

# IP Fire Series™ XP Multisensor Detector

- **XP-M**

### Description

The AsBuilt intelligent analog addressable multisensor detector (XP-M) operates seamlessly with the AsBuilt IP Fire Series™ network fire control. The XP-M communicates to and is managed and controlled by the IPF Series™ analog loop module (ALM).

The XP-M is distinguished from the other XP-devices by dual LED's on the external cover. The XP-M has two clear LED's that light steady when in an alarm condition and flash briefly when polled by the ALM.

### Operation

The XP-M multisensor detector contains a photoelectric smoke detector and thermistor temperature sensor whose outputs are combined give the final analog value to the ALM.

The XP-M multisensor construction is similar to the photoelectric detector (XP-P) but uses a different lid and optical moldings to accommodate the thermistor temperature sensor.

The signals from the photoelectric smoke sensing element and the temperature sensor are independent, and represent the smoke level and the air temperature in the vicinity of the detector. The detectors microcontroller processes the two signals. The temperature signal processing extracts only rate of rise information for combination with the optical signal. The XP-M is not a fixed temperature heat detector.

The processing algorithms in the XP-M multisensor incorporate drift compensation. Unlike other XP devices whose alarm thresholds are adjusted by the ALM, the XP-M sensing window remains at factory set thresholds throughout its lifetime. When the sensing window can no longer be compensated, the XP-M will put a 'dirty detector' signal on the fire control network to alert maintenance personnel to replace or clean the affected detector before a false alarm condition can be generated.

Due to the combination of signals from the smoke sensing chamber and thermistor, the sensitivity of the XP-M is considered the optimum for most general applications since it offers good response to both smoldering and flaming fires.




### Features

- **Sleek, non-fading white polycarbonate enclosure**
- **Zero insertion force base**
- **Multisensor reduces need for use of ionization detectors**
- **Maintains own drift-compensation values on smoke sensor portion to keep sensing window open and nuisance alarms eliminated**
- **Alarm flag sends signal to system even when device is not being interrogated**
- **True multi-criterion detector evaluates combined signals from ROR heat sensing element and smoke sensing element**
- **Dual LED's for 360 degree visibility**
- **Wide variety of addressable input/output devices**
- **Relay and synchronized temporal sounder bases**
- **Line isolators and isolator bases also available**
- **Green/RoHS Compliant**

### Listings

**UL File: S5022**  
**CSFM: 7272-1394:113**  
**MEA: 294-95-E-4**

Product	Data Sheet Number	Rev/Revision Date	
IPF Series™ Detectors XP-M	2104	1.4/ 10/1/2009	

## Engineer Specification

The contractor shall furnish and install, where indicated on the plans, intelligent multisensor smoke detectors with one of the several addressable mounting base options available. The detector base will contain the patented XPERT programming card which will permit the free interchange of sensor heads without requiring additional programming of the detector head or attached base. The intelligent detector shall be self compensating, and contain dual integral LED's which will flash intermittently when polled and shall latch when the unit goes into Alarm. The multisensor detector head shall combine the signal from the heat sensing thermistor in a rate-of-rise fashion with the analog value readings from the photoelectric smoke sensing chamber for optimum protection from smoldering and flaming fires. The combination of the detector head and twist lock mounting base shall be UL listed and UL listed as compatible with the AsBuilt IP Fire Series network fire controls. The detector base shall be installed without regard to wire polarity. The multisensor detector shall be the AsBuilt model XP-M.

## Technical Data

**Operating Voltage:** 17-28VDC

**Clean-air Analog Value:** 25 +/-0

**Standby Current:** 500uA avg. / 750uA peak

**Alarm Level Analog Value:** 55

**Alarm LED Current:** 3.5mA

**Wire Supply:** Two-wire supply, polarity insensitive

**Remote Alarm Output:** 4mA max

**Recommended Spacing:**

**Temperature range:** 32°F to 140°F(0°C to 60°C)

Meets the 30 ft. (9.1m) spacing guidelines in NFPA 72 Chapter 2, however, this spacing is based on ideal conditions and should be used as a layout guide only.

**Relative Humidity (non-condensing):**0%-95%

## Ordering Information

Part Number	Data Sheet	Description
XP-M	2101	Intelligent XP Multisensor Detector (model 55000-886)
DXP-6	2310	6" Low Profile Base w/Expert Card (model 45681-250)
DXP-4	2310	4" Low Profile Base w/Expert Card (model 45681-210)
DXP-RLY	2310	6" Low Profile 4-wire Relay Base (model MB-RLYT-AA)
DXP-SND/T	2310	6" Low Profile 4-wire Sounder Base (model MB-SDRT-AA)
DXP65	2310	Sync Module for Temporal Sounder Bases (model MB-SDRT-SM/G/R)
DXI	2300	Line Isolator (55000-750)
DXP-LIB	2300	Isolating Base for DXI only (45681-211)
DXP-IB	2300	Line Isolating Base for Use with XP/DISC Detectors (45681-321)
DXP-XPC		Additional XPERT programming card
DXP-XPC#A		Order "A" for Addresses 1-42, "B" for 43-84, "C" for 85-126, # for Loop #
DXP-126		126 Pre-Programmed XPERT cards
DXP-REM		Remote LED (24V)



## Related Data Sheets

**XP Detectors:** XP-P, 2101; XP-I, 2102; XP-T, 2103

**Discovery Detectors:** DISC-P, 2106; DISC-I, 2107; DISC-T, 2108; DISC-M, 2109

**Addressable Devices:** DXP-PIM/MPIM, DXP-PID/MPID, 2810; DXP-IOM, 2812; DXP-SDR, 2814, DXP-2PID, 2816; DXP-OCR, 2818

**Addressable Base Options:** All Bases, 2310

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