

PERTRONIC INDUSTRIES LTD

DATASHEET

C Series Analogue Addressable Smoke Detector

2251CPI-IV, 2251CPI-W, 2251CPI-BK



Overview

The 2251CPI **C Series** smoke detector is an improved version of the 2251BPI analogue addressable photoelectric smoke detector.

The detector features a smoke sensing chamber designed to detect smoke and diminish stray internal reflections that can cause nuisance alarms. These features were developed to satisfy stringent nuisance alarm immunity tests defined in the US smoke detector standard, UL268 edition 7.

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

A suitably configured fire panel will display 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.

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

The detector's address on the analogue addressable loop circuit is easily configured using rotary address switches.



*C Series Analogue Addressable
Plug-In Smoke Detector 2251CPI-W
with B501AUS-W base*

Features

- » Analogue addressable (AA) communication with fire panel
- » On-board drift compensation
- » Stable communication with excellent noise immunity
- » Smoke sensitivity configurable in the fire panel
- » Rotary address switches
- » Address range: 1 to 159
 - » Up to 159 detectors per loop (Pertronic F220, F120A)
 - » Up to 99 detectors per loop (Pertronic F100A)
- » Dual LEDs for 360° visibility
- » Optional remote LED indicator available (note 1)
- » Compatible with B501AUS, B501AP, and other System Sensor analogue addressable bases
- » Compatible bases provide an optional anti-tamper feature
- » SAI Global StandardsMark listed to AS 7240.7:2004, certificate SMHK25312
- » Complies with NZS 4512:2021 s. 2.16.2

Detector Sensitivity Levels in Pertronic Fire Panels

F220		F100A	
1	4.7 %/m		
0	6.9 %/m	1	6.9 %/m
-1	8.0 %/m	2	8.0 %/m
-2	9.5 %/m	3	9.5 %/m

Notes

1. Please refer to the [Remote Indicators RMIND \(AU\)](#) or [Remote LED Indicator DETREM \(NZ\)](#) datasheets for details of Pertronic remote LED indicators.
2. Average standby (quiescent) current = 150 µA with LED blink enabled and one poll every five seconds.
3. Remote output current is specified with terminal 3 shorted to terminal 1
4. Manufactured for Pertronic Industries by System Sensor.

This information 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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Specification

Operating Voltage	15 to 32 V dc
Average Standby Current	150 µA (note 2)
Maximum Alarm Current	2 mA (LEDs on)
Remote Output Voltage	22.5 V dc, no load (minimum)
Remote Output Current	10.5 mA (note 3)
Diameter	103 mm (in B501AUS base)
Height	51 mm (in B501AUS base) 58 mm (in B524IEFT-1 base)
Weight	95 g
Air Velocity, in Duct	up to 20.3 m/s
Operating Temperature	-10 °C to 50 °C
Humidity	10% to 93% RH non-condensing

Ordering Information

Product Code	Description
2251CPI-IV	AA Photo Smoke Detector, Ivory, excl Base
2251CPI-W	AA Photo Smoke Detector, White, excl Base
2251CPI-BK	AA Photo Smoke Detector, Black, excl Base
B501AUS-IV	AA Base, Ivory
B501AUS-W	AA Base, White
B501AUS-BK	AA Base, Black
B524IEFT-1	AA Base with Isolator, Ivory

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