IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Certificate No.:	**IECEx IBE 12.0021**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 2	Issue 1 (2013-08-09) Issue 0 (2012-09-19)
Date of Issue:	2021-10-15		

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

Equipment: **RS485-Profibus coupler, -Profibus repeater type 17-6583-3***/**** as well as Transmitting and receiving unit LWL type 17-2524-0001/**** and 17-2524-0002/******

Optional accessory:

Type of Protection: **Intrinsic safety "ib" and inherently safe optical radiation "op is"**

Marking: Type: 17-6583-3***/****

[Ex ib Gb] IIC
[Ex ib Db] IIIC

Type: 17-2524-0001/**** and 17-2524-0002/****

[Ex op is IIC T4 Gb]
[Ex op is IIIC Db]

Approved for issue on behalf of the IECEx Certification Body: **Alexander Henker**

Position: **Deputy Head of department Certification Body**

Signature: (for printed version)

Date: 2021-10-15

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 www.iecex.com or use of this QR Code.

Certificate issued by:

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg
Germany

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Date of issue: 2021-10-15 Issue No: 2

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

Additional manufacturing locations:

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-28:2015 Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2

This Certificate **does not** indicate compliance with 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 Reports:

DE/IBE/ExTR12.0019/00 DE/IBE/ExTR12.0019/01 DE/IBE/ExTR12.0019/02

Quality Assessment Report:

DE/TUN/QAR06.0017/13

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The RS485-Profibus coupler, -Profibus repeater is a device for transmitting date in hazardous area containing a master connection and one, two or four slave connections according to RS-485-IS standard. The slave connections are galvanically separated to master connection by means of opto coupler and their energy is limited. The electronic part has been considered as associated apparatus and must not be operated without any protection. It has to be assembled in a housing providing a degree of protection of at least IP20 when installed in safe area.

The Transmitting and receiving unit LWL consists of an optical fibre transceiver including limitating components for voltage and current, power supply and the Ethernet controller / switch. The Transmitting and receiving unit LWL i s used to convert electrical signals into optical signals and vice versa. The optical interface is connected via fibre optic cables to an identical unit or comparable equipment with identical type of protection, which must meet the requirements for the equipment protection level. Alternatively, the electrical signals can also be processed via a programmable logic module, e.g. as a Profibus signal.

The technical data are mentioned in the Annex.

SPECIFIC CONDITIONS OF USE: NO

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- The RS485-Profibus coupler, -Profibus repeater fulfils the requirements of IEC 60079-0, Ed. 7
- Modifications of schematics without influence on the intrinsically safe parameter have been considered.
- A Transmitting and receiving unit LWL Type: 17-2524-0001/**** and 17-2524-0002/**** has been added.

Annex:

Annex_IBE12.0021_02.pdf

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Technical data

Ambient temperature range	-25 °C ≤ T_{amb} ≤ +65 °C (Type: 17-6583-3***/****) -40 °C ≤ T_{amb} ≤ +70 °C (Type: 17-2524-0001/**** and 17-2524-0002/****)

Electrical values (Type: 17-6583-3***/****)

Non intrinsically safe circuits

Supply (connector X2, X3 and X4)		
Rated voltage	U_B	= 20…30 V DC
Nominal current	I_B	≤ 70 mA
Maximum voltage	U_m	= 253 V
Signal circuit (connector X1 and X5)		
Rated voltage	U_B	= 9 V
Nominal current	I_B	= 50 mA
Maximum voltage	U_m	= 253 V

Intrinsically safe output circuit (Ex ib IIC)

Profibus coupler (connector X5, X8, X9, X10, X11, X12, X13 and X14) (up to four circuits)	U_o	= 4.2 V DC
	I_o	= 142.4 mA
	P_o	= 130.6 mW
Maximum external capacitance	C_o	≤ 100 µF (at L_o = 0 mH)
Maximum external inductance	L_o	≤ 1.3 mH

All circuits are galvanically isolated from each other.

Electrical values (Type: 17-2524-0001/**** and 17-2524-0002/****)

Supply (connector X1 and X2)		
Rated voltage	U_B	= 20…30 V DC
Nominal current	I_B	≤ 100 mA
Maximum voltage	U_m	= 253 V
Signal circuit (connector X6 and X7)		Ethernet- or other data interface
Maximum voltage	U_m	= 253 V

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