



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 capability (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;**
- **Engineering Safety Consultants Ltd Report: D152_SV009 rev.4, which includes details associated with the Safety Manual requirements in Appendix C;**
- **Engineering Safety Consultants Ltd Report: D152_PU001 rev.3;**
- **Renewal Letter from Tyco Fire & Security GmbH, signed by Deepika Sahni, Principal Regulatory Engineer, Dated 8th April 2021.**

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 (2010 Edition) with regards to:

- Random Hardware Failure with Predicted PFD <2.0E-03 (assuming a 1 year proof test interval and average repair time of 168 hrs);
- Architectural Constraint (Type B, SFF >90%, <99%);
- Systematic Capability against IEC 61511 (2016 Edition) Prior Use.

IMPORTANT: It should be noted that this assessment does not include confirmation of the response time of the devices. For response times (along with any relevant assumptions) reference should be made to the Safety Manual of each device and the total SIF response time **MUST** be compared against the process safety time for the specific application.

Managing Director: Simon Burwood
Member of IEC 61508 (MT61808-1-2) & IEC 61511 (MT61511) Maintenance Committees
Assessment Date: April 2015
Renewal Date: April 2021, valid to April 2023
Certificate: D152_CT009 rev. 6

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

Reg: 12Q12086

ENGINEERING SAFETY CONSULTANTS LTD
2nd Floor, Exchequer Court, 33 St. Mary Axe,
London, EC3A 8AA UK
Telephone/Fax: +44 (0)20 8542 2807
E-Mail: info@esc.uk.net Web: www.esc.uk.net
Registered in England and Wales: 7006868
Registered Office: 33 St. Mary Axe, London, EC3A 8AA