



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) 3

Functional Safety of Safety-Related Programmable Electronic Systems

The **Matic Camtorc (Series) Valve Actuator** produced by **Imtex Controls Ltd** has been assessed and is considered capable in terms of systematic capability for use in systems up to SIL 3 low demand safety functions. As this device only forms part of a final element, the random failure rate SIL integrity must be verified for each application configuration.

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

- **Technis Report: T452 Issue 3.0** – (SFF assessment);
- **Technis Report: T918 Issue 1.0** – (Current PFD assessment);
- **ESC Ltd Report: B134_FSA001 rev.6** - (Systematic).
- **Letter from Imtex Controls Ltd confirming no change dated 07/08/2020**

The system was assessed against the following failure mode:

- Single solenoid valve, fail to release.

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

- Random Hardware Failures against IEC 61508:
 - Predicted failure rate $\leq 0.3E-06$ per hour;
 - PFD = $1.3E-03$ with no partial stroke testing and an annual proof test interval;
 - PFD = $5.1E-04$ with fortnightly partial stroke testing and an annual proof test interval.
- Architectural Constraints Type A:
 - No partial stroke test, SFF $>60\%$, $<90\%$ (simplex configuration up to SIL 2);
 - With partial stroke test, SFF $>90\%$, $<99\%$ (simplex configuration up to SIL 3 and assuming valve actuator is used in clean service).
- Systematic against IEC 61511, prior use, suitable up to SIL 3.

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Member of the IEC61508 committee

Assessment Date: February 2013

Assessment Date: September 2020, valid to September 2022

Certificate: B134_CT001 rev. 6

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