



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 C005

exida hereby confirms that the:

Universal Converter ACT20X-HUI-SAO-S/P

Device version 2

**Weidmüller Interface GmbH CO KG
Detmold, Germany**

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 related function:

The Universal Converter converts various sensor input signals from hazardous areas to a 4..20 mA current output signal. An additional safety related output relay is available.

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 Universal Converter ACT20X-HUI-SAO-S/P:

Type B device IEC 61508:2000 Failure rates				
	λ_{Safe}	λ_{DD}	λ_{DU}	$\lambda_{No\ effect}$
Resistance / RTD temperature / TC temperature inputs, Current output	0	352	43	278
Resistance / RTD temperature / TC temperature inputs, Relay output	107	230	62	252
Current input, Current output	0	554	42	444
Current input, Relay output	219	320	62	418
Voltage input, Current output	0	479	56	395
Voltage input, Relay output	112	353	76	369

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 R014 V2 R2 Assessment Report

Safety manual ACT20X-HUI-SAO-S V0.2



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