



Certificate / Certificat Zertifikat / 合格証

PREI 070902 P0002 C004

exida hereby confirms that the:

Solenoid / Alarm Driver 9203
Product Version 9203-002

PR electronics A/S
Rønede - 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 9203 Solenoid / Alarm Driver shall convert NPN / Contact / PNP signals between hazardous areas and safe areas.

Application Restrictions:

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

The manufacturer may use the mark:



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



J. Koellhaas
Evaluating Assessor

[Signature]
Certifying Assessor

9203 Solenoid / Alarm Driver

Product Version 9203-002

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**

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.

9203 Configuration

	λ_s	λ_{DD}	λ_{DU}
Solenoid / Alarm Driver High Current	214	106	56

IEC 61508 Failure Rates in FIT*

* 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_{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: 9203 Safety Manual V8R3

