

Translation

TÜV NORD



(1) **Statement of Conformity**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 94/9/EC**

(3) **Statement of Conformity Number: TÜV 06 ATEX 2967 X**

(4) for the equipment: Transmitter supply type IM33-***Ex-Hi

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

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

Order number: 8000552105-1

Date of issue: 2006-08-08

(7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this statement of conformity and the documents therein referred to.

(8) The TÜV NORD CERT GmbH 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. 06 YEX 552105-1.


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

EN 60 079-15:2005

(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 statement of conformity 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 3 G Ex nA [nL] IIC/IIB T4**

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) **Statement of Conformity No. TÜV 06 ATEX 2967 X**

(15) Description of equipment

The transmitter supply type IM33-***Ex-Hi is used for the supply of passive two-pole or multipolar apparatus (e. g. two wire transmitters).

The device is executed with 1 or 2 channels.

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

Electrical Data

Supply circuit U = 20...250 V a. c. resp. 20...125 V d. c., P ca. 5 W
 (Connections 19, 20)

IM33-1Ex-Hi**

Supply and measuring circuits
 (Connections 1, 2, 3 resp. 6, 7, 8)

energy limited circuit Ex nL IIC/IIB

Maximum values per circuit:

$U_o = 21.3 \text{ V}$

$I_o = 92 \text{ mA}$

$P_o = 722 \text{ mW}$

$R = 341.2 \Omega$

Characteristic line: trapezoidal

effective internal capacitance: see below

effective internal inductance: 30 μH

Ex nL	IIC	IIB
max. permissible external inductance	3.6 mH	5 mH
max. permissible external capacitance	0.147 μF	1.1 μF

IM33-Ex-Hi**

Supply and measuring circuits
 (Connections 1, 2, 3 resp. 6, 7, 8)

energy limited circuit Ex nL IIC/IIB

Maximum values per circuit:

$U_o = 21.3 \text{ V}$

$I_o = 86 \text{ mA}$

$P_o = 675 \text{ mW}$

$R = 365 \Omega$

Characteristic line: trapezoidal

effective internal capacitance: see below

effective internal inductance: 30 μH

Ex nL	IIC	IIB
max. permissible external inductance	4.5 mH	10 mH
max. permissible external capacitance	0.157 μF	0.89 μF

Schedule Statement of Conformity No. TÜV 06 ATEX 2967 X

The maximum values of the tables are also allowed to be used up to the permissible limits as concentrated capacitances and as concentrated inductances.

The connection to energy limited circuits with the following maximum values at the connections 2, 3 resp. 7, 8 is permissible:

$$P_i = 650 \text{ mW}$$
$$U_i = 40 \text{ V}$$

The rules for the interconnection of energy limited circuits have to be observed; the voltage of internal capacitances (80nF) is limited safely to 3.8V.

Output circuits
(Connections 11[+], 12[-],
16[+], 17[-])

Electrical data per circuit:
 $U \leq 30 \text{ V}, 30 \text{ mA}$

The energy limited supply and measuring circuits are safely galvanically separated from the non energy limited circuits up to the peak crest value of the voltage of 375 V.

IM33-2**Ex-Hi: The energy limited supply and measuring circuit of channel 1 is safely galvanically separated from the energy limited supply and measuring circuit of channel 2.

(16) Test documents are listed in the test report No. 06 YEX 552105-1.

(17) Special conditions for safe use

1. The transmitter supply type IM33-***Ex-Hi has to be installed in such a way, that a degree of protection of at least IP 54 according to EN 60529 is reached.

2. The connecting and disconnecting of energised non energy limited circuits is only permitted during installation, for maintenance or for repair purposes.

Note: The temporal coincidence of explosion hazardous atmosphere and installation, maintenance resp. repair purposes is assessed as unlikely.

(18) Essential Health and Safety Requirements

no additional ones

Translation

1. SUPPLEMENT

to Certificate No.

