

Push buttons and signalling devices



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of high quality electromechanical components.



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Quality makes



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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

BP Series Ø 22

Technical data	6
Push buttons - Not illuminated	
Flush head	7
Extended head	7
Push buttons - Illuminated	
Flush head	7
Extended head	7
Double Push buttons	8
Emergency mushrooms	9
Selector switches - Not illuminated	
2 positions - Short handle	10
3 positions - Short handle	10
2 positions - Long handle	11
3 positions - Long handle	11
Selector switches - Illuminated	
2 positions - Short handle	12
3 positions - Short handle	12
Selectors key operated - 2 and 3 positions	13
Contact Blocks	14
LED elements	14
Accessories for push buttons	15
BM - BP series - Product with symbols	38



BM Series Ø 22

Technical data	6
Push buttons	
Flush head	16
Extended head	17
Mushroom push buttons	
Momentary	18
Turn to release	19
Selector switches	
2 positions - Short handle	20
3 positions - Short handle	20
2 positions - Long handle	21
3 positions - Long handle	21
Selectors key operated - 2 and 3 positions	22
LED indicators	23
Multi-voltage LED indicators	24
Buzzers	24
BM - BP series - Product with symbols	38



■ Signal towers

Technical data	26
Bases	27
Sound modules	27
Lense modules	28



■ Push button stations

Technical data	30
BM series box	
Single push button	31
Double push buttons	32
Triple push buttons	32
BP series box	
Emergency stations with mushroom push button	33
Accessories for push button stations	34
BM - BP series - Product with symbols	38



■ Foot switches

PS - PC series - Foot switches	40
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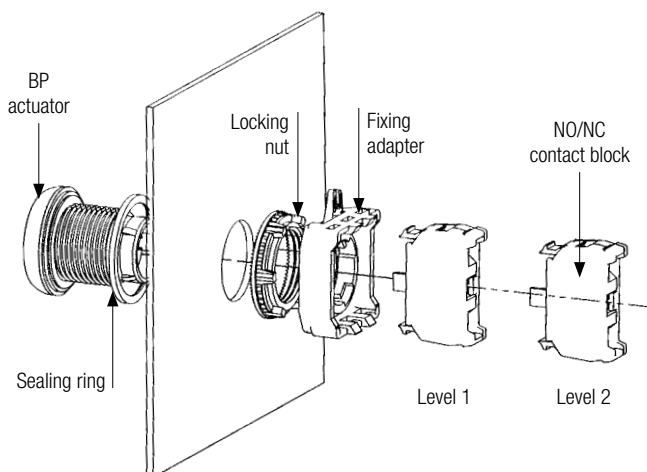
Push buttons
and LED indicators

BP - BM - BL - BB
Series

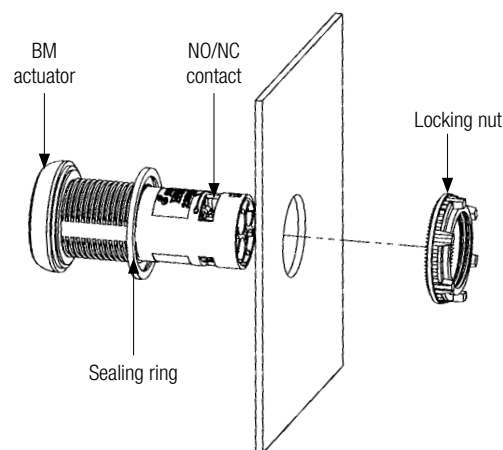
BP series Ø22

Note:

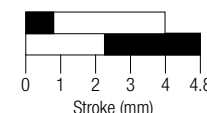
- Maximum 2 levels, each with 3 elements
- Example of 1 level: 3NO/NC or 2NO/NC + 1 LED HOLDER
- Example of 2 levels: 3NO/NC + 3NO/NC, 2NO/NC + 2NO/NC + 1 LED HOLDER



