Addressable Fire Alarm Control Panels

Monaco Analog Addressable+ (MAAP(+)) FACP with Integrated Radio Transceiver

Features

- Combines the Narrowband Radio Transceiver and Addressable (and/or conventional) Fire Alarm Control Panel in one modular, compact unit; no interconnection wiring or interfacing needed
- Monaco Analog Addressable Panel (MAAP(+)) with Point Reporting capability individually reports every addressable sensor or addressable monitor module to a D-21 Central Receiving System
  - Heat or Smoke detector status (Alarm Trouble)
  - Monitor module status (Alarm Trouble)
- Combines Monaco original zone reporting with point reported status
  - Fast response using well established protocol for zone information
  - Point Reporting of sensors and monitor modules to the central receiving system for detailed real-time alarm and trouble status which can be graphically displayed at the D-21 Central in dispatch or on scene using the D-21 Mobile Client system
- Enhanced diagnostic information
  - Panel troubles and loop faults uniquely identified
  - Control Module and NAC module faults reported
- Supports traditional grouping of multiple devices to a common zone number for transmission to a D-700 or D-21(FSK) Central Receiving System
- Now supports a combined zone and point reporting features to D-21 Central Reporting Systems enabled for MAAP(+) Point Reporting
- Monitors and transmits zone alarms (fire and supervisory), troubles and restorations, and Addressable Control Panel status for up to 64 zones or 48 zones with all points reporting active
- Provides up to eight Analog Driver Cards (ADCs) (one standard, seven optional) that may be configured as Class B, Class A, or Class X Signaling Line Circuits (SLCs)
  - Each ADC has a capacity for up to 99 analog addressable smoke or heat sensors and 99 addressable monitor or control modules for a total system count of up to 792 analog addressable smoke or heat sensors and 792 addressable monitor or control modules
  - IMPORTANT Large systems with many optional modules such as sounder bases and fault indicators draw more current than smoke and heat detectors and monitor and control modules. If using these items, refer to the MAAP(+) I-O-M (P/N 001-353-01) for capacity calculations. SLC wiring shall be unshielded twisted pair (UTP).
- Provides two Class A or four Class B Notification Appliance Circuits (NACs)
- Provides two Class A or four Class B Initiating Device Circuits (IDCs). Expandable through installation of an Expansion Backplane and expansion cards.
- Quick scanning algorithm for fast reporting
- Plain English display (LCD)
  - Enable / disable sensor (point) event is sent to Central
  - Enhanced walktest and system checkout through D-21
  - Radio Key-up test
  - Local History output to LCD, printer or laptop
- LEDs indicate the operational status of the Addressable Control Panel
- Internal clock and calendar synchronized with the D-21
- 48 character display for device identification and description
- Provides 24 Vdc filtered power
- New MAP(+) Planner creates a master configuration file for programming the Panel. The D-21 Central System Admin Client imports the master configuration file, eliminating the need to manually enter the MAAP(+) panel configuration, zone, and point information.
Description

The MAAP(+) is a low voltage, automatic, integrated Narrowband Radio Transceiver and Addressable Fire Alarm Control Panel that incorporates the latest in solid-state addressable technology and Monaco expertise in radio transmission-based systems. All monitoring, supervision, signaling, and reporting functions are incorporated into this one unit.

Each MAAP(+) can support up to 792 analog addressable smoke or heat sensors and 792 addressable monitor or control modules. The addressable devices may be grouped together to form virtual zones and are individually reported to the D-21 Central Receiving System through Monaco’s new Point Reporting transmission protocol. Only one antenna system is required for reporting status of 64 zones or 48 zones combined with all points reporting turned on. The Panel LCD identifies the individual addressable device or point that has generated the alarm or trouble.

The new sensor group feature allows smoke detectors to work together to control local sounder bases and prevent nuisance alarms, which is particularly useful in dormitory environments.

The basic panel provides two Class B SLCs or one Class A or Class X SLC (expandable to sixteen Class B or eight Class A or Class X SLCs; two Class A or Class X or four Class B NACs; two Class A or Class X or four Class B IDCs; an auxiliary output circuit; an auxiliary power output circuit; two programmable Form C relays; and a remote trouble circuit.