Equipment:

Manufacturer:

Address:

TÜV 06 ATEX 2967 X

Transmitter supply type IM33-***Ex-Hi

Hans Turck GmbH & Co. KG

Witzlebenstraße 7

45472 Mülheim an der Ruhr

Germany

Order number:

8000424697

Date of issue:

2012-12-10

In future, the transmitter supply type IM33-***Ex-Hi is manufactured according to the documents listed in the test report.

The required tests were performed according to the current standards.

The following changes were performed:

-Some new components resp. component changes

-New routine test for the transformers

-Actualization of the manual

-Changes of the "Special conditions for safe use"

-New marking; this reads:

II 3 G Ex nA [ic Gc] IIC T4 Gc

Electrical data

Supply circuit
(Connections 19, 20)

$U = 20...250 \text{ V a. c. resp. } 20...125 \text{ V d. c.}, P \text{ ca. } 5 \text{ W}$

$U_m = 250 \text{ V a. c. resp. } 125 \text{ V d. c.}$

Output circuits
(Connections 11[+], 12[-],
16[+], 17[-])

Electrical data per circuit:

$U \leq 30 \text{ V}, 30 \text{ mA}$

$U_m = 250 \text{ V a. c. resp. } 125 \text{ V d. c.}$

IM33-1Ex-Hi**

Supply and measuring circuits
(Connections 1, 2, 3 resp. 6, 7, 8)

in type of protection Intrinsic Safety Ex ic IIC/IIB

Maximum values per circuit:

$U_o = 21.3 \text{ V}$

$I_o = 92 \text{ mA}$

$P_o = 722 \text{ mW}$

$R = 341.2 \Omega$

Characteristic line: trapezoidal

effective internal capacitance: 3 nF

effective internal inductance: 30 μH

Ex ic	IIC	IIB
max. permissible external inductance	3.6 mH	5 mH
max. permissible external capacitance	0.147 μF	1.1 μF

1. Supplement to Certificate No. TÜV 06 ATEX 2967 X

M33-Ex-Hi**

Supply and measuring circuits
(Connections 1, 2, 3 resp. 6, 7, 8)

in type of protection Intrinsic Safety Ex ic IIC/IIB

Maximum values per circuit:

$$U_o = 21.3 \text{ V}$$

$$I_o = 86 \text{ mA}$$

$$P_o = 675 \text{ mW}$$

$$R = 365 \text{ } \Omega$$

Characteristic line: trapezoidal

effective internal capacitance: 3 nF

effective internal inductance: 30 μ H

Ex ic	IIC	IIB
max. permissible external inductance	4.5 mH	10 mH
max. permissible external capacitance	0.157 μ F	0.89 μ F

The maximum values of the tables are also allowed to be used up to the permissible limits as concentrated capacitances and as concentrated inductances.

The connection to intrinsically safe circuits with the following maximum values at the connections 2, 3 resp. 7, 8 is permissible:

$$P_i = 650 \text{ mW}$$

$$U_i = 40 \text{ V}$$

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

The intrinsically safe supply and measuring circuits are safely galvanically separated from the non intrinsically safe circuits up to the peak crest value of the voltage of 375 V.

IM33-2**Ex-Hi: The intrinsically safe supply and measuring circuit of channel 1 is safely galvanically separated from the intrinsically safe supply and measuring circuit of channel 2.

All other details remain unchanged.

The equipment according to this supplement meets the requirements of these standards:

EN 60079-0:2012

EN 60079-11:2012

EN 60079-15:2010

(16) The test documents are listed in the test report No. 13 203 127575.

1. Supplement to Certificate No. TÜV 06 ATEX 2967 X

(17) Special conditions for safe use

1. According to IEC 60079-15, section 6.3.1, the following is valid for the transmitter supply type IM33-***Ex-Hi:
 - a) The apparatus has to be mounted in a housing tested according to IEC 60079-0, that meets the requirements of degree of protection IP54.
 - or
 - b) The apparatus has to be mounted in a housing tested according to IEC 60079-0, that meets the requirements of degree of protection IP4X. Then, the apparatus may exclusively be mounted in locations providing adequate protection against the entry of solid foreign objects or liquids.

