



ENGINEERING SAFETY CONSULTANTS

The Global Provider of Functional Safety Expertise and Technical Consultancy

Certificate of Conformity to IEC 61508 / IEC 61511 Safety Integrity Level (SIL) 2

Functional Safety of Safety-Related Programmable Electronic Systems

Manufacturer: Tyco Fire & Security GmbH (TFSG)
Victor Von Bruns-Strasse 21
8212 Neuhausen am Rheinfall
Schaffhausen
Switzerland

The **TFSG, TLI800EN Network Module** (the function of this module is to allow multiple MX Fire Panels to communicate and transmit information, states and commands between each other) has been assessed and is considered capable for use in a low demand Safety Function up to SIL 2 with regard to systematic (assessed under the Prior Use route), random failure rate and architectural constraint in conjunction with the **T2000, MX & ZX Fire Panel**.

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

- **Technis Report No. T432, Issue 4.0;**
- **ESC Ltd report D152_SV009 rev.4, which includes details associated with the Safety Manual requirements in Appendix C;**
- **ESC Ltd report D152_PU001 rev.2;**
- **Renewal Letter from Tyco Fire & Security GmbH, signed by Deepika Sahni, Regulatory Engineer, Dated 2nd May 2019.**

The use of the TLI800EN Network Module in conjunction with the MX Fire Panel can meet the SIL 2 capability, in terms of hardware reliability, however, a complete analysis of the total safety function will need to be undertaken.

The product was assessed against the following failure modes:

- Failure to respond (executive output);
- Failure to respond (audible output).

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

- Random Hardware Failure with Predicted PFD <2.0E-03 (assuming a 1 year proof test and average repair time of 168 hrs);
- Architectural Constraint (Type B, SFF >90%, <99%);
- Systematic Capability against IEC 61511 (2004 Edition) Prior Use.

Managing Director: Kenneth G L Simpson
Member of the IEC 61508 committee
Assessment Date: April 2015
Renewal Date: May 2019, valid to May 2021
Certificate: D152_CT009 rev. 5

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