

22mm Push Buttons & Operator Interface - PBM22

Features

- Available in die cast chrome plated and double insulated head
- Wide variety of operators available
- Double break, slow action, self-clean contacts
- Positive opening of normal close contact
- Double insulated version can be used in corrosive environment
- Finger safe contact block
- Contact blocks are securely fasten to the connecting block by screw
- UL, cUL Listed (UL file number E216958)



Characteristics

Nominal thermal current	10 A conforming to IEC 60947-5-1, NF C 63-140, UL 508, CSA 22-2 No. 14, VDE 0660 part 2, NEMA / UL Type A600-Q600.
Nominal insulation voltage	500 V conforming to NF C 20-040, VDE 0110, IEC 60158-1, 600 V conforming to UL 508
Contact operation	Slow- make N.O. or slow-break N.C. with direct opening operation conforming to EN60947-5-1 section 3.
Contact resistance	<25mΩ (initial value)
Operating force	Flush or projecting push buttons - with 1 NO contact: 2.25 lb (10N) - with 1 NC contact: 1.8 lb (8N) Additional contacts - N.O.: add 1 lb(4.5N) - N.C.: add 0.7 lb(3.1N)
Short circuit protection	10 A cartridge fuses, GI or N conforming to IEC 60269-1 and VDE 0660-200.
Ambient temperature	Operating: -25 °C to +70 °C (-13 °F to +158 °F) Storage: -40 °C to +70 °C (-40 °F to +158 °F)
Resistance to vibration	60 mm diameter mushroom head: 8 g. Other push buttons: 15 g. Small joystick controllers: 5 g (from 40 to 50 Hz) Conforming to IEC 60068-2-6.
Resistance to shock	Push buttons: 70 g. Mushroom head push-buttons: 15 g. Selector switches: 200 g. Conforming to IEC 60068-2-27.
Protection against electric shock	Class 1, conforming to IEC 60536 and NF C 20-030.
Degree of protection conforming to IEC 60529	IP40 or IP65
Mechanical life	Push buttons 3 million operations Latching mushroom head push buttons: 300,000 operations. Illuminated selector switches: 100,000 operations
Approvals	UL/cUL: push buttons and selector switches NEMA / UL Type A600-Q600; E216958 pilot lights and illuminated push buttons direct supply (250 V max.); pilot lights and illuminated push buttons with transformer (600 V)
Conformity to standards	UL 508, IEC 60947-5-1, EN60947-5-1, IEC 60337-1, IEC 60337-2, VDE 0660, CSA C 22-2

AC Rating, NEMA/UL A600

Volts	Inductive 35% Power factor				Continuous carrying Amperes	Resistive 75% Power factor Make, Break and continuous Amperes
	Make Amperes	VA	Break Amperes	VA		
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


