# BARTEC

# ComEx Actuating elements

for Zone 1 and 21
Datasheet

**A large number of variants and versions of actuating elements are available for the ComEx control and indicator units. All actuating elements are made of high-quality thermoplastic and conform to the IP 66/IP 67 type of protection.**

To complete the actuating elements, there are useful accessories such as e. g. label holders, marking tags, metal shroud or nut wrench. Actuating elements for increased resistance to oil are available too. The actuating elements are mounted quickly and easily onto the ComEx control and indicating devices. Use in Zone 1 and 21 is certified.

– Easy installation
– Certified for Zone 1 and 21
– High IP degree of protection

## Explosion protection

| Marking ATEX | Ex II 2G  Ex eb IIC Gb<br>Ex II 2D  Ex tb IIIC Db |
|---|---|
| Certification | CML 13 ATEX 3010 U |
| Marking IECEx | Ex eb IIC Gb<br>Ex tb IIIC Db |
| Certification | IECEx CML 14.0005 U |

Other approvals and certificates, see bartec.com

## Temperature range

| Service temperature | -40 °C to +70 °C<br>-55 °C to +70 °C* |
|---|---|
| Storage and transport temperature | -55 °C to +70 °C |

* related to explosion protection according to
  EN IEC 60079-0

## Technical Data

| Protection class | IP66/ IP67 |
|---|---|
| Weight | see table |
| Impact resistance | 7 Nm (Lamp actuators 4 Nm) |
| Material | Enclosure thermoplastic |
| Fastening | Installation in enclosures with wall thickness of 1 mm up to 6 mm (threading M30 x 1.5). Suitable for through-holes 30.3$^{+0.3}$ mm |

For ComEx
enclosure

For Control
unit/ ComEx
316L
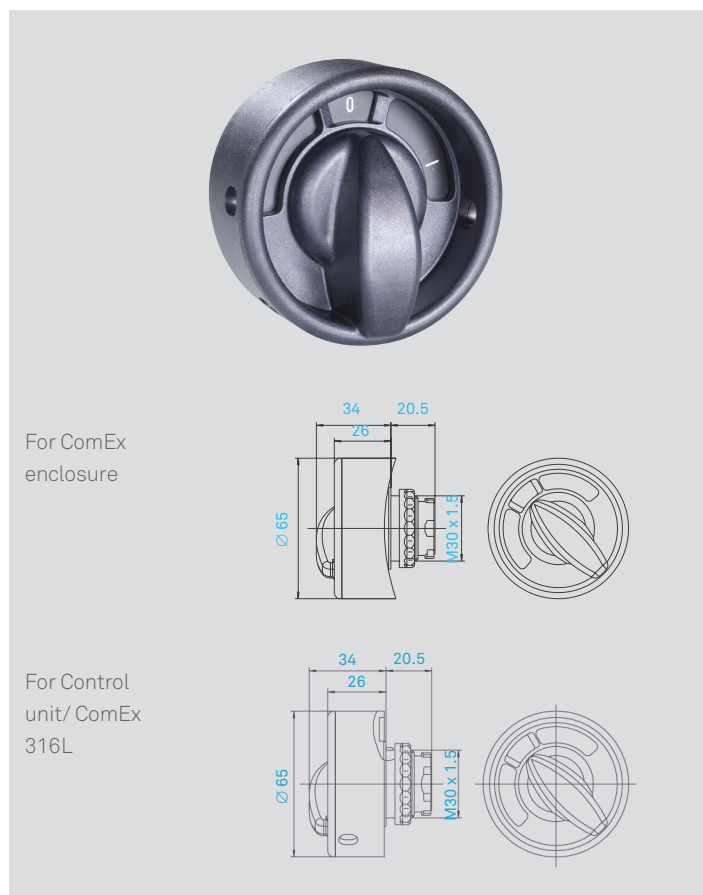
## Position selector switch (black)

| Description | | Order no. |
|---|---|---|
| – with 2 or 3 switch positions with protective collar | | |
| – lockable* only for switch module (2-pole) | | |
| – weight 74 g | | |
| 0 - I<br>latching | for control unit (flat) | 05-0003-007001 |
| | for ComEx enclosure | 05-0003-007101 |
| I - II<br>latching | for control unit (flat) | 05-0003-007002 |
| | for ComEx enclosure | 05-0003-007102 |
| I - 0 - II<br>bothsides latching | for control unit (flat) | 05-0003-007203 |
| | for ComEx enclosure | 05-0003-007303 |
| HAND - 0 - AUTO<br>left latching<br>right momentary | for control unit (flat) | 05-0003-007224 |
| | for ComEx enclosure | 05-0003-007324 |
| MAN - 0 - AUTO<br>left latching<br>right momentary | for control unit (flat) | 05-0003-007225 |
| | for ComEx enclosure | 05-0003-007325 |

* 3 boreholes in the protective collar to fit padlocks the switch position 0 (I)
  or to customer specifications

## Double pushbutton actuator

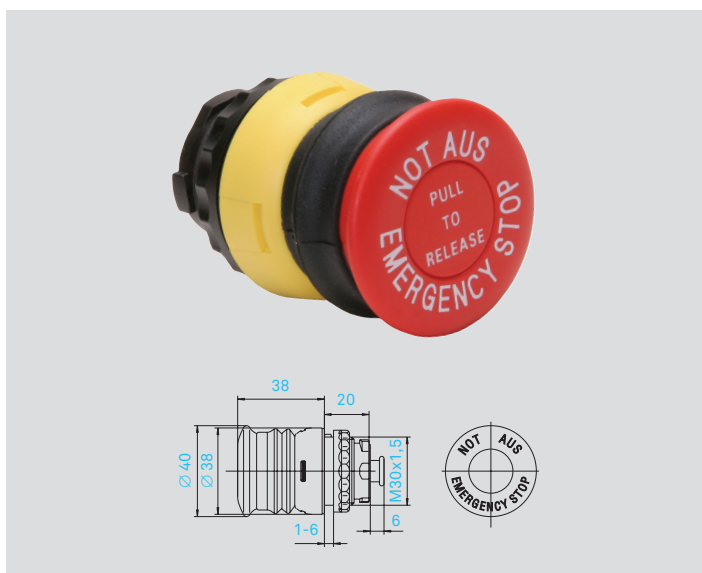| Description | Order no. |
|---|---|
| – 5 labels red, green, yellow, white, black,<br>  supplied loose | |
| – weight 52 g | |
| for ComEx enclosures | 05-0003-007500 |
| for control units | 05-0003-007400 |

For ComEx enclosure

For Control unit/ ComEx 316L

Technical data subject to change without notice.

