



S50JCK- SERIES

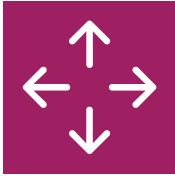
Heavy duty joysticks with ATEX/IECEx certified components



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S50JCK-EX JOYSTICK

Heavy duty joystick with ATEX/IECEx certified components

THESE JOYSTICKS COMBINE A HEAVY DUTY JOYSTICK DESIGN WITH ATEX/IECEx CERTIFIED POTENTIOMETERS AND/OR SWITCHES FOR INTRINSICALLY SAFE USE IN ZONE 1 OPERATIONS WITHOUT THE NEED FOR A GALVANIC BARRIER.

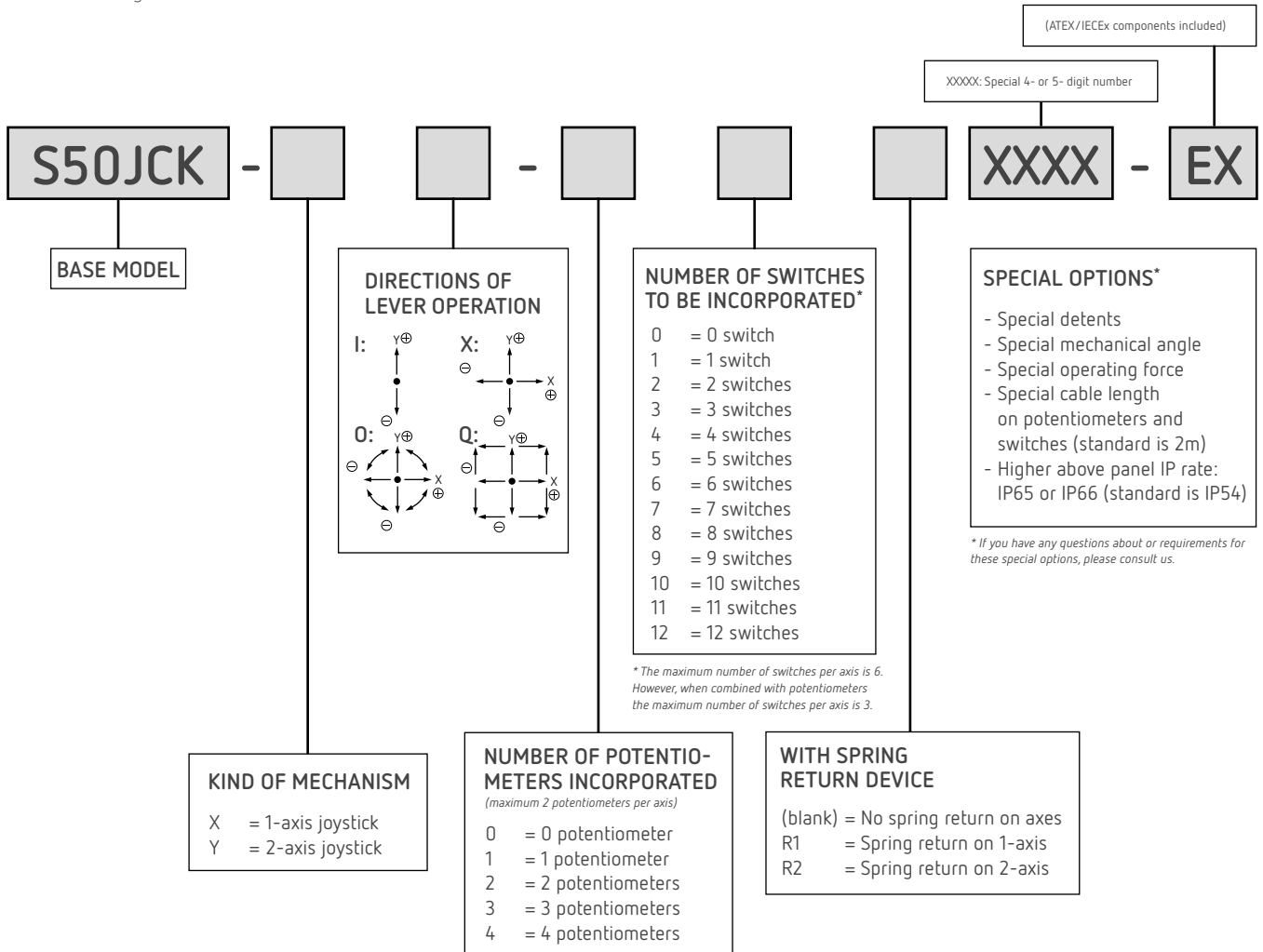


FEATURES

- Heavy duty design
- High precision control
- Long life expectancy of 5M+ cycles
- Customization for small quantities
- Standard configurations available from stock

APPLICATION AREAS

- Offshore cranes & winches
- Mining vehicles
- Painting platforms
- Chemical & process control systems
- Sawmills & grain silos



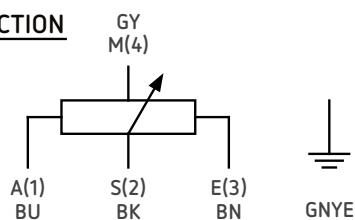
General specifications joystick

Mechanical operating angle	Approx. $\pm 30^\circ$ – $\pm 35^\circ$ from center position in each direction
Operating force	Approx. 3N–15N (300gf–1,500gf)
Operating temperature range	-20°C...+65°C
Vibration	10...55Hz 98m/s ²
Shock	294m/s ²
Life expectancy	Approx. 5,000,000 operations
Mass	Joystick base: ± 350 g Potentiometer with 2m cable: ± 450 g/pc. Switch with 2m cable: ± 150 g/pc.
