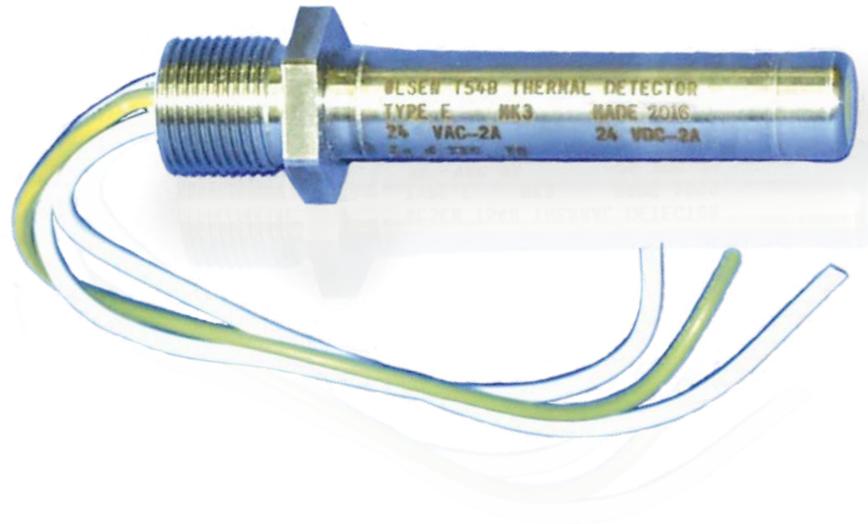


T54B

Type E Heat Probe Detector



Features

- IP67 Ingress Protection
- Robust Stainless Steel Construction
- Proven Reliability
- Normally-open and Normally-closed versions

Description

The T54B Type E heat detector is a sealed stainless steel tubular device operating on a principle of differential coefficients of expansion. The T54B is available in either normally-open or normally-closed contact configurations. When subjected to heating, the outer stainless steel case lengthens more than the inner strut assembly. Sufficient lengthening of the outer case causes contacts mounted on the inner struts to make or break, as required. This creates a short circuit (or open circuit, as applicable) across the alarm zone circuit triggering an alarm at the control and indicating equipment.

An alarm is triggered when the temperature reaches the detector's factory-set actuation point. However, a rapid temperature rise will magnify the difference in expansion rates and the detector will alarm faster than if the temperature rise is slow. This partially compensates for the detector's body temperature lagging behind the ambient temperature. The T54B is non-latching and returns to its normal state when the temperature drops below the set point.

Specifications

Operating Voltage (max.)	32Vdc / 32VAC
Switching Current ¹	5mA to 200mA
Contact Resistance	<1 ohm
Actuating Temp. Range ²	60°C to 240°C
Accuracy	
Set Point +60°C to +145°C	+/- 5°C
Set Point +160°C to +240°C	+/- 5%
Fixed Temp. only	Type E
Dimensions (dia.x D)	15 mm x 100 mm
	M20x1.5 Thread
Material	Stainless Steel
Weight	95g
Ambient Temperature	
Set Point +60°C to +145°C	-40°C to +175°C
Set Point +160°C to +240°C	-40°C to +280°C
Relative Humidity	100%
Ingress Protection	IP67
ActivFire Listed	afp-1612
FPANZ Listed	VF/214
Part Number Format ³	T4EnnnX/T4EnnnNC

1. Resistive loads only. 2. Actuating temperature is factory-set. 3. nnn represents temperature in degrees C.

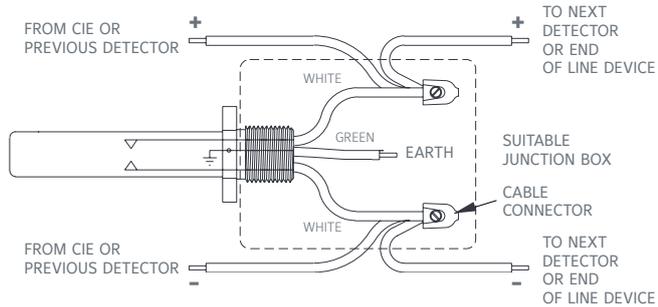
Mounting

The T54B's external M20 conduit thread is used to screw the device to a suitable bracket or mounting enclosure. The T54B is not certified as flameproof, but may be used as a simple device in an intrinsically safe system when used with an appropriate I.S. barrier, with the approval of the authority having jurisdiction.

