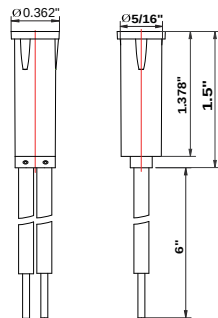
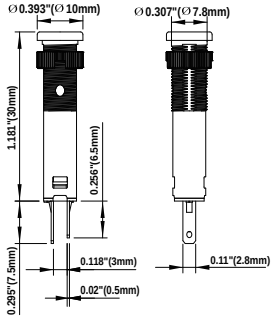
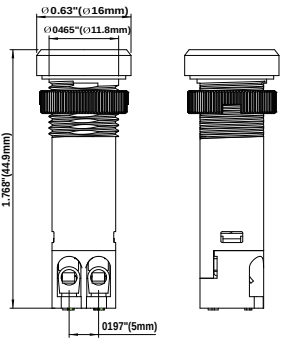
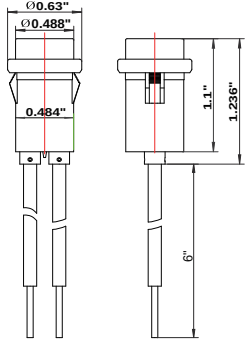
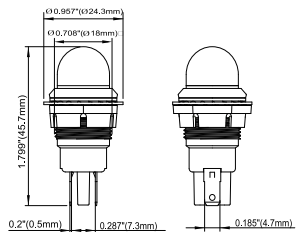
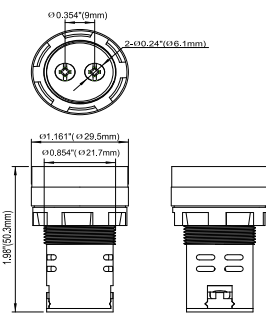


IL Series Indicator Light

Selection Guide:

IL - 1	F	120	E	G	U6
Mounting Holes	Options	Voltage	Light Bulb Type	Lens Color	Wiring/Terminal
1: 5/16"	F: Flush Head	5: 5V	E: LED	G: Green	Q: Quick Connect
2: 8mm	E: Extended Head	12: 12-14V	C: Incandescent	R: Red	U6: 6 inch wire
3: 12mm		24: 24-28V	N: Neon	A: Amber	M15: 15cm wire
4: 1/2"		48: 48V		Y: Yellow	
5: 3/4"		120: 120V		B: Blue	
6: 22mm		240: 240V		W: White	

Dimensions:

IL-1:	 	IL-2:	 
IL-3:	 	IL-4:	 
IL-5:	 	IL-6:	 

22mm Push Buttons & Operator Interface - PB22

Features

- Double insulation, corrosion resistant
- Wide variety of operator available
- Double break, slow action
- Positive opening of normal close contact
- Finger safe contact block
- 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

22mm Push Buttons & Operator Interface - PB22

Metal Head	Plastic Head	Description	Part Numbers	Contacts	Head
		Flat-Head Pushbutton	- White PB22-FP-W - Black PB22-FP-B - Green PB22-FP-G - Red PB22-FP-R - Yellow PB22-FP-Y - Blue PB22-FP-U	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Extended-Head Pushbutton	- White PB22-EP-W - Black PB22-EP-B - Green PB22-EP-G - Red PB22-EP-R - Yellow PB22-EP-Y - Blue PB22-EP-U	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Extended-Head Pushbutton	- White PB22-BP-W - Black PB22-BP-B - Green PB22-BP-G - Red PB22-BP-R - Yellow PB22-FP-Y - Blue PB22-BP-U	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Selector Switch 2- maintained 2-spring return R to L 3- maintained 3-spring return L/R to C	- Black PB22-S2M-B - Black PB22-S3M-B - Black PB22-S3-B	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Selector Switch 2- maintained 2-spring return R to L 3- maintained 3-spring return L/R to C	- Black PB22-SL2M-B - Black PB22-SL2-B - Black PB22-SL3M-B - Black PB22-SL3-B	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Key Selector Switch 2- maintained ,key withdraw left 2- maintained ,key withdraw all positions 2-spring return R to L , key withdraw left 3- maintained ,key withdraw center 3- maintained ,key withdraw all positions 3-spring return L/R to C, key withdraw center	- Black PB22-SK2ML-B - Black PB22-SK2M-B - Black PB22-SK2L-B - Black PB22-SK3MC-B - Black PB22-SK3M-B - Black PB22-SK3C-B	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic

22mm Push Buttons & Operator Interface - PB22

Metal Head	Plastic Head	Description	Part Numbers	Contacts	Head
		Mushroom Pushbutton (40mm)	● Black ● Green ● Red PB22-MP-B PB22-MP-G PB22-MP-R	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Emergency Stop (Turn-Release) (40mm)	● Red PB22-ET-R	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Emergency Stop (Push-Pull) (40mm)	● Red PB22-ES-R	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Emergency Stop (Key-Release) (40mm)	● Red PB22-EK-R	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Two Button Switch (Flush)	PB22-MF	Add suffix: P0: Without Contact P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Two Button Switch (Extended Stop)	PB22-ME	Add suffix: P0: Without Contact P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic

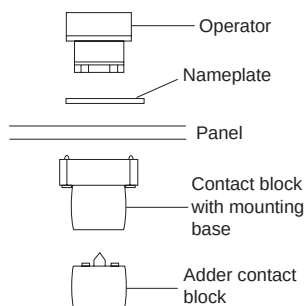
22mm Push Buttons & Operator Interface - PB22

Metal Head	Plastic Head	Description	Part Numbers	Contacts	Head
		Illuminated Two Button Switch (Flush)	PB22-MF- Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC LED	Add suffix: P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X:Plastic
		Illuminated Two Button Switch (Extended Stop)	PB22-ME- Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC LED	Add suffix: P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X:Plastic
		Illuminated Selector Switch  2- maintained  2-spring return R to L  3- maintained  3-spring return L/R to C	PB22-S2M- PB22-S2- PB22-S3M- PB22-S3- Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC LED	Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X:Plastic
		Illuminated Selector Switch  2- maintained  2-spring return R to L  3- maintained  3-spring return L/R to C	PB22-SL2M- PB22-SL2- PB22-SL3M- PB22-SL3- Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC LED	Add suffix: P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X:Plastic

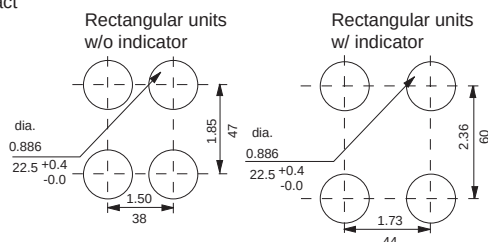
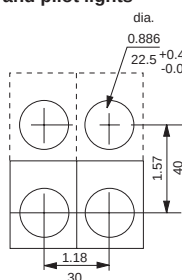
22mm Push Buttons & Operator Interface - PB22

Metal Head	Plastic Head	Description	Part Numbers	Contacts	Head
		Illuminated Pushbutton Switch (Flush)	PB22-GP- Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC LED Color suffix -W -G -R -U -Y	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Illuminated Pushbutton Switch (Flush)	PB22-FP- Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC LED Color suffix -W -G -R -U -Y	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Illuminated Pushbutton Switch (Extended)	PB22-EP- Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC LED Color suffix -W -G -R -U -Y	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Illuminated Mushroom Button	PB22-MP- Direct voltage suffix D6E: 6 VAC/DC D12E: 12 VAC/DC D24E: 24 VAC/DC D120E: 120 VAC/DC D240E: 240VAC/DC LED Color suffix -W -G -R -U -Y	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic

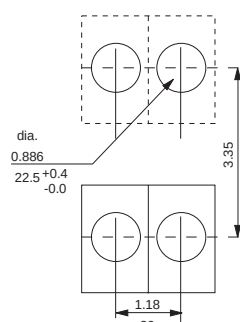
MOUNTING DIMENSIONS (Minimum spacing) General mounting set-up



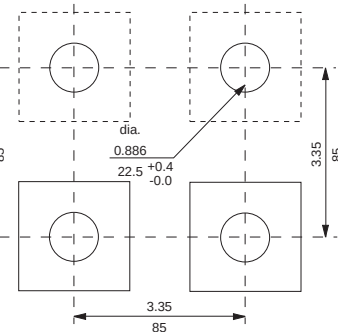
Standard pushbuttons and pilot lights



2 Position Joysticks



4 Position Joysticks



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

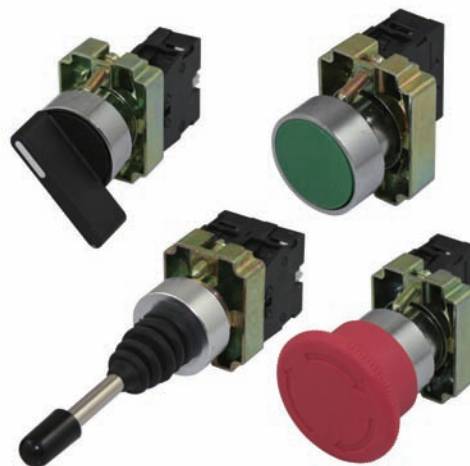
22mm Push Buttons & Operator Interface - PB22