Lever strength	Max. 50N (Max. 5kgf) <i>This value shows the value of static load to be part of knob.</i>
IP Protection class	Standard: IP54 Optionally: IP65 or IP66 (with subpanel) <i>This value shows the value from above panel towards knob only.</i>

Specifications Ex-certified potentiometers

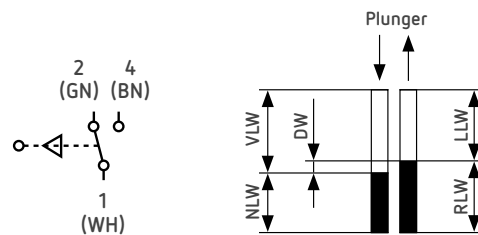
ATEX certification marking	II 2G Ex d e [ib] IIC T6, T5 bzw. T4 Gb II 2(1)G Ex d e [ia Ga] IIC T6, T5 bzw. T4 Gb II 2G Ex d e IIC T6 or T5 Gb II 2D Ex tb [ib] IIIC T80°C bzw. T95° Db II 2(1)D Ex tb [ia Da] IIIC T80°C or T95° Db II 2D Ex tb IIIC T80°C or T95° Db
IECEx certification marking	Ex d e [ib] IIC T6, T5 or T4 Gb Ex d e [ia Ga] IIC T6, T5 or T4 Gb Ex d e IIC T6 or T5 Gb Ex tb [ib] IIIC T80°C or T95°C Db Ex tb [ia Da] IIIC T80°C or T95°C Db Ex tb IIIC T80°C or T95°C Db
Model no.	07-6111-SFCP22AC-10589
Total resistance value	10k Ω $\pm 15\%$
Mechanical rotating angle	360° (Endless)
Electrical rotating angle	60° $\pm 5^\circ$
Power rating	0.2W
Tap	With center tap (voltage tap)
Center return accuracy	50% $\pm 3\%$
Output smoothness	Below 0.2% against input voltage
Contact resistance variation	Below 5% C.R.V.
Resolution	Essentially infinite
Dielectric strength	1 minute at 500 V.A.C.
Insulation resistance	Over 1,000 M Ω at 500Vdc
Maximum allowable current through the potentiometer	< 1mA

