

# PERTRONIC INDUSTRIES LTD

## INSTALLATION DATASHEET

### In-Ceiling Detector Mount



## Overview

The Pertronic In-Ceiling Detector Mount Kit and In-Ceiling Detector Mount Pole together provide a convenient method to allow detector installation in above-ceiling locations.

The kit has four main parts: Cover Plate, Pole Base, Ceiling Bracket and Detector Mounting Bracket.

A universal detector base bracket allows the user to mount a base from most detector manufacturers. Either conventional or analogue addressable detectors may be used with their respective bases.

An optional Remote LED Indicator (PIC-DRI) (supplied separately) attaches to the pole base and is wired to the detector inside the concealed ceiling area. The PIC-DRI circuit board can be wired for optional current limiting resistance values, to suit the detector's remote LED output.



*In-Ceiling Detector Mount*

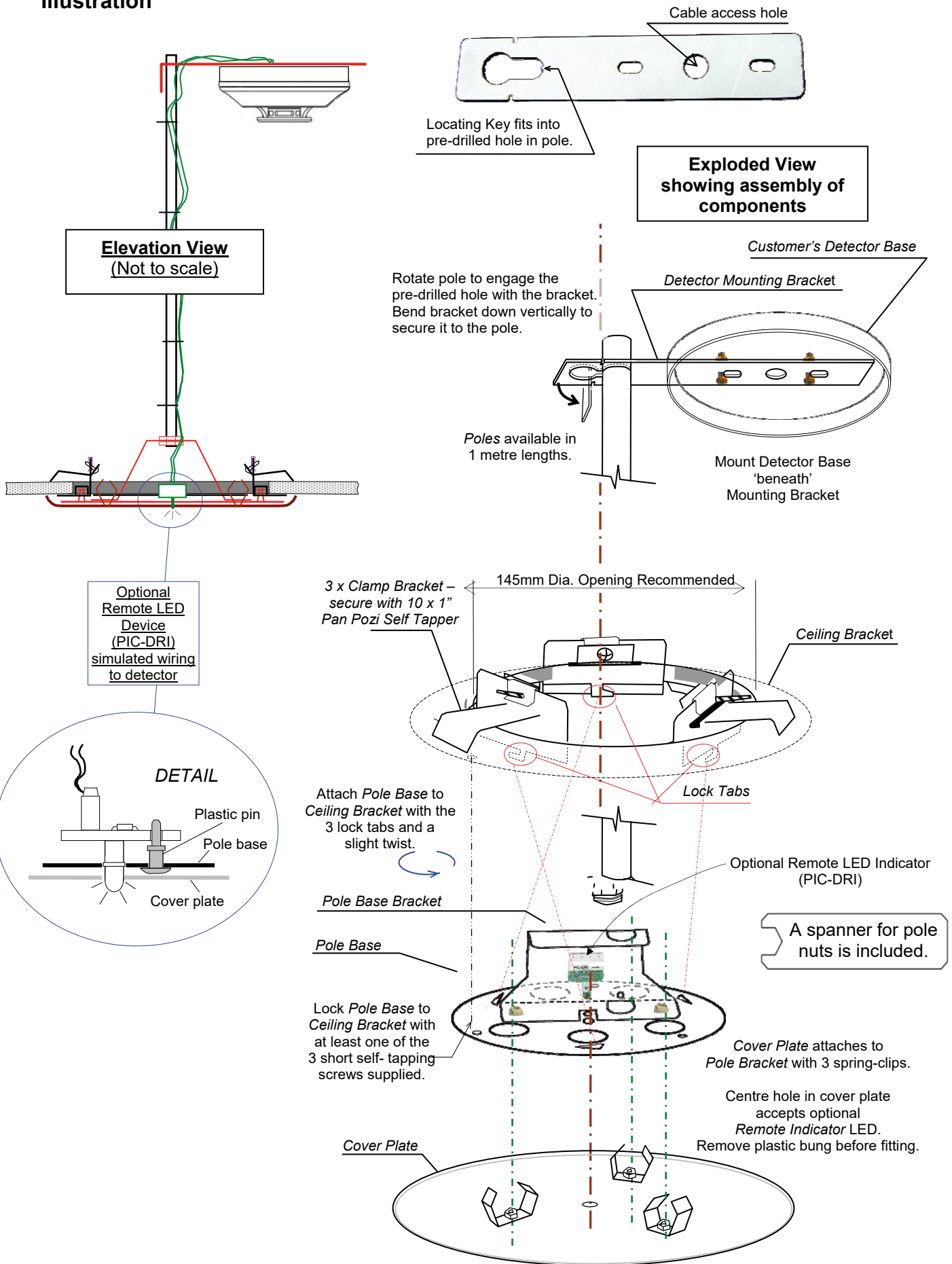
## Features

- » Allows detector mounting height up to 3 metres
- » One metre poles must be ordered separately
- » Universal detector mount bracket compatible with analogue addressable or conventional detector bases
- » Kit includes spanner for pole nuts
- » Optional remote LED indicator fixes to the pole base fitting
- » Pole base fitting locks tightly into ceiling bracket
- » Spring clips allow cover plate to easily snap to pole base
- » Optional labels supplied with kit:
  - » FIRE ALARM label for use with a remote indicator;
  - » FIRE DETECTOR label for use if a remote indicator is not used

