



Certificate / Certificat Zertifikat / 合格証

PREI 070902 P0002 C03.3

exida hereby confirms that the:

9113 Temperature / mA Converter
Product Version 9113-002

PR electronics A/S
Rønne - Denmark

Has been assessed per the relevant requirements of:

IEC 61508 : 2000 Parts 1-7

and meets requirements providing a level of integrity to:

Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type B Device

**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.

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 2.0 March 2, 2015



ANSI Accredited Program
PRODUCT CERTIFICATION
#1004

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Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type B Device

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

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.

Device	λ_{Safe}	λ_{DD}	λ_{DU}	SF λ_{Total}
9113 Temperature / mA Converter	234	367	61	662

All failure rates are given in FIT (failures / 10⁹ hours)

SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of 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: 0709-02C R012 V1R5

Safety Manual: 9113 Safety Manual V4R0

