
Certificate of Conformity to IEC 61508 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, Manual Call Points with Short Circuit Isolators** have been assessed and are considered capable for use in a low demand Safety Function up to SIL 2, with regards to random hardware failures and architectural constraints.

It should be noted that Systematic Capability (SC) has not been addressed as part of this certificate.

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

- **MCP Range of Manual Call Points With Short Circuit Isolator, Review Report Iss1 by Thorn Security, FMEDA 514.800.609/610/611/612, Dated 21/11/2013;**
- **MCP Range of Manual Call Points With Short Circuit Isolator, FMEDA Iss1 by Thorn Security, Dated 21/11/2013;**
- **Renewal Letter from Tyco Fire & Security GmbH, signed by P.W. Cottrell, R&D Engineer – Sensor Team, Dated 8th April 2021.**

The assessment was carried out against failure modes where the manual call points were unable to detect and process alarms over the addressable system. The following models were assessed:

- **MCP820;**
- **MCP820M;**
- **MCP830;**
- **MCP830M.**

The assessment was carried out to determine compliance with IEC 61508 (2010 Edition) with regards to:

- Random Hardware Failures (Predicted PFD <1.0E-03), based on a one year proof test interval;
- Architectural Constraint (Type B, SFF >90%, <99%).

IMPORTANT: It should be noted that this assessment does not include confirmation of the response time of the device. 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.

Page 1 of 2

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



ENGINEERING SAFETY CONSULTANTS

The Global Provider of Functional Safety Expertise and Technical Consultancy

The following models are covered by this certificate:

Model Name	Product Description	λ DU Dangerous Undetected Failures	λ DD Dangerous Detected Failures	λ S Safe Failures	Safe Failure Fraction	PFD _{avg}
MCP820	Indoor Addressable Manual Call Point with Short Circuit Isolator	1.7E-07 /hr	1.6E-06 /hr	4.4E-07 /hr	93%	<1.0E-03
MCP820M	Indoor Addressable Manual Call Point with Short Circuit Isolator (Marine Version)	1.7E-07 /hr	1.6E-06 /hr	4.4E-07 /hr	93%	<1.0E-03
MCP830	Outdoor Addressable Manual Call Point with Short Circuit Isolator	1.7E-07 /hr	1.6E-06 /hr	4.4E-07 /hr	93%	<1.0E-03
MCP830M	Outdoor Addressable Manual Call Point with Short Circuit Isolator (Marine Version)	1.7E-07 /hr	1.6E-06 /hr	4.4E-07 /hr	93%	<1.0E-03

Managing Director: Simon Burwood
 Member of IEC 61508 (MT61808-1-2) & IEC 61511 (MT61511) Maintenance Committees
 Assessment Date: November 2013
 Renewal Date: April 2021, valid to April 2023
 Certificate: B181_CT001 rev. 3

Page 2 of 2

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