



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 **Linesense Fire Detection Ltd, Digital Interface Module (52101-001)**, has been assessed and is considered capable for use in a low demand Safety Function up to SIL 2 with regard to random failure rate and architectural constraint.

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

- ESC Ltd Report: H033_FM001 rev. 2.

The product was assessed against the following failure mode:

- The unit fails to provide an alarm from either of the two alarm relays (A1, A2) when there is a high temperature at the sensing element.

The system assessed comprises the following modules:

- 52101-001 Digital Interface Module;
- Linear Heat Detecting Cable (LHDC):
 - 51100-068 Model H8040N Digital LHDC. Alarm temperature 68°C, max ambient 45°C. Black nylon outer sheath;
 - 51100-085 Model H8045N Digital LHDC. Alarm temperature 85°C, max ambient 45°C. Black nylon outer sheath;
 - 51100-105 Model H8028 Digital LHDC. Alarm temperature 105°C, max ambient 70°C. Black PVC outer sheath;
 - 51100-176 Model H8069 Digital LHDC. Alarm temperature 176°C, max ambient 105°C. Red PVC outer sheath;
 - 51100-240 Model H9650 Digital LHDC. Alarm temperature 240°C, max ambient 200°C. White fluoropolymer outer sheath.

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

- Random Hardware Failure (Predicted failure rate $<3.7E-04$ per year);
- Architectural Constraint (Type A, SFF $>60 <90\%$).

Managing Director: Kenneth G L Simpson
Member of the IEC61508 committee
Assessment Date: July 2018, valid to July 2020
Certificate: H033_CT001 rev. 2

ENGINEERING SAFETY CONSULTANTS LTD
is ISO9001-certified by Global Group, itself a
UKAS-accredited ISO9001 certification
company

Reg: 12Q12086

ENGINEERING SAFETY CONSULTANTS LTD
Tuition House, 27-37 St George's Road
London, SW19 4EU, UK
Telephone: +44 (0)20 8542 2807

E-Mail: info@esc.uk.net Web: www.esc.uk.net
Registered in England and Wales: 7006868

Registered Office: Tuition House, 27-37 St George's Road, London, SW19 4EU