

PDRP-1001 Series Pre-Action/Deluge Control Panel



Models Available

PDRP-1001 Pre-Action/Deluge Panel

PDRP-1001E (International, 230V)

PDRP-1001A (Canadian)

Optional Accessories Available

4XZM Zone Relay Module

4XTM Transmitter Module

4XLM LED Interface Module

4XMM Volt/Amp Meter

RZA-4X Supervised Remote Annunciator
requires LED interface module (4XLM)

NOTI•FIRE 911A Digital Communicator

PDRP-1001
Control Panel



Product Overview

2 initiating device circuits (Style B/D)

**2 notification appliance circuits
(Style Y/Z)**

2 release circuits (Style Y)

Waterflow input (Style B/D)

**Dual hazard option
(combined or split release)**

Supervisory input option (Style B/D)

**Distinct audible indications for: 1 zone
in alarm; 2 zones in alarm; release**

**Power-limited on all circuits except
municipal box output**

Alarm and trouble resound

Battery/earth fault supervision

**Last event recall feature to trap
intermittent trouble conditions**

**Fuse protection on all indicating/release
circuits**

Discharge timer: 0, 10, or 15 minutes

Disable/enable controls per initiating zone

Cross-zone option

Features. Battery/earth fault supervision and fuse protection on all indicating/release circuits. Extensive transient protection. 6.5 AH to 15 AH battery options, up to 90 hours standby. Output circuits protected against false activations by 2-step command sequence and watchdog timer to supervise microprocessor. Last event recall feature to trap intermittent trouble conditions. Non-resettable regulated 24 VDC power output and RMS regulated 24 VDC output power, 2.25 amperes. 230 VAC, 50 Hz international option. 4-wire smoke detector power output. Slide-in labels for zone identification.

Code Compliance. Complies with NFPA 72 Local, Auxiliary, Remote Station, Control Station, and Proprietary Protective and Central Station Signaling Systems. Also meets NFPA13 Installation of Sprinkler Systems, NFPA15 Water Spray Fixed Systems, and NFPA16 Deluge Foam/Water and Foam-Water Spray Systems.

Optional Meters. Voltage and current meters (4XMM): The 4XMM provides a voltmeter to measure the voltage across the batteries, and an ammeter to measure the charging current to the batteries.



General Specifications

Dimensions:
Door:
16.125"H x 14.625"W
Backbox:
16.0"H x 14.5"W x 4.75"D
Cabinet:
16.125"H x 14.625"W x 5.375"D

Electrical Specifications
120 VAC, 60 Hz, 1.2 A
Input Terminals
14 AWG with 600 V insulation

Circuit Specifications

Input Circuits
1. Detector Circuit 1/
Manual Release (Style B/D)
2. Detector Circuit 2 (Style B/D)
3. Waterflow (Style B/D)
4. Supervisory (Style B/D)

Output Circuits
(optional auxiliary relays track these four circuits)
1. Alarm/Waterflow Bell (Style Y/Z)
2. Waterflow/Supervisory Bell (Style Y/Z)
3. Releasing Circuit 1 (Style Y)
4. Supervisory Bell/Release Circuit 2 (Style Y)

Front Panel Control Switches
Switch 1— Tone Silence
Switch 2— Alarm Silence
Switch 3— Alarm Activate
Switch 4— System Reset

Initiating Circuit Specifications

General
Power-limited circuitry
Operation: Style B (Class B) / Style D (Class A)
Electrical Specifications
Standby voltage: 24 VDC (ripple = 10 mV peak-to-peak), 5 mA
Alarm current:
15 mA minimum

Short circuit current:
40 mA maximum
Maximum detector current in standby: 2 mA (peak) per zone
Maximum loop resistance:
200 ohms
EOL resistor:
4.7 kohms, ½ watt

Notification/Releasing Circuit Specifications

General
Power-limited circuitry
Electrical Specifications
Voltage: 24 VDC RMS regulated (not filtered)
Maximum voltage drop due to wiring: 2 VDC

Total current: 2.25 amps max.
Maximum signaling current per circuit: 1.5 amps
Fuses: 2 AG, 4 amps
EOL Resistor: 4.7 kohms, ½ watt (part no. 71252)

Terminal Specifications

Four-wire Smoke Detector Power Output Maximum Current: 200 mA
RMS Regulated 24 VDC Power Output Maximum current: 0.5 A (subtracted from notification appliance power dedicated to all output circuits).
Non-resettable 24 VDC Power Output Maximum DC current: 200 mA (subtracted from four-wire smoke power).

Field Program Selections

6-position DIP-switch to select:
1. Two-zone, single hazard operation
2. Two-zone, single hazard operation (cross zoned)
3. Two-zone, dual hazard operation (combined release)
4. Two-zone, dual hazard operation (split release)
5. Discharge times: 0, 10, or 15 minutes

Alarm/Trouble Relays

Dry Form-C contacts rating:
2.0 amps @ 30 VDC (resistive)
0.5 amps @ 30 VAC (resistive)

NFPA Standard Specified Requirements

Digital Communicator NOTI•FIRE 911A:
For Central Station service (NFPA 72 Central Station Protective Signaling System) or Remote Station Service (NFPA 72 Remote Station Protective Signaling System).

Transmitter Module (4XTM):
For Local Energy Municipal Box service (NFPA-72 Auxiliary Protective Signaling System):
Supervisory current:
5.0 mA

Trip current
0.35 amps (subtracted from indicating appliance power)
Coil voltage
3.65 VDC

Coil resistance
14.6 ohms
Total wire resistance between panel and trip coil
3 ohms

For Remote Station service (NFPA-72 Remote Station Protective Signaling System):
Maximum current allowed for both circuits shall not exceed 10 mA per circuit.
Reverse polarity output voltage
24 VDC.

Optional Boards

The PDRP-1001 has mounting slots for two option boards. Any two of the three option modules may be installed.

Zone Relay Module (4XZM):
The Zone Relay module provides Form-C general alarm and trouble contacts and the following Form-C relays:
Alarm/Waterflow Bell
Waterflow/Supervisory Bell
Releasing Circuit 1
Supervisory Bell/Release Circuit 2
Dry, Form C Contacts rated for:
2.0 amps @ 30 VDC (resistive)
0.5 amps @ 30 VAC (resistive)
Relays can be silenceable/non-silenceable by jumper

Transmitter Module (4XTM)
The Transmitter module option provides a supervised output for local energy municipal box transmitter (for NFPA-72 Auxiliary Protective Signaling System) and alarm and trouble reverse polarity (for NFPA-72 Remote Station Protective Signaling System). Also included is a DISABLE switch and disable trouble LED. A jumper option allows the reverse polarity circuit to open with a System Trouble condition if no alarm condition exists.

LED Interface Module (4XLM):
The module supports the RZA-4X Remote Annunciator module. The LED Interface Module mounts to the main board occupying one of the two option connectors. Annunciator LED wiring is supervised for opens. Faults will activate System Trouble condition.

Remote Annunciator

RZA-4X:
The Remote Annunciator mounts on a standard single-gang box and provides the following:
System Trouble LED (yellow)
Local Piezo Sounder
Silence Switch (for local sounder)
Alarm/Waterflow Bell LED (red)
Waterflow/Supervisory Bell LED (red)
Releasing Circuit 1 LED (red)
Supervisory Bell/Release Circuit 2 LED (red)
Note: The Remote Annunciator requires the use of an LED interface module.

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