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. CHQ-ISM and CHQ-ISM/DIN Intrinsically Safe Sounder Module** (function is to allow a sounder output to be driven through an IS barrier, and also monitors for an open circuit which is fed back to indicate a detected line fault through the IS barrier) have been assessed and are 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 E029_SV002 rev.3.

The product was assessed against the following failure mode:

- Failure to drive sounder output when demanded.

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

- Random Hardware Failures with Predicted PFD <1.1 E-3 (assuming a 1 year proof test and average repair time of 168 hrs);
- Architectural Constraint (Type A, SFF >60%, <90%).

Note: The CHQ-ISM Module is not in itself an intrinsically safe device, but is designed to connect to intrinsically safe barriers.

Managing Director: Kenneth G L Simpson
Member of the IEC61508 committee
Assessment Date: May 2015
Renewal Date: September 2016, valid to September 2018
Certificate: E029_CT002 rev. 4

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