BM series Ø22

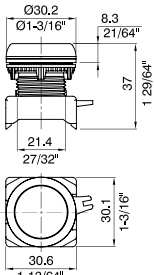


Technical data

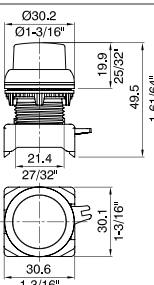
General				BP series	BM series	BL series
Standards				IEC/EN 60947-5-1, cULus, CE,		
Rated insulation voltage	IEC947-5-1	Ui	V AC	600V	600V	600V
Rated thermal current	IEC947-5-1	Ithe	A	10	10	-
Operating frequency			Hz	50/60	50/60	50/60
Rated operating current	IEC947-5-1 / EN60947-5-1					
AC-15 Control of A.C. electromagnetic loads		120V	Ie A	6	6	14-20mA
		230V	Ie A	2	2	14-28mA
DC-13 Control of D.C. electromagnetics		24V	Ie 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
Overvoltage 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-button	Operations	x10 ⁶	1	1	-
	Selector	Operations	x10 ⁶	0,5	0,5	-
	Emergency mushroom	Operations	x10 ⁶	0,1	0,1	-
Electrical life	at 250VAC 6A with resistance load cosφ= 0,4			500.000 cycles	500.000 cycles	100.000 hours
Terminals	Screws			Screw washer	Screw washer	Screw washer
	Tightening torque		Nm	0,8	0,8	0,8
	Solid and flexible wires	Min-Max	mm ²	(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	-25° ÷ +70°	-25° ÷ +70°	-25° ÷ +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				 Stroke (mm) □ Contact open ■ Contact close		

Push buttons, not illuminated - IP65

Flush head, momentary function

	Dimensions	Color of actuator	Code	Pack
		●	BPR1	1
		●	BPR2	1
		●	BPR3	1
		●	BPR4	1
		●	BPR5	1
		●	BPR6	1

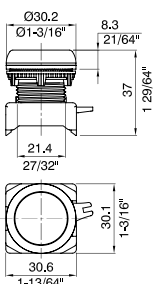
Extended head, momentary function

	Dimensions	Color of actuator	Code	Pack
		●	BPS1	1
		●	BPS2	1
		●	BPS3	1
		●	BPS4	1
		●	BPS5	1
		●	BPS6	1

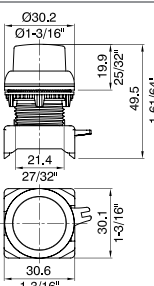
Push buttons, illuminated - IP65

Available from January 2017

Flush head, momentary function

	Dimensions	Color of actuator	Code	Pack
		●	BPRL2	1
		●	BPRL3	1
		●	BPRL4	1
		●	BPRL5	1
		●	BPRL6	1
		●	BPRL6	1

Extended head, momentary function

	Dimensions	Color of actuator	Code	Pack
		●	BPSL2	1
		●	BPSL3	1
		●	BPSL4	1
		●	BPSL5	1
		●	BPSL6	1
		●	BPSL6	1

Note:

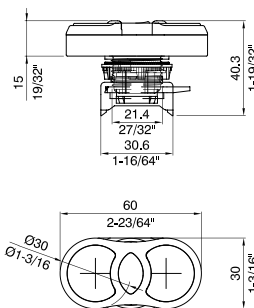
- Antirotating ring included
- Black collar is available on request
- Led elements for illuminated push buttons must be ordered separately
- Other colors are available on request

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Double push buttons, not illuminated - IP65

Available from January 2017

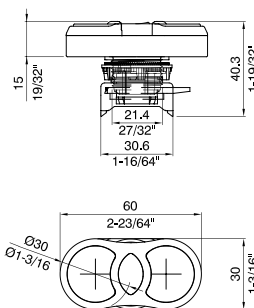
Flush head, momentary function

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

Double push buttons, illuminated - IP65

Available from January 2017

Flush head, momentary function

	Dimensions	Symbols / Colors of actuators	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

Available from January 2017

Flush head

	Dimensions		Type	Color of actuator	Code	Pack
			Turn to release		BPFB240	1
			Release by turning with key		BPFCB240	1
			Push-Pull		BPFBT240	1
			Momentary		BPFBM240	1
			Momentary		BPFBM340	1
			Momentary		BPFBM440	1
			Momentary		BPFBM140	1

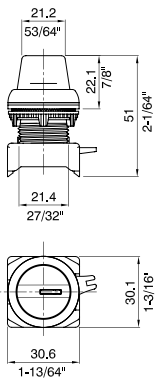
Note:

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

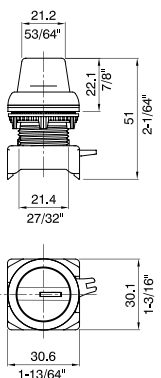
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■ Selector switches, not illuminated - IP65