CONNECTION



Specifications Ex-certified switches

ATEX certification marking	II 2G Ex d IIC T6, T5 Gb or II 2G Ex db IIC T6, T5
IECEx certification marking	Ex d IIC T6, T5 Gb or Ex db IIC T6, T5
Further approvals	INMETRO, NEPSI, FM
Ambient temperature limit switches	T5 to max. +90°C T6 to max. +75°C depending on the rated current
Protection class (according to IEC/EN 60529)	IP54



Technical data

Rated voltage	AC 250 V				
Rated current					
Switching capacity with AC	Switching capacity with DC				
	ohmic load	inductive load		ohmic load	inductive load
250 V	5 A	5 A	250 V	0,25 A	0,03 A
30 V	5 A	5 A	125 V	0,5 A	0,06 A
			75 V	1 A	1 A
			30 V	5 A	5 A
Tightening torque of fixing screws	max. 0.6 Nm				
Operating force	max. 1.4 N				
Release force	min. 0.25 N				
Switching frequency	max. 1000/h				
Contact travels	<ul style="list-style-type: none"> - Pretravel (VLW) 0.5 to 1.0 mm - Overtravel (NLW) min. 0.2 mm - Reset travel (RLW) ~0.55 mm - Differential value (DW) max. 0.13 mm - No-load travel (LLW) ~0.5 mm 				
Mechanical life	>2 x 10 ⁶ switching cycles				
Electrical life	dependent on load				
Electrical connection	Limit switches Lead 0.75 mm ² LSYY/BETAflam®				
Enclosure	Duroplast				
Plunger/additional actuator	Stainless steel				

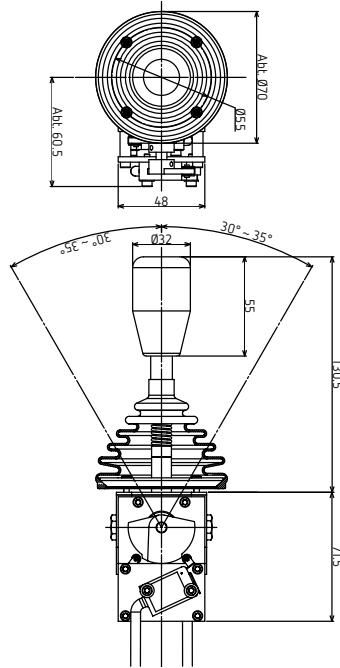
COMMONLY USED CONFIGURATIONS (1-AXIS)



S50JCK-XI-02R1G-8406-EX

FEATURES

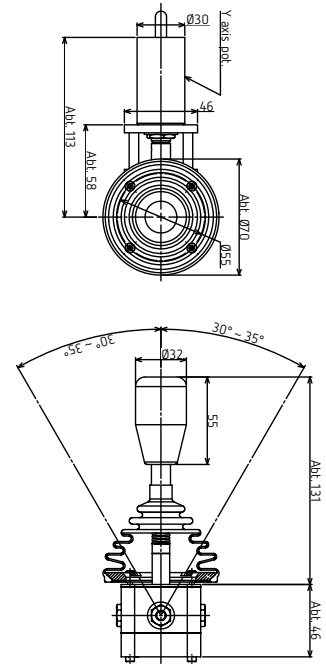
- 1-axis with spring return
- No potentiometers
- EEx directional switches (ON @ $\pm 5^\circ$)
- Standard knob
- Dust-proof rubber cover
- IP54



