NAC Extender with 4, Class B NACs and 8 A power supply. 240 VAC input, UL Listed
4009-9807	NAC Option Card. Adds four conventional NACs, one maximum
4009-9808	Dual Class A adapter, for two NAC outputs, four maximum

2250FS mounting and module location reference

Figure 2: 2250FS board and cabinet, in.

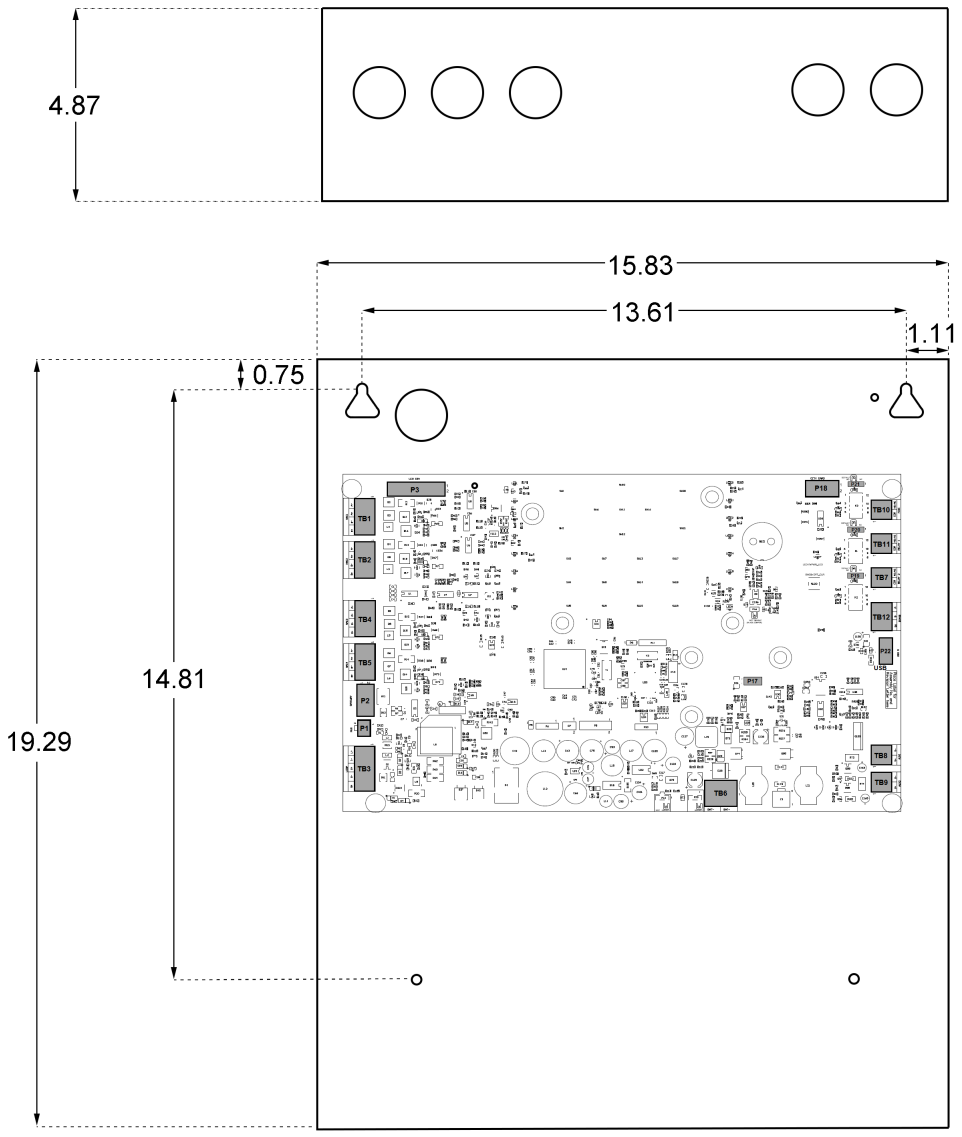


Figure 3: 2250FS control unit board

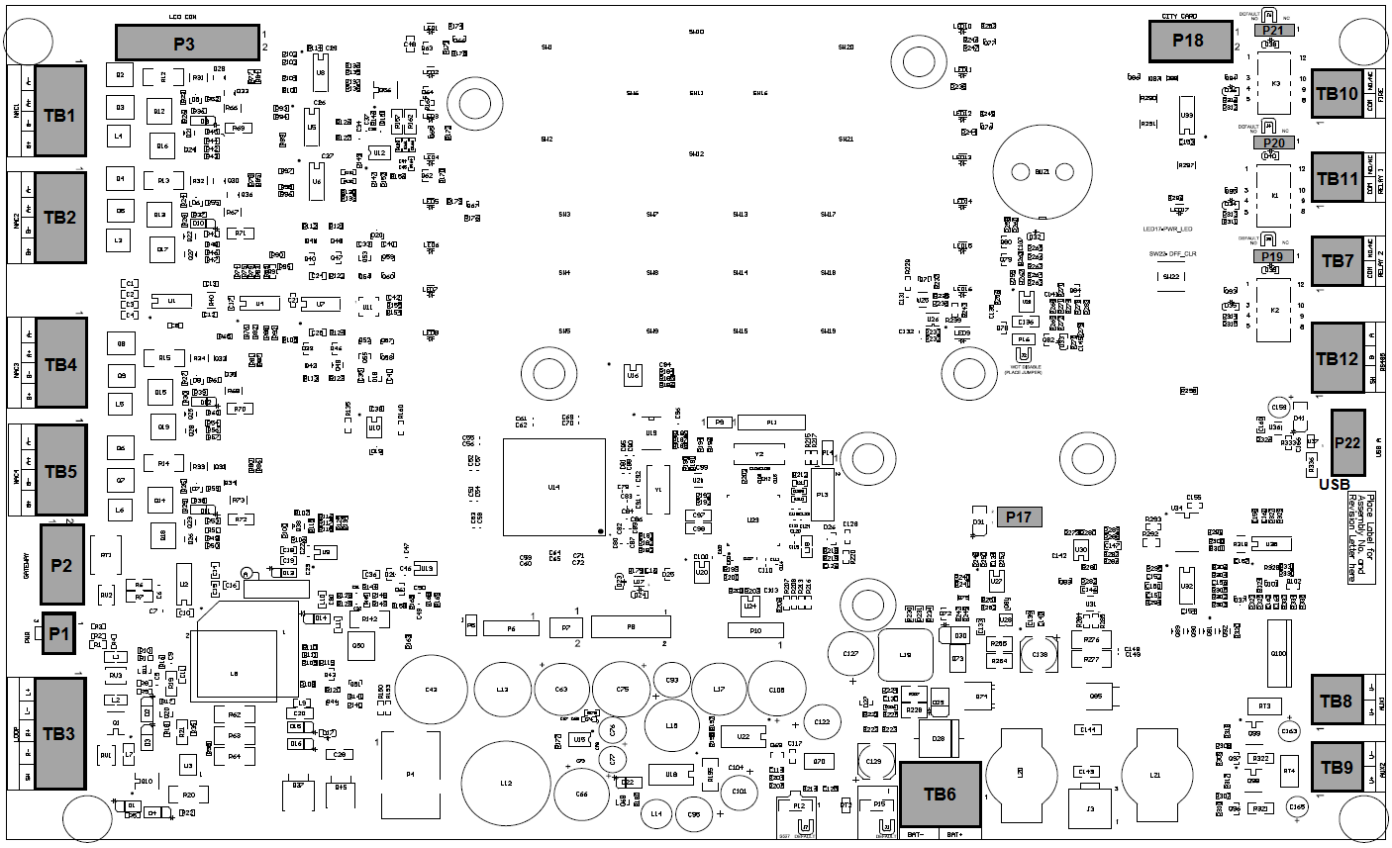


Table 15: Main components information

Identifier	Description	Identifier	Description	Identifier	Description
TB1	NAC1	TB7	Relay-3	P3	LCD display connector
TB2	NAC2	TB8	Aux-1 (Non-resettable power)	P17	RFID connector
TB3	MX Loop	TB9	Aux-2 (Resettable power)	P18	City Card connector
TB4	NAC3	TB10	Relay-1	P19	Jumper for Relay-3 setting
		TB11	Relay-2	P20	Jumper for Relay-2 setting
TB5	NAC4	P1	Gateway module connector	P21	Jumper for Relay-1 setting
TB6	Battery terminal	P2	Gateway module power connector	P22	USB port

