

(1) **EU - Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – Directive 2014/34/EU

(3) EU - Type Examination Certificate Number

EPS 14 ATEX 1 696 X

Revision 1

(4) Equipment: Miniature / Control and Display Unit, type 07-61**_****/**** and type 07-662*_****/****

(5) Manufacturer: BARTEC GmbH

(6) Address: Max-Eyth-Str. 16, 97980 Bad Mergentheim, Germany

(7) This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, certifies that this equipment has been found to comply with the essential health and safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 13TH0217.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN 60079-0:2012 + A11:2013

EN 60079-1:2014

EN 60079-7:2015

EN 60079-31:2014

EN 60079-11:2012

EN 60079-28:2015

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.

(11) This EU - Type Examination Certificate relates only to the design and examination of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 2G Ex db eb op is ia/ib [ib] IIC T6...T4 Gb

II 2(1)G Ex db eb op is ia/ib [ia Ga] IIC T6...T4 Gb

II 2D Ex tb op is ia/ib [ib] IIC T80°C, T95°C, T130°C Db

II 2(1)D Ex tb op is ia/ib [ia Da] IIC T80°C, T95°C, T130°C Db



Certification department of explosion protection

H. Schaffer

Nuremberg, 2017-09-01

(13)

Annex

(14) EU - Type Examination Certificate EPS 14 ATEX 1 696 X

Revision 1

(15) Description of equipment:

The Miniature / Control and Display Unit type 07-61**_****/**** is used to provide a flameproof enclosure of industrial-standard switching, control and display units. It consists of a flameproof housing, optionally with spindles, shafts and/or inspection windows.

The Potentiometer type 07-662*_****/**** is used to provide a flameproof enclosure of industrial-standard regulating resistors. It consists of a flameproof housing with actuating spindle.

Connection is made by means of a terminal box in type of protection Increased Safety or by means of an integrated connecting cable (open-ended line).

Max. ambient temperature range: -40 °C to +40 °C resp. up to max. +80 °C at reduced power dissipation

Electrical data:

Rated insulating voltage:

Type 07-61*2-****/****: up to 1100 V

Type 07-61*1-****/**** & 07-662*_****/****: up to 690 V

Rated current: max. 21 A

Conductor size.....: max. 2,5 mm²

Dimensions in mm (Diameter, length)			Power dissipation in W for	
			T6	T5
07-6111	∅ 30	L ≥ 55 ¹⁾	2,5	3
07-6622	∅ 30	L ≥ 55 ¹⁾	2,5	-
07-6623	∅ 30	L ≥ 55 ¹⁾	-	3
07-6121	∅ 45	L ≥ 55 ¹⁾	2,5	3
07-6121	∅ 45	L ≥ 90 ¹⁾	5	6
07-6624	∅ 45	L ≥ 55 ¹⁾	5	-
07-6625	∅ 45	L ≥ 55 ¹⁾	-	6
07-6131	∅ 60	L ≥ 60 ¹⁾	5	6
07-6131	∅ 60	L ≥ 90 ¹⁾	7	8
07-6626	∅ 60	L ≥ 55 ¹⁾	7	-
07-6627	∅ 60	L ≥ 55 ¹⁾	-	8
07-6132	∅ 60	60 ≤ L < 90	5	6



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07-6132	∅ 60	$90 \leq L < 135$ ²⁾	7	8
07-6142	∅ 90	$40 \leq L < 140$		
07-6142	∅ 90	$140 \leq L \leq 250$	16	18
07-6152	∅ 120	$75 \leq L < 200$		
07-6142	∅ 90	$L > 250$ ²⁾	23	26
07-6152	∅ 120	$200 \leq L \leq 370$	30	34
07-6152	∅ 120	$L > 370$ ²⁾	40	45
07-6163	∅ 140	$L > 400$	40	45
07-6173	∅ 160	$L > 400$	40	45
07-6183	∅ 180	$L > 400$	40	45
07-6193	∅ 200	$L > 400$	80	100

The power dissipation values refer to an ambient temperature of +40 °C.

¹⁾ The nominal value of the enclosed volume is smaller than 25 cm³ (∅ 30 mm), 100 cm³ (∅ 45 mm) and 100 cm³ (∅ 60 mm). The length may exceed the given value only if the internal electrical device compensates for the increase of volume. The gaseous part (remaining free space) of the enclosed volume is kept at 1/3 minimum.

²⁾ The nominal value of the enclosed volume is 200 cm³ (∅ 60 mm and L = 135 mm), 1000 cm³ (∅ 90 mm and L = 250 mm) and 2750 cm³ (∅ 120 mm and L = 370 mm). The length may exceed the given value only if the internal electrical device compensates for the increase of volume. The gaseous part (remaining free space) of the enclosed volume is kept at 1/3 minimum.

In case of reduced power dissipation, ambient temperatures beyond +40 °C are acceptable.

The rated values are maximum values, the actual electrical values are determined by mounted electrical apparatus. Within these limiting values and complying with the appropriate standards, the manufacturer specifies the final limiting values depending on power supply specifications, operating mode, utilization category etc. Any additional technical features are specified in the test documents.

The composition of the Ex marking will be based on the types of protection of the components actually used.

(16) Reference number: 13TH0217

(17) Special conditions for safe use:

When operated at ambient temperatures below -20 °C, different variants of viewing windows can be used if a protected installation is ensured by the construction in accordance with the requirements of EN 60079-0, section 26.4.2.

Notes for manufacturing and operation:

The connecting cable (open-end line) of the Miniature / Control and Display Unit shall be installed to provide for permanent wiring and adequate protection against thermal and mechanical stress.

The connection cable (open-end line) of the Miniature / Control and Display Unit shall be connected in an enclosure that meets the requirements of an approved type of protection as specified in EN 60079-0, section 1 if connection is made inside a potentially explosive area.

The Miniature / Control and Display Unit may also be connected by means of adequate cable entries or conduit systems if they meet the requirements of EN 60079-1, sections 13.4 and 13.5 and if they are covered by a separate examination certificate.

Any unused openings shall be closed as specified in EN 60079-1, section 13.8.

Cable entries and sealing plugs of simple design shall not be used.

The connector for the external equipotential bonding or protective conductor may be excluded if the Miniature / Control and Display Unit is conductively connected by means of permanently conductive system elements to which the equipotential bonding conductor is led.

Intrinsically safe circuits shall be installed in the enclosure in such a way that the clearance and creepage distances specified in EN 60079-11 between intrinsically safe and non-intrinsically safe circuits are complied with.

If system installation and layout does not provide for the clearance requirements for connectors as specified in EN 60079-11, wiring that meets the quality criteria Increased Safety "e" shall be used, or the wiring shall be mechanically fail safe in accordance with EN 60079-11.

Should these clearance requirements not be met, local wiring work may be performed only if an explosion risk can positively be excluded along all the lines.

When connecting more than one intrinsically safe circuit, the rules and regulations for interconnection shall be duly observed.

When incorporating sources of optical radiation, only certified components shall be used which have been assessed according to EN 60079-28.

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Nuremberg, 2017-09-01