PB22-FP 	PB22-EP 	PB22-BP 	PB22-SK
PB22-S 	PB22-SL 	PB22-MP 	PB22-ET-R
PB22-ES-R 	PB22-EK-R 	PB22-MF 	PB22-ME
PB22-MF 	PB22-ME- 	PB22-S 	PB22-SL
PB22-GP 	PB22-FP 	PB22-EP 	PB22-MP-

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

22mm Push Buttons & Operator Interface - PBM22

Metal Head	Plastic Head	Description	Part Numbers	Contacts	Head
		Flat-Head Pushbutton	○ White PBM22-FP-W ● Black PBM22-FP-B ● Green PBM22-FP-G ● Red PBM22-FP-R ● Yellow PBM22-BP-Y ● Blue PBM22-FP-U	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Extended-Head Pushbutton	○ White PBM22-BP-W ● Black PBM22-BP-B ● Green PBM22-BP-G ● Red PBM22-BP-R ● Yellow PBM22-BP-Y ● Blue PBM22-BP-U	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Extended-Head Pushbutton	○ White PBM22-EP-W ● Black PBM22-EP-B ● Green PBM22-EP-G ● Red PBM22-EP-R ● Yellow PBM22-EP-Y ● Blue PBM22-EP-U	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Mushroom-Head Pushbutton (40mm)	● Black PBM22-MP-B ● Green PBM22-MP-G ● Red PBM22-MP-R	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Mushroom-Head Pushbutton (60mm)	● Black PBM22-MP6-B ● Green PBM22-MP6-G ● Red PBM22-MP6-R	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		2- maintained 2-spring return R to L 3- maintained 3-spring return R to C 3-spring return L/R to C	● Black PBM22-S2M-B ● Black PBM22-S2-B ● Black PBM22-S3M-B ● Black PBM22-S3ML-B ● Black PBM22-S3-B	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		2- maintained 2-spring return R to L 3- maintained 3-spring return R to C 3-spring return L/R to C	● Black PBM22-SL2M-B ● Black PBM22-SL2-B ● Black PBM22-SL3M-B ● Black PBM22-SL3ML-B ● Black PBM22-SL3-B	Add suffix: P0: Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic

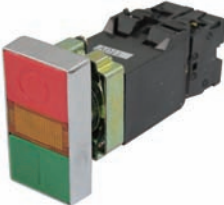
22mm Push Buttons & Operator Interface - PBM22

Metal Head	Plastic Head	Description	Part Numbers	Contacts	Head
		2- maintained	Black PBM22-SK2M-B	Add suffix: P0:Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38:2NO/2NC	Blank: Metal -X:Plastic
		2-spring return R to L	Black PBM22-SK2-B		
		3- maintained	Black PBM22-SK3M-B		
		3-spring return R to C	Black PBM22-SK3ML-B		
		3-spring return L/R to C	Black PBM22-SK3-B		
		Emergency Stop (Turn-Release) (30mm)	Red PBM22-ET3-R	Add suffix: P0:Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38:2NO/2NC	Blank: Metal -X:Plastic
		Emergency Stop (Turn-Release) (40mm)	Red PBM22-ET-R	Add suffix: P0:Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38:2NO/2NC	Blank: Metal -X:Plastic
		Emergency Stop (Turn-Release) (60mm)	Red PBM22-ET6-R	Add suffix: P0:Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38:2NO/2NC	Blank: Metal -X:Plastic
		Emergency Stop (Push-Pull) (40mm)	Red PBM22-ES-R	Add suffix: P0:Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38:2NO/2NC	Blank: Metal -X:Plastic
		Emergency Stop (Key-Release) (40mm)	Red PBM22-EK-R	Add suffix: P0:Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38:2NO/2NC	Blank: Metal -X:Plastic

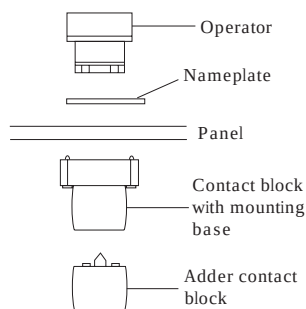
22mm Push Buttons & Operator Interface - PBM22

Metal Head	Plastic Head	Description	Part Numbers	Contacts	Head
		Pilot Light (LED)	PBM22-PL- 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)	Add suffix: P0:Without Contact	Blank: Metal -X:Plastic
		Illuminated Pushbutton (LED)	PBM22-FP- 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)	Add suffix: P0:Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38:2NO/2NC	Blank: Metal -X:Plastic
		2- maintained	PBM22-S2M-	Add suffix: P0:Without Contact P5: 1NO P6: 1NC P7: 2NO P8: 2NC P21: 1NO/1NC P38:2NO/2NC	Blank: Metal -X:Plastic
		2-spring return R to L	PBM22-S2-		
		3- maintained	PBM22-S3M-		
		3-spring return R to C	PBM22-S3ML-		
		3-spring return L/R to C	PBM22-S3-		
		Two Button Switch (Flush)	PBM22-MF- 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)	Add suffix: P0:Without Contact P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X:Plastic
		Two Button Switch (Extended Stop)	PBM22-ME-	Add suffix: P0:Without Contact P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X:Plastic

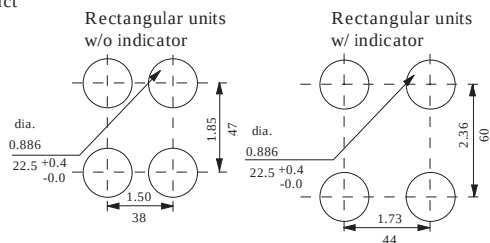
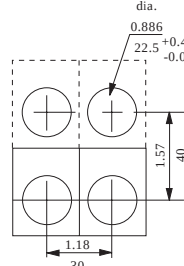
22mm Push Buttons & Operator Interface - PBM22

Metal Head	Plastic Head	Description	Part Numbers	Contacts	Head
		Illuminated Two Button Switch (Flush)	PBM22-MF- 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)	Add suffix: P0: Without Contact P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Illuminated Two Button Switch (Extended Stop)	PBM22-ME- 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)	Add suffix: P0: Without Contact P21: 1NO/1NC P38: 2NO/2NC	Blank: Metal -X: Plastic
		Joystick	2-Direction: (2NO) PBM22-JS3H-P7 PBM22-JS3H-M-P7 (Maintained) 4-Direction: (4NO) PBM22-JS5-P38 PBM22-JS5-M-P38 (Maintained)		Blank: Metal -X: Plastic

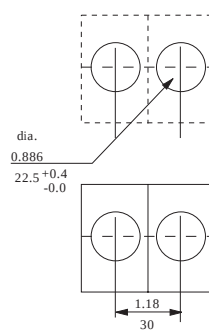
MOUNTING DIMENSIONS (Minimum spacing) General mounting set-up



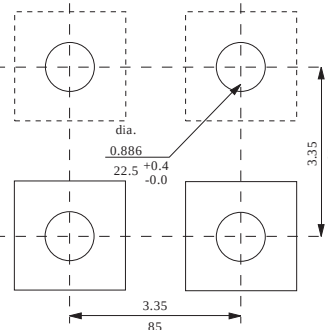
Standard pushbuttons and pilot lights



2 Position Joysticks



4 Position Joysticks

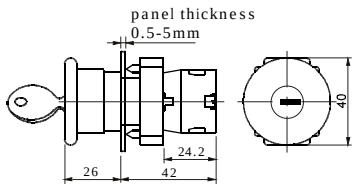
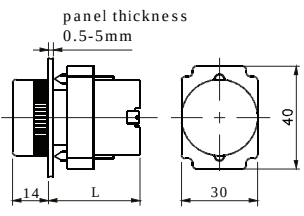
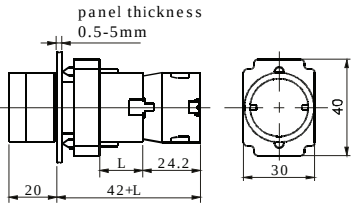
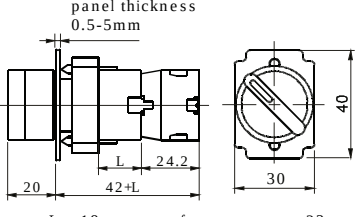
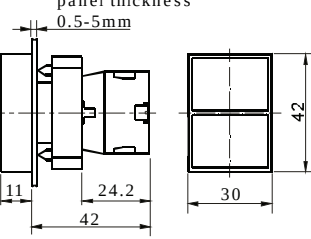
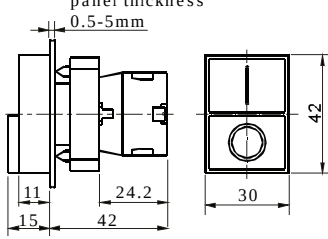
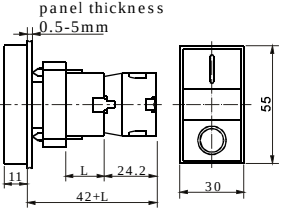
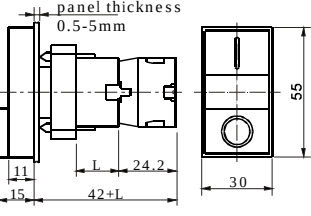
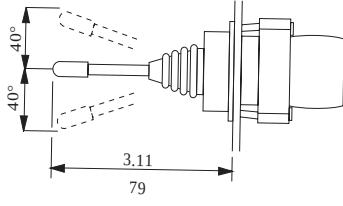


