

Head Office

Wellington

PO Box 35-063
Naenae
Lower Hutt 5041
17 Eastern Hutt Rd
Wingate
Lower Hutt 5019
Tel (04) 567-3229
Fax (04) 567-3644

www.pertronic.co.nz

sales@pertronic.co.nz
tech@pertronic.co.nz

Auckland Office

PO Box 15-867
New Lynn
Auckland 0640
359 Onehunga
Mall
Onehunga
Auckland 1061
Tel (09) 633-0226
Fax (09) 633-0228



Certificate No:
205487-2016-
AQ-AUS-JAS-ANZ

Product Overview

The analogue addressable plug-in COPTIR sensor combines four sensing elements into one unit:

- » CO sensor: for monitoring carbon monoxide products from a fire
- » IR sensor: for measuring ambient light levels and flame signatures
- » Optical smoke sensor
- » Heat sensor

By measuring and processing the individual sensor outputs in conjunction with intelligent algorithms, the detector is ultra-immune to nuisance sources which may be incorrectly identified as a real fire by a single sensing element. However, it is very sensitive to real fires.

Individual sensor Alarm thresholds are programmable within the control panel software. Pertronic analogue addressable control panels can utilise the 6 sensitivities available from a single sensor and react accordingly. The smoke levels within the sensor are monitored continuously and reported to the panel.

Each sensor's address is easily set with the 200 Series addressable decade address switches, giving the precise location of each sensor in the event of a fire or for selective maintenance when chamber contamination reaches an unacceptable level.

The CO sensing cell has a life expectancy of six years from the date of manufacture. Internal software monitors the age of the CO sensing cell. When the CO cell approaches the end of its useful life, the COPTIR sensor signals a fault to the fire alarm control panel, indicating that the CO sensing cell should be replaced. At the end of the six-year lifetime, if the CO sensing cell is not replaced, the COPTIR sensor's internal algorithms automatically switch to using only properly weighted inputs from the photoelectric, heat and IR sensors. Smoke and heat detection is not compromised when the CO cell has expired.

The CO cell is not replaceable, instead the detector will need replacing.

Features:

- ▶ Highest nuisance alarm immunity
- ▶ Unique, true four sensor multi-criteria fire detector incorporating CO (carbon monoxide), photo, thermal and IR (infra-red) sensing elements, advanced algorithms interpret and respond to the multiple inputs
- ▶ Six available sensitivities
- ▶ CO sensing for fastest response to slow-developing, smouldering fires
- ▶ Fully integrated infrared sensing to support the fire alarm decision
- ▶ Automatic drift compensation of smoke sensor and CO cell
- ▶ Rotary Decade Address Switches, 1 to 99 (see note, page 2)
- ▶ Dual red indicator LED accessory
- ▶ Magnet test function bypasses inbuilt delays



2251CTLE-24-IV

Specifications:

▶ Dimensions	102 x 68 mm	Diameter x Depth in B501AUS base
▶	102 x 75 mm	Diameter x Depth in B524IEFT-1 base
▶ Weight	134 g (excl. base)	
▶ Operating Temperature Range	- 20 °C to 55 °C	
▶ Sensitivity	Refer to sensitivity settings below	
▶ Operating Humidity Range	15 % to 90 %, non-condensing	
▶ Operating Voltage Range	15 Vdc to 32 Vdc	
▶ Standby Current	200 µA (nominal)	
▶ LED Current	7 mA @ 24 Vdc	

Sensitivity Settings:

Level 1	Low false alarm resistance, high photo sensitivity (3.28 %/m) with no delay
Level 2	Medium false alarm resistance, medium photo sensitivity (6.56 %/m) with no delay
Level 3	Standard false alarm resistance, low photo sensitivity (9.84 %/m) with no delay
Level 4	High false alarm resistance, low photo sensitivity (9.84 %/m) with up to 10min delay
Level 5	Very high false alarm resistance, low photo sensitivity (13.12 %/m) with up to 10min delay
Level 6	Heat only mode. 60 °C or Rate of Rise



B501 Base



B524IEFT-1 Base

Ordering Information:		
Product Code	Description	NZFPA Listing No:
2251CTLE-34-IV	AA CO-Photo-Thermal-IR Multi Sensor excl Base	PI/337
B501	AA Base	N/A
B524IEFT-1	AA Base with Isolator	PI/621

Note: Although the COPTIR sensor's "tens" address switch has 16 positions, only positions 0 to 9 can be used. Analogue addressable Pertronic fire alarm control panels must not be configured with COPTIR sensors at addresses 100 to 159.

PERTRONIC INDUSTRIES LTD

Head Office:

17 Eastern Hutt Rd, Wingate, Lower Hutt 5019
Telephone (04) 567-3229 Fax (04) 567-3644

www.pertronic.co.nz

sales@pertronic.co.nz
tech@pertronic.co.nz

Auckland Office:

359 Onehunga Mall, Onehunga, Auckland 1061
Telephone (09) 633-0226 Fax (09) 633-0228

'Pertronic' and 'Firetronix' are registered trademarks of Pertronic Industries Ltd