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 7102 X**	Issue: **00**
4	Product:	**Solenoid driver type IMX(K)12-DO**-**-**-**/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 7102.00 / 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

13 SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE

14 CERTIFICATE NUMBER TÜV 22 UKEX 7102 X

15 Description of Product

The solenoid driver type type IMX(K)12-DO**-**-**-**/24VDC/**

General product information

The solenoid driver type IMX(K)12-DO**-**-**-**/24VDC/** is used for the supply of intrinsic safe passive two poles (e. g. solenoid valves, illuminated circuit diagrams, light emitting diodes, two wire transmitters) as well as for the safe galvanic separation of the intrinsically safe circuits and the non-intrinsically safe circuits.

The device is executed with 1 or 2 channels.

The device in the version “K” is executed with 1 channel.

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., ≤ 3.5W U_m = 253V a. c. / d. c.
Input circuits (X14-contacts 9[+], 10[-] X13-contacts 11[+], 12[-] “K” version: X12-contacts 5[+], 6[-])	0-signal: U = 0…5V d. c. 1-signal: U = 10…30V d.c. 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[-]

"K" version:

X22-contacts 3[+], 4[-])

In type of protection

Intrinsic Safety Ex ia IIC/IIB resp. Ex ia IIIC

Maximum values per channel:

U_o = 27,3 V

I_o = 68.4 mA

U_e = 26.2 V

I_e = 15.1 mA

P_o = 576 mW

Characteristic line: angular

The effective internal capacitance and inductance is negligibly small.

Ex ia	IIC			IIB		
Max. permissible external inductace [mH]	0.94	0.4	0.2	10	2	0.5
Max. permissible external capacitance [µF]	0.057	0.078	0.088	0.26	0.31	0.45

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 solenoid driver	Hans Turck GmbH & Co KG	IMX(K)12-DO**-**-**-**/24VDC/**	Ex ec [ia Ga] IIC T4 Gc Ex ec [ia Da] IIC T4 Gc [Ex ia Ga] IIC [Ex ia Da] IIIC	Issue 2 of IECEx TUN 15.0017X

16 Test report No. (associated with this certificate issue): 557 / UKEx 7102.00 / 22

17 Specific Conditions of Use

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

1) According to EN 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 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-DO (221 p.)	Approval documentation IMX(K)12-DO_TÜV22UKEX7102X signed.pdf	01	30.06.2022