## Pushbutton

| Description | Order no. |
|---|---|
| – 5 labels red, green, yellow, white, black, supplied loose<br>– weight 24 g | |
| for ComEx enclosures | 05-0003-000700 |

## Mushroom pushbutton

| Description | Order no. |
|---|---|
| – weight 74 g | |
| black, unlabelled | 05-0003-001800 |
| red, unlabelled | 05-0003-001802 |

## Emergency stop slam button

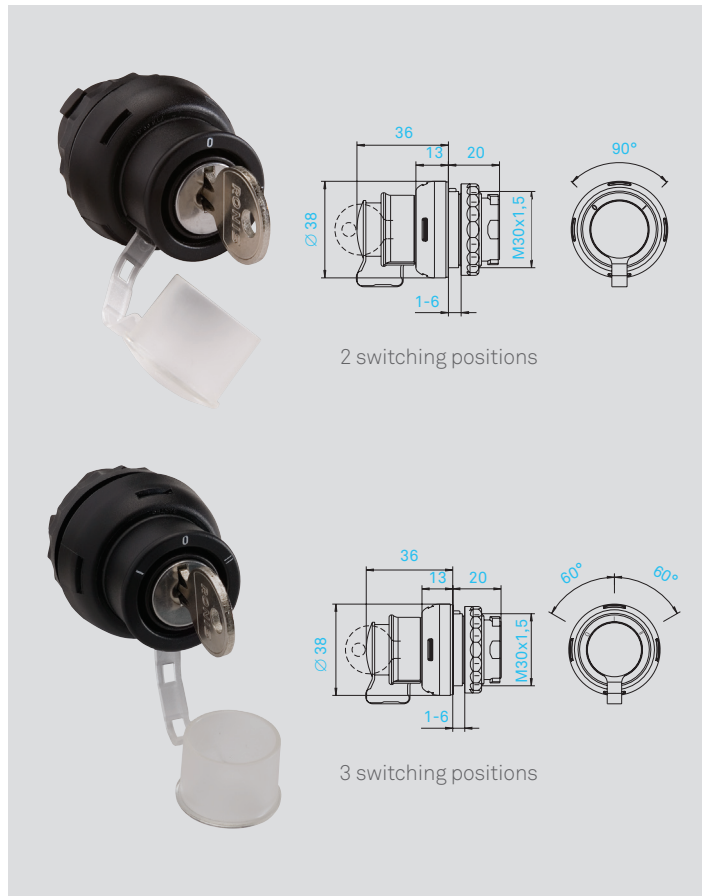| Description | Order no. |
|---|---|
| – weight 46 g<br>– DIN EN 60204-1: 2007<br>– DIN EN 60947-5-1: 2005 (VDE 0660 Teil 200) | |
| Pushbutton with imprint "NOT-AUS EMERGENCY STOP" "Pull to Release" | 05-0003-000800 |
| Pushbutton with imprint "ARRET" | 05-0003-000802 |
| Pushbutton yellow, unlabelled | 05-0003-000801 |
| Pushbutton black, unlabelled | 05-0003-000803 |
| Pushbutton red, unlabelled | 05-0003-000804 |
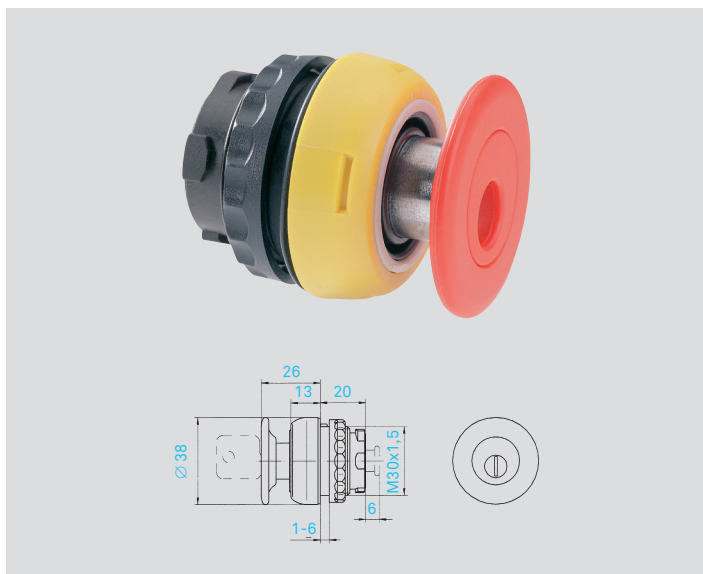
## Locking mushroom pushbutton

| Description | Order no. |
| --- | --- |
| – push in without key, unlock with key<br>– DOM lock 4 A 185<br>– weight 70 g | 05-0003-001203 |
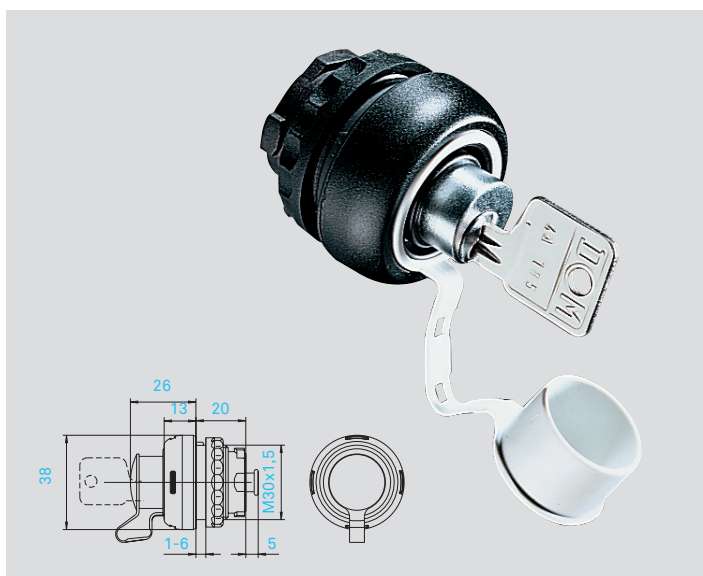