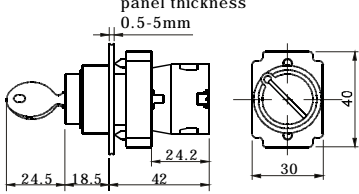











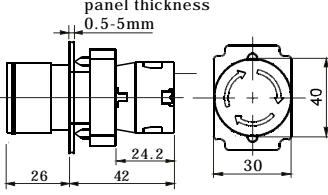



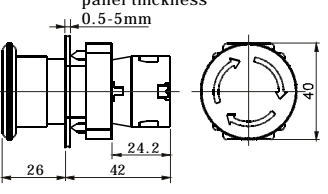



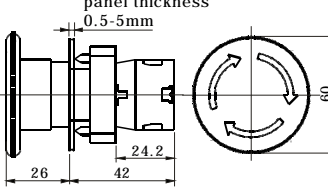



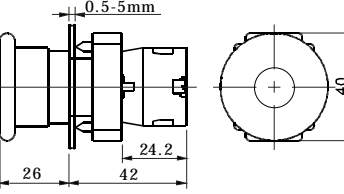



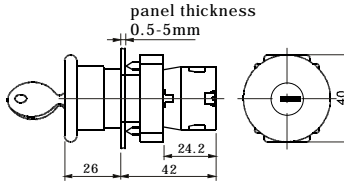


DC Rating, NEMA/UL Q600 Inductive and resistive

Volts	Make and break	Continuous
125	0.55	2.5
250	0.27	2.5
600	0.10	2.5

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Pictures and Dimension	Description	Part Numbers	Contacts
	Flat-Head Pushbutton	<ul style="list-style-type: none"> ○ White PBM22-FP-W ● Black PBM22-FP-B ● Green PBM22-FP-G ● Red PBM22-FP-R ● Amber PBM22-FP-A ● Blue PBM22-FP-U 	Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC
	Extended-Head Pushbutton	<ul style="list-style-type: none"> ○ White PBM22-EP-W ● Black PBM22-EP-B ● Green PBM22-EP-G ● Red PBM22-EP-R ● Amber PBM22-EP-A ● Blue PBM22-EP-U 	Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC
	Mushroom-Head Pushbutton (40mm)	<ul style="list-style-type: none"> ● Black PBM22-MP-B ● Green PBM22-MP-G ● Red PBM22-MP-R 	Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC
	Mushroom-Head Pushbutton (60mm)	<ul style="list-style-type: none"> ● Black PBM22-MP6-B ● Green PBM22-MP6-G ● Red PBM22-MP6-R 	Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC
	2- maintained	Black PBM22-S2M-B	Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC
	2-spring return R to L	● Black PBM22-S2-B	
	3- maintained	● Black PBM22-S2M-B	
	3-spring return R to C	● Black PBM22-S2ML-B	
	3-spring return L/R to C	● Black PBM22-S3-B	
	2- maintained	Black PBM22-SL2M-B	Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC
	2-spring return R to L	● Black PBM22-SL2-B	
	3- maintained	● Black PBM22-SL2M-B	
	3-spring return R to C	● Black PBM22-SL2ML-B	
	3-spring return L/R to C	● Black PBM22-SL3-B	

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 	 2- maintained  2-spring return R to L  3- maintained  3-spring return R to C  3-spring return L/R to C	<ul style="list-style-type: none">  Black PBM22-SK2M-B  Black PBM22-SK2-B  Black PBM22-SK2M-B  Black PBM22-SK2ML-B  Black PBM22-SK3-B 	Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC
 	Emergency Stop (Turn-Release) (30mm)	<ul style="list-style-type: none">  Red PBM22-ET3-R-P6 (1NC)  Red PBM22-ET3-R-P8 (2NC) 	
 	Emergency Stop (Turn-Release) (40mm)	<ul style="list-style-type: none">  Red PBM22-ET-R-P6 (1NC)  Red PBM22-ET-R-P8 (2NC) 	
 	Emergency Stop (Turn-Release) (60mm)	<ul style="list-style-type: none">  Red PBM22-ET6-R-P6 (1NC)  Red PBM22-ET6-R-P8 (2NC) 	
 	Emergency Stop (Push-Pull) (40mm)	<ul style="list-style-type: none">  Red PBM22-ES-R-P6 (1NC)  Red PBM22-ES-R-P8 (2NC) 	
 	Emergency Stop (Key-Release) (40mm)	<ul style="list-style-type: none">  Red PBM22-EK-R-P6 (1NC)  Red PBM22-EK-R-P8 (2NC) 	

