

MPC-1500 Analog Addressable/Conventional Fire Alarm Control Panel

Features

- Two analog/addressable SLCs (396 pts.), expandable to four (792 pts.)
- Four NACs, style "Y" (Class B), expandable to (12) convertible to style "Z", (class A)
- Expandable to add up to (8) IDCs, style "D/B"
- 4.5 amp power supply, 3 amps for NACs
- 80 character, backlit LCD with custom labeling
- LEDs for panel status indication
- Connection for 16 remote 80 character display/control LCD annunciators, backlit on activation
- Optional DACT connection or internal DACT
- Fully field programmable via PC, removable keypad and automatic programming
- 2000 event history log in nonvolatile memory
- Dynamic "quick test" function by device or the entire panel
- Drift compensation & alarm verification
- Day/Night sensitivity mode
- NFPA 72 sensitivity testing
- Manual alarm silence with 0, 1, 3, or 6 minute inhibit
- Auto-silence selectable for each NAC (10, 20, or 30 minute, or none)
- Silent or audible Quick Test
- Local energy, shunt or polarity-reversal city tie signaling
- 240 Software zones, 255 notification and 255 relay software circuits
- Coded output
- Two password levels - Tech & Maintenance
- Transient protected
- UL Listed, standard 864, CSFM listed & MEA approved

Description

The **MPC-1500** is an advanced modular fire alarm panel. It features analog/addressable detection, programming, and memory capability and is capable of accepting special expansion modules to allow the inclusion of up to 8 local conventional style "D/B" initiating zones. It's base configuration includes two analog/addressable loops, with four conventional notification appliance output circuits.

Operating controls and indicators are mounted on the door with a mylar label for identification. An 80-character LCD display provides specific indications for addressable devices and conventional expansion zones while LEDs indicate general panel status.



MPC-1500

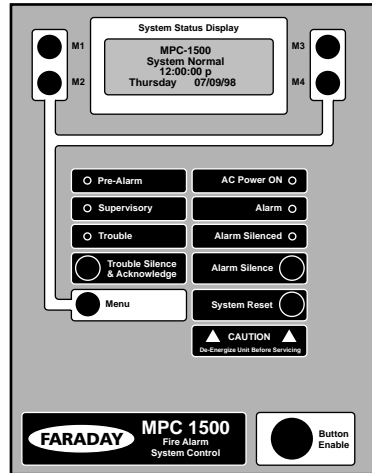
Hardware Configuration

The main termination board mounts in the rear of the panel. The main power supply is physically contiguous with the main termination board. The MPC-1500 main termination board provides the interface for external analog system connections, a platform for the loop driver board, four signaling circuits, remote signaling circuits and indicating interfaces, and the electronics of the main system power supply. Expansion termination boards mount in the rear of the control panel above the main board. They provide the interface for an additional loop driver board, and conventional zone interface boards, expanding the capability of the panel from two loops (unused loop capability need not be programmed in) to four loops and eight conventional input zones (in the extended cabinet). Each loop/signal expansion board also provides four more signaling circuits and each conventional expansion termination board provides two more signaling circuits, for a system maximum of 12.

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The front main logic PCB mounts on the cover of the box, allowing it to carry the controls and displays which must be accessible from the front panel. The system processor and low-level logic are included on this board to leave the power handling to the heavier boards in the back of the box. Since displays for any number of zones are handled through this board, no expansion of this board is required for system expansion.

All normal operation is controlled from the front of the panel via push-button switches and an enabling key-switch required for all functions except display of the most recent active event. Displays are provided by an 80-character, alphanumeric, backlit LCD display and by discrete LED indicators for major panel functions.



The 80-character LCD display is used to display event data, including alarms and troubles, identification of zone or device, and presentation of history. The display is controlled by a set of four push-button switches commanding the control processor. Operation of the key-switch is required to call up any but the most recent active event. A back light is included in the display to assure visibility in low light, but to conserve power, it is only activated during a reported event or operation of a display control switch.

