Certificate / Certificat
Zertifikat / 合格証

MII 1103026 C001

exida hereby confirms that the:

STA Programmable Safety Trip Alarm
(with Relay or Analog Output)

Moore Industries-International, Inc.
North Hills, CA - 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 B Element

SIL 2 @ HFT=0; SIL 3 @ HFT = 1

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

Safety Function:
The STA will act as a logic solver or transmitter and perform a programmable algorithm to drive outputs within the safety accuracy based on a choice of temperature, resistance, current, or voltage input sources.

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

John C Yozallinas
Evaluating Assessor

Certifying Assessor

Certificate / Certificat / Zertifikat / 合格証

MII 1103026 C001

Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type B Element

SIL 2 @ HFT=0; SIL 3 @ HFT = 1

PFH/PFD$_{AVG}$ and Architecture Constraints must be verified for each application

STA Safety Trip Alarm

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*

Configuration Options#	λ_S	λ_{DD}	λ_{DU}	SFF
STA/TPRG/3PRG/U [DIN] Relay Output	703	207	90	91.0%
STA/HLPRG/3PRG/U [DIN] Relay Output	714	208	86	91.4%
STA/TPRG/3PRG/U/-AO [DIN] Analog Output	708	214	92	90.9%
STA/HLPRG/3PRG/U/-AO [DIN] Analog Output	719	215	88	91.4%

* FIT = 1 failure / 10^9 hours

Contact manufacturer for failure rates of different configuration options and input types (RTD, thermocouple, or millivolt).

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 subsystem 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 11-03-026 R001 V3R1 or later

Safety Manual: 225-748-00L (TPRG) or 225-748-01N (HLPRG)

exida®

80 N Main St
Sellersville, PA 18960

T-002, V7R1