

The manufacturer may use the mark:



Revision 1.0 September 26, 2023
Surveillance Audit Due
October 1, 2026



# Certificate / Certificat Zertifikat / 合格証

MII 2005142 C001

exida hereby confirms that the:

Safety Logic Alarm (SLA)

Moore Industries International Inc.

North Hills, CA - USA

Has been assessed per the relevant requirements of:

IEC 61508: 2010 Parts 1-3

and meets requirements providing a level of integrity to:

Systematic Capability: SC 3 (SIL 3 Capable)

**Random Capability: Type B Element** 

SIL 2 @ HFT=0; SIL 3 @ HFT = 1; Route 1<sub>H</sub>
PFH/PFD<sub>avg</sub> and Architecture Constraints
must be verified for each application

## Safety Function:

The Safety Logic Alarm reads a variety of analog and/or discrete inputs and produces one or more Alarm outputs and/or one or more 4-20mA outputs based on user-configured simple math and logic equations.

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

Random Capability: Type B Element

SIL 2 @ HFT=0; SIL 3 @ HFT = 1; Route 1<sub>H</sub>

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.

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

IEC 01500 Fallure Rates III F11"			
λsp	λѕυ	$\lambda_{DD}$	λου
579	491	123	70
548	503	107	86
39	14	0	13
0	14	0	23
35	2	10	3
33	33	216	24
30	11	192	10
30	22	188	22
9	40	0	17
56	72	0	5
0	32	168	19
20	22	0	7
	579 548 39 0 35 33 30 30 9 56	579 491 548 503 39 14 0 14 35 2 33 33 30 11 30 22 9 40 56 72 0 32	579     491     123       548     503     107       39     14     0       0     14     0       35     2     10       33     33     216       30     11     192       30     22     188       9     40     0       56     72     0       0     32     168

<sup>\*</sup> 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<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: MII 20-05-142 R002 V1R0 (or later)

Safety Manual: 226-750-01 SLA Safety Manual

Safety Logic Alarm (SLA)



80 N Main St Sellersville, PA 18960

T-002, V7R2