Operational Instruction (Translation)

Control and Display Unit Type 07-61.2 -.../...-

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 control and display unit, type 07-61.2 -.../...-, 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 control and display unit consists 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 control and display unit can be used in hazardous areas in Zones 1 and 2 in accordance with the certified explosion hazard subgroups 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 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.

Exploration protection

Maximum Ex type of protection

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

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] IIC T80 °C or T95 °C Db
II 2(1)D Ex tb [ia Da] IIC T80 °C or T95 °C Db
II 2D Ex tb IIC T80 °C or T95 °C Db

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] IIC T80 °C...T95 °C Db
Ex tb [ia Da] IIC T80 °C...T95 °C Db
Ex tb IIC T80 °C...T95 °C Db
Certification
NCC 14.02943

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. 1100 V
Rated current/installation elements: max. 21 A
Power loss: max. 45 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/coated

Cover closure

Cheese head screw, ISO 4762-M4 x 14-A2-70 or ISO 4762-M5 x 14-A2-70

Dimensions

See page 4.
Operational Instruction (Translation)

Safety Instructions
The control and display unit may be used only within the specified temperature class and the temperature range indicated for it (see type label). The control and display unit is not suitable for use in Zones 0/20.
The control and display unit with axes or shafts cannot be used in hazardous dust areas. The 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 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 conformed to
EN 60079-0:2012/IEC 60079-0 : 2011
EN 60079-7:2007/IEC 60079-7 : 2006-07
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 60445:2010/IEC 60445:2010

 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 a quality of connection cable that will meet the mechanical and thermal requirements in the area of application.
In hazardous areas the connection cable must be laid in a way that ensures it will be protected from damage.

Note
For 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 control and display unit are only permissible if the manufacturer’s approval is obtained first.
- IEC/EN60079-14 must be observed.

Check at the installation:
- 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 that will meet the mechanical and thermal requirements in the area of application.
- 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.

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

When assembling the 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 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</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1.58 in)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>at least 30 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1.18 in)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Operational Instruction (Translation)

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 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 control and display unit functions perfectly.

Operation

DANGER
Death or serious injury through improper use.
- The 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 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 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 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
Operational Instruction (Translation)

Control and Display Unit Type 07-61.2 -.../...-

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info@bartec.de
www.bartec.de

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

Dimensions in mm (in)

Standard:
– Front flange □ 72/96/144 (2.83/3.78/5.67)
– Cable entry type 07-9.../...-

<table>
<thead>
<tr>
<th>Order number</th>
<th>Diameter</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>07-6132-.../...</td>
<td>60 (2.36)</td>
<td>variable to max. 200 cm³ (12.21 in³)</td>
</tr>
<tr>
<td>07-6142-.../...</td>
<td>90 (3.54)</td>
<td>variable to max. 1000 cm³ (61.02 in³)</td>
</tr>
<tr>
<td>07-6152-.../...</td>
<td>120 (4.72)</td>
<td>variable to max. 2750 cm³ (167.82 in³)</td>
</tr>
</tbody>
</table>

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

Front flange □ 72/96/144

Accessories:
Assembly foot for types 07-6142-... and 07-6152-...-
Swivel foot for type 07-6142-... and type 07-6152-...-

01-6100-7D0001/C-02/15-STVT-280342

04-6100-7D0001/C-02/15-STVT-280342
**Erklärung der Konformität**
**Declaration of Conformity**
**Attestation de conformité**

N° 01-6100-7C0003

Wir erklären in alleiniger Verantwortung, dass das Produkt

**Kleinheit-/Steuer-, Regel- und Anzeigegerät**

<table>
<thead>
<tr>
<th>Typ 07-61-........ und Typ 07-662-........</th>
</tr>
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<tbody>
<tr>
<td>EN 60079-7:2007</td>
</tr>
</tbody>
</table>

**Kennzeichnung**

II 2G Ex d i [n] IIC T6, T5 bzw. T4 Gb
II 2G Ex d i [n] IIC T6, T5 bzw. T4 Gb
II 2G Ex d i [n] IIC T6, T5 bzw. T4 Gb
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II 2D Ex tb [ib] IIC T80 °C bzw. T95 °C Db
II 2D Ex tb [ib] IIC T80 °C bzw. T95 °C Db
II 2D Ex tb [ib] IIC T80 °C bzw. T95 °C Db
II 2D Ex tb [ib] IIC T80 °C bzw. T95 °C Db

-20 °C ≤ Ta ≤ +70 °C

(abhängig von den eingebauten Komponenten)

Verfahren der EG-Baumusterprüfung / Be-nannte Stelle

EPS 14 ATEX 1 696

2004 BUREAU VERITAS, Businesspark A96, 86042 Tübingen, D

0044

Bad Mergentheim, den 14.10.2014

[Signature]

Geschäftsführung / General Manager