2 positions, short handle

	Dimensions		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

	Dimensions		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

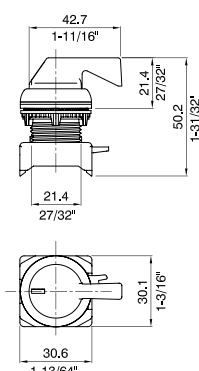
Note:

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

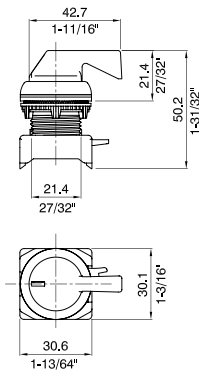
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■ Selector switches, not illuminated - IP65

2 positions, long handle

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

3 positions, long handle

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

Note:

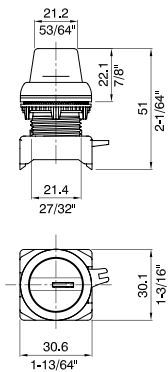
- Antirotating ring included
- Black collar is available on request
- Other colors and operating style are available on request

 standard article 

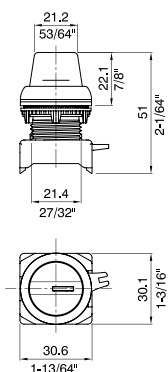
■ Selector switches, illuminated - IP65

Available from January 2017

2 positions, short handle

	Dimensions		Function		Color of actuator	Code	Pack
				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

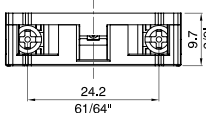
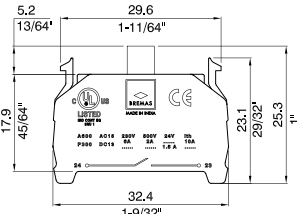
	Dimensions		Function		Color of actuator	Code	Pack
				-45° 0° +45°		BPSL6E	1
				-45° 0° +45°		BPSL2E	1
				-45° 0° +45°		BPSL3E	1
				-45° 0° +45°		BPSL6ERC	1
				-45° 0° +45°		BPSL2ERC	1
				-45° 0° +45°		BPSL3ERC	1
				-45° 0° +45°		BPSL6ERD	1
				-45° 0° +45°		BPSL2ERD	1
				-45° 0° +45°		BPSL3ERD	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

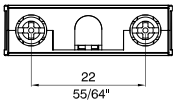
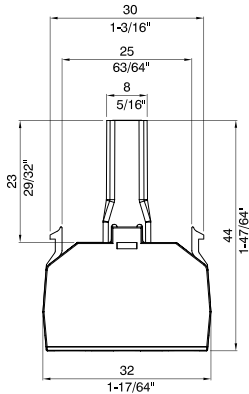
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Contact elements

	Dimensions	Contacts	Code	Pack
	 	1NO	BPC10B	10
 		1NC	BPC01B	10

Led elements

Available from January 2017

	Dimensions	Rated Voltage	LED color	Code	Pack
	 	24VAC/DC		BPLH224	10
		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:

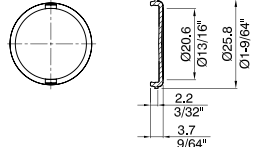
- Contact blocks and LED holder are provided with screw terminals
- Other colors are available on request
- Led elements: 100.000 operating hours

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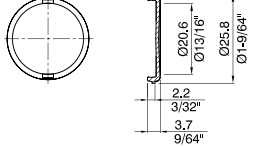


Accessories for push buttons

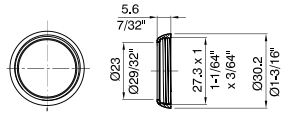
Lens cap for flush push buttons - not illuminated

		Color	Code	Pack
		White	BPLPR6	10
		Black	BPLPR1	10
		Red	BPLPR2	10
		Green	BPLPR3	10
		Yellow	BPLPR4	10
		Blue	BPLPR5	10
		Orange	BPLPR8	10

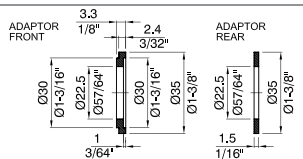
Lens cap for flush push buttons - illuminated

		Color	Code	Pack
		Colourless	BPLPRL0	10
		White	BPLPRL9	10
		Red	BPLPRL2	10
		Green	BPLPRL3	10
		Yellow	BPLPRL4	10
		Blue	BPLPRL5	10
		Orange	BPLPRL8	10

