

# Photoelectric Smoke / Thermal Multi-Criteria Fire Detector Model 22051TE

## Overview

### Features

- Two sensor multi-criteria fire detector incorporating photoelectric, and thermal sensing elements
- New mechanical platform with revolutionary chamber
- Includes Series 200 Advanced Protocol
- Available with or without single pole short circuit isolation with status control through the Series 200 Advanced Protocol
- Tri colour LED offering red, green and amber colours
- Rotary decade address switches
- Pure white colour to compliment modern buildings
- 100% mechanical and electrical backwards compatibility
- New Base design to compliment the detector



Non-Isolated  
199p/07  
Isolated  
199aa/02



Non-Isolated  
0786-CPD-20657  
Isolated  
0786-CPD-20651



Non-Isolated  
G209020  
Isolated  
G209014



Non Isolated  
TCC2 - K827/a  
Isolated  
TCC2-K827/a



B.04068  
B.04068

## Description

The revolutionary Series 200 Advanced range delivers a totally new detector platform that incorporates the new digital Series 200 Advanced Protocol. The new Protocol delivers more devices on the loop and gives greater control, configurability and device management whilst enabling the overall system to be optimised to the location and use of the building with far greater flexibility than ever before.

The multi-criteria multi-sensor 22051TE Photo Thermal detector uses thermal assistance to the core photoelectric smoke detector to give enhanced false alarm immunity and faster response to a wide range of incipient fires. The plug-in unit combines two separate sensing elements that are managed by embedded software to act as a single unit. The 22051TE conforms to EN54-5, a 58°C fixed temperature and rate of rise thermal, with the smoke detection element conforming to EN54-7.

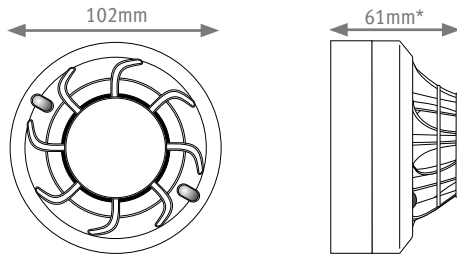
The thermal detection function combines thermistor technology with a software corrected linear temperature response. In areas where the normal daytime activities may potentially create unwanted alarms, the detector can be programmed to operate in a "heat only" mode, automatically reverting to full photo-thermal operation during unoccupied periods.

The sensing elements of the 22051TE are panel controllable so the sensitivity thresholds of each element can be changed by the panel offering the ability to customise the device for the changing use of the area it is protecting. The 22051TE has two integral tri-colour LEDs that provide 360° local visual indication of the device status. The LEDs are programmable with static or blinking red, amber and green status indications available.

All Series 200 Advanced detectors are environmentally friendly and meet the WEEE and RoHS legislative requirements, minimising end of life disposal costs, and are mechanically and electrically backwards compatible with existing Series 200 plus devices.

# Architect/Engineer Specifications

22051TE



## Electrical Specifications - Standard Product (22051TE)

Operating Voltage Range	15 to 32Vdc
Maximum Standby Current	200µA at 24VDC (no communications) / 300µA at 24VDC (LED blink enabled, once every 5s)
LED Current	Red: 3.5mA at 24Vdc Green: 7.0mA @ 24Vdc Yellow: 10.5mA @ 24Vdc
Remote Output Voltage	22.5Vdc @ 24Vdc
Remote Output Current	10.8mA @ 24Vdc
Additional Loop Resistance Using The B501AP	typ 20mohm (max 30 mohm)

## Electrical Specifications - Isolator Version (only found in 22051TEI)

Isolator Operating Voltage Range	15 to 28.5Vdc
Isolation Current	15mA at 24VDC
Maximum Continuous Current	1A (Switch Closed)

## Environmental Specifications

Temperature Range	-30°C to +80°C †
Humidity	10 to 93% relative Humidity (non-condensing)

## Mechanical Information

Height	61mm installed in B501AP base
Diameter	102mm installed in B501AP base
Weight	99g (inc base)
Max Wire Gauge for Terminals	2.5mm <sup>2</sup>
Colour	White
Material	PC/ABS

## Sensitivity Settings

Alarm Level 1	1%/ft smoke
Alarm Level 2	Adjusting 1% - 2%/ft smoke
Alarm Level 3	2%/ft smoke
Alarm Level 4	Adjusting 2% - 3.5%/ft smoke
Alarm Level 5	3%/ft smoke
Alarm Level 6	ClassA1R

## Product Range

Compatible Bases	B501AP Series, B500 Series (B501, B501DG, B524RTE, B524HTR, B524IEFT-1),
Other Devices in range	Please refer to other Series 200 Advanced Datasheets 22051E / EI, 22051TLE / TLEI, 52051RE/REI, 52051E/EI, 52051HTE /HTEI
Other Colours in range	Ivory

Note \* When installed in a B501AP base

† Do not install detectors in locations where normal ambient temperature exceeds 50°C

## System Sensor (Technical Services)

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Installation information: in order to ensure full functionality, refer to the installation instructions as supplied.