

Modules DATASHEET

JUNHO 2013

Tel: (+351) 21 843 64 00
Fax: (+351) 21 843 64 09
geral@bhb.pt www.bhb.pt



Switch module with terminals for rail-mounted installation

Explosion protection

Ex protection type

Ex II 2G Ex de IIC Gb

Ex I M2 Ex de I Mb

Class I, Zone 1, AEx de IIC, Ex de IIC

Class I, Div. 2, Groups A, B, C, D

Certification

PTB 99 ATEX 1043 U

UL E184198

IECEx PTB 07.0046 U

INMETRO 2003EC02CP081U

Ambient temperature

-55 °C to +60 °C

Technical data

Protection class

determined by the actuating element and ComEx enclosure, terminals IP 20

Rated insulation voltage

690 V

Rated voltage

400 V 400 V 110 V 24 V

Utilization category

AC-12 AC-15 DC-13 DC-13

Rated operating currents

16 A 10 A 0,5 A 1 A

Conventional thermal current I_{the}

16 A/+40 °C, 11 A/+60 °C

Contact options

contacts with positive break operation (self-cleaning)

1 NC and 1 NO or

2 NC or 2 NO

Contact material

AgSnO₂

Enclosure material

Thermoplastic

Connection

Terminals 2.5 mm², fine stranded

Mechanical life

10⁶ switching cycles

Storage and transport temperature

-55 °C to +70 °C

Weight

approx. 70 g

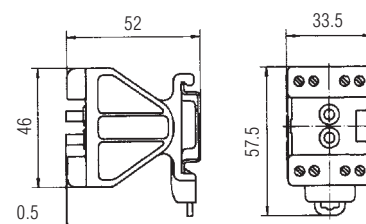
Mounting

on mounting rail TS 35 x 7.5

Shock resistance

DIN EN 60068-2-27: 1995, 30 g 18 ms

Dimensions



Selection chart

Type of contacts	Code no.	Actuating element	Code no.
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 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
		Lockable in both positions, DOM lock	1200
1 NC + 1 NO 	4	Lockable in the depressed position, DOM lock	1201
		Lockable in the initial position, DOM lock	1202
		Locking-type mushroom pushbutton	1203
		Lockable in both positions, RONIS lock	6100

Complete order no.

Switch module without actuating element 07-3321-1 00

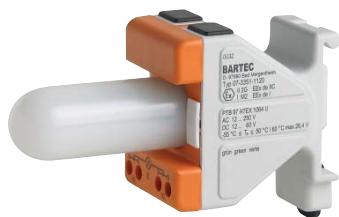
Actuating element

Standard

Increased oil resistance

Please enter code number.

05-0003-00 05-0003-00 BN



Lamp module with terminals for rail-mounted installation

Explosion protection

Ex protection type

Ex II 2G Ex de IIC Gb

Ex I M2 Ex de I Mb

Class I, Zone 1, AEx de IIC, Ex de IIC

Class I, Div. 2, Groups A, B, C, D

Certification

PTB 97 ATEX 1064 U

UL E184198

IECEx PTB 10.0014 U

INMETRO2003EC02CP096U

Ambient temperature

-55 °C to +50 °C

+60 °C (AC/DC 12 V to 24 V)

Technical data

Protection class

determined by the actuating element and ComEx enclosure, terminals IP 20

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, over a visible angle of 180°

Enclosure material

Thermoplastic

Connection

Terminals 2.5 mm², fine stranded

Electrical life

>10⁵ running hours

Storage and transport temperature

-55 °C to +70 °C

Weight

approx. 90 g

Mounting

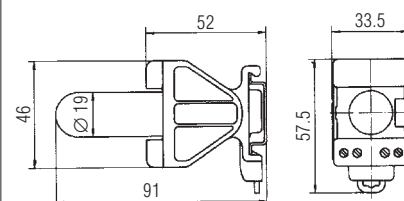
on mounting rail TS 35 x 7.5

(DIN EN 60715)

Shock resistance

DIN EN 60068-2-27: 1995, 30 g 18 ms

Dimensions



Selection chart

Wiring diagram	Colour LED	Code no.	Colour actuator	Code no.
	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 actuating element 07-3351-11 0

Actuating element

Standard

05-0003-001 00

Increased oil resistance

05-0003-001 00BN

Please enter code number.