Minimum Control Unit Configuration

- A. **Addressable Input/Output Circuits** – The addressable main termination board mounts an addressable loop interface board supporting two addressable device communication loops.
- B. **Notification Appliance Circuits** – The base panel has four independent NACs. Each circuit can be selected to give continuous output or one of eight sounding patterns available.
- C. **Dry Contacts** – Five dry relay contacts are provided. These contacts are dedicated to alarm, trouble, supervisory, AC failure, and processor failure indications.

- D. **City Tie** – The city tie circuitry is located on the main termination PCB. Shunt, local energy, or polarity reversal mode may be selected by means of a programming header. Only one mode and only one output may be selected. The output may be alarm, trouble, supervisory, or trouble/supervisory.
- E. **Digital Dialer Output** – The main termination board provides a standard DACT interface, providing system event data to a remote receiving station.
- F. **Remote Annunciation** – The MPC-1500 panel will drive up to 16 annunciators (RDC-1) and 8 remote processors (SAU-1 & SRU-1) on an RS-485 communication line.
- G. **Power Supply** – A 4.5A, 24V nominal power supply provides all operating power to the panel for both standby and alarm conditions.

Optional Control Unit Configuration

- A. **Addressable Loop/Signal Exp. Board (LSE-1)** – Addition of an expansion termination board provides for another addressable loop interface board supporting two addressable loops. Only one additional expansion board may be used.
- B. **Conventional Expansion Board (CEB-1)** – Conventional IDCs may be included in the system by adding one or two conventional expansion device boards. Each board provides 4 initiating circuits, which can be converted to class "A" by the addition of a class "A" adapter board.

The **CEB-1** board also includes two notification appliance circuits. Each group of two notification appliance circuits may be powered by separate externally provided 24 Vdc, if desired.
- C. **DACT Expansion Module (DEM-1)** – The **DEM-1** provides a dual line digital alarm communications transmitter. It's parameters are set via the control unit programming sequence. The **DEM-1** may be mounted in the main enclosure. An extended cabinet is required if more than one expansion board is to be used.

