



# IEC 61508 Safety Integrity Level Capability Certificate

## **Functional Safety of Safety-Related Programmable Electronic Systems**

The **Base<sub>2</sub>, Communications Controller Unit 3 (CCU3)** has been assessed and is considered capable for use in a low demand Safety Function up to (and including) SIL 2 with respect to random hardware failures and architectural constraints.

The function of the CCU3 is to provide an interface between the Tyco MX Fire Panels and a Host PLC.

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

- **Environmental Resources Management Ltd Report: D153\_FM001 rev. 3;**
- **Renewal Letter from Base<sub>2</sub>, signed by Grant Hodson, General Manager, Dated: 15<sup>th</sup> July 2023.**

The product was assessed against the following failure mode:

- **Failure to process (From Com1/Com3 or Com3/Com1) Serial Data (e.g. Rs 422/435/485) Between Tyco MX Fire Panels And A Host Computer/PLC.**

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

- SIL 2 with a HFT = 0 via Route 1H;
- Architectural Constraint (Type B, SFF >90% - <99%).

Note 1: The SIL of a complete SIF (sensor, logic solver and final element subsystems) must be verified to calculate the required PFD / PFH, considering any redundancy, Proof Test Interval (PTI), Proof Test Coverage (PTC), Mission Time and Mean Time To Restoration (MTTR) for all elements included in the SIF. Each subsystem should be verified to ensure compliance with the minimum HFT requirements.

**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.

Device	$\lambda_{DU}$ (/hr)	$\lambda_{DD}$ (/hr)	$\lambda_s$ (/hr)	SFF	Device Type	Estimated SIL Capability (Arch. Constraints)
CCU3	1.2E-07	8.2E-07	2.4E-07	90%	B	SIL 2

Partner: Simon Burwood  
Assessment Date: May 2015  
Renewal Date: August 2023, valid to August 2025  
Certificate: D153\_CT001 rev. 4

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