

# Push buttons and signalling devices



More than 50 years of experience  
in the design and manufacture  
of high quality electromechanical components.



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# Quality makes



# our products great



With over 50 years of experience we are specialist in the manufacturing of cam switches, disconnect switches, position and safety switches, power tools switches, relay sockets and push buttons.

We design and build extremely reliable and efficient products: our company is managed in full accordance with UNI EN ISO 9001 and all our products are verified in our laboratory under the most stringent standards to guarantee performance, durability and safety.

We have a state of the art R&D department committed to develop new, better products. We have gained a wide experience in designing custom products for different industrial sectors: our technicians constantly interact with customers to develop solutions which can offer significant added value.





## ■ Push buttons and LED indicators

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### BM Series Ø 22

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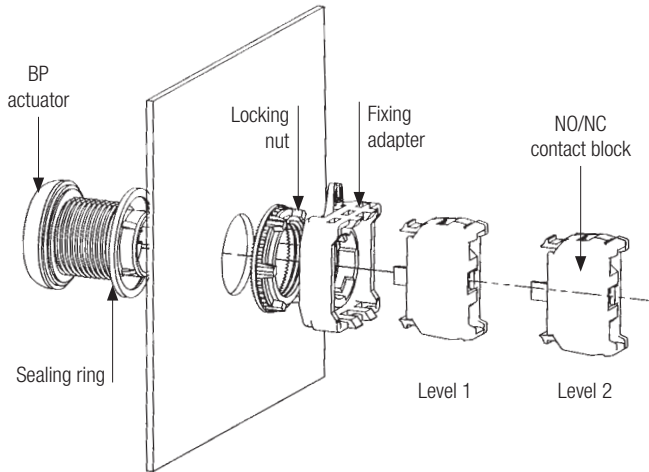
**Push buttons  
and LED indicators**

**BP - BM - BL - BB  
Series**

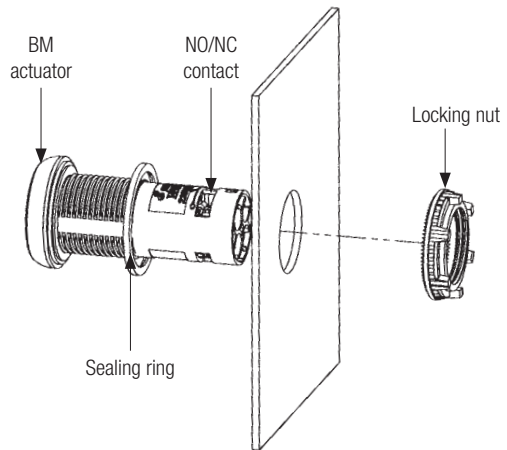
## BP series Ø22

Note:

- Maximum 2 levels, each with 3 elements
- Example of 1 level: 3NO/NC or 2NO/NC + 1 LED HOLDER
- Example of 2 levels: 3NO/NC + 3NO/NC, 2NO/NC + 2NO/NC + 1 LED HOLDER



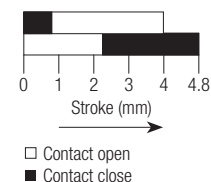
## BM series Ø22



## Technical data


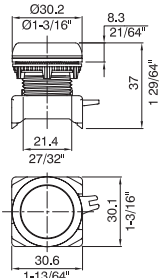
General				BP series	BM series	BL series
Standards				IEC/EN 60947-5-1, cULus, CE		
Rated insulation voltage	IEC947-5-1	Ui	V AC	600V	600V	600V
Rated thermal current	IEC947-5-1	Ith	A	10	10	-
Operating frequency			Hz	50/60	50/60	50/60
Rated operating current	IEC947-5-1 / EN60947-5-1					
AC-15 Control of A.C. electromagnetic loads	230V	le	A	6	6	14-20mA
	500V	le	A	2	2	14-28mA
DC-13 Control of D.C. electromagnetics	24V	le	A	1,5	1,5	14-20mA
Short-circuit protection						
Fuse type gG/gL	500V		A	10	10	10
Contact resistance	IEC255-7 cat.3		mΩ	< 20	< 20	< 20
Dielectric strenght	50/60Hz for 1 sec.		VAC	2.5KV	2.5KV	2.5KV
Rated conditional short-circuit current	IEC947-5-1		A	10A	10A	>0.5A
Overtoltage category/degree of pollution	IEC947-5-1			II/3	II/3	II/3
Insulation resistance at 500V DC				> 50MΩ	> 50MΩ	>1MΩ
MV drop at 16A DC				> 200MV	> 200MV	-
Protection degree	IEC/EN60529	Above panel		IP65	IP65	IP65
		Terminals		IP20	IP20	IP20
Mechanical life	Push-buttons, Emergency mushrooms (Momentary) Selectors, Emergency mushrooms (Push-Pull) Emergency mushrooms (Turn to release)	Operations		1.000.000	1.000.000	-
		Operations		500.000	500.000	-
		Operations		100.000	100.000	-
Electrical life	at 250VAC 6A with resistance load			500.000 cycles	500.000 cycles	100.000 hours
Terminals	Screws			Screw washer	Screw washer	Screw washer
	Tightening torque		Nm	0,6 ÷ 0,8	0,6 ÷ 0,8	0,6 ÷ 0,8
	Solid and flexible wires	Min-Max	mm <sup>2</sup>	(2x) 1-2,5	(2x) 1-2,5	0,5-2,5
		Min-Max	AWG	18-14	18-14	21-14
Climatic conditions						
Operating ambient temperature			°C	-30° ÷ +60°	-30° ÷ +60°	-30° ÷ +60°
Storage ambient temperature			°C	-30° ÷ +70°	-30° ÷ +70°	-30° ÷ +70°
Climatic proofing	Damp heat, constant, to IEC 60068			2-78	2-78	2-78
	Damp heat, cyclic, to IEC 60068			2-30	2-30	2-30

Contact travel


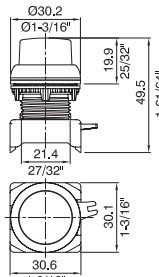


## Push buttons, not illuminated - IP65

### Flush head, momentary function


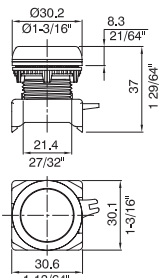
	Dimensions	Color of actuator	Code	Pack
		<ul style="list-style-type: none"> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> </ul>	<ul style="list-style-type: none"> <li>BPR1</li> <li>BPR2</li> <li>BPR3</li> <li>BPR4</li> <li>BPR5</li> <li>BPR6</li> </ul>	<ul style="list-style-type: none"> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> </ul>

### Extended head, momentary function


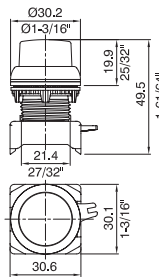
	Dimensions	Color of actuator	Code	Pack
		<ul style="list-style-type: none"> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> </ul>	<ul style="list-style-type: none"> <li>BPS1</li> <li>BPS2</li> <li>BPS3</li> <li>BPS4</li> <li>BPS5</li> <li>BPS6</li> </ul>	<ul style="list-style-type: none"> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> </ul>

## Push buttons, illuminated - IP65

### Flush head, momentary function

	Dimensions	Color of actuator	Code	Pack
		<ul style="list-style-type: none"> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> </ul>	<ul style="list-style-type: none"> <li>BPRL2</li> <li>BPRL3</li> <li>BPRL4</li> <li>BPRL5</li> <li>BPRL6</li> </ul>	<ul style="list-style-type: none"> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> </ul>