Dual Dimensions $\frac{\text{inches}}{\text{mm}}$

22mm Push Buttons & Operator Interface - PBM22

PBM22-FP panel thickness 0.5-5mm	PBM22-BP panel thickness 0.5-5mm	PBM22-EP panel thickness 0.5-5mm
PBM22-MP panel thickness 0.5-5mm	PBM22-MP6 panel thickness 0.5-5mm	PBM22-S panel thickness 0.5-5mm
PBM22-SL panel thickness 0.5-5mm	PBM22-SK panel thickness 0.5-5mm	PBM22-ET3-R panel thickness 0.5-5mm
PBM22-ET-R panel thickness 0.5-5mm	PBM22-ET6-R panel thickness 0.5-5mm	PBM22-ES-R panel thickness 0.5-5mm

22mm Push Buttons & Operator Interface - PBM22

PBM22-EK-R-P	PBM22-PL	PBM22-FP
 panel thickness 0.5-5mm 26 42 24.2 40	 panel thickness 0.5-5mm 14 L 30 40 direct type: L = 18mm; transformer type : = 23mm	 panel thickness 0.5-5mm 20 L 24.2 42+L 30 40 direct type: L = 18mm; transformer type : = 23mm
PBM22-S	PBM22-MF-P21	PBM22-ME-P21
Illuminated Selector Switch (LED)  panel thickness 0.5-5mm 20 L 24.2 42+L 30 40 direct type: L = 18mm; transformer type : = 23mm	 panel thickness 0.5-5mm 11 24.2 42 30 42	 panel thickness 0.5-5mm 11 15 24.2 42 30 42
PBM22-MF	PBM22-ME	PBM22-JS
 panel thickness 0.5-5mm 11 L 24.2 42+L 30 55 direct type: L = 18mm; transformer type : = 23mm	 panel thickness 0.5-5mm 11 15 L 24.2 42+L 30 55 direct type: L = 18mm; transformer type : = 23mm	 40° 40° 3.11 79

30mm Push Buttons & Operator Interface

PBM30 chromium plated metal bezel
PB30 plastic bezel

Features

- Available in die cast chrome plated (PBM30) and double insulated head (PB30)
- 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	NEMA 4, 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

30mm Push Buttons & Operator Interface

PBM30 chromium plated metal bezel
PB30 plastic bezel

PBM30	PB30	Description	Part Numbers	Contacts(1)
		Extended Guard Pushbutton	○ PB(M)30-GP-W ● PB(M)30-GP-B ● PB(M)30-GP-G ● PB(M)30-GP-R ● PB(M)30-GP-Y ● PB(M)30-GP-U ● PB(M)30-GP-A	Add suffix: P0: Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Full Guard Pushbutton	○ PB(M)30-FP-W ● PB(M)30-FP-B ● PB(M)30-FP-G ● PB(M)30-FP-R ● PB(M)30-FP-Y ● PB(M)30-FP-U ● PB(M)30-FP-A	Add suffix: P0: Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		No Guard Pushbutton	○ PB(M)30-EP-W ● PB(M)30-EP-B ● PB(M)30-EP-G ● PB(M)30-EP-R ● PB(M)30-EP-Y ● PB(M)30-EP-U ● PB(M)30-EP-A	Add suffix: P0: Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Mechanical Interlock Buttons (Maintained)	●● PB(M)30-MIP-BR ●● PB(M)30-MIP-GR	Add suffix: P0: Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Mushroom-Head Pushbutton (40mm)	○ PB(M)30-MP-W ● PB(M)30-MP-B ● PB(M)30-MP-G ● PB(M)30-MP-R ● PB(M)30-MP-Y ● PB(M)30-MP-U ● PB(M)30-MP-A	Add suffix: P0: Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Mushroom-Head Pushbutton (60mm)	○ PB(M)30-MP6-W ● PB(M)30-MP6-B ● PB(M)30-MP6-G ● PB(M)30-MP6-R ● PB(M)30-MP6-Y ● PB(M)30-MP6-U ● PB(M)30-MP6-A	Add suffix: P0: Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC

(1) Add the *P* number chosen from page 28 to the end of the operator type number.

30mm Push Buttons & Operator Interface

PBM30 chromium plated metal bezel
PB30 plastic bezel

PBM30	PB30	Description	Part Numbers	Contacts(1)
		Emergency Stop (Push-Pull) (40mm)	PB(M)30-ES- (2-position) PB(M)30-E3S- (3-position) ○ PB(M)30-ES/E3S-W ● PB(M)30-ES/E3S-B ● PB(M)30-ES/E3S-G ● PB(M)30-ES/E3S-R ● PB(M)30-ES/E3S-Y ● PB(M)30-ES/E3S-U ● PB(M)30-ES/E3S-A	Add suffix: P0: Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Emergency Stop Break Glass Button	● PB(M)30-BG-Y	Add suffix: P0: Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Joystick Controller	● 3-Position Horizontal PBM30-JS3H-R ● 3-Position Vertical PBM30-JS3V-R ● 5-Position PBM30-JS5-R ● 3-Position Horizontal(Maintained) PBM30-JS3H-M-R ● 3-Position Vertical(Maintained) PBM30-JS3V-M-R ● 5-Position(Maintained) PBM30-JS5-M-R	Add suffix: P0: Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Joystick Controller With Latch	● 3-Position Horizontal with Latch PBM30-JS3HL ● 3-Position Vertical with Latch PBM30-JS3VL ● 5-Position with Latch PBM30-JS5L ● 3-Position Horizontal with Latch(Maintained) PBM30-JS3HL-M ● 3-Position Vertical with Latch(Maintained) PBM30-JS3VL-M ● 5-Position with Latch(Maintained) PBM30-JS5L-M	Add suffix: P0: Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Potentiometer	1K PB(M)30-VR-1K-P0 2.5k PB(M)30-VR-2/5K-P0 5K PB(M)30-VR-5K-P0 10K PB(M)30-VR-10K-P0 25K PB(M)30-VR-25K-P0	

(1) Add the *P* number chosen from page 28 to the end of the operator type number.

30mm Push Buttons & Operator Interface

PBM30 chromium plated metal bezel
PB30 plastic bezel

PBM30	PB30	Description	Part Numbers	Contacts(1)
		Pilot Light (LED)	PB(M)30-PL- 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)	Color suffix ○ -W ● -G ● -R ● -Y ● -U ● -A Add suffix: P0:Without Contact
		Push-To-Test Pilot Light (LED)	PB(M)30-PTL- 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)	Color suffix ○ -W ● -G ● -R ● -Y ● -U ● -A Add suffix: P1: 1NO/1NC
		Illuminated Pushbutton No Guard (LED)	PB(M)30-EP- 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)	Color suffix ○ -W ● -G ● -R ● -Y ● -U ● -A Add suffix: P0:Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Illuminated Pushbutton Full Plastic Guard (LED)	PB(M)30-FP- 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)	Color suffix ○ -W ● -G ● -R ● -Y ● -U ● -A Add suffix: P0:Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Illuminated Pushbutton Full Metal Guard (LED)	PBM30-GP- 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)	Color suffix ○ -W ● -G ● -R ● -Y ● -U ● -A Add suffix: P0:Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC
		Illuminated Pushbutton Mushroom (LED)	PB(M)30-MP- 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)	Color suffix ○ -W ● -G ● -R ● -Y ● -U ● -A Add suffix: P0:Without Contact P1: 1NO/1NC P2: 2NO/2NC P5: 1NO P6: 1NC P7: 2NO P8: 2NC

(1)Add the *P* number chosen from page 28 to the end of the operator type number.

