



# XP Series Transponders

Section: Intelligent Fire Alarm Control Panels

## GENERAL

The **XP Series Transponders** provide the AFP-300, AFP-400, AFC-600, AFP1010, and AM2020 systems with an efficient multiplex subsystem capability. The XP Transponders communicate with the Fire Alarm Control Panels and function as data-gathering panels for alarm initiating device circuits, and as remote switching centers for Notification Appliance Circuits or relays.

The alarm Initiating Device Circuits (IDC) of the XP Transponders may be used to monitor multiple zones of conventional two-wire smoke detectors, manual pull stations, heat detectors, and other initiating devices. The Notification Appliance Circuits (NAC) may be used to control multiple zones of horns or speakers, or two-way firefighter's telephones, or dry-contact relays.

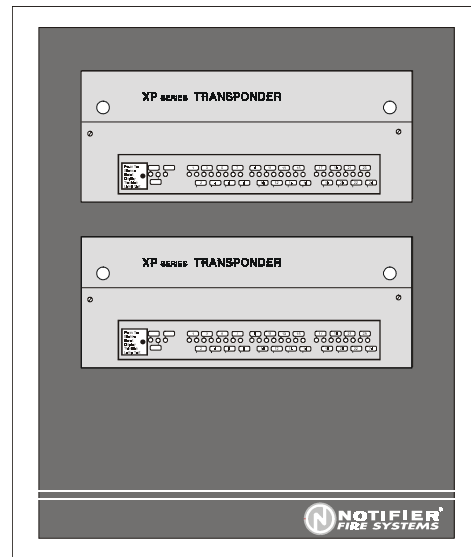
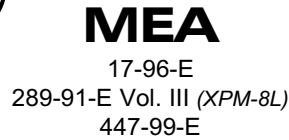
Each XP Transponder communicates with, and is controlled by, one of the SLC loops of the host fire alarm control panel. The XP communicates with the control panel as a cluster of monitor and control modules, and uses one module address for every XP point. Upon the unlikely event that communications are lost, the transponder will automatically switch over to a "Local Mode" operation, and function as an independent Fire Alarm Control Panel.

## FEATURES

- Modular design and construction.
- "Local Mode" functionality for transponder stand-alone operation in the event of communications failure with host control panel.
- Up to 26 field-configurable circuits.
- Can configure initiating circuits Style B or Style D.
- Can configure indicating circuits Style Y or Style Z.
- Can configure relays single Form-C or dual Form-C.
- Full LED display of Alarm per point and Trouble, with space for custom labels.
- Display of output point ON/OFF status.
- Transponder status displays and controls including: Power/On-Line LED, Local Alarm LED, Local Trouble LED, Reset, and Lamp Test control switch.
- Power supply, charger, and battery capability in the same cabinet.
- Optional audio amplifiers may be mounted in transponder cabinet.
- Power-limited on all indicating and initiating circuits.
- Optical isolation from the Signaling Line Circuit.
- Multiple Transponders may be mounted in same cabinet.
- Pluggable terminal blocks for ease of installation, service.
- UL-Listed NFPA 72 as a stand-alone control.
- Optional alarm verification.



California State Fire Marshal  
**AFP1010, AM2020:**  
 7165-0028:141  
 7170-0028:153  
**AFC-600:**  
 7165-0028:203  
 7170-0028:204  
**AFP-300, AFP-400:**  
 7165-0028:181  
 7170-0028:182



**XP Transponders in CAB-B3 Cabinet**

- XRAM option allows programmability in the stand-alone mode.

## APPLICATIONS

The XP Transponders are designed to be used anywhere a cost-effective, remote-data-gathering control panel is required. The transponders are extremely effective in both high-rise and low-rise buildings where power losses over long wiring distances dictate the use of remote control equipment, amplifiers, or audio/visual power supplies. Standard cabinet and modular hardware provide an attractive and easy-to-configure Fire Alarm Life Safety System.