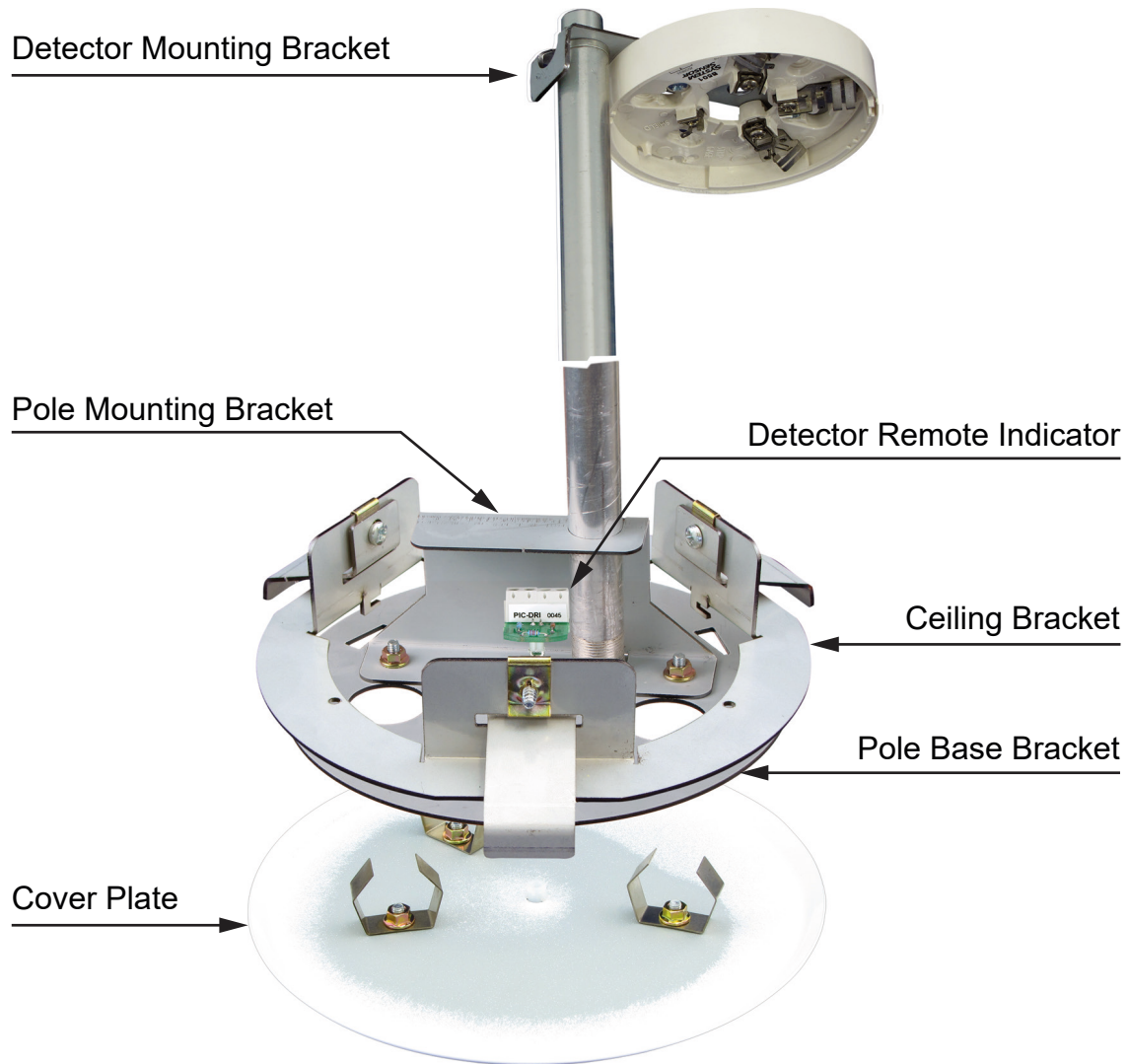
## Specification

<b>Cover Diameter</b>		183 mm
<b>Ceiling Aperture</b>		145 - 155 mm (145 mm recommended)
<b>Weight</b>	<b>Basic Kit</b>	1.1 kg
	<b>1 m Pole</b>	20 g

**Illustration**



## Exploded View



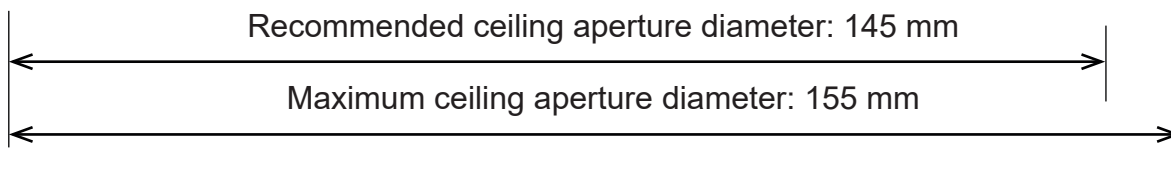
## Installation Instructions

### Preparation (at ground level)

- Secure the detector base to the detector mounting bracket, using the two nuts and bolts provided.
- Determine the length of pole required for your specific needs; consider the following:
- If the detector must be mounted higher than 1-metre above the ceiling, additional height can be achieved by joining more lengths of the standard 1m pole.
- NOTE: If only a partial pole length needed, the additional length must be made from the upper end of another pole. Cut off and discard the lower. The remaining section fits snugly onto the top of a standard pole and the top end of the new portion will accept the Detector Mounting Bracket. Refer to the diagram on Page 2. A sharp knock may be required to join two poles together using the joiner. A 3.5mm hole needs to be drilled at the bottom of the short pole. Then a 3.2mm-wide cable tie is be used to secure the poles together and prevents them rotating.

## Preparation (continued)

- e. Attach the Pole to the Pole Mounting Bracket using 1 x M3 x 25 Pozi machine screw and M3 Nyloc Nut.
- f. If using a remote indicator, locate the plastic mounting pillar supplied and push it through the smaller of the two holes in the middle of the Pole Base, from the lower face upwards. Push firmly until the pillar is locked in place.
- g. Peel off and discard the centre circle from the relevant cover label, and then peel off and fit the label to the centre of the Cover Plate.
  - » use the FIRE ALARM label if using a Remote Indicator
  - » use the FIRE DETECTOR label if a Remote Indicator is not used.
- h. If using a Remote Indicator, remove and discard the plastic bung in the centre of the Cover Plate.



