



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx TUN 11.0026X issue No.: 0 Certificate history:

Status: Current

Date of Issue: 2011-10-25 Page 1 of 3

Applicant: **BARTEC GmbH**
Max-Eyth-Str. 16
97980 Bad Mergentheim
Germany

Electrical Apparatus: **Bus-Interface HART type 17-6583-^{*}H^{**}/^{****}**
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **[Ex ia Ga] IIC**
[Ex ia Ga] IIB
[Ex ia Da] IIIC
[Ex ia Da] IIIB

Approved for issue on behalf of the IECEx
Certification Body:

Karl-Heinz Schwedt

Position: Head of the IECEx certification body

Signature:
(for printed version)

Date: 2011-10-25

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

TÜV NORD CERT GmbH
Hanover Office
Am TÜV 1
30519 Hannover
Germany





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Manufacturer: **BARTEC GmbH**
Max-Eyth-Str. 16
97980 Bad Mergentheim
Germany

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I"
IEC 61241-11 : 2005 Edition: 1	Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection by intrinsic safety 'iD'

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

DE/TUN/ExTR11.0026/00

Quality Assessment Report:

DE/TUN/QAR06.0017/02



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The device is an associated apparatus. It is an interface between a PROFIBUS and 8 analog channels with "4 to 20 mA" output current which provides a galvanically safe connection between intrinsically safe and non-intrinsically safe circuits.

For technical data see attachment.

CONDITIONS OF CERTIFICATION: YES as shown below:

The device has to be erected in such a way, that a degree of protection of at least IP20 according to IEC 60529 is reached.

Technical data

The permissible temperature range is -20 °C to + 85 °C.

Supply circuit
(connections X4.23 X4.24)

$U = 20 \dots 30 \text{ V d.c.}$
 $U_m = 253 \text{ V}$

PA
(connections X4.21 X4.22)

For the connection to the potential
equalisation

Analog-in for measuring transducers resp. Analog-out
(connections X1.1, X1.2; X1.4, X1.5; X1.7, X1.8;
X1.10, X1.11; X1.13, X1.14; X1.16, X1.17; 1.19, X1.20;
X1.22,
X1.23)

In type of protection [Ex ia] IIC / IIB
resp. [Ex iaD] IIIC / IIIB
 $U_o = 26.7 \text{ V}$

$I_o = 89.9 \text{ mA}$
 $P_o = 600 \text{ mW}$

Maximum permissible external inductance
for IIC resp. IIIC

$L_o = 5 \text{ mH}$

Maximum permissible external inductance
for IIB resp. IIIB

$L_o = 18 \text{ mH}$

Maximum permissible external capacitance
for IIC resp. IIIC

$C_o = 93 \mu\text{F}$

Maximum permissible external capacitance
for IIB resp. IIIB

$C_o = 720 \mu\text{F}$

For the external inductance and capacitance:

All above-mentioned values are
only valid for the single
appearance of the inductance or
capacitance. For combinations see
values below.

Combination of inductance and capacitance for IIC

$L_o = 2 \text{ mH}, C_o = 35 \text{ nF}$

Combination of inductance and capacitance for IIB

$L_o = 16 \text{ mH}, C_o = 227 \text{ nF}$

Analog-in for an external standard signal
of 40 to 20 mA

$U_i = 50 \text{ V}$

(connections X1.2, X1.3; X1.5, X1.6; X1.8, X1.9;
X1.11, X1.12; X1.14, X1.15; X1.17, X1.18; X1.20,
X1.21; X1.23, X1.24)

$I_i = 87.7 \text{ mA}$

Effective internal inductance and capacitance

$C_i = \text{negligibly small}$
 $L_i = \text{negligibly small}$