



## 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

The polyester distribution boxes, type 07-5103-.../..., 07-5105-.../..., 07-5106-.../... and 07-5107-.../..., are used for connections and distribution of incoming and outgoing cables and wires with certified connecting and/or rail-mounted terminals.

The enclosure is made of glass-fibre reinforced polyester. The lid and base are fastened with stainless steel captive screws (+/- crosshead).

A grooved spring system with inserted sealing chord in between the lid and the base provides for the high protection type IP 66. The assembly of the distributions is done through the holes found outside of the sealed space.

The distribution boxes are used for connecting lights, devices and signals. The distribution boxes are also suitable for intrinsically safe electric circuit's connections. In this case, a special marking is required.

The BARTEC Varnost distribution boxes can be used in hazardous areas of both zone 1 and 2 with certified explosion subgroups II and the temperature class T5/T6 and as well as in zone 21 and 22 with certified max. surface temperature.

## Explosion protection

### ATEX

Ex type of protection

⊕ II 2G Ex e ia/ib IIA, IIB, IIC T6, T5 Gb

⊕ II 2G Ex ia/ib IIA, IIB, IIC T6, T5 Gb

For type 07-5103-.../... and 07-5105-.../... also:

⊕ II 2D Ex tb IIC T80°C, T95°C Db IP65/IP66

For type 07-5105-.../... also:

⊕ II 2D Ex ia/ib IIC T80°C Db

Certification

PTB 08 ATEX 1064X

### IECEX

Ex type of protection

Ex e ia/ib IIA, IIB, IIC T6, T5 Gb

Ex ia/ib IIA, IIB, IIC T6, T5 Gb

For type 07-5103-.../... and 07-5105-.../... also:

Ex tb IIC T80°C, T95°C Db IP65/IP66

For type 07-5105-.../... also:

Ex ia/ib IIC T80°C Db

Certification

IECEX PTB 09.0009X

## Working temperature ranges

With EPDM gasket:

-20 °C to +95 °C

(-4 °F to +203 °F)

With inspection windows:

-25 °C to +95 °C

(-13 °F to +203 °F)

With silicone gasket:

-55 °C to +100 °C

(-67 °F to +212 °F)

## Ambient temperature ranges

Depending on the temperature class:

T5, T95 °C, and for the Ex ia/ib IIC T6 Gb version, silicone gasket:

-55 °C to +55 °C

(-67 °F to +131 °F)

T6, T80 °C, silicone gasket:

-55 °C to +40 °C

(-67 °F to +104 °F)

T6, EPDM gasket and inspection window(s):

-20 °C to +40 °C

(-4 °F to +104 °F)

## Approved for zones

1 and 2

21 and 22

## Technical data

### Protection class

Max. IP66

### Rated voltage (U<sub>e</sub>)

AC/DC 1000 V

### Mechanical strength

Impact energy: 7 Joule

### Enclosure material/manufacturing process

Type 07-5103-.../... and 07-5105-.../...

– Glass-fiber reinforced polyester

– Surface resistance <10<sup>9</sup>Ω

– RAL 9005 black

Type 07-5106-.../... and 07-5107-.../...

– Glass-fiber reinforced polyester

– Surface resistance <10<sup>12</sup>Ω

– RAL 9000/RAL 7001 grey

### Lid screws

Stainless Steel, cross-head (+)

### Recommended tightening torque

M4 screw: ca. 1.2 Nm

M6 screw: ca. 1.4 Nm

### Terminals

Certified connecting and/or rail-mounted terminals with a maximum rated voltage of 1100 V AC/DC and a maximum rated cross section of 300 mm<sup>2</sup>.

For information about the tightening torque of the terminal screw, see the manufacturer's catalogue.

### Dimensions in mm (in)

From 80 x 75 x 55

(3.1 x 3 x 2.2)

to 600 x 250 x 120

(23.6 x 9.8 x 4.7),

see also Bartec catalogue

## Safety instructions

The junction box may be used within the specified temperature class and the temperature range indicated for it (see type label).

The junction box may be operated only if it is clean and not damaged in any way. Dust deposits > 5 mm (> 0.2 in) must be removed.

As for junction boxes used in flammable dust, the ignition temperature of the dust/air mixture and the glowing temperature of the dust concerned must be greater than the maximum surface temperature of the distribution box taking into account of the given safety factor specified in EN 60079-0.

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 Varnost 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.

Observe the applicable laws and directives when commissioning or restarting operation.

Always follow the safety instructions on the operating equipment.

