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.

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 mm² (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.
Miniature Control and Display Unit
Type 07-61.1-......

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 62208:2011/IEC 62208:2011
EN 60445:2010/IEC 60445:2010

Installation

Death or serious injury through improper use.
- Extensions or modifications to the mini-
  nute control and display unit are only per-
  mission if the manufacturer’s approval is 
  obtained first.
- IEC/EN60079-14 must be observed.

Check when installing:
- When connecting cables and conductors to 
ap 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 protec-
tion 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 capaci-
ty, 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 (in-
cluding those not in use).

Commissioning

Before commissioning, check that:
- The miniature control and display unit has 
  been installed in compliance with regu-
lations.
- 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.

Transport, storage

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

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 as-
sembly/disassembly.
- Follow the components mounting instruc-
tions/operating instructions.
- When assembling the miniature control and 
  display unit, take care that the distances be-
tween 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:

<table>
<thead>
<tr>
<th>Gas/vapour sub-group</th>
<th>IIC</th>
<th>IIB</th>
</tr>
</thead>
<tbody>
<tr>
<td>at least 40 mm (1.58 in)</td>
<td>at least 30 mm (1.18 in)</td>
<td></td>
</tr>
</tbody>
</table>

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.
Operational Instruction (Translation)

Miniature Control and Display Unit
Type 07-61.1-…./….

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 later time.
- 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.

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.../....

<table>
<thead>
<tr>
<th>Order number</th>
<th>Diameter (in)</th>
<th>Overall length (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>07-6111.../...</td>
<td>30 (1.2)</td>
<td>≥ 55 (≥ 2.2)</td>
</tr>
<tr>
<td>07-6121.../...</td>
<td>45 (1.8)</td>
<td>≥ 55 (≥ 2.2)</td>
</tr>
<tr>
<td>07-6131.../...</td>
<td>60 (2.4)</td>
<td>≥ 60 (≥ 2.4)</td>
</tr>
</tbody>
</table>

Front flange □ 48/72

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.
**Erklärung der Konformität**

**Declaration of Conformity**

**Attestation de conformité**

Nº 01-6100-7C0003

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**Wir**

**Nous**

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**BARTEC**

**GmbH**

Max-Eyth-Straße 16

97980 Bad Mergentheim

Germany

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**Operational Instruction (Translation)**

**Miniature Control and Display Unit**

Type 07-61.1-.....

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**BARTEC**

**GmbH**

Max-Eyth-Straße 16

97980 Bad Mergentheim

Germany

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**Technical data subject to change without notice. Changes, errors and misprints may not be used as a basis for any claim for damages.**

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**EN 4/4**

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**01-6100-7D0002/B-02/15-STVT-283184**

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**Kennzeichnung**

**Marking**

II 2G Ex de [ib] IIC T6, T5 bzw. T4 Gb

II 2G Ex de [ia Ga] IIC T6, T5 bzw. T4 Gb

II 2G Ex de [ib] IIC T5 bzw. T5 Gb

II 2D Ex ib [ib] IIC T80 °C bzw. T95 °C Db

II 2D Ex ib [ia Da] IIC T80 °C bzw. T95 °C Db

-20 °C ≤ Ta ≤ +70 °C

(abhängig von den eingebauten Komponenten)

**Verfahren der EG-Baumusterprüfung / Benannte Stelle**

**Procedure of EC-Type Examination / Notified Body**

BP S 14 ATEX 1 696

2004 BUREAU VERITAS, Businesspark A96, 86042 Türkheim, D

**0044**

Bad Mergentheim, den 16.10.2014

[p.ä. Ewald Warmuth

Geschäftsführung / General Manager

03-0383-0289