



EN Operating instructions.pages 1 to 4
Original

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1. About this document

1.1 Function

This operating instructions manual provides all the information you need for the mounting, correct use and commissioning to ensure the safe operation and disassembly of the mounted housing. The operating instructions must be available in a legible condition and a complete version in the vicinity of the device.

1.2 Target group: authorised qualified personnel

All operations described in this operating instructions manual must be carried out by trained specialist personnel, authorised by the plant operator only. Please make sure that you have read and understood these operating instructions and that you know all applicable legislations regarding occupational safety and accident prevention prior to installation and putting the component into operation.

1.3 Explanation of the symbols used



Information, hint, note:

This symbol is used for identifying useful additional information.



Caution: Failure to comply with this warning notice could lead to failures or malfunctions.

Warning: Failure to comply with this warning notice could lead to physical injury and/or damage to the machine.

1.4 Appropriate use

The products described in these operating instructions are developed to execute safety-related functions as part of an entire plant or machine. It is the responsibility of the manufacturer of a machine or plant to ensure the correct functionality of the entire machine or plant.

1.5 General safety instructions

The user must observe the safety instructions in this operating instructions manual, the country specific installation standards as well as all prevailing safety regulations and accident prevention rules.



Further technical information can be found in the Schmersal catalogues or in the online catalogue on the Internet: products.schmersal.com.

The information contained in this operating instructions manual is provided without liability and is subject to technical modifications.

There are no residual risks, provided that the safety instructions as well as the instructions regarding mounting and maintenance are observed.

1.6 Warning about misuse



In case of inadequate or improper use or manipulations of the enclosure, personal hazards or damage to machinery or plant components cannot be excluded. The requirements of the relevant standards must be observed.

1.7 Exclusion of liability

We shall accept no liability for damages and malfunctions resulting from defective mounting or failure to comply with this operating instructions manual. The manufacturer shall accept no liability for damages resulting from the use of unauthorised spare parts or accessories.

For safety reasons, invasive work on the device as well as arbitrary repairs, conversions and modifications to the device are strictly forbidden; the manufacturer shall accept no liability for damages resulting from such invasive work, arbitrary repairs, conversions and/or modifications to the device.

2. Product description

2.1 Ordering code

This operating instructions manual applies to the following types:

EX-EBG①.O

No.	Option	Description
①	311	incl. 1 cable gland M20 for cable section 7 ... 12 mm
	633	incl. 1 cable gland M25 for cable section 13 ... 18 mm
	665	incl. 2 cable glands M25 for cable section 13 ... 18 mm and 1 locking screw

The supplied cable glands and locking screws are EX-approved.



The installation and maintenance requirements to the standard series 60079 must be met.



Only if the information described in this operating instructions manual are realised correctly, the safety function and therefore the compliance with the Explosion Protection Directive is maintained.

2.2 Special versions

For special versions, which are not listed in the order code below 2.1, these specifications apply accordingly, provided that they correspond to the standard version.

2.3 Purpose

The enclosures for surface mounting are designed for assembling the EX-R range command devices and indicator lights from Schmersal.



For all other components and devices, the requirements regarding the explosion protection must be checked. This also applies to the heating inside the enclosure and the IP protection (EN 60529).

Conditions for safe operation

The presence of small dust particles inside of the dust-proof IP65 enclosure must be excluded.

If the enclosure for surface mounting is used with the cable glands, permanent wired cables must be used.



Only tested, certified cable glands/sealing plugs (including lock nuts) that meet the Ex requirements of the device (the technical data, the same protection class and the same temperature range) are to be used.
During the selection and usage of the cable gland/sealing plug, the related operating instructions/installation instructions from the manufacturer are to be followed.

The types of the Ex-R programme, the Ex-EBG enclosure and the cable glands have different authorised ambient temperatures. The ambient temperature range of the assembly concerned results from the range of the most critical individual module. To this effect, the operating manuals or the tables in appendix to the EU-type examination certificate must be respected and observed.

