



# 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](http://www.iecex.com)

Certificate No.: **IECEx PTB 13.0050U** issue No.: **0** Certificate history:

Status: **Current**

Date of Issue: **2013-11-05** Page 1 of 3

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

Electrical Apparatus: **Cable gland, type 07-925\*-\*\*\*\*/\*\*\*\* to 07-929\*-\*\*\*\*/\*\*\*\***  
Optional accessory:

Type of Protection: **Flameproof enclosure "d", Protection by enclosure 't'**

Marking: **Ex d IIC Gb**  
**Ex tb IIIC Db IP 6X**

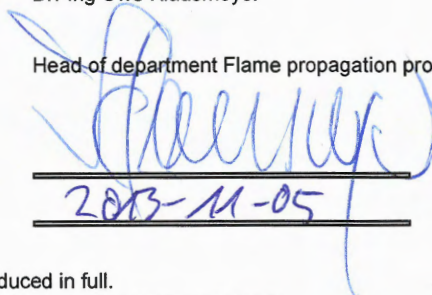
Approved for issue on behalf of the IECEx  
Certification Body:

Dr.-Ing Uwe Klausmeyer

Position:

Head of department Flame propagation processes

Signature:  
(for printed version)

  
2013-11-05

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](http://www.iecex.com).

Certificate issued by:

**Physikalisch-Technische Bundesanstalt (PTB)**  
Bundesallee 100  
38116 Braunschweig  
Germany





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Manufacturer: **Bartec GmbH**  
Max-Eyth-Str. 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 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:

- |  |  |
|--|--|
| <b>IEC 60079-0 : 2007-10</b><br>Edition: 5 | Explosive atmospheres - Part 0: Equipment - General requirements                     |
| <b>IEC 60079-1 : 2007-04</b><br>Edition: 6 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"    |
| <b>IEC 60079-31 : 2008</b><br>Edition: 1   | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't' |

*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/PTB/ExTR13.0069/00

Quality Assessment Report:  
DE/TUN/QAR06.0017/04



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The cable entry, types 07-925\*-\*\*\*\*/\*\*\*\* to 07-929\*-\*\*\*\*/\*\*\*\*, is used for entering cables into flameproof compartments.

Depending on their design, the cables shall be installed to provide for fixed wiring. When designed as a flared screwed Gland, Installation may be non-fixed.

For further information refer to the attachment!

### CONDITIONS OF CERTIFICATION: NO

## Attachment to IECEx PTB 13.0050 U

### Electrical data

Rated line voltage $U_0/U$ <sup>1)</sup> .....	up to	300 V/300 V 450 V/750 V	300 V/500 V 600 V/1000 V <sup>2)</sup>
Rated cross section <sup>1)</sup> .....	max.	185 mm <sup>2</sup>	
Number of wires <sup>1)</sup> .....		1 to 47	
Bushing size (diameter) <sup>1)</sup> .....		15 mm <sup>-30</sup> <sub>-100</sub> to 90 mm <sup>-30</sup> <sub>-100</sub>	
Length of flameproof joint of sleeve <sup>1)</sup> mm		≥ 12.5 mm, ≥ 25 mm, ≥ 40	

Rated current for (for multi-wire designs, ambient temperatures 40 °C and admissible temperature of 80 °C at the cable for T6)	0.08 mm <sup>2</sup>	1.0 A	10 mm <sup>2</sup>	50 A
	0.2 mm <sup>2</sup>	3.0 A	16 mm <sup>2</sup>	67 A
	0.3 mm <sup>2</sup>	4.5 A	25 mm <sup>2</sup>	90 A
	0.35 mm <sup>2</sup>	5.5 A	35 mm <sup>2</sup>	110 A
	0.5 mm <sup>2</sup>	7.5 A	50 mm <sup>2</sup>	140 A
	0.75 mm <sup>2</sup>	10 A	70 mm <sup>2</sup>	170 A
	1.0 mm <sup>2</sup>	12 A	95 mm <sup>2</sup>	205 A
	1.5 mm <sup>2</sup>	15 A	120 mm <sup>2</sup>	240 A
	2.5 mm <sup>2</sup>	21 A	150 mm <sup>2</sup>	275 A
	4.0 mm <sup>2</sup>	28 A	185 mm <sup>2</sup>	310 A
	6 mm <sup>2</sup>	36 A		

<sup>1)</sup> depending on type and design of the cable entry and the cable used

<sup>2)</sup> NSSHÖU up to 1140 V

Temperatures at the place of installation of the cable entry for normal operation of the electrical apparatus ..... -55 °C to +110 °C

Max. operating temperature at the location of the cable entry for normal operation of the electrical apparatus .....	cast resin	110 °C
	H05RN-F, H07RN-F	60 °C
	Ölflex-100	70 °C
	Ölflex-110	80 °C
	NSSHÖU	90 °C
	H05GG-F	110 °C
	RADOX 125	120 °C
	RADOX 155	150 °C

The maximum current carrying capacity of connecting wires shall be established on the basis of the self-heating rate and the heating rate of the enclosure at the place of installation, starting from the maximum permissible ambient temperature; due consideration shall also be given to the service temperatures of the cast resin and the line quality.

