



Certificate / Certificat Zertifikat / 合格証

ASC 1407023 C001

exida hereby confirms that the:

8317 Quick Exhaust Solenoid Valves

ASCO, L.P.

Florham Park, NJ - USA

Have 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 A, Route 2_H Device

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

Safety Function:

The Valve will exhaust the outlet port within the specified safety time when the solenoid is de-energized.

Application Restrictions:

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

The manufacturer may use the mark:



Revision 1.3 August 9, 2018

Surveillance Audit Due
November 1, 2020



ANSI Accredited Program
ISO/IEC 17065
PRODUCT CERTIFICATION BODY
#1004



Evaluating Assessor

Certifying Assessor

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 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. This device meets *exida* criteria for Route 2_H.

Versions:

Catalog Number	Construction	Category
8317G007, ...G008	NC P2 / NO P3	General Purpose
8317G035, ...G036	NC	General Purpose
8317G023, ...G024	NC - Atmosphere	General Purpose
8317G053, ...G054	NO	General Purpose
8317H307, ...H308	Universal	Low Power 0.55W (LP)
8317G307, ...G308	Universal	Low Power 1.4W (LP)
JPIS8317B307, ...B308	Universal	Intrinsically Safe (IS, JPIS, JSIS, ISVT, ISSC)

IEC 61508 Failure Rates in FIT¹

Device / Configuration	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}
8317, NC, DTT, General Power (<16 Watts)	0	488	0	68
8317, NC, DTT, Low Power (<2 Watts)	0	138	0	68
Adder to Gen. Power for HB Coils ² 16–30 Watts, DTT	0	405	0	0

¹ FIT = 1 failure / 10⁹ hours

² Failure Rate Adders for other Coil Options available from ASCO

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 14/07-023 R001 V1R3 (or later)

Safety Manual: V9629R8 (or later)

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