2.4 Technical data

Enclosure in combination with contact elements and illuminated elements range EX-R from K.A. Schmersal GmbH & Co. KG:

Designation in accordance with the ATEX Directive: Ⓢ II 2GD

Designation in accordance with standards: Ex ib IIC T4 Gb

Ex tb IIIC T110°C Db

ATEX: TÜV 08 ATEX 7630 X

IECEx: TUR 16.0030 X

INMETRO: TÜV 20.0599 X

Enclosure in combination with suitable built-in components from other manufacturers:

Designation in accordance with the ATEX Directive: Ⓢ II 2GD

Designation in accordance with standards: Ex ib IIC Gb

Ex tb IIIC Db

ATEX: TÜV 08 ATEX 7685 U

IECEx: TUR 16.0031 U

INMETRO: TÜV 20.0598 U

Applied standards: EN 60947-5-1, EN 60947-5-5, EN 60947-1

- ATEX: EN IEC 60079-0, EN 60079-11, EN 60079-31

- IECEx: IEC 60079-0, IEC 60079-11, IEC 60079-31

- INMETRO: ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-11, ABNT NBR IEC 60079-31

EX-relevant technical Data:

Ambient temperature T_{amb} : -20°C ... +55°C



Note external heat and/or cold source.

Temperature class: T4 (in combination with Ex-R programme)

Verified impact energy

(according to EN IEC 60079-0 / ABNT NBR IEC 60079-0): 7 J

Protection class: IP 65 (in combination with Ex-R programme)

Materials: Enclosure: Stainless steel,

Seal: NBR

Tightening torque for the enclosure screws: 1.2 Nm

3. Mounting

3.1 General mounting instructions



The installation may only be carried out with the system de-energised and by authorised personnel.

Assemble the following items in accordance with the operating instructions manual regarded:

- the command devices
- the indicator lights
- cable glands with counter nut
- possibly the locking screw with counter nut



Please seal all non-used positions by means of the EX-RB blanking plug (available as accessory).

Assembly of the base plate

Depending on the execution, the enclosure is fixed by means of 4 or 6 threaded holes (in the stud bolts) M6/12 deep on the rearside (bottom set). The fixation is only provided at the bottomside.

Assembly of the upper part of the enclosure

1. Realise a connection, one per conductor, between the provided earthing screw (Fig. 1) at the enclosure cover and the enclosure bottom.
2. Check whether the gasket is fixed to the enclosure bottom.
3. The upper and the bottom part of the enclosure are connected to each other by means of V4A hexagonal screws M5 × 10 (to ISO 4017), tightening torque 1.2 Nm. The sealing is realised by means of the gasket.
4. The enclosure must be integrated in the equipotential bonding conductor system with the free earthing screw to EN 60079-14 (ABNT NBR IEC 60079-14) (Fig 1).



All openings must be sealed prior to the start-up.
Blanking plug EX-RB available as accessory.

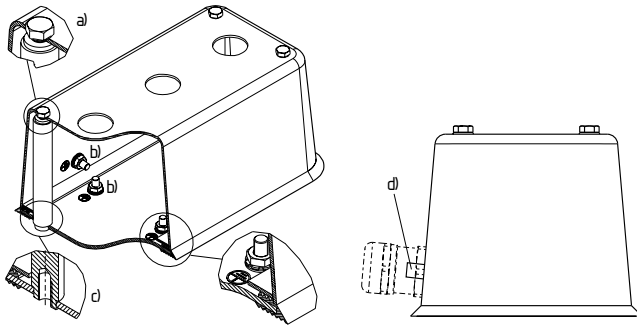


Fig. 1: Assembly of the enclosure Fig. 2: PA connection to enclosure
a) Assembly of the enclosure cover d) PA connection (outside)
b) Earthing screw (inside)
c) Assembly of the base plate

3.2 Dimensions

All measurements in mm.

