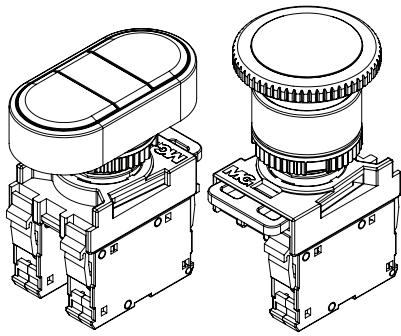




PUSHBUTTON AND ROTARY SWITCHES

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 

KEMA-KEUR certified contact blocks



TECHNICAL DATA

CONTACT BLOCKS

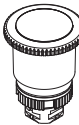
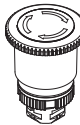
Applicable Technical Standard		EN 60947-5-1
Certification		KEMA-KEUR
Rated insulation voltage <i>Ui</i>		600 V
Rated impulse voltage <i>Uimp</i>		6 kV
Conventional thermal current <i>Ith</i>		10 A
Nominal current <i>Ie</i> for operating voltage <i>Ue</i>		
AC 15	127 VAC	6 A
	240 VAC	3 A
	380 VAC	2 A
DC 13	24 VDC	3 A
	110 VDC	0,6 A
	220 VDC	0,3 A
Short circuit protection (Fuses class gL/gG)		10A
Degree of protection		IP 20
Cabling capacity		Minimum: 1x0,5mm² Maximum: 2x2,5mm²
Maximum tightening torque		0,8 N.m
Operating temperature		-25°C to 70°C

LIGHTING BLOCKS

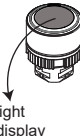
Technology	LED	
Operating voltage range	0,9 to 1,1 x Vn	
Maximum current consumption	14 mA	
Average service life	100.000 hours	
Degree of protection	IP 20	
Cabling capacity	Minimum: 1x0,5mm ² Maximum: 2x2,5mm ²	
Maximum tightening torque	0,8 N.m	
Operating temperature	-25°C to 70°C	

BLOCK 1: Actuators

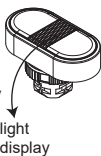
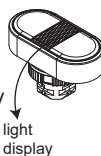
MUSHROOM BUTTONS

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				

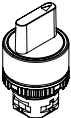
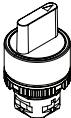
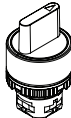
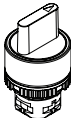
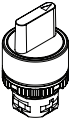
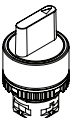
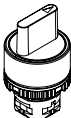
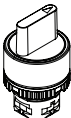
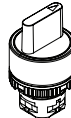
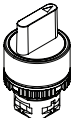
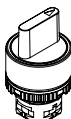
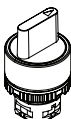
SIMPLE BUTTONS

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			
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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	
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ROTARY KNOBS

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

(On)*: Momentary / Spring return actuation.

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

BLOCK 2: Marking

G0 - Without marking

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

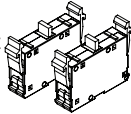
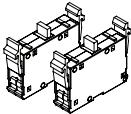
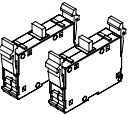
NOTES: G1, G2 and G3 apply only to the double buttons.
Marking on other actuators on request.

BLOCK 3: Flange

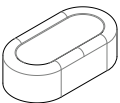
F0 - Without flange	F1 - Flange 	
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BLOCK 4: Contacts

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 
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BLOCK 5: Protection

P0 - without cover	P1 - Silicone cover for single pushbutton 	P2 - Silicone cover for double pushbutton 
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BLOCK 6: Lighting

L0 - Without lighting block	L1 - 12VAC/VDC lighting block	L2 - 24VAC/VDC lighting block	L3 - 48VAC/VDC lighting block	L4 - 127/220VAC lighting block
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BLOCK 7: Labels

Q0 - Without label	Q1 - Label (in portuguese) for emergency pushbuttons	Q2 - Label (in english/ portuguese) for emergency pushbuttons	
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ACESSORIES: Panel hole cover



TP1F
Black

Other colors available upon request.

CODING BLOCK

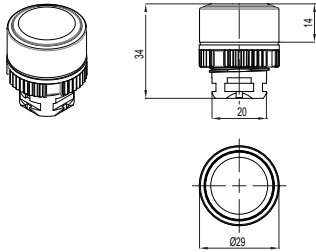
Block 1: Actuators	Block 2: Marking	Block 3: Flange	Block 4: Contacts	Block 5: Protection	Block 6: Lighting	Block 7: Labels
B1C B1D B1E B2E B3E B4E B5E B6E B7A B7B B7C B7D B7E B7F B8A B8B B8C B8D B8E B9 B10A B10B B10C B10D B10E B11 B12A B12B B12C B12D B12E	B13F B14A B14B B14C B14D B14E B15F B16A B16B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

