

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 18 ATEX 230812 X **issue:** 00

(4) for the product: Transmitter Supply type IM33-***Ex-***/24VDC

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

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

Order number: 8000489202

Date of issue: 2018-11-20

(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. 18 203 230812.

(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 [ia Ga] 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

Hanover office, Am TÜV 1, 30519 Hannover, Tel. +49 511 998-61455, Fax +49 511 998-61590

This certificate may only be reproduced without any change, schedule included.
Excerpts or changes shall be allowed by the TÜV NORD CERT GmbH

(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 18 ATEX 230812 X issue 00**

(15) Description of product

The Transmitter Supply type IM33-***Ex-***/24VDC is an associated electrical apparatus for installation outside of the explosion hazardous area (according IEC 60079-11) resp. an apparatus for use in Zone 2 explosion hazardous areas (according IEC 60079-7).

The Transmitter Supply type IM33-***Ex-***/24VDC is used as power supply for intrinsically safe 2 wire (and optional 3 wire) transmitters operated in explosive gas atmospheres and also for the galvanically separated transmission of standardised analogue signals into areas with non-explosive atmospheres. The device is executed with 1 or 2 channels.

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

Electrical data

Supply circuits (Terminals 11 and 12) $U \leq 35 \text{ V d.c.}, P \leq 3.2 \text{ W}$
 $U_m = 253 \text{ V a.c. resp. } 125 \text{ V d.c.}$

Output circuits (Terminals 7, 10 and 8, 9 resp. 7, 10 with one channel) $U \leq 15 \text{ V d.c.}, I \leq 25 \text{ mA}$
 $U_m = 253 \text{ V a.c. resp. } 125 \text{ V d.c.}$

Control circuits in type of protection Intrinsic Safety Ex ia IIC/IIB resp. Ex ia IIC

(Terminals 1, 2, 3 and 4, 5, 6 resp. 1, 2, 3 with one channel) The maximum values have to be taken from the following table:

Version xxx	11, 12, 22 221 221...K39 221...K40	222 222...K39	223
U_o	21.9 V	19.8 V	19.8 V
I_o	95 mA	75 mA	90 mA
R	331 Ω	419 Ω	316 Ω
Characteristic line: trapezoidal			
C_o	Ex ia IIC	57 nF	70 nF
L_o	Ex ia IIC	2.8 mH	1.7 mH
C_o	Ex ia IIB	370 nF	350 nF
L_o	Ex ia IIB	11 mH	21 mH

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 of the table for IIB and for IIC are also permissible for explosive dust atmospheres.

Schedule to EU-Type Examination Certificate No. TÜV 18 ATEX 230812 X issue 00

The connection of the control circuits to certified intrinsically safe circuits with the following maximum values is possible:

(Terminals 2, 3	$U_i = 40 \text{ V d.c.}$ (device with one channel) resp.
resp. 5, 6)	$U_i = 30 \text{ V d.c.}$ (device with 2 channels)
	$P_i = 650 \text{ mW}$

The rules for the interconnection of intrinsically safe circuits have to be observed.

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

The intrinsically safe control circuits are safely galvanically separated up to a sum of the voltages of 60 V.

(16) Drawings and documents are listed in the ATEX Assessment Report No. 18 203 230812

(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 EN/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

no additional ones

- End of Certificate -