

# PUSHBUTTON AND ROTARY SWITCHES

## SPECIFICATIONS:

For panels with Ø22mm drilling and thickness up to 6mm  
 Modern and functional design  
 Robust and compact construction  
 NF contact block with positive rupture  $\ominus$   
 KEMA-KEUR certified contact blocks



## TECHNICAL DATA

### CONTACT BLOCKS

|   |  |         |       |
|---|--|---------|-------|
| Applicable Technical Standard                     | EN 60947-5-1   |         |       |
| Certification                                     | KEMA-KEUR  |         |       |
| Rated insulation voltage $U_i$                    | 600 V  |         |       |
| Rated impulse voltage $U_{imp}$                   | 6 kV   |         |       |
| Conventional thermal current $I_{th}$             | 10 A   |         |       |
| Nominal current $I_e$ for operating voltage $U_e$ | AC 15  | 127 VAC | 6 A   |
|   |  | 240 VAC | 3 A   |
|   |  | 380 VAC | 2 A   |
|   | DC 13  | 24 VDC  | 3 A   |
|   |  | 110 VDC | 0,6 A |
|   |  | 220 VDC | 0,3 A |
| Short circuit protection<br>(Fuses class gL/gG)   | 10A  |         |       |
| Degree of protection                              | IP 20  |         |       |
| Cabling capacity                                  | Minimum: 1x0,5mm <sup>2</sup><br>Maximum: 2x2,5mm <sup>2</sup> |         |       |
| Maximum tightening torque                         | 0,8 N.m  |         |       |
| Operating temperature                             | -25°C to 70°C  |         |       |

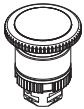
### LIGHTING BLOCKS

|                             |  |  |
|-----------------------------|--|--|
| Technology                  | LED  |  |
| Operating voltage range     | 0,9 to 1,1 x V <sub>n</sub>                                    |  |
| Maximum current consumption | 14 mA  |  |
| Average service life        | 100.000 hours  |  |
| Degree of protection        | IP 20  |  |
| Cabling capacity            | Minimum: 1x0,5mm <sup>2</sup><br>Maximum: 2x2,5mm <sup>2</sup> |  |
| Maximum tightening torque   | 0,8 N.m  |  |
| Operating temperature       | -25°C to 70°C  |  |

# BLOCK 1: Actuators

## MUSHROOM BUTTONS

**B1 -**  
Mushroom head  
pushbutton - short  
Spring return



**Options:**  
**B1C** - Yellow  
**B1D** - Green  
**B1E** - Red

**B2 -**  
Emergency  
mushroom head  
pushbutton - short  
Pull to release



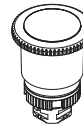
**Option:**  
**B2E** - Red

**B3 -**  
Emergency  
mushroom head  
pushbutton - short  
Turn to release



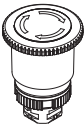
**Option:**  
**B3E** - Red

**B4 -**  
Emergency  
mushroom head  
pushbutton - long  
Pull to release



**Option:**  
**B4E** - Red

**B5 -**  
Emergency  
mushroom head  
pushbutton - long  
Turn to release



**Option:**  
**B5E** - Red

**B6 -**  
Emergency  
mushroom head  
pushbutton - long  
Key release



**Option:**  
**B6E** - Red

## SIMPLE BUTTONS

**B7 -**  
Single pushbutton  
without light display  
Spring return



**Options:**  
**B7A** - Blue  
**B7B** - White  
**B7C** - Yellow  
**B7D** - Green  
**B7E** - Red  
**B7F** - Black

**B8 -**  
Single pushbutton  
with light display  
Spring return



light  
display

**Display color options:**  
**B8A** - Blue  
**B8B** - Crystal  
**B8C** - Yellow  
**B8D** - Green  
**B8E** - Red

## DOUBLE BUTTONS

**B9 -**  
Double  
pushbutton  
without light display  
Spring return



**Option:**  
**B9**

Green/red keys

**B10 -**  
Double  
pushbutton  
with light display  
Spring return

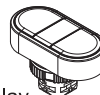


light  
display

**Display color options:**  
**B10A** - Blue  
**B10B** - Crystal  
**B10C** - Yellow  
**B10D** - Green  
**B10E** - Red

