

The manufacturer may use the mark:



Revision 1.1 December 1, 2022 Surveillance Audit Due November 1, 2025



# Certificate / Certificat Zertifikat / **合格証**

### FLO 1810095 C001

exida hereby confirms that the:

## D30 Valve Positioner

### PMV Automation AB Solna, Sweden

Has 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<sub>H</sub> Device

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

#### Safety Function:

The Valve Positioner will move to the designed fail-safe state upon the removal of analog input power 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** 

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## Certificate / Certificat / Zertifikat / 合格証 FLO 1810095 C001

# 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  $2_{\rm H}$ .

#### IEC 61508 Failure Rates in FIT<sup>1</sup>

Application/Device/Configuration	$\lambda_{\text{SD}}$	λ <sub>su</sub>	$\lambda_{DD}$	λ <sub>DU</sub>
Double Acting, Deenergized to Trip	0	215	0	230
Single Acting, Deenergized to Trip	0	224	0	186
Double Acting, Deenergized to Trip with PVST	213	2	176	54
Single Acting, Deenergized to Trip with PVST	222	2	136	50

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

<sup>2</sup> 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 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: FLO 18-10-095 R002 V1R1 PMV D30, D20 Assessment Report (or later)

Safety Manual: D30 safety manual v1 r2 (or later)



80 N Main St Sellersville, PA 18960

PMV D30