

MOMENTARY ACTION, SEALED SUB-SUBMINIATURE PUSHBUTTON SNAP-ACTION SWITCHES

The P7 series incorporates OTTO's patented double break design in a significantly smaller package than the P1 series. These subminiature switches embrace today's technology requirements by allowing for a large number of switches to fit within a faceplate.

The long life snap-action design is protected from the environment by a silicon rubber boot, operating on a patented "rolling sleeve" principle that gives long sealed life and smooth operation.

The P7 series is designed to meet the requirements of MIL-PRF-8805 including low level switching (10mA @ 30mV) with power switching up to 5 amps at 28VDC as well.

A variety of mounting styles are offered to best match the application. The P7-1, P7-2, P7-7 and P7-8 case styles feature a swaged bushing shape to allow press fit installation in aircraft flight control and hand grips and similar applications. The other styles feature threaded bushing mounting. The P7-3 case style has a front panel bezel, while the P7-5 and P7-6 have conventional bushings for rear panel mounted installations. Silver or black bezels are standard. Other colors available on special order.

Pushbuttons are available in a choice of nine colors. Excellent tactile feedback assures the operator that contact transfer has been made.

A choice of MIL-SPEC and commercial versions of these switches are offered: Moistureproof and dusttight to IP64 and MIL-PRF-8805 Design 2 or watertight to IP68S and to MIL-PRF-8805 Design 3.

Features:

- Low level switching capability
- Less than 25mΩ contact resistance
- High contact pressure
- 6 circuit variations
- Positive tactile feedback
- Variety of mounting styles
- Qualified to MIL-PRF-8805/110
- Moistureproof & dusttight to IP64 & MIL-PRF-8805 Design 2 or watertight to IP68S & MIL-PRF-8805 Design 3
- RoHS/WEEE/Reach compliant



Standard Characteristics/Ratings:

ELECTRICAL RATINGS:		Sea Level @ 28VDC			50,000 feet @ 28VDC		
Load	Circuits:	1 & 2	3-5	6	1 & 2	3-5	6
Resistive		5A	2.5A	4A	5A	2.5A	4A
Inductive		3A	1.5A	2A	3A	1.5A	2A
Lamp		1A	0.5A	N/A	N/A	N/A	N/A
Motor		3A	1.5A	N/A	N/A	N/A	N/A
DVV		1050Vrms			400Vrms		
Center Contact					3A max		
Low Level					10mA @ 30mV		
Electrical Life:	25,000 cycles						
Mechanical Life:	1,000,000 cycles						
Seal:	IP64 and MIL-PRF-8805 Design 2 or IP68S and MIL-PRF-8805 Design 3						
Operating Temp Range:	-55°C to +85°C						
Operating Force:	1.7 +/- 0.5 lb.						
Total Travel:	0.080 inches max						
Overtravel:	0.010 inches min						
MATERIALS:							
Case:	Anodized aluminum alloy						
Button:	Thermoplastic						
Terminals:	Brass with gold over silver						
Terminal Hardware:	None provided						
Mounting Hardware:	Hex nut, lockwasher and panel gasket when applicable						