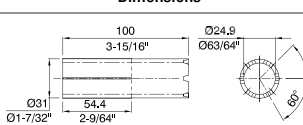
Collar for flush/extended push buttons

		Type	Code	Pack
		Collar chrome plated ABS	BPCP	10
		Collar black ABS	BPCPN	10

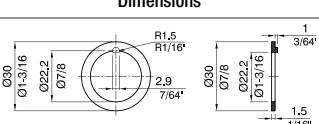
Adaptor ring for 30 to 22mm in panel cutout conversion

		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

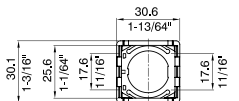
Fixing device for operator Ø22

		Type	Code	Pack
		Fixing device	BPC22	10

Antirotating ring

		Type	Code	Pack
		Antirotating ring	BPATR	10

Fixing adapters

		Type	Code	Pack
		Fixing adapter (BP series)	BPFA	10
		Fixing adapter (BL series multivoltage led)	BPFAL	10

Center Indication strip for double push button

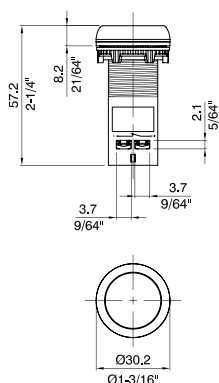
			Type	Code	Pack
			Center ind. strip colourless. (illuminated)	BPIP2L0	10
			Center ind. strip black (non illuminated)	BPIP2L1	10

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	Red	BMPR210	1
1NO	Green	BMPR310	1
1NO	Yellow	BMPR410	1
1NO	Black	BMPR110	1
1NO	Blue	BMPR510	1
1NO	White	BMPR610	1
1NC	Red	BMPR201	1
1NC	Green	BMPR301	1
1NC	Yellow	BMPR401	1
1NC	Black	BMPR101	1
1NC	Blue	BMPR501	1
1NC	White	BMPR601	1
1NO+1NC	Red	BMPR211	1
1NO+1NC	Green	BMPR311	1
1NO+1NC	Yellow	BMPR411	1
1NO+1NC	Black	BMPR111	1
1NO+1NC	Blue	BMPR511	1
1NO+1NC	White	BMPR611	1
2NO	Red	BMPR220	1
2NO	Green	BMPR320	1
2NO	Yellow	BMPR420	1
2NO	Black	BMPR120	1
2NO	Blue	BMPR520	1
2NO	White	BMPR620	1
2NC	Red	BMPR202	1
2NC	Green	BMPR302	1
2NC	Yellow	BMPR402	1
2NC	Black	BMPR102	1
2NC	Blue	BMPR502	1
2NC	White	BMPR602	1

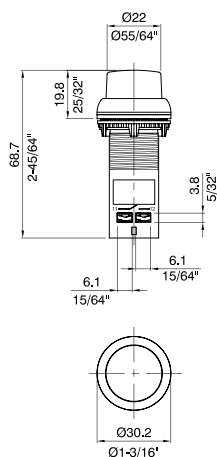
Note:

- 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



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

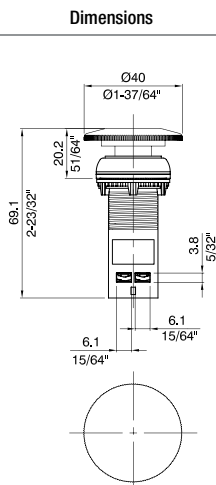
Note:

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

standard article

Mushroom push buttons - IP65

Momentary function



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

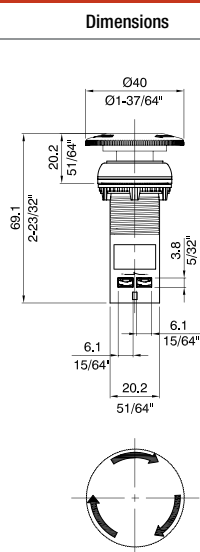
Note:

- 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	Red	BMPFB210	1
1NO	Green	BMPFB310	1
1NO	Yellow	BMPFB410	1
1NO	Black	BMPFB110	1
1NC	Red	BMPFB201	1
1NC	Green	BMPFB301	1
1NC	Yellow	BMPFB401	1
1NC	Black	BMPFB101	1
1NO+1NC	Red	BMPFB211	1
1NO+1NC	Green	BMPFB311	1
1NO+1NC	Yellow	BMPFB411	1
1NO+1NC	Black	BMPFB111	1
2NO	Red	BMPFB220	1
2NO	Green	BMPFB320	1
2NO	Yellow	BMPFB420	1
2NO	Black	BMPFB120	1
2NC	Red	BMPFB202	1
2NC	Green	BMPFB302	1
2NC	Yellow	BMPFB402	1
2NC	Black	BMPFB102	1