Illuminated button with terminals for rail-mounted installation

Explosion protection

Ex protection type

Ex II 2G Ex de IIC

Ex I M2 Ex de I

Class I, Zone 1, AEx de IIC, Ex de IIC
Class I, Div. 2, Groups A, B, C, D

Certification

PTB 97 ATEX 1064 U

UL E184198

IECEx PTB 10.0014 U

INMETRO 2003 EC 02 CP096 U

Ambient temperature

-55 °C to +50 °C

+60 °C (AC/DC 12 to 24 V)

Technical data

Protection class

determined by the actuating element and
ComEx enclosure, terminals IP 20

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, over a visible angle of 180°

Contact element

Rated voltage

230 V 24 V

Utilization category

AC-15 DC-13

Rated operating currents

1 A 0,25 A

Contacts

1 NC or 1 NO as snap switch element

Switching capacity

AC-15 1 A/230 V

DC-13 0.25 A/24 V

Enclosure material

Thermoplastic

Connection

Terminals 2.5 mm², fine stranded

Electrical life

>10⁵ running hours

Mechanical life

>10⁵ switching cycles

Storage and transport temperature

-55 °C to +70 °C

Weight

approx. 110 g

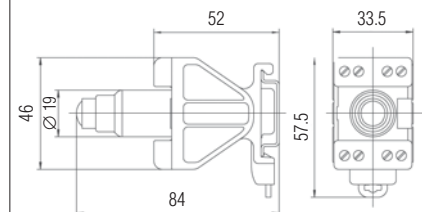
Mounting

on mounting rail TS 35 x 7.5
(DIN EN 60715)

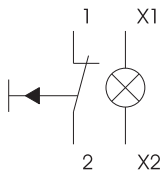
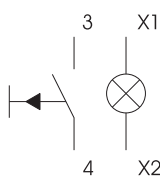
Shock resistance

DIN EN 60068-2-27: 1995, 30 g 18 ms

Dimensions



Selection chart

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

07-3361-1 0

Actuating element

Standard

Increased oil resistance

Please enter code number.

05-0003-006 00

05-0003-006 00BN



Potentiometer with terminals for rail-mounted installation

Explosion protection

Ex protection type

Ex II 2G Ex de IIC
Ex I M2 Ex de I
Ex de IIC

Certification

PTB 05 ATEX 1064 U
IECEx PTB 10.0017 U

Ambient temperature

-55 °C to +60 °C

Technical data

Protection class

determined by the actuating element and
ComEx enclosure, terminals IP 20

Rated insulation voltage

500 V

Max. rated voltage

AC/DC 320 V

Resistance

1 k Ω to 10 k Ω

Curve shape

linear

Resistance tolerance

$\pm 20\%$

Rated output

max. 1 W at $T_a \leq +40\text{ °C}$

Resistor material

carbon film on ceramics

Rotation

mech. 285° -5°
electr. about approx. 250°

Torque (beginning)

0.5 to 1.5 Ncm

Torque (end stop)

≥ 100 Ncm

Enclosure material

thermoplastic

Connection

Double terminals 2 x 2.5 mm², fine stranded

Mechanical life

25000 sinusoidal cycles

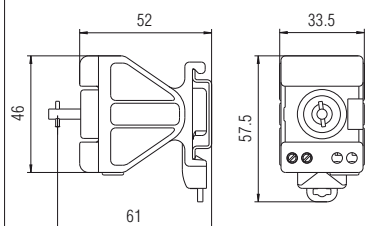
Storage and transport temperature

-55 °C to +70 °C

Weight

approx. 71 g

Dimensions



Selection chart

Wiring diagram	Resistance	Code no.
	1 k Ω	4
	2.2 k Ω	5
	4.7 k Ω	6
	10 k Ω	7

Other resistances on request.

Complete order no.

Potentiometer without actuating element

07-3371-1D **0**

Please enter code number.

Actuating element

Standard (Skala 1-10)

Order no. 05-0003-007600

Increased oil resistance (Skala 1-10)

Order no. 05-0003-007600BN

Notes for installation and inspection:

At rated voltage: \leq AC 50 V/ \leq DC 120 V
(protection low voltage in accordance with DIN VDE 0100 T. 410)
potentiometer drive shaft can be operated without actuating element.

At rated voltage: \geq AC 50 V to max. AC/DC 320 V
potentiometer drive shaft can only be operated with actuating element
or has to be deenergized.



Control switch

Features

- Contacts with positive break operation
- Latched and momentary-contact positions

Description

This control switch has been designed to solve the variety of problems encountered in chemical and petrochemical plants and on explosion-proofed electrical machinery. Four switch contacts as opening and closing elements in different permutations permit a variety of functions. The opener has a positive break operation. The switch actuator offers latched and momentary-contact positions with different switch positions.