S50JCK-XI-10R1G-10953-EX

FEATURES

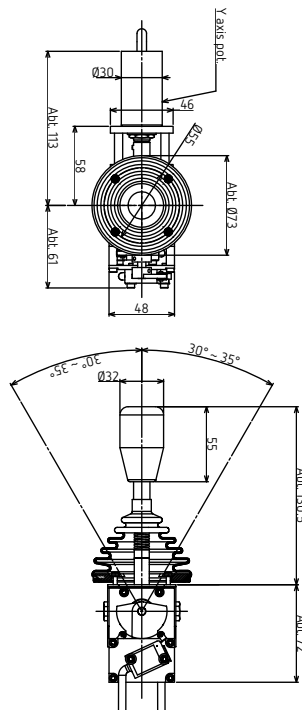
- 1-axis with spring return
- EEx potentiometer (10kOhm with center tap)
- No directional switches
- Standard knob
- Dust-proof rubber cover
- IP54



S50JCK-XI-12R1G-7962A-EX

FEATURES

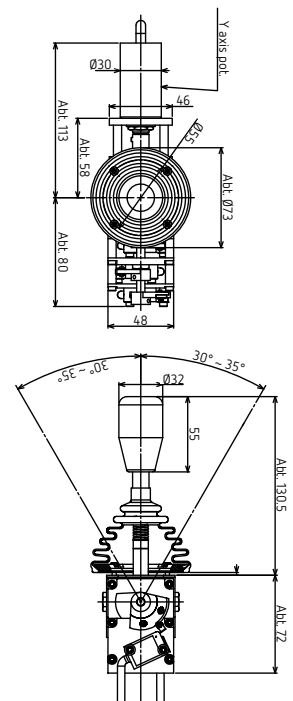
- 1-axis with spring return
- EEx potentiometer (10kOhm with center tap)
- EEx directional switches (ON @ $\pm 5^\circ$)
- Standard knob
- Dust-proof rubber cover
- IP54



S50JCK-XI-13R1G-10800-EX

FEATURES

- 1-axis with spring return
- EEx potentiometer (10kOhm with center tap)
- EEx directional switches (ON @ $\pm 5^\circ$)
- EEx center detecting switch (ON @ 0°)
- Standard knob
- Dust-proof rubber cover
- IP54



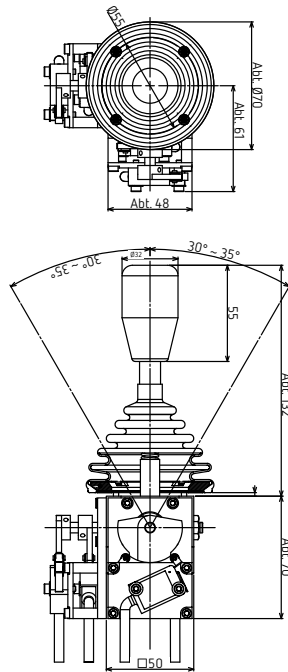
COMMONLY USED CONFIGURATIONS (2-AXIS)



S50JCK-YO-04R2G-10113-EX

FEATURES

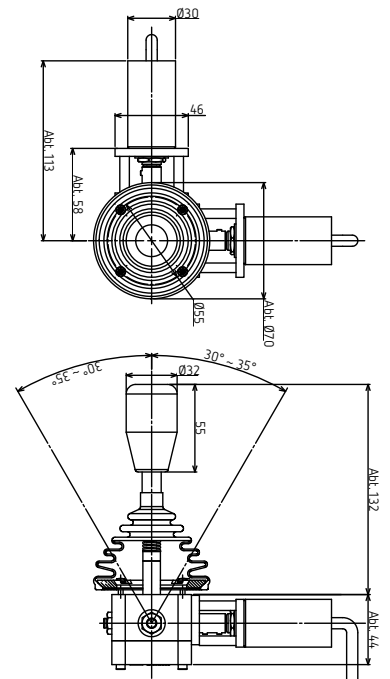
- 2-axis with spring return
- No potentiometers
- EEx directional switches (ON @ $\pm 5^\circ$)
- Standard knob
- Dust-proof rubber cover
- IP54