## Lock

| Description | Order no. |
| --- | --- |
| – DOM lock 4 A 185<br>– weight 70 g | |
| Lockable in both positions,<br>key retractable in both positions | 05-0003-001200 |
| Lockable in depressed position,<br>key retractable in depressed position | 05-0003-001201 |
| Tip lock lockable in initial positions,<br>key retractable in initial positions | 05-0003-001202 |

## Key-operated switch

| Description | | Order no. |
|---|---|---|
| – Key-operated switch** RONIS lock 455 | | |
| – with 2 or 3 switching positions, | | |
| – turned 90° for ComEx enclosures | | |
| – weight 49 g | | |
| 0 - I latching key retractable | for control units | 05-0003-007700 |
| | for ComEx enclosures | 05-0003-007800 |
| 0 - I momentary contact Position I, key not retractable | for control units | 05-0003-007701 |
| | for ComEx enclosures | 05-0003-007801 |
| 0 - I latching Position I, key not retractable | for control units | 05-0003-007702 |
| | for ComEx enclosures | 05-0003-007802 |
| I - 0 - II (I + II latching) key retractable | for control units | 05-0003-007900 |
| | for ComEx enclosures | 05-0003-008000 |
| I - 0 - II (I + II momentary contact) Position I + II key not retractable | for control units | 05-0003-007901 |
| | for ComEx enclosures | 05-0003-008001 |

2 switching positions

3 switching positions
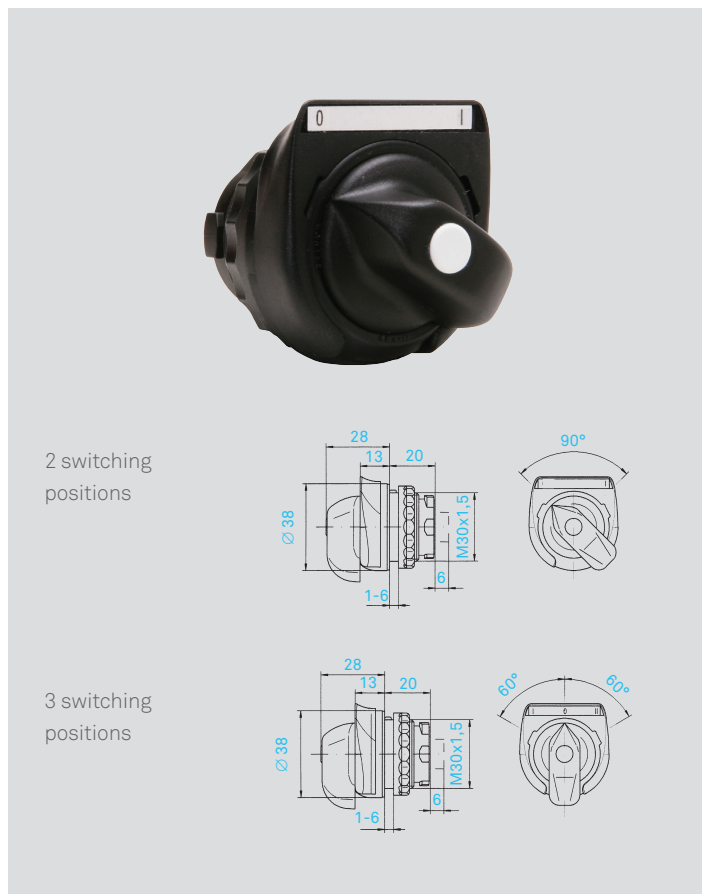
## Position selector switch (black)

| Description | | Order no. |
|---|---|---|
| – with 2 or 3 switching positions | | |
| – weight 33 g | | |
| 0 - I (latching) | for control units | 05-0003-000900 |
| | turned 90° for ComEx enclosures | 05-0003-000901 |
| 0 - I (momentary) | for control units | 05-0003-000902 |
| | turned 90° for ComEx enclosures | 05-0003-000903 |
| I - 0 - II (I + II latching) | for control units | 05-0003-001000 |
| | turned 90° for ComEx enclosures | 05-0003-001100 |
| I - 0 - II (I + II momentary) | for control units | 05-0003-001001 |
| | turned 90° for ComEx enclosures | 05-0003-001101 |
| I - 0 - II (I latching, II momentary) | for control units | 05-0003-001002 |
| | turned 90° for ComEx enclosures | 05-0003-001102 |
| I - 0 - II (I momentary, II latching) | for control units | 05-0003-001003 |
| | turned 90° for ComEx enclosures | 05-0003-001103 |

2 switching positions

3 switching positions

Technical data subject to change without notice.

## Lamp module actuator

| Description | Order no. |
|---|---|
| – weight 19 g | |
| red | 05-0003-001300 |
| green | 05-0003-001400 |
| yellow | 05-0003-001500 |
| white | 05-0003-001600 |
| blue | 05-0003-001700 |

## Illuminated button actuator

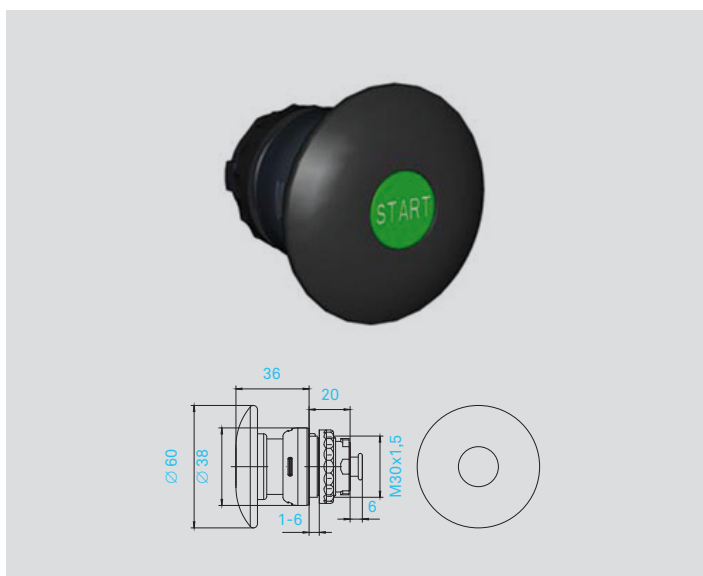| Description | Order no. |
|---|---|
| – weight 19 g | |
| red | 05-0003-006500 |
| green | 05-0003-006600 |
| yellow | 05-0003-006700 |
| white | 05-0003-006800 |
| blue | 05-0003-006900 |