### Extended head, momentary function

	Dimensions	Color of actuator	Code	Pack
		<ul style="list-style-type: none"> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> </ul>	<ul style="list-style-type: none"> <li>BPSL2</li> <li>BPSL3</li> <li>BPSL4</li> <li>BPSL5</li> <li>BPSL6</li> </ul>	<ul style="list-style-type: none"> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> </ul>

Note:

- Antirotating ring included
- Black collar is available on request
- Led elements for illuminated push buttons must be ordered separately
- Other colors are available on request

standard article 



## Double push buttons, not illuminated - IP65

Flush head, momentary function

	<b>Dimensions</b> 	<b>Symbols / Colors of actuators</b>	Code	Pack	
				BP2UD	1
				BP2LR	1
				BP2AL	1
				BP2IO	1
				BP2IOW	1

## Double push buttons, illuminated - IP65

Flush head, momentary function

	<b>Dimensions</b> 	<b>Symbols / Colors of actuators</b>	Voltage	Code	Pack	
				NO LED	BP2LAL	1
				24V AC/DC	BP2LAL24	1
				110V AC	BP2LAL110	1
				240V AC	BP2LAL240	1
				NO LED	BP2LIO	1
				24V AC/DC	BP2LIO24	1
				110V AC	BP2LIO110	1
				240V AC	BP2LIO240	1

Note:

- Antirotating ring included
- Black collar is available on request
- Other colors are available on request

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## Emergency mushroom, not illuminated - IP65

### Flush head

	Dimensions	Type	Color of actuator	Code	Pack
		Turn to release	●	BPFB240	1
		Release by turning with key	●	BPFBC240	1
		Push-Pull	●	BPFBT240	1
		Momentary	●	BPFBM240	1
		Momentary	●	BPFBM340	1
		Momentary	●	BPFBM440	1
		Momentary	●	BPFBM140	1


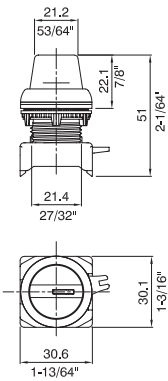
#### Note:

- Emergency mushrooms in accordance with EN ISO 13850
- Antirotating ring included
- Black collar is available on request
- Other colors are available on request


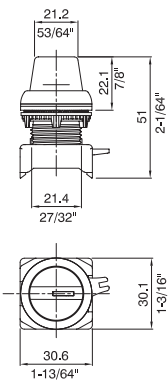
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## ■ Selector switches, not illuminated - IP65

### 2 positions, short handle

	<b>Dimensions</b> 	Function		Color of actuator	Code	Pack
		↙	0° +45°	●	BPSN1CD	1
↘	0° +45°	●	BPSN2CD	1		
↗	0° +45°	●	BPSN1CDRD	1		
↖	-45° +45°	●	BPSN1A	1		

### 3 positions, short handle

	<b>Dimensions</b> 	Function		Color of actuator	Code	Pack
		↕	-45° 0° +45°	●	BPSN1E	1
↕	-45° 0° +45°	●	BPSN2E	1		
↔	-45° 0° +45°	●	BPSN1ERC	1		
↔	-45° 0° +45°	●	BPSN2ERC	1		
↕	-45° 0° +45°	●	BPSN1ERD	1		
↕	-45° 0° +45°	●	BPSN2ERD	1		
↔	-45° 0° +45°	●	BPSN1ERS	1		
↔	-45° 0° +45°	●	BPSN2ERS	1		


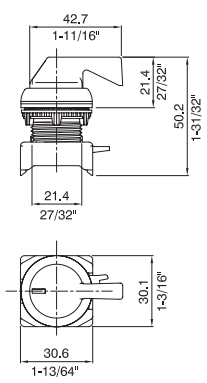



Note:

- Antirotating ring included
- Black collar is available on request
- Other colors and operating style are available on request


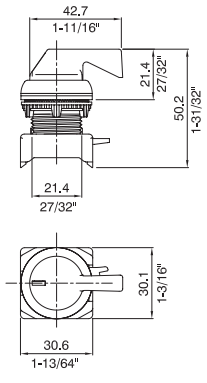




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## ■ Selector switches, not illuminated - IP65

### 2 positions, long handle

	Dimensions	Function		Color of actuator	Code	Pack
		Symbol	Range			
			0° +45°	●	BPSNL1CD	1
			0° +45°	●	BPSNL1CDRD	1
			-45° +45°	●	BPSNL1A	1

### 3 positions, long handle

	Dimensions	Function		Color of actuator	Code	Pack
		Symbol	Range			
			-45° 0° +45°	●	BPSNL1E	1
			-45° 0° +45°	●	BPSNL1ERC	1
			-45° 0° +45°	●	BPSNL1ERD	1
			-45° 0° +45°	●	BPSNL1ERS	1


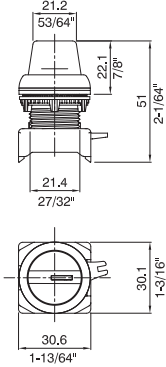












Note:

- Antirotating ring included
- Black collar is available on request
- Other colors and operating style are available on request


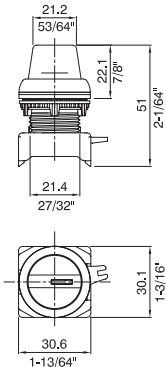
























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## ■ Selector switches, illuminated - IP65

### 2 positions, short handle

	<b>Dimensions</b> 	<b>Function</b>		<b>Color of actuator</b>	<b>Code</b>	<b>Pack</b>
			0° +45°		BPSL6CD	1
	0° +45°		BPSL2CD	1		
	0° +45°		BPSL3CD	1		
	0° +45°		BPSL6CDRD	1		
	0° +45°		BPSL2CDRD	1		
	0° +45°		BPSL3CDRD	1		

### 3 positions, short handle

	<b>Dimensions</b> 	<b>Function</b>		<b>Color of actuator</b>	<b>Code</b>	<b>Pack</b>
			-45° 0° +45°		BPSL6E	1
	-45° 0° +45°		BPSL2E	1		
	-45° 0° +45°		BPSL3E	1		
	-45° 0° +45°		BPSL6ERC	1		
	-45° 0° +45°		BPSL2ERC	1		
	-45° 0° +45°		BPSL3ERC	1		
	-45° 0° +45°		BPSL6ERD	1		
	-45° 0° +45°		BPSL2ERD	1		
	-45° 0° +45°		BPSL3ERD	1		
	-45° 0° +45°		BPSL6EGS	1		
	-45° 0° +45°		BPSL2EGS	1		
	-45° 0° +45°		BPSL3EGS	1		


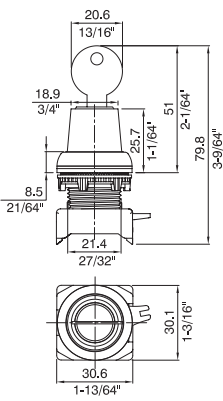





Note:

- Antirotating ring included
- Black collar is available on request
- Other colors and operating style are available on request


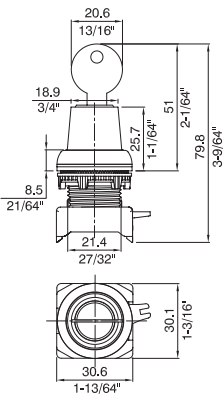









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## ■ Selector key-operated - IP65