30mm Push Buttons & Operator Interface
PBM30 chromium plated metal bezel
PB30 plastic bezel



Selector Switches -- Non-Illuminated -- Complete Assemblies, Contact Blocks Included

Contact Mounted on Side		Contact Block Included	Contact Status 1=closed 0=open	Standard Black Handle	Long Black Handle
2 Position Stay put					
	A	PBC30-10A		PB(M)30-S2ME-BP5	PB(M)30-SL2ME-BP5
	B	PBC30-10A		PB(M)30-S2ME-BP36	PB(M)30-SL2ME-BP36
	A	PBC30-11A		PB(M)30-S2ME-BP1	PB(M)30-SL2ME-BP1
	B	PBC30-11A		PB(M)30-S2ME-BP13	PB(M)30-SL2ME-BP13
	both sides	2*PBC30-11A		PB(M)30-S2ME-BP2	PB(M)30-SL2ME-BP2
Spring return, right to left					
	B	PBC30-11A		PB(M)30-S2MLD-BP13	PB(M)30-SL2MLD-BP13
3 Position Stay put					
	A	PBC30-11A		PB(M)30-S3MC-BP1	PB(M)30-SL3MC-BP1
	B	PBC30-11A		PB(M)30-S3MC-BP13	PB(M)30-SL3MC-BP13
	both sides	2*PBC30-11A		PB(M)30-S3MC-BP2	PB(M)30-SL3MC-BP2
Stay put					
	Side B Side A	PBC30-01A PBC30-11A		PB(M)30-S3MF-BP28	PB(M)30-SL3MF-BP28
	Side B Side A	PBC30-11A PBC30-01A		PB(M)30-S3MF-BP89	PB(M)30-SL3MF-BP89
Spring return left to center					
	B	PBC30-11A		PB(M)30-S3MRC-BP13	PB(M)30-SL3MRC-BP13
	both sides	2*PBC30-11A		PB(M)30-S3MRC-BP2	PB(M)30-SL3MRC-BP2
Spring return, right and left to center					
	B	PBC30-11A		PB(M)30-S3C-BP13	PB(M)30-SL3C-BP13
	both sides	2*PBC30-11A		PB(M)30-S3C-BP2	PB(M)30-SL3C-BP2

30mm Push Buttons & Operator Interface

PBM30 chromium plated metal bezel
PB30 plastic bezel



Selector Switches -- Non-Illuminated -- Assemblies, Order Contact Blocks Separately

Contact Mounted on Side	Contact Block Options (order separately from page 28).	Contact Status 1=closed 0=open	Standard Black Handle	Long Black Handle
2 Position Stay put				
A or B	PBC30-11A or PBC30-01A PBC30-10A	 1 0 0 1	PB(M)30-S2ME-BP0	PB(M)30-SL2ME-BP0
A or B	PBC30-11A or PBC30-01A PBC30-10A	 0 1 1 0	PB(M)30-S2MD-BP0	PB(M)30-SL2MD-BP0
Spring return, left to right				
A or B	PBC30-11A or PBC30-01A PBC30-10A	 1 0 0 1	PB(M)30-S2MRE-BP0	PB(M)30-SL2MRE-BP0
Spring return, right to left				
A or B	PBC30-11A or PBC30-01A PBC30-10A	 0 1 1 0	PB(M)30-S2MLD-BP0	PB(M)30-SL2MLD-BP0
3 Position Stay put				
B	PBC30-11A or PBC30-01A PBC30-10A	 1 0 0 0 1 1	PB(M)30-S3MB-BP0	PB(M)30-SL3MB-BP0
A	PBC30-11A or PBC30-01A PBC30-10A	 0 0 1 1 1 0		
A or B	PBC30-11A or PBC30-01A PBC30-10A	 1 0 0 0 0 1	PB(M)30-S3MC-BP0	PB(M)30-SL3MC-BP0
A or B	PBC30-11A or PBC30-01A PBC30-10A	 0 0 1 0 1 0	PB(M)30-S3MD-BP0	PB(M)30-SL3MD-BP0
Stay put				
B	PBC30-11A or PBC30-01A PBC30-10A	 1 0 0 0 0 1	PB(M)30-S3MF-BP0	PB(M)30-SL3MF-BP0
A	PBC30-11A or PBC30-01A PBC30-10A	 0 1 0 0 0 1		
B	PBC30-11A or PBC30-01A PBC30-10A	 1 0 0 0 1 1	PB(M)30-S3MJ-BP0	PB(M)30-SL3MJ-BP0
A	PBC30-11A or PBC30-01A PBC30-10A	 1 0 1 0 1 0		

30mm Push Buttons & Operator Interface
PBM30 chromium plated metal bezel
PB30 plastic bezel



Selector Switches -- Non-Illuminated -- Assemblies, Order Contact Blocks Separately

Contact Mounted on Side		Contact Block Options (order sepatately from page 28).	Contact Status 1=closed 0=open	Standard Black Handle	Long Black Handle	
3 Position(continued) Stay put						
	B	PBC30 -11A  or PBC30 -10A 	 0 1 0	PB(M)30-S3MA-BP0	PB(M)30-SL3MA-BP0	
			1 0 0			
	A	PBC30 -11A  or PBC30 -10A 	 0 0 1			
			0 1 0			
Spring return left to center						
	A or B	PBC30 -11A  or PBC30 -10A 	 1 0 0	PB(M)30-S3MRC-BP0	PB(M)30-SL3MRC-BP0	
			0 0 1			
		A or B	PBC30 -11A  or PBC30 -10A 	 0 0 1	PB(M)30-S3MRD-BP0	PB(M)30-SL3MRD-BP0
				0 1 0		
Spring return right to center						
		B	PBC30 -11A  or PBC30 -10A 	 1 0 0	PB(M)30-S3MLB-BP0	PB(M)30-SL3MLB-BP0
			0 1 1			
	A	PBC30 -11A  or PBC30 -10A 	 0 0 1			
			1 1 0			
	A or B	PBC30 -11A  or PBC30 -10A 	 1 0 0	PB(M)30-S3MLC-BP0	PB(M)30-SL3MLC-BP0	
			0 0 1			
	Spring return*right and left to center					
		B	PBC30 -11A  or PBC30 -10A 	 1 0 0	PB(M)30-S3B-BP0	PB(M)30-SL3B-BP0
			0 1 1			
A		PBC30 -11A  or PBC30 -10A 	 0 0 1			
			1 1 0			
	A or B	PBC30 -11A  or PBC30 -10A 	 1 0 0	PB(M)30-S3C-BP0	PB(M)30-SL3C-BP0	
			0 0 1			
	4 Position Stay put					
		B	PBC30 -11A  or PBC30 -10A 	 1 0 0 0	PB(M)30-S4MH-BP0	PB(M)30-SL4MH-BP0
			0 0 1 0			
A		PBC30 -11A  or PBC30 -10A 	 0 0 0 1			
			0 1 0 0			

30mm Push Buttons & Operator Interface

PBM30 chromium plated metal bezel
PB30 plastic bezel



Selector Switches - Illuminated Assemblies - Super Bright LED Included, Order Contact Blocks Separately

For Contact Mounted on Side	Contact Block Options (order separately from page 28).	Contact Status 1=closed 0=open	Voltage	Super Bright LED Color	Long Handle (except where noted)	Long Handle
2 Position Stay put						
A or B	PBC30 -11A or PBC30 -01A PBC30 -10A	1 0 0 1			PB(M)30-S2ME-■-▲P0	PB(M)30-SL2ME-■-▲P0
A or B	PBC30 -11A or PBC30 -01A PBC30 -10A	0 1 1 0			PB(M)30-S2MD-■-▲P0	PB(M)30-SL2MD-■-▲P0
Spring return, right to left						
A or B	PBC30 -11A or PBC30 -01A PBC30 -10A	0 1 1 0			PB(M)30-S2MLD-■-▲P0	PB(M)30-SL2MLD-■-▲P0
3 Position Stay put						
A or B	PBC30 -11A or PBC30 -01A PBC30 -10A	1 0 0 0 0 1			PB(M)30-S3MC-■-▲P0	PB(M)30-SL3MC-■-▲P0
Stay put						
B	PBC30 -11A or PBC30 -01A PBC30 -10A	1 0 0 0 0 1			PB(M)30-S3MF-■-▲P0	PB(M)30-SL3MF-■-▲P0
A	PBC30 -11A or PBC30 -01A PBC30 -10A	0 1 0 0 0 1				
Spring return left to center						
A or B	PBC30 -11A or PBC30 -01A PBC30 -10A	1 0 0 0 0 1			PB(M)30-S3MRC-■-▲P0	PB(M)30-SL3MRC-■-▲P0
Spring return right to center						
	PBC30 -11A or PBC30 -01A PBC30 -10A	1 0 0 0 0 1			PB(M)30-S3MLC-■-▲P0	PB(M)30-SL3MLC-■-▲P0
Spring return, right and left to center						
A or B	PBC30 -11A or PBC30 -01A PBC30 -10A	1 0 0 0 0 1			PB(M)30-S3C-■-▲P0	PB(M)30-SL3C-■-▲P0
4 Position Stay put						
B	PBC30 -11A or PBC30 -01A PBC30 -10A	1 0 0 0 0 0 1 0			PB(M)30-S4MH-■-▲P0	PB(M)30-SL4MH-■-▲P0
A	PBC30 -11A or PBC30 -01A PBC30 -10A	0 0 0 1 0 1 0 0				

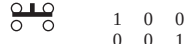
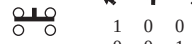
Direct voltage suffix -
D6E: 6 VAC/DC
D12E: 12 VAC/DC
D24E: 24 VAC/DC
D120E: 120 VAC/DC
D240E: 240VAC/DC
Transformer type suffix:
T120E: 120 V (in) 6V (out)
T240E: 240 V (in) 6V (out)
T380E: 380 V (in) 6V (out)
T600E: 600 V (in) 6V (out)

Color suffix
○ -W
● -G
● -R
● -Y
● -U
● -A

30mm Push Buttons & Operator Interface
PBM30 chromium plated metal bezel
PB30 plastic bezel



Selector Switches -- Key Operated -- Complete Assemblies, Contact Blocks Included

Contact Mounted on Side	Contact Block Included	Contact Status 1 = closed 0 = open	Key
2 Position			
Stay put, key withdraw left			
 B	PBC30-10A		PBM30-SK2MEL-P36
 B	PBC30-11A		PBM30-SK2MEL-P13
Stay put, key withdraw left and right			
 B	PBC30-11A		PBM30-SK2ME-P13
3 Position			
Stay put, key withdraw center			
 both sides	2*PBC30-11A		PBM30-SK3MCC-P2
Spring return right & left to center, key withdraw center			
 both sides	2*PBC30-11A		PBM30-SK3CC-P2
4 Position			

