1 **UNITED KINGDOM CONFORMITY ASSESSMENT**

UK TYPE EXAMINATION CERTIFICATE

2 **Product or Protective System Intended for use in Potentially Explosive Atmospheres**

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3	Type Examination Certificate No.:	**TÜV 22 UKEX 7101 X**	Issue: **00**
4	Product:	**Analog Signal Isolator type IMX(K)12-AO01-*I-*I-H**/24VDC/****	
5	Manufacturer:	**Hans Turck GmbH & Co KG**	
6	Address:	**Witzlebenstraße 7 45472 Mülheim an der Ruhr, Germany**	

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

8 TUV Rheinland UK Ltd, Approved Body number 2571, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), 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 Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential report 557 / UKEx 7101.00 / 22.

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

EN IEC 60079-0:2018	**EN IEC 60079-7:2015 / A1:2018**	**EN 60079-11:2012**

Except in respect of those requirements listed at section 18 of the schedule to this certificate.

10 If the sign “X” is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall include the following:

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

This certificate and its schedules may only be reproduced in its entirety and without change.

TUV Rheinland UK Ltd

Solihull, 2022-09-13

Dipl.-Ing. Klauspeter Graffi

This Type Examination Certificate without signature shall not be valid. Alterations are subject to approval by TUV Rheinland UK Ltd, 1011 Stratford Road, Shirley, Solihull, B90 4BN, Tel. +44 (0) 121 7969400
A UKAS accredited certification body, No. 8400

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13 SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE

14 CERTIFICATE NUMBER TÜV 22 UKEX 7101 X

15 Description of Product

The Analog Signal Isolator type IMX(K)12-AO01-*I-*I-H**/24VDC/**.

General product information

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 up to + 70 °C.

Details of change:

Instructions and data sheets in English language has been add.

A new marking label according to UKCA has been add.

Technical Data

Supply circuit (X11-contacts 15[+], 16[-] Or X30-contacts 4[+], 5[-] “K” version: X11-contacts 7[+], 8[-])	U = 10 … 30V d. c., 2W U_m = 253V a. c. / d. c.
Input circuits (X14-contacts 9[+], 10[-] X13-contacts 11[+], 12[-] “K” version: X12-contacts 5[+], 6[-])	U = 24V (max. 30V) d. c., 4-20mA U_m = 253V a. c. / d. c.
Failure signal output (X30-contacts 1, 2)	U = 30V d. c., 100mA; potential free contact U_m = 253V a. c. / d. c.
Output circuits (X24-contacts 7[+], 8[-] X23-contacts 5[+], 6[-]	In type of protection Intrinsic Safety Ex ia IIC/IIB resp. Ex ia IIIC

"K" version:	Maximum values per channel:		
X22-contacts 3[+], 4[-])	U_o =	21,8	V
	Io =	53.2	mA
	R_i =	134.6	Ω
	Po =	671	mW

Characteristic line: angular

The effective internal capacitance and inductance is negligibly small.

Ex ia	IIC			IIB		
Max. permissible external inductace [mH]	1.5	0.5	0.1	20	10	0.5
Max. permissible external capacitance [µF]	0.069	0.095	0.169	0.54	0.6	0.66

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 ate 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 375V.

List of used equipment and components

Device	**Manufacturer**	**Type**	**Ex-Marking**	**Certificate no.**
The Analog Signal Isolator	Hans Turck GmbH & Co KG	IMX(K)12-AO01--*I-*I-H**/24VDC/**	Ex ec [ia Ga] IIC T4 Gc Ex ec [ia Da] IIC T4 Gc [Ex ia Ga] IIC [Ex ia Da] IIIC	Issue 1 of IECEx TUN 15.0011X

16 Test report No. (associated with this certificate issue): 557 / UKEx 7101.00 / 22

17 Specific Conditions of Use

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

1) According to EN 60079-7:2015, 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 (Regulations Schedule 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

19 Drawings and Documents

Reg. no.	Document title:	Document no.:	Rev.:	Date:
1.	Approval documentation IMX(K)12-AO (190 p.)	Approval documentation IMX(K)12-AO signed.pdf	01	30.06.2022