

# COMMERCIAL GRADE PUSHBUTTONS

**P3**  
COMMERCIAL  
PUSHBUTTONS

MOMENTARY ACTION, SEALED, SNAP-ACTION, DOUBLE BREAK

Makes and breaks every time! Less than 25mΩ contact resistance because the OTTO design features inherent rocking action that breaks welds and wipes contacts clean.

The P3 is the commercial version of the P1 Pushbutton switch, offering vastly improved life under extreme conditions found in some industrial environments. The pushbutton is sealed by a silicone boot operating on our patented “rolling sleeve,” providing longer life and smoother operation over a wide temperature range. Epoxy protects the contacts and terminals from hostile environments and solder flux.

High contact force (120g/4.2 oz), low contact resistance (25mΩ max) and short contact bounce are the result of our snap-action mechanism. These characteristics provide exceptional current carrying capabilities over the life of the switch. With the optional low level (gold plate) configuration, the P3 is well suited to interface directly to computers and other solid state devices.

Watertight sealing is available by simply adding “W” to your part number. Because the P3 is a double break switch, wide connection possibilities, longer life and greater capacity are offered. The P3 design provides a unique terminal connection to the moving element for added flexibility. Special versions can be provided with five terminals to control up to four circuits.

## Features:

- Button sealed with patented “rolling sleeve” principle
- Contact area sealed at button & terminals
- Less than 25mΩ contact resistance
- Positive tactile feedback
- Variety of mounting styles
- Engraved buttons & bezels available
- UL recognized & CSA certified
- 1 million mechanical cycle life
- Watertight to IP68S available
- RoHS/WEEE/Reach compliant



### Standard Characteristics/Ratings:

#### ELECTRICAL RATINGS:

Load	Sea Level @ 28VDC or 115VAC, 60/400Hz	50,000 feet @ 28VDC or 115VAC, 60/400Hz	Cycles
Resistive	10A	N/A	100,000
Inductive	5A	5A	100,000
Lamp	3A	N/A	100,000
Center Contact	3A max	N/A	100,000
DWV	1050Vrms	400Vrms	
Low Level	10mA @ 30mV max DC or peak AC		

**Electrical Life:** See Rating Chart

**Mechanical Life:** 1 million cycles, circuit forms 1, 2 & 6  
100,000 cycles, circuit forms 3, 4 & 5

**Seal:** IP64 or IP68S

**Shock:** MIL-STD-202, method 207

**Operating Temp Range:** -55°C to +85°C

**Operating Force:** 2.5 lbs. or 4.0 lbs.

**Reset Force:** 0.75 lb. min or 1.0 lb.

**Total Travel:** 0.085 +/- 0.015 inches

**Overtravel:** 0.012 inches min

**Movement Differential:** 0.015 inches min

#### MATERIALS:

**Case:** Anodized aluminum alloy

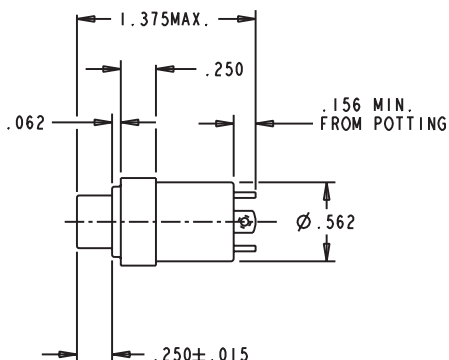
**Button:** Thermoplastic

**Terminals:** Brass with silver, gold for low level

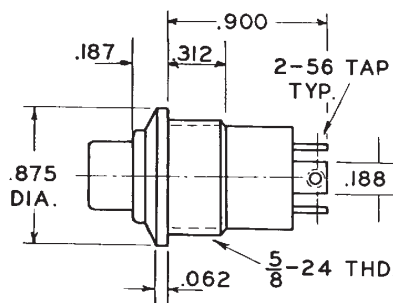
**Terminal Hardware:** Screws, lockwasher and terminal lug for screw terminal option

**Mounting Hardware:** Hex nut, lockwasher and panel seal when applicable

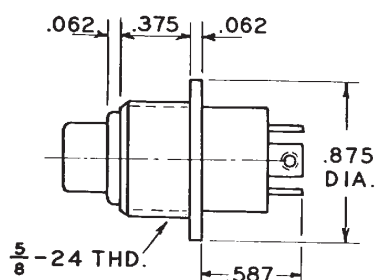
IDEAL FOR USE IN HEAVY MACHINERY &amp; COMMERCIAL APPLICATIONS



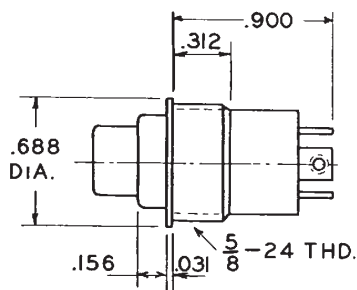
Style P3-1



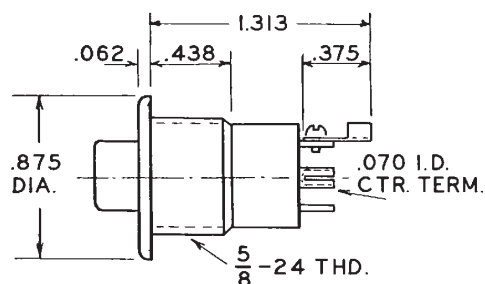
Style P3-3



Style P3-6



Style P3-7



Style P3-8

**ORDERING INFORMATION:**

Select the OTTO P3 switch to match your application requirements. Combinations of features are almost unlimited.