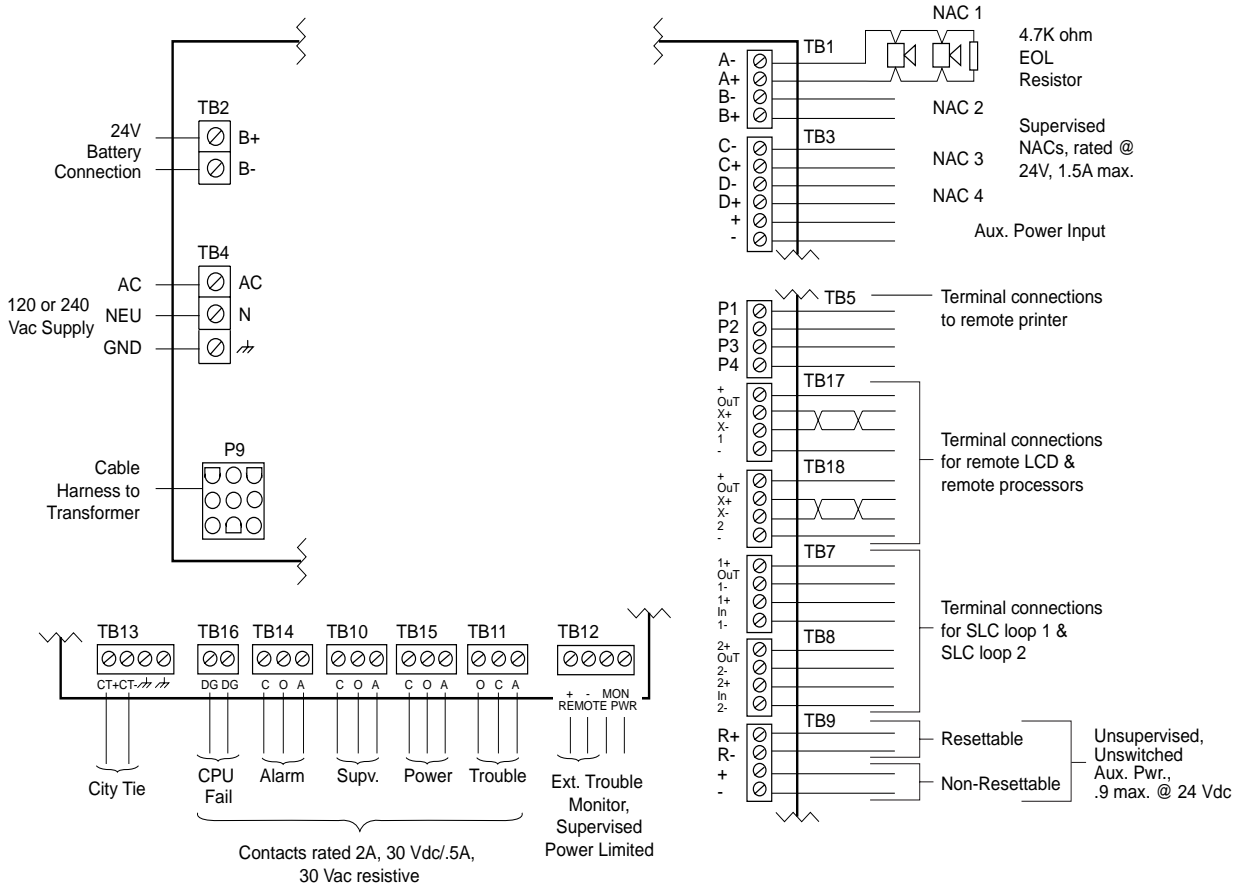
The **DEM-1** is compatible with the following formats: SIA DCS 8, SIA DCS 20, Ademco Contact ID, 3/1 1400 Hz, 3/1 2300 Hz, 4/2 1400 Hz and 4/2 2300 Hz.

Auxiliary Devices

- A. **Remote LCD Annunciator (RDC-1)** – The remote LCD annunciator consists of a backlit 80 character, alphanumeric display, 4 menu buttons, 4 dedicated buttons for operator interaction, 6 LED indicators, and a security key switch.
- B. **Serial Annunciator Unit (SAU-1)** – The remote processor is used with LED or incandescent indicating modules to perform programmed functions.

- C. **Serial Relay Unit (SRU-1)** – Each remote relay board contains eight 3A form "C" relays. Each remote processor board can then address up to 24 relays. The MPC-1500 panel will control eight processors, for a total of 192 relay addresses, but only 100 maximum addresses may be used at one time in the system.

Wiring, Main Termination Board



General Specifications

Environmental

Operating temperature
32-120°F (0-49°C)
Relative Humidity
85% @ 86°F

Primary Supply

Primary input voltage
120 Vac (50/60 Hz.), 240 Vac (50/60 Hz.)

Maximum primary input current
3 amp @ 120 Vac, .5 amp @ 240 Vac

Secondary and Trouble Power Supply

24 volt lead-acid battery with 7-38 AH capacity (10 AH will fit in main cabinet)