The NACs can be programmed as silenceable or non-silenceable and can be assigned to specific zones, group of zones, or specific addressable devices. The auxiliary output may be assigned to activate for waterflow alarm, positive alarm sequence, or publicly accessible manual pull station alarms or it may be used as another bell circuit and assigned to specific devices or groups of devices. The two programmable Form C relays may be assigned to common alarm or common trouble or can be assigned to specific zones, a group of zones, or specific addressable devices. Additional outputs can be provided by using addressable devices.

The MAAP(+) provides 2 A of filtered, 24 Vdc auxiliary power to operate conventional and addressable devices, as well as other auxiliary devices. All circuits are internally protected by power limiting or fuses. Batteries are connected to the unit for continued operation in the event of an ac power failure. The battery charging circuitry is built-in.

Configuration programming is performed using the MAP(+) Planner software (P/N 207-617-00). The Planner exports the panel configuration information to the D-21 Central.

The MAAP(+) indicates alarms with an on-board audible, a red LED, and a message in the LCD that identifies the zone input or the specific addressable device and description. The Panel indicates zone and panel troubles with an onboard audible alert, a yellow LED, and a message in the LCD that identifies the zone input, the specific addressable device, or the specific panel trouble. A list of the last 500 alarms and troubles are maintained in panel history.
## Ordering Information

<table>
<thead>
<tr>
<th>Part Category</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panels</strong></td>
<td>227-855-xx**</td>
<td>MAAP(+) Point Reporting, Narrowband surface-mount M-2 Addressable Control Panel with one Analog Addressable Controller (AAC), one Analog Driver Card (ADC), and two 12 V/18 Ah batteries in a 28-inch-high x 18-inch-wide x 3.6-inch-deep NEMA 1 enclosure, Specify Frequency</td>
</tr>
<tr>
<td>227-855-MN</td>
<td></td>
<td>MAAP(+) Point Reporting MNS, 28-inch-high x 18-inch-wide x 3.6-inch-deep NEMA 1 surface mount enclosure, no radio, with interface to BT-XM2</td>
</tr>
<tr>
<td>227-865-xx**</td>
<td></td>
<td>MAAP(+) Point Reporting, flush mount (same as 227-855-xx except for mount), Specify Frequency</td>
</tr>
<tr>
<td>227-865-MN</td>
<td></td>
<td>MAAP(+) Point Reporting MNS, 28-inch-high x 18-inch-wide x 3.6-inch-deep NEMA 1 flush mount enclosure, no radio, with Interface to BT-XM2</td>
</tr>
<tr>
<td>227-856-xx**</td>
<td></td>
<td>MAAP(+) Point Reporting, Narrowband surface-mount M-2 Addressable Control Panel with one AAC, one ADC, and four 12V/18 Ah batteries in a 43-inch-high x 18-inch-wide x 3.6-inch-deep NEMA 1 enclosure with space for one optional expansion backplanes, Specify Frequency</td>
</tr>
<tr>
<td>227-856-MN</td>
<td></td>
<td>MAAP(+) Point Reporting MNS, 43-inch-high x 18-inch-wide x 3.6-inch-deep NEMA 1 surface mount enclosure, no radio, with interface to BT-XM2</td>
</tr>
<tr>
<td>227-866-xx**</td>
<td></td>
<td>MAAP(+) Point Reporting, flush mount (same as 227-856-xx except for mount), Specify Frequency</td>
</tr>
<tr>
<td>227-866-MN</td>
<td></td>
<td>MAAP(+) Point Reporting MNS, 43-inch-high x 18-inch-wide x 3.6-inch-deep NEMA 1 flush mount enclosure, no radio, with Interface to BT-XM2</td>
</tr>
<tr>
<td>227-857-xx**</td>
<td></td>
<td>MAAP(+) Point Reporting, Narrowband surface-mount M-2 Addressable Control Panel with one AAC, one ADC, and four 12V/18 Ah batteries in a 60-inch-high x 18-inch-wide x 3.6-inch-deep NEMA 1 surface mount enclosure with space for three optional expansion backplanes, Specify Frequency</td>
</tr>
<tr>
<td>227-857-MN</td>
<td></td>
<td>MAAP(+) Point Reporting MNS, 60-inch-high x 18-inch-wide x 3.6-inch-deep surface mount enclosure, no radio, with interface to BT-XM2</td>
</tr>
<tr>
<td>227-869-xx**</td>
<td></td>
<td>MAAP(+) Point Reporting 24” Nema 3R enclosure, Specify Frequency</td>
</tr>
<tr>
<td>227-811-xx**</td>
<td></td>
<td>MAAP(+) electronics package assembly upgrade for existing MAAP-2 (legacy addressable), and M-2 Conventional (except 19” enclosures). Replaces the M CPU, power supply, display, and radio (Specify Frequency). Provides replacement AAC and one ADC. Note: Existing ADC cards may be used with the upgrade.</td>
</tr>
<tr>
<td>227-811-MN</td>
<td></td>
<td>MAAP(+) electronics package assembly MNS upgrade for existing MAAP-1 and MAAP-2 (legacy addressable) and M-2 Conventional panels (except 19” enclosures). Replaces the M CPU, power supply, and display. Provides replacement AAC and one ADC, and a BT-XM2 MNS interface. Note: Existing ADC cards may be used with the upgrade.</td>
</tr>
<tr>
<td><strong>Addressable Backplane and Cards</strong></td>
<td>176-193-01</td>
<td>Analog Addressable Controller (AAC). The AAC supports eight ADCs.</td>
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<tr>
<td>176-194-00</td>
<td></td>
<td>Analog Driver Card (ADC)</td>
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<tr>
<td><strong>Conventional Expansion Backplane and Cards</strong></td>
<td>176-185-00</td>
<td>Expansion Backplane, supports seven expansion cards (ZEC, AOC, UIC)</td>
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<tr>
<td>176-186-00</td>
<td></td>
<td>Zone Expansion Card (ZEC), two Class A or four Class B Zones</td>
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<td>176-187-00</td>
<td></td>
<td>Auxiliary Output Card (AOC), eight-circuit</td>
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<td>176-197-00</td>
<td></td>
<td>Universal Input Card (UIIC), four pair of input terminals to connect up to four, two-wire input zones</td>
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<tr>
<td><strong>Batteries</strong></td>
<td>081-156-00</td>
<td>Two 12 V / 26 Ah batteries in an 18-inch x 12-inch x 6-inch (45.7 x 30.5 x 15.2 cm) red, surface mount enclosure</td>
</tr>
<tr>
<td><strong>Printer</strong></td>
<td>205-032-00</td>
<td>MAAP(+) Printer Kit</td>
</tr>
<tr>
<td><strong>Configuration Software</strong></td>
<td>207-617-00</td>
<td>MAP(+) Planner Kit (Required)</td>
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<tr>
<td>225-163-00</td>
<td></td>
<td>Monaco Planner / Programmer Kit - contains Monaco FAC, D-700R and BT-X planner software and interface cables</td>
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</tbody>
</table>

