# COMMERCIAL GRADE PUSHBUTTONS

P3 COMMERCIAL PUSHBUTTONS

#### MOMENTARY ACTION, SEALED, SNAP-ACTION, DOUBLE BREAK

Makes and breaks every time! Less than  $25 m \Omega$  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 ( $25m\Omega$  max) and short contact bounce are the result of our snapaction 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



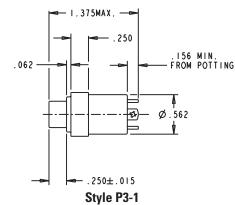
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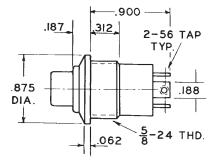
Standard Characteristics/Ratings:					
ELECTRICAL RATINGS:					
Load	Sea Level @ 28VDC or 115VAC, 60/400Hz	50,000 feet @ 28VDC or 115VAC, 60/400Hz	Cycles		
Resistive	10A	N/A	100,000		
Inductive	5A	5A	100,000		
Lamp	3A	N/A	100,000		
Center Contact	3A max	N/A	100,000		
DWV	1050Vrms	400Vrms			
Low Level	10mA @ 30mV max D	10mA @ 30mV max DC or peak AC			
Electrical Life:	See Rating Cha	rt			
Mechanical Life:		, circuit forms 1, 2 & 6 circuit forms 3, 4 & 5			
Seal:	IP64 or IP68S				
Shock:	MIL-STD-202, m	nethod 207			
Operating Temp Ra	<b>nge:</b> -55°C to +85°C	-55°C to +85°C			
Operating Force:	2.5 lbs. or 4.0 lbs	S.			
Reset Force:	0.75 lb. min or 1.	0.75 lb. min or 1.0 lb.			
Total Travel:	0.085 +/- 0.015 ir	0.085 +/- 0.015 inches			
Overtravel:	0.012 inches mi	0.012 inches min			
Movement Differen	itial: 0.015 inches mi	0.015 inches min			
MATERIALS:					
Case:	Anodized alumi	num alloy			
Button:	Thermoplastic				
Terminals:	Brass with silve	er, gold for low level			
Terminal Hardware:	Screws, lockwa	Screws, lockwasher and terminal lug for screw terminal option			
Mounting Hardwar	e: Hex nut, lockwa	Hex nut, lockwasher and panel seal when applicable			

PUSHBUTTONS

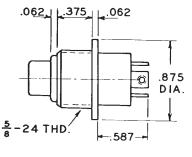
## SEALED COMMERCIAL GRADE PUSHBUTTONS

#### IDEAL FOR USE IN HEAVY MACHINERY & COMMERCIAL APPLICATIONS

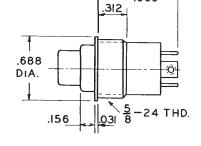




Style P3-3

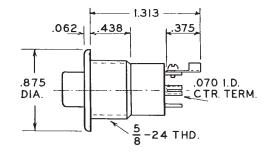


Style P3-6



Style P3-7

.900

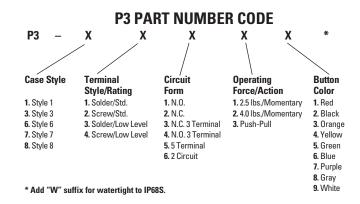


Style P3-8

### **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.



## SPECIAL PURPOSE DESIGNS

PUSHBUTTONS

#### 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 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

#### 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 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



#### **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)



Large Diameter Button

P3-90207-X (X denotes button color)

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



#### 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

# **C**

#### 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 Pushbut	ton 1.89 MAX	
PART NUMBER	BUTTON COLOR	5144	
P330115-1 P330115-2 P330115-3	RED BLACK ORANGE		F
P330115-4 P330115-5 P330115-6	YELLOW GREEN BLUE		375
P330115-7 P330115-8 P330115-9	VIOLET GRAY WHITE	TO WITHIN 062 .182	ES WITH X.032 TONS

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 M7E-HRN2

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 67081K512X
 701PB580
 7199K101
 810K12910
 810KSV30B
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 MML21KA3ABK
 MML23KA3AC05K-001

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 8450K1
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