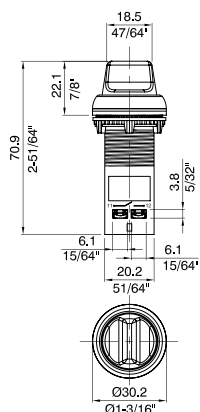
Note:

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

standard article

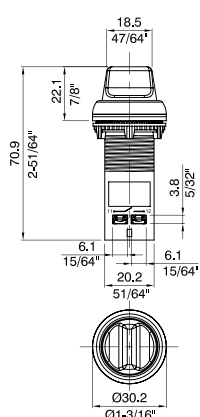
Selector switches - IP65

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
		1NO	●	BMSNL1CD10	1
		1NO	●	BMSNL1ERC10	1
		1NC	●	BMSNL1CD01	1
		1NC	●	BMSNL1ERC01	1
		1NO+1NC (Left 1NO)	●	BMSNL1CD11	1
		1NO+1NC (Left 1NO)	●	BMSNL1ERC11	1
		2NO	●	BMSNL1CD20	1
		2NO	●	BMSNL1ERC20	1
		2NC	●	BMSNL1CD02	1
		2NC	●	BMSNL1ERC02	1

3 positions, long handle



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

Note:

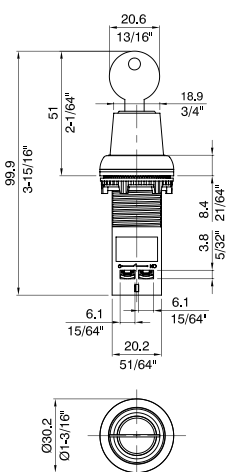
- Antirotating ring included
- Black collar is available on request
- IP20 terminal protection
- Other colors are available on request

standard article

Selector key operated - IP65

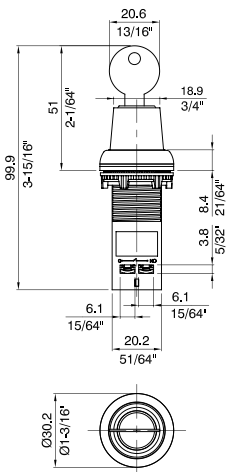
2 positions



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

3 positions



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

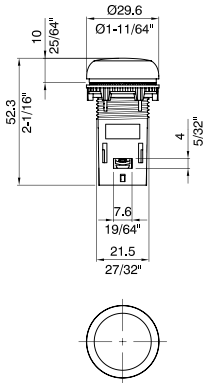
Note:

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

standard article

■ Led indicators - IP65

With integrated LED

							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:

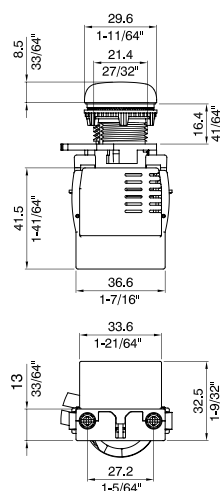
- IP20 terminal protection
- Other colors are available on request

standard article 

Multi-voltage LED indicator - IP65

Available from January 2017

With integrated LED



Rated Voltage*	Color of actuator	Code	Pack
24V ÷ 240V AC/DC		BLU2	8
24V ÷ 240V AC/DC		BLU3	8
24V ÷ 240V AC/DC		BLU4	8
24V ÷ 240V AC/DC		BLU5	8
24V ÷ 240V AC/DC		BLU6	8

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

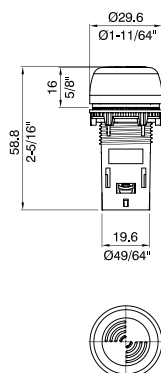
Note:

- IP20 terminal protection
- Other colors are available on request

standard article 

Buzzer - IP65

Available from January 2017



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/DC	BBU110	10
240V AC/DC	BBU240	10

Note:

