

PMX

PARTICULATE MONITOR

Monitor smoke and airborne particulates with the PMX sensor. The device combines proven sensor technology with innovative hardware to provide an easy-to-use system for monitoring light transmission in a wide variety of applications. Ideal for industrial ventilation hoods and commercial kitchen ventilation applications.

The PMX is available in two styles: circuit boards for OEM applications and NEMA 4X housings to protect the components while providing a high quality, durable window for light transmission measurement. The transmitter is mounted up to 10 meters from the receiver module, then aligned and adjusted to focus the light onto the receiver. The illumination level is adjusted for the optimum operation at the distance and light transmission range necessary for the specific application. An adjustable threshold level allows the operator to set the discrete output switching point.

The PMX features a 2-digit display that provides an indication of signal strength making set-up and integration quick and easy. The sensor provides both a discrete PNP/NPN output and a 0-5V analog output. The analog output can be monitored allowing the external system to log variations and take action, such as activating exhaust fans.

PMX



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Applications

- Demand control kitchen ventilation (DCKV)
- Ventilation systems
- Commercial cooking hoods
- Factory venting
- Exhaust systems
- Environmental monitoring

Design & Features

- Small spot size
- High sensitivity and high resolution
- Fast response
- Display range 00-99
- Adjustable gain
- Analog output
- PNP/NPN discrete output

Ordering Information



PMX
Particulate Monitor, Transmitter
& Receiver, NEMA 4X



PMX-TX
Transmitter, NEMA 4X



PMX-RX
Receiver, NEMA 4X



PMX-TX-BD
Transmitter board with optics



PMX-RX-BD
Receiver board with optics

Accessories



IRB-325-SP
Liquid tight strain relief
connectors, set of 2

**NOT INTENDED FOR USE IN
PERSONAL SAFETY APPLICATIONS.**

Functions

NORMAL OPERATING MODE
CALIBRATION
THRESHOLD
LED INTENSITY
HYSTERESIS LEVEL
DISCRETE OUTPUT
OUTPUT PULSE STRETCH
SECURITY
TEACH MODE

Displays relative reflection intensity
User sensitivity adjustment
Set detection level
Set LED, LO, MED, HI
Set undetect level 1-9 steps below threshold
Set normally open or normally closed
Set minimum output period 10...90ms
Lock/unlock pushbutton controls
Auto-set detection threshold

Specifications

Light source
525nm green LED
Sensing distance (transmitter-to-receiver)
Up to 10m (33 ft.)
Sensitive area (receiver lens dia.)
18mm
Response time
<150uS
Switching frequency
6kHz
LED intensity
Adjustable
Relative intensity display range
00 to 99
Sensitivity
Adjustable
Signal level
Two 7 segment digits
Detection threshold
Two 7 segment digits
Digital output
Auto-Detect PNP / NPN
Output function
NO/NC selectable
Analog output
0...5V
Security
LOCK / UN-LOCK keypad
Power indicator
Green LED
Detect indicator
Red LED
Programming indicator
Yellow LED
Data retention
EEPROM non—volatile memory
PMX-RX (receiver)
Dimensions

525nm green LED
Up to 10m (33 ft.)

18mm

<150uS

6kHz

Adjustable

00 to 99

Adjustable

Two 7 segment digits

Two 7 segment digits

Auto-Detect PNP / NPN

NO/NC selectable

0...5V

LOCK / UN-LOCK keypad

Green LED

Red LED

Yellow LED

EEPROM non—volatile memory

130mm x 78mm x 78mm

(5.1" x 3.1" x 3.1")

408g (0.9 lbs.)

Weight
PMX-TX (transmitter)
Dimensions

130mm x 78mm x 78mm

(5.1" x 3.1" x 3.1")

340g (0.75 lbs.)

10...24 VDC

60 mA

Discrete output

Supply voltage

-20°C...55°C

-20°C...70°C

Plastic

NEMA 4X

Indicators

7-Segment display

Green LED

Red LED

Yellow LED

LED
Power
Detect
Program

Transmitter Terminals

1 TX -
2 TX +

Receiver Terminals

1 Power to 24VDC+
2 Ground
3 Analog output 0-5V
4 Discrete output
PNP/NPN/ NO/NC
5 Shield
6 TX +
7 TX -



WARRANTY EMX INC. the product described herein for a period of 2 years under normal use and service from the date of manufacture. The product will be free from defects in material and workmanship. This warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products, or damage caused by the purchaser from incorrect connections, or lightning damage. There is no warranty of merchantability. There are no warranties expressed, implied or any affirmation of fact or representation which extend beyond the description set forth herein. EMX Inc. sole responsibility and liability, and purchaser's exclusive remedy shall be limited to the repair or replacement at EMX's option of a part or parts not so conforming to the warranty. In no event shall EMX Inc. be liable for damages of any nature, including incidental or consequential damages, including but, not limited to any damages resulting from non-conformity defect in material or workmanship.