

# CERTIFICATE

## (1) EU-Type Examination

(2) **Equipment or protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **KEMA 10ATEX0019 X** Issue Number: **4**

(4) Product: **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  
Type ACT20X-2SDI-2HDO-S, Type ACT20X-2SDI-2HDO-P**

(5) Manufacturer: **Weidmüller Interface GmbH**

(6) Address: **Klingenbergstraße 16, 32758 Detmold, Germany**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) DEKRA Certification B.V., Notified Body number 0344 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential test report number NL/KEM/ExTR10.0014/03.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN IEC 60079-0 : 2018**

**EN IEC 60079-15 : 2019**

**EN 60079-11 : 2012**

**EN 60079-7 : 2015 + A1 : 2018**

except in respect of those requirements listed at item 18 of the Schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:



**II (1) G [Ex ia Ga] IIC/IIB/IIA**

**II (1) D [Ex ia Da] IIIC**

**I (M1) [Ex ia Ma] I**

Date of certification: 29 October 2022

DEKRA Certification B.V.

R. Schuller  
Certification Manager



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(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate KEMA 10ATEX0019 X**

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(15) **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):  $U = 19,2 \dots 31,2 \text{ Vdc}$ .

Digital input (terminals 41, 42 and 43, 44):  $U \leq 60 \text{ Vdc}$

Status Relay (terminals 53, 54):

$U \leq 32 \text{ Vdc}$  or  $32 \text{ Vac}$ ,  $I \leq 1 \text{ Adc}$  or  $I \leq 0,5 \text{ Aac}$  respectively.

If the Solenoid / Alarm driver 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).

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:

$U_o = 28 \text{ V}$ ;  $C_o = 80 \text{ nF}$  (IIC) or  $640 \text{ nF}$  (IIB) or  $2,1 \text{ }\mu\text{F}$  (IIA) or  $3,76 \text{ }\mu\text{F}$  (I);

and for terminals 11, 12 and 21, 22:

$I_o = 93 \text{ mA}$ ;  $P_o = 0,65 \text{ W}$ ;  $L_o = 4,2 \text{ mH}$  (IIC) or  $16,8 \text{ mH}$  (IIB) or  $32,6 \text{ mH}$  (IIA) or  $47 \text{ mH}$  (I);

$L_o/R_o = 54 \text{ }\mu\text{H}/\Omega$  (IIC) or  $218 \text{ }\mu\text{H}/\Omega$  (IIB) or  $436 \text{ }\mu\text{H}/\Omega$  (IIA) or  $717 \text{ }\mu\text{H}/\Omega$  (I);

and for terminals 11, 13 and 21, 23:

$I_o = 100 \text{ mA}$ ;  $P_o = 0,70 \text{ W}$ ;  $L_o = 3,5 \text{ mH}$  (IIC) or  $14,2 \text{ mH}$  (IIB) or  $27,6 \text{ mH}$  (IIA) or  $46 \text{ mH}$  (I);

$L_o/R_o = 50 \text{ }\mu\text{H}/\Omega$  (IIC) or  $201 \text{ }\mu\text{H}/\Omega$  (IIB) or  $402 \text{ }\mu\text{H}/\Omega$  (IIA) or  $667 \text{ }\mu\text{H}/\Omega$  (I);

and for terminals 11 ... 14 and 21 ... 24:

$I_o = 110 \text{ mA}$ ;  $P_o = 0,77 \text{ W}$ ;  $L_o = 2,9 \text{ mH}$  (IIC) or  $11,8 \text{ mH}$  (IIB) or  $22,8 \text{ mH}$  (IIA) or  $38 \text{ mH}$  (I);

$L_o/R_o = 46 \text{ }\mu\text{H}/\Omega$  (IIC) or  $184 \text{ }\mu\text{H}/\Omega$  (IIB) or  $369 \text{ }\mu\text{H}/\Omega$  (IIA) or  $607 \text{ }\mu\text{H}/\Omega$  (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:

$U_o = 28 \text{ V}$ ;  $C_o = 80 \text{ nF}$  (IIC) or  $640 \text{ nF}$  (IIB) or  $2,1 \text{ }\mu\text{F}$  (IIA) or  $3,76 \text{ }\mu\text{F}$  (I);

and for terminals 11, 12:

$I_o = 115 \text{ mA}$ ;  $P_o = 0,81 \text{ W}$ ; (group IIC/IIB/IIA/IIIC/I);

$L_o = 2,69 \text{ mH}$  (IIC) or  $10,8 \text{ mH}$  (IIB) or  $20,8 \text{ mH}$  (IIA) or  $33 \text{ mH}$  (I);

$L_o/R_o = 44 \text{ }\mu\text{H}/\Omega$  (IIC) or  $176 \text{ }\mu\text{H}/\Omega$  (IIB) or  $353 \text{ }\mu\text{H}/\Omega$  (IIA) or  $578 \text{ }\mu\text{H}/\Omega$  (I);

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and for terminals 11, 13:

$I_o = 125 \text{ mA}$ ;  $P_o = 0,88 \text{ W}$ ; (group IIB/IIA/IIIC/I);  
 $L_o = 9,1 \text{ mH}$  (IIB) or  $17,6 \text{ mH}$  (IIA) or  $28 \text{ mH}$  (I);  
 $L_o/R_o = 163 \text{ } \mu\text{H}/\Omega$  (IIB) or  $327 \text{ } \mu\text{H}/\Omega$  (IIA) or  $533 \text{ } \mu\text{H}/\Omega$  (I);

and for terminals 11 ... 14:

$I_o = 135 \text{ mA}$ ;  $P_o = 0,95 \text{ W}$ ; (group IIB/IIA/IIIC/I);  
 $L_o = 7,80 \text{ mH}$  (IIB) or  $15,1 \text{ mH}$  (IIA) or  $24 \text{ mH}$  (I);  
 $L_o/R_o = 150 \text{ } \mu\text{H}/\Omega$  (IIB) or  $301 \text{ } \mu\text{H}/\Omega$  (IIA) or  $493 \text{ } \mu\text{H}/\Omega$  (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.

**Marking**

The equipment marking may additionally include the code II 3 G Ex ec nC IIC T4 Gc.

**Installation instructions**

The instructions provided with the product shall be followed in detail to assure safe operation.

(16) **Report Number**

No. NL/KEM/ExTR10.0014/03.

(17) **Specific conditions of use**

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 EN 60664-1.

If the Solenoid / Alarm driver is installed in an explosive atmosphere where equipment protection level Gc is required, it shall be installed in an enclosure in type of protection Ex e, providing a degree of protection of at least IP54 according to EN 60079-0. Cable entry devices and blanking elements shall fulfil the same requirement.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. NL/KEM/ExTR10.0014/03.

(20) **Certificate history**

Issue 1 -	213256700	Initial certificate
Issue 2 -	216740400	Update to latest standards
Issue 3 -	223250800	Addition of *-P models and removal of EN 60079-26
Issue 4 -	226311500	Assessment per latest standard editions