- IP20 terminal protection

standard article 



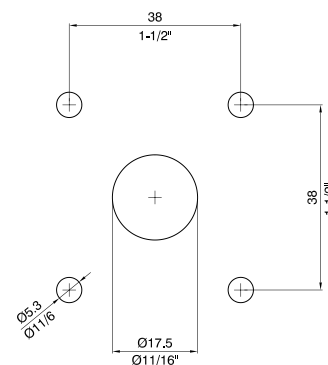
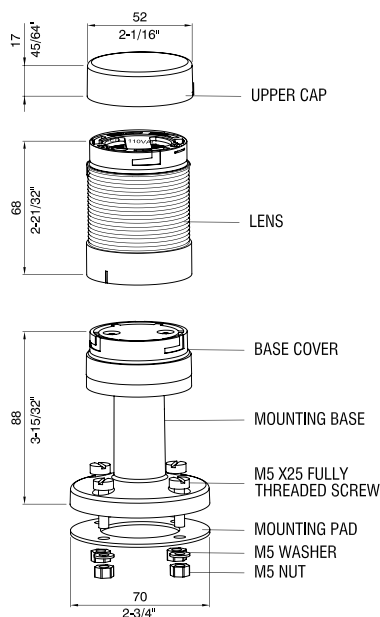
Signal towers

BT
Series

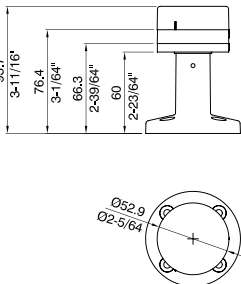
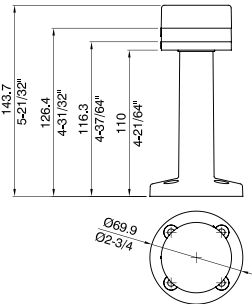
Technical data

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			-	II/3	II/3
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	4	1
Terminals	Solid and flexible wires	mm ²	0,5-1,5	-	-
		AWG	20-16	-	-
Type of light			-	Continuous - blinking - revolving	-
Light elements			-	LED type SMD	-
Flashing frequency			-	1Hz	-
Transmission angle			-	360°	360°
Current - power consumption	12-24V AC/DC	mA	-	40-60	14-22
	110V AC	mA	-	10-20	14-22
	240V AC	mA	-	10-20	14-22
Voltage levels			-	24VAC/DC ± 10%	24VAC/DC ± 10%
			-	110VAC ± 10%	110VAC ± 10%
			-	240VAC ± 10%	240VAC ± 10%
Sound pressure		dB	-	-	80dB ± 5dB a 1 meter
Types of sound			-	-	Continuous or pulsed tone
Lifespan		h	-	100.000	-
Weight		g	106	309	62
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

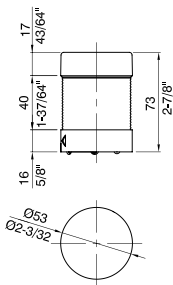
Signal towers - IP65



Bases

	Dimensions	Type	Code	Pack
	 93.7 3-11/16" 76.4 3-1/64" 66.3 2-39/64" 60 2-23/64" Ø52.9 Ø2-5/64"	Base 60mm, plastic type	BTBA60	1
	 143.7 5-21/32" 126.4 4-31/32" 116.3 4-37/64" 110 4-21/64" Ø69.9 Ø2-3/4"	Base 110mm, plastic type	BTBA110	1

Sound modules

	Dimensions	Type of sound	Rated Voltage	Code	Pack
	 17 43/64" 40 1-37/64" 16 5/8" 73 2-7/8" Ø53 Ø2-3/32"	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

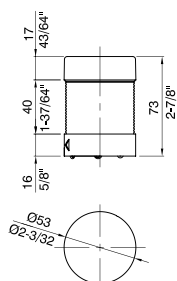
Note:

- 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



Dimensions	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

standard article



Push button stations

BM - BP
Series - Box

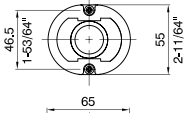
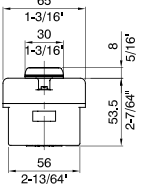
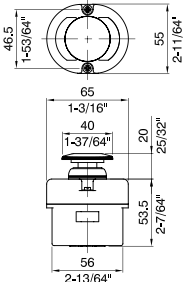
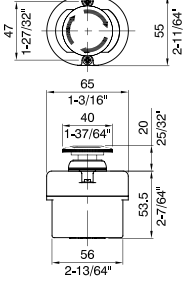
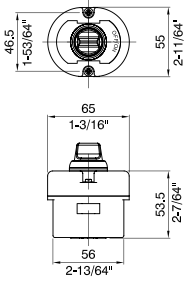
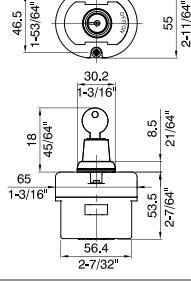
Technical data

