

SIL



Functional Safety Certificate

No. 1N250828.HICQN09

Certificate's Holder: Hitewell Industries Controls Ltd.
No. 689, Zhangong Rd, Fengxian District, Shanghai P.R. China.

Product: Electric Actuator
Model(s): VAD, VADQ, SAL, VAR, VAQ

Standard: Has been assessed per the relevant requirements of:
IEC 61508:2010 Parts 1-7
And meets requirements providing a level of integrity to:
Systematic Capability: SC 3(SIL 3 Capable)
Random Capability: Type B Element
SIL3 @ HFT≥ 1
PFD_{avg} and Architecture Constraints must be verified each application

***Safety function:**

This product is a kind of electric actuator used to open & close the valve or control the flow rate of the pipeline.

*** Application Restrictions:**

The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements.

* Is suitable to be safety function according to the description and the configuration defined in Annex I

Verification Mark:



The Verification Mark can be affixed on the product. It is NOT permitted to alter the Verification Mark in any way

Remark: This SIL Verification of Compliance has been issued on a voluntary basis. ECM confirms that a Test Report is existent for the above listed product(s) and found to meet the requirements of above standards for application in safety related system up to Safety Level of **SIL 3**. The unit must be properly designed into a Safety Instrument Function as per the requirements in the Safety Manual. The Verification Mark shown above can be affixed on the product. It is NOT permitted to alter the Verification Mark in any way. In addition the Verification's Holder is NOT allowed to transfer the Verification to third parties. This certificate can be checked for validity at www.entecerma.it

Date of issue 29 August 2025

Expiry date 27 August 2030

For online check:



Approver
Ente Certificazione Macchine
Legal Representative
Luca Bedonni



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Annex I

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1. The use of the product [Electric Actuator] must obey the required rules to conservation of SIL3 properties, these rules are recalled in the §6 of the Assessment Report reference: [SIL Capability assessment report].

2. The product version of hardware components used for validation and type tests are the following:

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3. Acceptable environmental constraints for the system are recalled in the safety Manual. These elements must be checked for each integration operation of the product.

4. The product has met manufacturer design process requirements of Safety Integrity Level (SIL)3. These are intended to achieve enough integrity against systematic errors of design by the manufacturer.

5. ICE 61508 Failure Rates:

Failure Rates For the product in FIT*

Component architecture	SIL Capability	Demand frequency	PFD
1oo2 configuration	SIL3	Low	8.92E-04

Safety function	Failure rate	Undetected dangerous failure rate	Tests intervals	MTTR
SF1	4.72E-05	4.39E-07	11months	48h
SF2	4.77E-05	4.35E-07	11months	48h

6. SIL Verification:
The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFDavg considering redundant architectures, proof test interval, proof test effectiveness, any Automatic diagnostics, average repair time and the specific failure rates of all products included in the SIF. Each subsystem must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.