The control switch can be installed quickly and directly into double or triple ComEx enclosures, or in combination with other command devices in control units

Explosion protection

Ex protection type

- Ex II 2G Ex de IIC
- Ex I M2 Ex de I
- Class I, Zone 1, AEx de IIC, Ex de IIC
- Class I, Div. 2, Group A, B, C, D

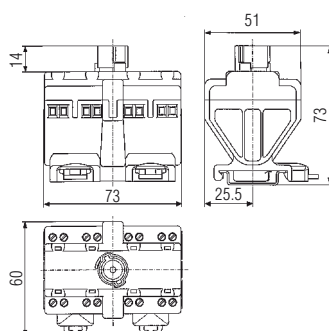
Certification

- PTB 99 ATEX 1043 U
- UL E184198
- IECEx PTB 07.0046 U
- INMETRO 2003 EC02 CP0814

Permissible ambient temperature

-55 °C to +60 °C

Dimensions



Technical data

Connection

Terminals 2.5 mm², fine stranded

Contact material

AgSnO₂

Enclosure material

Thermoplastic

Installation

on TS 35 x 7.5 mounting rail

Switch function

max. 4 switch contacts
different NC/NO contact assemblies
latching and momentary-contact functions
with different switch positions

Contacts

contacts with positive break operation
(self-cleaning)

Installation

able to be installed in double and triple
ComEx enclosures in control units

Switch isolator

DIN EN 60947-3 (main motor switch)

P/AC-3/AC-23	AC-3	AC-23
230 V	3ph/3kW	1ph/2.2 kW
400 V	3ph/5.5 kW	1ph/3 kW

$I_e = AC-23/400 V/10 A$

Control switch according to DIN

EN 60947-5-1 (auxiliary circuit switch)

AC-15	400 V	10 A
AC-12	400 V	16 A
DC-13	24 V	1 A

Electrical data

Rated insulation voltage

$U_i = 690 V$
 $U_e = 450 V$

Rated impulse strength

$U_{imp} = 6 kV$

Conditional rated short-circuit current at 400 V

$I_e = 4 kA$

Short-circuit current

(general-purpose l.v.h.b.c back-up fuse
for the protection of cables and circuits)
max. 16 A

Nominal thermal current

(+40 °C) $I_{the} = 16 A$
(+60 °C) $I_{the} = 11 A$



Selection chart

Contact arrangement of control switch	Code no.	Contact arrangement of control switch	Code no.
	A01		C06
	A02		C07
	A03		E08
	A04		E09
	H05		L01
Contact arrangement of switch-isolator			
	N01		N02

Further contact versions are available upon request.



Complete order no.

07-3331-1



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

Selection chart

Illustration/Dimensions	Description	Order no.
<p>For ComEx enclosure</p>	<p>Black position selector with protective collar, lockable* only for 4-pole switch</p> <p>0 - I for ComEx enclosure für Control unit (flat)</p> <p>I - II for ComEx enclosure für Control unit (flat)</p> <p>I - 0 - II for ComEx enclosure für Control unit</p>	<p>05-0003-006201 05-0003-006301 05-0003-006202 05-0003-006302 05-0003-006203 05-0003-006303</p>
<p>For control unit/ComEx 316L</p>	<p>0 - I - II for ComEx enclosure für Control unit (flat)</p> <p>0 - I - II - III for ComEx enclosure für Control unit (flat)</p> <p>0 - I - II - III - IV for ComEx enclosure für Control unit (flat)</p> <p>HAND - 0 - AUTO for ComEx enclosure für Control unit (flat)</p>	<p>05-0003-006204 05-0003-006304 05-0003-006205 05-0003-006305 05-0003-006206 05-0003-006306 05-0003-006209 05-0003-006309</p>

*In principle, there are 3 boreholes in the protective collar to fit padlocks. If no further details are given on which switching position is to be locked, the boreholes are provided in the switch position 0 (I), other to customer specifications.



ComEx^{flex} Switch module

Features

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

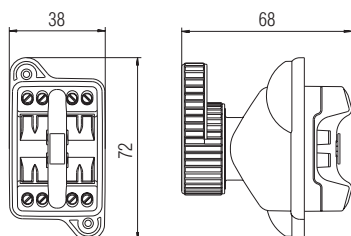
Description

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 self-cleaning 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 tools ensures conformance to the high IP degree of protection.

Dimensions



Selection chart

Type of contact		Code no.
2 N/C		1
2 N/O		2
1 N/C + 1 N/O		4

Complete order no.

Switch module without actuating element
Please enter code number.

07-3323-4 00

ComEx^{flex} Switch module

Explosion protection

Ex protection type II 2G Ex de IIC Gb
 I M2 Ex de I Mb

Certification PTB 99 ATEX 1043 U
IECEx PTB 07.0046 U

Ambient temperature -55 °C to +60 °C

Technical Data

Protection class determined by the actuating element and control station enclosure, terminals IP 20 (IEC 60529).

