Certificate / Certificat
Zertifikat / 合格証

P+F 1005041 C006

exida hereby confirms that the:

Switch Amplifiers HiC283*

Pepperl + Fuchs SE
Mannheim, Germany

Have been assessed per the relevant requirements of:

IEC 61508 : 2010 Parts 1-2

and meets requirements providing a level of integrity to:

Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type A, Route 1_H Device

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

Safety Function:
The Switch Amplifiers provide power to 1 or 2 Namur sensors in hazardous areas and convert sensors supply current into 1 or 2 digital output signals (passive transistor output) to safe areas. The outputs are configurable as normal or inverted mode. The Switch Amplifiers are suitable for use in applications in low or high demand mode of operation.

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

The manufacturer may use the mark:

Revision 3.0 September 29, 2025
Surveillance Audit Due
October 1, 2028

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

exida Certification

Evaluating Assessor

Certifying Assessor

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Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type A, Route 1_H Device

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

HiC283* Switch Amplifier series

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*

Mode / Device	λ_{Safe}	λ_{DU}	λ_{DD}
HiC283* Inverting mode	106	27	3
HiC283* Non-Inverting mode	106	23	3

*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: P+F 10/05-041-C R022 V2 R3

Safety Manual: Safety Manual Switch Amplifier HiC283*; DOCT-2386F 12/2021

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Sellersville, PA 18960