



Notes about the instructions

When work is carried out in potentially explosive areas, the safety of persons and systems depends on compliance with the relevant safety regulations. Persons responsible for installation and maintenance bear special responsibility. This requires having detailed knowledge of the applicable regulations and provisions. The instructions summarize the most important safety measures and must be read by all persons who work with the product so that they are familiar with the proper way to handle the product. The instructions must be kept available for the entire service life of the product.

Description

The switchgear assemblies are designed in accordance with the requirements of the “e” increased safety (Type 07-31...-.../....) or “t” protection by enclosure (Type 07-3S...-.../....) type of protection. They may consist of either one or more connected housings. Depending on the specification and number of components, various housing types and sizes are available. Switches, signal lights, terminal blocks, fuses, bus modules, etc. are installed in the housing according to the technical requirements. In addition, industrial series products can be installed in switchgear assemblies of the “tb” protection by enclosure type of protection. The assembly elements are installed in different ways. Depending on the model, these are installed on mounting rails or in the front side. BARTEC tests the Ex capability of the individual components and housings and confirms it with the II 2G Ex db eb... and/or II 2D Ex tb... marking on the nameplate of the switchgear assembly. If the switchgear assemblies contain intrinsically safe electrical circuits or Ex i components, the electrical limit values normative for the “intrinsic safety” that are specified in the accompanying documents must be maintained.

Explosion protection

Maximum Ex type of protection

Depending on the installed components; observe the specifications on the type label.

Marking ATEX

- ⊕ II 2G Ex db eb ma/mb op is q ia/ib [ib]
IIA, IIB, IIC, T6, T5, T4, T3 Gb
- ⊕ II 2(1)G Ex db eb ma/mb op is q ia/ib [ia Ga]
IIA, IIB, IIC, T6, T5, T4, T3 Gb
- ⊕ II 2D Ex tb op is [ib] IIIA, IIIB, IIIC,
T80 °C, T100 °C, T130 °C Db
- ⊕ II 2(1)D Ex tb op is [ia Da] IIIA, IIIB, IIIC,
T80 °C, T100 °C, T130 °C Db

C € 0044

Certification

IBExU 12 ATEX 1099 X

Marking IECEx

- Ex db eb ma/mb op is q ia/ib [ib]
IIA, IIB, IIC, T6, T5, T4, T3 Gb
- Ex db eb ma/mb op is q ia/ib [ia Ga]
IIA, IIB, IIC, T6, T5, T4, T3 Gb
- Ex tb op is [ib] IIIA, IIIB, IIIC,
T80 °C, T100 °C, T130 °C Db
- Ex tb op is [ia Da] IIIA, IIIB, IIIC,
T80 °C, T100 °C, T130 °C Db

Certification

IECEx IBE 12.0031 X

Area of use

Atmospheric conditions at an altitude of up to 2000 m above sea level

Ambient temperature range

Depending on the installed components; observe the specifications on the type label.
-55 °C to +80 °C (-67 °F to +176 °F)

Approved for zones

1/2 and 21/22

Components

Follow the components manufacturer’s mounting instructions and safety instructions.

Other applicable documents

Circuit diagram, mounting instructions/operating instructions for the installed components, delivery note; the retention of these documents is mandatory.

Technical data

Protection class

max. IP 66 (EN 60529)

Mechanical strength

Impact energy: max. 7 Nm

Enclosure material

- Aluminium:
Type 07-3.01-.../....; Type 07-3.02-.../....
- Polyester black:
Type 07-3.03-.../....; Type 07-3.05-.../....;
Type 07-3.09-.../....; Type 07-3.10-.../....
- Stainless steel 1.4301 (304):
Type 07-3.11-.../....; Type 07-3.12-.../....;
Type 07-3.13-.../....; Type 07-3.14-.../....;
Type 07-3.30-.../....; Type 07-3.31-.../....;
Type 07-3.34-.../....; Type 07-3.35-.../....
- Stainless steel 1.4404 (316L):
Type 07-3.32-.../....; Type 07-3.33-.../....;
Type 07-3.36-.../....; Type 07-3.37-.../....;
Type 07-3.92-.../....; Type 07-3.93-.../....;
Type 07-3.94-.../....; Type 07-3.95-.../....

Local measuring, control and switchgear combinations that are intended exclusively for use in areas with inflammable types of dust have the following deviating markings: Type 07-3S...-.../....