Rated insulation voltage 690 V

Rated operating voltage

400 V	400 V	110 V	24 V
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Utilization category

AC-12	AC-15	DC-13	DC-13
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Rated operating currents

16 A	10 A	0,5 A	1 A
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Conventional thermal current I_{the} 16 A/+40 °C, 11 A/+60 °C

Contact options contacts with positive-break operation (self-cleaning)
1 N/C and 1 N/O or
2 N/C or 2 N/O

Contact material AgSnO₂

Enclosure material thermoplastic

Connection terminals 2.5 mm², fine-stranded

Mechanical life >10⁶ switching cycles

Storage temperature -55 °C to +70 °C

Weight approx. 110 g

Mounting locked, bayonet lock

Shock resistance DIN EN 60068-2-27: 2010, 30 g 18 ms



ComEx^{flex} Lamp Module

Features

- One module for all fields of application
- Illumination 180°
- High flexibility due to junction box
- Low installation depth

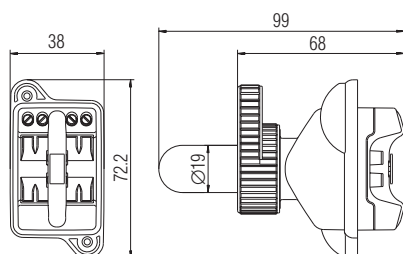
Description

The ComEx^{flex} 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 tools, which ensures conformance to the high IP degree of protection.

Dimensions



Selection chart

Wiring diagram	Colour LED	Code no.	Colour actuator	Code no.
	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 actuating element

Actuating element Standard

Increased oil resistance

Please enter code number.

07-3353-41 0

05-0003-001 00

05-0003-001 00BN

ComEx^{flex} Lamp Module

Explosion protection

Ex protection type Ex II 2G Ex de IIC Gb
Ex I M2 Ex de I Mb

Certification PTB 97 ATEX 1064 U
IECEx PTB 10.0014 U

Ambient temperature -55 °C to +60 °C

Technical data

Protection class determined by actuating element and control station enclosure, 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, over a visible angle of 180°

Enclosure material Thermoplastic

Connection Terminals 2.5 mm², fine-stranded

Electrical life >10⁵ 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: 2010, 30 g 18 ms



ComEx^{flex} Illuminated button

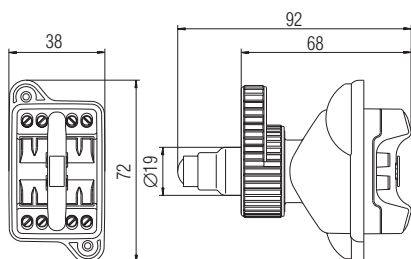
Description

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.

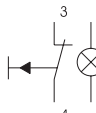
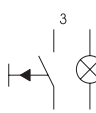
ComEx^{flex} is flexible and in addition to a large number of illuminated button actuators it offers a junction box to facilitate a safe and convenient installation of the module into a control panel. The module contacts are designed as snap-action contact elements.

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 tools, ensures conformance to the high IP degree of protection.

Dimensions



Selection chart

Type of contacts	Code no.	Colour LED	Code no.	Colour actuator	Code no.
1 N/C 	7	red	1	red	5
		green	2	green	6
1 N/O 	8	yellow	3	yellow	7
		white	4	white	8
		blue	5	blue	9

Features

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

ComEx^{flex} Illuminated Button

Explosion protection

Ex protection type Ex II 2G Ex de IIC Gb
Ex I M2 Ex de I Mb

Certification PTB 97 ATEX 1064 U
IECEx PTB 10.0014 U

Ambient temperature -55 °C to +60 °C

Technical Data

Protection class determined by the actuating element and control station enclosures, terminals IP 20 (IEC 60529).

Rated Insulation voltage 300 V

Rated operating voltage AC 12 V to 250 V ($T_a \leq +50\text{ °C}$)
DC 12 V to 60 V ($T_a \leq +50\text{ °C}$)
AC/DC 12 V to 24 V ($T_a \leq +60\text{ °C}$)

Power consumption < 1 W

Lamp LED, red, green, yellow, white, blue

Contacts 1 N/C or 1 N/O
as snap switch element
AC 15: 1 A, 230 V

Illumination very bright, over a visible angle of 180°

Enclosure material thermoplastic

Type of connection terminals 2.5 mm², fine-stranded

Service life electrical: >10⁵ running hours
mechanical: >10⁵ 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: 2010, 30 g 18 ms

Complete order no.

Illuminated button
without actuating element

Actuating element
Standard

Increased oil resistance

07-3363-4

05-0003-006

05-0003-006

0

00

00BN

Please enter code number.



ComEx^{flex} Potentiometer

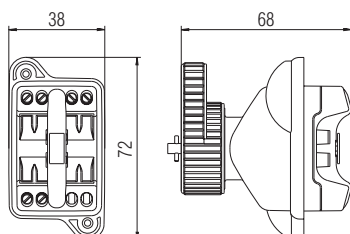
Description

The ComEx^{flex} 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.

Dimensions



Selection chart

Wiring diagram	Resistance (kΩ)	Code no.
	1	4
	2,2	5
	4,7	6
	10	7

Complete order no.

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

Please enter code number. Other levels of resistance on request.

Actuating element

Standard (Scale 1-10)

Increased oil resistance (Scale 1-10)

Complete order no.

