Local control station

for Zone 1 and Zone 21

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Note on 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 a 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 product service life.

Description

Measuring, control and switchgear assemblies are designed in accordance with the requirements of the “e” increased safety (Type 07-31..-..../....) local control stations and , “t” protection by enclosure type of protection (Type 07-3S..-..../....). They may consist of either one or more connected housings. Various housing types and sizes are available depending on the specification and number of components. 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 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 assembly. If the assembly 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

Marking ATEX	**Type 07-31**-****/******
	⟨Ex⟩ II 2 G Ex db eb ia ib [ib] ma mb op is [op is] op pr [pxb] [pyb] q 60079-30-1 [60079-30-1] IIA, IIB, IIC T6, T5, T4 or T3 Gb
	⟨Ex⟩ II 2(1)G Ex db eb ia ib [ia Ga] ma mb op is [op is] op pr [pxb] [pyb] q 60079-30-1 [60079-30-1] IIA, IIB oder IIC T6, T5, T4, or T3 Gb
	⟨Ex⟩ II 2 D Ex tb ia ib [ib] ma mb op is [op is] op pr [pxb] [pyb] IIIA, IIIB oder IIIC, T80 °C, T95 °C, or T130 °C Db
	⟨Ex⟩ II 2(1)D Ex tb ia ib [ia Da] ma mb op is [op is] op pr [pxb] [pyb] IIIA, IIIB or IIIC, T80 °C, T95 °C oder T130 °C Db
	Type 07-3S-****/******
	⟨Ex⟩ II 2D Ex tb ia ib [ib] ma mb op is [op is] op pr [pxb] [pyb] IIIA, IIIB oder IIIC, T80 °C, T95 °C, or T130 °C Db
	⟨Ex⟩ II 2(1)D Ex tb ia ib [ia Da] ma mb op is [op is] op pr [pxb] [pyb] IIIA, IIIB oder IIIC, T80 °C, T95 °C or T130 °C Db
Marking IECEx	**Type 07-31**-****/******
	Ex db eb ia ib [ib] ma mb op is [op is] op pr [pxb] [pyb] q 60079-30-1 [60079-30-1] IIA, IIB, or IIC T6, T5, T4, or T3 Gb
	Ex db eb ia ib [ia Ga] ma mb op is [op is] op pr [pxb] [pyb] q 60079-30-1 [60079-30-1] IIA, IIB, or IIC T6, T5, T4, or T3 Gb
	Ex tb ia ib [ib] ma mb op is [op is] op pr [pxb] [pyb] IIIA, IIIB, or IIIC, T80 °C, T95 °C, or T130 °C Db
	Ex tb ia ib [ia Da] ma mb op is [op is] op pr [pxb] [pyb] IIIA, IIIB, or IIIC, T80 °C, T95 °C, or T130 °C Db
	Typ 07-3S-****/******
	Ex tb ia ib [ib] ma mb op is [op is] op pr [pxb] [pyb] IIIA, IIIB, or IIIC, T80 °C, T95 °C, or T130 °C Db
	Ex tb ia ib [ia Da] ma mb op is [op is] op pr [pxb] [pyb] IIIA, IIIB, or IIIC, T80 °C, T95 °C, or T130 °C Db
Certification	IBExU 12 ATEX 1099X IECEx IBE 12.0031X CSA: 2515401 CCC: 2020322304001711 INMETRO: UL-BR 11.0118X PESO: A/P/HQ/UP/104/5577 (P470774) ECASEx: 24-04-23018/Q24-03-049101/NB0002
Ambient temperature	Dependent on installed components. Please pay attention to the information on the marking plate. -60 °C to max. +80 °C (-76 °F to max. +176 °F)
Temperature Classes	T6, T5, T4, T3 T80 °C, T95 °C, T130 °C

For further informations and certificates, see www.bartec.com

Technical data

Material	Aluminium, glass-fibre reinforced polyester, stainless steel, sheet steel

Electrical data

Rated voltage	up to 1000 V
Rated curent	max. 690 A
Rated cross section	max. 400 mm²

Safety Instructions

Measuring, control and switchgear must be used only for the specified temperature class and within the temperature range marked on type plate or label. It is exclusively suitable for use in Zones 1 and 21. Local control station 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 about 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.