NAC Power

3.0 amps

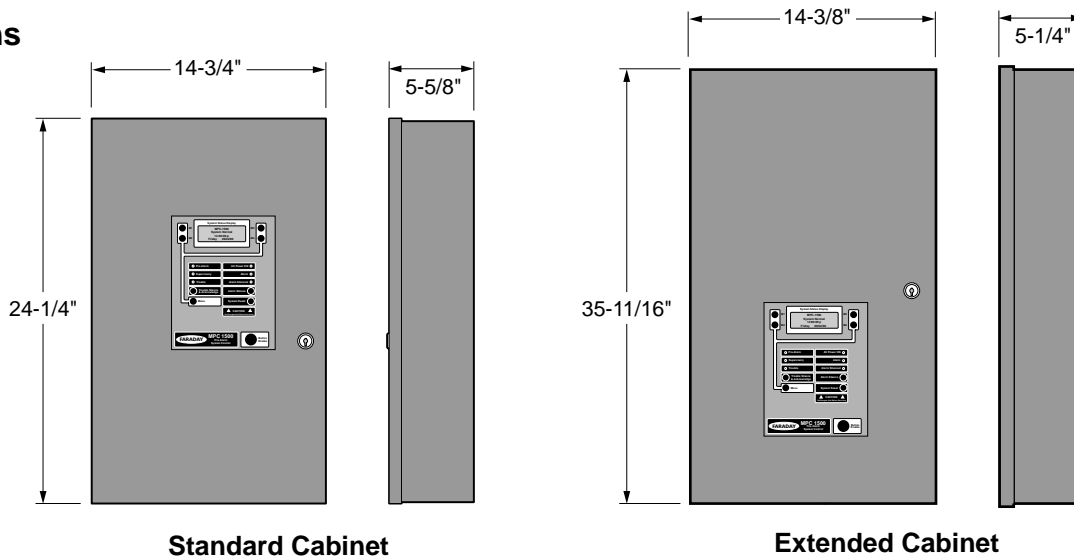
Auxiliary Power Outputs

Current
0.9 amp resettable/non-resettable power outputs

Status System Relays

5 relays rated @ 2 amp, 30 Vdc & .5 amp @ 30 Vac

Dimensions



Ordering Information

Model No.	Order No	Description	Spec Sheet
MPC-1500 Control Panel – (2 to 4) analog/addressable loops and 4 to 12 NACs, style "Y" (class B)			
MPC-1500	12500-0*-120	Base unit with surface cabinet, 120 Vac, 60 Hz.	FAC-3-8
MPC-1500	12520-0*-120	Above unit with DACT.	FAC-3-8
MPC-1500	12500-0*-240	Base unit with surface cabinet, 240 Vac, 50 Hz.	FAC-3-8
MPC-1500E	12501-0*-120	Base unit w/ext. surface cabinet, 120 Vac, 60 Hz.	FAC-3-8
MPC-1500E	12521-0*-120	Above unit with DACT.	FAC-3-8
MPC-1500E	12501-0*-240	Base unit w/ext. surface cabinet, 240 Vac, 50 Hz.	FAC-3-8

Options for MPC-1500

LSE-1	12505	Loop/signal expansion board, adds 4 NACs	FAC-3-8
LDBS	12502A	Adds 2 SLC loops to LSE-1	FAC-3-8
CEB-1	12503	Conventional exp. brd., adds 4 IDCs and 4 NACs	FAC-3-8
CAA-1A	12401A	Class A adapter for CEB-1 board	FAC-3-8
CAA-2	12504	Class A adapter for base NACs and LSE-1 NACs	FAC-3-8
RDC-1	12506-0(*)	Remote 80 character LCD annunciator	FAC-9
SRU-1	12507	Remote serial relay unit	FAC-3-8
SRE-8	12508	Remote serial relay extender	
SAU-1	12509	Serial annunciator unit	FAC-3-8
SAE-16	12510	Serial annunciator extender	
FAE-21	401403-0(*)	Enclosure for 12507-12510 units	
DEM-1	12513	DACT point ID expansion module	FAC-3-8
SIB-1	12511	RS-232 isolator module	
12515	12515-0(*)	Semi-flush mounting kit	
12516	12516-0(*)	Semi-flush mounting kit, extended cabinet	
CIS-3	12106	Upload/download programming kit (includes software, cable & board)	
ARB	12402	Alarm relay board	
APS-1	12408-0(*)-120/240	Aux. power supply, w/surface cabinet	
DC-100	15128	Four channel DACT	FAC-2-6
DCC-1	12410	Digital communicator cable for DC-100/101	

* Colors: (14) red, (21) off-white



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