

ESP Enclosure

Ex e GRP enclosure for zone 1, 2, 21, 22



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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 Ex empty enclosure types 07-5184-..../.... and 07-5185-..../.... may be used for fitting electrical and mechanical components. The enclosure consists of fibre glass-reinforced polyester (07-5184 grey or 07-5185, black). Lid and base are screwed together with stainless steel captive screws (+/- screw head). A groove-and-tongue system with inserted sealing cord between the lid and base assures the high protection class IP 65/66. The enclosure is mounted through the screw channels lying outside the sealing space.

The enclosures conform to the relevant standards EN 60079-0 and EN 60079-7 and were developed, produced and tested in accordance with ISO 9001. Enclosures type 07-5184 and 07-5185 can be used in hazardous areas of zone 1 and 2 with certified explosion sub- groups II. The enclosures type 07-5185 can also be used in zone 21 and 22 with certified max. surface temperature. Inspection glass can be installed in the enclosure lids, if required.

The maximum number of conductors for each enclosure size, which is subject to the cross section and the permissible continuous current, is shown in the supplements (www.IECEx.com). Enclosures and cabinets with windows shall only be used in conditions with low level me-chanical risk.

Explosion protection

ATEX	Ex type of protection Ex II 2G Ex eb IIC Gb Ex II 2D Ex tb IIIC Db IP65/IP66 - only for type 07-5185
Certification	IBExU 21 ATEX 1009U
IECEx	Ex type of protection Ex eb IIC Gb Ex tb IIIC Db - only for type 07-5185
Certification	IECEx IBE 20.0041U
Working temperature ranges	-20 °C... +95 °C – with EPDM gasket -25 °C... +95 °C – with inspection windows -55 °C... +100 °C – with silicone gasket
Approved for zones	1 and 2 21 and 22

Technical data

Protection class	Max. IP 66 if silicone gasket is used Max. IP 66 if EPDM gasket is used
Enclosure material/ manufacturing process	Type 07-5185 glass-fiber reinforced polyester, surface resistance <10 ⁹ Ω, RAL 9005 black Type 07-5184 glass-fiber reinforced polyester, surface resistance >10 ¹² 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
Mechanical strength	Impact energy 7 Joule
Dimensions	See BARTEC Catalogue

Safety instructions

The supplied Ex empty enclosures are U-certified components which serve as a basis for completely certified devices which then in their entirety must still be tested and approved by a specified agency for capability for use in potentially explosive areas.

All universally valid rules and the other binding directives relating to workplace safety, accident prevention and environmental protection must be adhered to.

Marking

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



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



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



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury.



NOTICE indicates a potentially hazardous situation which, if not avoided, may result in property damage.



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

Standards conformed to

EN 60079-0:2018

EN IEC 60079-7:2015/A1:2018

EN 60079-31:2014 / IEC 60079-31:2013

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.
- Pay attention to the type of mounting required (for fitting into enclosure /attachment with junction box).
- Use suitable tools.
- For assembly and operation of explosion-protected electrical equipment, relevant installation and operating regulations are to be adhered (z.B.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 of the Ex-distribution boxes are provided in the Bartec catalog and on the product itself.
- For accommodating use only components certified for the Ex areas such as terminals, switches, cable glands, measuring instruments, control equipment and display units.
- When processing the enclosures, attention must be paid to ensuring that there is suitable minimum spacing between individual boreholes and from the sealing edge of the enclosure so that the enclosure with the fittings will be able to withstand an impact test.
- The minimum spacing depends on the geometrical dimensions of the built-in components, a longer lever will require an increase in the minimum spacing and accordingly must be determined specifically.



Installation

CAUTION

- For enclosures placed in outdoors, steps must be taken to ensure smooth operation, for example rain protected roofs, and if necessary, sufficient enclosure protection.
- 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.
- Metallic conductor entries must be connected to the ground. Unused holes for cable entries must be sealed with certified plugs.



Commissioning

CAUTION

Before commissioning, check that:

- The device has been installed in compliance with regulations.
- The device is not damaged



Operation, maintenance and repair

For maintenance and/or repair the provided safety regulations are to be adhered.



CAUTION

Maintenance and repair work may be accomplished only by the technical experts.

- Check distribution box, actuating elements, cable entries, sealing, and cables regularly for cracks and damage. Make sure that they are properly established.

! Risk of serious injury due to use of non-original parts

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

! Risk of serious accidents due to damaged parts.

- Before restarting the equipment, the applicable regulations and guidelines must be observed. For maintenance and/or repair the provided safety regulations are to be adhered.

! Dust deposits > 5 mm must be removed

Warning marks



WARNING

DO NOT OPEN WHEN ENERGIZED!



WARNING

only for type 07-5184 and for enclosures with windows with surface resistance of >10⁹Ω potential electrostatic charging hazard exist. The enclosure must therefore carry the following warning:

POTENTIAL ELECTROSTATIC CHARGING HAZARD – ONLY WET CLEANING

Transport, Storage and Disposal



NOTICE

Damage through incorrect transport or incorrect storage.

- Transport and storage is permissible in original packaging only.
- Store in a dry place in original packaging.



NOTE

Disposal

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

The enclosures contain metal and plastic parts. Therefore the statutory requirements for disposing of scrap must be observed (e.g. disposal by approved disposal company)

Installation dimensions



NOTICE

Damage to elements due to incorrect installation dimensions.

- The minimum spacing between the mounting holes must be observed.

Dimensions in mm

From 80 x 75 x 55 to 600 x 250 x 120

Accessories, spare parts

See BARTEC website www.bartec.com

Service Address

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