Certificate / Certificat
Zertifikat / 合格証

PREI 070902 P0002 C003

exida hereby confirms that the:

9113 Temperature / mA Converter
Product Version 9113-004

PR electronics A/S
Rønde - Denmark

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 2 (SIL 2 Capable)

Random Capability: Type B Route 2_H Device
PFH/PFD_{avg} and Architecture Constraints must be verified for each application

Safety Function:
The 9113 Temperature / mA Converter shall convert various sensor input signals from hazardous areas to a 4..20 mA current output signal.

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

Evaluating Assessor

Certifying Assessor

The manufacturer may use the mark:

Revision 3.0 August 01, 2024
Surveillance Audit Due August 01, 2027

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17065
PRODUCT CERTIFICATION BODY
#1004

Certificate / Certificat / Zertifikat / 合格証

9113 Temperature / mA Converter

Product Version 9113-004

Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type B Route 2_H Device

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

9113 Temperature / mA Converter

Systematic Capability :

The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 2. 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.

9113 Configuration	λ_S	λ_{DD}	λ_{DU}
Temperature / mA Converter	0	404	66

IEC 61508 Failure Rates in FIT*

* FIT = 1 failure / 10^9 hours

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 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: PR 23/12-098 R035 V1R0

Safety Manual: 9113 Safety Manual V8R2

80 N Main St
Sellersville, PA 18960