



ENGINEERING SAFETY CONSULTANTS

The Global Provider of Functional Safety Expertise and Technical Consultancy

Certificate of Conformity to IEC 61508 Safety Integrity Level (SIL) 2

Functional Safety of Safety-Related Programmable Electronic Systems

The **Hochiki Europe (UK) Ltd, Short Circuit Isolator** for use in fire detection and alarm systems has been assessed and is considered capable for use in a low demand Safety Function up to SIL 2, with regard to random failure rates and architectural constraints.

The assessment was based on the assumptions, data provided, and recommendations given in:

- **ESC Ltd Report: C003_SV003 rev. 6;**
- **Renewal letter from Hochiki Europe (UK) Ltd, signed by Richard Anderson, Approvals & Certification Engineer, dated: 17/08/2020.**

The system was assessed against the following failure mode:

- Dangerous failure of sensor in loop.

Subject to the following requirements detailed in report C003_SV003 rev. 6:

- Host system will be configured to detect and alarm on loss of communications to the detector (loss of response to polls).

The following product variants are also covered under this certificate, with the product labels being the only difference:

- YBN-R/3(SCI);
- YBN-R/3(WHT)-SCI.
- YBN-R/3(SCI)/SIL;
- YBN-R/3(WHT)-SCI/SIL;
- YBN-R/3(SCI)/RWY;
- YBN-R/3(WHT)-SCI/RWY.

The assessment was carried out to determine compliance with IEC 61508 with regards to:

- Random Hardware Failures (Predicted PFD <3.0E-05 (assuming a 1-year proof test and average repair time of 168 hrs));
- Architectural Constraint (Type A, SFF >90%).

IMPORTANT: It should be noted that this assessment does not include confirmation of the response time of the device. For response times (along with any relevant assumptions) reference should be made to the Safety Manual of each device and the total SIF response time **MUST** be compared against the process safety time for the specific application.

Chairman: Kenneth G L Simpson

Member of the IEC 61508 committee

Assessment Date: April 2014

Renewal Date: October 2020, valid to October 2022

Certificate: C003_CT005 rev. 6

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