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information, contact **NOTIFIER**. Phone: (203) 484-7161 FAX: (203) 484-7118



## CONSTRUCTION AND INSTALLATION

The XP Transponders utilize modular hardware assemblies which allow the custom configuration of the panel to fit the individual job requirements. Standard backboxes and mounting hardware schemes allow the transponders to be constructed and configured with other system components, including audio amplifiers and annunciators. XP modules mount easily with two screws and may be connected together in seconds with ribbon cables.

A key-locked, hinged front door and dead-front panel construction allow easy access to all operator indicators and controls, and prevent unauthorized access to the system electronics.

All field-wiring terminations use removable, compression-type terminal blocks for ease of installation, wiring, and circuit testing.

## OPERATION

The XP Transponders function as a remote group of independent monitor and/or control modules. It communicates with the control panel over a single pair of wires. Additional pairs may be required for voice and telephone signals. The XP may share the same SLC loop with other devices such as intelligent detectors or addressable modules. Multiple XP Transponders may be placed on the same SLC loop as long as the transponder module address capacity of 99 is not exceeded.

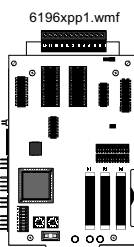
The XP Transponder is controlled by the XPP-1 Processor Module. The XPP-1 includes two dual Form-C relays that may be programmed (dip-switch selection) to operate as control module points.

These relays are often used for voice channel switching in dual-channel systems. The XPP-1 may control up to three additional modules, which may be any mix of the following:

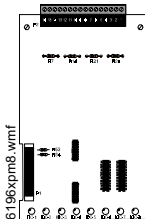
- Transponder Monitor Module (XPM-8) provides eight Style B or four Style D Initiating Device Circuits.
- Transponder Control Module (XPC-8) provides eight Style Y or four Style Z Indicating Appliance Circuits.
- Transponder Relay Module (XPR-8) provides eight single Form-C or four dual Form-C dry contact relays.

## PRODUCT LINE INFORMATION

**BE-XP:** Transponder Base Equipment. Includes XPP Transponder Processor Module, CHS-4 Chassis, dress panel, all required cables, and instructions. XPP-1 module includes two field-programmable DPDT relays. From one to three Transponder modules, of any mix, may be added and controlled by the XPP-1.

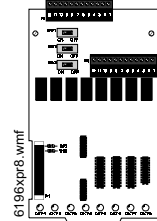


**XPM-8:** Provides the control panel with the capability to monitor up to eight Style B or four Style D Initiating Device Circuits. These circuits employ conventional alarm initiating devices, including two-wire smoke detectors. Each circuit assumes a separate address in the system and has a separate status LED (red) at the bottom of the XPM-8 board.

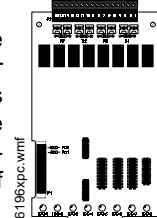


**XPM-8L:** Similar to the XPM-8 and permits 1000 ohms line impedance, but does not support two-wire smoke detectors or Style D wiring.

**XPR-8:** Provides the control panel with the capability to control up to eight SPDT relays. The XPR-8 can alternately employ up to four dual Form-C relays. Each relay assumes a unique address in the system and has a separate status LED (green) at the bottom of the XPC board.



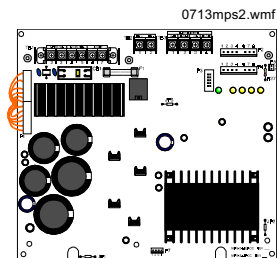
**XPC-8:** Provides the control panel with the capability to control eight Style Y or four Style Z Notification Appliance Circuits (NAC). Each circuit assumes a unique address in the system and has a separate status LED (green) at the bottom of the XPC-8 board.



