



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

Certificate No.: **IECEx KEM 09.0092X**

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Certificate history:

Status: **Current**

Issue No: 3

[Issue 2 \(2019-03-26\)](#)

[Issue 1 \(2014-04-03\)](#)

[Issue 0 \(2010-03-10\)](#)

Date of Issue: 2022-10-29

Applicant: **Weidmuller Interface GmbH**
Klingenbergstrasse 16
Detmold
Germany

Equipment: **Temperature/mA Converter, Type ACT20X-HTI-SAO-S, ACT20X-HTI-SAO-P, ACT20X-2HTI-2SAO-S, and ACT20X-2HTI-2SAO-P**

Optional accessory:

Type of Protection: **Ex i, Ex e, Ex n**

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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DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands





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Manufacturer: **Weidmuller**
Klingenbergstrasse 16
Detmold
Germany

Manufacturing
locations: **Weidmuller**
Klingenbergstrasse 16
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/ExTR10.0015/03](#)

Quality Assessment Report:

[NL/DEK/QAR12.0052/08](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Temperature / mA Converters Type ACT20X-HTI-SAO-S, Type ACT20X-HTI-SAO-P and Type ACT20X-2HTI-2SAO-S and ACT20X-2HTI-2SAO-P), for rail mounting are 24 V powered 1 channel (Type ACT20X-HTI-SAO-S and Type ACT20X-HTI-SAO-P) or 2 channel (Type ACT20X-2HTI-2SAO-S and Type ACT20X-2HTI-2SAO-P) isolating barriers, interfacing temperature sensors or current sources located in a hazardous area.

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

For electrical data, refer to the Annex to this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

The Temperature / mA Converter 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 Temperature / mA Converter is installed in an explosive atmosphere where equipment protection level Gc is required, the Temperature / mA Converter 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:

[226311500-5-ExTR10.0015.03-Annex1.pdf](#)

Description

Temperature / mA Converters, Types ACT20X-HTI-SAO-S, ACT20X-HTI-SAO-P, ACT20X-2HTI-2SAO-S and ACT20X-2HTI-2SAO-P for rail mounting are 24 V powered 1 channel (ACT20X-HTI-SAO-S and ACT20X-HTI-SAO-P) or 2 channel (ACT20X-2HTI-2SAO-S and ACT20X-2HTI-2SAO-P) isolating barriers, interfacing temperature sensors or current sources located in a hazardous area.

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

Electrical data

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

Outputs (terminals 41, 42 and 43, 44): $I = 0 \dots 20 \text{ mA}$ or $4 \dots 20 \text{ mA}$

Status output (terminals 53, 54):

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

If the Temperature / mA Converter is installed outside the hazardous area, the following data for the relay contacts apply: $U \leq 110 \text{ Vdc}$ or 125 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 respectively 21 ... 24):

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

$U_o = 8.7 \text{ V}$; $I_o = 18.4 \text{ mA}$; $P_o = 40 \text{ mW}$; $C_o = 5 \mu\text{F}$ (IIC) or $50 \mu\text{F}$ (IIB) or $1000 \mu\text{F}$ (IIA);

$L_o = 100 \text{ mH}$ (IIC) or 300 mH (IIB) or 700 mH (IIA); $L_o/R_o = 892 \mu\text{H}/\Omega$ (all groups);

$U_i = 10 \text{ V}$; $I_i = 30 \text{ mA}$; $C_i = 30 \text{ nF}$; $L_i = 820 \text{ nH}$.

for group IIIC, the parameters of group IIB apply;

for group I, the parameters of group IIA apply.

Sensor circuits, when combined to one circuit (terminals 11 ... 14 and 21 ... 24):

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

$U_o = 17.4 \text{ V}$; $I_o = 18.4 \text{ mA}$; $P_o = 80 \text{ mW}$; $C_o = 0.3 \mu\text{F}$ (IIC) or $1.6 \mu\text{F}$ (IIB) or $8 \mu\text{F}$ (IIA);

$L_o = 80 \text{ mH}$ (IIC) or 250 mH (IIB) or 600 mH (IIA); $L_o/R_o = 445 \mu\text{H}/\Omega$ (all groups);

$U_i = 10 \text{ V}$; $I_i = 30 \text{ mA}$; $C_i = 15 \text{ nF}$; $L_i = 1.7 \mu\text{H}$.

for group IIIC, the parameters of group IIB apply;

for group I, the parameters of group IIA apply.

The intrinsically safe output circuits are infallibly galvanically isolated from the non-intrinsically safe circuits, and from each other if applicable.