SEALED AGAINST DUST & MOISTURE, LOW LEVEL SWITCHING OPTION

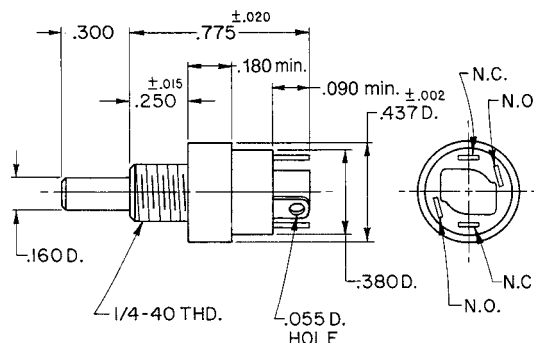
P7-1 Series Case Style 1 Press Fit Mount Also available with PC terminals.		P7-6 Series Case Style 6 15/32" Threaded Bushing Also available with PC pins.																																																																									
P7-2 Series Case Style 2 Press Fit Mount Also available with PC pins.		P7-7 Series Case Style 7 Press Fit Mount Also available with PC pins.																																																																									
P7-3 Series Case Style 3 Bezel/Threaded Bushing Also available with PC pins.		P7-8 Series Case Style 8 Press Fit Mount Guarded Button Also available with PC pins.																																																																									
P7-5 Series Case Style 5 1/4" Threaded Bushing Also available with PC pins.		Terminal Style "A" & "B" Standard																																																																									
PC Pin Mounting Pattern (As viewed from switch bottom. See above drawings for terminal identification.)		P7 PART NUMBER CODE P7 - X X X X X X <table><tr><th>Case Style</th><th>Terminal Style/Construction Grade</th><th>Circuit Form</th><th>Contact Rating</th><th>Bezel Color/ Button Dia.</th><th>Button Color</th></tr><tr><td>1. Style 1</td><td>A. Solder/Commercial</td><td>1. N.O.</td><td>1. Std.</td><td>1. Clear/Std.</td><td>1. Red</td></tr><tr><td>2. Style 2</td><td>B. Solder/Watertight</td><td>2. N.C.</td><td>2. Low Level</td><td>2. Black/Std.</td><td>2. Black</td></tr><tr><td>3. Style 3</td><td>Commercial</td><td>3. N.C. 3 Terminal</td><td></td><td>3. Clear/0.312 ①</td><td>3. Orange</td></tr><tr><td>5. Style 5</td><td>1. Solder/Military/Short</td><td>4. N.O. 3 Terminal</td><td></td><td>4. Black/0.312 ①</td><td>4. Yellow</td></tr><tr><td>6. Style 6</td><td>2. Solder/Commercial/Short</td><td>5. 5 Terminal</td><td></td><td></td><td>5. Green</td></tr><tr><td>7. Style 7</td><td>3. Solder/Mil. Watertight/Short</td><td>6. 2 Circuit</td><td></td><td></td><td>6. Blue</td></tr><tr><td>8. Style 8</td><td>4. PC Pin/Commercial</td><td></td><td></td><td></td><td>7. Purple</td></tr><tr><td></td><td>5. PC Pin/Military</td><td></td><td></td><td></td><td>8. Gray</td></tr><tr><td></td><td>6. PC Pin/Mil. Watertight</td><td></td><td></td><td></td><td>9. White</td></tr><tr><td></td><td>7. Solder/Com. Watertight/Short</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>8. PC Pin/Com. Watertight</td><td></td><td></td><td></td><td></td></tr></table>		Case Style	Terminal Style/Construction Grade	Circuit Form	Contact Rating	Bezel Color/ Button Dia.	Button Color	1. Style 1	A. Solder/Commercial	1. N.O.	1. Std.	1. Clear/Std.	1. Red	2. Style 2	B. Solder/Watertight	2. N.C.	2. Low Level	2. Black/Std.	2. Black	3. Style 3	Commercial	3. N.C. 3 Terminal		3. Clear/0.312 ①	3. Orange	5. Style 5	1. Solder/Military/Short	4. N.O. 3 Terminal		4. Black/0.312 ①	4. Yellow	6. Style 6	2. Solder/Commercial/Short	5. 5 Terminal			5. Green	7. Style 7	3. Solder/Mil. Watertight/Short	6. 2 Circuit			6. Blue	8. Style 8	4. PC Pin/Commercial				7. Purple		5. PC Pin/Military				8. Gray		6. PC Pin/Mil. Watertight				9. White		7. Solder/Com. Watertight/Short						8. PC Pin/Com. Watertight				
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① Not available with Case Styles 1, 2 & 5.