Green/red keys

**B11 -**  
Double  
pushbutton  
without light display  
Spring return



**Option:**  
**B11**

Black/white keys

**B12 -**  
Double  
pushbutton  
with light display  
Spring return









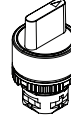

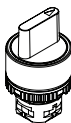
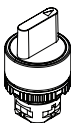
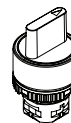


light  
display

**Display color options:**  
**B12A** - Blue  
**B12B** - Crystal  
**B12C** - Yellow  
**B12D** - Green  
**B12E** - Red

Black/white keys

## ROTARY KNOBS









|  |  |   |  |   |
|--|--|---|--|---|
| <p><b>B13 -</b><br/>Rotary knob<br/>2 positions without<br/>light display</p>  <p>Off - On</p> <p><b>Option:</b><br/><b>B13F</b> - Black</p>  | <p><b>B14 -</b><br/>Rotary knob<br/>2 positions with<br/>light display</p>  <p>Off - On</p> <p><b>Display color options:</b><br/><b>B14A</b> - Blue<br/><b>B14B</b> - Crystal<br/><b>B14C</b> - Yellow<br/><b>B14D</b> - Green<br/><b>B14E</b> - Red</p>              | <p><b>B15 -</b><br/>Rotary knob<br/>2 positions without<br/>light display</p>  <p>Off - (On)*</p> <p><b>Option:</b><br/><b>B15F</b> - Black</p>  | <p><b>B16 -</b><br/>Rotary knob<br/>2 positions with<br/>light display</p>  <p>Off - (On)*</p> <p><b>Display color options:</b><br/><b>B16A</b> - Blue<br/><b>B16B</b> - Crystal<br/><b>B16C</b> - Yellow<br/><b>B16D</b> - Green<br/><b>B16E</b> - Red</p> | <p><b>B17 -</b><br/>Rotary knob<br/>3 positions without<br/>light display</p>  <p>On - Off - On</p> <p><b>Option:</b><br/><b>B17F</b> - Black</p>  |
| <p><b>B18 -</b><br/>Rotary knob<br/>3 positions with<br/>light display</p>  <p>On - Off - On</p> <p><b>Display color options:</b><br/><b>B18A</b> - Blue<br/><b>B18B</b> - Crystal<br/><b>B18C</b> - Yellow<br/><b>B18D</b> - Green<br/><b>B18E</b> - Red</p> | <p><b>B19 -</b><br/>Rotary knob<br/>3 positions without<br/>light display</p>  <p>On - Off - (On)*</p> <p><b>Option:</b><br/><b>B19F</b> - Black</p>  | <p><b>B20 -</b><br/>Rotary knob<br/>3 positions with<br/>light display</p>  <p>On - Off - (On)*</p> <p><b>Display color options:</b><br/><b>B20A</b> - Blue<br/><b>B20B</b> - Crystal<br/><b>B20C</b> - Yellow<br/><b>B20D</b> - Green<br/><b>B20E</b> - Red</p> | <p><b>B21 -</b><br/>Rotary knob<br/>3 positions without<br/>light display</p>  <p>(On)* - Off - On</p> <p><b>Option:</b><br/><b>B21F</b> - Black</p>  | <p><b>B22 -</b><br/>Rotary knob<br/>3 positions with<br/>light display</p>  <p>(On)* - Off - On</p> <p><b>Display color options:</b><br/><b>B22A</b> - Blue<br/><b>B22B</b> - Crystal<br/><b>B22C</b> - Yellow<br/><b>B22D</b> - Green<br/><b>B22E</b> - Red</p> |
| <p><b>B23 -</b><br/>Rotary knob<br/>3 positions without<br/>light display</p>  <p>(On)* - Off - (On)*</p> <p><b>Option:</b><br/><b>B23F</b> - Black</p>   | <p><b>B24 -</b><br/>Rotary knob<br/>3 positions with<br/>light display</p>  <p>(On)* - Off - (On)*</p> <p><b>Display color options:</b><br/><b>B24A</b> - Blue<br/><b>B24B</b> - Crystal<br/><b>B24C</b> - Yellow<br/><b>B24D</b> - Green<br/><b>B24E</b> - Red</p> | <p><b>B25 -</b><br/>Rotary knob<br/>2 positions with<br/>light display</p>  <p>Off - On<sup>1</sup></p> <p><b>Option:</b><br/><b>B25F</b> - Black</p> <p><sup>1</sup> Double actuation</p>   |  |   |