## Potentiometer actuator (black)

| Description | Order no. |
|---|---|
| – durable and abrasion-resistant scale gradation from 0 to 10 | 05-0003-007600 |
| – weight 28 g | |
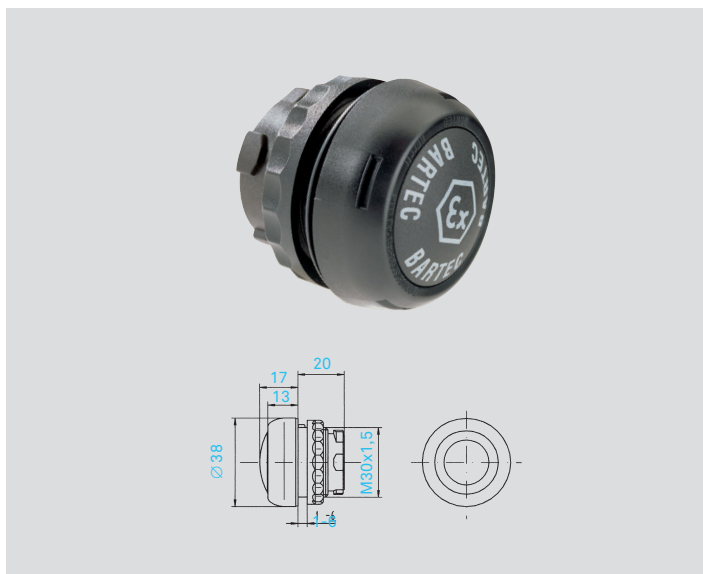
## Blanking plug

| Description | Order no. |
|---|---|
| – to cover unused holes in the cover<br>– weight 20 g | 05-0003-001900 |



## Mushroom pushbutton (black)

| Description | Order no. |
|---|---|
| – with pushbutton label "START"<br>– weight 24 g | |
| black | 05-0003-008200 |
| with pushbutton label "START" | 05-0003-008201 |

2 switching positions



3 switching positions
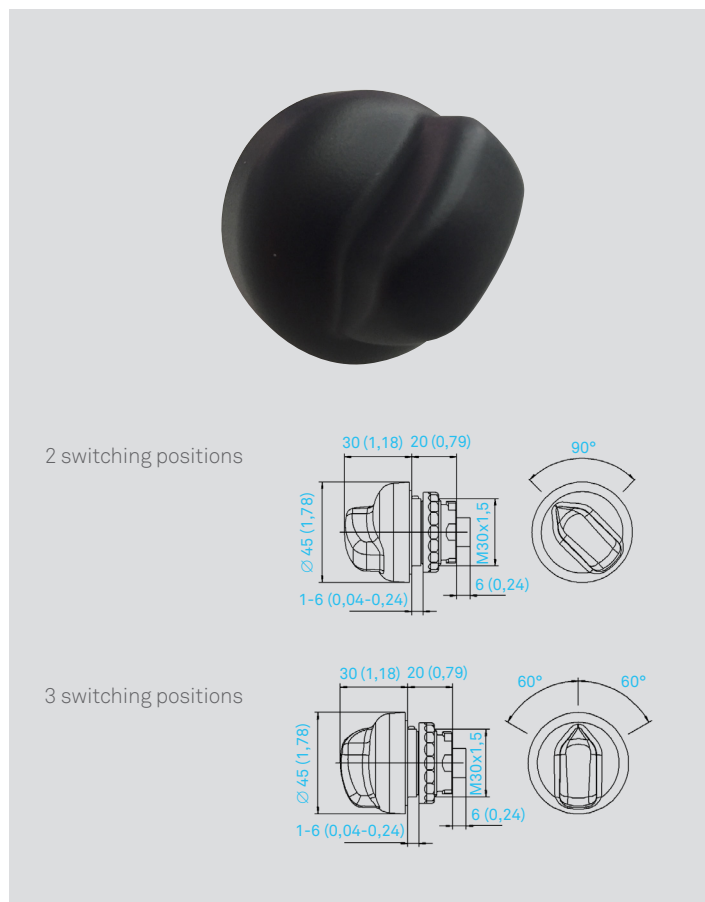


## Position selector switch BS

- black
- with 2 or 3 switching positions,
- turned 90° for ComEx enclosures
- weight 33 g (0.073 lb)

| Description | | Order no. |
|---|---|---|
| 0 - I | for control units | 05-0003-000900BS |
| | for ComEx enclosures | 05-0003-000901BS |
| I - 0 - II (I + II latching) | for control units | 05-0003-001000BS |
| | for ComEx enclosures | 05-0003-001100BS |
| I - 0 - II (I + II momentary contact) | for control units | 05-0003-001001BS |
| | for ComEx enclosures | 05-0003-001101BS |
| I - 0 - II (I latching, II momentary contact) | for control units | 05-0003-001002BS |
| | for ComEx enclosures | 05-0003-001102BS |
| I - 0 - II (I momentary contact, II latching) | for control units | 05-0003-001003BS |
| | for ComEx enclosures | 05-0003-001103BS |

**BARTEC**

# ComEx^flex Switch module

## for local control stations and control panels



**The ComEx^flex switch module is used in almost all hazardous areas where machine functions are activated by means of a button or a switch. The ComEx^flex is flexible and in addition to a large number of actuating elements it offers a junction box to facilitate a safe and convenient installation of the module into a control panel.**

All contacts in the switch modules are selfcleaning and the opening contacts have positive opening operation. The conductors are connected by means of terminals on the back of the module which have an increased safety level. The easy installation of the actuating elements, without the use of tools, ensures conformance to the high IP degree of protection.