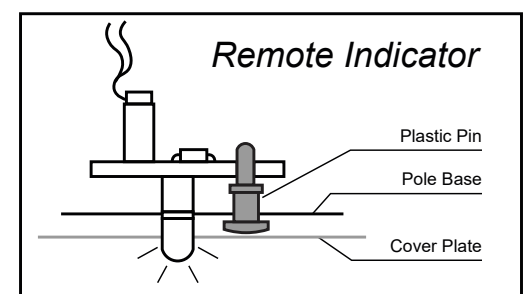
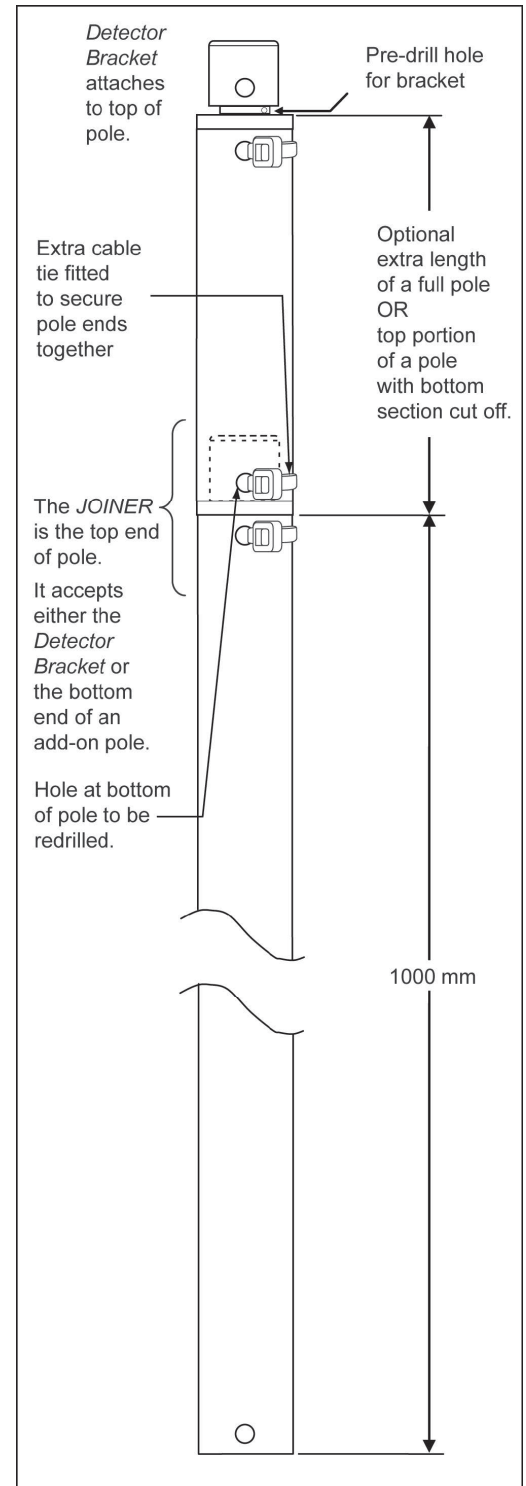
Verify diameter dimensions above by measurement—printers may alter the scaling of this Installation Note

## Installation (at ceiling level)

1. Determine the location for the Ceiling Bracket opening, and mark it clearly on the ceiling. The diameter dimension on the Page 1 may be used as a guide.
2. Carefully cut out the hole. The recommended size of 145 mm. diameter provides a snug fit for the Ceiling Bracket but a standard 152mm hole-saw is adequate.
3. Locate the three Clamp Brackets and the three 10 x 1" Pan-Pozi screws. Insert one Clamp Bracket into any one of the vertical tabs that will penetrate the ceiling opening; secure it loosely in the slot with a screw. See the diagram for placement.
4. Carefully place the Ceiling Bracket into the ceiling opening with the single Clamp Bracket on top of the ceiling material. Insert the two remaining Clamp Brackets, and use the 10 x 1" Pan-Pozi screws supplied to secure all three Clamp Brackets snugly into place and the Ceiling Bracket tight to the ceiling.
5. Locate the field cabling in the ceiling space and pull a short length through the centre of the Ceiling Bracket. Cut and strip as required.
6. Attach the field cabling to the detector base, passing the cables through the cable access hole in the detector mounting bracket and then to the base itself.
7. If using the optional Remote Indicator, attach the remote wiring to the detector base, passing the cables through the cable access hole in the Detector Mounting Bracket. Allow for sufficient wire to run the length of the pole to reach the remote LED at the ceiling.
8. Retrieve the pole and Pole Base Bracket assembly.
9. Insert the top of the pole into the keyhole of the Detector Mounting Bracket and slide the two parts together. Rotate the Detector Mounting Bracket, so the small locating key fits into the pre-drilled hole in the pole.

