

## BUSHING MOUNT PUSHBUTTONS FOR OTTO B2 &amp; B3 BASICS

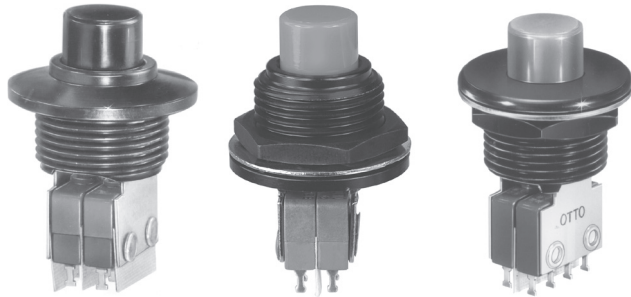
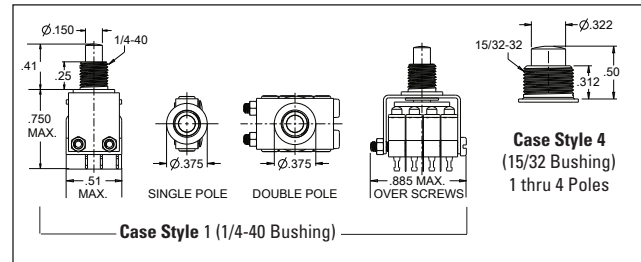
**IP68S Sealed Construction**

P4 series auxiliary actuators are designed to work with OTTO B2 (single break) and B3 (double break) basic switches. Auxiliary type actuators offer a wide variety of styles and types. Special basic switch characteristics can be specified to match your application needs. All case styles, except 1 and 4, feature OTTO's patented "rolling sleeve" principle and are sealed to IP68S.

**Unsealed Construction**

These unsealed pushbutton actuators feature a choice of 1/4" and 15/32" mounting bushings with nylon buttons available in nine colors. Choose single, two, three and four pole models. To order standard models, use the Part Number Code shown below.

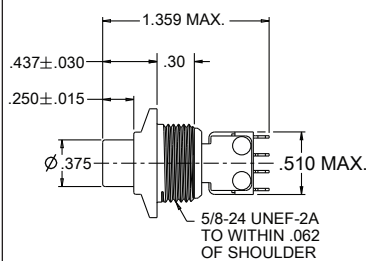
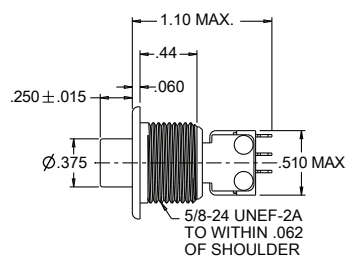
| Number of Poles | Operating Force (oz) | Release Force (oz) |
|-----------------|----------------------|--------------------|
| 1               | 8                    | 2                  |
| 2               | 16                   | 2                  |
| 3               | 24                   | 3                  |
| 4               | 32                   | 4                  |

**Sealed Construction**

Moistureproof at the front panel. Choice of one and two pole configurations. Select from a variety of six bezel/bushing mount case styles in clear (silver) or black anodized aluminum. Styles C, F and H are illustrated here. For styles A, B and G, see P1 series information. Buttons are available in nine colors.

**Operating Force:** 4.0 lbs. max

Use Part Number Code below to specify your requirements.

**P4-3 Case Style C Example****P4-8 Case Style H Example**

**Plunger Seal:** Watertight and Dusttight. See P1 series information for case styles A,B, F and G.

**RFI Shielding Option with Moistureproof Panel Seal**

RFI shielding can be included along with the moistureproof sealing feature in all case styles (except styles 1 and 4) and in single or double pole momentary action. Case styles are illustrated at left. The plunger seal above panel is dusttight and watertight.

**Operating Force:** 5.0 lbs. max

To order, see Part Number Code below.

**ORDERING INFORMATION:****Standard Auxiliary Actuator Assemblies for Basics**

Select the OTTO P4 pushbutton switch assembly to match your specific application needs. Standard and special features are shown at right. Specify your choice by building the OTTO Part Number Code.

**Example:** P4-614121 features the style "F" case, DPDT (4 terminals each), PC terminals, single step momentary action, black bezel with red button.

**P4 PART NUMBER CODE**

| P4              | -              | X                     | X                 | X           | X            | X | * |
|-----------------|----------------|-----------------------|-------------------|-------------|--------------|---|---|
| Case Style      | Terminal Style | Circuit Form          | Switching Action  | Bezel Color | Button Color |   |   |
| 1. 1/4-40 THD   | 1. PC Terminal | 1. SPDT 3 Terminal    | 1. Momentary      | 1. Silver   | 1. Red       |   |   |
| 2. Style B ①    | 2. Turret      | 2. SPDT 4 Terminal    | 2. Two Step ③ ④   | 2. Black    | 2. Black     |   |   |
| 3. Style C      | 3. Wire Wrap   | 3. DPDT 6 Terminal    | 3. RFI Shielded ③ |             | 3. Orange    |   |   |
| 4. 15/32-32 THD |                | 4. DPDT 8 Terminal    | (Momentary)       |             | 4. Yellow    |   |   |
| 5. Style A ①    |                | 5. 3PDT 9 Terminal ②  |                   |             | 5. Green     |   |   |
| 6. Style F      |                | 6. 3PDT 12 Terminal ② |                   |             | 6. Blue      |   |   |
| 7. Style G ①    |                | 7. 4PDT 12 Terminal ② |                   |             | 7. Purple    |   |   |
| 8. Style H      |                | 8. 4PDT 16 Terminal ② |                   |             | 8. Gray      |   |   |
|                 |                |                       |                   |             | 9. White     |   |   |

① See P1 Series information for front panel appearance details.