S50JCK-YO-20R2G-11048-EX

FEATURES

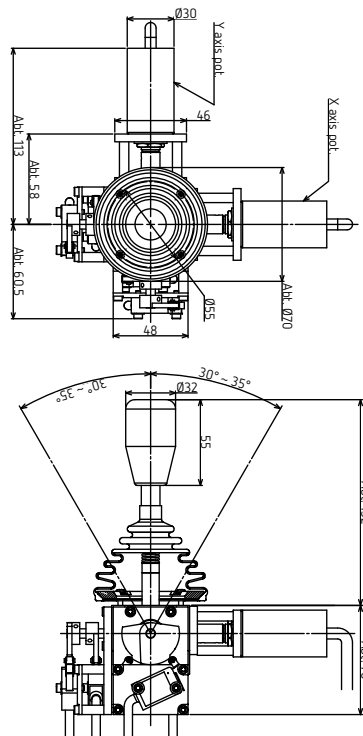
- 2-axis with spring return
- EEx potentiometers (10kOhm with center tap)
- No directional switches
- Standard knob
- Dust-proof rubber cover
- IP54



S50JCK-YO-24R2G-11367-EX

FEATURES

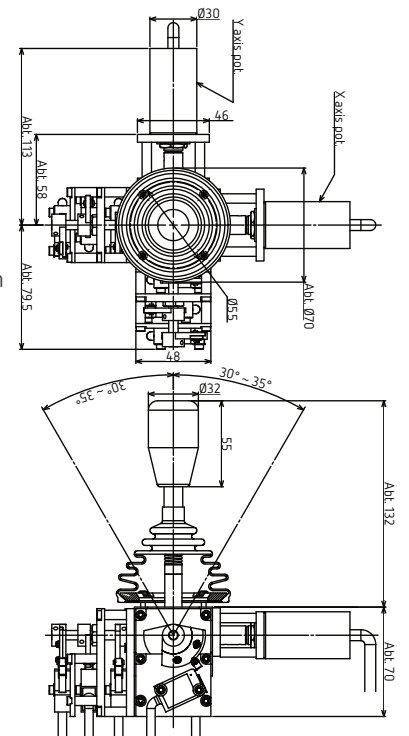
- 2-axis with spring return
- EEx potentiometers (10kOhm with center tap)
- EEx directional switches (ON @ $\pm 5^\circ$)
- Standard knob
- Dust-proof rubber cover
- IP54



