



Certificate / Certificat Zertifikat / 合格証

PREI 070902 P0002 C07.1

exida hereby confirms that the:

9107 HART transparent driver
Version 9107-002

PR electronics AS
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: SIL 2 Capable

Random Capability: Type A Device

Safety Function:

The 9107 HART transparent driver isolates 4-20 mA process signals and realizes a ground loop elimination.

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 2.0 March 31, 2016
Surveillance Audit Date
March 19,2018



ANSI Accredited Program
PRODUCT CERTIFICATION
#1004



Evaluating Assessor

Certifying Assessor

PREI 070902 P0002 C07.1

Systematic Capability: SIL 2 Capable

Random Capability: Type A Device

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

**9107 HART
transparent driver**

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:

Summary for the 9107 HART transparent driver

Type A device

IEC 61508 Failure Rates in FIT*

Device	λ_{Safe}	λ_{DD}	λ_{DU}
9107 configuration Single active input and active output	164	127	48

* 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 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 0709-02C Assessment Report 9107 V1R2.pdf

Safety Manual: 9107 Safety Manual V1R0.pdf



64 N Main St
Sellersville, PA 18960