– One module for all fields of application
– Large selection of actuating elements
– High flexibility thanks to the junction box
– Low installation depth

## Explosion protection

| | |
|---|---|
| Marking ATEX | Ex II 2G Ex db eb IIC Gb<br>Ex I M2 Ex db eb I Mb |
| Certification | CML 17 ATEX 1105 U |
| Marking IECEx | Ex db eb IIC Gb<br>Ex db eb I Mb |
| Certification | IECEx CML 17.0045U |

Other approvals and certificates, see bartec.com

## Technical data

| | | | | |
|---|---|---|---|---|
| Ambient temperature | -55 °C to +60 °C | | | |
| Protection class<br>Electrical load silver-plated contacts | determined by the actuating element and control station enclosure, min. IP 66, terminals IP 20 (IEC 60529). | | | |
| Rated insulation voltage | 690 V | | | |
| Rated voltage | 400 V | 400 V | 110 V | 60 V |
| Utilization category | AC-12 | AC-15 | DC-13 | DC-13 |
| Rated operating currents | 16 A | 10 A | 1 A | 2 A |
| Conventional thermal current $I_{the}$ | 16 A/+40 °C, 11 A/+60 °C | | | |
| Contact options | contacts with positive-break operation (self-cleaning)<br>1 N/C and 1 N/O or 2 N/C or 2 N/O | | | |
| Contact material | $AgSnO_2$ | | | |
| Enclosure material | Thermoplastic | | | |
| Connection | Terminals 2.5 mm$^2$, fine stranded | | | |
| Electrical load gold-plated contacts | Min. DC 2 V - 300 mA<br>Max. DC 60 V - 1 mA<br>For alternating current, these values are not to be interpreted as peak values. | | | |
| Mechanical life | >10$^6$ switching cycles | | | |
| Storage and transport temperature | -55 °C to +70 °C | | | |
| Weight | approx. 110 g | | | |
| Mounting | locked, bayonet lock | | | |
| Shock resistance | DIN EN/IEC 60068-2-27, 30 g 18 ms | | | |

## Dimensions
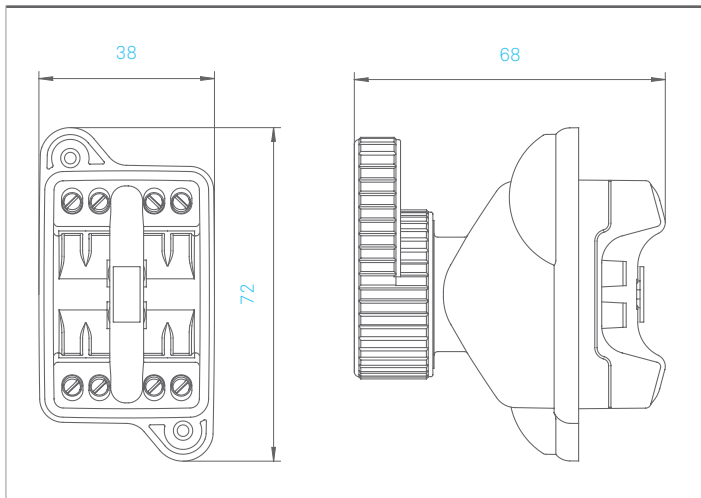


## Ordering information

Switch module without actuating element

| 0 | 7 | - | 3 | 3 | 2 | 3 | - | 4 | * | 0 | 0 | 0 | 0 | 0 | * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | A | | | | | | B |

Actuating element

| 0 | 5 | - | 0 | 0 | 0 | 3 | - | 0 | 0 | * | * | * | * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | C | C | C | C |

| Type of contacts | Code A | Actuating element | Code CCCC |
|---|---|---|---|
| 2 NC | 1 | Pushbutton | 0700 |
| | | Double push button actuator | 7400 |
| | | Emergency stop NOT-AUS | 0800 |
| | | Selector switch 0 + I latching, 2 positions | 0900 |
| | | Selector switch I + II latching, 3 positions | 1000 |
| 2 NO | 2 | Selector switch I + II latching, 3 positions | 1000 |
| | | Selector switch I + II momentary-contact, 3 positions | 1001 |
| | | Selector switch I latching, II momentary-contact, 3 positions | 1002 |
| | | Selector switch I momentary-contact, II latching, 3 positions | 1003 |
| | | Mushroom pushbutton, black | 1800 |
| 1 NC + 1 NO | 4 | Mushroom pushbutton, black | 1800 |
| | | Lockable in both positions, DOM lock | 1200 |
| | | Lockable in the depressed position, DOM lock | 1201 |
| | | Lockable in the initial position, DOM lock | 1202 |
| | | Locking-type mushroom pushbutton | 1203 |

**Code B**
0 = silver-plated contacts
1 = gold-plated contacts

Please enter code number. Other actuators available see bartec.com

Technical data subject to change without notice.

# ComEx^flex **Illuminated button** for local control stations and control panels

- One module for all fields of application
- Excellent luminosity
- High flexibility thanks to the junction box
- Low installation depth

The ComEx^flex illuminated button is used in almost all hazardous (potentially explosive) areas where machine functions are activated by pressing a button and the corresponding functional status is to be indicated visually. ComEx^flex is flexible and in addition to a large number of illuminated button actuators it offers a junction box to facilitate a safe and convenient installation of the module into a control panel. The module contacts are designed as snap-action contact elements. The conductors are connected by means of terminals on the back of the module which have an increased safety level. The easy installation of the lamp module actuating elements, without the use of tools, ensures conformance to the high IP degree of protection.
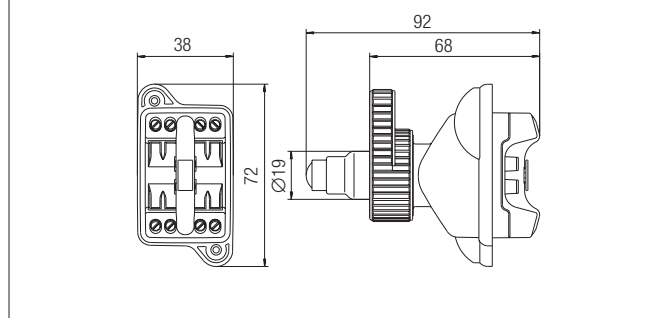
## Explosion protection

| | |
|---|---|
| Marking ATEX | ⟨Ex⟩ II 2G Ex db eb IIC Gb |
| | ⟨Ex⟩ I M2 Ex db eb I Mb |
| Certification | CML 17 ATEX 1106 U |
| Marking IECEx | Ex db eb IIC Gb |
| | Ex db eb I Mb |
| Certification | IECEx CML 17.0046U |
| Other approvals and certificates, see www.bartec.de | |
| Ambient temperature | -55 °C to +60 °C |