### 2 positions

	<b>Dimensions</b> 	<b>Function</b>		<b>Code</b>	<b>Pack</b>
			0° +45°, Key removable in 0	BPSC1CDRDV	1
	0° +45°, Key removable in 0	BPSC1CD45V	1		
	0° +90°, Key removable in 0	BPSC1CD90V	1		
	0° +45°, Key removable in 1	BPSC1CD45VA	1		
	0° +90°, Key removable in 1	BPSC1CD90VA	1		

### 3 positions


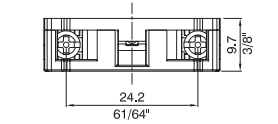
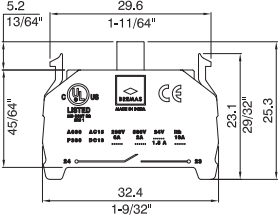
	<b>Dimensions</b> 	<b>Function</b>		<b>Code</b>	<b>Pack</b>
			-45° 0° +45°, Key removable in 0	BPSC1EV	1
	-45° 0° +45°, Key removable in 0	BPSC1ERCV	1		
	-45° 0° +45°, Key removable in 0	BPSC1ERDV	1		
	-45° 0° +45°, Key removable in 0	BPSC1ERSV	1		
	-45° 0° +45°, Key removable in 1	BPSC1ERDVA	1		
	-45° 0° +45°, Key removable in 1	BPSC1EVA	1		
	-45° 0° +45°, Key removable in 2	BPSC1ERSVB	1		
	-45° 0° +45°, Key removable in 1-0	BPSC1EVB	1		
	-45° 0° +45°, Key removable in 1-0-2	BPSC1EVC	1		

Note:


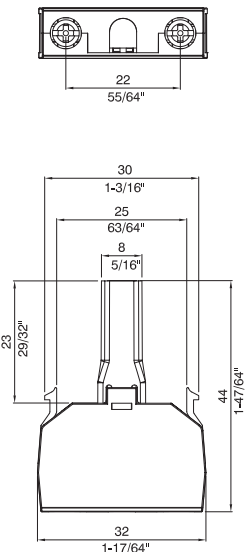
- Antirotating ring included
- Black collar is available on request
- Other operating style are available on request

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## Contact elements

	Dimensions	Contacts	Code	Pack
			1NO	BPC10B
		1NC	BPC01B	10

## LED elements

	Dimensions	Rated Voltage	LED color	Code	Pack
			24VAC/DC	●	BPLH224
		24VAC/DC	●	BPLH324	10
		24VAC/DC	●	BPLH424	10
		24VAC/DC	●	BPLH524	10
		24VAC/DC	●	BPLH624	10
		110VAC	●	BPLH2110	10
		110VAC	●	BPLH3110	10
		110VAC	●	BPLH4110	10
		110VAC	●	BPLH5110	10
		110VAC	●	BPLH6110	10
		240VAC	●	BPLH2240	10
		240VAC	●	BPLH3240	10
		240VAC	●	BPLH4240	10
		240VAC	●	BPLH5240	10
		240VAC	●	BPLH6240	10

Note:


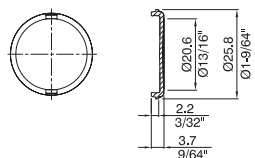
- Contact blocks and LED holder are provided with screw terminals
- Other colors are available on request
- Led elements: 100.000 operating hours

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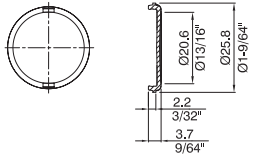


## Accessories for push buttons


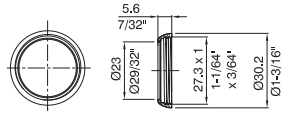
### Lens cap for flush push buttons - not illuminated

	<b>Dimensions</b> 	<b>Color</b> <ul style="list-style-type: none"> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> </ul>	Code	Pack
			BPLPR6	10
BPLPR1	10			
BPLPR2	10			
BPLPR3	10			
BPLPR4	10			
BPLPR5	10			
BPLPR8	10			


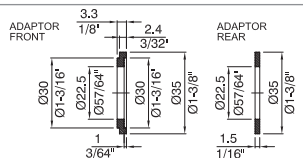
### Lens cap for flush push buttons - illuminated

	<b>Dimensions</b> 	<b>Color</b> Colourless <ul style="list-style-type: none"> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> <li>●</li> </ul>	Code	Pack
			BPLPRL0	10
BPLPRL9	10			
BPLPRL2	10			
BPLPRL3	10			
BPLPRL4	10			
BPLPRL5	10			
BPLPRL8	10			


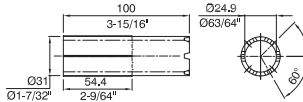
### Collar for flush/extended push buttons

	<b>Dimensions</b> 	Type	Code	Pack
		Collar chrome plated ABS	BPCP	10
Collar black ABS	BPCPN	10		


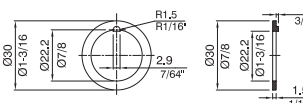
### Adaptor ring for 30 to 22mm in panel cutout conversion

	<b>Dimensions</b> 	Type	Code	Pack
		Front & rear (Grey)	BPARG1	10
Rear (Grey)	BPARG2	10		
Front & rear (Black)	BPARB1	10		
Rear (Black)	BPARB2	10		
Front & rear (Cr. Plated)	BPARC1	10		
Rear (Cr. Plated)	BPARC2	10		


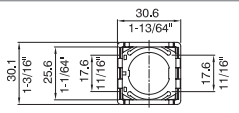
### Fixing device for operator Ø22

	<b>Dimensions</b> 	Type	Code	Pack
		Fixing device	BPC22	10

### Antirotating ring

	<b>Dimensions</b> 	Type	Code	Pack
		Antirotating ring	BPATR	10

### Fixing adapters

	<b>Dimensions</b> 	Type	Code	Pack
		Fixing adapter (BP series)	BPFA	10
Fixing adapter (BL series multivoltage led)	BPFAL	10		

### Center Indication strip for double push button

	Type	Code	Pack
	Center ind. strip colourless. (illuminated)	BPIP2L0	10
Center ind. strip black (non illuminated)	BPIP2L1	10	

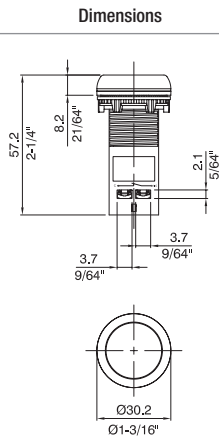
### Other accessories

	Type	Code	Pack
	Lens plug	BPLPL	10
Legend plate	BPLEP	10	



## Push buttons - IP65

### Flush head, momentary function



Contacts	Color of actuator	Code	Pack
1NO	●	BMPR210	1
1NO	●	BMPR310	1
1NO	●	BMPR410	1
1NO	●	BMPR110	1
1NO	●	BMPR510	1
1NO	●	BMPR610	1
1NC	●	BMPR201	1
1NC	●	BMPR301	1
1NC	●	BMPR401	1
1NC	●	BMPR101	1
1NC	●	BMPR501	1
1NC	●	BMPR601	1
1NO+1NC	●	BMPR211	1
1NO+1NC	●	BMPR311	1
1NO+1NC	●	BMPR411	1
1NO+1NC	●	BMPR111	1
1NO+1NC	●	BMPR511	1
1NO+1NC	●	BMPR611	1
2NO	●	BMPR220	1
2NO	●	BMPR320	1
2NO	●	BMPR420	1
2NO	●	BMPR120	1
2NO	●	BMPR520	1
2NO	●	BMPR620	1
2NC	●	BMPR202	1
2NC	●	BMPR302	1
2NC	●	BMPR402	1
2NC	●	BMPR102	1
2NC	●	BMPR502	1
2NC	●	BMPR602	1

