



(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 2052 X

(4) Equipment: Fiberoptic coupler, type OC11 Ex / 3G...

(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 05-25061.

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

EN 50014:1997 + A1 + A2

EN 50020:2002

EN 1127-1:1997, clause 5.3.10

IEC TC 31/571CDV

(IEC 60079-28 Ed. 1.0 CDV)

(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 [Ex ib or is] IIC

Zertifizierungsstelle Explosionschutz
By order:

Dr.-Ing. U. Gerlach
Regierungsrat



Braunschweig, August 2, 2005

sheet 1/2

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

SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2052 X**

(15) Description of equipment

The fiberoptic coupler, type OC11 Ex / 3G... is an associated apparatus. It is used for the data transmission between electrical and optical fieldbus circuits.

The maximum permissible ambient temperature is +70 °C.

Electrical data

Supply circuit
(Plug connector J1: L+, L- and PE)

$U_n \leq 35 \text{ V DC}$
Maximum voltage $U_m = 60 \text{ V}$

RS485 circuit, remote
(Plug connector J2)

$U_n = 5 \text{ V}$
Maximum voltage $U_m = 60 \text{ V}$

RS485 circuit, local
(Plug connector J3)

$U_n = 5 \text{ V}$
Maximum voltage $U_m = 60 \text{ V}$

Optical interface

type of protection Ex ib or is IIC

$P_{opt \max} = 2.3 \text{ mW}$

cf. notes for manufacture and operation

Housing/screen earthing

for alternative connection to the protective earth conductor of the electrical system

(16) Test report PTB Ex 05-25061

(17) Special conditions for safe use

1. Resonance phenomena with radiated substances (explosive mixture) of hazardous extent (direct absorption of the radiation in the mixture with the effect of temperature rise or bond breakage (radicals)) shall not occur.

2. It shall be guaranteed that the irradiated surface does not fall below the value of $3 \times 10^{-5} \text{ mm}^2$ due to focussing.

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionschutz
By order:

Dr.-Ing. U. Gerlach
Regierungsrat



Braunschweig, August 2, 2005

sheet 2/2

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

Konformitätserklärung Nr. 3183 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/3G

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 50021 / 1999

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 TC 31/571CDV (IEC 60079-28 Ed.1.0 CDV)
EN 1127-1 / 1997 Abs. 5.3.10

Aussteller der EG-Baumusterbescheinigung:
Physikalisch - Technische Bundesanstalt
Bundesallee 100, D-38116 Braunschweig
Kenn-Nr. 0102, Registriernummer: PTB 05 ATEX 2052 X, PTB 05 ATEX 2053 X

Mülheim, den 12.08.05


(i.v. W. Stoll)

Ort und Datum der Ausstellung /
Place and date of issue

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

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 2052 X

(Translation)

Equipment: Fiberoptic coupler, type OC11 Ex / 3G...

Marking:  **II (2) G [Ex Ib or is] IIC**

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 / 3G... is adapted according to the requirements of IEC 60079-28 Ed. 1 / FDIS, protection of equipment and transmission systems operating with optical radiation.

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:  **II (2) G [Ex ib op is] IIC**

Applied standards

IEC 60079-28 Ed.1.0 / FDIS

Test report: PTB Ex 06-26083

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeyer
Direktor und Professor



Braunschweig, July 11, 2006

Sheet 1/1

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 • 38116 Braunschweig, Germany

Konformitätserklärung **Nr. 3183-1 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

Lichtwellenleiter Koppler Typ OC11 Ex / 3G...

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 2052 X, PTB 05 ATEX 2053 X

Mülheim, den 11.09.06

(i.V. W. Stoll)

Ort und Datum der Ausstellung /
Place and date of issue

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