## Technical data

| | |
|---|---|
| Protection class | determined by the actuating element and control station enclosure, min. IP 66, terminals IP 20 (IEC 60529). |
| Rated insulation voltage | 300 V |
| Rated operating voltage | AC 12 V to 250 V ($T_a \leq$ +50 °C) |
| | DC 12 V to 60 V ($T_a \leq$ +50 °C) |
| | AC/DC 12 V to 24 V ($T_a \leq$ +60 °C) |
| Power consumption | < 1 W |
| Lamp | LED, red, green, yellow, white, blue |
| Illumination | very bright, visible angle over 180° |
| Contacts | 1 N/C or 1 N/O as snap switch element |
| | AC-15 1 A/230 V |
| | DC-13 0.25 A/24 V |
| Enclosure material | thermoplastic |
| Type of connection | terminals 2.5 mm$^2$, fine-stranded |
| Electrical life | >10$^5$ running hours |
| Mechanical life | >10$^5$ switching cycles |
| Storage and transport temperature | -55 °C to +70 °C |
| Weight | approx. 110 g |
| Mounting | locked, bayonet lock |
| Shock resistance | DIN EN 60068-2-27, 30 g 18 ms |

## Dimensions



## Ordering information

| Type of contact | Code no. | Colour LED | Code no. | Colour actuator | Code no. |
|---|---|---|---|---|---|
| 1 NC | 7 | red | 1 | red | 5 |
| | | green | 2 | green | 6 |
| | | yellow | 3 | yellow | 7 |
| 1 NO | 8 | white | 4 | white | 8 |
| | | blue | 5 | blue | 9 |

Complete order no.

**Illuminated button** without actuating element 07-3363-4 ☐ ☐ 0

**Actuating element** Standard 05-0003-006 ☐ 00

Increased oil resistance 05-0003-006 ☐ 00BN

Please enter code number.
Technical data subject to change without notice.

- One module for all intrinsically safe application areas

- Excellent luminosity

- High flexibility due to junction box

- Low installation depth

The ComEx^flex Ex i illuminated button is used in almost all hazardous (potentially explosive) areas where machine functions are to be activated at the touch of a button and the corresponding functional status is to be visually displayed. The illuminated buttons are produced in conformance to the requirements for the "e increased safety", "d flameproof enclosure", and "i intrinsic safety types of protection". They may be activated by intrinsically safe circuits. ComEx^flex is flexible and in addition to a large number of illuminated button actuators, it offers a junction box to facilitate a safe and convenient installation of the module into a control panel. The module's contacts are designed as snap-action switching elements. Conductors are connected using terminals with increased safety on the back of the module. The illuminated button actuators can be fitted easily, without the use of tools, which ensures conformance to the high IP degree of protection.
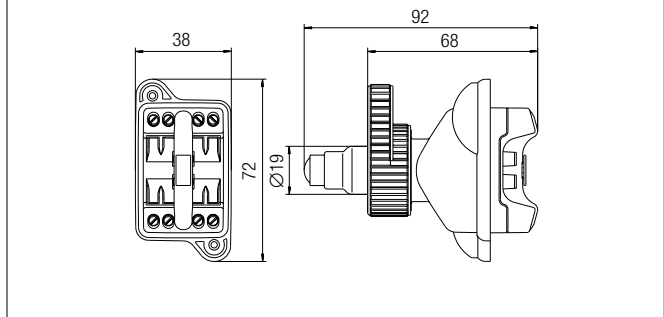
## Explosion protection

| Marking ATEX | ⟨Ex⟩ II 2G  Ex db eb ia IIC Gb |
| | ⟨Ex⟩ I M2  Ex db eb ia I Mb |
| Certification | CML 17 ATEX 1106 U |
| Marking IECEx | Ex db eb ia IIC Gb |
| | Ex db eb ia I Mb |
| Certification | IECEx CML 17.0046U |
| Other approvals and certificates, see www.bartec.de | |
| Ambient temperature | -55 °C to +60 °C |

## Technical data

| Protection class | determined by actuating element and control station enclosure, min. IP 66, terminals IP 20 (IEC 60529). |
| Rated operating voltage ($U_e$) | AC/DC 10 to 30 V |
| Frequency range | with AC supply 30 to 100 Hz |
| Power consumption | $\leq$ 0.5 W |
| Lamp | LED, red, green, yellow, white, blue |
| Illumination | very bright, visible angle over 180° |
| Contacts | 1 N/C or 1 N/O as snap switch element DC-13    0.25 A/24 V |
| Enclosure material | thermoplastic |
| Type of connection | terminals 2.5 mm², fine-stranded |
| Electrical life | >$10^5$ running hours |
| Mechanical life | >$10^5$ switching cycles |
| Storage and transport temperature | -55 °C to +70 °C |
| Weight | approx. 110 g |
| Mounting | locked, bayonet lock |
| Shock resistance | DIN EN 60068-2-27, 30 g, 18 ms DIN EN 60068-2-6, 4 g, 1.6 mm |

## Dimensions



## Intrinsically safe parameters

| Input voltage ($U_i$) | 30 V |
| Input current ($I_i$) | 150 mA |
| Input power ($P_i$) | 1 W |
| Indcutance ($L_i$) | negligible |
| Capacitance ($C_i$) | negligible |

## Selection chart

| Type of contact | Code no. | Colour LED | Code no. | Colour actuator | Code no. |
|---|---|---|---|---|---|
| 1 NC | 5 | red | 1 | red | 5 |
| | | green | 2 | green | 6 |
| | | yellow | 3 | yellow | 7 |
| 1 NO | 6 | white | 4 | white | 8 |
| | | blue | 5 | blue | 9 |

Complete order no.

**Illuminated button** without actuating element   07-3363-4 ☐☐ 0

**Actuating element** Standard   05-0003-006 ☐ 00

Increased oil resistance   05-0003-006 ☐ 00BN

Please enter code number.
Technical data subject to change without notice.

- One module for all fields of application

- Illumination 180°

- High flexibility due to junction box

- Low installation depth

The ComEx<sup>flex</sup> lamp module indicates command modes by means of a light signal lighting up or going out. It is suitable for use in almost all explosive areas in which a visual indication of a machine's functional status is required. The lamp module can be combined with various lamp module actuating elements. A junction box is available to facilitate a safe and convenient installation of the module into a control panel. The conductors are connected by means of terminals on the back of the module which have an increased safety level. The lamp module actuating elements can be fitted easily, without the use of tools, which ensures conformance to the high IP degree of protection.
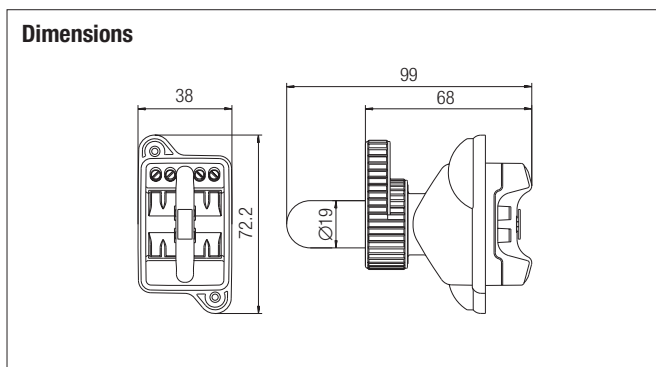
## Explosion protection

| | |
|---|---|
| Marking ATEX | ⟨Ex⟩ II 2G  Ex db eb IIC Gb |
| | ⟨Ex⟩ I M2  Ex db eb I Mb |
| Certification | CML 17 ATEX 1106 U |
| Marking IECEx | Ex db eb IIC Gb |
| | Ex db eb I Mb |
| Certification | IECEx CML 17.0046 U |
| Other approvals and certificates, see www.bartec.de | |
| Ambient temperature | -55 °C to +60 °C |

