



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-FTM and CHQ-FTM/DIN** (function is to monitor two 4-20mA current loop circuits with four threshold alarm settings, communicating to the Control Panel through the ESP Protocol) 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_SV001 rev.3.

The product was assessed against the following failure mode:

- Failure to transmit any of the four alarms to the ESP Control Panel.

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

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

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Member of the IEC61508 committee
Assessment Date: May 2015

Renewal Date: September 2016, valid to September 2018
Certificate: E029_CT001 rev. 4



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