Translation

(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 552967 X**

(4) for the equipment: Isolating Switch Amplifier type IM1-4**-Ex-*

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

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

Order number: 8000552967

Date of issue: 2006-06-19

(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 552967.

(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:

Ex **II 3 G Ex nA nC [nL] IIC/IIB T4** resp. **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

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BA 02 01.06 1.000.020

(13) SCHEDULE

(14) Statement of Conformity No. TÜV 06 ATEX 552967 X

(15) Description of equipment

The isolating switch amplifier type IM1-4**-Ex-* is an associated electrical apparatus for installation outside of the explosion hazardous area resp. an apparatus for use in Zone 2 explosion hazardous areas. It is used for the transmission of binary signals from the explosion hazardous area into the non explosion hazardous area as well as for the safe galvanic separation of the intrinsically safe resp. energy limited circuits and the non intrinsically safe resp. non energy limited circuits.

Permitted range of the ambient temperature	-25 °C to +70 °C

Electrical Data

Supply circuit (Terminals 19 and 20): U = 20 … 250 V a.c. resp. 20 … 125 V d.c., P ≤ 3 W

Input circuits (Terminals 1, 2; 4, 5; 6, 7 and 9, 10): energy limited circuits Ex nL IIC/IIB
Maximum values per channel:
U_o = 11,3 V
I_o = 13 mA
P_o = 36 mW
Characteristic line: linear
Effective internal capacitance: 1,1 nF
Effective internal inductance: 100 µH

Ex nL	IIC			IIB		
max. permissible external inductance	10 mH	5 mH	1 mH	20 mH	10 mH	2 mH
max. permissible external capacitance	0,91 µF	1,0 µF	1,5 µF	4,3 µF	4,9 µF	6,8 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.

Type IM1-4-Ex-T**
Output circuits (Terminals 11 to 18): Electrical data of each transistor output:
U ≤ 30 V d.c., I ≤ 50 mA, P ≤ 1,5 W

Type IM1-4-Ex-R**
Output circuits (Terminals 11 to 18): Electrical data of each relay output:
U = 250 V a.c., I = 2 A, S = 500 VA, P = 60 W
U = 125 V d.c., I = 0,5 A resp.
U = 30 V d.c., I = 2 A

The energy limited circuits are safely galvanically separated from the non energy limited circuits up to a peak crest value of the voltage of 375 V.
The energy limited circuits are galvanically connected with each other.

The marking for the type IM1-4**-Ex-R is:

II 3 G Ex nA nC [nL] IIC/IIB T4

The marking for the type IM1-4**-Ex-T is:

II 3 G Ex nA [nL] IIC/IIB T4

(16) Test documents are listed in the test report No. 06 YEX 552967.

(17) Special conditions for safe use

- The isolating switch amplifier type IM1-4**-Ex-* 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 operation of the front switches as well as 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 in zone 2.
- For the supply circuit arrangements have to be taken externally, that the rated voltage is exceeded not more than 40% by transient disturbances.

(18) Essential Health and Safety Requirements

no additional ones

Translation

1. SUPPLEMENT

to Certificate No.	**TÜV 06 ATEX 552967 X**
Equipment:	Isolating switch amplifiers IM1-4**-Ex-*
Manufacturer:	Hans Turck GmbH & Co. KG
Address:	Witzlebenstraße 7 D-45472 Mülheim an der Ruhr
Order number:	8000554841
Date of issue:	21.08.2008

Amendments:

The isolating switch amplifiers type IM1-4**Ex-* is an associated electrical apparatus for installation outside of the explosion hazardous area resp. apparatus for use in Zone 2 explosion hazardous areas. The isolating switch amplifiers are used for the transmission of binary signals from the explosion hazardous area into the non explosion hazardous area as well as for the safe galvanic separation of the energy limited circuits and the non energy limited circuits. In the future the isolating switch amplifier can be produced in the versions listed below.

Permitted ambient temperature range - 25 °C to + 70 °C

Electrical data

Supply circuits ..... (terminals 19 and 20)
U = 20 ... 250 V AC resp. 20 ... 125 V DC, P ≤ 3 W
U_m = 250 V AC resp. 125 V DC

Input circuits ..... (terminals 1, 2; 4, 5; 6, 7 and 9, 10)
energy limited circuits EEx nL IIC/IIB
Maximum values per channel:
U_o = 11.3 V
I_o = 13 mA
P_o = 36 mW
Characteristic line: linear
Effective internal capacitance: 1.1 nF
Effective internal inductance: 100 µH

EEx ia	IIC			IIB		
Max. permissable external inductance	10 mH	5 mH	1 mH	20 mH	10 mH	2 mH
Max. permissable external capacitance	0.91 µF	1.0 µF	1.5 µF	4.3 µF	4.9 µF	6.8 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.

Type IM1-2 Ex-T**

Output circuits ..... (Terminals 11 ...18)	Electrical data of each transistor output: U ≤ 30 V DC, I ≤ 50 mA, P ≤ 1.5 W

Type IM1-2 Ex-R**

Output circuits ..... (Terminals 11 ...18)	Electrical data of each relay output: U = 250 V AC, I = 2 A, S = 500 VA, P = 60 W U = 125 V DC, I = 0.25 A resp. U = 30 V DC, I = 2 A

Type IM1-3 Ex-T**

Output circuits ..... (Terminals 11 ...18)	Electrical data of each transistor output: U ≤ 30 V DC, I ≤ 50 mA, P ≤ 1.5 W

Type IM1-3 Ex-R**

Output circuits ..... (Terminals 11 ...18)	Electrical data of each relay output: U = 250 V AC, I = 2 A, S = 500 VA, P = 60 W U = 125 V DC, I = 0.25 A resp. U = 30 V DC, I = 2 A

The energy limited circuits are safely galvanically separated from all non energy limited circuits up to the peak crest value of the voltag of 375 V.
The intrinsically safe circuits are galvanically connected with each other.