The apparatus may be installed in an area of not more than pollution degree 2.

2. The connecting and disconnecting of energised non intrinsically safe circuits is only permitted, if no explosion hazardous atmosphere is available.

(18) Essential Health and Safety Requirements
no additional ones

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



Meyer

Hanover office, Am TÜV 1, 30519 Hannover, Tel.: +49 (0) 511 986-1455, Fax: +49 (0) 511 986-1590

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

Transmitter-Speisetrenner Typ IM33-*-Ex-Hi**

auf die sich die Erklärung bezieht, den Anforderungen der folgenden EU-Richtlinien durch Einhaltung der
folgenden Normen genügen:
to which this declaration relates are in conformity with the requirements of the following EU-directives by compliance with the following standards:

EMV – Richtlinie / EMC Directive EN 61326-1:2013	2014 / 30 / EU	26. Feb. 2014
Niederspannungsrichtlinie/ Low Voltage Directive (für die Geräte mit Versorgungsspannung / for equipment with supply voltage : EN 61010-1:2010	2014 / 35 / EU >50V AC bzw. >75V DC)	26. Feb. 2014
Richtlinie / Directive ATEX EN 60079-0:2012 EN 60079-11:2012	2014 / 34 / EU EN 60079-15:2010	26. Feb. 2014

Weitere Normen, Bemerkungen
additional standards, remarks

Das Produkt stimmt mit den Anforderungen der Richtlinie 2014 / 34 / EU überein. Eine oder mehrere in der zugehörigen EG-Baumusterprüfbescheinigung genannten Normen wurden bereits durch neue Ausgaben ersetzt. Der Hersteller erklärt für das Produkt auch die Übereinstimmung mit den neuen Normenausgaben, da die veränderten Anforderungen der neuen Normenausgaben für dieses Produkt nicht relevant sind.

The product complies with the directive 2014 / 34 / EU. One or more norms mentioned in the respective EC type examination certificate were already replaced by new ones. The manufacturer declares that the product complies with the new valid norms, as the changed requirements mentioned there are not relevant for the product.

Die Niederspannungsrichtlinie ist nicht anwendbar bei Betrieb des Produktes im explosionsgefährdeten Bereich. In diesem Fall sind alle grundlegenden Zielsetzungen im Hinblick auf die Niederspannung von der Richtlinie 2014 / 34 / EU Anhang II Punkt 1.2.7 abgedeckt.

The low voltage directive is not applicable when the product is installed in the hazardous area. In this case all Low Voltage essential objectives are covered by the Directive 2014 / 34 / EU Annex II 1.2.7.

Zusätzliche Informationen:

Supplementary information:

Angewandtes ATEX-Konformitätsbewertungsverfahren / ATEX - conformity assessment procedure applied:
Modul B + Modul D / E / module B + module D / E

EU-Baumusterprüfbescheinigung (Modul B) TÜV 05 ATEX 2910, TÜV 06 ATEX 2967 X /
EC-type examination certificate (module B)

ausgestellt von / issued by: TÜV NORD CERT GmbH, Kenn-Nr. / number 0044
Langemarckstraße 20, 45141 Essen

Zertifizierung des QS-Systems gemäß Modul D durch:
certification of the QS-system in accordance with module D by :

Physikalisch Technische Bundesanstalt, Kenn-Nr. / number 0102,
Bundesallee 100, D-38116 Braunschweig

Mülheim, den 20.04.2016



i.V. Dr. M. Linde, Leiter Zulassungen / Manager Approvals

Ort und Datum der Ausstellung /
Place and date of issue

Name, Funktion und Unterschrift des Befugten /
Name, function and signature of authorized person