## 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

EN 60079-0:2018/IEC 60079-0:2017  
EN 60079-7:2015/IEC 60079-7:2015  
EN 60079-11:2012/IEC 60079-11:2011  
EN 60079-31:2014/IEC 60079-31:2013  
as well as  
EN 60439-1:1999 + A1:2004  
EN 62208:2011  
EN 60445:2010  
EN 60529:1991 + A1:2000 + A2:2013

## Transport, storage

### CAUTION

Risk of injury due to heavy loads.

- Use an appropriate carrying aid or an appropriate means of transport (e.g. a forklift) with an adequate load-carrying ability.
- Ensure that the lifted load will not tip over or slip off.

### NOTICE

Damage through incorrect transport or incorrect storage.

- Transport the junction box in original packaging, handle with care, and do not drop.
- Store the junction box dry in original packaging.

## Assembly, installation, and commissioning

### WARNING

Risk of serious injury due to incorrect proceedings.

- Only qualified personnel who are authorized and trained to assemble electrical components in hazardous (potentially explosive) areas may do any of the assembly, disassembly, installation and commissioning work.
- For assembly and operation of explosion protected electrical equipment, relevant installation and operating regulations are to adhere (e.g. Betr.SichV, IEC/EN 60079-14 and series DIN VDE 0100).
- The data on the label and the EEC design test data are to be observed. Further technical information are provided in the Bartec catalog and on the product itself.
- Do not open the junction box when energized.

## Assembly / disassembly

### DANGER

Death or serious injury because of a missing protective earth connection.

- Metallic conductor entries must be connected to the ground. With plastic enclosures, BARTEC Earth loc or appropriate ground plates serve the similar purpose.

### WARNING

Risk of serious injury due to incorrect proceedings.

- The assembly with connecting and/or rail-mounted terminals must be implemented under the consideration of the EEC design inspection certificate.

Check when assembling:

- Use suitable tools.
- Pay attention to the type of mounting required (for fitting into enclosure/attachment with junction box).
- For junction boxes placed in outdoors, steps must be taken to ensure smooth operation, for example rain protected roofs, and if necessary, sufficient enclosure protection.

## Installation

### WARNING

Risk of injury due to incorrect proceedings.

- Extensions or modifications to the junction box are only permissible if the manufacturer's approval is obtained first.
- The IEC/EN60079-14 must be observed.

Installations for the highly combustible range must exhibit an EEC design inspection certificate. Installation of these components must take place in such way, so that at least the enclosure remains IP54.

Connection of cables and conductors to equipment in hazardous areas require Ex certified entries, which are suitable for respective cable and conductor types. They must possess the protection type e" and contain a suitable sealing gasket, so that the protection class of the enclosure remains at least IP54.

Unused holes for cable entries have to be sealed with Ex-certified plugs. Connection of cables and conductors of zone 21 and 22 equipment require at least the protection class IP 65.

## Connecting conductors

**⚠ WARNING**

Risk of serious injury due to incorrect proceedings.

- All terminal positions, including the unused ones, are to be tightened firmly.
- The connections must be secured against self-loosening.

Take care when connecting conductors:

- Remove approx. 6 mm (0.24 in) conductor insulation from the cores.
- Prepare the ends of fine-stranded and multi-stranded conductors: Crimp wire end sleeves with suitable crimping tools in order to achieve a constant pressure quality.
  - NOTICE! Take care not to damage the individual wires.
- Release terminals.
- Put the wire in the terminals.
- Tight the terminals with a maximum permissible torque depending from the size of the screws. For information about tightening torque of the terminal screw, see the manufacturer's catalogue.

## Commissioning

Before commissioning, check that:

- The junction box has been installed in compliance with regulations.
- The junction box is not damaged.
- The connection has been established properly.
- The cables have been laid correctly.
- All screws have been tightened securely.
- The junction box functions perfectly.

**i Note**

*Electrical equipments, before putting into operation, and at certain time intervals, are to be subjected and to examination by an electrical expert.*

## Operation

**⚠ DANGER**

Death or serious injury through improper use.

- The distribution box may be operated only within the technical limits that apply to it (see page 1).

The operation of the equipment is to take place only in intact and clean condition.

## Maintenance and fault clearance

**⚠ WARNING**

Risk of serious injury due to incorrect proceedings.

- Only authorized qualified personnel are allowed to do any of the work relating to maintenance and fault clearance.
- IEC/EN 60079-17 must be observed.
- Do not open the junction box when energized.

**⚠ WARNING**

Risk of serious injury due to damaged parts.

- If any part of the equipment is damaged, it should be exchanged only with original parts (e.g. sealing gasket/cable glands/terminals).