The marking for the types IM1-2**-Ex-R resp. IM1-3**-Ex-R is:

Ex II 3 G Ex nA nC [nL] IIC/IIB T4

The marking for the types IM1-2**-Ex-T resp. IM1-3**-Ex-T is:

Ex II 3 G Ex nA [nL] IIC/IIB T4

The electrical data and all other data apply unchanged for this supplement.

The amendments in this supplement meets the requirements of these standards:

EN 60079-0:2006 **EN 60079-15:2005**

(16) The test documents are listed in the test report No. 08 204 554689.

(17) Special conditions for safe use

no additional ones

(18) Essential Health and Safety Requirements

no additional ones

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The head of the certification body

Schwedt

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Translation

2. SUPPLEMENT

to Certificate No.	**TÜV 06 ATEX 552967 X**
Equipment:	Isolating switch amplifier type IM1-4/3/2**-Ex*
Manufacturer:	Hans Turck GmbH & Co. KG
Address:	Witzlebenstraße 7 45472 Mülheim an der Ruhr, Germany
Order number:	8000393982
Date of issue:	22.07.2011

In future, the isolating switch amplifier type IM1-4/3/2**-Ex* is manufactured according to the documents listed in the test report.
The changes refer to the internal construction, the electrical data, the special conditions for safe use and the marking.
This reads as follows:

II 3 G Ex nA [ic Gc] IIC T4 Gc resp. II 3 G Ex nA nC [ic Gc] IIC T4 Gc

Electrical data:

Supply circuit (Terminals 19 and 20)	U = 20 ... 250 V a. c. resp. 20 ... 125 V d. c.; P ≤ 3 W U_m = 250 V a. c. resp. 125 V d. c.
Input circuits (Terminals 1, 2; 4, 5; 6, 7 and 9, 10)	in type of protection Intrinsic Safety Ex ic IIC Maximum values per channel: U_o = 11.3 V I_o = 13 mA P_o = 36 mW Characteristic line: linear Effective internal capacitance: 1.1 nF Effective internal inductance: 100 µH

Ex ic	IIC			IIB		
max. permissible external inductance	10 mH	5 mH	1 mH	20 mH	10 mH	2 mH
max. permissible external capacitance	0.91 µF	1.0 µF	1.5 µF	4.3 µF	4.9 µF	6.8 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.

Type IM1-4 Ex-T, IM1-3**Ex-T, IM1-2**Ex-T**

Output circuits	Electrical data of each transistor output:
(Terminals 11 to 18)	U ≤ 30 V d. c., I ≤ 50 mA, P ≤ 1.5 W
	U_m = 250 V

Type IM1-4 Ex-R, IM1-3**Ex-R, IM1-2**Ex-R**

Output circuits	Electrical data of each relay output:
(Terminals 11 to 18)	U = 250 V a. c., I = 2 A, S = 500 VA, P = 60 W
	U = 125 V d. c., I = 0.25 A resp.
	U = 30 V d. c., I = 2 A

The intrinsically safe circuits are safely galvanically separated from all non intrinsically safe circuits up to the peak crest value of the voltage of 375 V.
The intrinsically safe circuits are galvanically connected with each other.

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

EN 60 079-0:2009 EN 60 079-11:2007 EN 60 079-15:2010

(16) The test documents are listed in the test report No. 11 214 080473.

(17) Special conditions for safe use

1. The isolating switch amplifier type IM1-4/3/2**-Ex* 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.
2. The operation of the front switches as well as the connecting and disconnecting of energised non intrinsically safe circuits is only permitted if no explosion hazardous atmosphere exists.
3. For the supply circuit arrangements have to be taken externally, that the rated voltage is exceeded not more than 40% by transient disturbances.

(18) Essential Health and Safety Requirements

no additional ones

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Konformitätserklärung Nr. 4071M

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

Trennschaltverstärker Typ IM1-2**-Ex*
IM1-3**-Ex*
IM1-4**-Ex*

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
EN 60947-5-6:2000

und wo anwendbar
and where applicable

EN 60079-0:2009 EN 60079-11:2007 EN 61241-11:2006 EN 60079-15:2010

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
Niederspannungsrichtlinie	/ Low Voltage Directive	2006 / 95 / EG	12. Dez. 2006

Weitere Normen, Bemerkungen
additional standards, remarks

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 94/9/EG 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 94/9/EG Annex II 1.2.7.

Aussteller der EG- Baumusterprüfbescheinigung:
TÜV NORD CERT GmbH
Langemarckstraße 20, 45141 Essen
Kenn-Nr. 0044, Registriernummer: TÜV 04 ATEX 2604 Kennzeichnung Ex II (1) G, II (1) D
TÜV 04 ATEX 552967 X Kennzeichnung Ex II 3 G

Mülheim, den 27.07.2011

i.V. W. Stoll

(i.V. W. Stoll)

Ort und Datum der Austellung / Place and date of issue

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