(1) EC-Type Examination Certificate

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres – **Directive 94/9/EC**

(3) EC Type Examination Certificate Number

EPS 14 ATEX 1 644 U **Revision: 0**

(4) Equipment: Line bushing with terminals type 07-93**-****/****

(5) Manufacturer: Bartec GmbH

(6) Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

(7) This component and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, Notified Body No. 2004 in accordance with Article 9 of the Council Directive 94/9/EC of March 23rd 1994, certifies that this component 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 of the Directive. The examination and test results are recorded in the confidential report 13TH0451.

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

EN 60079-0:2012 **EN 60079-1:2007**

EN 60079-7:2007

(10) The sign "U" placed behind the certificate number indicates that this certificate should not be confounded with certificates issued for equipment or protective systems. This component certificate only serves as a basis for the issuing of certificates for equipment or protective systems.

(11) This EC-Type Examination Certificate relates only to the design and the construction of the specified component in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this component.

(12) The marking of the component shall include the following:

II 2G Ex d e IIC Gb or II 2G Ex db eb IIC

I M2 Ex d e I Mb or I M2 Ex db eb I

Certification department of explosion protection

Türkheim, April 3, 2014

D. Zitzmann

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(13) **Annexe**

(14) **EC-Type Examination Certificate EPS 14 ATEX 1 644 U**

(15) Description of component:

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 EN 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.

Electrical data:

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

Rated isolation 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	
Withstand temperature range[(1)]:	-60 °C ≤ T ≤ +110 °C	

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

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

Rated isolation voltage[(2)]:	max. 1000 V
Related current[(2)]:	max. 54 A
Current type[(2)]:	AC and DC
Number of terminals[(2)]:	1 to n
Current type[(2)]:	AC and DC
Rated cross section[(2)]:	max. 6 mm²
Withstand temperature range[(2)]:	-60 °C ≤ T ≤ +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)

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All types

Size of sleeve (with thread)	M10x1 - M42x1,5 (alternatively to metric also different thread types , e.g. NPT)
Size of sleeve (cylindric):	Ø 10mm - Ø 40mm
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 ratings:
(These ratings are given in the marking of the line bushing)

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

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

(16) Test report: 13TH0451

(17) Special conditions for safe use:

- 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. withstand 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 EN 60079-1, clause 5.3, table 3 (cylindrical threaded joints).
- Cylindrical holes for the line bushings with cylindrical joint must meet the minimum requirements of EN 60079-1, table 1 and 2 (cylindrical joint). The information to the outside-diameter of cylindrical sleeves in the operation instructions has to be considered.
- Line bushings with cylindrical joint must be included in type testing to EN 60079-1 section 15 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 EN 60079-0, section 2. The conductors must be suitably connected in accordance with their rated cross sections and the selected type of protection.

(18) Essential health and safety requirements:

Met by standards.

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