② Available in case styles 1 and 4 only.

③ Not available in case styles 1 and 4.

④ Available in circuit form 3 and 4 only.

\* Add "W" suffix for watertight to IP68S (not available in case styles 1 and 4)

# ACTUATORS FOR BASIC SWITCHES

**P4**  
PUSHBUTTONS  
FOR BASICS

## BUSHING MOUNT PUSHBUTTONS FOR B2 & B3 BASICS



P4-10050-x



P4-10149-x

### Rugged Sealed Panel

These rugged, sealed aluminum pushbutton actuators are anodized in a variety of colors. Available in one and two pole models. An O-ring provides the panel seal to keep out water and dust from the basic switches behind the panel.

#### Operating Force:

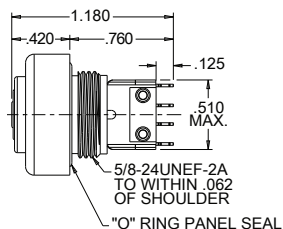
1 Pole: 2.5 lbs. max

2 Pole: 4.0 lbs.

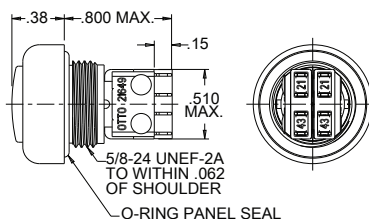
To order, please use Table A.

Table A

| Part No.<br>SPDT-DB | Part No.<br>DPDT-DB | Button<br>Color |
|---------------------|---------------------|-----------------|
| P4-10050-1          | P4-10149-1          | Red             |
| P4-10050-2          | P4-10149-2          | Black           |
| P4-10050-3          | P4-10149-3          | Orange          |
| P4-10050-4          | P4-10149-4          | Yellow          |
| P4-10050-5          | P4-10149-5          | Green           |
| P4-10050-6          | P4-10149-6          | Blue            |
| P4-10050-7          | P4-10149-7          | Violet          |
| P4-10050-8          | P4-10149-8          | Gray            |
| P4-10050-9          | P4-10149-9          | Clear           |



P4-10050-X



P4-10149-X

### Standard Sealed TwoStep™

Ideal for applications requiring three modes of operation: "OFF," Level 1 and Level 2. Plunger seal is dusttight and moistureproof. Available in P1 series bezel styles C, F and H. Two pole only.

#### Standard Operating Force:

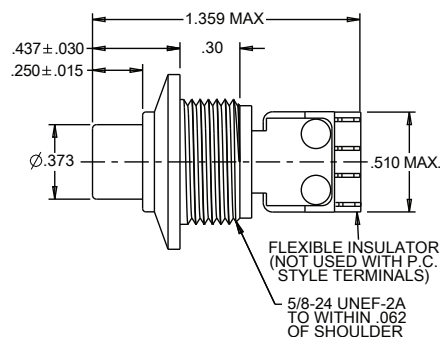
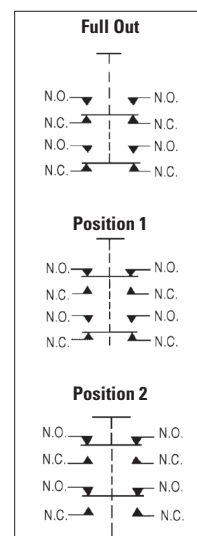
Position 1: 2.25 lbs. max

Position 2: 3.25 lbs. max

Total Travel: 0.140 inches max



#### Sequence of Action



### Miniature, Offset Pushbutton

This miniature switch features an offset pushbutton to clear back of panel interference, stainless steel bushing and natural acetal button.

**Operating Force:** 8 oz max

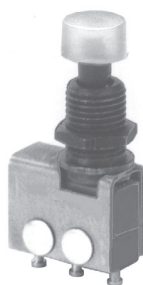
**Circuit:** SPDT

**Rating:** 1 amp Resistive

**Mechanical Life:** 50,000 cycles

**Electrical Life:** 25,000 cycles

P4-900027



### Special TwoStep™ Pushbutton, Dusttight Sealed

Switch "A" operates at Level 1; stays "on" when Level 2 operates Switch "B".

**Circuit:** SPDT 2 circuit

**Rating:** 5 amps Resistive  
3 amps Inductive @ 28VDC

**Operating Force:** Level 1: 1.75 +/- 0.5 lb.  
Level 2: 2.75 +/- 0.5 lb.

**Button:** Red nylon

P4-20002



### Style F, Panel Sealed, 2 Pole

Moistureproof and dusttight sealed switch features the "F" style bezel, as illustrated on previous page. Button is molded of gray nylon.