(On)\*: Momentary / Spring return actuation.

| Degrees of protection:   |   |  |
|--|---|--|
| IP65   | IP40  | IP66*  |
| <p><b>Mushroom head pushbuttons</b><br/>(B1, B2, B3, B4, B5 and B6)</p> <p><b>Single pushbuttons</b><br/>(B7 and B8)</p> <p><b>Rotary knobs</b><br/>(B13, B14, B15, B16, B17, B18, B19, B20, B21, B22, B23, B24 and B25)</p> | <p><b>Double pushbuttons</b><br/>(B9, B10, B11 and B12)</p> | <p><b>Single pushbuttons</b><br/>(B7 and B8)</p> <p><b>Double pushbuttons</b><br/>(B9, B10, B11 and B12)</p> <p>* Only with the <u>protective covers</u><br/>(see block 5)</p> |

## BLOCK 2: Marking

**G0** - Without marking

|  |  |  |  |  |
|--|--|--|--|--|
| <p><b>G1</b> -<br/>O I</p>                    | <p><b>G2</b> -<br/>LIGA DESLIGA</p>                 | <p><b>G3</b> -<br/>START STOP</p>   | <p><b>G4</b> -<br/>REARME</p>  <p>B7 option</p> | <p><b>G5</b> -<br/>EMERGÊNCIA</p>  <p>B2 option</p> |
| <p><b>G6</b> -<br/>Bell</p>  <p>B7 option</p> | <p><b>G7</b> -<br/>EMERGÊNCIA</p>  <p>B3 option</p> | <p><b>G8</b> -<br/>Arrow</p>  <p>Rotary knobs<br/>standard (B13 to B24)</p> |  |  |

**NOTES:** G1, G2 and G3 apply only to the double buttons.  
Marking on other actuators on request.

## BLOCK 3: Flange

**F0** -  
Without flange

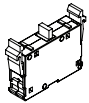
**F1** -  
Flange



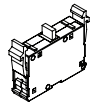
## BLOCK 4: Contacts

**C0** - Without contact block

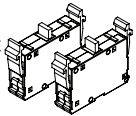
**C1** -  
01 NO contact  
block



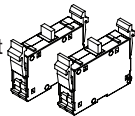
**C2** -  
01 NC contact  
block



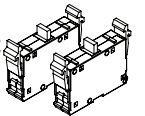
**C3** -  
02 NO contact  
blocks



**C4** -  
02 NC contact  
blocks



**C5** -  
01 NO contact  
block +  
01 NC contact  
block



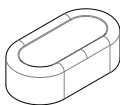
## BLOCK 5: Protection

**P0** -  
without cover

**P1** -  
Silicone cover  
for single  
pushbutton



**P2** -  
Silicone cover  
for double  
pushbutton



## BLOCK 6: Lighting

|                                       |   |   |   |  |
|---------------------------------------|---|---|---|--|
| <b>L0 -</b><br>Without lighting block | <b>L1 -</b><br>12VAC/VDC lighting block | <b>L2 -</b><br>24VAC/VDC lighting block | <b>L3 -</b><br>48VAC/VDC lighting block | <b>L4 -</b><br>127/220VAC lighting block |
|---------------------------------------|---|---|---|--|

