

INFORMATION SHEET

DESCRIPTION

Tyco 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 performance not normally available with older detection technologies. The 614T detectors include a built-in diode on the remote indicator output that enables several detectors to connect to a common remote indicator. The 614T detectors may be used as service replacements for the T614 detectors and may be intermixed with Minerva and Tyco 614 series detectors. They are compatible with F3200, MX4428, 4100U and the obsolete F08 and F4000 panels.

INSTALLATION

The detector 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 1670.1-2004. Refer to the 5B 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.

MAINTENANCE

614T detectors should be maintained in accordance with the relevant section of AS 1851. Wormald Detector Clean & Calibration Wollongong are equipped and competent to service 614T detectors.

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 detector being installed. The detector may then be removed only after inserting an unlocking tool (a Ø3 x 22mm long rod) into the hole on the detector cover to depress the locking device.



TESTING

The recommended in-situ tester is the model X461 test unit.



SPECIFICATIONS

Mechanical (including 5B base)

Dimensions:

Height	53mm
Diameter	127mm
Mass	174g

Compatible Bases 5B, MUB (M614)

Electrical

Operating Voltage	11Vdc to 32Vdc
Quiescent Current ¹	85µA @ 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 110µA. 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

Ambient Temperature

Types A, B	-10°C to +45°C
Types C, D	-10°C to +75°C

Storage Temp

-10°C to +75°C

Relative Humidity

10% to 95% (non-cond.)

Part Numbers

Part Number	Model	CSIRO ActivFire Listing
4098-9637EA	614TA	afp-1813
4098-9638EA	614TB	afp-1814
4098-9639EA	614TC	afp-1815
4098-9640EA	614TD	afp-1816

WIRING

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

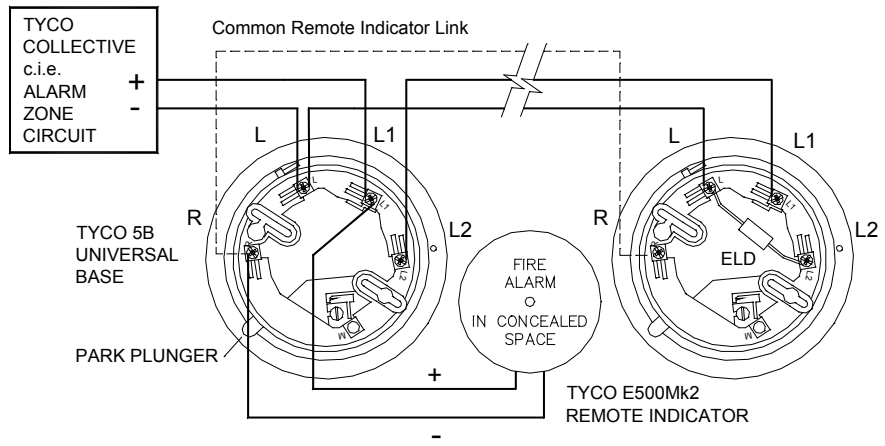
R: – Remote*

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 signal an alarm. Only the E500Mk2 remote indicator can be used. Its positive line must connect to L1 (+In), not any external power.



APPLICATION NOTES

The 614T series of heat detectors are not suitable for direct external use; however the improved environmental protection of the thermistor provides a greater tolerance to outdoor air in covered areas. When mounted on damp surfaces or where moisture may otherwise enter the rear of the detector or where it is subject to mist or driving rain, the deckhead mounting base DHM5B (part number 517.050.603) must be used in conjunction with the 5B base. In addition, product bulletin GPBD0018 should be consulted for further guidelines.

The 614T is backwards compatible with the T614 and T614 Mk2 heat detectors and bases.

DETECTOR SELECTION GUIDE

The 614T heat detectors are part of the Tyco 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	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.

Applications Warning

In many fires, hazardous levels of smoke and toxic gas can build up before a heat detector 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 detectors (Type A or Type C). 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).

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