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 EPS 14.0020U

Issue No: 1

Certificate history:
Issue No. 1 (2018-04-26)
Issue No. 0 (2014-05-02)

Status: **Current**

Date of Issue: **2018-04-26**

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

Equipment: **Line bushing with terminals 07-93**-****/****

Optional accessory:

Type of Protection: **flameproof enclosures "d", increased safety "e"**

Marking:

Ex db eb IIC Gb

Ex db eb I Mb

Approved for issue on behalf of the IECEx Certification Body: Holger Schaffer

Position: Head of certification

Signature:
(for printed version)

Date:

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.

Certificate issued by:

Bureau Veritas Consumer Products Services Germany GmbH
Businesspark A96
86842 Türkheim
Germany

IECEx Certificate of Conformity

Certificate No:	IECEx EPS 14.0020U	Issue No: 1
Date of Issue:	**2018-04-26**	Page 2 of 4
Manufacturer:	**BARTEC GmbH** Max-Eyth-Straße 16 97980 Bad Mergentheim **Germany**	

Additional 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 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 : 2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*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/EPS/ExTR13.0033/01

Quality Assessment Report:

DE/TUN/QAR06.0017/09

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Date of Issue: 2018-04-26

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The line bushing type 07-93**-**** / * *** with terminals is used for the electrical connection of electrical equipment in explosion-proof enclosures. This may be the connection between a flameproof housing and a housing in another approved type of protection according to IEC 60079-0, Section 1 or between interconnected flameproof enclosures. Because of this design, the wires/cables are always protected against direct contact.

Depending on the type they are designed for intrinsically safe circuits, measuring, regulation and controll circuits or power circuits.

For schedule of limitations see additional page - annex.

SPECIFIC CONDITIONS OF USE: NO

IECEx Certificate of Conformity

Certificate No: IECEx EPS 14.0020U Issue No: 1

Date of Issue: **2018-04-26** Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Rev. 1 standard update and addition of a new potting.

Annex:

Bart_13TH0451_IECEx EPS 14.0020U_Attachment to IECEx certificate_1.pdf

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

Electrical Apparatus: Line bushing with terminals type 07-93**-****/****

Description:

The line bushing type 07-93**-****/**** with terminals is used for the electrical connection of electrical equipment in explosion-proof enclosures. This may be the connection between a flameproof housing and housing in another approved type of protection according to IEC 60079-0, section 1 or between interconnected flameproof enclosures. Because of this design, the wires/cables are always protected against direct contact.

Depending on the type, they are designed for intrinsically safe circuits, measuring, regulating and control circuits or power circuits.

Technical data:

Type 07-93**-*0**/*0** (with BARTEC terminals):

Rated voltage:	Type 07-93*4-*0**/*0**:	690 V
	Type 07-93*6-*0**/*0**:	1000 V
Related current(1):	Max. 40 A	
Number of terminals:	2 to 6	
Current type:	AC and DC	
Rated cross section:	0.35 – 6 mm²	
Service temperature range(1):	-60 °C ≤ T_S ≤ +110 °C	

(1) = Type-dependent ranges.
(These ratings are given in the marking of the line bushing)
- Service temperature depends on used conductor type.
- The related current depends on the cross-section of the conductor.

Type 07-93**-*0**/*1** (with circuit board terminals):

Rated voltage(2):	Max. 1000 V
Related current(2):	Max. 54 A
Current type(2):	AC and DC
Number of terminals(2):	1 to n
Rated cross section(2):	Max. 6 mm²
Service temperature range (2):	-60 °C ≤ T_S ≤ +110 °C

(2) = Type-dependent ranges depending on the used conductor, terminals and size of the sleeve.
(these ratings are given in the marking of the line bushing)

All types:

Size of sleeve (with thread):	M10x1 – M56x1,5 (alternatively to metric also different thread types, e.g. NPT)
Size of sleeve (cylindric):	Ø 10 mm – Ø 54 mm
Join length:	≥ 9.5 mm, ≥ 12.5 mm, ≥ 25 mm, ≥ 40 mm
Static test pressure (type tested) (3):	41.1 bar – 48.6 bar

(3) = Type-dependent ranges.
(These ratings are given in the marking of the line bushing)

- Static test pressure is related to the lower service temperature of the line bushing.

Limitation for use (1), (2) and (3) can be found in the related documents to each shipment.

Notes for manufacture, installation and operation:

The line bushings have to be used according to the ratings given in the marking and the related documents attached to the shipment.

The classification of the temperatures to the temperature class of the line bushing must be stipulated in the type test of the electrical equipment concerned.

For determination of the max. current rating of the component, the self-heating and the maximum heating of the electrical apparatus have to be considered. The max. service temperature of the line bushing with terminals has to be considered.

The line bushings are suitable for installation in electrical equipment of protection type flameproof enclosures “d” groups I, IIA, IIB or IIC.

Line bushings screwed in threaded holes must meet minimum the requirements of IEC 60079-1, section 5.3.

Cylindrical holes for the line bushings with cylindrical joint must meet the minimum requirements of IEC 60079-1, section 5.2. The information to the outside-diameter of cylindrical sheaths in the instruction manual has to be considered. This cylindrical joint must be included in type testing to IEC 60079-1 section 15.3 in accordance with the group subdivision of the electrical equipment concerned (I, IIA, IIB or IIC).

The line bushings must be fixed to the electrical equipment in such a way that they are secured against rotation and self-loosening.

The conductors of the line bushing must be connected in enclosures meeting a type of protection to IEC 60079-0, section 1. The conductors must be suitably connected in accordance with their rated cross sections and the selected type of protection.