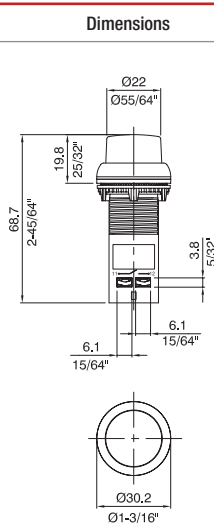
**Note:**

- Antirotating ring included
- Black collar is available on request
- IP20 terminal protection
- Other colors are available on request

standard article

## Push buttons - IP65

### Flush head, momentary function



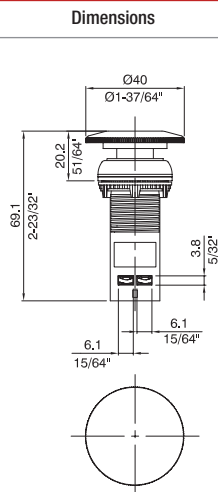
Dimensions	Contacts	Color of actuator	Code	Pack
	1NO	●	BMPS210	1
	1NO	●	BMPS310	1
	1NO	●	BMPS410	1
	1NO	●	BMPS110	1
	1NO	●	BMPS510	1
	1NO	●	BMPS610	1
	1NC	●	BMPS201	1
	1NC	●	BMPS301	1
	1NC	●	BMPS401	1
	1NC	●	BMPS101	1
	1NC	●	BMPS501	1
	1NC	●	BMPS601	1
	1NO+1NC	●	BMPS211	1
	1NO+1NC	●	BMPS311	1
	1NO+1NC	●	BMPS411	1
	1NO+1NC	●	BMPS111	1
	1NO+1NC	●	BMPS511	1
	1NO+1NC	●	BMPS611	1
	2NO	●	BMPS220	1
	2NO	●	BMPS320	1
	2NO	●	BMPS420	1
	2NO	●	BMPS120	1
	2NO	●	BMPS520	1
	2NO	●	BMPS620	1
	2NC	●	BMPS202	1
	2NC	●	BMPS302	1
	2NC	●	BMPS402	1
	2NC	●	BMPS102	1
	2NC	●	BMPS502	1
	2NC	●	BMPS602	1

#### Note:

- Antirotating ring included
- Black collar is available on request
- IP20 terminal protection
- Other colors are available on request

## Mushroom push buttons - IP65

### Momentary function



Contacts	Color of actuator	Code	Pack
1NO	●	BMPF210	1
1NO	●	BMPF310	1
1NO	●	BMPF410	1
1NO	●	BMPF110	1
1NC	●	BMPF201	1
1NC	●	BMPF301	1
1NC	●	BMPF401	1
1NC	●	BMPF101	1
1NO+1NC	●	BMPF211	1
1NO+1NC	●	BMPF311	1
1NO+1NC	●	BMPF411	1
1NO+1NC	●	BMPF111	1
2NO	●	BMPF220	1
2NO	●	BMPF320	1
2NO	●	BMPF420	1
2NO	●	BMPF120	1
2NC	●	BMPF202	1
2NC	●	BMPF302	1
2NC	●	BMPF402	1
2NC	●	BMPF102	1

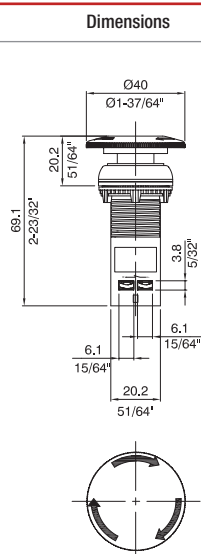
Note:

- Emergency mushrooms in accordance with EN ISO 13850
- Antirotating ring included
- Black collar is available on request
- IP20 terminal protection

standard article

## ■ Mushroom push buttons - IP65

### Turn to release



Contacts	Color of actuator	Code	Pack
1NO	●	BMPFB210	1
1NO	●	BMPFB310	1
1NO	●	BMPFB410	1
1NO	●	BMPFB110	1
1NC	●	BMPFB201	1
1NC	●	BMPFB301	1
1NC	●	BMPFB401	1
1NC	●	BMPFB101	1
1NO+1NC	●	BMPFB211	1
1NO+1NC	●	BMPFB311	1
1NO+1NC	●	BMPFB411	1
1NO+1NC	●	BMPFB111	1
2NO	●	BMPFB220	1
2NO	●	BMPFB320	1
2NO	●	BMPFB420	1
2NO	●	BMPFB120	1
2NC	●	BMPFB202	1
2NC	●	BMPFB302	1
2NC	●	BMPFB402	1
2NC	●	BMPFB102	1

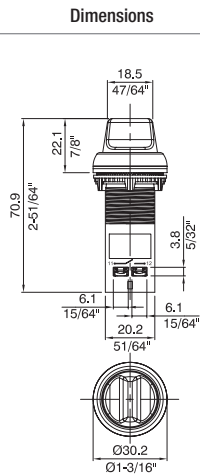
#### Note:

- Emergency mushrooms in accordance with EN ISO 13850
- Antirotating ring included
- Black collar is available on request
- IP20 terminal protection

standard article

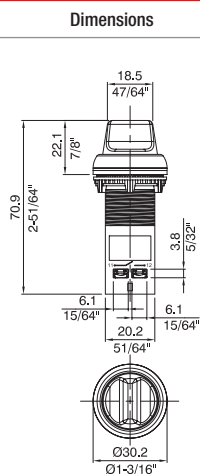
## Selector switches - IP65

### 2 positions, short handle



Function		Contacts	Color of actuator	Code	Pack
↙	0° +45°	1NO	●	BMSN110	1
↘	-45° +45°	1NO	●	BMSN1A10	1
↗	0° +45°	1NO	●	BMSN1CDRD10	1
↙	0° +45°	1NC	●	BMSN101	1
↘	-45° +45°	1NC	●	BMSN1A01	1
↗	0° +45°	1NC	●	BMSN1CDRD01	1
↙	0° +45°	1NO+1NC (Left 1NO)	●	BMSN111	1
↘	-45° +45°	1NO+1NC (Left 1NO)	●	BMSN1A11	1
↗	0° +45°	1NO+1NC (Left 1NO)	●	BMSN1CDRD11	1
↙	0° +45°	2NO	●	BMSN120	1
↘	-45° +45°	2NO	●	BMSN1A20	1
↗	0° +45°	2NO	●	BMSN1CDRD20	1
↙	0° +45°	2NC	●	BMSN102	1
↘	-45° +45°	2NC	●	BMSN1A02	1
↗	0° +45°	2NC	●	BMSN1CDRD02	1

