



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEx KEM 09.0072X</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 4	Issue 3 (2019-03-25) Issue 2 (2014-04-03) Issue 1 (2010-01-27) Issue 0 (2009-12-15)
Date of Issue:	2022-10-28		
Applicant:	<b>Weidmuller Interface GmbH</b> Klingenbergsstrasse 16 32758 Detmold Germany		
Equipment:	<b>NAMUR Pulse Isolator, Type ACT20X-.HDI-.SDO-...-S, Type ACT20X-.HDI-.SDO-...-P</b>		
Optional accessory:			
Type of Protection:	<b>Ex i, Ex e, Ex n</b>		
Marking:	Ex ec nC IIC T4 Gc [Ex ia Ga] IIC/IIB/IIA [Ex ia Da] IIIC [Ex ia Ma] I		

Approved for issue on behalf of the IECEx  
Certification Body:

**R. Schuller**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:  
(for printed version)



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Manufacturer: **Weidmuller Interface GmbH**  
Klingenbergrasse 16  
32758 Detmold  
**Germany**

Manufacturing locations: **Weidmuller Interface GmbH**  
Klingenbergrasse 16  
32758 Detmold  
**Germany**

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

**IEC 60079-15:2017** Explosive atmospheres - Part 15: Equipment protection by type of protection "n"  
Edition:5.0

**IEC 60079-7:2017** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

**NL/KEM/ExTR09.0087/04**

Quality Assessment Report:

**NL/DEK/QAR12.0052/08**



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

NAMUR Pulse Isolators, for rail mounting, Type ACT20X-.HDI-.SDO-...-S or Type ACT20X-.HDI-.SDO-...-P are 24 V powered isolating barriers, interfacing "Namur" sensors or contacts located in an explosive atmosphere.

ACT20X-HDI-SDO-...-S or ACT20X-HDI-SDO-...-P are one channel versions.

ACT20X-2HDI-2SDO-...-S or ACT20X-2HDI-2SDO-...-P are two channel versions.

Ambient temperature range -20 °C to +60 °C.

Used models:

Type ACT20X-HDI-SDO-RNO-S,

Type ACT20X-HDI-SDO-RNO-P,

Type ACT20X-HDI-SDO-RNC-S,

Type ACT20X-HDI-SDO-RNC-P,

Type ACT20X-HDI-SDO-S,

Type ACT20X-HDI-SDO-P,

Type ACT20X-2HDI-2SDO-RNO-S,

Type ACT20X-2HDI-2SDO-RNO-P,

Type ACT20X-2HDI-2SDO-RNC-S,

Type ACT20X-2HDI-2SDO-RNC-P,

Type ACT20X-2HDI-2SDO-S,

Type ACT20X-2HDI-2SDO-P

For electrical data, refer to the Annex 1.

## SPECIFIC CONDITIONS OF USE: YES as shown below:

The NAMUR Pulse Isolator shall be installed in a controlled environment with suitable reduced pollution, limited to pollution degree 2 or better.

The non-intrinsically safe circuits may only be connected to an overvoltage category I or II power source, as defined in IEC 60664-1.

If the NAMUR Pulse Isolator is installed in an explosive atmosphere where equipment protection level Gc is required shall be installed in a suitable enclosure, providing a degree of protection of at least IP54 according to IEC 60079-0.



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Assessed per IEC 60079-0 Ed. 7.0, IEC 60079-7 Ed. 5.1, IEC 60079-15 Ed. 5.0

### Annex:

[226311500-3-ExTR09.0087.04-Annex1.pdf](#)

## Description

The NAMUR Pulse Isolators for rail mounting, Type ACT20X-.HDI-.SDO-...-S (screw terminal) and Type ACT20X-.HDI-.SDO-...-P (push terminal), are 24 V powered, isolating barriers, interfacing "Namur" sensors or contacts located in an explosive atmosphere.

ACT20X-HDI-SDO-...-S and ACT20X-HDI-SDO-...-P are one channel versions.  
ACT20X-2HDI-2SDO-...-S and ACT20X-2HDI-2SDO-...-P are two channel versions.

Ambient temperature range -20 °C to +60 °C.

## Electrical data

Supply (terminals 51, 52):  $U = 19.2 \dots 31.2 \text{ Vdc}$

Digital outputs (terminals 41, 42 and 43, 44):

Transistor output,  $U_{\max} = 30 \text{ Vdc}$ ,  $I_{\max} = 80 \text{ mA}$  (Type ACT20X-HDI-SDO-...-S and Type ACT20X-HDI-SDO-...-P)

Relay contacts,  $U_{\max} = 30 \text{ Vdc}$  or  $32 \text{ Vac}$ ,  $I_{\max} = 2 \text{ A}$  (Types ACT20X-.HDI-.SDO-...-S and Types ACT20X-.HDI-.SDO-...-P)

If the Pulse Isolator is installed outside the hazardous area, the following data for the relay contacts apply:  
 $U \leq 30 \text{ Vdc}$  or  $250 \text{ Vac}$ ,  $I \leq 2 \text{ Adc}$  or  $Aac$  respectively.

Status output (terminals 53, 54):

Relay contacts,  $U \leq 32 \text{ Vdc}$  or  $32 \text{ Vac}$ ,  $I \leq 1 \text{ Adc}$  or  $I \leq 0.5 \text{ Aac}$  respectively.

If the Pulse Isolator is installed outside the hazardous area, the following data for the relay contacts apply:  
 $U \leq 110 \text{ Vdc}$  or  $125 \text{ Vac}$ ,  $I \leq 0.3 \text{ Adc}$  or  $I \leq 0.5 \text{ Aac}$  respectively.

For all circuits above:  $U_m = 253 \text{ Vac}$  (max. frequency 400 Hz).

Sensor circuits (terminals 11 ... 14, 21 ... 24):

in type of protection intrinsic safety Ex ia IIC/IIB/IIA/IIIC/I, with following maximum values:

$U_o = 10.6 \text{ V}$ ;  $I_o = 12 \text{ mA}$ ;  $P_o = 32 \text{ mW}$ ;

$C_o = 2.0 \mu\text{F}$  (IIC) or  $6.0 \mu\text{F}$  (IIB) or  $18.0 \mu\text{F}$  (IIA) or  $90 \mu\text{F}$  (I);

$L_o = 260 \text{ mH}$  (IIC) or  $780 \text{ mH}$  (IIB) or  $1000 \text{ mH}$  (IIA) or  $1000 \text{ mH}$  (I);

$L_o/R_o = 1150 \mu\text{H}/\Omega$  (all groups);

For group IIIC, the parameters of group IIB apply.

The intrinsically safe sensor circuits are infallibly galvanically isolated from each other and from the non-intrinsically safe circuits.