## BLOCK 7: Labels

|                              |  |  |  |  |
|------------------------------|--|--|--|--|
| <b>Q0 -</b><br>Without label | <b>Q1 -</b><br>Label (in portuguese) for emergency pushbuttons | <b>Q2 -</b><br>Label (in english/portuguese) for emergency pushbuttons |  |  |
|------------------------------|--|--|--|--|

## ACCESSORIES: Panel hole cover



TP1F  
Black

Other colors available upon request.

## CODING BLOCK

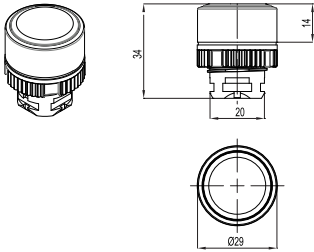
| Block 1:<br>Actuators  | Block 2:<br>Marking  | Block 3:<br>Flange   | Block 4:<br>Contacts             | Block 5:<br>Protection | Block 6:<br>Lighting       | Block 7:<br>Labels |
|--|--|--|----------------------------------|------------------------|----------------------------|--------------------|
|  |  |  |                                  |                        |                            |                    |
| B1C<br>B1D<br>B1E<br>B2E<br>B3E<br>B4E<br>B5E<br>B6E<br>B7A<br>B7B<br>B7C<br>B7D<br>B7E<br>B7F<br>B8A<br>B8B<br>B8C<br>B8D<br>B8E<br>B9<br>B10A<br>B10B<br>B10C<br>B10D<br>B10E<br>B11<br>B12A<br>B12B<br>B12C<br>B12D<br>B12E<br>B13F<br>B14A<br>B14B<br>B14C<br>B14D | B14E<br>B15F<br>B16A<br>B16B<br>B16C<br>B16D<br>B16E<br>B17F<br>B18A<br>B18B<br>B18C<br>B18D<br>B18E<br>B19F<br>B20A<br>B20B<br>B20C<br>B20D<br>B20E<br>B21F<br>B22A<br>B22B<br>B22C<br>B22D<br>B22E<br>B23F<br>B24A<br>B24B<br>B24C<br>B24D<br>B24E<br>B25F | G0<br>G1<br>G2<br>G3<br>G4<br>G5<br>G6<br>G7<br>G8<br><br>F0<br>F1 | C0<br>C1<br>C2<br>C3<br>C4<br>C5 | P0<br>P1<br>P2         | L0<br>L1<br>L2<br>L3<br>L4 | Q0<br>Q1<br>Q2     |

# PUSHBUTTON SWITCHES

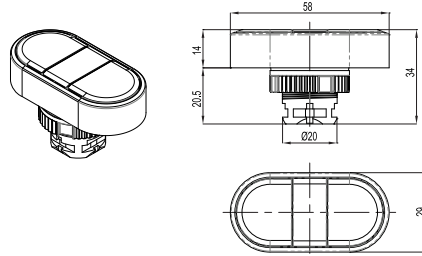
## DIMENSIONS

### PUSHBUTTONS FOR CONTROL

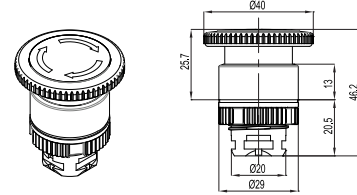
Single pushbutton  
Spring return (B7 / B8)



Double pushbutton  
Spring return (B9 / B10 / B11 / B12)