05-0003-007600

05-0003-007600BN

Features

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

ComEx^{flex} Potentiometer

Explosion protection

Ex protection type Ex II 2G Ex de IIC Gb

Ex I M2 Ex de I Mb

Certification PTB 05 ATEX 1064 U
IECEx PTB 10.0017 U

Ambient temperature -55 °C to +60 °C

Technical data

Protection class determined by the actuating element and control station enclosure, terminals IP 20 (IEC 60529).

Rated insulation voltage 500 V

Max. rated voltage AC/DC 320 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) ≥ 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

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.
- \geq AC 50 V to max. AC/DC 320 V
Potentiometer drive shaft must be operated with an actuating element or it must be deenergized.

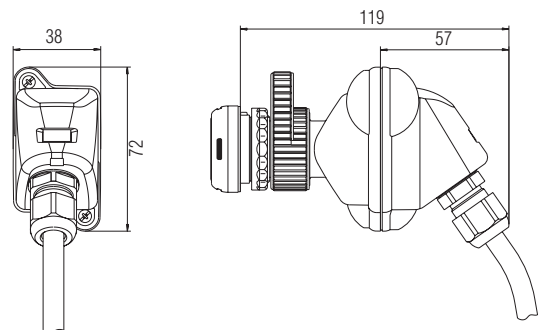


ComEx^{flex}
Junction box

ComEx^{flex} Junction box with function modules



Dimensions



Junction box

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 box

➤ Explosion protection

Ex protection type Ex II 2G Ex de IIC T6 Gb
Ex II 2D Ex tb IIIC T80°C Db IP 66

Certification PTB 11 ATEX 1010 X
IECEx PTB 11.0025X

Ambient temperature -55 °C to +40 °C / +50 °C / +60 °C

Approved for Zone 1, 2 and 21, 22

➤ Technical data

Protection class Function module with junction box and actuating element up to IP 66/IP 67

Weight approx. 40 g

Clamping range 4 to 9 mm
5 to 10 mm

**Enclosure material/
-manufacturing process** Thermoplastic/injection moulding

➤ **Order no.**
Junction box
05-0042-0050

Technical data subject to change without notice.



Switch module with terminals for panel-mounted installation

Explosion protection

Ex protection type

- Ex II 2G Ex de IIC Gb
- Ex I M2 Ex de I Mb
- Class I, Zone 1, AEx de IIC, Ex de IIC
- Class I, Div. 2, Groups A, B, C, D

Certification

PTB 99 ATEX 1043 U
UL E184198
IECEx PTB 07.0046 U
INMETRO 2003EC02CP081U

Ambient temperature

-55 °C to +60 °C

Technical data

Protection class

Determined by actuating element and control station enclosure, terminals IP 20 (IEC 60529).

Rated insulation voltage

690 V

Rated voltage

400 V 400 V 110 V 24 V

Utilization category

AC-12 AC-15 DC-13 DC-13

Rated operating currents

16 A 10 A 0,5 A 1 A

Conventional thermal current I_{the}

16 A/+40 °C, 11 A/+60 °C

Contact options

contacts with positive break operation (self cleaning)
1 NC and 1 NO or
2 NC or 2 NO

Contact material

AgSnO₂

Enclosure material

Thermoplastic

Connection

Terminals 2.5 mm², fine stranded

Mechanical life

10⁶ switching cycles

Storage temperature

-55 °C to +70 °C

Weight

approx. 87 g

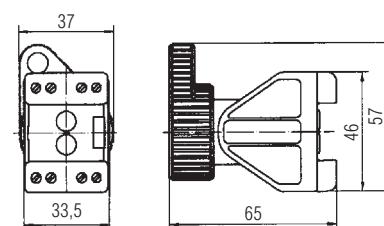
Mounting

locked, by bayonet lock

Shock resistance

DIN EN 60068-2-27: 1995, 30 g 18 ms

Dimensions



Selection chart

Type of contact	Code no.	Actuating element	Code no.
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
		Selector switch I + II momentary-contact, 3 positions	1001
		Selector switch I latching, II momentary-contact, 3 positions	1002
2 NO 	2	Selector switch I momentary-contact, II latching, 3 positions	1003
		Selector switch with protective collar 0 + I	7001
		Selector switch with protective collar I + 0	7002
		Selector switch with protective collar I + 0 + II	7203
		Mushroom pushbutton, black	1800
1 NC + NO 	4	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
		Lockable in both positions, RONIS lock	6100
		Key switch, 2 switching positions latching, key retractable 0 + I	7700
		Key switch, 2 switching positions momentary contact, not retractable 0 + I	7701
		Key switch, 2 switching positions momentary contact, not retractable 0 + I	7900

Complete order no.

Switch module without actuating element 07-3323-1 00

Actuating element

Standard

Increased oil resistance

Please enter code number.