### 3 positions, short handle



Function		Contacts	Color of actuator	Code	Pack
↙↘	-45° 0° +45°	1NO+1NC (Left 1NO)	●	BMSN1E11NOS	1
↙↗	-45° 0° +45°	1NO+1NC (Left 1NO)	●	BMSN1RC11NOS	1
↘↗	-45° 0° +45°	1NO+1NC (Right 1NO)	●	BMSN1E11NOD	1
↘↙	-45° 0° +45°	1NO+1NC (Right 1NO)	●	BMSN1RC11NOD	1
↙↘	-45° 0° +45°	2NO	●	BMSN1E20	1
↙↗	-45° 0° +45°	2NO	●	BMSN1RC20	1
↘↙	-45° 0° +45°	2NC	●	BMSN1E02	1
↘↗	-45° 0° +45°	2NC	●	BMSN1RC02	1


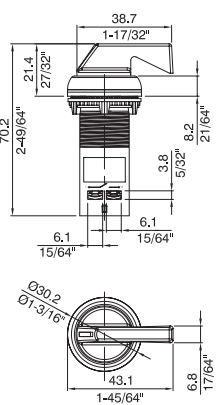










Note:

- Antirotating ring included
- Black collar is available on request
- IP20 terminal protection
- Other colors are available on request


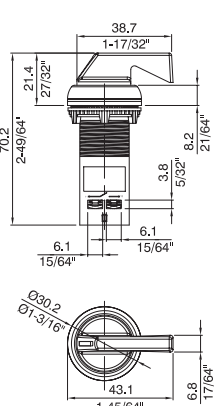








standard article

## ■ Selector switches - IP65

### 2 positions, long handle

	Dimensions		Function		Contacts	Color of actuator	Code	Pack
				0° +45°	1NO	●	BMSNL1CD10	1
				0° +45°	1NO	●	BMSNL1ERC10	1
				0° +45°	1NC	●	BMSNL1CD01	1
				0° +45°	1NC	●	BMSNL1ERC01	1
				0° +45°	1NO+1NC (Left 1NO)	●	BMSNL1CD11	1
				0° +45°	1NO+1NC (Left 1NO)	●	BMSNL1ERC11	1
				0° +45°	2NO	●	BMSNL1CD20	1
				0° +45°	2NO	●	BMSNL1ERC20	1
				0° +45°	2NC	●	BMSNL1CD02	1
			0° +45°	2NC	●	BMSNL1ERC02	1	

### 3 positions, long handle

	Dimensions		Function		Contacts	Color of actuator	Code	Pack
				-45° 0° +45°	1NO+1NC (Left 1NO)	●	BMSNL1E11NOS	1
				-45° 0° +45°	1NO+1NC (Left 1NO)	●	BMSNL1RC11NOS	1
				-45° 0° +45°	1NO+1NC (Right 1NO)	●	BMSNL1E11NOD	1
				-45° 0° +45°	1NO+1NC (Right 1NO)	●	BMSNL1RC11NOD	1
				-45° 0° +45°	2NO	●	BMSNL1E20	1
				-45° 0° +45°	2NO	●	BMSNL1RC20	1
				-45° 0° +45°	2NC	●	BMSNL1E02	1
				-45° 0° +45°	2NC	●	BMSNL1RC02	1

Note:

- Antirotating ring included
- Black collar is available on request
- IP20 terminal protection
- Other colors are available on request

standard article 

## ■ Selector key operated - IP65

### 2 positions



Dimensions	Function	Contacts	Code	Pack	
		0° +45°, Key removable in 0	1NO	<b>BMSC1CD10</b>	1
		0° +45°, Key removable in 0	1NO	<b>BMSC1CDR10</b>	1
		0° +45°, Key removable in 0	1NC	<b>BMSC1CD01</b>	1
		0° +45°, Key removable in 0	1NC	<b>BMSC1CDR01</b>	1
		0° +45°, Key removable in 0	1NO+1NC (Left 1NO)	<b>BMSC1CD11</b>	1
		0° +45°, Key removable in 0	1NO+1NC (Left 1NO)	<b>BMSC1CDR11</b>	1
		0° +45°, Key removable in 0	2NO	<b>BMSC1CD20</b>	1
		0° +45°, Key removable in 0	2NO	<b>BMSC1CDR20</b>	1
		0° +45°, Key removable in 0	2NC	<b>BMSC1CD02</b>	1
		0° +45°, Key removable in 0	2NC	<b>BMSC1CDR02</b>	1

### 3 positions



Dimensions	Function	Contacts	Code	Pack	
		-45° 0° +45°, Key removable in 0	1NO+1NC (Left 1NO)	<b>BMSC1E11NOS</b>	1
		-45° 0° +45°, Key removable in 0	1NO+1NC (Left 1NO)	<b>BMSC1RC11NOS</b>	1
		-45° 0° +45°, Key removable in 0	1NO+1NC (Right 1NO)	<b>BMSC1E11NOD</b>	1
		-45° 0° +45°, Key removable in 0	1NO+1NC (Right 1NO)	<b>BMSC1RC11NOD</b>	1
		-45° 0° +45°, Key removable in 0	2NO	<b>BMSC1E20</b>	1
		-45° 0° +45°, Key removable in 0	2NO	<b>BMSC1RC20</b>	1
		-45° 0° +45°, Key removable in 0	2NC	<b>BMSC1E02</b>	1
		-45° 0° +45°, Key removable in 0	2NC	<b>BMSC1RC02</b>	1

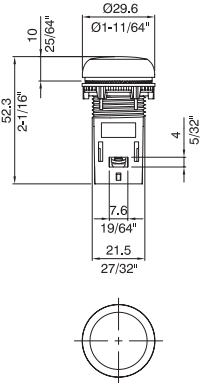
Note:

- Antirotating ring included
- Black collar is available on request
- IP20 terminal protection

standard article

## ■ Led indicators - IP65

### With integrated LED

	Dimensions	Rated Voltage*	Color of actuator	Code	Pack			
		12V AC/DC	●	BLI2012	10			
		24V AC/DC		BLI2024	10			
		48V AC/DC		BLI2048	10			
		110V AC		BLI2110	10			
		110V DC		BLI2110D	10			
		240V AC		BLI2240	10			
		220V DC		BLI2220D	10			
		12V AC/DC		BLI3012	10			
		24V AC/DC		BLI3024	10			
		48V AC/DC	●	BLI3048	10			
		110V AC		BLI3110	10			
		110V DC		BLI3110D	10			
		240V AC		BLI3240	10			
		220V DC		BLI3220D	10			
		12V AC/DC		BLI4012	10			
		24V AC/DC		BLI4024	10			
					48V AC/DC	●	BLI4048	10
					110V AC		BLI4110	10
110V DC	BLI4110D		10					
240V AC	BLI4240		10					
220V DC	BLI4220D		10					
12V AC/DC	BLI5012		10					
24V AC/DC	BLI5024		10					
			48V AC/DC		●		BLI5048	10
			110V AC				BLI5110	10
		110V DC	BLI5110D	10				
		240V AC	BLI5240	10				
		220V DC	BLI5220D	10				
		12V AC/DC	BLI6012	10				
		24V AC/DC	BLI6024	10				
				48V AC/DC		●	BLI6048	10
				110V AC			BLI6110	10
110V DC	BLI6110D			10				
240V AC	BLI6240			10				
220V DC	BLI6220D			10				

\* operating voltage: -20% ÷ +10% of rated voltage

#### Note:

- IP20 terminal protection
- Other colors are available on request

standard article





## Multi-voltage LED indicator - IP65

With integrated LED



Dimensions	Rated Voltage*	Color of actuator	Code	Pack
	24V ÷ 240V AC/DC	<span style="color: red;">●</span>	BLU2	8
	24V ÷ 240V AC/DC	<span style="color: green;">●</span>	BLU3	8
	24V ÷ 240V AC/DC	<span style="color: yellow;">●</span>	BLU4	8
	24V ÷ 240V AC/DC	<span style="color: blue;">●</span>	BLU5	8
	24V ÷ 240V AC/DC	<span style="color: white;">●</span>	BLU6	8

