

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 allow the switch density today's technologies require in control grips and panels.

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

The P7 series is designed to meet the requirements of MIL-S-8805 including low level switching (10 mA @ 30 mV) with power switching up to 5 amps at 28 VDC 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 series 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 had 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. Watertight to IP68. Watertight to MIL-PRF-8805 Design 3. Consult the ordering code to specify.

**Quality Features:**

- **Low level switching capability**
- **Low contact resistance: .025 ohms max**
- **High contact pressure**
- **Six circuit variations**
- **Positive tactile feedback**
- **Variety of mounting styles**
- **Sealed against dust and moisture**
- **Qualified to MIL-PRF-8805/110**
- **Watertight IP68 available**



Standard Characteristics/Ratings:		
<b>ELECTRICAL:</b> (at 28 VDC or 115 VAC, 60/400 Hz.)		
LOAD	SINGLE CIRCUIT	2-CIRCUIT
Resistive	5 Amps	4 Amps
Inductive	3 Amps	2 Amps
Lamp	2 Amps	—
<b>Low Level Option:</b>	30 mV @ 10 ma. for 25,000 cycles	
<b>MATERIALS:</b>		
<b>Case:</b>	Aluminum alloy, anodized	
<b>Button:</b>	Thermoplastic	
<b>Seal:</b>	Internal silicone rubber	
<b>Terminals:</b>	The terminals are suitable for soldering	
<b>OPERATIONAL:</b>		
<b>Operating Force:</b>	1.7 lbs. ±.5 lbs. Also available 12oz. ±4oz.. on special order	
<b>Mechanical Life:</b>	1,000,000 cycles	
<b>Electrical Life:</b>	25,000 cycles	
<b>Dielectric Withstanding:</b>	1050 Vrms.	
<b>Temperature Range:</b>	-55°C to +85°C	

# MINI SIZED PER MIL-PRF-8805/110

**P7**  
SUBMINIATURE  
PUSHBUTTONS

SEALED AGAINST DUST AND MOISTURE, LOW LEVEL SWITCHING OPTION

<p><b>P7-1 Series</b></p> <p><b>Case Style 1</b> <b>Press-fit Mount</b></p> <p>Also available with P.C. terminals.</p>		<p><b>P7-6 Series</b></p> <p><b>Case Style 6</b> <b>15/32" Threaded Bushing</b></p> <p>Also available with P.C. pins.</p>																																																																									
<p><b>P7-2 Series</b></p> <p><b>Case Style 2</b> <b>Press-fit Mount</b></p> <p>Also available with P.C. pins.</p>		<p><b>P7-7 Series</b></p> <p><b>Case Style 7</b> <b>Press-fit Mount</b></p> <p>Also available with P.C. pins.</p>																																																																									
<p><b>P7-3 Series</b></p> <p><b>Case Style 3</b> <b>Bezel/Threaded Bushing</b></p> <p>Also available with P.C. pins.</p>		<p><b>P7-8 Series</b></p> <p><b>Case Style 8</b> <b>Press-fit Mount Guarded Button</b></p> <p>Also available with P.C. pins.</p>																																																																									
<p><b>P7-5 Series</b></p> <p><b>Case Style 5</b> <b>1/4" Threaded Bushing</b></p> <p>Also available with P.C. pins.</p>		<p><b>Terminal Style "A" &amp; "B"</b></p> <p><b>Standard</b></p>																																																																									
<p><b>P.C. Pin Mounting Pattern</b></p> <p>(As viewed from switch bottom. See above drawings for terminal identification.)</p>	<p><b>P.C. MOUNTING PATTERN (BOARD VIEW)</b></p>	<p><b>P7 PART NUMBER CODE</b></p> <p>P 7 X X X X X X</p> <table border="1"> <thead> <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> </thead> <tbody> <tr> <td>1. Style 1</td> <td>0. Special<sup>①</sup></td> <td>1. N.O.</td> <td>1. Standard</td> <td>1. Clear-Standard</td> <td>1. Red</td> </tr> <tr> <td>2. Style 2</td> <td>A. Standard Commercial Solder</td> <td>2. N.C.</td> <td>2. Low Level</td> <td>2. Black-Standard</td> <td>2. Black</td> </tr> <tr> <td>3. Style 3</td> <td>B. Standard Watertight Commercial Solder</td> <td>3. N.C. 3-Terminal</td> <td></td> <td>3. Clear-.312<sup>②</sup></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-.312<sup>②</sup></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. Two Circuit</td> <td></td> <td></td> <td>6. Blue</td> </tr> <tr> <td>8. Style 8</td> <td>4. P.C. Pin/Commercial</td> <td></td> <td></td> <td></td> <td>7. Purple</td> </tr> <tr> <td></td> <td>5. P.C. Pin/Military</td> <td></td> <td></td> <td></td> <td>8. Gray</td> </tr> <tr> <td></td> <td>6. P.C. 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. P.C. Pin/Com. Watertight</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Case Style	Terminal Style/Construction Grade	Circuit Form	Contact Rating	Bezel Color Button Dia.	Button Color	1. Style 1	0. Special <sup>①</sup>	1. N.O.	1. Standard	1. Clear-Standard	1. Red	2. Style 2	A. Standard Commercial Solder	2. N.C.	2. Low Level	2. Black-Standard	2. Black	3. Style 3	B. Standard Watertight Commercial Solder	3. N.C. 3-Terminal		3. Clear-.312 <sup>②</sup>	3. Orange	5. Style 5	1. Solder/Military/Short	4. N.O. 3-Terminal		4. Black-.312 <sup>②</sup>	4. Yellow	6. Style 6	2. Solder/Commercial/Short	5. 5-Terminal			5. Green	7. Style 7	3. Solder/Mil. Watertight/Short	6. Two Circuit			6. Blue	8. Style 8	4. P.C. Pin/Commercial				7. Purple		5. P.C. Pin/Military				8. Gray		6. P.C. Pin/MIL Watertight				9. White		7. Solder/Com. Watertight/Short						8. P.C. Pin/Com. Watertight				
Case Style	Terminal Style/Construction Grade	Circuit Form	Contact Rating	Bezel Color Button Dia.	Button Color																																																																						
1. Style 1	0. Special <sup>①</sup>	1. N.O.	1. Standard	1. Clear-Standard	1. Red																																																																						
2. Style 2	A. Standard Commercial Solder	2. N.C.	2. Low Level	2. Black-Standard	2. Black																																																																						
3. Style 3	B. Standard Watertight Commercial Solder	3. N.C. 3-Terminal		3. Clear-.312 <sup>②</sup>	3. Orange																																																																						
5. Style 5	1. Solder/Military/Short	4. N.O. 3-Terminal		4. Black-.312 <sup>②</sup>	4. Yellow																																																																						
6. Style 6	2. Solder/Commercial/Short	5. 5-Terminal			5. Green																																																																						
7. Style 7	3. Solder/Mil. Watertight/Short	6. Two Circuit			6. Blue																																																																						
8. Style 8	4. P.C. Pin/Commercial				7. Purple																																																																						
	5. P.C. Pin/Military				8. Gray																																																																						
	6. P.C. Pin/MIL Watertight				9. White																																																																						
	7. Solder/Com. Watertight/Short																																																																										
	8. P.C. Pin/Com. Watertight																																																																										