S50JCK-YO-26R2G-11102-EX

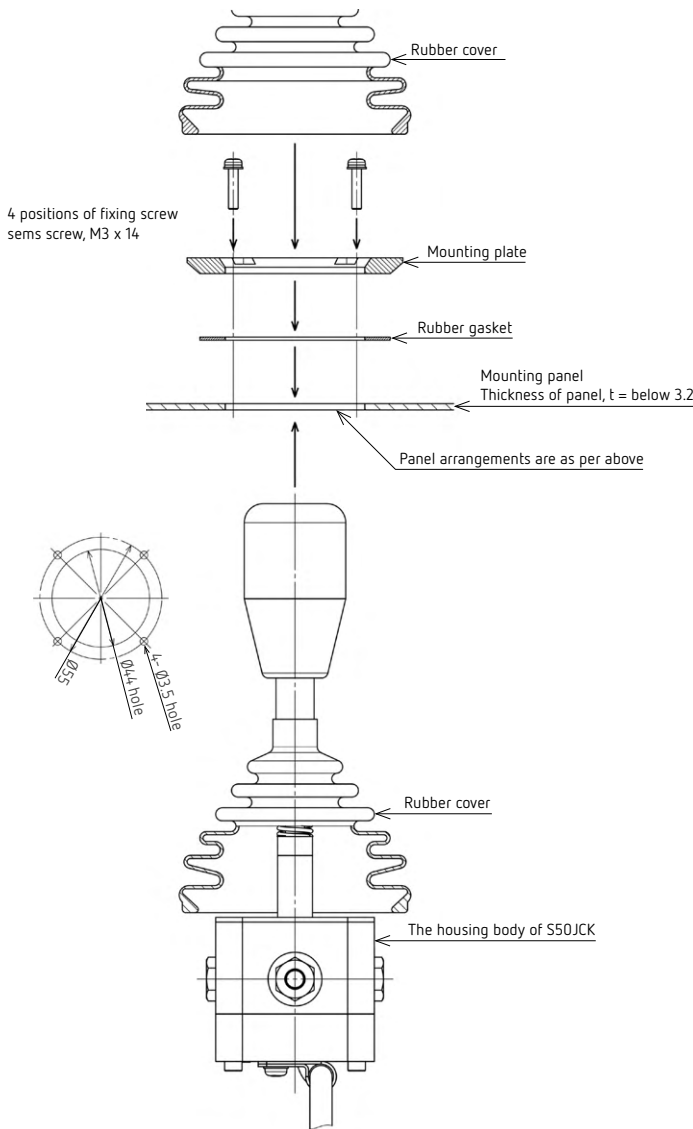
FEATURES

- 2-axis with spring return
- EEx potentiometers (10kOhm with center tap)
- EEx directional switches (ON @ $\pm 5^\circ$)
- EEx center detecting switch (ON @ 0°)
- Standard knob
- Dust-proof rubber cover
- IP54



MOUNTING OPTIONS

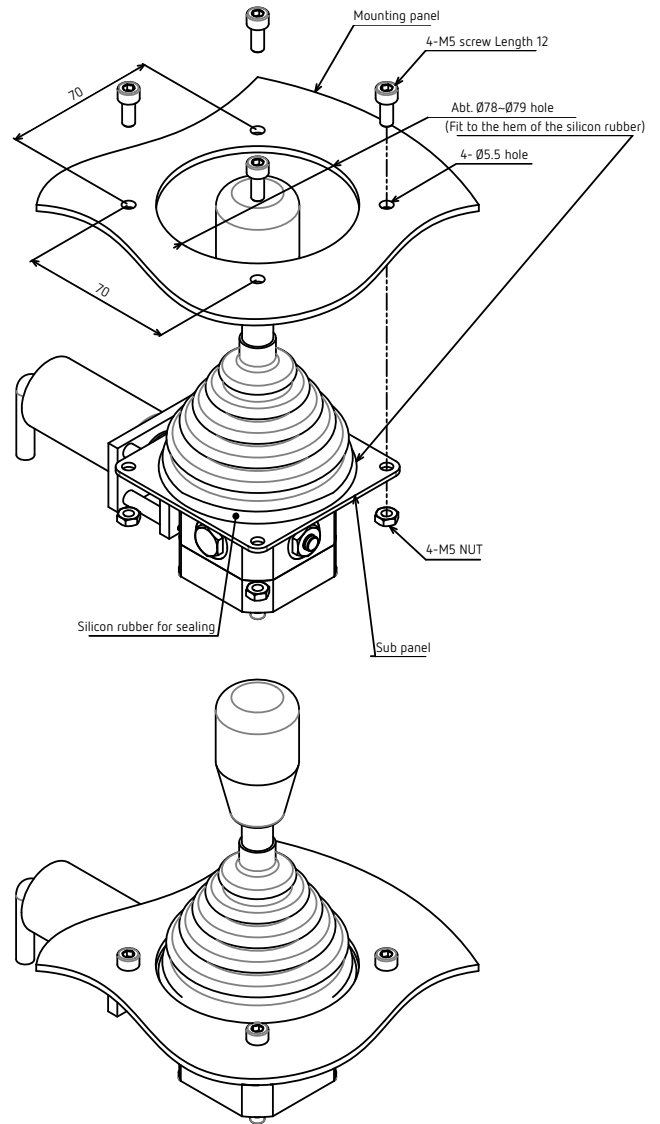
Without subpanel



HOW TO MOUNT JOYSTICK CONTROLLER

1. You can see the mounting plate when turning up rubber cover.
2. Remove the 4 positions of sems screw, M3 x 14 on mounting plate and then, remove mounting plate and rubber gasket.
3. As shown in the above illustration, mount them by 4 positions of sems screw, M3 x 14 to the mounting panel of your device, according to the order of the body of joystick, mounting panel and rubber gasket.
4. Finally, the rubber cover is covered to the mounting plate.

