

Translation

(1) **Statement of Conformity**

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

TUV NORD



(3) **Statement of Conformity Number: TÜV 06 ATEX 552978 X**

(4) for the equipment: **Temperature Transmitter type IM34-**Ex-**i**

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

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

Order number: **8000552978**

Date of issue: **2006-09-18**

- (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 552978.
- (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

The head of the certification body

Schwedt

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

(13) **SCHEDULE**

(14) **Statement of Conformity No. TÜV 06 ATEX 552978 X**

(15) Description of equipment

The temperature transmitter type IM34-**Ex-**i 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 measurement of temperatures by means of thermocouples or resistance thermometers (e.g. Pt100) as well as for the safe galvanic separation of the energy limited and the non energy limited circuits.

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

Electrical Data

Supply circuit (Terminals 11 and 12) $U_n = 20 \dots 250 \text{ V a.c. resp. } 20 \dots 125 \text{ V d.c.}$

Output circuit (Terminals 7 and 8) $U = 35 \text{ V}, I = 25 \text{ mA}$

Contact circuit (Terminals 9 and 10) **IM34-**Ex-Ri and IM34-**Ex-CRi**
 $U = 250 \text{ V a.c.}, I = 2 \text{ A}, S = 500 \text{ VA resp.}$
 $U = 120 \text{ V d.c.}, I = 0.5 \text{ A resp.}$
 $U = 30 \text{ V d.c.}, I = 2 \text{ A}$

Configuration circuit (Front side stereo jack) **RS232C**

Measuring circuit (Terminals 1 ... 6) energy limited circuits Ex nL IIC/IIB.
 Maximum values:
 $U_o = 5 \text{ V}$
 $I_o = 2 \text{ mA}$
 $P_o = 2.6 \text{ mW}$
 Characteristic line : linear

The effective internal capacitance is negligibly small.
 Effective internal inductance: 0.2 mH

| | Ex nL | IIC | IIB |
|---------------------------------------|-------|--------|--------|
| max. permissible external inductance | | 100 mH | 100 mH |
| max. permissible external capacitance | | 3.6 µF | 18 µF |

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

The energy limited measuring circuit is safely galvanically separated from all other circuits up to the peak crest value of the voltage of 375 V.

Schedule Statement of Conformity No. TÜV 06 ATEX 552978 X

The marking for the types IM34-**Ex-Ri and IM34-**Ex-CRi is:

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

The marking for all types without relays is:

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

(16) Test documents are listed in the test report No. 06 YEX 552978.

(17) Special conditions for safe use

- The Temperature Transmitter type IM34-**Ex-**i 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 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.
- 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 552978 X

Equipment:

Temperature Transmitter type IM34-**iEx-**i

Manufacturer:

Hans Turck GmbH & Co. KG

Address:

Witzlebenstraße 7
45472 Mülheim an der Ruhr
Germany

Order number:

8000554557

Date of issue:

2008-06-24

Amendments:

In the future, the temperature transmitter type IM34-**Ex-**i may only be manufactured, installed and operated according to the documents listed in the test report.

The following changes and/or additions were made:

- The temperature transmitter type IM34-**Ex-**i may be manufactured, installed and operated with the printed circuit boards 2010/4 or 2010/6.
- For the assessment the current standards listed as evaluation principles were considered.

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

The equipment 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 554557.

(17) Special conditions for safe use

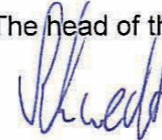
No additional ones

(18) Essential Health and Safety Requirements

no additional ones

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The head of the certification body



Schwedt

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

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Translation
2. SUPPLEMENT

to Certificate No. TÜV 06 ATEX 552978 X
Equipment: Temperature transmitter
type IM34-Ex-i and type IM34-Ex-i/24VDC
Manufacturer: Hans Turck GmbH & Co. KG
Address: Witzlebenstraße 7
45472 Mülheim an der Ruhr, Germany
Order number: 8000393066
Date of issue: 2011-08-18

In future, the temperature transmitter type IM34-Ex-i is manufactured according to the documents listed in the test report.

The changes refer to

- a new version for 24 V d. c. supply, type IM34-Ex-i/24VDC
- changes of the pcb and components for version with wide range supply
- the electrical data
- the special conditions for safe use and
- the marking.

This reads as follows:

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

Electrical data

Type IM34-Ex-i

Supply circuit $U_n=20 \dots 250 \text{ V a. c. resp. } 20 \dots 125 \text{ V d. c.}; P \leq 3 \text{ W}$
(Terminals 11, 12) $U_m=250 \text{ V a. c. resp. } 125 \text{ V d. c.}$

Type IM34-Ex-i/24VDC

Supply circuit $U_n=20 \dots 30 \text{ V d. c.}, P \leq 2 \text{ W}$
(Terminals 11, 12) $U_m=250 \text{ V}$

Type IM34-Ex-i and IM34-Ex-i/24VDC

Measuring circuit in type of protection Intrinsic Safety Ex ic IIC/IIB
(Terminals 1...6) **Maximum values:** $U_o= 5 \text{ V}$
 $I_o = 2.5 \text{ mA}$
 $P_o= 3 \text{ mW}$
Characteristic line: linear
The effective internal capacitances and inductances are negligibly small.

| Ex ic | IIC | IIB |
|---------------------------------------|-------------------|------------------|
| max. permissible external inductance | 100 mH | 100 mH |
| max. permissible external capacitance | 3.6 μF | 18 μF |

2. Supplement to Certificate No. TÜV 06 ATEX 552978 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 intrinsically safe measuring circuit is safely galvanically separated from all non intrinsically safe circuits up to a peak value of the voltage of 375 V.

All other electrical data remain unchanged for this supplement.

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

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

(16) The test documents are listed in the test report No. 11 214 079141.

(17) Special conditions for safe use

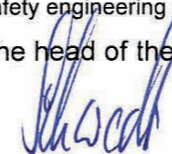
1. The temperature transmitter type IM34-Ex-i resp. type IM34-Ex-i/24VDC has to be installed in a suitable housing according to IEC 60079-15 in such a way, that a degree of protection of at least IP 54 according to IEC 60529 is reached.
2. The connecting and disconnecting of energized non intrinsically safe circuits and the operation of switches is only permitted if no explosion hazardous atmosphere exists.
3. Temperature transmitter type IM34-Ex-i: For the supply circuit arrangements have to be taken externally, that the peak rated voltage value does not exceed 140% of 85 V or of the rated voltage (higher value is valid) at the power supply terminals by transient disturbances.

(18) Essential Health and Safety Requirements

no additional ones

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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

Temperatur- Messumformer Typ IM34-Ex-**i und Typ IM34-**Ex-**i/24VDC**

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 | 26. Feb. 2014 >50V AC bzw. >75V DC) |
| 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 02 ATEX 1898, TÜV 06 ATEX 552978 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 issueName, Funktion und Unterschrift des Befugten /
Name, function and signature of authorized person