



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 miniature control and display unit, type 07-61.1-.../.... and type 07-662-.../...., serves as a flameproof enclosure for switching, control, regulating and display devices in an industrial quality. Alternatively, certified intrinsically safe or associated apparatus can be fitted too.

The miniature control and display units consist of an enclosure with the "flameproof enclosure" type of protection and optionally a bearing assembly with shafts and/or a flange with "flameproof"-certified washers.

For connection purposes, there is either a junction box with "increased safety" type of protection or Ex d certified cable and conductor entries.

The miniature control and display unit can be used in hazardous areas in Zones 1 and 2 in accordance with the certified explosion hazard sub-groups IIA, IIB and IIC and the temperature class T4/T5/T6, as well as in Zones 21 and 22 in accordance with the certified max. surface temperature (see type label).

If the miniature control and display units contain intrinsically safe circuits or Ex i components, the electrical limits that are decisive for "intrinsic safety" must be adhered to.

Explosion protection

Maximum Ex type of protection

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

ATEX/IECEX

⊕	II 2G	Ex d e [ib] IIC T6, T5 or T4 Gb
	II 2(1)G	Ex d e [ia Ga] IIC T6, T5 or T4 Gb
	II 2G	Ex d e IIC T6 or T5 Gb
⊕	II 2D	Ex tb [ib] IIIC T80 °C or T95 °C Db
	II 2(1)D	Ex tb [ia Da] IIIC T80 °C or T95 °C Db
	II 2D	Ex tb IIIC T80 °C or T95 °C Db

CE 0044

Certification

ATEX

EPS 14 ATEX 1 696

IECEX

IECEX EPS 14.0042

INMETRO

Ex d e [ib] IIC T6...T4 Gb
Ex d e [ia Ga] IIC T6...T4 Gb
Ex d e IIC T6...T5 Gb
Ex tb [ib] IIIC T80 °C...T95 °C Db
Ex tb [ia Da] IIIC T80 °C...T95 °C Db
Ex tb IIIC T80 °C...T95 °C Db

Certification

NCC 14.02943

ERC

TC RU C-DE.ГБ06.B.00443

Ambient temperature ranges

Depending on the installations; observe the specifications on the type label.

-20 °C up to max. +70 °C
(-4 °F up to max. +158 °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

Electrical data

Rated insulation voltage:	max. 690 V
Rated current/installation elements:	max. 21 A
Power loss:	max. 8 W
Nominal connection cross section:	max. 2.5 mm ² (14 AWG), see type label for precise details

Protection class

Max. IP 66 (EN 60529)

Mechanical strength

Impact energy: max. 7 Nm

Enclosure material

- Aluminium, surface bare/coated
- Stainless steel
- Brass, surface bare/nickel-plated

Cover closure

Cheese head screw,
ISO 4762-M4x14-A2-70 or
ISO 4762-M5x14-A2-70

Dimensions

See page 3.

Safety Instructions

The miniature control and display unit may be used only within the specified temperature class and the temperature range indicated for it (see type label). The miniature control and display unit is not suitable for use in Zones 0/20.

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

Utilization in areas other than those specified and the opening or modification of the product by anyone other than the manufacturer are not permitted and will exempt BARTEC 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.

When using electrical systems, the relevant installation and operating conditions must be observed. The specifications on the type label must be adhered to.

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 60079-0:2012/IEC 60079-0 : 2011
 EN 60079-1:2007/IEC 60079-1 : 2007-04
 EN 60079-7:2007/IEC 60079-7 : 2006-07
 EN 60079-11:2012/IEC 60079-11 : 2011
 EN 60079-31:2009/IEC 60079-31 : 2008

ABNT NBR IEC 60079-0
 ABNT NBR IEC 60079-1
 ABNT NBR IEC 60079-7
 ABNT NBR IEC 60079-11
 ABNT NBR IEC 60079-31

as well as

EN 60204-1:2006/IEC 60204-1:2005, mod.
 EN 62208:2011/IEC 62208:2011
 EN 60445:2010/IEC 60445:2010
 EN 60529:1991 + A1:2000 + A2:2013/
 IEC 60529:1989 + A1:1999 + A2:2013

Note

See the separate installations documentation for standards for the installed parts.

