



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 **PATOL Ltd LDM-519-LP Monitor/Controller** 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 C050_SV001_(2.0).

The system was assessed against the following failure mode:

- The unit fails to provide an alarm when there is a high temperature at the sensing element.

The system assessed comprises the following modules:

- LDM-519-LP module (Part No. 700-101).
- Linear heat detecting cable:
 - Red PVC 700-001.
 - Red PVC S.S 700-005.
 - Black Nylon 700-003.
 - Black Nylon S.S 700-004.

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

- Random Hardware Failures (Predicted PFD $<1.8E-04$ (assuming a 1 year proof test and average repair time of 168 hrs).
- Architectural Constraints (Type A, SFF $>60 <90\%$).

Managing Director: Kenneth G L Simpson

Member of the IEC61508 committee

Assessment Date: May 2013

Certificate: C050_CT001_(2.0)



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