① Specials are serialized. Subsequent numerals do not specify standard features.

② Not available with Case Style 1, 2 and 5.

## EXAMPLES OF CUSTOMIZED P7 SEALED PUSHBUTTONS

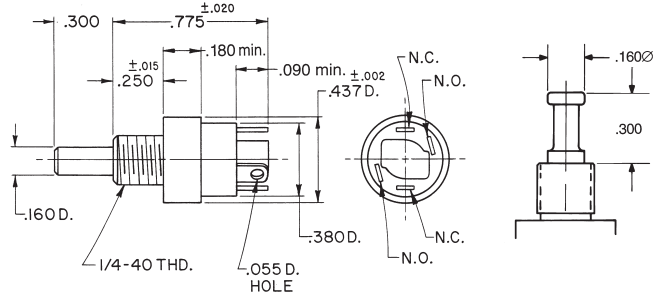


### Special Longer Length Button

Panel seal gasket and watertight enclosure. Button is black nylon. Bezel is black anodized aluminum alloy.

Available in two versions:

<b>Actuation</b>	<b>OTTO Part Number</b>
Momentary	P7-500001
Push-Pull Maintained	P7-500017



**P7-500001,**  
**Momentary**

**P7-500017,**  
**Push-Pull**

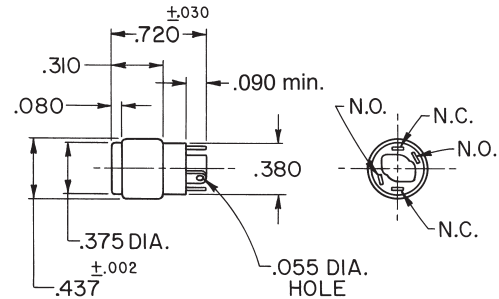


### Special Large Button, Press Fit

Available with a .375" dia. button with three color options.

<b>Color</b>	<b>OTTO Part Number</b>
Red	P7-900001
Black	P7-900002
White	P7-900009

Contact Factory for additional button color options



### Special Snap-On Button, Wire leads

Features changeable snap-on button caps available in two diameters and in a range of colors. Switch is splash-proof sealed per MIL-S-8805 and is supplied with a silicone panel gasket.

**Part Number: P7-500018**

<b>Button Color</b>	<b>.440" Dia.</b>	<b>.375" Dia.</b>
Red	400725-1	400723-1
Black	400725-2	400723-2
Orange	400725-3	400723-3
White	400725-9	400723-9

Contact factory for additional button color options