* Specify frequency when ordering. *FM Approved

**NOTES** Other battery options available depending on total Ah requirement. Ah capacity depends on system configuration. Contact Monaco for assistance in determining battery requirements. Antenna network accessories also required; see "Antenna Network Accessories" in the Monaco Addressable Catalog.
Wiring Diagrams
Wiring the MAAP(+) Electronic Assembly, the AAC, and the optional Expansion Backplane, is shown in the following wiring diagrams.

Electronic Assembly

[Diagram of Electronic Assembly]

Transformer

AC POWER
BATTERY
FAULT

ESR
ESR
ESR
ESR

Alarm S
Silence S
Silence N
Alarm N

Class A/Class B Configuration
Jumper, shown as Class B

To batteries 24 Vdc, (used for 6A) AH capacity depends on the configuration

To antenna

To AAC

Sprinkler/Flow Switch

Legend:

- Smoke Detector
- Heat Detector
- Manual Pull Station
- Bell
- Horn

Class A Operation

Unsupervised Class A Zone Circuit

Unsupervised Class A Bell Circuit

Typical Class A Zone and Bell Circuit (supervised) with end-of-line resistors integrated on-board

Addressable Systems Fire Alarm Products Catalog Rev N 06/10
Addressable Fire Alarm Control Panels: Monaco Analog Addressable+

### Analog Addressable Controller

![Analog Addressable Controller Diagram]

**LEGEND**
- Heat Detector
- Smoke Detector
- Isolator Module
- Monitor Module
- Mini Monitor Module
- Control Module
- Pull Station
- Notification Appliance

### Conventional Expansion Backplane

![Conventional Expansion Backplane Diagram]

**LEGEND**
- Smoke Detector
- Heat Detector
- Manual Pull Station