The cable gland of the types 07-925-..../.... to 07-929-..../.... may also be manufactured with the following modifications:

The lower range of ambient temperatures has been extended to -60 °C.  
(depending on the used flexible cables, the limits may be narrower)

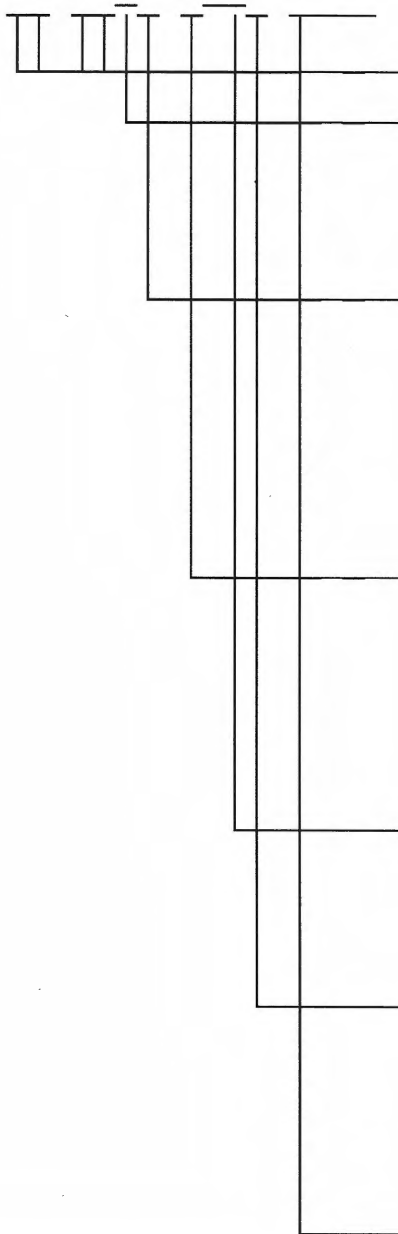
Additional sleeve sizes and materials can be used.

Additional materials are stainless steel, grey cast iron, aluminium alloys (with Mg < 6 %  
by wt).

There are additional installation options (angled installation, cables with stripped  
insulation)

Additional types of flexible cables can be used.

The type code has been extended:



ID number for cable gland

ID number for sleeve shape and type of thread

- 0 = threaded, metric
- 1 = threaded, other than metric, e.g. NPT
- 2 = threaded, other than metric, e.g. WWR
- 3 = threaded, metric, special type
- 4 = threaded, other than metric, e.g. Pg

ID number for type of cable

- 0 = subject to order
- 1 = Rubber-insulated flexible cable up to 1140 V
- 2 = PVC flexible cable up to 1000 V**
- 3 = Rubber-insulated flex. cable up to 1000 V for elevated
- 4 = Rubber-insulated flexible cable up to 500 V
- 5 = PVC flexible cable up to 500 V
- 6 = Rubber-insulated flexible cable up to 750 V
- 7 = Flexible cables for intrinsically safe circuits
- 8 = Flexible cables with shield

ID number for core cross section

- A = special cross sections
- B = 0.14 ... 0.2 mm<sup>2</sup>
- C = 0.25 ... 0.3 mm<sup>2</sup>
- D = 0.34 ... 0.35 mm<sup>2</sup>
- E = 0.5 mm<sup>2</sup>
- F = 0.75 mm<sup>2</sup>
- G = 1.0 mm<sup>2</sup>
- H = 1.5 mm<sup>2</sup>
- J = 2.5 mm<sup>2</sup>
- K = 4 mm<sup>2</sup>
- L = 6 mm<sup>2</sup>
- M = 10 mm<sup>2</sup>
- N = 16 mm<sup>2</sup>
- P = 25 mm<sup>2</sup>
- Q = 35 mm<sup>2</sup>
- U = 120 mm<sup>2</sup>
- V = 150 mm<sup>2</sup>
- W = 185 mm<sup>2</sup>
- Z = mixed

ID number for version and number of cores, flexible cable

- |               |               |
|---------------|---------------|
| Sleeve end    | Collar end    |
| 01 = 1 core   | 51 = 1 core   |
| 02 = 2 cores  | 52 = 2 cores  |
| etc. up to    | etc. up to    |
| 47 = 47 cores | 97 = 47 cores |

ID number for sleeve size

- |                           |             |
|---------------------------|-------------|
| 1 = Ø 15mm                | 7 = Ø 46 mm |
| 2 = Ø 22 mm               | B = Ø 50 mm |
| 3 = Ø 32 mm               | C = Ø 60 mm |
| 4 = Ø 34 mm               | D = Ø 70 mm |
| 5 = Ø 36 mm               | E = Ø 80 mm |
| 6 = Ø 40 mm               | F = Ø 90 mm |
| 9 = sizes between 1 ... F |             |

Classification / versions

### Notes for manufacturing and operation

Cylindrical bore holes which will receive the cable entries with cylindrical joint shall comply with the requirements set forth in IEC 60079-1, tables 1 or 2 (cylindrical joints) as a minimum. The joint surfaces shall be designed such that the mean roughness value does not exceed  $R_a$  6.3 µm.

These cable entries are suited for installation in electrical apparatus designed to Flameproof Enclosure "d" type of protection of groups IIA, IIB or IIC.

If the reference pressure exceeds 20 bar, the cable entry shall be included into the type test required in IEC 60079-1, section 15.1.3 (overpressure test) in compliance with the classification of the corresponding electrical apparatus (groups IIA, IIB or IIC).

The cable entry shall be fixed in the electrical apparatus in such a way that rotation and accidental loosening will be prevented.

The connecting wires of the cable entry shall be connected in enclosures that conform to a standardized type of protection as specified in IEC 60079-0, section 1.

The assignment of the temperatures to the temperature class of the cable entry shall be laid down during the type test of the respective electrical apparatus.