



(1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - Directive 94/9/EC

(3) EC-type-examination Certificate Number:

PTB 05 ATEX 2002

(4) Equipment: Junction box, type JRBS-40 .../ Ex

(5) Manufacturer: Hans Turck GmbH & Co. KG

(6) Address: Witzlebenstr. 7, 45472 Mülheim an der Ruhr, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment 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 PTB Ex 05-24349.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014:1997 + A1 + A2 **EN 50020:2002**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment 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 shall include the following:

II 2 G EEx ib IIC/IIB T4 resp. II 2(1) G EEx ia IIC/IIB T4

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor



Braunschweig, January 19, 2005

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
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Physikalisch-Technische Bundesanstalt • Bundesallee 100 • D-38116 Braunschweig

S C H E D U L E

(14) EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2002

(15) Description of equipment

The junction box, type JRBS-40 .../ Ex is used for the distribution of energy and data in fieldbus systems. It is designed for the connection of max. eight intrinsically safe field device circuits according to the FISCO-model (Entity or TS 60079-27). The field device circuits are electrically interconnected.

The junction box is intended for application in hazardous areas.

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

Electrical data

Supply: (trunk in/out type of protection Intrinsic Safety EEx ia/b IIC/IIB or segment in/out, depending on the fieldbus system used internal terminals X01/X02, 1...3)

Maximum values:

Entity - parameters
 $U_i = 24 \text{ V DC}$
 $I_i = 250 \text{ mA}$
 $P_i = 2.56 \text{ W}$
 $C_i < 5 \text{ nF}$
 $L_i \text{ negligibly low}$
 $U_o = 24 \text{ V DC}$
 $I_o = 250 \text{ mA}$
 $P_o = 2.56 \text{ W}$

The permissible values for C_o and L_o comply with the permissible values of the intrinsically safe power supply, considering C_i and L_i of the junction box.

FISCO - parameters
acc. to IEC TS 60079-27
 $U_i = 17.5 \text{ V DC}$
 $I_i = 380 \text{ mA}$
 $P_i = 5.32 \text{ W}$
 $C_i < 5 \text{ nF}$
 $L_i \text{ negligibly low}$
 $U_o = 17.5 \text{ V DC}$
 $I_o = 380 \text{ mA}$
 $P_o = 5.32 \text{ W}$

PA:
(internal terminal X03)
The supply lines - including the shield - are connected to PA through a capacitor, whereas the shield can also be connected directly to PA (by means of a switch).

SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2002



Field device circuits 1 ... n type of protection Intrinsic Safety EEx ia/b IIC/IIB
(internal terminals X1... Xn, 1... 3) depending on the fieldbus system used

Maximum values:

Entity - parameters $U_o = 24$ V DC
 $I_o = 250$ mA
 $P_o = 2.56$ W

The permissible values for C_o and L_o comply with the permissible values of the intrinsically safe power supply, considering C_i and L_i of the junction box.

FISCO - parameters $U_o = 17.5$ V DC
acc. to IEC TS 60079-27
 $I_o = 380$ mA
 $P_o = 5.32$ W

Internal capacitances and inductances Maximum values:

a) variant with up to 6 channels per field device circuit $C_i = 0.82$ nF
 L_i negligibly low

b) variant with 7 and 8 channels per field device circuit $C_i = 0.47$ nF
 L_i negligibly low

All field device circuits in total $C_i < 5$ nF
 L_i negligibly low

(16) Test report PTB Ex 05-24349

(17) Special conditions for safe use

none

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor



Braunschweig, January 19, 2005

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Konformitätserklärung Nr. 3165-1 M

Declaration of Conformity



Diese Konformitätserklärung entspricht der Europäischen Norm EN 45014 "Allgemeine Kriterien für Konformitätserklärungen von Anbietern". Die Grundlage der Kriterien sind internationale Dokumente, insbesondere ISO/IEC Leitfaden 22, 1982: "Information on manufacturer's declaration of conformity with standards or other technical specifications".

This "Declaration of Conformity" complies with the European Standard EN 45014 "General criteria for a supplier's declaration of conformity". These criteria are based on the relevant international documentation, particularly the ISO/IEC Guide 22, 1982: "Information on the manufacturer's declaration of conformity with standards or other technical specifications".