\* operating voltage -20% to + 10% of rated voltage

Note:

- IP20 terminal protection
- Other colors are available on request

standard article

## Buzzer - IP65

IEC 60947-5



Dimensions	Rated Voltage	Code	Pack
	12V AC/DC	BBU012	10
	24V AC/DC	BBU024	10
	30V AC/DC	BBU030	10
	48V AC/DC	BBU048	10
	64V AC/DC	BBU064	10
	110V AC	BBU110	10
	240V AC	BBU240	10

Note:

- IP20 terminal protection
- Continuous sound (80dB ± 5dB at 1 meter)

standard article



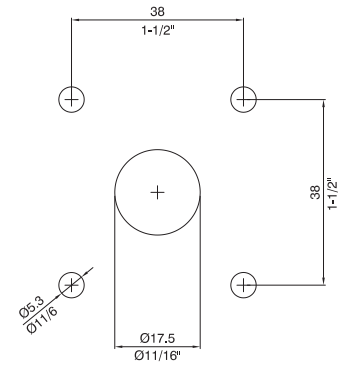
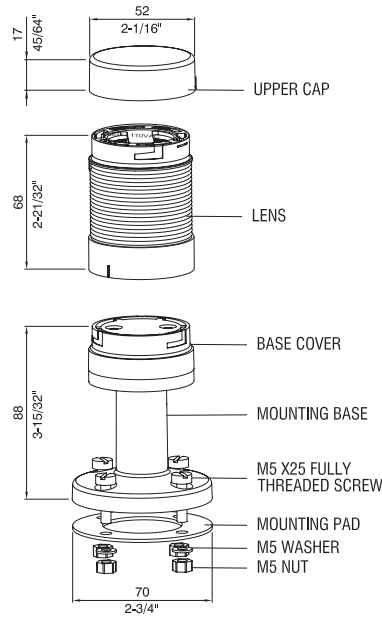
Signal towers

BT  
Series

## Technical data

General			Bases - BTB	Lense Modules - BTL	Sound Modules - BTM
Standards			IEC/EN 60947-5-1, cULus, CE		
Rated impulse withstand voltage	Uimp	VAC	-	2000	2000
Mounting position			As required		
Mechanical shock resistance	acc. to 60068-2-27	g	>15	-	-
HV tests for 60 sec.		kV	-	2KV	2KV
Overvoltage category/degree of pollution			-		
Protection degree			IP65 NEMA (1,2,3,3R,4, 4X, 12,13)	IP65 NEMA (1,2,3,3R,4, 4X, 12,13)	IP65 NEMA (1,2,3,3R,4, 4X, 12,13)
Max number of signal elements			4		
Terminals			Solid and flexible wires		
			mm <sup>2</sup>	-	-
			AWG	-	-
Type of light			-		
Light elements			-		
Flashing frequency			-		
Transmission angle			-		
Current - power consumption			-		
12-24V AC/DC			mA		
110V AC			mA		
240V AC			mA		
Voltage levels			-		
			24VAC/DC ± 10%		
			110VAC ± 10%		
			240VAC ± 10%		
Sound pressure			-		
Types of sound			-		
Lifespan			-		
Weight			-		
			h		
			g		
			106		
			309		
			62		
<b>Climatic conditions</b>					
Operating ambient temperature			°C		
Storage ambient temperature			°C		
Climatic proofing			Damp heat, constant, to IEC 60068		
			Damp heat, cyclic, to IEC 60068		
			2-78		
			2-30		
			2-78		
			2-30		
			2-78		
			2-30		

## Signal towers - IP65



### Bases

	Dimensions	Type	Code	Pack
	 	Base 60mm, plastic type	BTBA60	1
	 	Base 110mm, plastic type	BTBA110	1

### Sound modules

	Dimensions	Type of sound	Rated Voltage	Code	Pack
		Continuous	24V AC/DC	BTMS24C	1
		Pulsed	24V AC/DC	BTMS24I	1
		Continuous	110V AC	BTMS110C	1
		Pulsed	110V AC	BTMS110I	1
		Continuous	240V AC	BTMS240C	1
		Pulsed	240V AC	BTMS240I	1

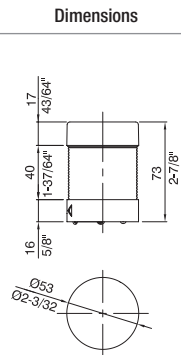
Note:

- Maximum number of modules: 4
- Other bases type are available on request
- Sound modules has to be used as last unit in the stack

standard article

## Signal towers - IP65

### Lense modules



Type	Rated Voltage	Color	Code	Pack
Continuous Led	24V AC/DC	Yellow	BTLM4C024	1
Continuous Led	24V AC/DC	Blue	BTLM5C024	1
Continuous Led	24V AC/DC	Green	BTLM3C024	1
Continuous Led	24V AC/DC	Red	BTLM2C024	1
Continuous Led	24V AC/DC	White	BTLM6C024	1
Flashing Led	24V AC/DC	Yellow	BTLM4F024	1
Flashing Led	24V AC/DC	Blue	BTLM5F024	1
Flashing Led	24V AC/DC	Green	BTLM3F024	1
Flashing Led	24V AC/DC	Red	BTLM2F024	1
Flashing Led	24V AC/DC	White	BTLM6F024	1
Rotary Led	24V AC/DC	Yellow	BTLM4R024	1
Rotary Led	24V AC/DC	Blue	BTLM5R024	1
Rotary Led	24V AC/DC	Green	BTLM3R024	1
Rotary Led	24V AC/DC	Red	BTLM2R024	1
Rotary Led	24V AC/DC	White	BTLM6R024	1
Continuous Led	110V AC	Yellow	BTLM4C110	1
Continuous Led	110V AC	Blue	BTLM5C110	1
Continuous Led	110V AC	Green	BTLM3C110	1
Continuous Led	110V AC	Red	BTLM2C110	1
Continuous Led	110V AC	White	BTLM6C110	1
Flashing Led	110V AC	Yellow	BTLM4F110	1
Flashing Led	110V AC	Blue	BTLM5F110	1
Flashing Led	110V AC	Green	BTLM3F110	1
Flashing Led	110V AC	Red	BTLM2F110	1
Flashing Led	110V AC	White	BTLM6F110	1
Rotary Led	110V AC	Yellow	BTLM4R110	1
Rotary Led	110V AC	Blue	BTLM5R110	1
Rotary Led	110V AC	Green	BTLM3R110	1
Rotary Led	110V AC	Red	BTLM2R110	1
Rotary Led	110V AC	White	BTLM6R110	1
Continuous Led	240V AC	Yellow	BTLM4C240	1
Continuous Led	240V AC	Blue	BTLM5C240	1
Continuous Led	240V AC	Green	BTLM3C240	1
Continuous Led	240V AC	Red	BTLM2C240	1
Continuous Led	240V AC	White	BTLM6C240	1
Flashing Led	240V AC	Yellow	BTLM4F240	1
Flashing Led	240V AC	Blue	BTLM5F240	1
Flashing Led	240V AC	Green	BTLM3F240	1
Flashing Led	240V AC	Red	BTLM2F240	1
Flashing Led	240V AC	White	BTLM6F240	1
Rotary Led	240V AC	Yellow	BTLM4R240	1
Rotary Led	240V AC	Blue	BTLM5R240	1
Rotary Led	240V AC	Green	BTLM3R240	1
Rotary Led	240V AC	Red	BTLM2R240	1
Rotary Led	240V AC	White	BTLM6R240	1

