



Translation

EC-TYPE EXAMINATION CERTIFICATE

- (1) **EC-TYPE EXAMINATION CERTIFICATE**
- (2) Equipment or Protective System intended for use in potentially explosive atmospheres - **Directive 94/9/EC**
- (3) EC-Type Examination Certificate Number



TÜV 02 ATEX 1898

- (4) Equipment or Protective System: Temperature Transmitter type IM34-12Ex-*i
- (5) Manufacturer: Hans Turck GmbH & CO KG
- (6) Address: Witzlebenstraße 7
D-45472 Mülheim
- (7) This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH & Co. KG, TÜV Certification Body N° 0032 in accordance with Article 9 of the Council Directive 94/9/EC of March 23, 1994, 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 confidential report N° 02YEX184675.

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

EN 50 014:1997

EN 50 020:1994

- (10) If the sign "X" is placed after the certification 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 EC-type examination certificate 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 (1) G D [EEx ia] IIC

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 TÜV CERT-Certification Body
 Am TÜV 1
 D-30519 Hannover
 Tel.: 0511 986-1470
 Fax: 0511 986-2555

Head of the
 Certification Body



Hanover, 2002-09-04



SCHEDULE

- (13) **SCHEDULE**
- (14) **EC-TYPE EXAMINATION CERTIFICATE N° TÜV 02 ATEX 1898**
- (15) Description of equipment or protective system

The temperature transmitter type IM34-12Ex-*i is used for the measurement of temperatures by means of thermocouples or resistance thermometers (e. g. Pt 100) and for the safe galvanic separation of the intrinsically safe and the non intrinsically safe circuits, as well.

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

Electrical Data

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

Measuring circuit in type of protection Intrinsic Safety EEx ia IIC/IIB
 (Terminals 1 ... 6) 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

	EEx ia	IIC	IIB
max. permissible external inductance		1000 mH	1000 mH
max. permissible external capacitance		100 µF	1000 µF

Output circuit $U = 35 \text{ V, } 25 \text{ mA}$
 (Terminals 7, 8) $U_m = 250 \text{ V a. c. resp. } 125 \text{ V d. c.}$

Contact circuit $U = 250 \text{ V a. c., } I = 2\text{A, } S = 500 \text{ VA resp.}$
 (Terminals 9, 10) $U = 120 \text{ V DC, } I = 0,5 \text{ A bzw.}$
 $U = 30 \text{ V DC, } I = 6 \text{ A}$

Configuration circuit RS232C
 (Front side stereo jack) $U_m = 250 \text{ V a. c. resp. } 125 \text{ V d. c.}$

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



Translation

1. SUPPLEMENT to

EC TYPE-EXAMINATION CERTIFICATE No. TÜV 02 ATEX 1898

of the company : Hans Turck GmbH & Co KG
Witzlebenstraße 7
D-45472 Mülheim

In the future, the marking of the Temperature Transmitter type IM34-12Ex-*i
reads as follows:

IM34-**Ex-**i

All other details remain unchanged for this 1. supplement.

The test document is listed in the test report no. 02 YEX 0164.

(16) The test documents are listed in the test report no. 02YEX184 675.

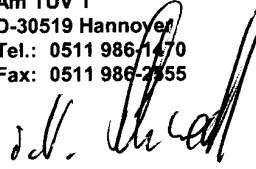
(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

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Head of the
Certification Body

Hanover, 2002-11-26

Translation
2. SUPPLEMENT

to Certificate No. TÜV 02 ATEX 1898
 Equipment: Temperature Transmitter type IM34-**Ex-**i
 Manufacturer: Hans Turck GmbH & Co. KG
 Address: Witzlebenstraße 7
 D-45472 Mülheim
 Order number: 8000552976
 Date of issue: 2006-06-21

Amendments:

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

The amendments concern the internal construction. A changed printed circuit board with the identifier 2010/5 is used.

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

The equipment incl. of this supplement meets the requirements of these standards:

EN 50014:1997+A1+A2 **EN 50020:2002**

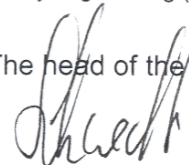
(16) The test documents are listed in the test report No. 06 YEX 552976.

(17) Special conditions for safe use
 no additional ones

(18) Essential Health and Safety Requirements
 no additional ones

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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Translation
3. SUPPLEMENT

to Certificate No. TÜV 02 ATEX 1898
 Equipment: Temperature Transmitter type IM34-**iEx-**i
 Manufacturer: **Hans Turck GmbH & Co. KG**
 Address: Witzlebenstraße 7
 45472 Mülheim an der Ruhr
 Germany
 Order number: 8000554342
 Date of issue: 2008-04-02

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 use of the equipment as associated apparatus for locations with combustible dust the meanwhile existing standards were considered.
- 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 60079-11:2007**
EN 61241-0:2006 **EN 61241-11:2006**

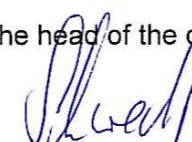
(16) The test documents are listed in the test report No. 08203554342.

(17) Special conditions for safe use
 none

(18) Essential Health and Safety Requirements
 no additional ones

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The head of the certification body



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Translation
4. SUPPLEMENT

to Certificate No. TÜV 02 ATEX 1898
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 and
- the marking.

This reads as follows:

II (1) G [Ex ia Ga] IIC and II (1) D [Ex ia Da] IIB

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 ia 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 ia	IIC	IIB
max. permissible external inductance	100 mH	100 mH
max. permissible external capacitance	2 μF	9.1 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 values of the tables for IIB and for IIC are also permissible for explosive dust atmospheres.

4. Supplement to Certificate No. TÜV 02 ATEX 1898

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 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 61241-11: 2006

(16) The test documents are listed in the test report No. 11 203 079142.

(17) Special conditions for safe use
none

(18) Essential Health and Safety Requirements
no additional ones

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The head of the certification body

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

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 2014 / 30 / EU 26. Feb. 2014
EN 61326-1:2013

Niederspannungsrichtlinie/ Low Voltage Directive 2014 / 35 / EU 26. Feb. 2014
(für die Geräte mit Versorgungsspannung / for equipment with supply voltage : >50V AC bzw. >75V DC)
EN 61010-1:2010

Richtlinie / Directive ATEX 2014 / 34 / EU 26. Feb. 2014
EN 60079-0:2012 EN 60079-11:2012 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.

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 issue

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