With subpanel

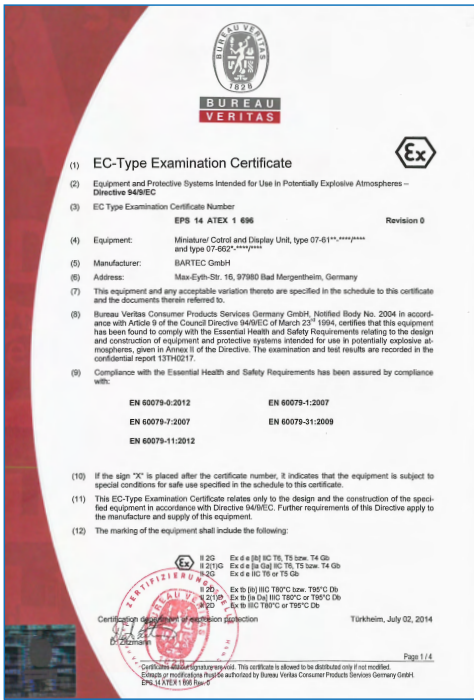


HOW TO MOUNT JOYSTICK CONTROLLER

1. You can see the mounting plate when turning up rubber cover.
2. Remove the 4 positions of sems screw, M3 x 14 on mounting plate and then, remove mounting plate and rubber gasket.
3. As shown in the above illustration, mount them by 4 positions of sems screw, M3 x 14 to the mounting panel of your device, according to the order of the body of joystick, mounting panel and rubber gasket.
4. Finally, the rubber cover is covered to the mounting plate.

EX CERTIFICATES FOR COMPONENTS USED

Potentiometers



BUREAU VERITAS

Ex

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

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres – Directive 94/9/EC

(3) EC Type Examination Certificate Number: **EPS 14 ATEX 1 696** Revision 6

(4) Equipment: **Miniature Control and Display Unit, type 07-611-***** 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 schedule to this certificate and the documents therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, Notified Body No. 2004 in accordance with Article 9 of the Council Directive 94/9/EC of March 23rd 1994, 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 I of the Directive. The examination and test results are recorded in the confidential report 13TH0217.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 **EN 60079-1:2007**
EN 60079-7:2007 **EN 60079-31:2009**
EN 60079-11:2012

(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 schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design and the construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

Ex **II 2G** **Ex d [II] IIC T6, T5 or T4 Gb**
Ex d [II] IIC T6, T5 or T4 Gb
Ex d [II] IIC T6 or T5 Gb

Ex **II 2G** **Ex b [II] IIC T60°C or T80°C Db**
Ex b [II] IIC T60°C or T80°C Db
Ex b [II] IIC T60°C or T80°C Db

Ex **II 2G** **Ex b [II] IIC T60°C or T80°C Db**
Ex b [II] IIC T60°C or T80°C Db

Ex **II 2G** **Ex b [II] IIC T60°C or T80°C Db**
Ex b [II] IIC T60°C or T80°C Db

Bad Mergentheim, July 02, 2014

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IEC IECEx

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
For rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEP EPS 14.0042** Issue No: 0 Certificate history: Issue No. 0 (2014-07-02)

Status: **Current** Page 1 of 3

Date of issue: **2014-07-02**

Applicant: **BARTEC GmbH**
 Max-Eyth-Str. 16
 97980 Bad Mergentheim
 Germany

Electrical Apparatus: **Miniature Control and Display Unit type 07-611-***** and type 07-662-*******