05-0003-00

05-0003-00 BN



Lamp module with terminals for panel-mounted installation

Explosion protection

Ex protection type

Ex II 2G Ex de IIC Gb

Ex I M2 Ex de I Mb

Class I, Zone 1, AEx de IIC, Ex de IIC

Class I, Div. 2, Groups A, B, C, D

Certification

PTB 97 ATEX 1064 U

UL E184198

IECEx PTB 10.0014 U

INMETRO 2003EC02CP096U

Ambient temperature

-55 °C to +50 °C

+60 °C (AC/DC 12 to 24 V)

Technical data

Protection class

Determined by actuating element and control station enclosure, 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, over a visible angle of 180°

Enclosure material

Thermoplastic

Connection

Terminals 2.5 mm², fine stranded

Electrical life

> 10⁵ running hours

Storage and transport temperature

-55 °C to +70 °C

Weight

approx. 90 g

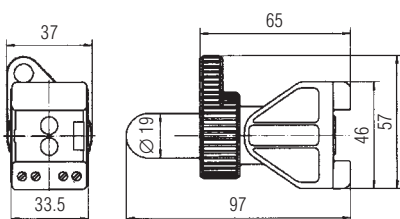
Mounting

locked, by bayonet lock

Shock resistance

DIN EN 60068-2-27: 1995, 30 g 18 ms

Dimensions



Selection chart

Wiring diagram	Colour LED	Code no.	Colour actuator	Code no.
	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 actuating element

07-3353-11 ☐ 0

Actuating element

Standard

05-0003-001 ☐ 00

Increased oil resistance

05-0003-001 ☐ 00BN

Please enter code number.



Illuminated button with terminals for panel-mounted installation

Explosion protection

Ex protection type

Ex II 2G Ex de IIC

Ex I M2 Ex de I

Class I, Zone 1, AEx de IIC, Ex de IIC

Class I, Div. 2, Groups A, B, C, D

Certification

PTB 97 ATEX 1064 U

UL E184198

IECEX PTB 10.0014 U

INMETRO 2003 EC02 CP096 U

Ambient temperature

-55 °C to +50 °C

+60 °C (AC/DC 12 to 24 V)

Technical data

Protection class

determined by actuating element and control station enclosure, 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, over a visible angle of 180°

Contact element

Rated voltage

230 V

24 V

Utilization category

AC-15

DC-13

Rated operating current

1 A

0.25 A

Contacts

1 NC or 1 NO as snap switch element

Switching capacity

AC-15 1 A/230 V

DC-13 0.25 A/24 V

Enclosure material

Thermoplastic

Connection

Terminals 2.5 mm², fine stranded

Electrical life

>10⁵ running hours

Mechanical life

>10⁵ switching cycles

Storage and transport temperature

-55 °C to +70 °C

Weight

approx. 130 g

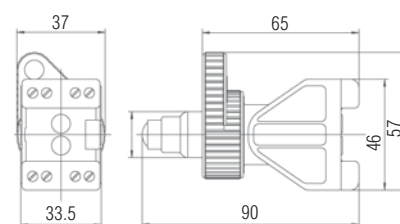
Mounting

locked, by bayonet lock

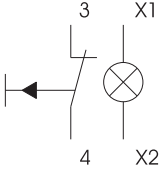
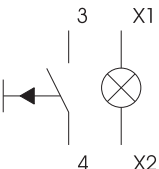
Shock resistance

DIN EN 60068-2-27: 1995, 30 g 18 ms

Dimensions



Selection chart

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

07-3363-1   0

Actuating element

Standard

05-0003-006  00

Increased oil resistance

05-0003-006  00BN

Please enter code number.



Potentiometer with terminals for panel-mounted installation

Explosion protection

Ex protection type

Ex II 2G Ex de IIC

Ex I M2 Ex de I

Ex de IIC

Certification

PTB 05 ATEX 1064 U

IECEx PTB 10.0017 U

Ambient temperature

-55 °C to +60 °C

Technical data

Protection class

determined by actuating element and control station enclosure, terminals IP 20 (IEC 60529).

Rated insulation voltage

500 V

Max. rated voltage

AC/DC 320 V

Resistance

1 kΩ to 10 kΩ

Curve shape

linear

Resistance tolerance

± 20 %

Power consumption

max. 1 W at $T_a \leq +40$ °C

Resistor material

carbon film on ceramics

Rotation

mech. 285° -5°

electr. about approx. 250°

Torque (beginning)

0.5 to 1.5 Ncm

Torque (end stop)

≥ 100 Ncm

Enclosure material

Thermoplastic

Connection

Double terminals 2 x 2.5 mm², fine stranded

Mechanical life

25000 sinusoidal cycles

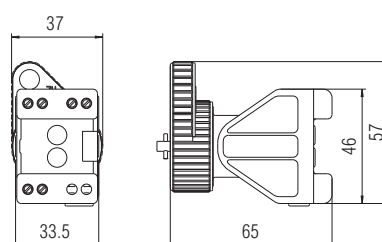
Storage and transport temperature

-55 °C to +70 °C

Weight

approx. 88 g

Dimensions



Selection chart

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

Other resistances on request.

Complete order no.

Potentiometer without actuating element

Please enter code number.