The electrical limit values relevant for „intrinsic safety“ must be complied with (according to the enclosed equipment documents).

WARNING

- Observe instructions of components.
- Do not replace or add components on your own.
- Repair only after consultation with BARTEC
- Do not open when energized

Marking

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

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

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

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

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

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

Standards conform to

Please see EU Declaration of Conformity and IECEx certificate.

Transport and Storage

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 measuring, control and switchgear combination must be in dry ambient in original package.

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.

Assembly, installation 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.

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.

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.

NOTICE

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.

Observe during installation:

– When connecting cables and wires to equipment with type of protection "Ex e", use Ex certified cable entries that are suitable for the respective cable or wire type. The type of protection "Ex e" has to be maintained and the entries have to contain a suitable sealing element so that the protection class of the control station is preserved.

– For intrinsically safe circuits, the specifications in the operating instructions for the intrinsically safe components must be observed.

– Line entries out of metal must be connected to the grounding system.

– For plastic enclosures, use the BARTEC Earth-Loc or an earthing plate corresponding to the approval.

– Close unused openings for cable entries with Ex-certified closing elements.

Observe when connecting the conductor:

– Carry out conductor connection carefully.

– Crimp ferrules with a suitable crimping tool to ensure consistent crimping quality.

NOTICE

Take care not to damage the individual wires.

– Tighten all clamping points (also the unused ones).

– All connections must be secured against self-loosening.

– Remove approx. 6 mm (0.24 in) conductor insulation from the cores.

– Tight the terminals with a maximum permissible torque depending on the size of the screws. For information about tightening torque of the terminal screw, see manufacturer`s instructions.

NOTE

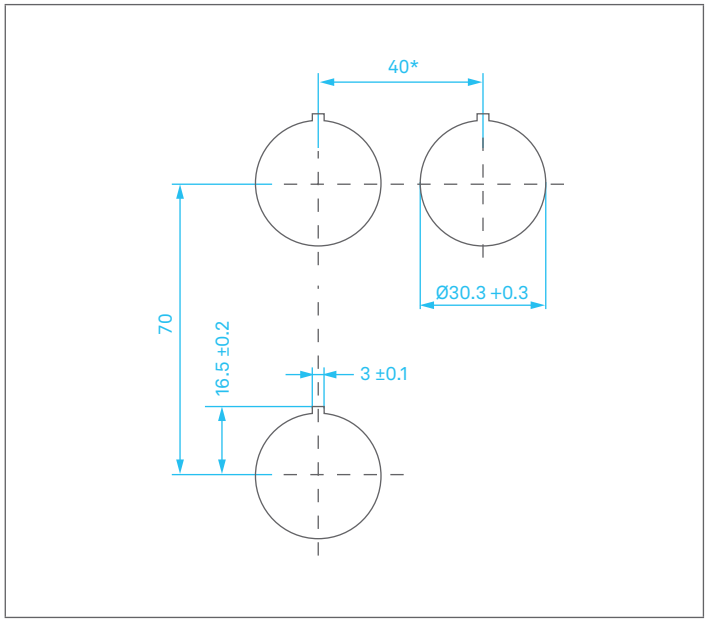
Tighten all terminal points securely (including those not in use).

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..-..../.... ".

Mounting dimensions

for switching and light elements according to EN 60947-5-1



* Recommended distance for mushroom pushbutton, emergency switch as well as position selector with protective shroud: 100 mm.

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).