30mm Push Buttons & Operator Interface

PBM30 chromium plated metal bezel
PB30 plastic bezel



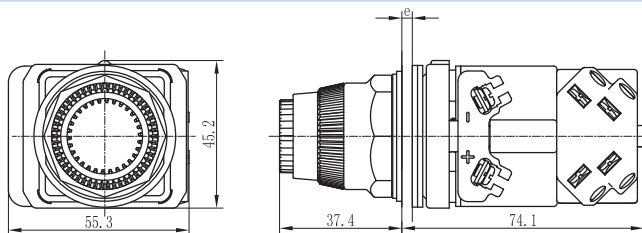
Selector Switches -- Key Operated -- Order Contact Blocks Separately

For Contact Mounted on Side	Contact Block Options (order separately from page 28).	Contact Status 1 = closed 0 = open	Key
2 Position			
Stay put, key withdraw left			
A or B	PBC30-11A or PBC30-01A		PBM30-SK2MEL-P0
Stay put, key withdraw right			
A or B	PBC30-11A or PBC30-01A		PBM30-SK2MER-P0
Stay put, key withdraw left & right			
A or B	PBC30-11A or PBC30-01A		PBM30-SK2ME-P0
Spring return, right to left, key withdraw right			
A or B	PBC30-11A or PBC30-01A		PBM30-SK2MLDR-P0
3 Position			
Stay put, key withdraw left, center, right			
A or B	PBC30-11A or PBC30-01A		PBM30-SK3MC-P0
Stay put, key withdraw center			
A or B	PBC30-11A or PBC30-01A		PBM30-SK3MCC-P0
Spring return, right and left to center, key withdraw center			
A or B	PBC30-11A or PBC30-01A		PBM30-SK3CC-P0

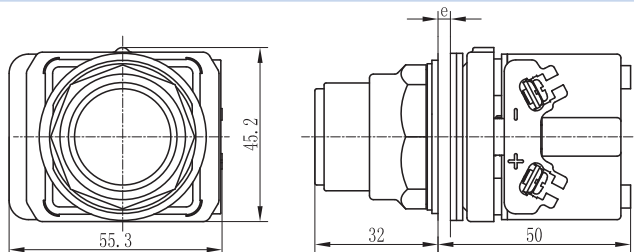
30mm Push Buttons & Operator Interface - PBM30

Illuminated

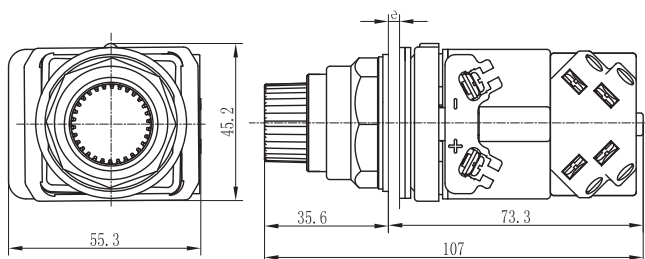
PB(M)30-FP(LED)



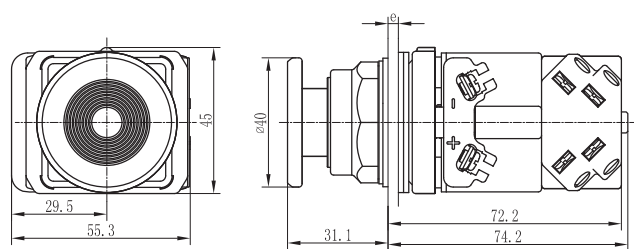
PB(M)30-PL



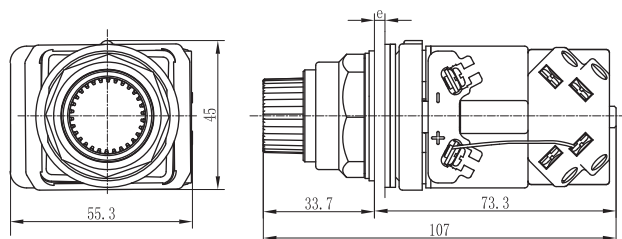
PB(M)30-EP(LED)



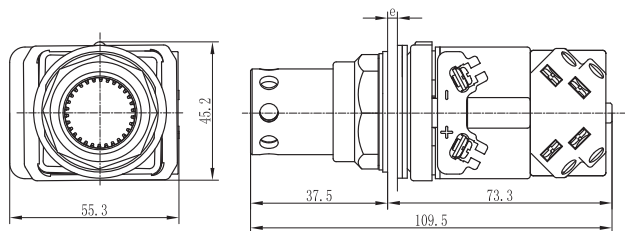
PB(M)30-MP



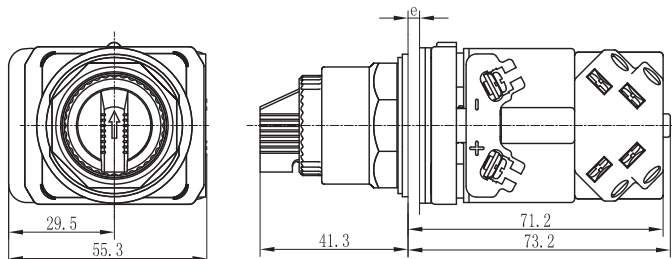
PB(M)30-PTL



PBM30-GP



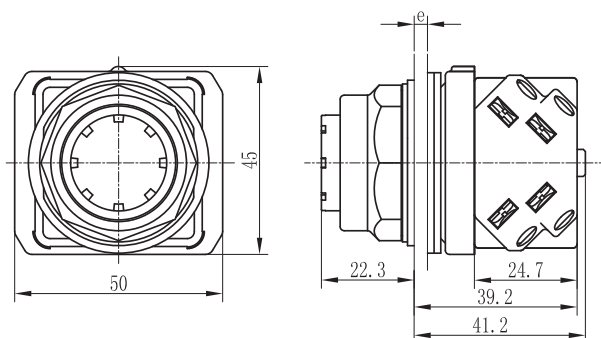
PB(M)30-SL



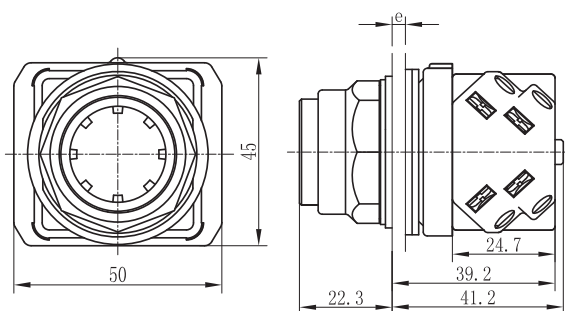
30mm Push Buttons & Operator Interface - PBM30

