



Certificate of Conformity

| Certificate num. | Registration date | Version | Valid until | |
|------------------|-------------------|-----------|------------------------|-------------|
| afp - 403 | 22-May-1990 | Number 13 | Issue date 26-Apr-2019 | 30-Apr-2020 |

Page 1 of 2

Product designation

Tyco Fire Products, Model TY-FRB: SIN TY4332, 20NS thread x 11.5K(metric), 57°/68°/79°C (3 mm bulb), extended coverage, horiz. sidewall, quick/standard response sprinklers
(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

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

Producer

Tyco Fire Protection Products
8902 North Interstate 27, LUBBOCK, TX, UNITED STATES, 79403

Conformance criteria and evaluation

The Tyco Fire Products, Model TY-FRB: SIN TY4332, 20NS thread x 11.5K(metric), 57°/68°/79°C (3 mm bulb), extended coverage, horiz. sidewall, quick/standard response sprinklers have been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Underwriters Laboratories - Evaluation and listing, 'UL listing'.
2. Underwriters Laboratories Canada - Evaluation, follow-up services and listing, 'cUL listing'.
3. Factory Mutual - Evaluation and approval, 'FM approval'.
4. Verband der Schadenverhütung - Evaluation and approval, 'Vds approval'.

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.

(Limitations/conditions of conformance continue)

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



Schedule to Certificate of Conformity

| Certificate num. | Registration date | Version | | Valid until | Page 2 of 2 |
|------------------|-------------------|--------------|---------------------------|-------------|-------------|
| afp - 403 | 22-May-1990 | Number 13 | Issue date 26-Apr-2019 | 30-Apr-2020 | |

- Fire sprinkler equipment, system design and installation should be determined and verified in accordance with the performance and prescribed requirements of the regulations, standards and criteria as specified by the building code and authorities having jurisdiction. Due considerations include the occupancy fire loading, sprinkler location, coverage, response, hydraulic characteristics and other specified requirements relevant to the conformance and effectiveness of the equipment and installed system.
- Specific or special requirements in relation to this product must be considered and included in the system design and installation.
- Only the Style 30 or 40 recessed escutcheon, as applicable, is to be used for recessed pendent installations.
- The maximum working pressure is 1720 kPa.

Producer's description

The Tyco Fire Products, Model TY-FRB: SIN TY4332, 20NS thread x 11.5K(metric), 57°/68°/79°C (3 mm bulb), extended coverage, horiz. sidewall, quick/standard response sprinklers are designed for use in commercial occupancies such as banks, hotels, shopping malls, etc.

Corrosion resistant coatings, where applicable, are utilized to extend the life of copper alloy sprinklers beyond that which would otherwise be obtained when exposed to corrosive atmospheres. Although corrosion resistant coated sprinklers have passed the standard corrosion tests of the applicable approval agencies, the testing is not representative of all possible corrosive atmospheres. Consequently, it is recommended that the end user be consulted with respect to the suitability of these coatings for any given corrosive environment. The effects of ambient temperature, concentration of chemicals, and gas/chemical velocity, should be considered, as a minimum, along with the corrosive nature of the chemical to which the sprinklers will be exposed.

The recessed version is intended for use in areas with a finished ceiling. It uses the two-piece Style 30 or Style 40 recessed escutcheon. The adjustment provided by the recessed escutcheon reduces the accuracy to which the fixed pipe drops to the sprinklers must be cut.

The glass bulb contains a fluid which expands when exposed to heat. When the rated temperature is reached, the fluid expands sufficiently to shatter the glass bulb, allowing the sprinkler to activate and water to flow.

Technical specification

The following details are a representative extract of the technical specification for the Tyco Fire Products, Model TY-FRB: SIN TY4332, 20NS thread x 11.5K(metric), 57°/68°/79°C (3 mm bulb), extended coverage, horiz. sidewall, quick/standard response sprinklers and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

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| SIN | TY4332 |
| Maximum working pressure | 1720 kPa (250 psi) |
| Thread size | 20NS (3/4" NPT) |
| Nominal K-factor | 11.5 K(metric), l/min / kPa ^{0.5} (8.0 GPM/psi ^{0.5}) |
| Nominal temperature rating | 57°/68°/79°C |
| Finishes | Natural brass, chrome plated, white polyester |
| Physical characteristics | |
| Frame | Bronze |
| Button | Brass/copper |
| Sealing assembly | Beryllium nickel w/Teflon |
| Bulb | Glass (3 mm) |
| Compression screw | Bronze |
| Deflector | Copper |
| Reference technical data sheet | TFP296, January 2007 |