Specific conditions of use

- The polyamide hose shall only be used in a temperature range of -20 °C up to +60 °C.
- It may be a potential risk of electrostatic charge from an Ex Equipment having a touch screen or plastic window in the enclosure or when the enclosure has been painted with an additional layer; refer to the installation instruction manual.
- When the service temperature is higher than 70 °C at the entry point or 80 °C at the branching point of the conductors, the switchgear combination is marked accordingly. Suitable cables and cable glands have to be used.

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.

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.

WARNING

Risk of serious injury from electrostatic charging.

- Risk of electrostatic charging on surface with the resistance of $>10^9$ Ω. Only cleaning with a wet cloth is allowed.

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 switch-gear combination. In all cases contact BARTEC GmbH at the service address.

NOTE

If a repair/replacement is necessary please contact BARTEC at the service address.

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.

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.

Accessories, Spare parts and disposal

See BARTEC catalogue Control and connection equipment.

Service Address

BARTEC GmbH
Max-Eyth-Str. 16
97980 Bad Mergentheim
Germany

Tel.: +49 7931 597 0
info@bartec.com

EU Konformitätserklärung
EU Declaration of Conformity
Déclaration UE de conformité
№ 01-3000-7C0001-E

BARTEC

Wir	We	Nous
	BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim Germany	
erklären in alleiniger Verantwortung, dass das Produkt **Schaltgerätekombination**	declare under our sole responsibility that the product **Measuring, Control and Switchgear combination**	attestons sous notre seule responsabilité que le produit **Ensemble d`appareillage de connecion et de commande**
Types 07-31-****/****, 07-3S**-****/****		
auf das sich diese Erklärung bezieht den Anforderungen der folgenden **Richtlinien (RL)** entspricht **ATEX-Richtlinie 2014/34/EU** **RoHS-Richtlinie 2011/65/EU** **WEEE-Richtlinie 2012/19/EU**	to which this declaration relates is in accordance with the provision of the following **directives (D)** **ATEX-Directive 2014/34/EU** **RoHS-Directive 2011/65/EU** **WEEE-Directive 2012/19/EU**	se référant à cette attestation correspond aux dispositions des **directives (D)** suivantes **Directive ATEX 2014/34/UE** **Directive RoHS 2011/65/UE** **Directive WEEE 2012/19/UE**
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 IEC 60079-0:2018
EN 60079-1:2014
EN 60079-2:2014
EN 60079-5:2015
EN 60079-7:2015/A1:2018
EN 60079-11:2012
EN 60079-18:2015/A1:2017
EN 60079-28:2015
EN 60079-30-1:2017
EN 60079-31:2014
EN 60529:1991/A2:2013/ AC:2019
EN 60204-1:2019
EN IEC 63000:2018
EN 50419:2022

Eine Übereinstimmung mit den aufgeführten Normen ist variabel und abhängig von den eingebauten Komponenten. Produktspezifische Normen der Einbaukomponenten können der jeweiligen Konformitätserklärung entnommen werden.	**A conformity with the listed standards is variable and depends on the installed components. Product-specific standards of the built-in components can be found in the respective declaration of conformity.**	**La conformité aux normes citées est variable et dépend des comosants installés. Les normes spécifiques aux produits des composants encastrés peuvent être consultées dans la déclaration de conformité correspondante.**
Verfahren der EU-Baumusterprüfung / Benannte Stelle	**Procedure of EU-Type Examination / Notified Body**	**Procédure d'examen UE de type / Organisme Notifié**

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0637, IBExU, Fuchsmühlenweg 7, 09599 Freiberg, DE

CE 0044

Bad Mergentheim, 25.01.2024

i.A. Simon Dyhringer
Product Manager Ex e

i.A. Steffen Mika
Team Leader Certification Management R&D ESS

BARTEC

BARTEC GmbH
Max-Eyth-Str. 16
97980 Bad Mergentheim
Germany

Tel.: +49 7931 597-0
info@bartec.com

bartec.com