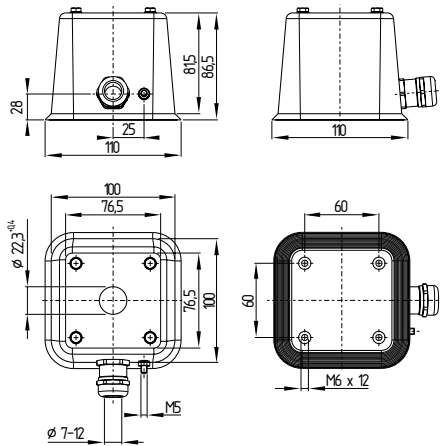


Fig. 3: Enclosure execution Ex-EBG 311.O with 1 command device position

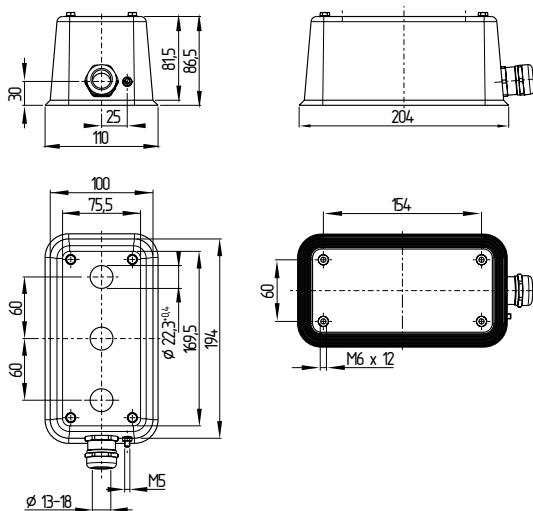


Fig. 4: Enclosure execution Ex-EBG 633.O with 3 command device positions

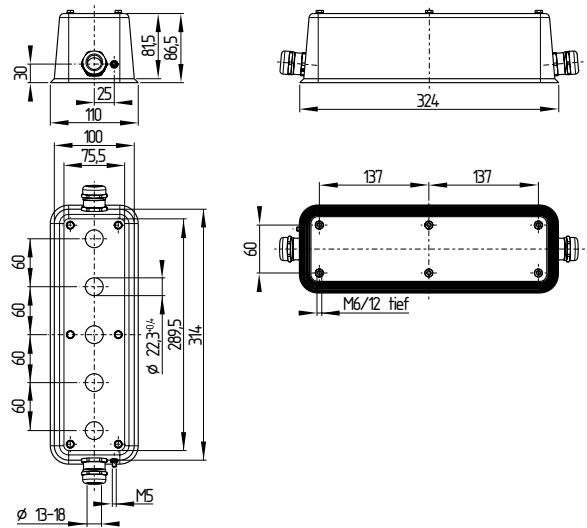


Fig. 5: Enclosure execution Ex-EBG 665.O with 5 command device positions

4. Electrical connection

4.1 General information for electrical connection



The electrical connection may only be carried out by authorised personnel in a de-energised condition.



If contacts are looped through, a thermal assessment could possibly be required.

5. Set-up and maintenance

5.1 Functional testing

The following conditions must be checked and met:

1. Correct fixing of the fitted component
2. Check the integrity of the cable glands and connections
3. Check the command devices for damage.
4. All enclosure openings must be sealed (blanking plug EX-RB available as accessory)

5.2 Maintenance

We recommend a regular visual inspection, including the following steps:

1. Correct fixing of the fitted component
2. Check the integrity of the cable glands and connections
3. Check the command devices for damage.

Damaged or defective components must be replaced.

6. Disassembly and disposal


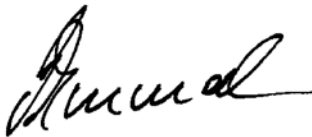
6.1 Disassembly

The product must be disassembled in a de-energised condition only.

6.2 Disposal

The product must be disposed of in an appropriate manner in accordance with the national prescriptions and legislations.

7. EU Declaration of conformity

EU Declaration of conformity		 SCHMERSAL
Original	K.A. Schmersal GmbH & Co. KG Möddinghofe 30 42279 Wuppertal Germany Internet: www.schmersal.com	
We hereby certify that the hereafter described components both in their basic design and construction conform to the applicable European Directives.		
Name of the component:	EX-EBG	
Type:	see ordering code	
Marking	⊕ II 2G Ex ib IIC T4 Gb ⊕ II 2D Ex tb IIIC T110°C Db	
Description of the component:	Assembly housing	
Relevant Directives:	Explosion Protection Directive (ATEX) 2014/34/EU RoHS-Directive 2011/65/EU	
Applied standards:	EN IEC 60079-0:2018 EN 60079-11:2012 EN 60079-31:2014	
Notified body, which approved the full quality assurance system, referred to in Appendix IV, 2014/34/EU:	TÜV Rheinland Industrie Service GmbH Am Grauen Stein, 51105 Köln ID n°: 0035	
Notified body:	TÜV Rheinland Industrie Service GmbH Am Grauen Stein 51105 Köln ID n°: 0035	
EU-type examination certificate:	TÜV 08 ATEX 7685 U	
Person authorised for the compilation of the technical documentation:	Oliver Wacker Möddinghofe 30 42279 Wuppertal	
Place and date of issue:	Wuppertal, July 1, 2021	
EX-EBG-H-EN		
	Authorised signature Philip Schmersal Managing Director	



The currently valid declaration of conformity can be downloaded from the internet at products.schmersal.com.

