



The manufacturer
may use the mark:



Revision 2.3 February 4, 2021
Surveillance Audit Due
February 28, 2023



Certificate / Certificat Zertifikat / 合格証

Weidmüller 070902 P0002 C001

exida hereby confirms that the:

Pulse Isolator

ACT20X-(2)HDI-(2)SDO-S/P

ACT20X-(2)HDI-(2)SDO-RNO-S/P

ACT20X-(2)HDI-(2)SDO-RNC-S/P

Device version 2

Weidmüller Interface GmbH CO KG
Detmold, Germany

Have 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 Pulse Isolators provides EX-isolation of digital signals, on/off converter for NAMUR sensors or mechanical switches between hazardous areas and safe areas.

Application restrictions:

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



Evaluating Assessor

Certifying Assessor

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 these products must not be used at a SIL level higher than the statement without "prior use" justification by end user or diverse technology redundancy in the design.

Random Capability:

The SIL limit imposed by the Architectural Constraints must be met for each subsystem.

**Summary for the Pulse Isolators ACT20X-(2)HDI-(2)SDO-S/P,
ACT20X-(2)HDI-(2)SDO-RNO-S/P and ACT20X-(2)HDI-(2)SDO-RNC-S/P**

Type B device				
IEC 61508:2000 Failure rates				
	λ_{Safe}	λ_{DD}	λ_{DU}	$\lambda_{No\ effect}$
Relay output	140	130	47	150
Opto output	119	136	36	157

All failure rates are given in FIT=10⁻⁹/h

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 subsystem must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are mandatory parts of this certificate:

Weidmüller 0709-02-C R003 V2 R2 Assessment Report

Safety manual ACT20X-(2)HDI-(2)SDO-S V0.1

Safety manual ACT20X-(2)HDI-(2)SDO-RNx-S V0.1



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