



# Certificate / Certificat Zertifikat / 合格証

STL 1909047 C001

*exida* hereby confirms that the:

## **Axiom AN/ANX Valve Position Indicator/Controller**

**StoneL**

**Fergus Falls, MN - USA**

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 A, Route 2<sub>H</sub> Device**

**PFH/PFD<sub>avg</sub> and Architecture Constraints  
must be verified for each application**

### **Safety Function:**

The solenoid will control the position of the attached actuator/valve by either energizing or de-energizing the solenoid.

### **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 1.1 August 17, 2020

Surveillance Audit Due  
September 1, 2023



ISO/IEC 17065  
PRODUCT CERTIFICATION BODY  
#1004



Evaluating Assessor

Certifying Assessor

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**Systematic Capability: SC 3 (SIL 3 Capable)**

**Random Capability: Type A, Route 2<sub>H</sub> Device**

**PFH/PFD<sub>avg</sub> 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. This device meets *exida* criteria for Route 2<sub>H</sub>.

**IEC 61508 Failure Rates in FIT\***

Application	$\lambda_{SD}$	$\lambda_{SU}$	$\lambda_{DD}$	$\lambda_{DU}$
Single Solenoid, DTT	0	269	0	299
Single Solenoid, ETT	0	107	0	474
Dual Solenoid	0	275	0	546

\* FIT = 1 failure / 10<sup>9</sup> hours

**SIL Verification:**

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFH/PFD<sub>avg</sub> 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:** STL 19/09-047 R002 V1 R2 (or later)

**Safety Manual:** Axiom Safety Manual\_1\_00



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Position  
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