Temperature Sensors
Models 52051E, 52051RE, 52051HTE

Overview

Features

- 58^0 & 78^0 fixed temperature and rate of rise heat detectors

- Includes Series 200 Advanced Protocol and the ability to customise the heat thresholds of each detector to the specific risks found in the application

- 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

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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.
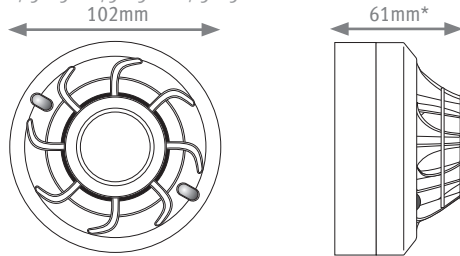
The 52051E and 52051HTE are fixed temperature analogue addressable sensors employing low mass thermistors and microprocessor technology for fast response and linear temperature sensing. Their linear response allows these sensors to be used to signal temperatures over the range of 58°C (Class A1S) to 78°C (Class BS). The 52051RE uses the same thermistor and microprocessor technology to provide an alarm when the rate of rise in temperature exceeds 10°C/minute (typical) or if the temperature exceeds a threshold of 58°C (Response Class A1R). With the implementation of the Series 200 Advanced Protocol, any model can be software configured to be either a fixed 58°, a fixed 78° unit or a 58° with rate of rise device. For backwards compatibility and approval continuity, three separate versions continue to be available as separate part numbers.

The sensing elements of all three heat sensors are panel controllable through the Series 200 Advanced Protocol 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.

SYSTEM SENSOR®

Architect/Engineer Specifications

52051RE / 52051REI/52051E / 52051REI/52051HTE / 52051HTEI

102mm   61mm*

Electrical Specifications - Standard Product (52051RE/E/HTE)

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 - Standard Product (52051RE/E/HTE)

Operating Voltage Range	15 to 28.5Vdc
Isolation Current	15mA at 24VDC
Maximum Continuous Current	1A (Switch Closed)
Additional Loop Resistance	typ 80 mohm @24V (max 170mohm @ 15V)

Environmental Specification

Temperature Range	-30°C to +70°C †
Humidity	10 to 93% relative Humidity (non-condensing)

Heat Detection Performance

52051RE / REI	Class A1R - 58°C fixed temperature and rate of rise
52051E / EI	Class A1S - 58°C fixed temperature
52051HTE / HTEI	Class BS - 78°C fixed temperature

Mechanical Information

Height	61mm installed in B501 base
Diameter	102mm installed in B501 base
Weight	88g (excluding base)
Max Wire Gauge for Terminals	2.5mm^2
Colour	White
Material	PC/ABS

Product Range

Compatible Bases	B500 Series (B501, B501DG, B524RTE, B524HTR, B524IEFT-1), B501AP
Other Devices in range	Please refer to other Series 200 Advanced Datasheets 22051TE / TEI, 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 Europe (Technical Services)

Installation information: in order to ensure full functionality, refer to the installation instructions as supplied.   DS52051-09