

Control & Signalling Units ϕ 22.5mm Metal

Product Characteristics

General Characteristics

Products	Push Buttons, Selector Switches, Key Selector Switches, Latching Mushroom Head Push Buttons, Pilot Lights & illuminated Push Buttons
Reference Standard	IEC 60947-5-1, EN 60947-5-1, IEC 337-1, UL 508, CSA C-22-2 n° 14
Approval	UL, cUL, CSA, CE
Protection Degree	IP 65 / IP 66 according to IEC 60947-1;
Pollution Degree	3
Temperature	-40°C ~ + 70°C (Storage) -25°C ~ + 70°C (Working)
Vibration Resistance	→60mm Mushroom Head Push Buttons: 8g, Other Push Buttons & Pilot Lights: 15g (40Hz<frequency<500 Hz) conforming to IEC 68-2-6
Shock Resistance	Push Buttons : 70g, Mushroom Head Push Buttons: 15g, Selector Switches : 200g conforming to IEC 68-2-27
Working Position	All working positions are allowed
Mechanical Life	Push Buttons & Selector Switches 1 million operations, Latching Emergency Mushroom Push Buttons 300,000 operations

Contact Elements Characteristics

Rated Thermal Current I_{th}	10A
Rated Insulation Voltage U_i	500V conforming to IEC 60947-1, UL 508 & CSA 22-2 n° 14
Insulation Category	Group C conforming to NF C 20-040, VDE 0110
Operating Force	Push Buttons – 1 'NO' = 10N, 1 'NC' = 8N Additional contacts – 'NO' = +5N, 'NC' = +3N
Dielectric Strength	2.5KV for 1 minute
Insulation Resistance	2M Ohm min (500 VDC)
Initial Contact Resistance	≤ 25 milli Ohm
Short Circuits Protection	10A 500V, Cartridge Fuse g1 or N conforming to IEC 337-1
Cabling/Terminal Capacity	1x0.5mm ²2x1.5mm ²
Contact Operation	Slow action, Positive Opening
Rated Power	Conforming to IEC 60947-5-1; utilization categories AC 15 & DC 13

DC Supply

Power broken in W

For 1 million operations

Voltage	24V	48V	120V
Inductive Load	65W	48W	40W

AC Ratings, Inductive – NEMA A600

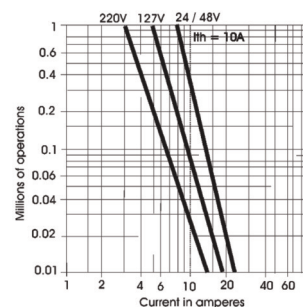
35% Power Factor

Volts	Make Amperes	VA	Break Amperes	VA	Continuous carrying Amperes	Resistive 75% Power factor Make, Break & continuous Amperes
120	60	7200	6	720	10	10
240	30	7200	3	720	10	10
480	15	7200	1.5	720	10	10
600	12	7200	1.2	720	10	10

Standard Contact Blocks

AC Supply (50/60Hz)

Inductive



DC Ratings, NEMA Type Q600

Inductive and resistive

Volts	Make & Break (Amp.)	Continuous (Amp.)
125	0.55	2.5
250	0.27	2.5
600	0.10	2.5



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Assemblies for Illuminated, Non-Illuminated type
Push Buttons & Selector Switches



PB-BZ101



PB-BE101



PB-BW06



PB-BWL7

Body assemblies with fixing collar & contact blocks (screw clamp terminal connections)

Description	Contact	Type	Reference
For Push Buttons, Selector and Key Switches	NO	Standard	PB-BZ101
	NC	Standard	PB-BZ102
	NO+NO	Standard	PB-BZ103
	NC+NC	Standard	PB-BZ104
	NO+NC	Standard	PB-BZ105

Additional / Replacement Contact Blocks

Description	Contact	Type	Reference
For making up Body Assemblies with 3, 4, 5 or Maximum of 6 Contact Blocks or Replacing 1 st OR 2 nd Contact	NO	Standard	PB-BE101
	NC	Standard	PB-BE102

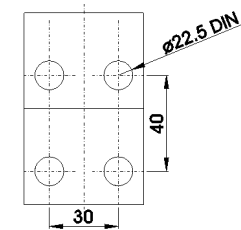
Body assemblies for illuminated Push Buttons & Selectors with or w/o Contacts