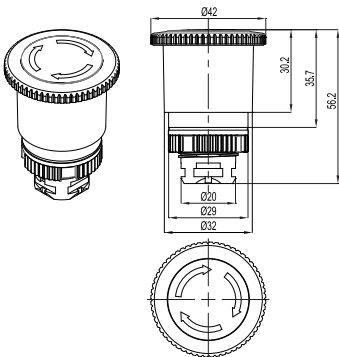


### MUSHROOM HEAD PUSHBUTTONS - SHORT (B1 / B2 / B3)

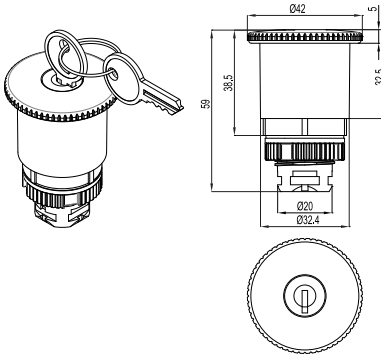


### EMERGENCY MUSHROOM HEAD PUSHBUTTONS - LONG (B4 / B5 / B6)

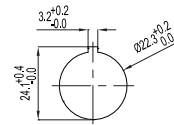
Pull or turn to release



Key release



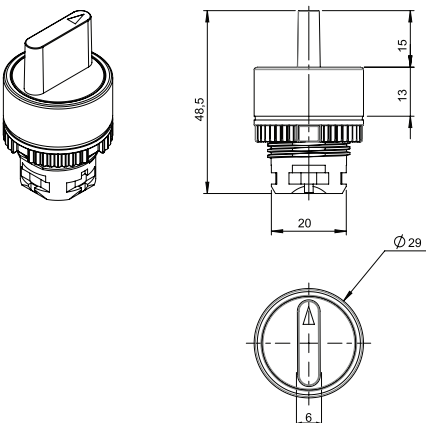
### CUT FOR FIT



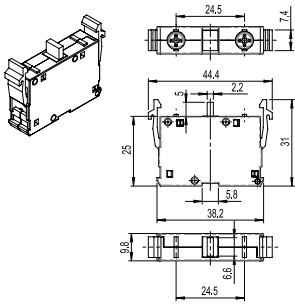
Maximum panel thickness: 6mm

### ROTARY KNOBS

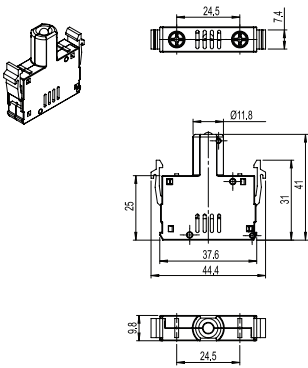
(B13 / B14 / B15 / B16 / B17 / B18 / B19 / B20 / B21 / B22 / B23 / B24 / B25)



## CONTACT BLOCKS (C)



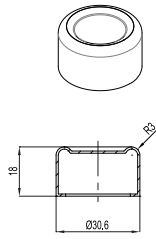
## LIGHTING BLOCKS (L)



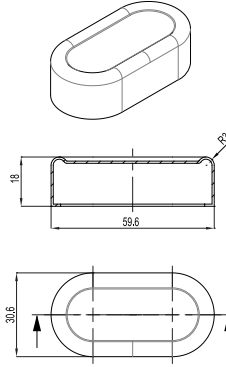
## ACCESSORIES

### Silicone covers

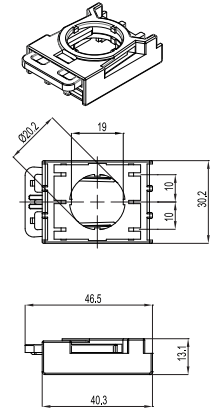
#### Single pushbutton (P1)



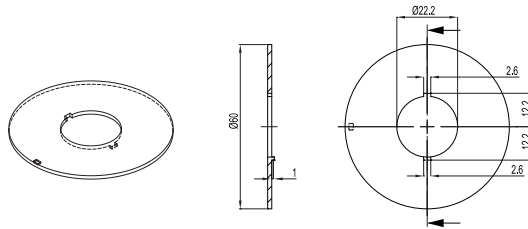
#### Double pushbutton (P2)



### Flange (F1)



### Labels (Q1 / Q2)



### Panel hole cover