Note: Do not tighten by tubular body, always use the hexagon provided. Do not exceed torque of 25 Nm.

Wiring

To comply with AS 1603.1 and AS 1670.1, the flying leads must be terminated by connections within a mounting enclosure for the detector.



(EARTH CONNECTION OPTIONAL)

T54B Selection Guide

For reliable operation, it is recommended that T54B detectors have set points 20°C or 20% (whichever is higher) above the maximum anticipated ambient temperature. The nearest preferred value T54B detector above the calculated set point should be used - refer to the table below.

Ambient Temperature Range for Preferred Value T54B Detectors

AMBIENT TEMPERATURE RANGE (°C)	DETECTOR SET TEMPERATURE (°C)	AMBIENT TEMPERATURE RANGE (°C)	DETECTOR SET TEMPERATURE (°C)
0 - 40	60*	101 - 110	132
41 - 46	66*	111 - 120	145*
47 - 52	72	120 - 133	160
53 - 60	80*	134 - 150	180
61 - 70	90*	151 - 166	200
71 - 80	100*	167 - 183	220
81 - 90	110*†	184 - 200	240
91 - 100	120		

* Normally-open values usually available ex-stock.

† Normally-closed value usually available ex-stock NZ.

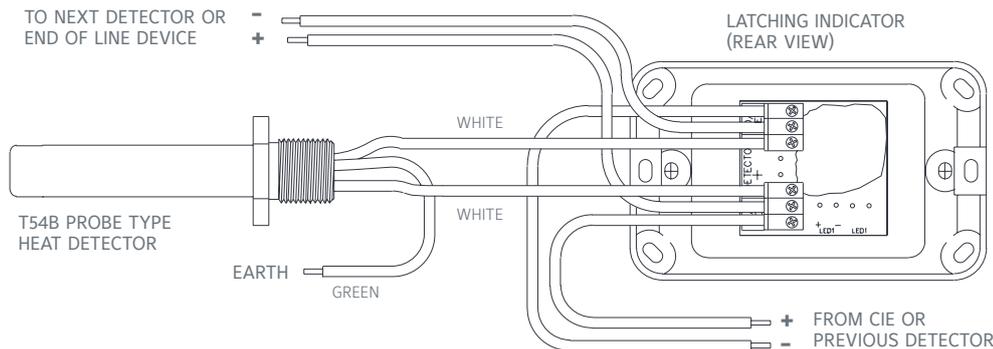
Others available with a minimum order quantity of 20.

Please contact Customer Service to discuss your requirements.

Latching Indicators

Johnson Controls has available a range of Latching Indicators suitable for use with the T54B probe-type heat detectors. These indicators provide a visual alarm indication even after a T54B has self-reset. The Indicators are reset from the CIE during a zone reset. Note: These Latching Indicators are not suitable for use in hazardous areas and thus must not be connected to a T54B that is in a hazardous location.

The latching indicators are rated at: 30Vdc maximum, 25mA @45°C; 15mA@75°C, Maximum Ambient Temp. 75°C.



LATCHING INDICATOR ORDERING CODES	
E561	Fire Alarm in Concealed Space
E566	Fire Alarm in Roof Space
E573	Fire Alarm in Room
E574	Fire Alarm Above
E575	Fire Alarm in Duct

Australia Level 3, 95 Coventry Street Southbank VIC 3006 Tel: 1300 725 688 Tel: +61 3 9313 9700 Email: fdp.customerservice.au@jci.com

New Zealand 17 Mary Muller Drive Hillsborough PO Box 19-545 Woolston Christchurch 8241 Tel: +64 9 635 0617 Email: tsp.sales.nz@tycoint.com

VIGILANT, a respected regional brand of Johnson Controls, is a technology leader in the Australian and New Zealand fire detection markets with AS and NZS product approvals. The VIGILANT product line includes a comprehensive range of MX TECHNOLOGY fire detection products and the market-leading QE90 voice evacuation systems. VIGILANT product is widely supported throughout Australia and New Zealand by a network of installation companies, service companies and distributors.

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