

Translation

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



- (2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 94/9/EC**
- (3) **Certificate Number** TÜV 11 ATEX 078981
- (4) for the equipment: Evaluation device for flow sensors type FMX-IM-*U***X
- (5) of the manufacturer: Hans Turck GmbH & Co. KG
- (6) Address: Witzlebenstraße 7
45472 Mülheim (Ruhr)
Germany
- Order number: 8000391067
- Date of issue: 2011-05-06

- (7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH, notified body No. 0044 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive. The examination and test results are recorded in the confidential report No. 11 203 078981.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2009 EN 60079-11:2007 EN 61 241-11:2006
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EC-type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. 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 equipment or protective system must include the following:

II (1) G [Ex ia Ga] IIC resp. II (1) D [Ex ia Da] IIIC

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited 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 certification body

Schwedt

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(13) **SCHEDULE**

(14) **EC-Type Examination Certificate No. TÜV 11 ATEX 078981**

(15) Description of equipment

The evaluation device for flow sensors type FMX-IM-*U***X is used for the evaluation of calorimetric flow sensors as well as for the safe galvanic separation between intrinsically safe measuring signals and non intrinsically safe output signals.

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

Electrical Data

Supply circuit FMX-IM-3UR38X:
(Terminals 19[+], 20 [-]) $U_n = 20 \dots 250$ V a. c. and $20 \dots 125$ V d. c. ca. 4 W
FMX-IM-3UP63X, FMX-IM-2UPLI63X:
 $U_n = 20 \dots 30$ V d. c. ca. 4.5 W
 $U_m = 250$ V a. c. resp. 125 V d. c.

Output circuits

FMX-IM-3UP63X
(Terminals 12, 13, 14, 20) 3 PNP output circuits; $I \leq 100$ mA; $U_m = 250$ V

FMX-IM-2UPLI63X
(Terminals 13, 14, 20) 2 PNP output circuits; $I \leq 100$ mA; $U_m = 250$ V
(Terminals 11[+], 16[-]) 1 current output circuit;
0/4 ... 20 mA, $R_L \leq 600 \Omega$; $U_m = 250$ V

FMX-IM-3UR38X
(Terminals 12, 13; 14, 15; 17, 18) 3 relay output circuits;
 $U = 250$ V a. c. resp. 24 V d. c.; $I \leq 2$ A

Configuration interface RS 232C..... $U_n = 3.3$ V; $U_m = 250$ V
(Front-side programming jack)

Input circuit in type of protection Intrinsic Safety
(Terminals 1 ... 4) Ex ia IIC/IIB/IIA resp. Ex ia IIIC

Maximum values:
 $U_o = 13.2$ V
 $I_o = 161$ mA
 $R_i = 105.2 \Omega$
 $P_o = 0.689$ W
Characteristic line: angular
Effective internal capacitance: 22 nF
Effective internal inductance: 340 μ H

	Ex ia	IIC	IIB	IIA
max. permissible external inductance		1.06 mH	6.16 mH	9.56 mH
max. permissible external capacitance		0.318 μ F	1.178 μ F	1.478 μ F

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The values for IIB and for IIC are also permissible for explosive dust atmospheres.
 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 intrinsically safe circuit is safely galvanically separated from the non intrinsically safe circuits up to the peak value of the voltage of 375 V.

(16) The test documents are listed in the test report No. 11 203 078981.

(17) Special conditions for safe use
 none

18) Essential Health and Safety Requirements
 no additional ones

Konformitätserklärung Nr. 4064 M Declaration of Conformity

Diese Konformitätserklärung entspricht der Europäischen Norm EN ISO/IEC 17050-1:2010 "Allgemeine Kriterien für Konformitätserklärungen von Anbietern".

This "Declaration of Conformity" complies with the European Standard EN ISO/IEC 17050-1:2010 "General criteria for a supplier's declaration of conformity".

Wir/ We **HANS TURCK GMBH & CO KG**
WITZLEBENSTR. 7, D – 45472 MÜLHEIM A.D. RUHR

erklären in alleiniger Verantwortung, dass die Produkte
 declare under our sole responsibility that the products

Auswertegeräte Typen FMX-IM-3UP63X, FMX-IM-2UPLI63X,
 FMX-IM-3UR38X *)

auf die sich die Erklärung bezieht, mit den folgenden Normen übereinstimmen
 to which this declaration relates are in conformity with the following standards

EN 61326-1:2006
 EN 61010-1:2001 *)

und wo anwendbar
 and where applicable

EN 60079-0:2009 EN 60079-11:2007 EN 61241-11:2006

Gemäß den Bestimmungen der Richtlinie (falls zutreffend)
 Following the provisions of Directive (if applicable)

EMV – Richtlinie	/ EMC Directive	2004 / 108 / EG	15. Dez.2004
Richtlinie ATEX 100a	/ Directive ATEX 100a	94 / 9 / EG	23. März 1994
Niederspgs. Richtlinie *)	/ Low Voltage Directive *)	2006 / 95 / EG	12. Dez. 2006

Weitere Normen, Bemerkungen
 additional standards, remarks


*) Anzuwenden bei Versorgungsspannungen >50 V AC bzw. >75 V DC.

*) To be used for supply voltage >50 V a. c. resp. >75 V d. c.

Aussteller der EG- Baumusterprüfbescheinigung:

TÜV NORD CERT GmbH
 Langemarckstraße 20, 45141 Essen

Kenn-Nr. 0044, Registriernummer: TÜV 11 ATEX 078981

Kennzeichnung  II (1) G
 II (1) D

Mülheim, den 24.05.2011



(i.V. W. Stoll)

Ort und Datum der Ausstellung /
 Place and date of issue

Name und Unterschrift des Befugten /
 Name and signature of authorized person