



Note on instructions

When working in hazardous areas, the safety of personnel and equipment depends on compliance with the relevant safety regulations. The people in charge of installation and maintenance bear a special responsibility. It is essential that they have an exact knowledge of the applicable rules and regulations.

The instructions provide a summary of the most important safety measures and must be read by everyone working with the product so that they will be familiar with the correct handling of the product.

The instructions have to be kept for future reference and must be available throughout the expected life of the product.

Description


Pressure and vacuum tight cable entries, type 07-92...-.../U.. and 07-92...-.../D.. are elements which allow electrical cables to be introduced into an Ex d enclosure, without danger of explosion. Using the pressure-tight and vacuum-tight cable entries prevents a transfer of mass through the conductors and a drop in pressure/vacuum.

The pressure and vacuum-tight cable entries consist of a threaded metal sleeve encapsulating the lengths of the electric leads and single conductors with cast resin. That ensures sealing along the conductor insulation and through the stranded conductors.

The type 07-92...-.../U.. version is suitable for the range of application from -500 mbar to 6 bar. The type 07-92...-.../D.. version with additional sealing is suitable for the range of application from -500 mbar to 80 bar.

Explosion protection

Ex type of protection

ATEX
 II 2 G Ex db IIC T6-T4

 0044

IECEX
 Ex db IIC T6-T4

Certification

PTB 97 ATEX 1079 X
 IECEX PTB 13.0051X

Operation temperature

-60 °C to +110 °C
 (-76 °F to +230 °F)

Depends on the respective version.
 See accompanying order confirmation.

Approved for zones

1 and 2

Pressure

Type
 07-92...-.../U..: -500 mbar to 6 bar
 (-7.25 psi to 87 psi)

Type
 07-92...-.../D.. with
 a supplemental
 seal: -500 mbar to 80 bar
 (-7.25 psi to
 1,160.3 psi)

Depends on the respective version.
 See accompanying order confirmation.

Technical data

Electrical data

Rated voltage: max. 1140 V

Terminal cross-section:
 0.2 mm² to 185 mm²

Max. rated current at:

0,2 mm ²	3,0 A
0,3 mm ²	4,5 A
0,35 mm ²	5,5 A
0,5 mm ²	7,5 A
0,75 mm ²	10 A
1,0 mm ²	12 A
1,5 mm ²	15 A
2,5 mm ²	21 A
4,0 mm ²	28 A
6 mm ²	36 A
10 mm ²	50 A
16 mm ²	67 A
25 mm ²	90 A
35 mm ²	110 A
50 mm ²	140 A
70 mm ²	170 A
95 mm ²	205 A
120 mm ²	240 A
150 mm ²	275 A
185 mm ²	310 A

Mechanical strength

Impact energy: max. 7 Nm

Sleeve material

Metal, bare, varnished or electro-plated

Thread size

M10 x 1 to M48 x 1.5

Dimensions

See separate dimension sheet.

Safety Instructions

The pressure and vacuum tight cable entries are suitable for use in zones 1/2.

The pressure and vacuum tight cable entry may be used only for the approved purpose. Incorrect installation can cause malfunctioning and the loss of explosion protection.

When determining the maximum current carrying capacity of the connection cores, consideration must be given to their self-heating and the enclosure heating at the place of installation at maximum ambient temperature.

Utilization in areas other than those specified or the modification of the product by anyone other than the manufacturer is not permitted and will exempt BARTEC from liability for defects and any further liability.

The generally applicable statutory rules and other binding directives relating to workplace safety, accident prevention and environmental protection must be observed.

The pressure and vacuum tight cable entries may be operated only if they are clean and not damaged in any way.

It is not permissible to convert or modify the pressure and vacuum tight cable entries.

Marking

Particularly important points in these instructions are marked with a symbol:

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

Note

Important instructions and information on effective, economical and environmentally compatible handling.

Standards conformed to

IEC 60079-0:2007
EN 60079-0:2009
IEC/EN 60079-1:2007

Transport, Storage

NOTICE

Damage to the pressure and vacuum tight cable entries through incorrect transport or incorrect storage.

- Transport and storage is permissible in original packaging only.

Assembly, Installation and Commissioning

WARNING

Risk of serious injury due to incorrect proceedings.

- Only authorized and qualified personnel may do any of the assembly, disassembly, installation and commissioning work.

Assembly/Disassembly

WARNING

Risk of serious injury due to incorrect assembly.

- When assembling the equipment, the IEC/EN 60079-14 and other applicable national standards and installation regulations must be observed.
- Tapped holes, into which pressure and vacuum tight cable entries are screwed, must meet the minimum requirements of IEC/EN 60079-1, section 5.3 (table 3 and 4). Observe the minimum depth of engagement.
- When laying the sheathed lead in Ex zones, the installation regulations for hazardous areas must be observed.
- Select the quality of the cable so that it corresponds to the thermal and mechanical requirements of the respective range of application.

Note

The non-threaded sleeve is usually mounted outwards from the d area. As a special version, the cable entry can be screwed in from outside.

Check when assembling:

- Use appropriate tools.

Thread size	Max. tightening torque
M10 x 1	10 Nm (0.69 lb.ft)
M16 x 1	15 Nm (1.03 lb.ft)
M16 x 1.5	15 Nm (1.03 lb.ft)
M20 x 1.5	25 Nm (1.71 lb.ft)
M24 x 1.5	35 Nm (2.40 lb.ft)
M25 x 1.5	35 Nm (2.40 lb.ft)
M33 x 1.5	50 Nm (3.43 lb.ft)
M36 x 1.5	50 Nm (3.43 lb.ft)
M38 x 1.5	50 Nm (3.43 lb.ft)
M42 x 1.5	50 Nm (3.43 lb.ft)
M48 x 1.5	50 Nm (3.43 lb.ft)

- Make sure the pressure and vacuum tight cable entry is in perfect condition.
- Fasten the pressure and vacuum tight cable entry in the electrical operating equipment in a way that will prevent rotation and self-loosening. Customary aids are: lock washer, hexagon nut, adhesive, etc. Assembly instruction, see page 3.
- If sealing materials are used, they must be selected to ensure compliance with the specified operating temperature and chemical resistance.
- Do not use sealing material over Ex gaps.