General specifications

Table 16: General specifications

Specification		Rating	
AC input ratings	Input voltage	120 VAC, 50/60 Hz, 240 VAC, 50/60 Hz, Auto-select	
	Input current, standard	2 A maximum at 120 VAC input; 1 A maximum at 240 VAC input	
Power supply output ratings	Power supply output rating	6 A maximum at 24 VDC in alarm	
	Battery charger	Temperature compensated charger is rated for up to 25 Ah	
	Standby current	150mA	
Notification appliance circuits (NACs)		3 A maximum at 24 VDC, per circuit; available as Class A or Class B; Class B end-of-line resistor = 10 kohm, 1/2 W; Model 4081-9008 (P/N 733-894) See note.	
Maximum load allowed on MX loop		945 mA at 40 V	
Annunciator Communications	Quantity supported	Up to eight annunciators	
	Wiring type	Twisted pair; 18 AWG (0.82 mm^2)	
	Bus-style wiring	Up to 4,000 ft (1,219 m); 0.58 µF (580 nF) maximum capacitance; 35 ohm	
	Line matching resistor	Bus-style, connect one at FACU and one at end of line.	100 ohm, 1/2 W, 4081-9011, part number 733-974
		T-tap, connect one at FACU and one at farthest device.	
	Suppression	Use 2081-9044 Overvoltage Protectors where wiring leaves and enters a building, refer to data sheet S2081-0016	
Auxiliary power output	Aux 1 Aux 2	1 A maximum at 24 VDC is available at each auxiliary circuit. Total load on FACU power supply must be within 6 A	
Standard auxiliary relay outputs	Relay 1	Trouble operation	Contacts rated 24 VDC at 2 A, jumper selectable as N.O or N.C.
	Relay 2 and 3	Programmable operation	
Note: The NAC Class B circuit can additionally support 3.9 kohm, 4.7 kohm, 5.1 kohm, 5.6 kohm and 15 kohm values for end-of-line (EOL) resistors to accommodate retrofit applications.			

Additional product reference data sheets

Table 17: Additional product reference data sheets

Title	Document number
4009 IDNet NAC Extender	S4009-0002
Mini-IAM (Individual Addressable Module) Model 4090-5258	S4090-0020
Individual Addressable Relay Module (Relay IAM) Model 4090-5259	S4090-0021
Addressable Manual Stations Single and Dual Action	S4099-0008
4901-9820 Electronic Horn, Free-Run or SmartSync™ Operation, Non-Addressable	S4901-0010
SmartSync™ Two-Wire Operation, Non-Addressable Mini-Horns	S4901-0013
SmartSync™ 2-Wire Operation, Non-Addressable Electronic Chime	S4902-0004
Non-Addressable Audible/Visible Notification Appliances for 4-Wire Operation (Horn/Strobe)	S4903-0011
Visible Notification Appliances with Synchronized Flash;Non-Addressable, SmartSync™ Operation Compatible	S4906-0001
SmartSync™ Operation Audible/Visible Notification with Horn and Synchronized Flash, Non-Addressable	S4906-0002
Weatherproof Notification Appliances (non-addressable) Wall Mount Visible Only (V/O) and Audible/Visible (A/V)	S4906-0010
Multi-Candela, High Intensity (non-addressable) Strobe and Horn/Strobe	S4906-0011
SmartSync™ Operation Audible/Visible Notification with Chime and Synchronized Flash, Non-Addressable	S4906-0012
Multi-Tone Horns; SmartSync™ Controlled or Free-run; with 520 Hz output, Non-Addressable	S49CMT-0001
Audible/Visible Notification Appliances; Multi-Tone FM Approved* Horn/Strobe with 520 Hz Output, Non-Addressable	S49CMTV-0001

2250FS annunciators

Figure 4: LCD annunciator



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