PUSHBUTTON SWITCHES

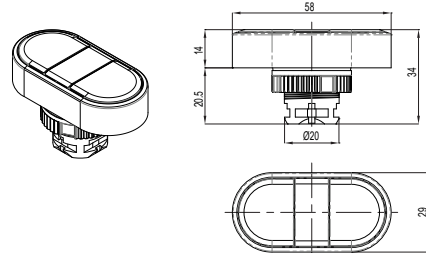
DIMENSIONS

PUSHBUTTONS FOR CONTROL

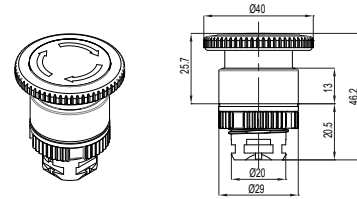
Single pushbutton
Spring return (B7 / B8)



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

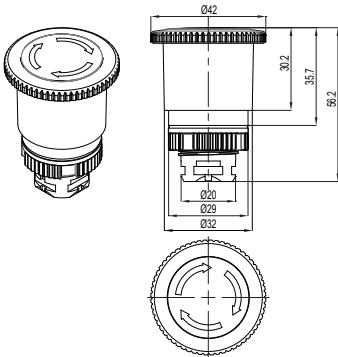


MUSHROOM HEAD PUSHBUTTONS - SHORT (B1 / B2 / B3)

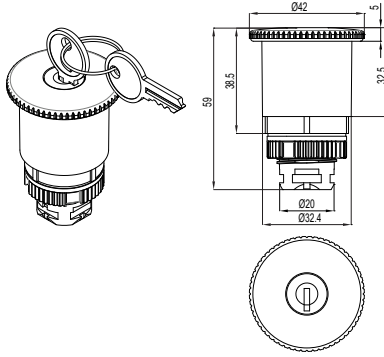


EMERGENCY MUSHROOM HEAD PUSHBUTTONS - LONG (B4 / B5 / B6)

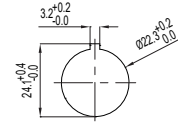
Pull or turn to release



Key release



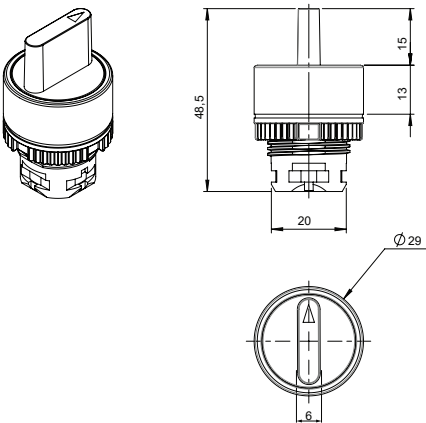
CUT FOR FIT



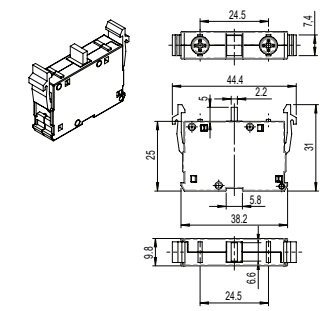
Maximum panel thickness: 6mm

ROTARY KNOBS

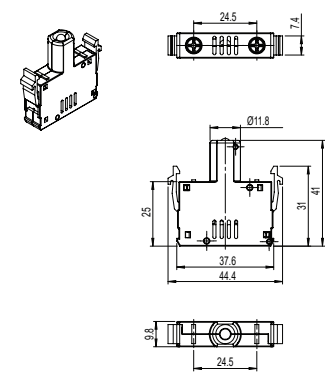
(B13 / B14 / B15 / B16 / B17 / B18 / B19 / B20 / B21 / B22 / B23 / B24)



CONTACT BLOCKS (C)



LIGHTING BLOCKS (L)

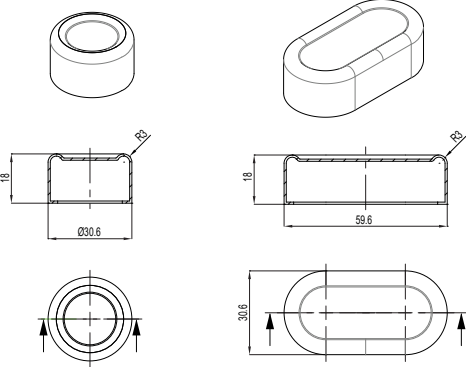


ACESSORIES

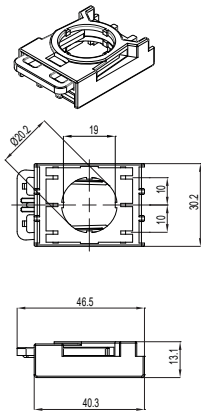
Silicone covers

Single pushbutton (P1)

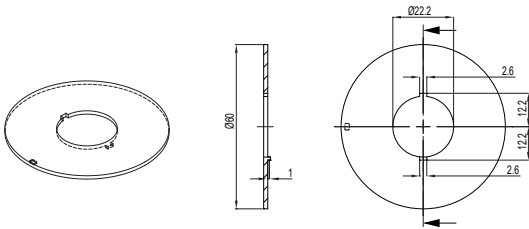
Double pushbutton (P2)



Flange (F1)



Labels (Q1 / Q2)



Panel hole cover