## Technical data

| | |
|---|---|
| Technical data | determined by actuating element and control station enclosure,   min. IP 66, terminals IP 20 (IEC 60529). |
| Rated insulation voltage | 300 V |
| Rated operating voltage | AC 12 V to 250 V          ($T_a \leq$ +50 °C) |
| | DC 12 V to 60 V            ($T_a \leq$ +50 °C) |
| | AC/DC 12 V to 24 V       ($T_a \leq$ +60 °C) |
| Power consumption | $\leq$ 1 W |
| Lamp | LED, red, green, yellow, white, blue |
| Illumination | very bright, visible angle over 180° |
| Enclosure material | thermoplastic |
| Connection | terminals 2.5 mm², fine-stranded |
| Electrical life | >$10^5$ running hours |
| Storage and transport temperature | -55 °C to +70 °C |
| Weight | approx. 110 g |
| Mounting | locked, bayonet lock |
| Shock resistance | DIN EN 60068-2-27, 30 g 18 ms |

## Dimensions



## Ordering information

| Wiring diagram | Colour LED | Code no. | Colour actuator | Code no. |
|---|---|---|---|---|
| X1 | red | 1 | red | 3 |
| | green | 2 | green | 4 |
| | yellow | 3 | yellow | 5 |
| | white | 4 | white | 6 |
| X2 | blue | 5 | blue | 7 |

Complete order no.

**Lamp module** without actuating element          07-3353-41 ☐ 0

**Actuating element**  Standard          05-0003-001 ☐ 00

Increased oil resistance  05-0003-001 ☐ 00BN

Please enter code number.
Technical data subject to change without notice.

# ComEx$^{flex}$ Lamp module Ex i for local control stations and control panels

- One module for all intrinsically safe application areas
- Illumination 180°
- High flexibility due to junction box
- Low installation depth

The ComEx$^{flex}$ Ex i lamp module indicates command modes by means of a light signal lighting up or going out. It is suitable for use in almost all hazardous (potentially explosive) areas in which a visual indication of a machine's functional status is required. The lamp modules are designed to conform to the requirements of the "e increased safety", "d flameproof enclosure" and "i intrinsic safety types of protection". They may be activated by intrinsically safe circuits. The lamp module can be combined with various lamp module actuators. A junction box is available to facilitate a safe and convenient installation of the module into a control panel. Conductors are connected using terminals with increased safety on the back of the module. The lamp module actuators can be fitted easily, without the use of tools, which ensures conformance to the high IP degree of protection.

## Explosion protection

| | |
|---|---|
| Marking ATEX | ⟨Ex⟩ II 2G  Ex db eb ia IIC Gb |
| | ⟨Ex⟩ I M2  Ex db eb ia I Mb |
| Certification | CML 17 ATEX 1106 U |
| Marking IECEx | Ex db eb ia IIC Gb |
| | Ex db eb ia I Mb |
| Certification | IECEx CML 17.0046U |
| Other approvals and certificates, see www.bartec.de | |
| Ambient temperature | -55 °C to +60 °C |

## Intrinsically safe parameters

| | |
|---|---|
| Input voltage ($U_i$) | 30 V |
| Input current ($I_i$) | 150 mA |
| Input power ($P_i$) | 1 W |
| Indcutance ($L_i$) | negligible |
| Capacitance ($C_i$) | negligible |

## Technical data

| | |
|---|---|
| Protection class | determined by actuating element and control unit enclosure, min. IP 66, terminals IP 20 (IEC 60529). |
| Rating operating voltage ($U_e$) | AC/DC 10 to 30 V |
| Frequency range | with AC supply 30 to 100 Hz |
| Power consumption | $\leq$ 0.5 W |
| Lamp | LED, red, green, yellow, white, blue |
| Illumination | very bright, visible angle over 180° |
| Enclosure material | thermoplastic |
| Type of connection | terminals 2.5 mm², fine-stranded |
| Electrical life | >$10^5$ running hours |
| Storage and transport temperature | -55 °C to +70 °C |
| Weight | approx. 110 g |
| Fastening | locked, by bayonet lock |
| Shock resistance | DIN EN 60068-2-27, 30 g, 18 ms |
| | DIN EN 60068-2-6, 4 g, 1.6 mm |

## Dimensions
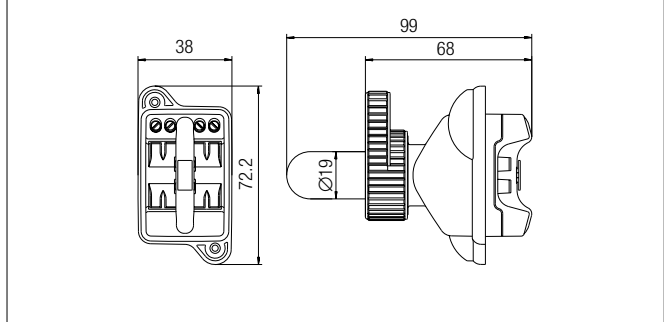


## Ordering information

| Wiring diagram | LED colour | Code no. | Actuator colour | Code no. |
|---|---|---|---|---|
| X1 ⊗ X2 | red | 1 | red | 3 |
| | green | 2 | green | 4 |
| | yellow | 3 | yellow | 5 |
| | white | 4 | white | 6 |
| | blue | 5 | blue | 7 |

Complete order no.

**Lamp module** without actuator  07-3353-44 ☐ 0

**Actuating element** Standard  05-0003-001 ☐ 00

Increased oil resistance  05-0003-001 ☐ 00BN

Please insert correct code.
Technical data subject to change without notice.