Electrical data

Rated voltage

up to DC 1000 V; AC 50/60 Hz

Rated cross-section/installation elements

max. 160 A

Rated cross-section

for installation elements: max. 50 mm²
for rail-mounted and connecting terminals:
max. 120 mm²

Safety notes

The switchgear assemblies must be used only for the specified temperature class and within the temperature range certified for this (see nameplate). The switchgear assembly is exclusively suitable for use in Zones 1/2 and 21/22. The switchgear assembly must be operated only in clean and undamaged condition. Dust deposits > 5 mm (> 0.2 in) must be removed. Use in areas other than those specified or modification of the product by someone other than the manufacturer is not permitted and releases BARTEC from liability for defects and further liability. The generally applicable regulations mandated by law and other binding directives pertaining to workplace safety, accident prevention and environmental protection must be followed. For electrical systems, observe the relevant construction and operating conditions as well as the information on the nameplate. Before commissioning or recommissioning, observe the applicable laws and directives. Always observe the safety notes on the 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 60079-0:2012 + A11:2013
 EN 60079-7:2015
 EN 60079-11:2012
 EN 60079-31:2014

Depending on the installed components

EN 60079-1:2014
 EN 60079-5:2015
 EN 60079-18:2015
 EN 60079-28:2015

as well as

EN 60529:1991 + A1:2000 + A2:2013
 EN 62208:2011
 EN 60445:2010

IEC 60079-0 Ed. 6, 2011 + Cor.:2012 + Cor.:2013
 IEC 60079-7 Ed. 5, 2015
 IEC 60079-11:2011 + Cor.:2012
 IEC 60079-31 Ed. 2, 2013

Depending on the installed components

IEC 60079-1:2014
 IEC 60079-5:2015
 IEC 60079-18:2014
 IEC 60079-28:2015

as well as

IEC 60529:1991 + A1:2000 + A2:2013
 IEC 62208:2011 + 1989 + A1:1999 + A2:2013
 IEC 60445:2010

Note

For further industrial standards for the installed parts, see separate operational instructions.

Transport and Storage

CAUTION

Risk of injury from heavy loads.

- Use suitable carrying aids or means of transport (e.g. lift trucks) with an adequate weight bearing capacity.
- Make sure that loads cannot tilt or slide off.

NOTICE

Damage to the measuring, control and switchgear combination through incorrect transport or incorrect storage.

- The measuring, control and switchgear combination must be transported in its original packaging, be secured against vibrations, handled carefully and not allowed to fall.
- Storage of control and switchgear combination must be in dry ambient in original package.

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.
- The relevant installation and operating regulations must be observed when setting up or operating explosion-proof electric systems.
- Follow the components mounting instructions/operating instructions.
- Before starting to work, ensure that the voltage supply has been isolated or take suitable protective measures.

Assembly and disassembly

DANGER

Death or risk of injury due to the absence of a PE conductor connection.

- Metallic enclosures in hazardous areas require equipotential bonding with at least 4 mm².
- PE conductor connections must be secured against self-loosening.

Check when assembling:

- Mount the measuring, control and switchgear combination with resistance to torsion on an even supporting surface.
- It is preferable to mount the measuring, control and switchgear combination in a vertical position.

Note

For enclosures set up outdoors, it may be necessary to implement measures to ensure operation in accordance with the intended purpose (e.g. shelter from the rain or an outer enclosure with a suitable protection class).

Installation

⚠ DANGER

Death or serious injury due to improper use.

- Extensions or modifications to the measuring, control and switchgear combination are only permissible if the manufacturer's approval is obtained first.
- The EN/IEC 60079-14 must be observed, in particular article 10, paragraphs 10.2, 10.4, and 10.7.

When connecting cables and conductors to operating equipment with the "Ex e" type of protection, use Ex certified cable entries that are suitable for the respective types of cables and conductors. The Ex certified cable entries must: conform to the "Ex e" type of protection and have a suitable sealing element to maintain the measuring, control and switchgear combination's protection class.

Metallic cable entries must be connected to the earthing system. For plastic enclosures BARTEC's Earth-Loc or the approval-compliant earth plates can be used for that purpose. Unused cable entry holes must be sealed with Ex certified stopping plugs.

Take care when connecting conductors:

- Always use suitable crimping tools when crimping the wire-end ferrules to ensure a consistent quality of pressing each time.

i NOTICE

Take care not to damage the individual wires.