Transport, storage

NOTICE

Damage to the miniature control and display unit through incorrect transport or incorrect storage.

➤ Transport and storage is permissible in original packaging only.

Assembly / disassembly

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.
- Always disconnect the miniature control and display unit from voltage before assembly/disassembly.
- Follow the components mounting instructions/operating instructions.

When assembling the miniature control and display unit, take care that the distances between the outside edge of the flame-proof gap and the fixed obstacles that are not part of the miniature control and display unit are for:

Gas/vapour sub-group	
IIC	IIB
at least 40 mm (1.58 in)	at least 30 mm (1.18 in)

NOTICE

Property damage caused by unsuitable connection cables.

- Select the quality of the connection cable so that it corresponds to the thermal and mechanical requirements of the respective range of application.

In hazardous areas the connection cable must be laid in a way that ensures it will be protected from damage and it will be mechanically fail-proof.

Note

For miniature control and display units 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 through improper use.

- Extensions or modifications to the miniature control and display unit are only permissible if the manufacturer's approval is obtained first.
- IEC/EN60079-14 must be observed.

Check when installing:

- 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. They must conform to the "Ex e" type of protection and have a suitable sealing element uphold the miniature control and display unit's protection class.
- Connect metallic cable entries to the earthing system.
- Seal unused cable entry holes with Ex-certified stopping plugs.
- When connecting directly to the flame-proof enclosure, use Ex-certified entries that are suitable for the enclosure capacity, the gas sub-group and the conductor.

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.
- Take care not to damage the individual wires.
- Tighten all terminal points securely (including those not in use).

Commissioning

Before commissioning, check that:

- The miniature control and display unit has been 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 miniature control and display unit functions perfectly.

Operation

DANGER

Death or serious injury through improper use.

- The miniature control and display unit may be operated only within the technical limits that apply to it (see page 1).

Maintenance and fault clearance

DANGER

Death or serious injury through damaged flameproof encapsulation.

- The threaded gaps must be protected. They must not be machined or varnished at any time later.
- Replace defective parts in the flameproof encapsulation with original parts immediately.

WARNING

Risk of serious injury due to incorrect proceedings.

- Only authorized qualified personnel may do any of the work relating to maintenance and fault clearance.
- IEC/EN 60079-17 must be observed. It is recommended to formulate a maintenance plan according to this standard.

Maintenance work

The operator of the miniature control and display unit must keep it in good condition, operate it correctly, monitor it and clean it regularly.

- Visually inspect the threaded gap.
- Visually inspect the flameproof encapsulation for damage.
- Check sealings for effectiveness.
- Replace old or damaged sealings with new original seals.
- Check that the connecting terminals, cable & 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 proper functioning are in good condition.

Fault Clearance

The miniature control and display unit is defective if the flameproof encapsulation is damaged and/or if one of the components does not function any longer

In this case:

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

Note

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

Accessories, spare parts

See BARTEC catalogue.

Disposal

The components in the miniature control and display unit contain metal and plastic parts. The statutory requirements for disposing of electronic scrap must be observed therefore (e.g. disposal by an approved disposal company).

Service address

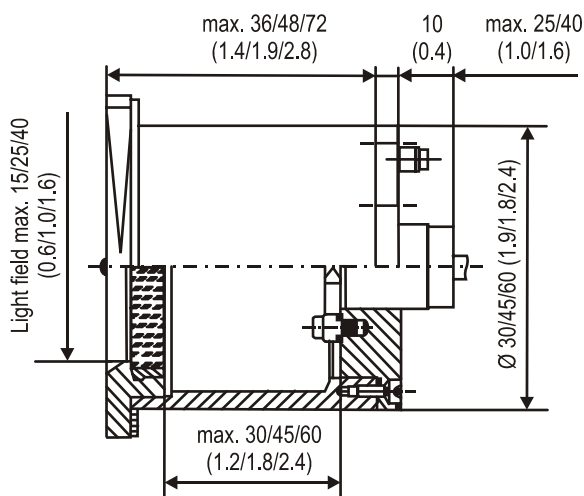
BARTEC GmbH
Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany
Tel.: +49 7931 597-0
Fax: +49 7931 597-119

