



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 type 07-662-..../.... potentiometer consists of a metal Ex d enclosure, into which an insertion potentiometer is fitted.

The metal Ex d enclosures are tailored to the dimensions of the resistors and will be produced in different sizes from Ø 30 to 60 mm (1.18 to 2.36 in).

The potentiometer can be fastened and secured against twisting in a number of ways. Two nuts are included in each consignment. Optionally BARTEC provides either threaded holes in the front panel of the enclosure or an antirotation pin.

Accessories, such as rotary and pointer knobs, scales, digital drives for 10 turns potentiometer, and slip clutches could be delivered.

Explosion protection

Maximum Ex type of protection

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

ATEX

Ex type of protection

Ex II 2G Ex d e IIC T6 resp. T5 Gb

Ex II 2D Ex tb IIIC T80 °C resp. T95 °C Db

CE 0044

Certification

EPS 14 ATEX 1 696

IECEX

Ex type of protection

Ex d e IIC T6 resp. T5 Gb

Ex tb IIIC T80 °C resp. T95 °C Db

Certification

IECEX EPS 14.0042

INMETRO

Ex type of protection

Ex d e IIC T6...T5 Gb

Ex tb IIIC T80 °C...T95 °C Db

Certification

NCC 14.02943

EAC

Certification

TC RU C-DE.ГБ06.B.00443

Ambient temperature range

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

Technical data

Electrical data

Rated voltage: up to 250 V

Power loss: max. 8 W

Protection class

Max. IP 66 (EN 60529)

Mechanical strength

Impact energy: max. 7 Nm

Rotation, electrical/mechanical

Cemented wire-wound resistors:

Type 07-662-.111-....: 250° / 270°

Carbon-film resistors on ceramic:

Type 07-662-.113-....: 270°

Precision wire-wound resistors:

Type 07-662-.112-....: 1 turn

320° ±2°

10 turns

Type 07-662-.102-....: 10 x 360°

+10°

Enclosure material

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

Dimensions

See page 3.

Safety instructions

The potentiometer may be used only within the specified temperature class and the temperature range indicated for it (see type label).

The potentiometer is not suitable for use in zones 0/20.

The potentiometer may be operated only if it is clean and not damaged in any way. Dust deposits exceeding 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 60079-31:2009/IEC 60079-31 : 2008

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

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

Transport, storage

NOTICE

Damage to the potentiometer 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 device from voltage before assembly/disassembly.

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

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

The potentiometer must be fitted into an enclosure that conforms to the requirements of a type of protection recognized as being in accordance with IEC/EN 60079-0.

When fitting into an enclosure with "Ex e" type of protection the clearance and creepage distances under IEC/EN 60079-7 Section 4.3, Section 4.4 and Table 1 must be observed.

Installation

DANGER

Death or serious injury due to improper use.

- Extensions or modifications to the potentiometer are only permissible if the manufacturer's approval is obtained first.
- The 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 uphold the device'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 device has been installed in compliance with regulations.
- The device is not damaged.
- The connection has been established properly.
- All screws have been tightened securely.
- The device functions perfectly.

Operation

DANGER

Death or serious injury through improper use.

- The potentiometer 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.

- 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 potentiometer 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.

i 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 potentiometer 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.

i Note

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

Accessories, spare parts

See BARTEC catalogue.

Disposal

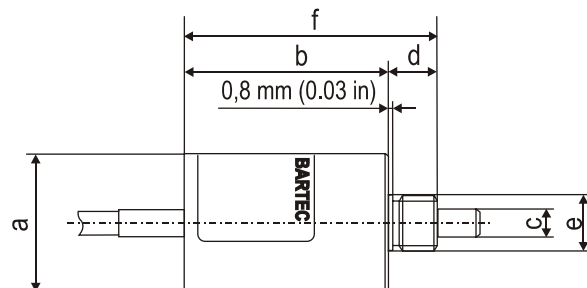
The potentiometer components contain metal and plastic parts.

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



Selection chart

Order number	Temperature class	Max. power loss	a in mm (in)	b in mm (in)	c in mm (in)	d in mm (in)	e	Overall length f in mm (in)	
07-6622-.111/....	T6	2.5 W	Ø 30 (1.2)	55 (2.2)	Ø 6 (0.2)	11 (0.4)	M12x1.5	66 (2.6)	
07-6622-.112/....	T6	1.2 W		45 (1.8)				55 (2.2)	55 (2.2)
07-6622-.113/....	T6	2 W		55 (2.2)				66 (2.6)	
07-6623-.111/....	T5	3 W	Ø 45 (1.8)	90 (3.5)	Ø 6.35 (0.3)	8 (0.3)	3/8-32 UNEF	101 (4)	
07-6624-.111/....	T6	5 W		Ø 38 (1.5)				50 (2)	61 (2.4)
07-6624-.102/....	T6	2 W	Ø 45 (1.8)	90 (3.5)	Ø 6 (0.2)	11 (0.4)	M12x1.5	101 (4)	
07-6625-.111/....	T5	6 W	Ø 60 (2.4)	87 (3.4)				98 (3.9)	
07-6626-.111/....	T6	7 W	Ø 60 (2.4)	87 (3.4)				Ø 6 (0.2)	11 (0.4)
07-6627-.111/....	T5	8 W							

07-6620-7D0002/A-02/15-STV/T-381059

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 Anzeigegerät	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)	(il dépend des composants)
Verfahren der EG-Baumusterprüfung / Benannte Stelle	Procedure of EC-Type Examination / Notified Body	Procédure d'examen CE de type / Organisme Notifié
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