

Translation

(1) **Statement of Conformity**

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

TÜV NORD



- (3) **Statement of Conformity Number:** TÜV 06 ATEX 553057 X

- (4) for the equipment: Isolating Amplifier type IM35-**Ex-**i****/-**u****

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

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

Order number: 8000553057

Date of issue: 2006-11-27

- (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 553057.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN 60079-0:2004** **EN 60079-15:2005**
- (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

Hanover office, Am TÜV 1, 30519 Hanover, Fon +49 (0)511 986 1455, Fax +49 (0)511 986 1590

(13) SCHEDULE

(14) Statement of Conformity No. TÜV 06 ATEX 553057 X

(15) Description of equipment

The isolating amplifier type IM35-**Ex**-**i******/-**u****** is used for the safe galvanic separation of the energy limited current-/voltage outputs and the non energy limited circuits. The isolating amplifier is executed with one or two channels.

The isolating amplifier is an associated electrical apparatus for installation outside of the explosion hazardous area (according to EN 50020) resp. an apparatus for use in Zone 2 explosion hazardous areas (according to EN 60079-15).

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

Electrical data

Supply circuit
(Terminals 11 [+], 12 [-])

U	=	24 V d.c. (max. 35 V d.c.)
P	≤	3 W

Input circuits
(Terminals 8 [+], 9 [-]
resp. 7 [+], 10 [-])

U	≤	15 V, 50 mA
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Output circuits
(Terminals 1 [+], 2 [-]
resp. 4 [+], 5 [-])

energy limited circuits Ex nL IIC/IIB

IM35-Ex**-**i********

Maximum values per circuit:

U _o	=	15.9 V
I _o	=	60 mA
R	=	528 Ω
P _o	=	470 mW

Characteristic line: trapezoidal

Effective internal inductance: negligibly small

Effective internal capacitance: 5 nF

Ex nL	IIC		IIB	
max. permissible external inductance	5.0 mH	0.5 mH	10 mH	0.5 mH
max. permissible external capacitance	290 nF	640 nF	1.7 µF	3.9 µF

Schedule Statement of Conformity No. TÜV 06 ATEX 553057 X

IM35-Ex**u******

Maximum values per circuit:

$U_o = 15.9 \text{ V}$

$I_o = 54 \text{ mA}$

$R = 584 \Omega$

$P_o = 420 \text{ mW}$

Characteristic line: trapezoidal

Effective internal inductance: negligibly small

Effective internal capacitance: 5 nF

Ex nL	IIC		IIB	
max. permissible external inductance	5.0 mH	0.5 mH	10 mH	0.5 mH
max. permissible external capacitance	310 nF	650 nF	1.7 μF	3.9 μF

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 energy limited output circuits are safely galvanically separated from the non energy limited circuits up to a peak crest value of the voltage of 375 V.

(16) Test documents are listed in the test report No. 06 YEX 553057.

(17) Special conditions for safe use

- The isolating amplifier type IM35-**Ex-**i****/-**u**** has to be installed in a suitable housing according to EN 60079-15 in such a way, that a degree of protection of at least IP 54 according to EN 60529 is reached.
- The connecting and disconnecting of energised non energy limited circuits is only permitted if no explosion hazardous atmosphere exists.

(18) Essential Health and Safety Requirements

no additional ones

Translation

1. SUPPLEMENT

to Certificate No.

Equipment:

Manufacturer:

Address:

Order number:

Date of issue:

TÜV 06 ATEX 553057 X

Isolating amplifier type IM35-**Ex-*i*****/-*u*******

Hans Turck GmbH & Co. KG

Witzlebenstraße 7

45472 Mülheim an der Ruhr, Germany

8000391356

16.03.2011

In the future, the isolating amplifier type IM35-**Ex-*i*****/-*u******* is manufactured according to the documents listed in the test report.

The changes refer to

- the designation of the intrinsically safe circuits according to EN 60079-11; "*ic*",
- new transformer routine tests,
- use of a new optoelectric coupler,
- minor corrections in the test documents and
- changes of the marking; this reads:

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

Electrical data

Output circuits

in type of protection "Intrinsic Safety"

Ex *ic* IIC/IIB

(Terminals 1 [+], 2 [-]

resp. 4 [+], 5 [-])

IM35-**Ex-*i*******

Maximum values per circuit:

$U_o = 15.9 \text{ V}$

$I_o = 60 \text{ mA}$

$R = 528 \Omega$

$P_o = 470 \text{ mW}$

Characteristic line: trapezoidal

Effective internal inductance:

negligibly small

Effective internal capacitance:

5 nF

Ex <i>ic</i>	IIC		IIB	
max. permissible external inductance	5.0 mH	0.5 mH	10 mH	0.5 mH
max. permissible external capacitance	290 nF	640 nF	1.7 μF	3.9 μF

1. Supplement to Certificate No. TÜV 06 ATEX 553057 X

IM35-Ex**u******

Maximum values per circuit:

$U_o = 15.9 \text{ V}$

$I_o = 54 \text{ mA}$

$R = 584 \Omega$

$P_o = 420 \text{ mW}$

Characteristic line: trapezoidal

Effective internal inductance: negligibly small

Effective internal capacitance: 5 nF

Ex ic	IIC		IIB	
max. permissible external inductance	5.0 mH	0.5 mH	10 mH	0.5 mH
max. permissible external capacitance	310 nF	650 nF	1.7 μF	3.9 μF

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

All other data apply unchanged for this supplement.

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

EN 60 079-0:2009

EN 60 079-11:2007

EN 60079-15:2010

(16) The test documents are listed in the test report No. 11 214 079106.

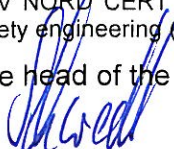
(17) Special conditions for safe use

- The isolating amplifier type IM35-**Ex-***i****/-**u**** has to be installed in a suitable housing according to EN 60079-15 in such a way, that a degree of protection of at least IP 54 according to EN 60529 is reached.
- The connecting and disconnecting of energised non intrinsically safe circuits is only permitted if no explosion hazardous atmosphere exists.

(18) Essential Health and Safety Requirements
no additional ones

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Schwedt

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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

Trennverstärker Typ IM35-Ex-**i**/-**u******

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

Richtlinie / Directive ATEX
EN 60079-0:2012 EN 60079-11:2012

2014 / 34 / EU

26. Feb. 2014

EN 60079-15:2010

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.

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 03 ATEX 2311, TÜV 06 ATEX 553057 X /

EC-type examination certificate (module B)

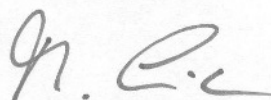
ausgestellt von / issued by: TÜV NORD CERT GmbH, Kenn-Nr. / number 0044
Langemarckstraße 20, 45141 Essen

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