Non-illuminated

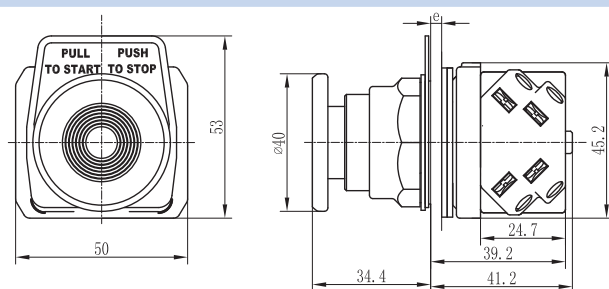
PB(M)30-EP



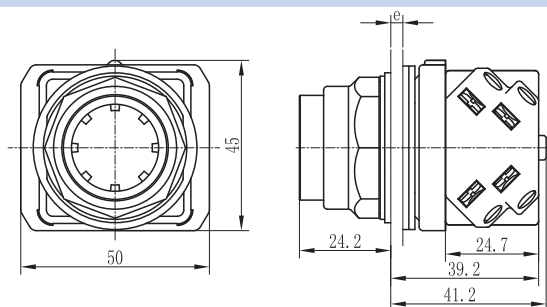
PB(M)30-FP



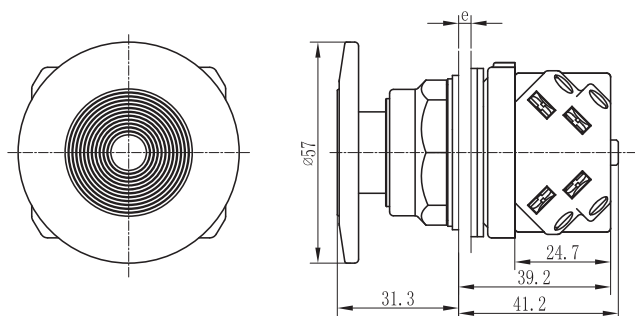
PB(M)30-ES



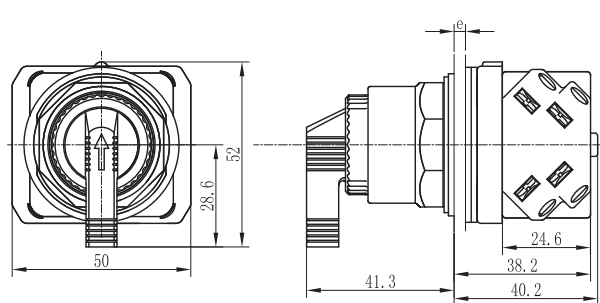
PB(M)30-GP



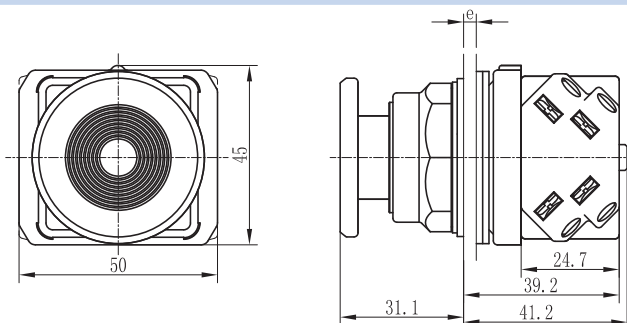
PB(M)30-MP6



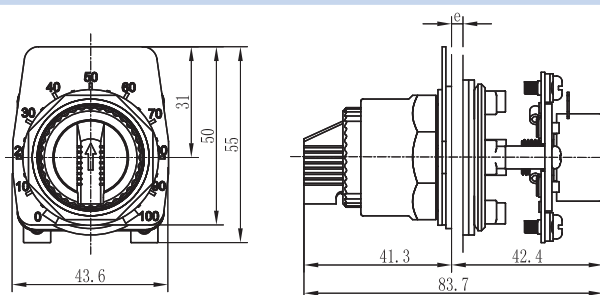
PB(M)30-SL



PB(M)30-MP



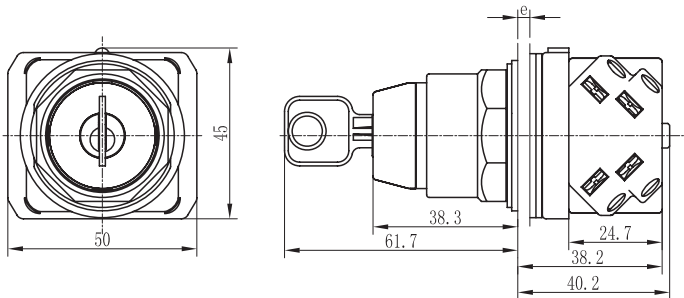
PB(M)30-VR



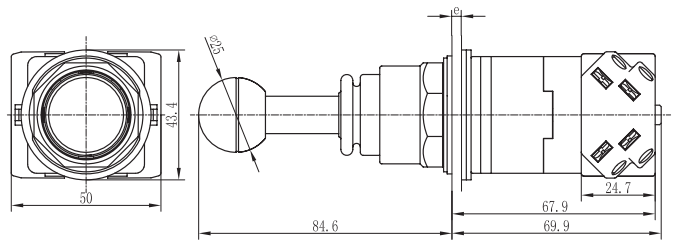
30mm Push Buttons & Operator Interface - PBM30

Non-illuminated

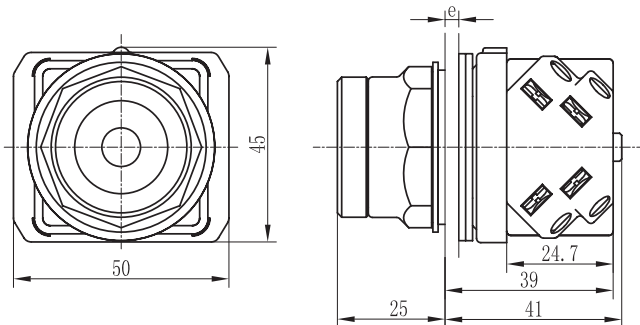
PBM30-SK



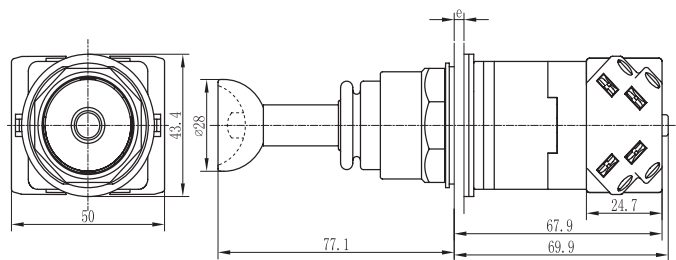
PBM30-JS



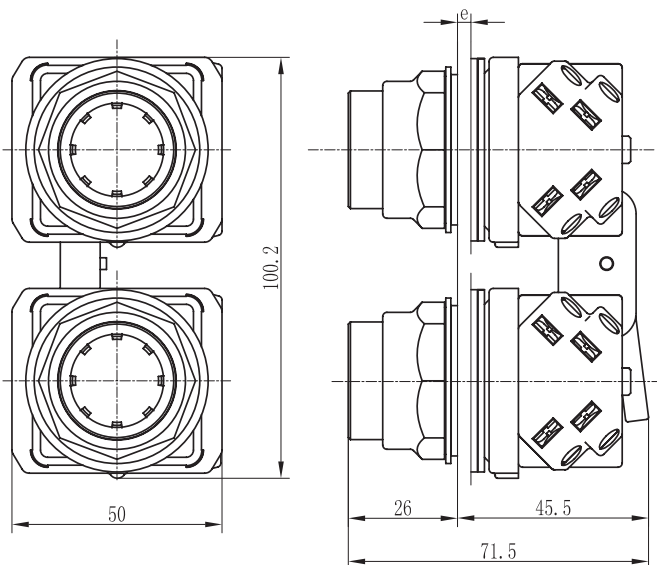
PBM30-BG



PBM30-JS_L



PB(M)30-MIP



30mm Push Buttons & Operator Interface

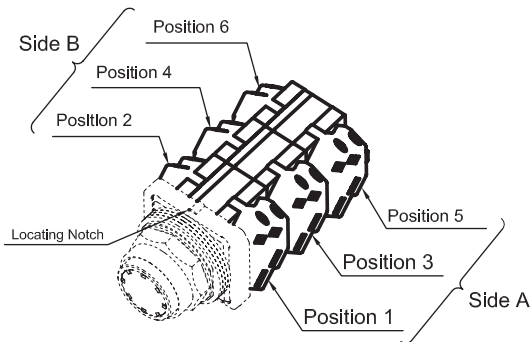
PBM30 chromium plated metal bezel
PB30 plastic bezel

The design of the PB(M)30 contact blocks allows them to be mounted side by side and/or in tandem.

The system illustrated below has been set up to enable an operator and a particular arrangement of contact blocks to be specified by a single type number. Operators and contact blocks will be shipped completely assembled.

Maximum Contact Block Usage

2 blocks mounted side by side only: Any 2, 3 or 4 position spring return selector switch (non-illuminated, illuminated or keyed).
2 blocks mounted in tandem on one side only: Any 2 operator interlocked push button.
2 blocks mounted in tandem (total of four blocks): Any selector push button, keyed push button, 2, 3, or 4 position maintained selector switch (non-illuminated, illuminated or keyed), push pull operators (non-illuminated or illuminated), joy stick, dual push button.
3 blocks mounted in tandem (total of six blocks): Single momentary push buttons (non-illuminated or illuminated).



NO=PBC30-10A
NC=PBC30-01A
CO=PBC30-11A

Suffix No.	Position					
	1	2	3	4	5	6
P1	CO					
P2	CO	CO				
P3	CO	CO	CO			
P4	CO	CO	CO	CO		
P5	NO					
P6	NC					
P7	NO	NO				
P8	NC	NC				
P11	CO	CO		CO		
P12	NO	NC	NO	NC		
P13		CO				
P14		NC				
P15	NO	NC	NO			
P16	NO	NC		NO		
P17	CO	CO	NO			
P18	NC	CO	NC		NC	
P19	CO	CO	CO	CO	CO	
P21	NO	NC				
P23	CO	CO	CO	CO	CO	CO
P24	CO	NO				
P27	NC	NC	NC			