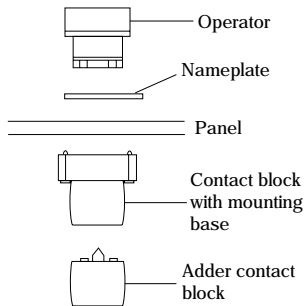
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Pictures and Dimension		Description	Part Numbers	Contacts
<p>direct type: L = 18mm; transformer type : = 23mm</p>	<p>Pilot Light (LED)</p>	<p>PBM22-PL-</p> <p>Direct voltage suffix - D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC Transformer type suffix: T120E: 120 V (in) 6V (out) T240E: 240 V (in) 6V (out) T380E: 380 V (in) 6V (out) T600E: 600 V (in) 6V (out)</p> <p>Color suffix ○ -W ● -G ● -R ● -U ● -A</p>		
<p>type: L = 18mm; transformer type : = 23mm</p>	<p>Illuminated Pushbutton (LED)</p>	<p>PBM22-FP-</p> <p>Direct voltage suffix - D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC Transformer type suffix: T120E: 120 V (in) 6V (out) T240E: 240 V (in) 6V (out) T380E: 380 V (in) 6V (out) T600E: 600 V (in) 6V (out)</p> <p>Color suffix ○ -W ● -G ● -R ● -U ● -A</p>	<p>Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC</p>	
<p>ie: L = 18mm; transformer type : = 23mm</p>	<p>Illuminated Selector Switch (LED)</p>	<p>2-maintained 2-spring return R to L 3-maintained 3-spring return R to C 3-spring return L/R to C</p> <p>PBM22-S2M- PBM22-S2- PBM22-S2M- PBM22-S2ML- PBM22-S3-</p> <p>Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC Transformer type suffix: T120E: 120 V (in) 6V (out) T240E: 240 V (in) 6V (out) T380E: 380 V (in) 6V (out) T600E: 600 V (in) 6V (out)</p> <p>Color suffix ○ -W ● -G ● -R ● -U ● -A</p>	<p>Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC</p>	
	<p>Two Button Switch (Flush)</p>	<p>PBM22-MF-P21 (1NO/1NC)</p>		
	<p>Two Button Switch (Extended Stop)</p>	<p>PBM22-ME-P21 (1NO/1NC)</p>		

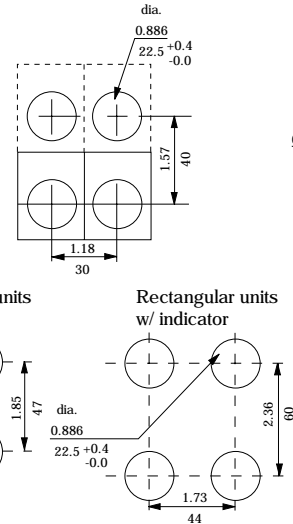
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Pictures and Dimension	Description	Part Numbers	Contacts
<p>direct type: L = 18mm; transformer type : = 23mm</p>	<p>Illuminated Two Button Switch (Flush)</p>	<p>PBM22-MF-</p> <p>Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC Transformer type suffix: T120E: 120 V (in) 6V (out) T240E: 240 V (in) 6V (out) T380E: 380 V (in) 6V (out) T600E: 600 V (in) 6V (out)</p>	<p>Add suffix: P21: 1NO/1NC</p>
<p>direct type: L = 18mm; transformer type : = 23mm</p>	<p>Illuminated Two Button Switch (Extended Stop)</p>	<p>PBM22-ME-</p> <p>Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC Transformer type suffix: T120E: 120 V (in) 6V (out) T240E: 240 V (in) 6V (out) T380E: 380 V (in) 6V (out) T600E: 600 V (in) 6V (out)</p>	<p>Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC</p>
	<p>Joystick</p>	<p>2-Direction: PBM22-JS3H PBM22-JS3H-M (Maintained) 4-Direction: PBM22-JS5H PBM22-JS5H-M (Maintained)</p>	<p>Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC</p>

MOUNTING DIMENSIONS (Minimum spacing) General mounting set-up

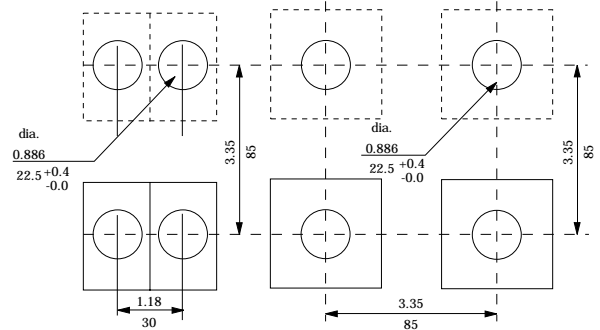


Standard pushbuttons and pilot lights



2 Position Joysticks

4 Position Joysticks



Dual Dimensions $\frac{\text{inches}}{\text{mm}}$