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 09.0071X**

Certificate history:
Issue 2 (2019-03-26)
Issue 1 (2014-04-03)
Issue 0 (2010-03-10)

Status: **Current**

Issue No: 3

Date of Issue: 2022-10-29

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

Equipment: **Solenoid / alarm driver, Type ACT20X-SDI-HDO-L-S, Type ACT20X-SDI-HDO-L-P, Type ACT20X-SDI-HDO-H-S, Type ACT20X-SDI-HDO-H-P, and Type ACT20X-2SDI-2HDO-S, Type ACT20X-2SDI-2HDO-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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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

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

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

Manufacturing locations: **Weidmuller Interface GmbH**
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/ExTR10.0014/03

Quality Assessment Report:

NL/DEK/QAR12.0052/08

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Solenoid / Alarm driver, Type ACT20X-SDI-HDO-L-S, Type ACT20X-SDI-HDO-L-P, Type ACT20X-SDI-HDO-H-S, Type ACT20X-SDI-HDO-H-P and Type ACT20X-2SDI-2HDO-S, Type ACT20X-2SDI-2HDO-P for rail mounting are 24 V powered isolating barriers, converting digital signals from PLC's and other equipment into signals for driving valves, solenoids and light emitting diodes 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 Solenoid / Alarm driver 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 Solenoid / Alarm driver is installed in an explosive atmosphere where the use of equipment protection level Gc is required, the Solenoid / Alarm driver 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:

226311500-4-ExTR10.0014.03-Annex1.pdf

Description

Solenoid / Alarm driver, Type ACT20X-SDI-HDO-L-S, Type ACT20X-SDI-HDO-L-P, Type ACT20X-SDI-HDO-H-S, Type ACT20X-SDI-HDO-H-P and Type ACT20X-2SDI-2HDO-S, Type ACT20X-2SDI-2HDO-P, for rail mounting, are 24 V powered isolating barriers, converting digital signals from PLC's and other equipment into signals for driving valves, solenoids and light emitting diodes located in a hazardous area.

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

Electrical data

Supply (terminals 51, 52): U = 19.2 ... 31.2 Vdc.
Digital input (terminals 41, 42 and 43, 44): U ≤ 60 Vdc

Status Relay (terminals 53, 54):
U ≤ 32 Vdc or 32 Vac, I ≤ 1 Adc or I ≤ 0.5 Aac respectively.

If the Solenoid / Alarm driver is installed outside the hazardous area, the following data for the relay contacts apply: U ≤ 110 Vdc or 125 Vac, I ≤ 0.3 Adc or I ≤ 0.5 Aac respectively.

For all circuits above: Um = 253 Vac (max. frequency 400 Hz).

Solenoid / Alarm driver, Type ACT20X-SDI-HDO-L-S, Type ACT20X-SDI-HDO-L-P and Type ACT20X-2SDI-2HDO-S, Type ACT20X-2SDI-2HDO-P, output circuits (terminals 11 ... 14 and 21 ... 24):
in type of protection intrinsic safety Ex ia IIC/IIB/IIA/IIIC/I, with following maximum values:
Uo = 28 V; Co = 80 nF (IIC) or 640 nF (IIB) or 2.1 µF (IIA) or 3.76 µF (I);

and for terminals 11, 12 and 21, 22:
Io = 93 mA; Po = 0.65 W; Lo = 4.2 mH (IIC) or 16.8 mH (IIB) or 32.6 mH (IIA) or 47 mH (I);
Lo/Ro = 54 µH/Ω (IIC) or 218 µH/Ω (IIB) or 436 µH/Ω (IIA) or 717 µH/Ω (I);

and for terminals 11, 13 and 21, 23:
Io = 100 mA; Po = 0.70 W; Lo = 3.5 mH (IIC) or 14.2 mH (IIB) or 27.6 mH (IIA) or 46 mH (I);
Lo/Ro = 50 µH/Ω (IIC) or 201 µH/Ω (IIB) or 402 µH/Ω (IIA) or 667 µH/Ω (I);

and for terminals 11 ... 14 and 21 ... 24:
Io = 110 mA; Po = 0.77 W; Lo = 2.9 mH (IIC) or 11.8 mH (IIB) or 22.8 mH (IIA) or 38 mH (I);
Lo/Ro = 46 µH/Ω (IIC) or 184 µH/Ω (IIB) or 369 µH/Ω (IIA) or 607 µH/Ω (I).
For group IIIC, the parameters of group IIB apply.

Solenoid / Alarm driver, Type ACT20X-SDI-HDO-H-S, Type ACT20X-SDI-HDO-H-P, output circuits (terminals 11 ... 14):
in type of protection intrinsic safety Ex ia IIC/IIB/IIA/IIIC/I, with following maximum values:
Uo = 28 V; Co = 80 nF (IIC) or 640 nF (IIB) or 2.1 µF (IIA) or 3.76 µF (I);

and for terminals 11, 12:
Io = 115 mA; Po = 0.81 W; (group IIC IIC/IIB/IIA/IIIC/I);
Lo = 2.69 mH (IIC) or 10.8 mH (IIB) or 20.8 mH (IIA) or 33 mH (I);
Lo/Ro = 44 µH/Ω (IIC) or 176 µH/Ω (IIB) or 353 µH/Ω (IIA) or 578 µH/Ω (I);

and for terminals 11, 13:
Io = 125 mA; Po = 0.88 W; (group IIB/IIA/IIIC/I);
Lo = 9.1 mH (IIB) or 17.6 mH (IIA) or 28 mH (I);
Lo/Ro = 163 µH/Ω (IIB) or 327 µH/Ω (IIA) or 533 µH/Ω (I);

and for terminals 11 ... 14:
Io = 135 mA; Po = 0.95 W; (group IIB IIA/IIIC/I);
Lo = 7.80 mH (IIB) or 15.1 mH (IIA) or 24 mH (I);
Lo/Ro = 150 µH/Ω (IIB) or 301 µH/Ω (IIA) or 493 µH/Ω (I);

For group IIIC, the parameters of group IIB apply.
The intrinsically safe output circuits are infallibly galvanically isolated from the non-intrinsically safe circuits, and from each other if applicable.