EXAMPLES OF CUSTOMIZED P7 SEALED PUSHBUTTONS



Actuation	OTTO Part Number
Momentary	P7-500001



Color	OTTO Part Number
Red	P7-900001
Black	P7-900002
White	P7-900009



Part Number: P7-500018

Technical drawing of a probe tip assembly. The drawing includes a side view and an end view. Key dimensions and features are labeled:

- Side View Dimensions:**
 - Overall length: $.55 \text{ MAX.}$
 - Distance from tip to start of thread: $.10$
 - Threaded section length: $.35 \text{ MAX.}$
 - Distance from tip to start of hex section: $.4950 \text{ MAX.}$
 - Distance from tip to start of hex section (alternative): $.42 \text{ MAX.}$
 - Distance from tip to start of hex section (alternative): $.59 \text{ MAX.}$
 - Thread specification: $.250-32\text{UNEF}-2\text{A}$
 - Thread length: $.415$
 - Thread length (alternative): $.49 \text{ W/GR P}$
 - Tip diameter: $.160 \pm .005$
 - Tip diameter (alternative): $.123 \pm .0010$
 - Tip diameter (alternative): $.160 \pm .005$
- End View Dimensions:**
 - Hex diameter: $.500 \text{ TYP.}$
- Other Labels:**
 - "BUTTON ACCEPTS SNAP ON CAPS" (pointing to the hex section)
 - "26 GA. WIRE LEADS 6' LONG" (pointing to the wire leads)

Mini Pushbutton, Shrouded

Technical drawing of a resistor showing three views: front, side, and end view.

Front View:

- Outer diameter: $\varnothing .490$
- Inner diameter: $\varnothing .615$

Side View:

- Total length: $.64$
- Mounting tab width: $\varnothing .190$
- Lead diameter: $\varnothing .055$ HOLE TYP.
- Lead length: $.195$
- Distance from potted end to lead start: $.090$ MIN. FROM POTTING
- Thread specification: $.468-32$ UNS-2A THREAD TO WITHIN $.062$ OF SHOULDER

End View:

- Outer diameter: $\varnothing .448 \pm .00$ TO FLAT
- Terminals: NO, NC
- Part number: OTTO 71649

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

OTTO:

[P7-3B6121](#) [P7-3B6122](#) [P7-5B6121](#) [P7-5B6122](#) [P7-6B6121](#) [P7-6B6122](#) [P7-511122](#) [P7-561128](#) [P7-351122](#) [P7-656122](#) [P7-536122](#) [P7-3B6142](#) [P7-112221](#) [P7-821112](#) [P7-821126](#) [P7-821129](#) [P7-626122](#) [P7-656221](#) [P7-712122](#) [P7-734122](#) [P7-751122](#) [P7-814129](#) [P7-551222](#) [P7-555111](#) [P7-571225](#) [P7-5B1121](#) [P7-5B1122](#) [P7-616242](#) [P7-8A1129](#) [P7-811222](#) [P7-511125](#) [P7-515126](#) [P7-536111](#) [P7-381244](#) [P7-3A1128](#) [P7-3A1242](#) [P7-824126](#) [P7-836229](#) [P7-8A1121](#) [P7-332124](#) [P7-371229](#) [P7-371244](#) [P7-376121](#) [P7-376225](#) [P7-381241](#) [P7-316121](#) [P7-321141](#) [P7-326146](#) [P7-326244](#) [P7-331149](#) [P7-331249](#) [P7-534111](#) [P7-311125](#) [P7-311126](#) [P7-311141](#) [P7-311148](#) [P7-314221](#) [P7-5A1121](#) [P7-516126](#) [P7-521129](#) [P7-521211](#) [P7-511111](#) [P7-534121](#) [P7-551221](#) [P7-551229](#) [P7-576121](#) [P7-831128](#) [P7-876221](#) [P7-3B6123](#) [P7-3B6225](#) [P7-7A1142](#) [P7-811122](#) [P7-811226](#) [P7-814121](#) [P7-816119](#) [P7-816228](#) [P7-3B1124](#) [P7-3B1149](#) [P7-3B6242](#) [P7-515128](#) [P7-515221](#) [P7-522119](#) [P7-741123](#) [P7-746122](#) [P7-371243](#) [P7-3A1142](#) [P7-3A1144](#) [P7-611229](#) [P7-621221](#) [P7-631146](#) [P7-632122](#) [P7-651122](#) [P7-722122](#) [P7-1B1224](#) [P7-231221](#) [P7-236222](#) [P7-256221](#) [P7-2B1222](#) [P7-611226](#) [P7-131122](#)