- Tighten all terminal points securely (including those not in use).

i Note

If necessary, safety temperature limiters (STB) are installed in measuring, control and switchgear combinations. The normally open contact of the STB is wired on the STB terminal block. The normally open contact that is wired on the STB terminal block has to be connected with the power supply of the measuring, control and switchgear combination in a way that the power supply is safely switched off (i.e. the measuring, control and switchgear combination is switched voltage free). Once the temperature drops, the STB can be unlocked manually, see the Operating Instructions for the "Ex-d temperature switch 07-6D..-.../.... "

Commissioning

Before commissioning, check that:

- The measuring, control and switchgear combination has been mounted and installed in compliance with regulations.
- The enclosure is not damaged.
- The connection has been established properly.
- The cables have been laid correctly.
- All screws have been tightened securely.
- The device functions perfectly.

Reservation Technical data subject to change without notice. No claims for damages arising from alterations, errors or misprints shall be allowed.

Operation

⚠ DANGER

Death or serious injury through improper use.

- The measuring, control and switchgear combination may be operated only within the technical limits that apply to it (see page 1).

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.
- EN/IEC 60079-17 must be observed. It is recommended to formulate a maintenance plan according to this standard.
- Before starting to work, ensure that the voltage supply has been isolated or take suitable protective measures.

Maintenance

The owner/managing operator of the measuring, control and switchgear combination must keep it in good condition, operate it correctly, monitor it and clean it regularly. The owner/managing operator must schedule maintenance intervals, which will suit the respective conditions of use.

- Check sealings for effectiveness.
- Replace old or damaged sealings with new original seals.
- Check that the connecting terminals and cable and conductor entries are secure.

i Note

In the course of maintenance particular attention must be paid to checking that the parts essential for the type of protection and for proper functioning are in good condition.

Fault Clearance

The measuring, control and switchgear combination is defective if one of the components does not function any longer. In this case the defective component must be replaced or repaired with original parts. Defective windows cannot be replaced by the operator of the measuring, control and switchgear combination. In this case contact BARTEC GmbH at the service address.

i Note

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

Accessories and Spare Parts

See BARTEC catalogue Control and connection equipment.

Disposal

Environmental damage can be caused by incorrect waste disposal. When in doubt, local authorities or specialist disposal companies can provide information on environmentally friendly disposal. The components in the measuring, control and switchgear combination contain metal and plastic parts. Therefore the statutory requirements for disposing of electronic scrap must be observed.

Service Address

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



EU Konformitätserklärung
EU Declaration of Conformity
Déclaration UE de conformité

BARTEC

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

Nº 01-3000-7C0001_C

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
Schaltgerätekombination	Measuring, Control and Switchgear combination	Ensemble d'appareillage de connexion et de commande
Typ 07-3***-****/****		
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 2014/34/EU	ATEX-Directive 2014/34/EU	ATEX-Directive 2014/34/UE
EMV-Richtlinie 2014/30/EU	EMC-Directive 2014/30/EU	CEM-Directive 2014/30/UE
RoHS-Richtlinie 2011/65/EU	RoHS-Richtlinie 2011/65/EU	RoHS-Richtlinie 2011/65/EU
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 60079-0:2012 + A11 2013 EN 60079-1:2014 EN 60079-5:2015 EN 60079-7:2015 EN 60529:1991 + A1:2000 +A2:2013 EN 62208:2011		EN 60079-11:2012 EN 60079-18:2015 EN 60079-28:2015 EN 60079-31:2014 EN 60445:2010
Kennzeichnung	Marking	Marquage
	II 2G Ex db eb ma/mb op is q ia/ib [ib] IIA, IIB, IIC, T6, T5, T4, T3 Gb II 2(1)G Ex db eb ma/mb op is q ia/ib [ia Ga] IIA, IIB, IIC, T6, T5, T4, T3 Gb II 2D Ex tb op is [ib] IIIA, IIIB, IIIC, T80 °C, T100 °C, T130 °C Db II 2(1)D Ex tb op is [ia Da] IIIA, IIIB, IIIC, T80 °C, T100 °C, T130 °C Db	
Verfahren der EU-Baumusterprüfung / Benannte Stelle	Procedure of EU-Type Examination / Notified Body	Procédure d'examen UE de type / Organisme Notifié
IBExU 12 ATEX 1099 X 0637 IBExU, Fuchsmühlenweg 7, 09599 Freiberg, D		
29.04.2017		
 i.V. Paul Wielsch Position BU-Leiter	 i.V. Michael Schulte Leiter GW PZ	

03-0383-0362

Seite / page / page 1 von / of / de 1

01-3000-7D0001/D-03/2017-STVT-352328

Reservation Technical data subject to change without notice. No claims for damages arising from alterations, errors or misprints shall be allowed.