



## 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:** 01  
(4) for the product: Isolating Switch Amplifier 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: 8003032516  
Date of issue: See date of signature

(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. 21 203 296791.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN IEC 60079-0:2018/AC:2020-02 EN IEC 60079-7:2015/A1:2018 EN 60079-11:2012**  
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 or  
II (1) D [Ex ia Da] IIIC or  
II 3 (1) G Ex ec [ia Ga] IIC T4 Gc**

TÜV NORD CERT GmbH, Am TÜV 1, 45307 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 deputy head of the notified body

 Digital unterschrieben  
von Drews Anke  
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(13) **SCHEDULE**

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

**Issue 01**

(15) **Description of product:**

The Isolating Switch Amplifier 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 non-explosive atmospheres.

The device is executed with 1 or 2 channels.

**Type code:**

IM33-\*\*\*Ex-\*\*\*/24VDC

**Electrical data:**

Supply circuits  
(Terminals 11/12)

For connection to non-intrinsically safe circuits with the following maximum values:

$U \leq 35 \text{ V d.c.}; P \leq 3.2 \text{ W}$

$U_m = 253 \text{ V a.c. resp. } 125 \text{ V d.c.}$

Output circuits  
(Terminals 7/10 and 8/9 resp. 7/10 with one channel)

For connection to non-intrinsically safe circuits with the following maximum values:

$U \leq 15 \text{ V d.c.}; I \leq 25 \text{ mA}$

$U_m = 253 \text{ V a.c. resp. } 125 \text{ V d.c.}$

Control circuits  
(Terminals 1/2/3 and 4/5/6 resp. 1/2/3 with one channel)

In type of protection intrinsic safety Ex ia IIC/IIIC with following maximum values per circuit:

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 $\Omega$	419 $\Omega$	316 $\Omega$
Characteristic line:		trapezoidal	
$C_o$	Ex ia IIC	57 nF	64 nF
$L_o$	Ex ia IIC	2.8 mH	1.7 mH
$C_o$	Ex ia IIIC	370 nF	350 nF
$L_o$	Ex ia IIIC	11 mH	21 mH

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

(Terminals 2/3 resp. 5/6)

$U_i = 40 \text{ V}$  (device with one channel)

$U_i = 30 \text{ V}$  (device with 2 channels)

$P_i = 650 \text{ mW}$

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.

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

**Thermal data:**

Permissible ambient temperature range during operation:  $-25\text{ °C} \leq T_a \leq +70\text{ °C}$

(16) Drawings and documents are listed in the ATEX Assessment Report No. 21 203 296791

(17) **Specific Conditions for Use:**

1. For EPL Gc applications the Isolating Switch Amplifier type IM33-\*\*\*Ex-\*\*\*/24VDC has to be installed in a suitable enclosure according to EN 60079-7 in such a way that a degree of protection of at least IP54 according to IEC 60529 is achieved.
2. For EPL Gc applications the Isolating Switch Amplifier type IM33-\*\*\*Ex-\*\*\*/24VDC has to be erected in such a way that a pollution degree 2 or less, according to EN 60664-1, is achieved.
3. For EPL Gc applications, the connection and disconnection of the terminals of non-intrinsically safe circuits is only permitted if no explosive atmosphere is present.

(18) **Essential Health and Safety Requirements:**

No additional ones.

- End of EU-Type Examination Certificate -