## Installation (continued)

10. With pliers, bend the notched end of the bracket down past 90° to meet the pole - this locks the detector Mounting Bracket to the Pole and prevents the Detector Mounting Bracket swivelling about the pole.
11. Fit the detector to the detector base.
12. Raise the assembly through the Ceiling Bracket, detector end first. The assembly may need to be held at an angle in order to feed the detector assembly through the aperture. Large holes in the Pole Base Bracket facilitate the insertion of fingers and thumb to help hold the assembly vertical for this step.
13. As the assembly is raised within the ceiling cavity, attach cable ties to attach the field and remote indicator wiring to the pole as desired.
14. If using the optional Remote Indicator attach the Remote Indicator wiring to the RI circuit board, before the Pole Base Bracket assembly reaches the Ceiling Bracket. See Wiring Details below.
15. Attach the Remote Indicator circuit board to the plastic pillar in the middle of the Pole Base Bracket, pressing it on firmly and ensuring the LED protrudes through the hole provided in the centre of the bracket, as shown in the diagram.
16. Note if there is any obvious air movement direction within the ceiling cavity. If so, it is important to ensure the detector is positioned upwind of the pole so that the path of the air to the detector is not impaired by the pole itself.
17. Offer up the complete assembly to the ceiling bracket, aligning the three locking tabs of the Ceiling Bracket with the relevant tapered slots in the Pole Base Bracket to accept them, and ensuring the detector is upwind of the pole.
18. Rotate the pole assembly clockwise slightly until the three locking tabs are all fully engaged in the tapered slots. At this point, the three holes for locking screws should all be aligned with those in the plate behind.
19. Insert and tighten at least one of the 8 x 1/2" Pan-Pozi self-tapping screws through the Pole Base Bracket into the hole in the Ceiling Bracket to firmly secure the assembly to the ceiling and to prevent the base from disengaging from the Tab Locks. (Two safety 8 x 1/2" Pan-Pozi self-tapping screws are provided for the three pairs of aligned holes.)
20. Align the three spring clips of the cover plate to three of the five circular holes in the Pole Base Bracket that match and press the Cover Plate upwards. It will clip tightly to the Ceiling Plate and (if used) the Remote Indicator LED will penetrate the cover for easy visibility.



## Wiring Details

Detector bases should be wired according to the manufacturer's instructions.

PIC-DRI Remote Indicators provide a common Negative and a choice of 3 Positive terminals. The choice of positive terminals depends upon the Remote LED output voltage, and the current limiting capabilities of the detector base used.

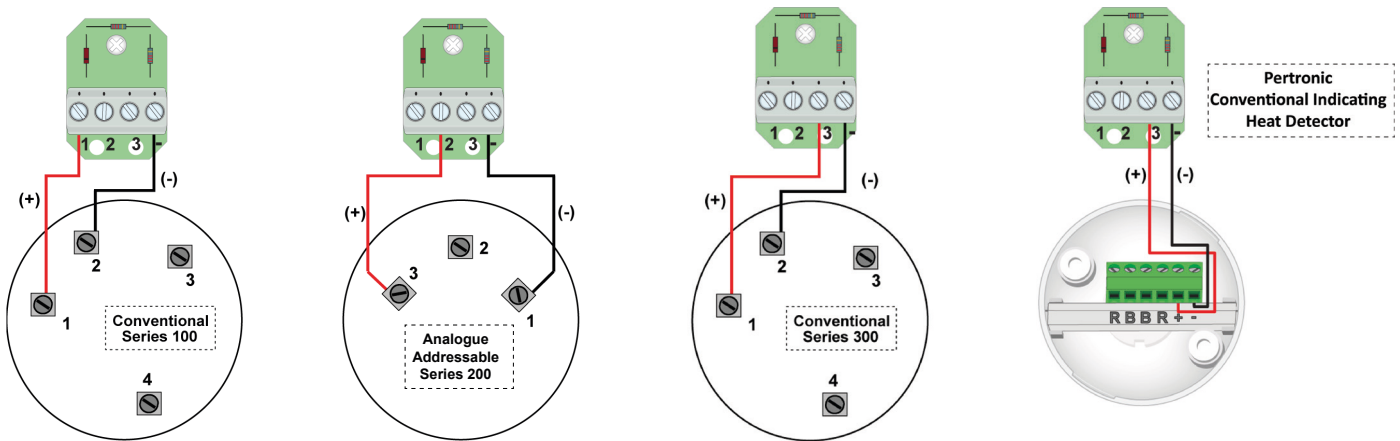
- » use Terminal 1 and –ve for System Sensor Series 100 conventional detectors.
- » use Terminal 2 and –ve for System Sensor Series 200 analogue addressable detectors

Ensure the correct terminals are used to prevent damage which may otherwise occur.

- » Terminal 1 provides current limiting resistance of 2K5Ω
- » Terminal 2 provides current limiting resistance of 330Ω
- » Terminal 3 provides no current limiting resistance

A high current limiting resistance will result in the remote Alarm LED being too dim, whereas too low a value may result in failure of the LED due to excess current. Suitably approved detectors should not be damaged by an incorrect value being used.

## Wiring Diagram



## Ordering Information & Notes

Product Code	Description
PIC-DMK	Pertronic In-Ceiling Detector Mount Kit
PIC-DMP	Pertronic In-Ceiling Detector Mount Pole (1m)
PIC-DRI	Pertronic In-Ceiling Detector Remote Indicator

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.

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