



Certificate / Certificat Zertifikat / 合格証

descote 1303056 C002

exida hereby confirms that the:

BIMATIC actuators

descote s.a.s
Feyzin, France

The manufacturer
may use the mark:



Have been assessed per the relevant requirements of:

IEC 61508 : 2010 Parts 1-2

and meets requirements providing a level of integrity to:

Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type A Device

**PFD_{AVG} and Architecture Constraints
must be verified for each application**

Revision 4.0 February 26, 2024
Surveillance Audit Due
March 31, 2027

Safety Function:

The actuator will move the valve to the designed safe position per the actuator design within the specified safety time.

Application Restrictions:

The unit must be properly designed into a Safety Instrumented Function per the Installation, Operations and Maintenance and Safety Manuals for the actuators.



Peter L.
Evaluating Assessor

C. Krupke
Certifying Assessor

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Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type A Device

PFD_{AVG} and Architecture Constraints must be verified for each application

Systematic Capability :

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

A Safety Instrumented Function (SIF) designed with this product must not be used at a SIL level higher than stated.

Random Capability:

The SIL limit imposed by the Architectural Constraints must be met for each element.

IEC 61508 Failure Rates in FIT*

V1 – Linear Pneumatic Actuator BIMATC

V2 – Linear Pneumatic Tandem Actuator BIMATIC

Device and application	Without PVST			With PVST		
	λ_{Safe}	λ_{DD}	λ_{DU}	λ_{Safe}	λ_{DD}	λ_{DU}
V1 Clean service	1014	0	137	1014	71	66
V2 Clean service	2032	0	211	2032	120	91

*FIT = 1 failure / 10⁹ hours

PVST = Partial Valve Stroke Test of a final element Device

SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFD_{avg} 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 element must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are a mandatory part of certification:

Assessment Report: descote 1303-056-C R005 V4 R0

Safety Manual: : descote Safety manual Bimatic 40-60-023 Rev 1

BIMATIC Actuators



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