



Certificate / Certificat Zertifikat / 合格証

ASC 2112125 C001

exida hereby confirms that the:

Series 327/8327G Solenoid Valves

The manufacturer
may use the mark:



ASCO Ede, The Netherlands

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, Route 2_H Device

**PFH/PFD_{avg} and Architecture Constraints
must be verified for each application**

Revision 2.7 April 8, 2024
Surveillance Audit Due
January 1, 2026

Safety Function:

The Valve will move to the designed safe position when de-energized within the specified safety time.

Application Restrictions:

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



Evaluating Assessor

Certifying Assessor

ASC 2112125 C001

Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type A, Route 2_H Device

**PFH/PFD_{avg} and Architecture Constraints
must be verified for each application**

Systematic Capability :

These products have 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 these products 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. This device meets *exida* criteria for Route 2_H.

IEC 61508 Failure Rates in FIT¹

Model	Application	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}
327B0/8327G...	De-energize to Trip, NC	0	416	0	58
	De-energize to Trip, NO	0	368	0	96
	Energize to Trip, NC	0	9	0	199
	Energize to Trip, NO	0	48	0	160
327B1..., 327B2..., 327H	De-energize to Trip, NC	0	174	0	58
	De-energize to Trip, NO	0	126	0	96
	Energize to Trip, NC	0	9	0	162
327B3	Energize to Trip, NO	0	48	0	123
	De-energize to Trip, NC	0	130	0	58
	De-energize to Trip, NO	0	82	0	96
	Energize to Trip, NC	0	9	0	144
327B3NFIS... & 327B3WSCRIS...	Energize to Trip, NO	0	48	0	105
	De-energize to Trip, NC	0	168	0	64
	De-energize to Trip, NO	0	120	0	103
	Energize to Trip, NC	0	14	0	188
327A	Energize to Trip, NO	0	53	0	150
	De-energize to Trip, NC	0	395	0	57
	De-energize to Trip, NO	0	367	0	87
	Energize to Trip, NC	0	13	0	173
327B0 Redundant	Energize to Trip, NO	0	43	0	138
	De-energize to Trip, (2oo2 NC)	0	57	0	315
327B1, B2, H Redundant	Energize to Trip (1oo2 NC)	0	151	0	36
	De-energize to Trip (2oo2 NC)	0	30	0	315
327B3 Redundant	Energize to Trip (1oo2 NC)	0	151	0	33
	De-energize to Trip (2oo2 NC)	0	20	0	315
MO Option Adder	Energize to Trip (1oo2 NC)	0	151	0	27
	De-energize to Trip, NC & NO	0	45	0	39
NVR Option Adder	De-energize to Trip, NC & NO	0	45	0	59

¹ FIT = 1 failure / 10⁹ hours

SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFH/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: ASC 21/12-125 R001 V2R6 (or later)

Safety Manual: V9629 Rev JC (or later)

Series 327/8327G
Solenoid Valves



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Sellersville, PA 18960