Suffix No.	Position					
	1	2	3	4	5	6
P28	CO	NC				
P31	NO	NO	CO			
P32		CO		CO		
P33	CO	NC	NC			
P36		NO				
P37	NC	NO				
P38	NC	NO	NC	NO		
P41	NC	NO		NO		
P42	CO	CO	NO	NO		
P43	NO	NO	NO			
P44	NC	CO		NC		
P45	CO	NO	NC	NO		
P46	NO	NO		NO		
P52	NC	CO	NC			
P55	CO	NO	NO		CO	
P56	NO	NO	NO	NO		
P59	CO	NO	CO			
P60	CO	NO	CO		NC	
P62	CO	NO	NC			
P63	CO		NC			
P64	NC	NO	NO			
P66	NC	CO	NC	CO		
P71	NC	NC	NC	NC		
P73	CO	CO	NC			
P75	CO	NC	NC	NC	NC	
P76	CO	NO	NO	NO	NO	
P77	CO		CO			
P81	CO	CO	NO	NC		
P86	NC	NO	NC			
P87	NC	NO	NC	NO	NC	
P89	NC	CO				
P90	CO	CO	NC	NC	NC	
P91	CO	NO	CO	NO		
P92	CO	NO	NC	NO	NC	
P94	CO	CO	CO	NC	NC	NC
P95	NO	CO				
P97	CO	NC		NO		
P98	CO	CO	CO	NO		NO
P99	NO	NO	NO	NO	NO	
P100	CO	NC	CO	NO		
P101	NO	NO	NO	NO	NO	NO
P102	CO	NC		NC		
P103	CO	CO	NC	NC		
P104	CO	CO	CO	NO	NO	NO
P109	NC	NC	NO			
P110	NC	NC	NC	NC	NC	NC
P116	NC	CO	NC	NO		
P117	NO	NC	CO	NO	NO	
P124		NC		NC		
P129		NO		NO		
P130	NO	NC		NO		
P131	NO		NC		NO	
P132	NO	NO	NC	NC		
P133	NC		NO			
P134	NC	NC	NO	NO		
P135	NC	NO	NO	NO		
P138	NC	NC		NO		
P152	CO	NO		NO		
P156	CO	CO	CO	CO	NO	NO
P157	CO		CO		NO	
P158	CO	NO	NC	NC		
P159	CO	CO	NC	NO		
P174	CO	NC	CO	NC		

Control Stations (CSD/CSN/CS Series)



CSD



CSN



CS

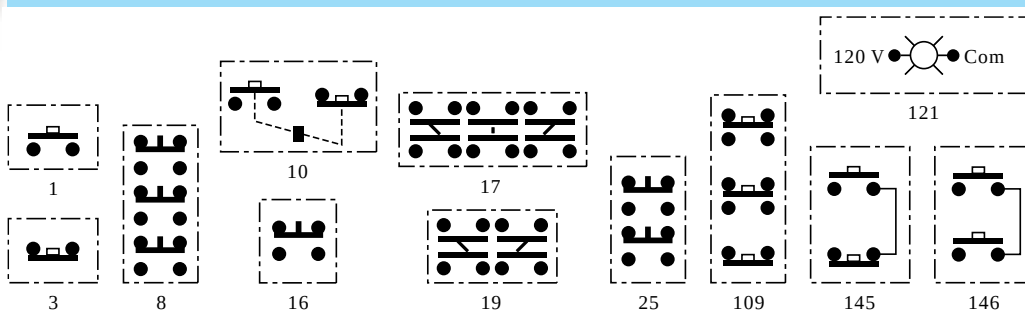
Control Stations

No. of Buttons	Nameplate Markings and Features	Contact Symbol	Surface Mounting NEMA 1 IP40	Watertight and Dusttight NEMA 4 IP65	Stainless Steel Flush Plate IP20
1	Start	1	CSD101	CSN101	CS110 (01)
	Stop	3	CSD102	CSN102	CS101 (02)
	Stop (Mushroom Button)	3	CSD103	CSN103	
	Stop (Lockout)	3	CSD104	CSN104	
	Universal (w/o legend insert)	16	CSD107	CSN107	CS110 (07)
	Off-On (Selector Switch)	19	CSD111		
	Hand-Off-Auto (Selector Switch)	17	CSD112		
	Universal Selector Switch (w/o legend insert)	19 or 17	CSD114		
2	Start-Stop	145	CSD201	CSN201	CS211-C (01)
	Start-Stop (for latching Applications)	146	CSD202	CSN202	
	Start-Stop (Mushroom on Stop)	145	CSD203	CSN203	
	Start-Stop (Lockout on Stop)	145	CSD204	CSN204	
	Start-Stop (Mushroom on both)	145	CSD205	CSN205	
	Forward-Reverse	146	CSD206	CSN206	CS220-C (06)
	Open-Close	146	CSD207	CSN207	CS220-C (07)
	Up-Down	146	CSD208	CSN208	CS220-C (08)
	Raise-Lower	146	CSD209	CSN209	CS220-C (09)
	On-Off	145	CSD210	CSN210	CS220-C (10)
	On-Off	146	CSD211	CSN211	CS220-C (11)
	Universal (w/o legend inserts)	25	CSD214	CSN214	CS222 (14)
	Start-Stop (Maintained Contact)	10	CSD215	CSN215	CS211-M-L (15)
	On-Off (Maintained Contact)	10	CSD216	CSN216	CS211-M-L (16)
	Universal (Maintained contact w/o legend inserts)	10	CSD218	CSN218	CS211-M-L (18)
3	Fast-Slow-Stop	109	CSD301		
	Forward-Reverse-Stop	109	CSD302		
	Open-Close-Stop	109	CSD303		
	Raise-Lower-Stop	109	CSD304		
	Up-Down-Stop	109	CSD305		
	Start-Jog-Stop	109	CSD316		
	Universal (w/o legend inserts)	8	CSD307		
	Start-Stop, Red Pilot Light: 120Vac/dc	145 & 121	CSD308		

Electrical Contact Ratings

(OSHA Regulation, Section 1910.70, Overhead and Gantry Cranes, limits the voltage of pendant push buttons to 150 Vac or 300 Vdc.)

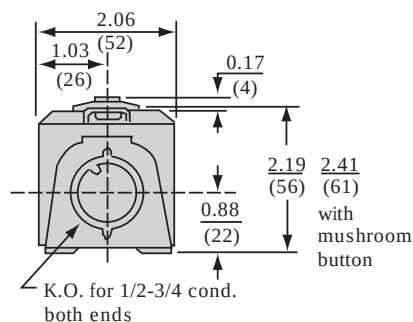
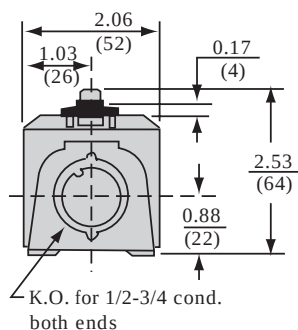
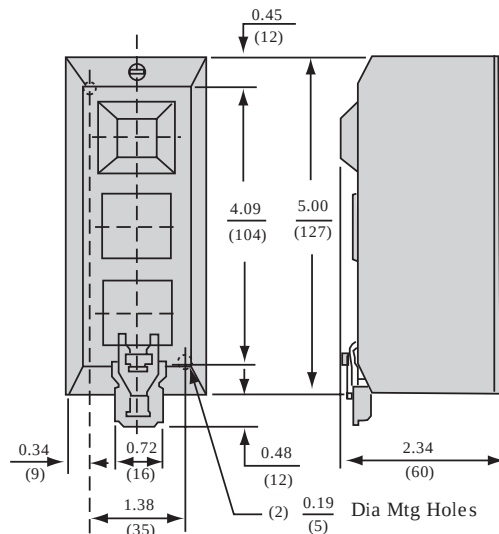
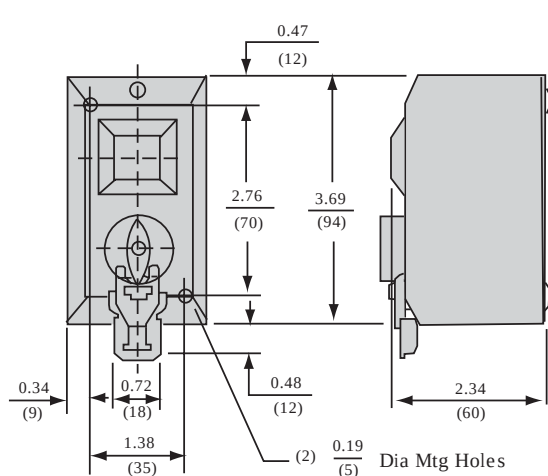
AC NEMA600							DC NEMAP600		
Volts	Inductive 35% Power Factor					Resistive 75% Power Factor	Volts	Inductive and Resistive	
	Make		Break		Continuous Carrying Amperes	Make, Break and Continuous Carrying Amperes		Make and Break Amperes	Continuous Carrying Amperes
	A	VA	A	VA					
120	60	7200	6	720	10	10	120	1.1	5
240	30	7200	3	720	10	10	240	0.55	5
480	15	7200	1.5	720	10	10	600	0.2	5
600	12	7200	1.2	720	10	10			



Control Stations (CSD/CSN/CS Series)

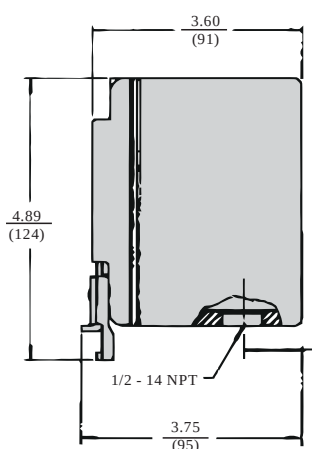
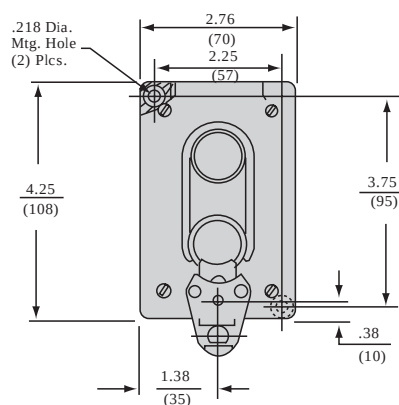
Dimensions