Description	Supply Voltage	Contact	Colour	Reference
Direct BA 9s Filament Bulb* Supplied	12V / 24V / 48V / 110V / 130V (AC)(DC) ϕ	NO + NC		PB-BW065■
		W/O Contact Blocks		PB-BW06■
Through Resistor BA 9s, 130V Filament Bulb Supplied	220V (AC)(DC)	NO + NC		PB-BW075
		W/O Contact Blocks		PB-BW07
Through Resistor & Diode BA 9s 130V Bulb Supplied	240V (AC)	NO + NC		PB-BWD075
		W/O Contact Blocks		PB-BWD07
Direct BA 9s Neon Bulb Supplied	220V / 380V / 415V (AC)(DC)	NO + NC	● Green	PB-BWN0635■
			■ Natural	PB-BWN0655■
		W/O Contact Blocks	● Green	PB-BWN063■
			■ Natural	PB-BWN065■
With Integral Circuit & Cluster LED	12V, 24V, 48V (AC)(DC) 110VAC, 110VDC 240V (AC) 220V (DC)	NO + NC	○ White	PB-BWL715■
			● Green	PB-BWL735■
			● Red	PB-BWL745■
			● Amber	PB-BWL755■
			● Blue	PB-BWL765■
			Clear	PB-BWL775■
			● Yellow	PB-BWL785■
		W/O Contact Blocks	○ White	PB-BWL71■
			● Green	PB-BWL73■
			● Red	PB-BWL74■
			● Amber	PB-BWL75■
			● Blue	PB-BWL76■
			Clear	PB-BWL77■
			● Yellow	PB-BWL78■

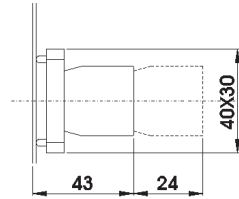
- ○ Body assemblies (suitable for bulb 2.6W max.) upto 230V max. available without bulb
- * Bulb rating 12V to 130V, 2.6W (max.);
- For accessories refer page C-9 & C-10
- ■ Please mention voltage while ordering

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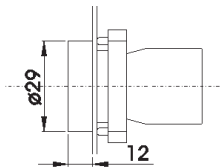
Dimensions / Complete Units' Reference



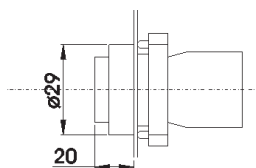
PANEL CUT-OUT
(Thickness: 6mm max.)



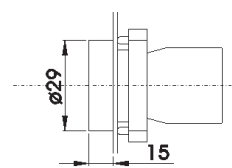
PB-BE10♦+PB-B



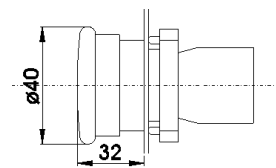
PB-BA♦+PB-BZ10♦
PB-BA334+PB-BZ10♦



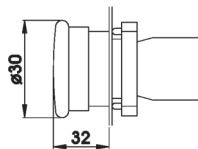
PB-BL♦+PB-BZ10♦



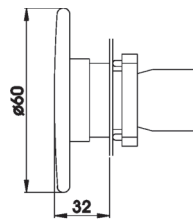
PB-BP♦+PB-BZ10♦
PB-BA♦8+PB-BZ10♦



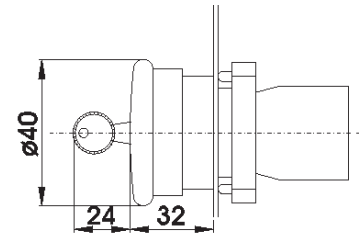
PB-BC♦+PB-BZ10♦
PB-BS54+PB-BZ10♦
PB-BT4+PB-BZ10♦



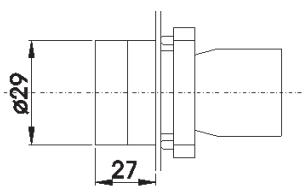
PB-BS44+PB-BZ10♦



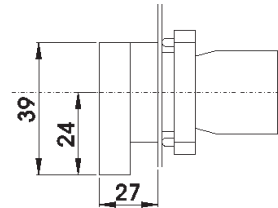
PB-BR4+PB-BZ10♦
PB-BS64+PB-BZ10♦



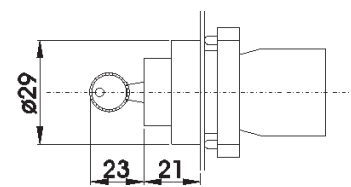
PB-BS14+PB-BZ10♦



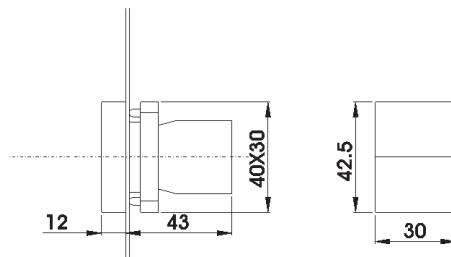
PB-BD2+PB-BZ10♦
PB-BD3+PB-BZ10♦



PB-BJ2+PB-BZ10♦
PB-BJ3+PB-BZ10♦



PB-BG♦+PB-BZ10♦
(Replace ♦ with code for position of
Key removal & operation pattern)



PB-BA87+PB-BZ10♦

- Replace ♦ with codes for type of contacts (See page C-4) & ● with colour codes (See page C-4 & C-5)
- For non-illuminated push button heads, selector switches & key switches, refer page C-4 & C-5

C