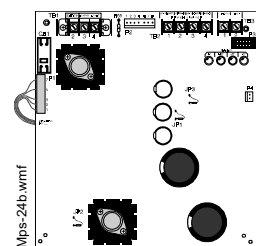
**When used** in conjunction with the Fire-Fighter's Telephone system (FFT-7), the NAC circuits can be employed as telephone circuits. **When used** in conjunction with the AA-30 amplifier, the XPC-8 can also be used to distribute audio signals to speaker circuits. **When used** in conjunction with MPS Series power supplies, the XPC-8 circuits may be used for supervised, polarized Notification Appliance Circuits. **Power for** indicating appliance and audio circuits are fed into the XPC-8 in pairs. **NOTE:** *When Class B wiring is used, a single XPC-8 may mix DC indicating, voice, and telephone circuits in circuit pairs.*

**XRAM-1:** Provides 32K x 8 of nonvolatile memory in the XPP-1. Allows custom input to output programming, in the field, of all "Local Mode" functions. **NOTE:** *Without the XRAM-1, the XP will provide general alarm functions in local mode.*

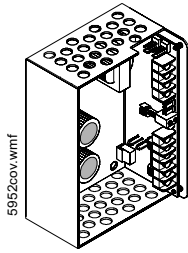
**MPS-24A:** Power Supply and battery charger mounts in bottom of transponder cabinet and powers from one to four XPP Transponders. Each power supply also provides 3.0 amperes (can be made resettable at 2.0 amperes) of usable, regulated 24 V power for notification circuits and 1.0 amperes of regulated, resettable 24 VDC power for four-wire detectors.



**MPS-24B:** Supplies the regulated power needed to run a CAB-A3-size system (CPU plus any three modules). 2.0 amps of RMS regulated notification circuit power (not for use with annunciators). 200 mA of regulated power for four-wire detectors or annunciators. Power limited with PTC overcurrent protection. Integral charger for 7 AH to 12 AH batteries.

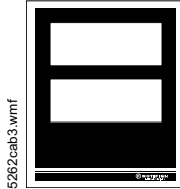


**APS-6R:** Auxiliary Power Supply for the operation of peripheral audible/visual devices (alarm signaling appliances). Provides two 3.0 ampere NAC circuits of full-wave, filtered 24 VDC power. Includes battery connection and transfer relay. May be mounted under XPM, XPC, and XPR modules.

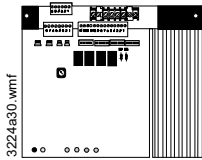


**CAB-3 Series:** Cabinets. The XP Series Transponders mount into any of the CAB-3 Series cabinets. See data sheet DN-3549 for more information.

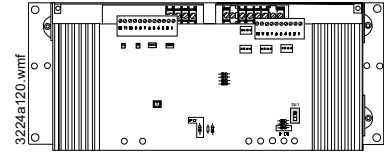
These backboxes are all 24" (609.6 mm) wide x 5-5/32" (130.969 mm) deep. Each backbox has a locking door and provides mounting space for XP Transponders, annunciators, or audio amplifiers as well as space for MPS Series power supply and standby batteries.



**AA-30:** Audio Amplifier providing up to 30 watts of ultra-low-distortion audio power for driving speaker circuits. The AA-30 amplifies the audio signal fed in from an Audio Message Generator (**AMG-1** or **ATG-2**) and mounts to one-half of a **CHS-4L** Chassis. For further information on the AA-30 and the larger **AA-120**, refer to the data sheet for AA Series Audio Amplifiers (DN-3224).



**AA-120/AA-100:** Audio Amplifier providing up to 120 watts of audio power for driving speaker circuits. The AA-120 includes its own chassis and uses one full tier of cabinet. The AA-100 is designed for 70.7 V<sub>RMS</sub> speakers and supports 100 watts of power.



**CHS-4L:** Low-profile chassis used to mount AA-30 Audio Amplifiers or APS-6R Auxiliary Power Supplies in the same cabinet as the XP Transponder.

**DP-1:** Blank Dress Panel. Use to cover unused tiers or AA-30 tiers in the backbox.

## ARCHITECTURAL/ENGINEERING SPECIFICATIONS

For specifications on the XP Transponder, contact NOTIFIER. <http://www.notifier.com>