General				BP series	BM series
Standards				IEC/EN 60947-5-1, cULus, CE,	
Rated insulation voltage	IEC947-5-1	Ui	V AC	600V	600V
Rated thermal current	IEC947-5-1	Ithe	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		120V	Ie	A	6
		230V	Ie	A	2
DC-13 Control of D.C. electromagnetics		24V	Ie	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	Operations	x10 ⁶	1	1
	Selector	Operations	x10 ⁶	0,5	0,5
	Emergency mushroom	Operations	x10 ⁶	0,1	0,1
Electrical life	at 250VAC 6A with resistance load cosφ=0,4			500.000 cycles	500.000 cycles
Terminals	Screws			Screw washer	Screw washer
	Tightening torque		Nm	0,8	0,8
	Solid and flexible wires	Min-Max	mm ²	(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	-25° ÷ +70°	-25° ÷ +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				012344.8 Stroke (mm) → □ Contact open ■ Contact close	



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:

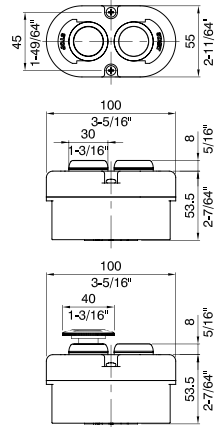
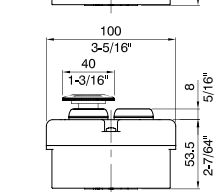
- Other colors or combinations are available on request

standard article

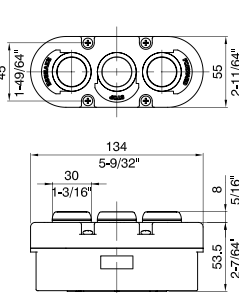
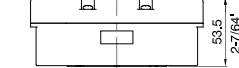


Push button stations - IP65

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

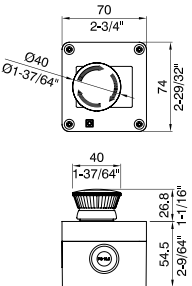
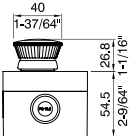
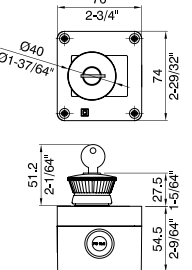
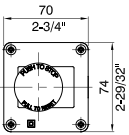
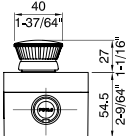
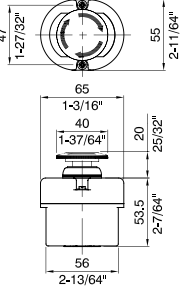




Emergency stations - IP65

Available from January 2017

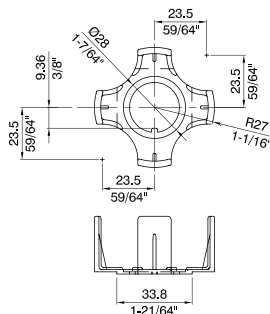
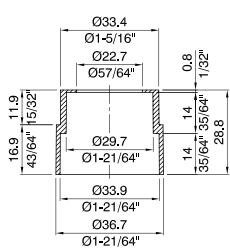
Emergency mushroom

	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

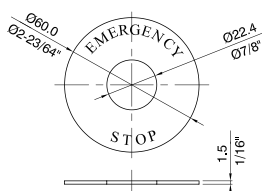
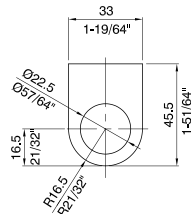


Accessories for push button stations

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	BPTR01	10
			ARRESTO	BPTR02	10
			I-0-2	BPTR03	10
			I-> 0 <-2	BPTR04	10
			CHIUDE	BPTR05	10
			APRE	BPTR06	10
			MANUALE	BPTR07	10
			AUTOMATICO	BPTR08	10
			AUT-0-MAN	BPTR09	10
			ON-OFF	BPTR10	10
			0-1	BPTR11	10
			EMERGENZA	BPTR12	10
			AVANTI	BPTR13	10
			INDIETRO	BPTR14	10
			STOP	BPTR15	10
			START	BPTR16	10
			RESET	BPTR17	10
			(BLANK)	BPTR	10

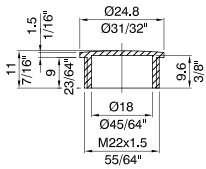
Note:

- Other text for metal plates can be ordered on request

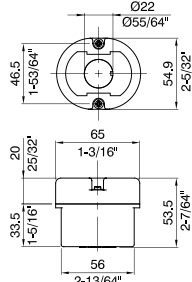
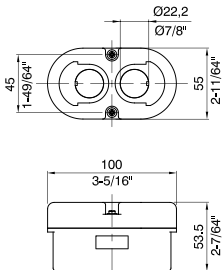
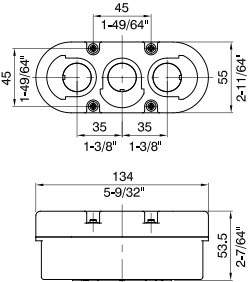
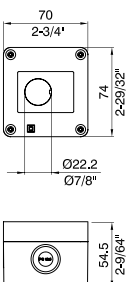
standard article



Blanking plugs

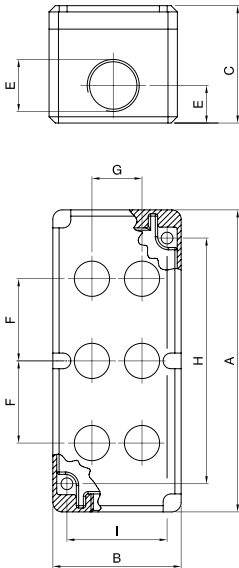
	Dimensions	Type	Code	Pack
		Convex grey	BPBPGC	10
		Flat grey	BPBPGF	10
		Convex black	BPBPBC	10
		Flat black	BPBPBF	10
		Convex cr. plated	BPBPCC	10
		Flat cr. plated	BPBPFC	10

Plastic enclosures

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

■ Accessories for push button stations

Metal enclosures

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

Cover with Ø22 mm holes

Code	Color	No. of holes
SM 1 V		1
SM 2 V		2
SM 3 V		3
SM 4 V		4
SM 5 V		5
SM 6 V		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

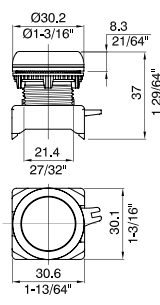
Code	Color
SV 1 SF	
SV 2 SF	
SV 3 SF	

Color grey RAL 7031

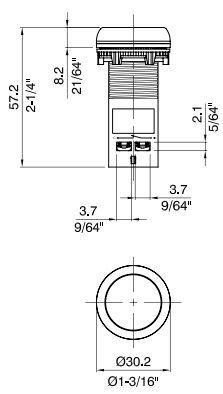
Dimensions					Drilling template	
A	B	C	D	E	H	I
82	82	75	24	1" GAS	49	67
141	82	75	24	1" GAS	108	67
193	82	75	24	1" GAS	157	64

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**

standard article 

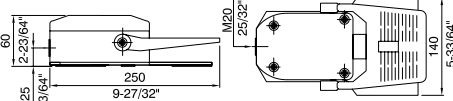
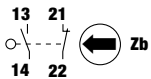


Foot switches

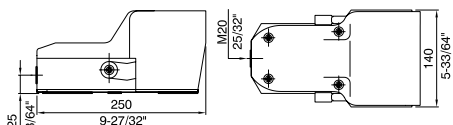
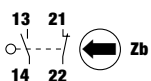
PS - PC
Series

Thermoplastic foot switches - IP54

Without protection

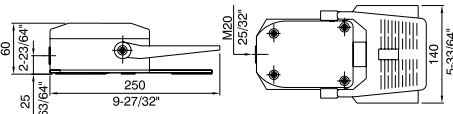
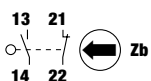
	Dimensions	Type	Contacts	Code	Pack
		Without protection, without lock		PSI00M20	1

With protection

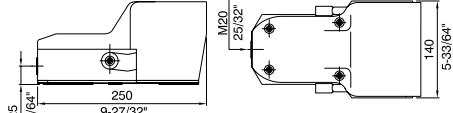
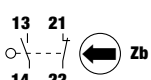
	Dimensions	Type	Contacts	Code	Pack
		With protection, without lock		PCI00M20	1
		With protection, with lock		PCI00PIM20	1

Metal foot switches, IP54

Without protection

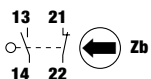
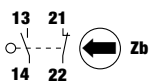
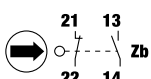
	Dimensions	Type	Contacts	Code	Pack
		Without protection, without lock		PSA00M20	1

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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