Optional accessory:

Type of Protection: **by flameproof enclosures, increased safety, by enclosure "X", intrinsic safety**

Marking: **Ex d e [II] IIC T6, T5 or T4 Gb**
Ex d e [II] IIC T6, T5 or T4 Gb
Ex d e [II] IIC T6 or T5 Gb

Ex b [II] IIC T60°C or T80°C Db
Ex b [II] IIC T60°C or T80°C Db
Ex b [II] IIC T60°C or T80°C Db

Approved for issue on behalf of the IECEx: **Dieter Zitzmann**
 Certification Body:

Postbox: **Manager Certification**

Signature: **(for printed version)**

Date:

1. This certificate and schedule may only be reproduced in full.
 2. This certificate is not transferable and remains the property of the issuing body.
 3. The status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:
Bureau Veritas Consumer Products Services Germany GmbH
 Businesspark A86
 86642 Tübingen
 Germany

Switches



BUREAU VERITAS

Ex

(1) **EG - Baumusterprüfbescheinigung**

(2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen – Richtlinie 94/9/EC

(3) EG-Baumusterprüfbescheinigungsnummer: **EPS 14 ATEX 1 699 X** Revision: 6

(4) Gerät: **Miniatur Endschalter Typ 07-2501-*******

(5) Hersteller: **BARTEC GmbH**

(6) Anschrift: **Max-Eyth-Strasse 16, 97980 Bad Mergentheim**

(7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zur dieser Baumusterprüfbescheinigung festgelegt.

(8) Die Bureau Veritas Consumer Products Services Germany GmbH bescheinigt als Benannte Stelle Nr. 2004 nach Artikel 9 der Richtlinie des Rates der Europäischen Gemeinschaft vom 23. März 1994 (94/9/EC) die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Artikel 9 der Richtlinie. Die Ergebnisse der Prüfung sind in dem vertraulichen Prüfbericht 13TH0495 festgelegt.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:

EN 60079-0:2012 **EN 60079-1:2007**

(10) Falls das Zeichen „X“ hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.

(11) Dieses EG-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Bau des festgelegten Gerätes gemäß Richtlinie 94/9/EC. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das in Verkehrbringen dieses Gerätes.

(12) Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:

Ex **II 2G** **Ex d IIC T6, T5 Gb** bzw. **II 2G** **Ex db IIC T6, T5**

Zertifizierungsstelle Explosionschutz Tübingen, 30.07. 2014

Dieter Zitzmann

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Bescheinigungen ohne Unterschrift haben keine Gültigkeit. Diese Bescheinigung darf nur verwendet werden, wenn sie vollständig und unverändert ist. Die Genehmigung von Bureau Veritas Consumer Products Services Germany GmbH: EPS 14 ATEX 1 699 X Rev. 6

BUREAU VERITAS Consumer Products Services Germany GmbH Businesspark A86, 86642 Tübingen, Germany Tel: +49 7141 92 10 10 Fax: +49 7141 92 10 20



IEC IECEx

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
For rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEP EPS 14.0030X** Issue No: 0 Certificate history: Issue No. 0 (2014-09-20)

Status: **Current** Page 1 of 3

Date of issue: **2014-09-20**

Applicant: **BARTEC GmbH**
 Max-Eyth-Strasse 16
 97980 Bad Mergentheim
 Germany

Electrical Apparatus: **Miniature limit switch Type 07-2501-*******

Optional accessory:

Type of Protection: **d - flameproof enclosure**

Marking: **Ex d IIC T6, T5 Gb** or **Ex db IIC T6, T5**

Approved for issue on behalf of the IECEx: **Dieter Zitzmann**
 Certification Body:

Postbox: **Manager Certification**

Signature: **(for printed version)**

Date:

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Certificate issued by:
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 86642 Tübingen
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2020-09-0001



Further information can be found at althencontrols.com