07-3373-1D 0

Actuating element

Standard (scale 1-10)

Order no. 05-0003-007600

Increased oil resistance (scale 1-10)

Order no. 05-0003-007600BN

Notes for installation and inspection:

At rated voltage: ≤ AC 50 V/≤ DC 120 V
(protection low voltage in accordance with DIN VDE 0100 T. 410)
potentiometer drive shaft can be operated without actuating element.

At rated voltage: ≥ AC 50 V to max. AC/DC 320 V
potentiometer drive shaft can only be operated with actuating element
or has to be deenergized.



Switch module with connection cable for installation on panel (front installation)

BARTEC



Features

- Self-cleaning contacts
- Positive break contacts
- One-hand fastening

Explosion protection

Ex protection type

Ex II 2G Ex d IIC T6
Class I, Division 2, Groups A, B, C, D
Class I, Zone 1, AEx d IIC
Class I, Division 2, Groups A, B, C, D for Canada
Class I, Zone 1, Ex d IIC for Canada

Certification

PTB 00 ATEX 1092 X
UL E184198
INMETRO 2004EC02CP005X

Ambient temperature

-40 °C to +60 °C (-55 °C on request)

Technical data

Protection class

Determined by actuating element and enclosure, up to IP 67, in conjunction with actuating element. PTB 00 ATEX 3114 U.

Rated insulation voltage

$U_i = 690$ V (on request)
 $U_i = 400$ V (Standard version)

Rated voltage			
400 V	400 V	110 V	24 V
Utilization category			
AC-12	AC-15	DC-13	DC-13
Rated operating currents			
16 A	10 A	0,5 A	1 A

Conventional thermal current I_{the}
16 A/+40 °C, 11 A/+60 °C

Contact options

contacts with positive break operation (self cleaning)
1 NC and 1 NO or
2 NC or 2 NO or
1 NC or 1 NO

Contact material

AgSnO₂

Enclosure material

Thermoplastic

Description

As completely certified equipment, BARTEC modules with connection cable can be directly installed in industrial control cabinets in hazardous areas. A high IP degree of protection can be maintained due to easy installation of the actuating elements in the control cabinet. The respective modules can be single-handedly installed to the actuating elements.

Connection

flexible cord 4 x 1.5 mm² (Ø 9.1 mm)
resp. 2 x 1.5 mm², (Ø 7.7 mm)

Mechanical life

10⁶ switching cycles

Storage temperature

-55 °C to +70 °C

Weight

approx. 160 g without cable

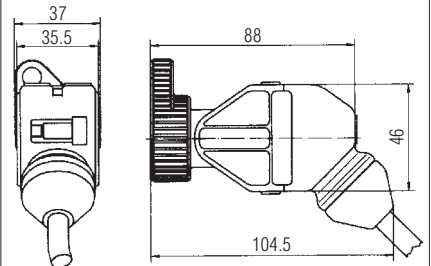
Cable length

3 m, indicate greater lengths in plain text

Shock resistance

DIN EN 60068-2-27: 1995, 30 g 18 ms

Dimensions



Selection chart

Type of contact	Code no.	Actuating element	Code no.
2 NC 	1	Pushbutton	0700
		Double push button actuator	7400
		Emergency stop NOT-AUS	0800
		Selector switch 0 + I latching, 2 positions	0900
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
1 NC + 1 NO 	4	Selector switch with protective collar 0 + I	7001
		Selector switch with protective collar I + 0	7002
		Selector switch with protective collar I + 0 + II	7203
		Mushroom pushbutton, black	1800
1 NC 	7	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
1 NO 	8	Lockable in both positions, RONIS lock	6100
		Key switch, 2 switching positions latching, key retractable 0 + I	7700
		Key switch, 2 switching positions momentary contact, not retractable 0 + I	7701
		Key switch, 3 switching positions latching, key retractable I + 0 + II	7900

Complete order no.

Switch module without actuating element 07-3323-3 03*)

Actuating element Standard 05-0003-00
Increased oil resistance 05-0003-00 BN

Please enter code number. *) Standard length 3 m, indicate greater lengths in plain text.



Lamp module with connection cable for installation on panel (front installation)

BARTEC



Features

- Long service life
- Illumination 180°
- Brilliant colours
- One-hand fastening

Explosion protection

Ex protection type

Ex II 2G Ex d IIC T6
Class I, Division 2, Groups A, B, C, D
Class I, Zone 1, AEx d IIC
Class I, Division 2, Groups A, B, C, D
for Canada
Class I, Zone 1, Ex de IIC for Canada

Certification

PTB 97 ATEX 1065 X
UL E184198
INMETRO 2004EC02CP006X

Ambient temperature

-40 °C to +50 °C (-55 °C on request)
+60 °C (AC/DC 12 to 24 V)

Technical data

Protection class

determined by actuating element and enclosure, up to IP 67, in conjunction with actuating element. PTB 00 ATEX 3114 U.