Surface Mount Type CSD, Glass Filled Polyester Cover



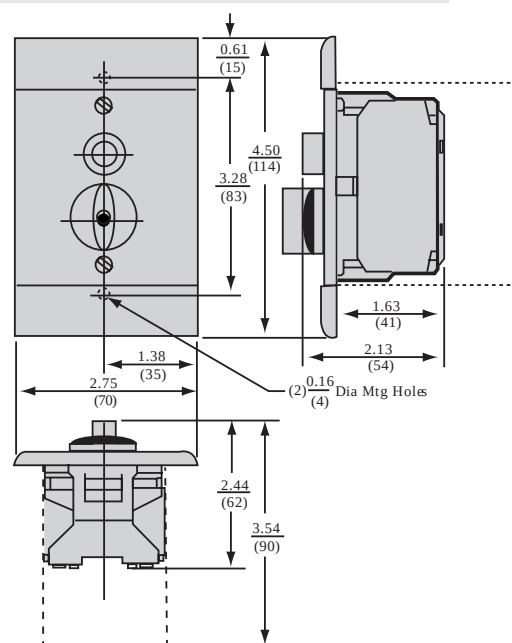
Watertight & Dusttight Type CSN

Cast Zinc Enclosure



Flush Mount Type CS

Stainless Steel



Dual Dimensions: Inches
mm

Pendent Stations CSB Series

Safety yellow high impact fiber reinforced plastic body
 NEMA 4X watertight for indoor and outdoor applications
 Ambient temperature range: -20 to 158F (-29 to 70C)
 UL and cUL listed capabilities
 Choice of single-speed, two-speed, or on-off

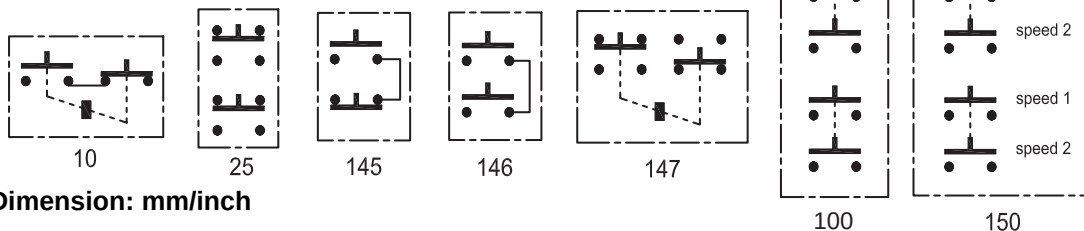


Description	Legend Insert Markings	Mechanical Interlock	Enclosure Color			Contact Symbol
			Yellow	Black	Red	
Single Speed	Up-Down	Yes	CSB272Y	CSB272B	CSB272R	146
	Forward-Reverse	Yes	CSB273Y	CSB273B	CSB273R	146
	On-Off ^[1]	Yes	CSB274Y	CSB274B	CSB274R	10
	Start-Stop	No	CSB275Y	CSB275B	CSB275R	145
	Start-Stop ^[1]	Yes	CSB276Y	CSB276B	CSB276R	10
	On-Off	No	CSB277Y	CSB277B	CSB277R	146
	Without Inserts	Yes	CSB293Y	CSB293B	CSB293R	146
	Without Inserts	Yes	CSB270Y	CSB270B	CSB270R	25
	Without Inserts	No	CSB271Y	CSB271B	CSB271R	25
Single Speed (2NO)	Without Inserts ^[1]	Yes	CSB279Y	CSB279B	CSB279R	147
	Without Inserts	Yes	CSB290Y	CSB290B	CSB290R	100
	Up-Down	Yes	CSB292Y	CSB292B	CSB292R	100
Two Speed	Without Inserts	Yes	CSB280Y	CSB280B	CSB280R	150
	Up-Down	Yes	CSB282Y	CSB282B	CSB282R	150

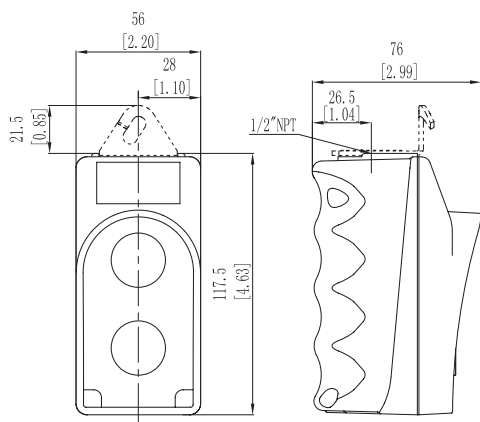
^[1] Maintained Contact

* Add -A suffix to include a strain Relief

Contact Symbols



Dimension: mm/inch



Hanger Bracket and Seal Kit:

Order code: CSB-HG



Pendent Stations CSE Series



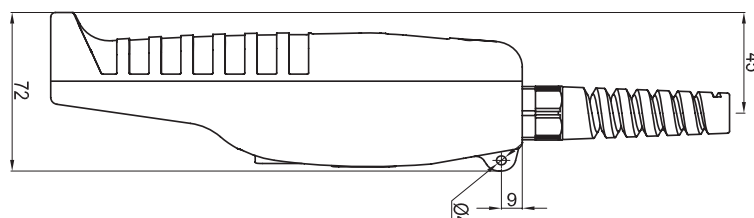
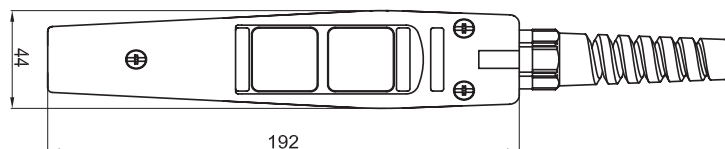
Safety yellow high impact fiber reinforced plastic body
 NEMA 4X watertight for indoor and outdoor applications
 Ambient temperature range: -20 to 158F (-29 to 70C)
 UL and cUL listed capabilities
 Choice of single-speed, two-speed, or on-off

Electrical Contact Ratings (OSHA Regulation, Section 1910.70, Overhead and Gantry Cranes, limits the voltage of pendant push buttons to 150 Vac or 300 Vdc.)

AC NEMA600							DC NEMA600		
Volts	Inductive 35% Power Factor					Resistive 75% Power Factor	Volts	Inductive and Resistive	
	Make		Break		Continuous Carrying Amperes	Make, Break and Continuous Carrying Amperes		Make and Break Amperes	Continuous Carrying Amperes
	A	VA	A	VA					
120	60	7200	6	720	10	10	120	1.1	5
240	30	7200	3	720	10	10	240	0.55	5
480	15	7200	1.5	720	10	10	600	0.2	5
600	12	7200	1.2	720	10	10			

Wiring Diagrams

Part Number	CSE272	CSE275	CSE282
Description	Single – Speed [†]	Mom entary (on/off)	Tw o – Speed [†]
Wiring Diagrams	Top Ctr. Bott. NO 1 COM NO 2	Top Ctr. Bott. NO 1 COM NC 1	Top Ctr. Bott. NO 1 2-speed NO 2
Features	mechanical interlocked		mechanical interlocked



Pendent Stations CSH Series

Safety yellow high impact fiber reinforced plastic body
NEMA 4X watertight for indoor and outdoor applications
Ambient temperature range: -20 to 158F (-29 to 70C)
UL and cUL listed capabilities
Choice of single-speed, two-speed, or on-off
Optional emergency stop button



Electrical Contact Ratings (OSHA Regulation, Section 1910.70, Overhead and Gantry Cranes, limits the voltage of pendant push buttons to 150 Vac or 300 Vdc.)

AC NEMA600							DC NEMAP600		
Volts	Inductive 35% Power Factor					Resistive 75% Power Factor	Volts	Inductive and Resistive	
	Make		Break		Continuous Carrying Amperes	Make, Break and Continuous Carrying Amperes		Make and Break Amperes	Continuous Carrying Amperes
	A	VA	A	VA					
120	60	7200	6	720	10	10	120	1.1	5
240	30	7200	3	720	10	10	240	0.55	5
480	15	7200	1.5	720	10	10	600	0.2	5
600	12	7200	1.2	720	10	10			

For control of single-speed hoist motors

Number of operators	Contact block(s) and scheme		Reference
	Per direction	For Emergency stop	
2 mechanically interlocked	1 N/O PBC22-10A	-	CSH22-0201
	1 N/C + 1 N/O PBC22-01A + PBC22-10A	-	CSH22-0205
3 mechanically interlocked + 1 latching Emergency stop Ø 30 mm operator	1 N/O PBC22-10A	1 N/C PBC22-01A	CSH22-0301
	1 N/C + 1 N/O PBC22-01A + PBC22-10A	1 N/C PBC22-01A	CSH22-0305
2 mechanically interlocked	2 step 1 N/O + 1 N/O staggered 2*PBC22-10A	-	CSH22-0207
3 mechanically interlocked + 1 latching Emergency stop Ø 30 mm operator	2 step 1 N/O + 1 N/O staggered 2*PBC22-10A	1 N/C PBC22-01A	CSH22-0307

Dimensions

CSH-02**

CSH-03**