# ComEx<sup>flex</sup> Potentiometer for local control stations and control panels



- One module for all fields of application
- High flexibility thanks to the junction box
- Low installation depth

The ComEx<sup>flex</sup> potentiometer is used in almost all hazardous (potentially explosive) areas where machine functions are controlled by means of adjustable voltage distributors. The module can be combined with a potentiometer actuator (scale graduation 0 to 10). A junction box is available as a safe and convenient means of installing the potentiometer in a control panel. The conductors are connected by means of terminals on the back of the module which have an increased safety level. The easy installation of the potentiometer actuating element without the need for tools,ensures conformance to the high IP degree of protection.

## Explosion protection

| | |
|---|---|
| Marking ATEX | ⟨Ex⟩ II 2G  Ex db eb IIC Gb |
| | ⟨Ex⟩ I M2  Ex db eb I Mb |
| Certification | CML 17 ATEX 1119 U |
| Marking IECEx | Ex db eb IIC Gb |
| | Ex db eb I Mb |
| Certification | IECEx CML 17.0057U |
| Other approvals and certificates, see www.bartec.de | |
| Ambient temperature | -55 °C to +60 °C |

## Technical data

| | |
|---|---|
| Protection class | determined by the actuating element and control station enclosure, min. IP 66, terminals IP 20 (IEC 60529). |
| Rated insulation voltage | 500 V |
| Max. rated voltage | AC/DC 230 V |
| Resistance | 1 kΩ to 10 kΩ |
| Curve shape | linear |
| Resistance tolerance | + 20 % |
| Rated output | max. 1 W for $T_a \leq$ +40 °C |
| Resistor material | carbon film on ceramics |
| Rotation | mech. 285° to 5° electr. approx. 250° |
| Torque (beginning) | 0.5 to 1.5 Ncm |
| Torque (end stop) | $\geq$ 100 Ncm |
| Enclosure material | thermoplastic |
| Connection | double terminals 2 x 2.5 mm², fine-stranded |
| Mechanical life | 25,000 sinusoidal cycles |
| Storage and transport temperature | -55 °C to +70 °C |
| Weight | approx. 110 g |

## Dimensions
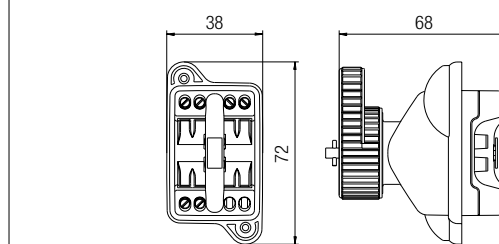


## Ordering information

| Wiring diagram | Resistance | Code no. |
|---|---|---|
| | 1   kΩ | 4 |
| | 2.2 kΩ | 5 |
| | 4.7 kΩ | 6 |
| | 10  kΩ | 7 |

Other levels of resistance on request.

Complete order no.

**Potentiometer** without actuating element 07-3373-4D ☐ 0

Please enter code number.
Technical data subject to change without notice.

## Actuating element

Standard (Scale 1 to 10)                    Order no. 05-0003-007600
Increased oil resistance (Scale 1 to 10)    Order no. 05-0003-007600BN

## Notes for installation and inspection

At rated voltage:
$\leq$ AC 50 V/$\leq$ DC 120 V
(Safety extra low voltage in conformance to DIN VDE 0100 T. 410)
The potentiometer drive shaft can be operated without actuating element.

At rated voltage:
$\geq$ AC 50 V to max. AC/DC 230 V
Potentiometer drive shaft must be operated with an actuating element
or it must be deenergized.

BARTEC offers a junction box to facilitate the use of ComEx^flex in a control console or a control panel. The junction box features a cable gland and can be combined with various function modules. The junction box allows the connection of a conductor, which can be assembled either to order or by the customer.

ComEx^flex junction boxes with function modules



## ComEx^flex junction boxes
in conjunction with ComEx^flex function modules

### Explosion protection

| | |
|---|---|
| Marking ATEX | ⟨Ex⟩ II 2G  Ex db eb IIC T6 Gb |
| | ⟨Ex⟩ II 2G  Ex db eb ia IIC T6 Gb |
| | ⟨Ex⟩ II 2D  Ex tb IIIC T80 °C Db |
| | ⟨Ex⟩ II 2D  Ex tb ia IIIC T80 °C Db |
| Certification | CML 17 ATEX 1117 X |
| Marking IECEx | Ex db eb IIC T6 Gb |
| | Ex db eb ia IIC T6 Gb |
| | Ex tb IIIC T80 °C Db |
| | Ex tb ia IIIC T80 °C Db |
| Certification | IECEx CML 17.0055X |
| Other approvals and certificates, see www.bartec.de | |
| Ambient temperature | 55 °C to +40 °C / +50 °C / +60 °C |
| Approved for Zone | 1/21 and 2/22 |

### Technical data

| | |
|---|---|
| Protection class | Function module with junction box and actuating element min. IP 66 |
| Weight | approx. 40 g |
| Clamping range | 4 to 9 mm |
| | 5 to 10 mm |
| Enclosure material/ manufacturing process | Thermoplastic/injection moulding |
| Sheathed leads available on request | BETAflam 145-flex UL ULstyle 4486 |

| | | |
|---|---|---|
| Switch module | 4 x 1.5 mm² | BK, BU, BN, GY |
| Lamp Module | 2 x 0.75 mm² | BU, BN |
| Illuminated button | 4 x 0.75 mm² | BK, BU, BN, GY |
| Potentiometer | 3 x 0.75 mm² | BK, BN, GY |
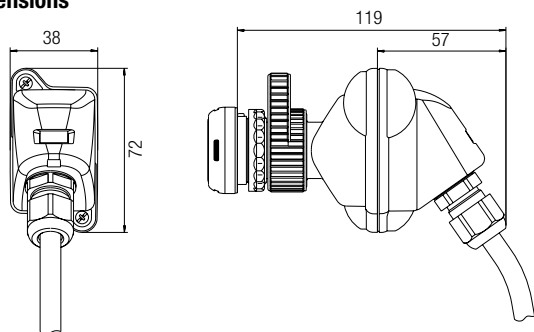
### Ordering information

| Version | Order no. |
|---|---|
| Junction box | 05-0042-0050 |

Technical data subject to change without notice.

### Dimensions



38    119    57    72