

PERTRONIC INDUSTRIES LTD

DATASHEET

Analogue Addressable Smoke Detectors

2251BPI-IV, 2251BPI-W, 2251BPI-BK



Overview

The Analogue Addressable Smoke Detector (2251BPI) is a plug-in photoelectric smoke detector with analogue addressable communication.

The smoke level in the sensor chamber is continuously monitored and reported to the fire panel. For each individual 2251BPI detector, the alarm, fault, and maintenance thresholds are programmable in the fire panel configuration software.

A suitably configured fire panel will identify the location of any detector which has triggered an alarm, fault, or maintenance signal. The fire panel can also identify any active detector by lighting up two red LEDs on the detector housing.

Features

- » Analogue addressable communications
- » Automatic drift compensation
- » Stable communication with excellent noise immunity
- » Smoke sensitivity configurable in the fire panel
- » Low standby current
- » Rotary address switches
- » Address range 1 to 159
- » Up to
 - » 159 detectors per loop (Pertronic F220, F120A)
 - » 99 detectors per loop (Pertronic F100A)
- » Dual red LEDs for 360° visibility
- » Optional remote LED indicator available (Note 1)
- » Compatible with B501AUS, B501AP, and other System Sensor B500 series bases
- » Independently tested and ActivFire listed to AS 7240.7:2018, certificate afp-3384
- » Meets the requirements of NZS 4512:2021 s. 2.16.2
- » FPANZ listing PI/365

Analogue Addressable
Smoke Detector
2251BPI-IV in
B501AUS-IV Base



The fire panel may be configured to briefly light up the LEDs (“blink”) when the detector is polled.

The detector’s address on the analogue addressable loop is easily set using rotary address switches.

Specification

Operating Voltage	15 to 32 Vdc
Standby Current	150 to 300 µA (see note 2)
LED Current	6.5 mA @ 24 Vdc
Remote Output Voltage	22 v dc, @ 24 V dc supply voltage
Remote Output Current	9.9 mA minimum @ 24 V dc (note 3)
Isolator Load Rating	0.0063 (note 4)
Dimensions (diameter x height)	102 x 51 mm (in B501AUS base) 102 x 58 mm (in B524IEFT-1 base)
Weight	89 g (excluding base)
Operating Temperature	-10 °C to +50 °C
Humidity	10 % to 93 % RH, non-condensing
Air Velocity	0 to 20.3 m/s (for installation in ducts)

Detector Sensitivity Levels in Pertronic Fire Panels

F220		F100A	
1	4.68 %/m		
0	6.88 %/m	1	6.88 %/m
-1	7.97 %/m	2	7.97 %/m
-2	9.51 %/m	3	9.51%/m

Ordering Information

Product Code	Description	Product Code	Description
2251BPI-IV	AA Photo Smoke Detector, Ivory	B501AUS-IV	AA Base, Ivory
2251BPI-W	AA Photo Smoke Detector, White	B501AUS-W	AA Base, White
2251BPI-BK	AA Photo Smoke Detector, Black (note 5)	B501AUS-BK	AA Base, Black (note 5)
		B524IEFT-1	AA Base with Isolator, Ivory

Notes

1. Please refer to the *Remote Indicators (AU)* or *Pertronic Remote LED Indicator (NZ)* datasheets for details of remote LED indicators.
2. Typical maximum standby (quiescent) current with LED blink enabled, and one poll every five seconds, is 300 µA
3. Remote output current is specified with terminal 3 shorted to terminal 1
4. The sum of the Isolator Load Ratings of all devices attached to a single isolator must not exceed 1.0
5. Please contact us to confirm availability of black detectors and bases.

The information in this document must not be treated as partial or complete instructions for the design, construction, installation, commissioning, or maintenance of fire detection, fire alarm, or building evacuation systems. Fire and evacuation systems must be designed and installed by properly qualified persons, in accordance with all regulatory requirements.

Unless explicitly stated otherwise, this document provides typical specifications and nominal dimensions. Actual product performance and dimensions may vary.

All information in this document is subject to change. Please consult Pertronic Industries or visit our web site for up to date information.

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0900-2251BPI-AA-Smoke-DS-20210707