



ENGINEERING SAFETY CONSULTANTS

The Global Provider of Functional Safety Expertise and Technical Consultancy

Certificate of Conformity to IEC 61508 Safety Integrity Level (SIL) 2 in Terms of Random Hardware Performance Requirements

Functional Safety of Safety-Related Programmable Electronic Systems

The **Hochiki Europe (UK) Ltd. Intelligent Analogue Addressable heat detector for use in fire detection and alarm systems** has been assessed and is considered capable for use in a SIL 2 low demand Safety Function with regard to random failure rates. The assessment was based on the assumptions, data provided and recommendations given in:

ESC Ltd report C003_SV001_(3.0).

The system was assessed against the following failure mode:

- Failure to communicate fire condition to the host system.

Subject to the following requirements detailed in report C003_SV001_(3.0):

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

The system assessed includes the following variants:

- ATJ-E(WHT);
- ATJ-EN;
- ATJ-EN(WHT).

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

- Random Hardware Failures (Predicted PFD $<2.0E-04$ (assuming a 1 year proof test and average repair time of 168 hrs);
- Architectural Constraints (Type B, SFF $>90\%$).

Managing Director: Kenneth G L Simpson

Member of the IEC61508 committee

Assessment Date: February 2014

Renewal Date: September 2016, valid to September 2018

Certificate: C003_CT002_(5.0)



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ENGINEERING SAFETY CONSULTANTS LTD

Tuition House

27-37 St George's Road Wimbledon London SW19 4EU UK

Telephone/Fax: +44 (0)20 8542 2807

E-Mail: info@esc.uk.net Web: www.esc.uk.net

Registered in England and Wales: 7006868

Registered Office: 27-37 St George's Road Wimbledon London SW19 4EU