Dimensions in mm (in)

Standard:

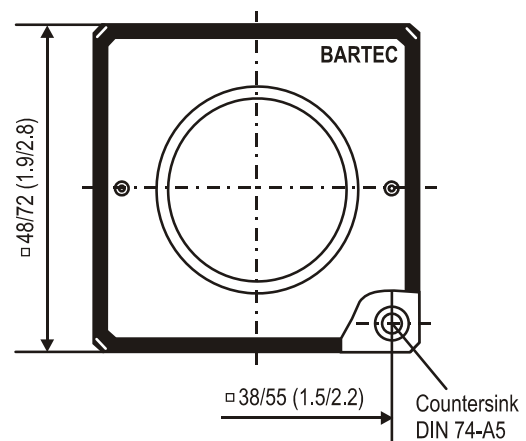
- Cable entry type 07-9.../....
- Front flange □ 48/72 (1.89/2.84)

Cable entry, type 07-9.../....



Order number	Diameter	Overall length
07-6111-.../....	30 (1.2)	≥ 55 (≥ 2.2)
07-6121-.../....	45 (1.8)	≥ 55 (≥ 2.2)
07-6131-.../....	60 (2.4)	≥ 60 (≥ 2.4)

Front flange □ 48/72



Erklärung der Konformität
Declaration of Conformity
Attestation de conformité
N° 01-6100-7C0003

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



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
Kleinst-/Steuer-, Regel- und Anzeigergerät	Miniature/ Control and Display Unit	Appareil miniature/ Ap- pareil de commande, de régulation et d'affichage

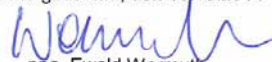
Typ 07-61.-.../.... und Typ 07-662.-.../....

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 94/9/EG	ATEX-Directive 94/9/EC	ATEX-Directive 94/9/CE
EMV-Richtlinie 2004/108/EG	EMC-Directive 2004/108/EC	CEM-Directive 2004/108/CE.
RoHS-Richtlinie 2011/65/EU und mit folgenden Normen oder normativen Dokumenten übereinstimmt	RoHS-Directive 2011/65/EU and is in conformity with the following standards or other normative documents	Directive Européenne RoHS 2011/65/UE et est conforme aux normes ou documents normatifs ci-dessous
EN 60079-0:2012 EN 60079-1:2007 EN 60079-7:2007	EN 60079-11:2012 EN 60079-31:2009 EN 60204-1:2006	EN 62208:2011 EN 60445:2010 EN 60529:1991 + A1:2000 + A2:2013

Kennzeichnung	Marking	Marquage
II 2G Ex d e [ib] IIC T6, T5 bzw. T4 Gb II 2(1)G Ex d e [ia Ga] IIC T6, T5 bzw. T4 Gb II 2G Ex d e IIC T6 bzw. T5 Gb II 2D Ex tb [ib] IIIC T80 °C bzw. T95 °C Db II 2(1)D Ex tb [ia Da] IIIC T80 °C bzw. T95 °C Db II 2D Ex tb IIIC T80 °C bzw. T95 °C Db -20 °C ≤ Ta ≤ +70 °C (abhängig von den eingebauten Komponenten)	(depending on the installed components) Procedure of EC-Type Examination / Notified Body	(il dépend des composants) Procédure d'examen CE de type / Organisme Notifié
Verfahren der EG-Baumusterprüfung / Benannte Stelle EPS 14 ATEX 1 696 2004 BUREAU VERITAS, Businesspark A96, 86842 Türkheim, D		

CE 0044

Bad Mergentheim, den 16.10.2014


ppa. Ewald Warmuth
Geschäftsleitung / General Manager

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