Note:

- Maximum numbers of modules: 4
- Other colors are available on request

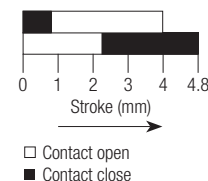
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## Push button stations


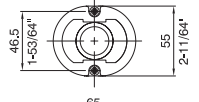




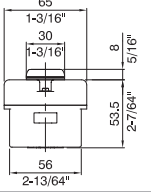




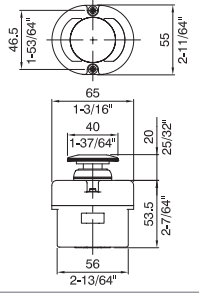




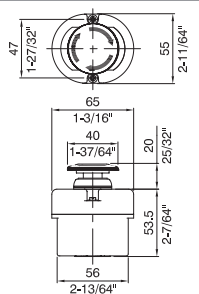




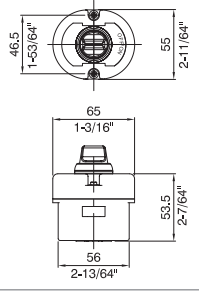




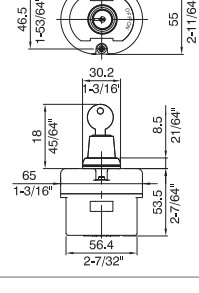



BM - BP  
Series - Box

## Technical data

General				BP series	BM series	
Standards				IEC/EN 60947-5-1, CE		
Rated insulation voltage	IEC947-5-1	Ui	V AC	600V	600V	
Rated thermal current	IEC947-5-1	Ith	A	10	10	
Operating frequency			Hz	50/60	50/60	
Rated operating current	IEC947-5-1 / EN60947-5-1					
AC-15 Control of A.C. electromagnetic loads	230V	le	A	6	6	
	500V	le	A	2	2	
DC-13 Control of D.C. electromagnetics	24V	le	A	1,5	1,5	
Short-circuit protection						
Fuse type gG/gL	500V		A	10	10	
Contact resistance	IEC255-7 cat.3		mΩ	< 20	< 20	
Dielectric strenght	50/60Hz for 1 sec.		VAC	2.5KV	2.5KV	
Rated conditional short-circuit current	IEC947-5-1		A	10A	10A	
Overvoltage category/degree of pollution	IEC947-5-1			II/3	II/3	
Insulation resistance at 500V DC				> 50MΩ	> 50MΩ	
MV drop at 16A DC				> 200MV	> 200MV	
Protection degree	IEC/EN60529	Above panel		IP65	IP65	
		Terminals		IP20	IP20	
Mechanical life	Push-button, Emergency mushrooms (Momentary)		Operations	1.000.000	1.000.000	
	Selector, Emergency mushrooms (Push-Pull)		Operations	500.000	500.000	
	Emergency mushroom (Turn to release)		Operations	100.000	100.000	
Electrical life	at 250VAC 6A with resistance load			500.000 cycles	500.000 cycles	
Terminals	Screws			Screw washer	Screw washer	
	Tightening torque			Nm	0,6 ÷ 0,8	0,6 ÷ 0,8
	Solid and flexible wires			Min-Max mm <sup>2</sup>	(2x) 1-2,5	(2x) 1-2,5
				Min-Max AWG	18-14	18-14
Climatic conditions						
Operating ambient temperature			°C	-30° ÷ +60°	-30° ÷ +60°	
Storage ambient temperature			°C	-30° ÷ +70°	-30° ÷ +70°	
Climatic proofing	Damp heat, constant, to IEC 60068			2-78	2-78	
	Damp heat, cyclic, to IEC 60068			2-30	2-30	
Contact travel				 <p>0 1 2 3 4 4.8 Stroke (mm)</p> <p>□ Contact open ■ Contact close</p>		

## Push button stations - IP65

### Single push button stations

	Dimensions	Color of the enclosure	Type	Contacts	Legend	Color of actuator	Code	Pack
			1 red flush head	1NC	STOP		BMBSR120	1
							BMBSR120Y	1
			1 green flush head	1NO	START		BMBSR110	1
							BMBSR110Y	1
			1 mushroom (momentary function)	1NC	STOP		BMBSR11040	1
							BMBSR11040Y	1
			1 mushroom (turn to release)	1NC	STOP		BMBSR11040T	1
							BMBSR11040TY	1
			1 selector switch 2 positions no spring return	1NO	OFF-ON		BMBSR110SN	1
							BMBSR110SNY	1
			1 selector key-operated 2 positions no spring return	1NO	OFF-ON		BMBSR110SC	1
							BMBSR110SCY	1

Note:


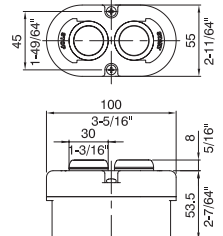




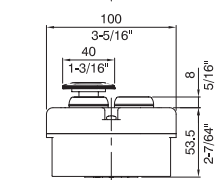



- Other colors or combinations are available on request

standard article 


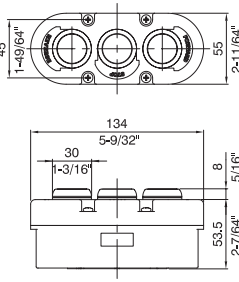




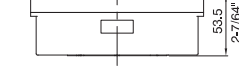









## Push button stations - IP65

### Double push button stations

	Dimensions	Color of the enclosure	Type	Contacts	Legend	Color of actuator	Code	Pack
			1 green flush head PB 1 red flush head PB	1NO+1NC	START-STOP		BMBSR210	1
							BMBSR210Y	1
			1 green flush head PB 1 mushroom (turn to release)	1NO+1NC	START-STOP		BMBSR21040T	1
							BMBSR21040TY	1

### Triple push button stations

	Dimensions	Color of the enclosure	Type	Contacts	Legend	Color of actuator	Code	Pack
			2 green flush head PB 1 red flush head PB	2NO+1NC	FORWARD-STOP-REVERSE		BMBSR310FW	1
							BMBSR310FWY	1
			2 green flush head PB 1 red flush head	2NO+1NC	UP-STOP-DOWN		BMBSR310UP	1
							BMBSR310UPY	1
			1 red LED indicator 240VAC 1 green flush head PB 1 red flush head PB	1NO+1NC	START-STOP		BMBSR310L23	1
							BMBSR310L23Y	1

Note:


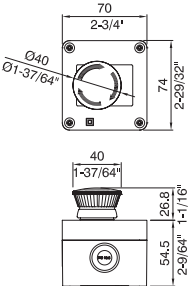

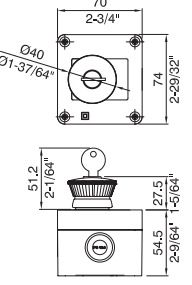

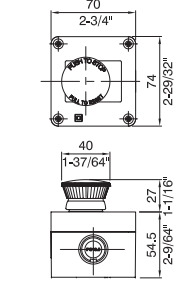

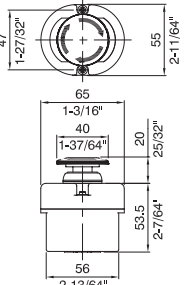
- Other colors or combinations are available on request

standard article 



## Emergency stations - IP65

### Emergency mushroom

	Dimensions	Type	Contacts	Color of actuator	Code	Pack
		Turn to release	2NC	●	BPBSP15040PT02	1
		Turn to release	1NC	●	BPBSP15040PT01	1
		With key	1NC	●	BPBSP15040PC01	1
		Push-pull	2NC	●	BPBSP15040PP02	1
		Push-pull	1NC	●	BPBSP15040PP01	1
		Turn to release	2NC	●	BPBSRY11040PT02	1
		Turn to release	1NC	●	BPBSRY11040PT01	1

## Accessories for push button stations

### Protecting shroud

	Dimensions	Type	Code	Pack
		Protecting shroud	BPP40	1
		Protecting shroud for selector	BPPSN	1

### Plates

	Dimensions	Type	Text	Code	Pack
		Yellow legend plate	EMERGENCY-STOP	BDGS22	10
		Metal plates	MARCIA ARRESTO I-O-2 I-> 0 <-2 CHIUDE APRE MANUALE AUTOMATICO AUT-O-MAN ON-OFF 0-1 EMERGENZA AVANTI INDIETRO STOP START RESET (BLANK)	BPTR01 BPTR02 BPTR03 BPTR04 BPTR05 BPTR06 BPTR07 BPTR08 BPTR09 BPTR10 BPTR11 BPTR12 BPTR13 BPTR14 BPTR15 BPTR16 BPTR17 BPTR	10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10


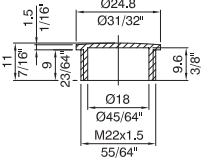
Note:

- Other text for metal plates can be ordered on request


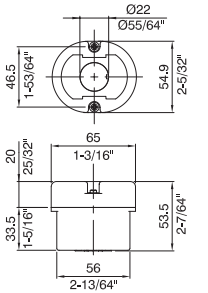
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## Blanking plugs

			Type	Code	Pack
			Convex grey	BPBPGC	10
Flat grey	BPBPGF	10			
Convex black	BPBPBC	10			
Flat black	BPBPBF	10			
Convex cr. plated	BPBPCC	10			
Flat cr. plated	BPBPFC	10			


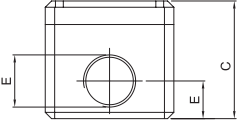

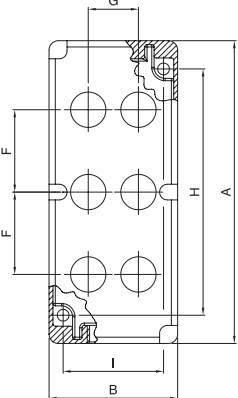






## Plastic enclosures

			Color of the enclosure	Type	Code	Pack
			● ●	Single push button station enclosure	BS1	1
			● ●	Single push button station enclosure	BSY1	1
			● ●	Double push button station enclosure	BS2	1
			● ●	Double push button station enclosure	BSY2	1
			● ●	Triple push button station enclosure	BS3	1
			● ●	Triple push button station enclosure	BSY3	1
			● ●	Single emergency push button station enclosure	BSE1	1

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## Accessories for push button stations

### Metal enclosures

	Dimensions	Type	Code	Pack
		Single push button enclosure, 1 hole, L=82mm	<b>SM1V</b>	1
		Double push button station enclosure, 2 vertical holes, L=141mm	<b>SM2V</b>	1
		Triple push button station enclosure, 3 vertical holes, L=193mm	<b>SM3V</b>	1
		Quadruple push button station enclosure, 4 horizontal holes, L=141mm	<b>SM40</b>	1
		Sextuple push button station enclosure, 6 horizontal holes, L=193mm	<b>SM60</b>	1
		Push button station enclosure, without holes, L=82mm	<b>SV1SF</b>	1
		Push button station enclosure, without holes, L=141mm	<b>SV2SF</b>	1
		Push button station enclosure, without holes, L=193mm	<b>SV3SF</b>	1

## Cover with Ø22 mm holes

Code	Color	No. of holes
<b>SM 1 V</b>	<input type="checkbox"/>	1
<b>SM 2 V</b>	<input type="checkbox"/>	2
<b>SM 3 V</b>	<input type="checkbox"/>	3
<b>SM 4 V</b>	<input type="checkbox"/>	4
<b>SM 5 V</b>	<input type="checkbox"/>	5
<b>SM 6 V</b>	<input type="checkbox"/>	6

Color grey RAL 7031

Dimensions										Drilling template		No. of holes	
A	B	C	D	E	F	G	H	I	O	V			
82	82	75	24	1" GAS	-	-	49	67	-	1			
141	82	75	24	1" GAS	52,5	-	108	67	-	2			
193	82	75	24	1" GAS	52,5	-	157	64	-	3			
141	82	75	24	1" GAS	52,5	32	108	67	2	2			
193	82	75	24	1" GAS	52,5	32	157	64	2	3			

O = Number of holes for horizontal line

V = Number of holes for vertical line

## Cover without holes

Code	Color
<b>SV 1 SF</b>	<input type="checkbox"/>
<b>SV 2 SF</b>	<input type="checkbox"/>
<b>SV 3 SF</b>	<input type="checkbox"/>

Color grey RAL 7031

Dimensions					Drilling template	
A	B	C	D	E	H	I
82	82	75	24	1" GAS	49	67
141	82	75	24	1" GAS	108	67
193	82	75	24	1" GAS	157	64

## ■ Push buttons, not illuminated - IP65

### Flush head, momentary function

	Dimensions	Contacts	Code	Pack
		-	BPR5UD	10
		-	BPR1D	10
		-	BPR6U	10
		-	BPR4A	10
		-	BPR1L	10

### Flush head, momentary function

	Dimensions	Contacts	Code	Pack
		1NO	BMPR5A10	10
		1NO+1NC	BMPR5A11	10
		1NO+1NC	BMPR1D11	10
		1NO+1NC	BMPR6U11	10
		1NO	BMPR4A10	10
		1NO+1NC	BMPR4A11	10
		1NO	BMPR1L10	10
		1NO+1NC	BMPR1L11	10

Note:

- Antirotating ring included
- Black collar is available on request



**CUSTOMIZED PUSH BUTTONS  
AND SPECIAL SYMBOLS  
ARE AVAILABLE ON REQUEST**

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## Foot switches

PS - PC  
Series



## Thermoplastic foot switches - IP54

### Without protection

	Dimensions	Type	Contacts	Code	Pack
		Without protection, without lock		PSI00M20	1

### With protection

	Dimensions	Type	Contacts	Code	Pack
		With protection, without lock		PCI00M20	1
		With protection, with lock		PCI00PIM20	1

## Metal foot switches, IP54

### Without protection

	Dimensions	Type	Contacts	Code	Pack
		Without protection, without lock		PSA00M20	1

### With protection

	Dimensions	Type	Contacts	Code	Pack
		With protection, without lock		PCA00M20	1
		With protection, with lock		PCA00PIM20	1

## Additional contact blocks

### With IP20 protection

	Type	Contacts	Code	Pack
	Additional contact block 1NO+1NC for foot switches	1NO + 1NC snap action 	KIT00	5
		1NO + 1NC snap action 	ELEM00	5
		1NO + 1NC slow action 	ELEM01	5

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