**Example:** P3-31111 is style 3 case, solder terminals, standard contact rating, SPST-N.O. contact configuration, 2.5 lbs. operating force, red button. For low level switching capability, specify P3-33111.

**P3 PART NUMBER CODE**

P3	-	X	X	X	X	*
Case Style		Terminal Style/Rating	Circuit Form	Operating Force/Action	Button Color	
1. Style 1		1. Solder/Std.	1. N.O.	1. 2.5 lbs./Momentary	1. Red	
3. Style 3		2. Screw/Std.	2. N.C.	2. 4.0 lbs./Momentary	2. Black	
6. Style 6		3. Solder/Low Level	3. N.C. 3 Terminal	3. Push-Pull	3. Orange	
7. Style 7		4. Screw/Low Level	4. N.O. 3 Terminal		4. Yellow	
8. Style 8			5. 5 Terminal		5. Green	
			6. 2 Circuit		6. Blue	
					7. Purple	
					8. Gray	
					9. White	

\* Add "W" suffix for watertight to IP68S.

## EXAMPLES OF CUSTOMIZED P3 SERIES SEALED PUSHBUTTONS

### Special Shaped Bezel

**Total Travel:** 0.085" +/- 0.015"  
**Operating Force:** 2.5, +0.5, -1.0 lb.  
**Reset Force:** 0.75 lb. min  
**Circuit:** SPNO-DB (Other circuits available)  
**Mechanical Life:** 1,000,000 cycles  
**Button:** Red nylon  
**Housing:** Clear anodized aluminum  
**P3-30017**



### Special Journaled Button

Watertight to IP68S, black anodized case and thermoplastic button available in nine colors.  
**Circuit:** SPNO-DB  
**Mechanical Life:** 1,000,000 cycles  
**Electrical Life:** 100,000 cycles  
**P3-90308-X**  
(X denotes button color)



### Special Large Round Button, Quick Connect Tab Terminals

**Total Travel:** 0.085" +/- 0.015"  
**Operating Force:** 4.0 +/- 1.0 lb.  
**Reset Force:** 1.0 lb. min  
**Circuit:** SPNO-DB (Other circuits available)  
**Mechanical Life:** 1,000,000 cycles  
**Button:** Black nylon  
**Housing:** Clear anodized aluminum  
**P3-30031**



### Large Diameter Button

Nine different button colors, black anodized protective shroud, watertight to IP68S.  
**Circuit:** SPNO-DB  
**Mechanical Life:** 1,000,000 cycles  
**Electrical Life:** 100,000 cycles at full load  
**P3-90207-X**  
(X denotes button color)



### Special Right Angle, Quick Connect Tabs, P3-6 Style

**Total Travel:** 0.085" +/- 0.015"  
**Operating Force:** 2.5, +0.5, -1.0 lb.  
**Reset Force:** 0.75 lb. min  
**Circuit:** SPNO-DB  
**Mechanical Life:** 1,000,000 cycles  
**Button:** Red nylon  
**Housing:** Clear anodized aluminum  
**P3-60024**



### Special "H" Case with Round Shaped Button

**Operating Force:** 4.0 +/- 1.0 lb.  
**Reset Force:** 1.0 lb. min  
**Circuit:** SPNC-DB (Other circuits available)  
**Mechanical Life:** 1,000,000 cycles  
**Button:** Red nylon  
**Housing:** Black anodized aluminum  
**P3-80016**



### Special Snap-In, Panel-Sealed, Rectangular Shaped Button

**Total Travel:** 0.125" max  
**Operating Force:** 4.0 +/- 1.0 lb.  
**Reset Force:** 1.0 lb. min  
**Circuit:** SPNO-DB (Other circuits available)  
**Mechanical Life:** 1,000,000 cycles  
**Button:** Black polyester  
**Housing:** Clear anodized celenex  
**P3-90037**



### Large Diameter Button

Nylon button is 1.187". Snaps on to special style body with leads. Dusttight to IP64.  
**Operating Force:** 2.5, +0.5, -1.0 lb.  
**Mechanical Life:** 1,000,000 cycles  
**Rating:** 10 amps Resistive  
**Circuit:** SPDT 2 circuit  
**P3-30101-X**



### Protective Shroud

This pushbutton is designed to avoid accidental actuation of the switch. The shroud requires the operator to purposely operate the switch. The actuation occurs below the height of the protective shroud, thus protecting against unintentional actuation.

Same ratings and sealing characteristics as the standard P3 series.

SPNC is shown.

**P3-90009**



### Emergency Stop Pushbutton

PART NUMBER	BUTTON COLOR
P330115-1 P330115-2 P330115-3	RED BLACK ORANGE
P330115-4 P330115-5 P330115-6	YELLOW GREEN BLUE
P330115-7 P330115-8 P330115-9	VIOLET GRAY WHITE