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

Junction Box Typ JRBS-40..-..../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 61326:2006

und wo anwendbar
and where applicable

EN 60079-0:2006 EN 60079-11:2007 EN 61241-1:2005
EN 60079-0:2004 EN 60079-15:2005 EN 60079-27:2006

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

Weitere Normen
additional standards

Aussteller der EG-Baumusterbescheinigung:
Physikalisch - Technische Bundesanstalt
Bundesallee 100, D-38116 Braunschweig
Kenn-Nr. 0102, Registriernummer: PTB 05 ATEX 2002, PTB 07 ATEX 2035 X

Mülheim, den 03.09.07

Ort und Datum der Austellung /
Place and date of issue

i.V. W. Stoll
(i.V. W. Stoll)
Name und Unterschrift des Befugten /
Name and signature of authorized person

1. SUPPLEMENT
according to Directive 94/9/EC Annex III.6
to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2002
(Translation)

Equipment: Junction box, type JRBS-40 .../ Ex

Marking: II 2 G EEx ib IIC/IIB T4 resp. II 2(1) G EEx ia IIC/IIB T4

Manufacturer: Hans Turck GmbH & Co. KG

Address: Witzlebenstr. 7, 45472 Mülheim an der Ruhr, Germany

Description of supplements and modifications

The junction box, type JRBS-40 .../ Ex is used for the distribution of energy and data in fieldbus systems. It is designed for the connection of max. eight intrinsically safe field device circuits according to the FISCO-model (Entity or TS 60079-27). The field device circuits are electrically interconnected.

The junction box is intended for application in hazardous areas.

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

New in this supplement are the versions types JRBS-40-XXR /Ex with pluggable PCB terminal plugs and the versions types JRBS-40-12C/R /Ex and JRBS-40-SC12C/R /Ex.

In the future the circuits of the junction box may with corresponding supply also be installed into hazardous areas due to combustible dust of zone 20 and 21. The marking of the equipment is supplemented.

Electrical data

Supply: (trunk in/out) type of protection Intrinsic Safety Ex ia/b IIC/IIB
or segment in/out,
internal terminals X01/X02, 1...3 resp. Ex iaD/ibD
depending on the fieldbus system used
Maximum values:

Entity - parameters
 $U_i = 24 \text{ V DC}$
 $I_i = 250 \text{ mA}$
 $P_i = 2.56 \text{ W}$

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1. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2002

$C_i < 5 \text{ nF}$
 L_i negligibly low
 $U_o = 24 \text{ V DC}$
 $I_o = 250 \text{ mA}$
 $P_o = 2.56 \text{ W}$

The permissible values for C_o and L_o comply with the permissible values of the intrinsically safe power supply, considering C_i and L_i of the junction box.

FISCO - parameters
acc. to IEC TS 60079-27
 $U_i = 17.5 \text{ V DC}$
 $I_i = 380 \text{ mA}$
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$C_i < 5 \text{ nF}$
 L_i negligibly low
 $U_o = 17.5 \text{ V DC}$
 $I_o = 380 \text{ mA}$
 $P_o = 5.32 \text{ W}$

PA:
(internal terminal X03)
The supply lines - including the shield - are connected to PA through a capacitor, whereas the shield can also be connected directly to PA (by means of a switch).

Field device circuits 1 ... n
(internal terminals X1... Xn, 1... 3)
type of protection Intrinsic Safety Ex ia/b IIC/IIB
resp. Ex iaD/ibD
depending on the fieldbus system used

Entity - parameters
 $U_o = 24 \text{ V DC}$
 $I_o = 250 \text{ mA}$
 $P_o = 2.56 \text{ W}$

The permissible values for C_o and L_o comply with the permissible values of the intrinsically safe power supply, considering C_i and L_i of the junction box.

FISCO - parameters
acc. to IEC TS 60079-27
 $U_i = 17.5 \text{ V DC}$
 $I_i = 380 \text{ mA}$
 $P_i = 5.32 \text{ W}$

Internal capacitances and inductances Maximum values:

a) variant with up to 6 channels per field device circuit
 $C_i = 0.82 \text{ nF}$
 L_i negligibly low
All field device circuits in total
 $C_i < 5 \text{ nF}$
 L_i negligibly low

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1. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2002

b) variant with 7 and 8 channels
per field device circuit

$C_i = 0.47 \text{ nF}$
 L_i negligibly low

All field device circuits in total

$C_i < 5 \text{ nF}$
 L_i negligibly low

c) variant with 9 to 12 8 channels
per field device circuit

$C_i = 0.33 \text{ nF}$
 L_i negligibly low

All field device circuits in total

$C_i < 5 \text{ nF}$
 L_i negligibly low

All other electrical specifications remain valid without changes.

In future the equipment will be marked as follows:

II 2 G Ex ib IIC/IIB T4 resp. II 2(1) G Ex ia IIC/IIB T4
resp. II 2 G (2D) Ex ib [ibD] IIB T4 resp. II 2(1) G (1D) Ex ia [iaD] IIB T4

Applied standards

EN 60079-0:2006

EN 60079-11:2007

IEC 61241-11:2005

Test report: PTB Ex 07-26346



Braunschweig, July 16, 2007

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