(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 2051 X

(4) Equipment: Fiberoptic coupler, type OC11 Ex/2G...

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

(6) Address: Witzlebenstraße 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 05-25059.

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

EN 50014:1997 + A1 A2	**EN 50020:2002**	**EN 60079-18:2004**
EN 50019:2000	**IEC 60079-28 Ed.1.0 CDV**	**EN 1127-1:1997**

(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:

Ex II 2 G EEx e mb ib [ib or is] IIC T4

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, July 4, 2005

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

(13) # SCHEDULE

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2051 X**

(15) Description of equipment

The fiberoptic couplers of type series OC11Ex form the connection unit for the data interchange between wired and optical Profibus by optical waveguides. Two fiberoptic couplers of type series OC11Ex, interconnected by two optical fibres, form a data transmission system between the hazardous area of zone 1 (type OC11Ex/2G) and the hazardous area of zone 2 or the safe area (type OC11Ex/3G). The fiberoptic couplers of type series OC11Ex are supplied with auxiliary power and couple each one wired and two optical terminals (input and output) for the profibus via electrical isolating points.

The intrinsically safe circuits (EEx ib) are safely electrically isolated from the non-intrinsically safe circuits up to a peak voltage of 60 V.

The permissible range of the ambient temperature is -20 °C ... +70 °C.

The type of protection is **Ex II 2G EEx e mb ib [ib or is] IIC T4**

Electrical data

Applicable to all circuits: U_m = 60 VDC

I. Supply circuit (L+; L-) : type of protection Increased Safety EEx e with the following maximum values:

U_{max} = 35 VDC
I_{max} = 100 mA
P_{max} = 2 W (total power consumption)

II. Ex-Profibus RS485-IS : (D-Sub plug connector) (Pin 1 – 9) type of protection Intrinsic Safety EEx ib IIC with the following maximum values:

U_0 ≤ 3.64 V
I_0 ≤ 127 mA
P_0 ≤ 116 mW
characteristic linear
internal capacitance: C_i negligibly low
internal inductance: L_i negligibly low

U_I ≤ 4.2 V

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.
In case of dispute, the German text shall prevail.

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • D-38116 Braunschweig

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2051 X

III. Internal fiberoptic communication with Ex i – data transmission line (M8 –circular connector)
(Note: This connector is only used for the communication of two fiberoptic couplers of type OC11 Ex/2G... inside the hazardous area)

type of protection Intrinsic Safety EEx ib IIC
with the following maximum values:

$U_0 \leq 3.64$ V
$I_0 \leq 3.6$ mA
$P_0 \leq 3$ mW
characteristic linear

Only for connection to certified intrinsically safe equipment with the following maximum value (cf. note above):

$U_i \leq 3.7$ V

(16) Test report PTB Ex 05-25059

(17) Special conditions for safe use

For application in hazardous areas, the fiberoptic coupler, type OC11 Ex/2G shall be mounted into a housing which meets the requirements of EN 50014, EN 50019 and EN 50020.

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

Braunschweig, July 4, 2005

Konformitätserklärung Nr. 3182 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

Lichtwellen-Koppler Typ OC11Ex/2G

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 / 1998; A1 / 1999

und wo anwendbar
and where applicable

EN 50014 + A1 +A2 / 1997 EN 50020 / 2002 EN 60079-18 / 2004
EN 50019 / 2000

Gemäß den Bestimmungen der Richtlinie (falls zutreffend)
Following the provisions of Directive (if applicable)

EMV - Richtlinie	/ EMC Directive	89 / 336 / EWG	3. Mai 1989
Richtlinie ATEX 100a	/ Directive ATEX 100a	94 / 9 / EG	23. März 1994

Weitere Normen
additional standards

IEC 60079-28 Ed.1.0 CDV
EN 1127-1 / 1997

Aussteller der EG-Baumusterbescheinigung:
Physikalisch - Technische Bundesanstalt
Bundesallee 100, D-38116 Braunschweig
Kenn-Nr. 0102, Registriernummer: PTB 05 ATEX 2051 X

Mülheim, den 12.08.05 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

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Stand: 001 vom 26.05.03

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2051 X

(Translation)

Equipment: Fiberoptic coupler, type OC11 Ex / 2G...

Marking: Ⓔx **II 2 G EEx e mb ib [ib or is] IIC T4**

Manufacturer: Hans Turck GmbH & Co. KG

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

Description of supplements and modifications

The marking of the fiberoptic coupler, type OC11 Ex / 2G... is adapted according to the requirements of IEC 60079-28 Ed. 1 / FDIS. Further modifications were not performed.

The electrical data, the special conditions and all other specifications of the EC-type examination certificate apply without changes also for this 1st supplement.

In the future the type of protection is: Ⓔx **II 2 G Ex e mb ib [ib op is] IIC T4**

Applied standards

IEC 60079-28 Ed.1.0 / FDIS

Test report: PTB Ex 06-26082

Zertifizierungsstelle Explosionsschutz
By order

Braunschweig, July 11, 2006

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

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In case of dispute, the German text shall prevail.

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • 38116 Braunschweig, Germany

Konformitätserklärung Nr. 3182-1 M

Declaration of Conformity

TURCK Industrielle Automation

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

Lichtwellenleiter Koppler Typ OC11 Ex / 2 G...

auf die sich die Erklärung bezieht, mit den folgenden Normen übereinstimmen
to which this declaration relates are in conformity with the following standards

DIN EN61326-1:2006-10

und wo anwendbar
and where applicable

EN 50014:1997+A1+A2 EN 50020:2002 EN 60079-18:2004

Gemäß den Bestimmungen der Richtlinie (falls zutreffend)
Following the provisions of Directive (if applicable)

EMV - Richtlinie	/ EMC Directive	89 / 336 / EWG	3. Mai 1989
Richtlinie ATEX 100a	/ Directive ATEX 100a	94 / 9 / EG	23. März 1994
Niederspannungsrichtlinie	/ Low Voltage Directive	73 / 23 / EWG	19. Februar 1973

Weitere Normen
additional standards

IEC 60079-28 Ed. 1.0 / FDIS
EN 1127-1:1997, Abschnitt 5.3.10

Aussteller der EG-Baumusterbescheinigung:
Physikalisch - Technische Bundesanstalt
Bundesallee 100, D-38116 Braunschweig
Kenn-Nr. 0102, Registriernummer: PTB 05 ATEX 2051 X

Mülheim, den 11.09.06

i.V. (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

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Stand: 001 vom 01.08.06