



Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 1210	11-Jan-1999	Number 14	Issue date 1-May-2018	30-Apr-2019

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Product designation

Tyco, Model MU614, ART 38ppm, carbon monoxide fire detector

(Refer to the Schedule/enclosures for further specified details)

Agent/distributor

Tyco Fire Protection Products
Level 3, 95 Coventry Street, SOUTHBANK, VIC, AUSTRALIA, 3006

Registrant

Johnson Controls
17 Mary Muller Drive, HILLSBOROUGH, CHRISTCHURCH, NEW ZEALAND, 8022

Producer

Tyco Fire & Security Gmbh
Victor von Bruns-Strasse 21, NEUHAUSEN AM RHEINFALL, SWITZERLAND, 8212

Conformance criteria and evaluation

The Tyco, Model MU614, ART 38ppm, carbon monoxide fire detector has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 1603.2-1997, 'Automatic fire detection and alarm systems - Point type smoke detectors' incl. Amdt 1 (August 1998).
2. Australian Standard AS 1603.14-2001, 'Automatic fire detection and alarm systems - Point type carbon monoxide (CO) fire detectors'.

Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

Specified limitations/conditions, determined from the evaluation for conformity, include the following.

- i. The detector is installed and maintained as recommended by the manufacturer.
- ii. The detector is used indoors, dry environments.
- iii. Compatibility of this fire detector and its base assembly with new or existing control and indicating equipment should be verified prior to installation.

This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

Issued by

David Whittaker
Executive Officer – ActivFire Scheme



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Producer's description

The Tyco, Model MU614, ART 38ppm, carbon monoxide fire detector detects the early stages of fires by responding to carbon monoxide (CO) molecules produced by the combustion of carbonaceous materials.

The detector uses an electro-chemical cell to detect CO. The cell is fully self-restoring after long exposure to high levels of CO and other substances. When the detector is de-energised, a FET shorts the cell and prevents deterioration during storage. The electro-chemical cell consists of platinum electrodes in an electrolyte gel. A membrane protects the electrolyte, but is permeable to CO and O₂ molecules. When the cell is exposed to CO, a chemical reaction occurs between the CO and O₂ molecules. This reaction produces CO₂ and free electrons that produce in the cell an electric current proportional to the concentration of CO. When the CO concentration reaches a pre-determined level, the detector's circuitry will signal an alarm state. The sensitivity of the MU614 may be expressed in terms of its response to smoke density as determined by Australian Standard AS 1603.2-1997. The sensitivity of the detector is fixed at the point of manufacture.

The detector has one recessed LED in the cover moulding which is red in colour when the detector is in the alarm condition. Electrical connection to the detector is achieved through the mounting base. The Tyco, Model MU614, CO detector must be used with the appropriate Tyco base assembly.

Technical specification

The following details are a representative extract of the technical specification for the Tyco, Model MU614, ART 38ppm, carbon monoxide fire detector and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Operating voltage:	16 Vdc to 28 Vdc
Quiescent current:	50 µA @ 28 Vdc
Alarm voltage:	2.5 Vdc to 7.4 Vdc
Alarm current:	67 mA (must be externally limited) @ 5 Vdc @ 50°C (maximum)
Visibility alarm current:	3.2 mA (minimum required for LED visibility)
Alarm response threshold:	38 ppm CO
Nominal sensitivity:	ART 38 ppm Equivalent to 0.20 MIC X (AS 1603.2-1997)
Externally powered load current:	50 mA (maximum)
Temperature rating:	0°C to +50°C
Relative humidity:	15 to 90% R.H. (non condensing)
Alarm Indicator colour:	Red
Remote indicator:	Tyco E500 Mk2

Tested base designation	Base + detector circuit type
Tyco, Model 5B	Collective
Tyco, Model M614	Collective

Supplementary information

Tyco, Models MUB/M614 and 5B Bases:

The base should be fixed so that the park plunger faces toward the door. This ensures the detector LED will be visible from the direction of entry.

Wiring MUB/M614 and 5B Bases:

Terminal	Collective
L	Negative In and Out
L1	Positive In & Remote
L2	Positive Out
R	Negative Remote**

** When a remote indicator is used as a common indicator 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.