

PERTRONIC INDUSTRIES LTD

DATASHEET

C Series Intelligent Addressable Pinnacle™ High-Sensitivity Smoke Detector 7251CPI-W



Overview

The 7251CPI **C Series** Pinnacle™ smoke detector is a high sensitivity intelligent addressable photoelectric detector for applications requiring sensitivity settings over and above the performance of standard photoelectric detector. It is designed for very early warning fire detection, and is suitable for protecting valuable assets and operational systems that must remain functioning at all times. The 7251CPI achieves detection levels up to approximately 100 times more sensitive than a standard photoelectric detector.

This detector features a smoke sensing chamber designed to detect smoke and diminish stray internal reflections that can cause nuisance alarms. A suitably configured fire panel will display the location of any detector which has initiated an alarm, fault, or maintenance signal.



*C Series Intelligent Addressable
Pinnacle™ High Sensitivity
Plug-In Smoke Detector 7251CPI-W
with B501AUS-W base*

Features

- » Intelligent addressable (IA) communication with fire panel
- » Very early warning fire detection capability
- » Automatic drift compensation
- » Stable communication with excellent noise immunity
- » Fire panel may be configured with separate alarm, fault, and maintenance thresholds for each individual detector
- » Rotary address switches for setting the address on the intelligent addressable loop
- » Fire panel identifies active detectors by lighting up two red LEDs on the detector housing
- » LEDs briefly light up (“blink”) when the detector is polled
- » LED blink may be disabled via the fire panel configuration
- » Dual LEDs for visibility from all normal viewing angles
- » Optional remote LED indicator available (note 1)
- » Magnet test function activates detector and bypasses inbuilt delays to facilitate testing
- » Compatible with B501AUS, B501AP, and other System Sensor intelligent addressable bases
- » Compatible bases provide an optional anti-tamper feature that prevents removal of the detector without a tool
- » Compatible with Pertronic F100A, F220 and F120A fire panels
- » SAI Global StandardsMark listed to AS 7240.7:2004, certificate SMHK25312
- » FPANZ Listing PI/368

Ordering Information

Product Code	Description
7251CPI-W	IA Pinnacle High Sens. Smoke Detector, White, excl Base
B501AUS-W	IA Base, White

Specification

Operating Voltage	15 to 32 V dc
Standby Current	300 μ A (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)
Smoke Alarm Sensitivity	See table below
Address range	F220, F120A 1 to 159
	F100A 1 to 99
Diameter	103 mm (in B501AUS base)
Height	51 mm (in B501AUS base)
	58 mm (in B524LEFT-1 base)
Weight	95 g
Air Velocity	up to 20.3 m/s
Operating Temperature	-10 °C to 50 °C
Humidity	10% to 93% RH non-condensing

7251CPI Detector Sensitivity Levels in Pertronic Fire Panels

Sensitivity Setting in Fire Panel									
F220, F120A	3	2	1	0	-1	-2	-3	-4	-5
F100A	1	2	3	4	5	6	7	8	9
Obscuration (%/m)	0.07	0.10	0.16	0.33	0.65	1.6	3.2	4.8	6.4

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. Standby (quiescent) current = 300 μ A with LED blink enabled and one poll every five seconds.
3. Remote output current is specified with terminal 3 shorted to terminal 1
4. The 7251CPI's maximum sensitivity (0.07 %/m) is 98 times more sensitive than default sensitivity (6.9 %/m) of a 2251CPI in a Pertronic fire alarm system.
5. Smoke sensitivity specifications allow comparison between various detector types from the System Sensor product range. However, please note that actual detector performance may vary.
6. 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, installed, and maintained 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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