Installation

Check when installing:

- Core wires that are connected in hazardous areas must be protected by means of an enclosure offering a standardized type of protection conforming to IEC/EN 60079-0.
- Cores that are not needed must be wired to terminals.
- The Pressure Equipment Directive 97/23/EC and the relevant standards it covers must be observed.

Commissioning

Before commissioning, check that:

- The pressure and vacuum tight cable entry is assembled and installed correctly.
- The pressure and vacuum tight cable entry and cables are not damaged.
- The cores have been laid correctly.
- The junction space is clean.
- The connection has been established properly.

Note

Temperature ranges are specified for fixed installed cables. For flexible installation, it is necessary to contact the manufacturer.

Operation

DANGER

Death or serious injury due to improper use.

- The pressure and vacuum tight cable entries may be operated only within the technical limits that apply to them (see page 1).

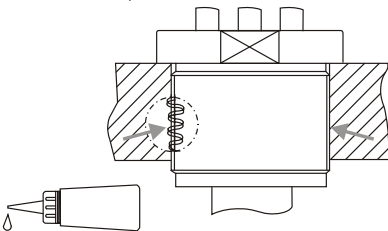
Assembly Instruction

Note

The cable entries in the sketches are used as examples for all different types of cable entries. The non-threaded sleeve is mounted outwards from the d area.

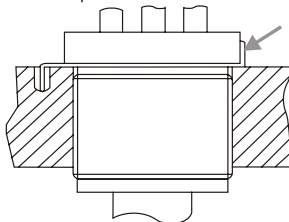
- Protection against twisting and self-loosening by gluing in place with a temperature-resistant adhesive.

"d" connection space



- Protection against twisting and self-loosening by means of a lock washer.

"d" connection space



Maintenance and Fault Clearance

WARNING

Risk of serious injury due to incorrect proceedings.

- Only authorized qualified personnel may do any of the work relating to maintenance and fault clearance.
- IEC/EN 60079-17 must be observed.

Maintenance

WARNING

Risk of serious accidents due to damaged parts.

- Check pressure and vacuum tight cable entries and cables regularly for cracks and damage. Make sure that they are properly established.

The operator of pressure and vacuum tight cable entries must keep them in good condition, operate them properly, monitor them and clean them regularly.

Fault Clearance

WARNING

Risk of serious injury due to use of non-original spare parts.

- Use original parts only as replacements.

Defective pressure and vacuum tight cable entries cannot be repaired.

They must be replaced considering this operational instruction.

Accessories, Spare Parts

See BARTEC catalogue.

Disposal

The components in the pressure and vacuum tight cable entries contain metal and plastic parts.

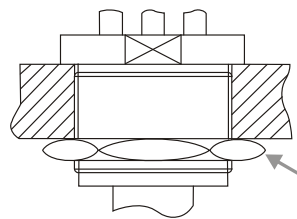
Therefore the statutory requirements for disposing of electronic scrap must be observed (e.g. disposal by an approved disposal company).

Service Address

BARTEC GmbH
Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany
Tel.: +49 7931 597-0
Fax: +49 7931 597-119

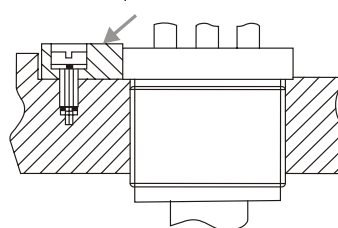
- Protection against twisting and self-loosening by securing with a locknut.

"d" connection space



- Protection against twisting and self-loosening by means of a loosening protection.

"d" connection space



Erklärung der Konformität
Declaration of Conformity
Attestation de conformité

N° 01-9200-7C0002

BARTEC

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



Wir	We	Nous
BARTEC GmbH,		
erklären in alleiniger Verantwortung, dass das Produkt	declare under our sole responsibility that the product	attestons sous notre seule responsabilité que le produit
Ex d Leitungseinführung	Ex d cable entry	Entrée de câble Ex d

Typ 07-920*-**/**** bis 07-924*-****/******

auf das sich diese Erklärung bezieht den Anforderungen der folgenden Richtlinien (RL) entspricht	to which this declaration relates is in accordance with the provision of the following directives (D)	se référant à cette attestation correspond aux dispositions des directives (D) suivantes
ATEX-Richtlinie 94/9/EG	ATEX-Directive 94/9/EC	ATEX-Directive 94/9/CE
und mit folgenden Normen oder normativen Dokumenten übereinstimmt	and is in conformity with the following standards or other normative documents	et est conforme aux normes ou documents normatifs ci-dessous

**EN 60079-0:2009
EN 60079-1:2007**

Kennzeichnung	Marking	Marquage
II 2 G Ex db IIC T6-T4		
Verfahren der EG-Baumusterprüfung / Benannte Stelle	Procedure of EC-Type Examination / Notified Body	Procédure d'examen CE de type / Organisme Notifié

PTB 97 ATEX 1079 X
0102 PTB, Bundesallee 100, 38116 Braunschweig, D

CE 0044

Bad Mergentheim, den 26.08.2014

ppa. Ewald Warmuth
Geschäftsleitung / General Manager

03-0383-0289