

The manufacturer
may use the mark:



Certificate / Certificat Zertifikat / 合格証

WES 090939 C001

exida hereby confirms that the:

Falcon 3-Way Solenoid Valve Series

Westlock Controls

Has been assessed per the relevant requirements of:

IEC 61508 : 2000 Parts 1-7

and meets requirements providing a level of integrity to:

Systematic Integrity: SIL 3 Capable

Random Integrity: Type A Element

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

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.

Reports:

WES 09/09-39 R002 V1 R1
Assessment Report

WES 09/09-39 R001 V1 R1
FMEDA Report

Validity:

This assessment is valid for
3 way Falcon *S****0
Solenoid Valves w/o manual
override.

This assessment is valid
until January 1, 2014.

Revision 1.3 July 12, 2013



Evaluating Assessor

Certifying Assessor

WES 090939 C001

Systematic Integrity: SIL 3 Capable**Random Integrity: Type A Element****PFD_{AVG} and Architecture Constraints
must be verified for each application****Falcon 3-Way Solenoid
Valve Series****Westlock Controls****SIL 3 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 without "prior use" justification by end user or diverse technology redundancy in the design.

IEC 61508 Failure Rates in FIT*

Device	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}
3-Way Falcon	0	1843	0	538
3-Way Falcon with automated Partial Valve Stroke Test	504	1339	533	5

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 subsystem must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

* FIT = 1 failure / 10⁹ hours



Form	Version	Date
C61508	2.7-3	Mar 2011