

614T SERIES

Conventional Heat Detection Range

Description

VIGILANT 614T heat detectors use a fast response thermistor based design to provide temperature sensing that quickly, accurately and consistently identifies when the ambient temperature exceeds the fixed temperature threshold. For Type A and Type C detectors, rate-of-rise detection is achieved by comparing the response of two thermistors, one of which has a slower thermal response. By combining accurate thermistors with proper physical placement, this patented rate-of-rise detection design achieves a high level of detection performance. 614T detectors include a built-in diode on the remote indicator output and do not require a series resistor when used on F3200 as was previously required on the original T614 detectors. The 614T detectors may be intermixed with MINERVA and VIGILANT T614 detectors and are compatible with VIGILANT MX1, F3200, MX4428 and SIMPLEX 4100ESi CIE. They may be used as service replacements for the MINERVA 614 series detectors both on these and the obsolete F08 and F4000 panels.

Installation

The base should be fixed such that the park plunger faces toward the door or trafficable area. This ensures the detector LED will be visible from the direction of entry, in accordance with AS 1670.1-2015. Refer to the base information sheet for more details.

With a clockwise rotational motion, the detector mounts quickly and easily onto the base. Rotating the detector anticlockwise past an indent to the park position disconnects the detector from the circuit whilst still retaining it in the base, allowing circuit separation. Depressing the plunger at the side of the base allows the detector to be rotated back into its operating position.

Testing

The 614T detectors should be maintained in accordance with the relevant section of AS 1851. The heat sensor can be tested in-situ using the X461 test unit.

Locking Device

A detector locking device is moulded into the 5B base. This must be detached and inserted into the locking aperture if required, prior to the selected detector being installed. The detector may then be removed only after inserting an unlocking tool (a $\varnothing 3 \times 22$ mm long rod) into the hole on the detector cover to depress the locking device.



Specifications

Mechanical (including 5B base)

Dimensions:

Height	53mm
Diameter	127mm
Mass	174g

Compatible Bases 4B, 5B, MUB (M614)

Electrical

Operating Voltage	11Vdc to 32Vdc
Quiescent Current ¹	85 μ A @ 24Vdc
Alarm State Current ²	5mA to 80mA
Alarm State Voltage ³	3V to 12.4V
Remote Indicator	Tyco E500 Mk2

Specifications are typical unless stated otherwise.

1. Max. quiescent current 110 μ A. 2. Min. 5mA for LED visibility; max. current must be externally limited. 3. Min. voltage with remote indicator shorted @ 5mA. Max. @ 80mA without remote indicator connected.

Environmental Indoor applications only

Type	Type A	Type B	Type C	Type D
Ambient Temp.	-10°C to +45°C		-10°C to +75°C	
Storage Temp.	-20°C to +75°C			
Rel. Humidity	10% to 95% (non-cond.)			

ActivFire Listed	afp-1813	afp-1814	afp-1815	afp-1816
Part Numbers	4098-9637EA	4098-9638EA	4098-9639EA	4098-9640EA

Wiring

A maximum of two 1.5mm² cables can be connected at any one terminal. All wiring terminates at the base as follows:

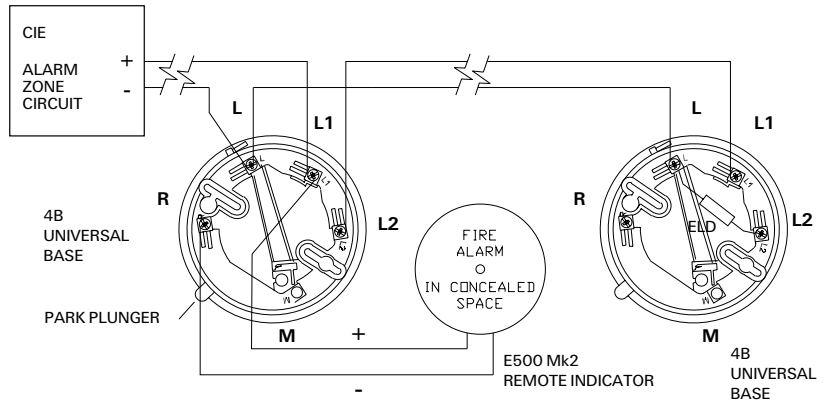
R: – Remote*

L: – In and Out

L1: + In & Remote

L2: + Out

* When a common remote indicator is used for two or more detectors, join the 'R' terminal to the next base 'R' terminal. The remote indicator will then activate when any of the connected detectors signals an alarm.



Application Notes

Note the 614T series of detectors are not suitable for use in areas subject to condensing moisture or salt mist.

When mounting on a damp surface or narrow beams where condensation may enter the rear of the detector, the deckhead mounting base DHM5B (part no. 517.050.603) or similar should be used.

The 614T does not require a resistor to be wired in series when used with an F3200 CIE and the SU0631 MCP, or a diode to be connected to the R terminal when used with a common remote indicator, as was previously the case with the original T614 detector.

The 614T is backwards compatible with the original T614 detector. For installations where 614T are replacing original T614s, no wiring modifications are necessary.

Detector Selection Guide

The 614T heat detectors are part of the VIGILANT 614 series of detectors. In the table below, detectors in **BOLD** are recommended as the most suitable for detecting the given type of fire in the particular environment. Non-bold detectors are suitable but will not give optimum performance for that application.

Fire type	Environment					
	Very clean (computer room)	Clean (office, hotel)	Moderately clean (warehouse)	Moderately dirty/smoky (loading area)	Dirty/smoky (car park)	Dirty/smoky Hot (kitchen)
Overheating (electrical/electronic equipment)	614P 614I	614P 614I 614CH	614P 614I	614P		
Smouldering (wood, paper)	614CH 614P	614CH 614P	614P 614CH	614P 614CH		
Flaming (wood, paper, flammable liquids)	614CH 614I 614P	614CH 614I 614P	614I 614CH 614P	614I 614CH 614T**		
Flaming with high heat (late stage flaming)	614P 614I 614CH	614P 614I 614CH 614T**	614I 614T** 614CH	614I 614T**	614T**	614T**

614I = Ionisation Smoke Detector 614P = Photoelectric Smoke Detector 614CH = combined Carbon Monoxide (CO) and Class A1R Heat Detector 614T = 614T Heat Detector. These detectors can be used separately, or combined, to provide fire detection for most applications. ** Refer to 614T Information sheet

Applications Warning

In many fires, hazardous levels of smoke and toxic gas can build up before a heat detectors will initiate an alarm. In cases where life safety is a factor, the use of smoke and/or CO detection is highly recommended. Heat detectors are used where property protection is desired. Typical heat detector applications are satisfied by use of rate-of-rise and fixed temperature electronic detectors. The addition of rate-of-rise operation provides faster heat detection for use where normal temperature fluctuations are controlled and are less than 6° C/min. Where temperatures may fluctuate more quickly, use fixed temperature detection only (Type B or Type D).

Australia Level 3, 95 Coventry Street Southbank VIC 3006 Tel: 1300 725 688 Tel: +61 3 9313 9700 Email: tfppcustservice.au@tycofp.com
New Zealand 17 Mary Muller Drive Hillsborough PO Box 19-545 Woolston Christchurch 8241 Tel: +64 9 635 0617 Email: tsp.sales.nz@tycofp.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.

© 2017 Johnson Controls. All rights reserved. All specifications and other information shown were current as of document revision date and are subject to change without notice.

614TINFVIG1708 August 2017

www.vigilant-fire.com.au