**Total Travel:** 0.100" max

**Operating Force:** 4.0 lbs. +/- 1.0 lb.

**Circuit:** DPNO-DB

**Rating:** 10 amps Resistive  
5 amps Inductive

**Mechanical Life:** 50,000 cycles

**Electrical Life:** 25,000 cycles

P4-600009



### Splash and Dusttight Sealed, 2 Pole, 4 Circuit

**Operating Force:** 4.0 lbs. +/- 1.0 lb.

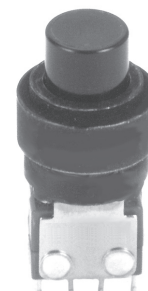
**Circuit:** DPDT 4 circuit

**Rating:** 5 amps Resistive  
3 amps Inductive

**Contacts:** Basic switches:  
Qualified per MIL-PRF-8805/101-009

**Button:** Black nylon

P4-10044



## BUSHING MOUNT PUSHBUTTONS FOR B2 &amp; B3 BASICS

**Square Button, Single Pole, 2 Circuit**

This subminiature pushbutton switch features a button molded of Lexan.

**Operating Force:** 24 +/- 4 oz

**Rating:** 5 amps Resistive  
3 amps Inductive

**Contacts:** Gold plate

White and other colors available.

**P4-300015**

**Vandal Resistant**

Brass plated dull nickel housing and button is watertight sealed. Ideal for unattended machines operated by the public.

**Total Travel:** 0.10" max

**Operating Force:** 4.0 lbs. max

**Circuit:** DPNO-DB

**Mechanical Life:** 50,000 cycles

**Bezel:** 0.969" dia.

**Button:** 0.600" dia.

**P4-10155-2**

For larger 1.5" dia., SPNO-DB design, see P1-90135-2.

**Watertight Panel Sealed  
Double Pole**

Dress ring has O-ring provision for watertight panel seal. Button and case are black. Switch uses MIL-PRF-8805/101 basics. Seal is watertight. Operating force is 4.0 lbs.

**P4-900003**

**1/4-40 Bushing, SPDT 2 Circuit**

This subminiature pushbutton switch features an anti-turn device to facilitate installation.

**Operating Force:** 10 oz max

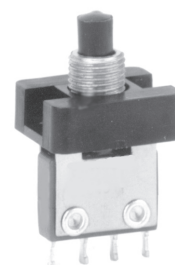
**Rating:** 8 amps Resistive @ 28VDC

**Bushing:** Stainless steel

**Bracket:** Stainless steel

**Button:** Nylon

**P4-10029**

**6 Pole, Right Angle, PC Mount**

Solders into printed circuit board. Basic switches per MIL-PRF-8805/4.

**Operating Force:** 3.5 lbs. max

**Rating:** 1 amp Resistive

**Contacts:** Gold

**Button Color:** Choice of nine colors

**P4-10073-X**

(X denotes button color)

**2 Pole, Right Angle, Bushing Mount—  
Single and TwoStep™ Versions**

Right angle bushing mount assembly of basic switches. Either 2-mode momentary or 3-mode. TwoStep™ (Off-Level 1-Level 2) action.

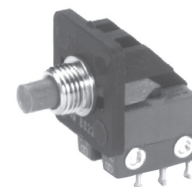
**Operating Force:** 24 +/- 4 oz

**Rating:** 8 amps Resistive

**Plunger:** Red nylon (Other colors available)

**Bushing:** Stainless steel

**Single Level:** P4-10022    **TwoStep™:** P4-20003

**8 Pole, Positive Detent, Sealed**

**Circuit:** 8 PDT

**Rating:** 1 amp Resistive  
0.5 amps Inductive

**Bracket:** Stainless steel

**Bushing:** Aluminum black anodized

**Button:** Nylon, choice of nine colors

**P4-10082-X**

(X denotes button color)

**Push-Pull Button, 3 Pole**

When the button is pushed down, a locking mechanism holds the pushbutton in the operated state. When the button is pulled up to release the lock, the pushbutton returns to its original position.

**Total Travel:** .200" max.

**Operating Force:** 3 lbs. min.

**Circuit:** SPDT-DB

**Rating:** 2 amps Resistive @ 28VDC

**Button:** Black thermoplastic

**P4-900124**

**Miniature with Shrouded  
Pushbutton, Unsealed**

**Total Travel:** 0.070" max

**Operating Force:** 2.5 lbs. max

**Circuit:** DPDT-DB

**Rating:** 8 amps Resistive @ 28VDC

**Button:** Black nylon

**Housing:** Clear anodized aluminum

**Plunger:** Unsealed

**P4-10090**

**Miniature with Shrouded Pushbutton,  
Dusttight Sealed**

**Total Travel:** 0.100" max

**Operating Force:** 4.0 lbs. max

**Circuit:** DPDT-DB

**Rating:** 8 amps Resistive @ 28VDC

**Button:** Black nylon

**Housing:** Black anodized aluminum

**Plunger:** Dusttight sealed

**P4-900019**

