

Translation

(1) **EU-Type Examination Certificate**

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



(3) **Certificate Number** TÜV 15 ATEX 153600 X **issue:** 00

(4) for the product: Analog Signal Isolator type IMX(K)12-AO01-*I-*I-H**/24VDC/**


(5) of the manufacturer: Hans Turck GmbH & Co. KG

(6) Address: Witzlebenstraße 7
45472 Mülheim an der Ruhr
Germany

Order number: 8003006122

Date of issue: 2019-07-09

- (7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 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 the confidential ATEX Assessment Report No. 19 203 245395.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013 EN 60079-11:2012 EN 60079-7:2015
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 for 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 equipment. These are not covered by this certificate.
- (12) The marking of the product shall include the following:

 II (1) G [Ex ia Ga] IIC, II (1) D [Ex ia Da] IIIC
II 3 (1) G Ex ec [ja Ga] IIC T4 Gc, II 3 G (1) D Ex ec [ja IIIC Da] IIC T4 Gc

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the notified body



Roder

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(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 15 ATEX 153600 X issue 00**

(15) Description of product

The Analog Signal Isolator type IMX(K)12-AO01-^{*}I-^{*}I-H^{**}/24VDC/^{**} is used for the galvanically separated supply of apparatus in the explosion hazardous area as well as for the safe galvanic separation between the non intrinsically safe measuring circuits and the intrinsically safe output circuits.

The device is executed with 1 or 2 channels.

The permissible ambient temperature range is -25°C ... 70°C.

Electrical data

Supply circuit U = 10 ... 30 V d. c., ca. 2W
 (X11-contacts 15[+], 16[-]
 or X30-contacts 4[+], 5[-]
 "K" version:
 X11-contacts 7[+], 8[-])
 $U_m = 253 \text{ V a. c. / d. c.}$

Input circuits U = 24 V (max.30 V) d. c., 4-20 mA
 (X14-contacts 9[+], 10[-]
 X13-contacts 11[+], 12[-]
 "K" version:
 X12-contacts 5[+], 6[-])
 $U_m = 253 \text{ V a. c. / d. c.}$

Failure signal output U = 30 V d. c., 100 mA; potential free contact
 (X30-contacts 1, 2)
 $U_m = 253 \text{ V a. c. / d. c.}$

Output circuits in type of protection
 (X24-contacts 7[+], 8[-]
 X23-contacts 5[+], 6[-]
 "K" version:
 X22-contacts 3[+], 4[-])
 Intrinsic Safety Ex ia IIC/IIB resp. Ex ia IIIC
 Maximum values per channel:
 $U_o = 21.8 \text{ V}$
 $I_o = 53.2 \text{ mA}$
 $R_i = 134.6 \text{ } \Omega$
 $P_o = 671 \text{ mW}$
 Characteristic line: angular
 The effective internal capacitance and inductance is negligibly small.

Ex ia	IIC			IIB		
max. permissible external inductance	1.5 mH	0.5 mH	0.1 mH	20 mH	10 mH	0.5 mH
max. permissible external capacitance	0.069 μF	0.095 μF	0.169 μF	0.54 μF	0.6 μF	0.66 μF

The maximum values of the table are also allowed to be used up to the permissible limits as concentrated capacitances and as concentrated inductances.

The values for IIB and for IIC are also permissible for explosive dust atmospheres.

The intrinsically safe output circuits are safely galvanically separated from the non intrinsically safe circuits up to the peak value of the voltage of 375 V.

Schedule to EU-Type Examination Certificate No. TÜV 15 ATEX 153600 X issue 00

(16) Drawings and documents are listed in the ATEX Assessment Report No. 19 203 245395

(17) Specific Conditions for Use (only for zone 2 applications)

1. According to EN/IEC 60079-7:2015, section 4.10.1, the following is valid for this apparatus:

The apparatus has to be mounted in a housing tested according to IEC 60079-0, that meets the requirements of degree of protection IP54.

The apparatus may be installed in an area of not more than pollution degree 2.

2. The connecting and disconnecting of energized non intrinsically safe circuits and the operation of the switches for parametrizing is only permitted, if no explosion hazardous atmosphere is available.

(18) Essential Health and Safety Requirements

no additional ones

- End of Certificate -