## Maintenance

**⚠ WARNING**

Risk of serious injury due to electrostatic charging.

- For type 07-5106-.../....., 07-5107-.../....., and for windows with surface resistance of  $>10^9 \Omega$  potential electrostatic charging hazard exist. Only wet cleaning is allowed.

The operator of the junction box must keep it in good condition, monitor it and clean it regularly. He has to determine the maintenance intervals depending on the conditions of use.

Within the scope of maintenance:

- Check junction box, cable entries, sealings, and cables regularly for cracks and damage.
- Make sure that they are properly established.

## Fault clearance

The junction box is defective if the encapsulation is damaged and/or if one of the components does not function any longer.

In this case:

- Replace defective parts in the encapsulation with original parts immediately.
- Replace or repair the defective components with original parts.

**i Note**

*Follow the components mounting instructions/operating instructions to replace or repair the components.*

## Accessories, spare parts

For accessories and spare parts, see BARTEC catalogue.

## Disposal

The junction box and its components 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).

**i Note**

*Ensure environmentally friendly disposal of all components according to legal regulations.*

## Sales/Support Address


Bartec UK Ltd  
Unit 1  
Sandbrook Park  
Sandbrook Way  
Rochdale  
OL11 1RY  
United Kingdom  
Tel: +44 161 767 1590

## Service Address

BARTEC VARNOST d.o.o.  
Cesta 9. avgusta 59  
1410 Zagorje ob Savi Slovenia  
Tel.: +386 59 221 471  
Fax: +386 59 221 470

EU Konformitätserklärung  
EU Declaration of Conformity  
Déclaration UE de conformité**BARTEC**BARTEC Varnost d.o.o.  
Cesta 9. Avgusta 59  
1410 Zagorje ob Savi  
Slovenia

Nº VS-02 02 099K

Wir	We	Nous
<b>BARTEC Varnost d.o.o.,</b>		
erklären in alleiniger Verantwortung, dass das Produkt	declare under our sole responsibility that the product	attestons sous notre seule responsabilité que le produit
<b>Abzweig- und Verbindungskasten</b>	<b>Junction Box</b>	<b>Boîtes de dérivation et coffrets de jonction</b>
<b>Typ: 07-5103-***/*, 07-5105-***/*, 07-5106-***/* and 07-5107-***/*</b>		
auf das sich diese Erklärung bezieht den Anforderungen der folgenden <b>Richtlinien (RL)</b> entspricht	to which this declaration relates is in accordance with the provision of the following <b>directives (D)</b>	se référant à cette attestation correspond aux dispositions des <b>directives (D)</b> suivantes
<b>ATEX-Richtlinie 2014/34/EU</b>	<b>ATEX-Directive 2014/34/EU</b>	<b>ATEX-Directive 2014/34/UE</b>
<b>RoHS-Richtlinie 2015/863/EU</b>	<b>RoHS-Directive 2015/863/EU</b>	<b>RoHS-Directive 2015/8635/UE</b>
<b>EMV Richtlinie 2014/30/EU</b> <i>nicht zutreffend nach Artikel 1, Absatz 3.</i>	<b>EMC Directive 2014/30/EU</b> <i>not applicable according to article 1, paragraph 3.</i>	<b>Directive CEM 2014/30/UE</b> <i>non applicable selon l'article 1, paragraphe 3.</i>
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
<b>EN 60079-0:2018</b> <b>EN 60079-7:2015+A1 2018</b>	<b>EN 60079-11:2012</b> <b>EN 60079-31 :2014</b>	<b>EN 60529:1991</b> <b>+A1:2000+ A2:2013</b>
<b>Kennzeichnung</b>	<b>Marking</b>	<b>Marquage</b>
	<b>II 2G Ex eb ia/ib IIA, IIB, IIC T6, T5 Gb</b> <b>II 2G Ex ia/ib IIA, IIB, IIC T6, T5 Gb</b> <b>II 2D Ex tb IIIC T80°C, T95°C Db</b> <b>II 2D Ex ia/ib IIIC T80°C, T95°C</b>	
<b>Verfahren der EU-Baumusterprüfung / Benannte Stelle</b>	<b>Procedure of EU-Type Examination / Notified Body</b>	<b>Procédure d'examen UE de type / Organisme Notifié</b>
<b>PTB 08 ATEX 1064 X</b> <b>0102 PTB, Bundesallee 100, 38116 Braunschweig, D</b>		
<b>CE 1304</b>		
Zagorje, 15.01.2020		Janez Gajski QAM 