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, over a visible angle of 180°

Enclosure material

Thermoplastic

Connection

flexible cord 2 x 0.75 mm² (Ø 6.4 mm)

Electrical life

>10⁵ running hours

Storage temperature

-55 °C to +70 °C

Description

As completely certified equipment, BARTEC modules with connection cable can be directly installed in industrial control cabinets in hazardous areas. A high IP degree of protection can be maintained due to easy installation of the actuating elements in the control cabinet. The respective modules can be single-handedly installed to the actuating elements.

Weight

approx. 180 g without cable

Mounting

locked, by bayonet lock

Cable length

3 m, indicate greater lengths in plain text

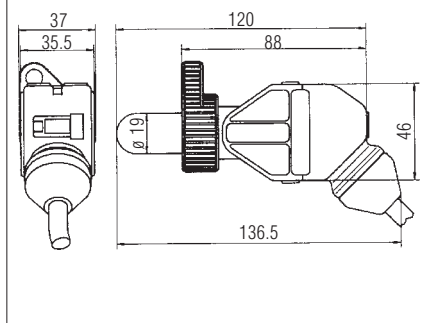
Shock resistance

DIN EN 60068-2-27: 1995, 30 g 18 ms

Note

The connection cable for lamp modules must be installed in a way which ensures that no capacitive influence (voltage transmission) is possible through lines routed in parallel.

Dimensions



Selection chart

Wiring diagram	Colour LED	Code no.	Colour actuator	Code no.
	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 actuating element

07-3353-31 **3*)**

Actuating element Standard

05-0003-001 **00**

Increased oil resistance

05-0003-001 **00BN**

Please enter code number.

*) Standard length 3 m, indicate greater lengths in plain text.



Potentiometer with connection cable for installation on panel (front installation)

BARTEC



Description

As completely certified equipment, BARTEC modules with connection cable can be directly installed in industrial control cabinets in hazardous areas. A high IP degree of protection can be maintained due to easy installation of the actuating elements in the control cabinet. The respective modules can be single-handedly installed to the actuating elements.

Features

- High end stop torque
- High IP degree of protection
- One-hand fastening

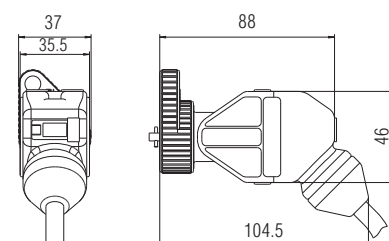
Weight

approx. 240 g with 1 m cable

Cable length

3 m, indicate greater lengths in plain text

Dimensions



Explosion protection

Ex protection type

Ex II 2G Ex d IIC T6

Certification

PTB 05 ATEX 1065 X

Ambient temperature

-40 °C to +60 °C
(-55 °C on request)

Technical data

Protection class

determined by actuating element and enclosure. Potentiometer up to IP 67 in conjunction with actuating element. PTB 00 ATEX 3114 U.

Rated insulation voltage

$U_i = 500$ V
 $U_i = 400$ V (Standard version)

Max. rated operating voltage

AC/DC 320 V

Resistance

1 k Ω to 10 k Ω

Characteristic curve

linear

Resistance tolerance

± 20 %

Power consumption

max. 1 W for $T_a \leq +40$ °C

Resistance material

carbon layer on ceramics

Rotation range

mech. 285° -5°
electr. effective approx. 250°

Torque (beginning)

0.5 to 1.5 Ncm

Torque (end stop)

≥ 100 Ncm

Enclosure material

Thermoplastic

Connection

flexible cable 3 x 0.75 mm²

Mechanical life

25000 sinusoidal cycles

Storage temperature

-55 °C to +70 °C

Selection chart

Wiring diagram	Resistance value	Code no.
	1 k Ω	4
	2.2 k Ω	5
	4.7 k Ω	6
	10 k Ω	7

Other resistances on request.

Complete order no.

Potentiometer without actuating element

Please enter code number.

^{*)} Standard length 3 m, indicate greater lengths in plain text.

07-3373-3D **3^{*)}**

Actuating element

Standard (Scale 1-10)

Increased oil resistance (Scale 1-10)

05-0003-007600

05-0003-007600BN

Notes for installation and inspection:

At rated voltage: \leq AC 50 V/ \leq DC 120 V
(protection low voltage in accordance with DIN VDE 0100 T. 410)
potentiometer drive shaft can be operated without actuating element.

At rated voltage: \geq AC 50 V to max. AC/DC 320 V
potentiometer drive shaft can only be operated with actuating element
or has to be deenergized.

Contactos/Contacts:

Comercial/Commercial:

Fernando Mena Costa

e-mail: fcosta@bhb.pt

Tel: (+351) 21 843 64 00

Fax: (+351) 21 843 64 09

Assistência/Service:

Patricia Costa

e-mail: ppcosta@bhb.pt

Tel: (+351) 21 843 64 00

