# SEALED DOME PUSHBUTTON SWITCHES

ATTRACTIVE AND RUGGED FOR WET & DUSTY ENVIRONMENTS

The OTTO P9 series pushbutton switches feature a contoured Dome style pushbutton and share similar size and characteristics to the OTTO P7 series. Major differences are plastic housing construction and the availability of a shorting bar contact arrangement. There are two button versions: low button profile and high button profile. The P9 comes with a threaded case for hex nut mounting or with a snap-in case. The switch series features short behind-panel depth. They also offer excellent mechanical and electrical performance while operating under severe conditions found in demanding applications.

The OTTO P9 Dome series is offered in dusttight and moistureproof sealed construction. Expect a minimum of 25,000 operations at full rated load of 5 amperes resistive or 3 amperes inductive; up to a million operations in low signal switching.

Watertight sealing (IP68) submersible to 1 meter water pressure is available. Add "W" suffix to the part number to specify IP68 rating.

The OTTO P9 Dome series is available in standard and low-force double-break snap-action and non-snap shorting bar models. All are momentary action. Special contact variations are available. High contact pressure and unique contact design provide low contact resistance for low level switching capability as well as full rated service. Solder, PC Pin, and .110" Quick Connect termination options are available.

Positive tactile feedback signaling the operator when the switch is operated is available in snap-action models but not shorting bar models.

The OTTO P9 Dome series is a quality precision switch designed for use in panels, control grips, computers, instruments, heavy equipment and other demanding applications where attractive, rugged pushbutton switches are required.

## Quality Features:

- **Attractive Dome style button**
- **Two button heights**
- **Double-break or Shorting bar, momentary action**
- **All plastic housing and button construction**
- **Threaded body or snap-in panel mounting**
- **Withstands extreme shock & vibration**
- **Positive tactile feedback contact transfer on snap-action models**
- **Solder, P.C. Pin, and .110" Quick Connect terminal styles**



Snap-in case with
.110" Quick Connect Terminals

| Standard Characteristics/Ratings: | |
|---|---|
| **OPERATIONAL:** | |
| **Mechanical Life:** | 1,000,000 cycles, minimum |
| **Seal:** | Moistureproof and dusttight to IP64 & MIL-PRF-8805 Design 2<br>Watertight to IP68 |
| **Operating Force:** | Standard: 1.7±.5 lbs.<br>Low Force: 12 oz., ±4 oz. |
| **Total Travel:** | .080 max. |
| **Temperature Range:** | -55°C to +85°C |
| **Case/Bezel:** | Thermoplastic |
| **Button:** | Thermoplastic. Standard Case/Bezel is Black. |
| **Mounting Hardware:** | Hexnut & Lockwasher<br>Torque Hexnut to 10 in./oz. max. |
| **Contacts:** | Gold Plated Silver Alloy |
| **ELECTRICAL:** | Snap-Action: at 28 VDC or 115 VAC, 60/400 Hz.<br>Shorting Bar: at 5VDC |

| | **Current Rating** | | **Operational Life** (Min. Cycles) | |
|---|---|---|---|---|
| Load | Snap-Action | Shorting Bar | Snap-Action | Shorting Bar |
| Resistive | 1A | 10mA | 1,000,000 | 1,000,000 |
| Resistive | 5A | N/A | 25,000 | N/A |
| Inductive | 3A | N/A | 25,000 | N/A |

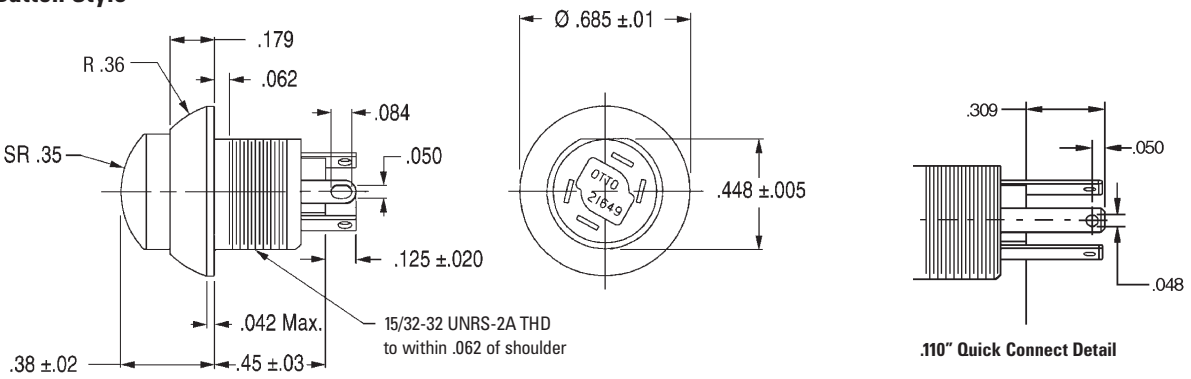
**Dielectric Withstand:** 1050 Vrms



Specifications Subject To Change Without Notice

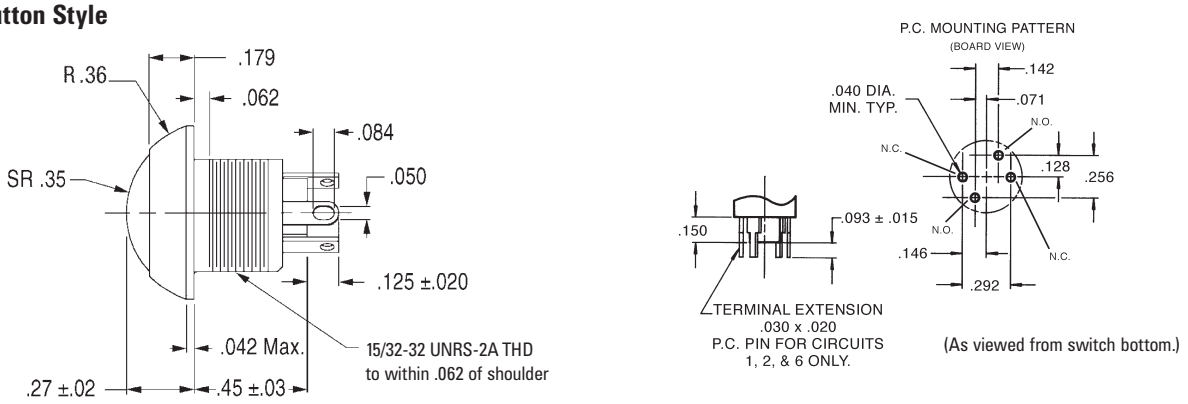
## CHOICE OF SNAP-ACTION & SHORTING BAR ACTION

### Raised Dome Button Style




**.110" Quick Connect Detail**

### Flush Dome Button Style



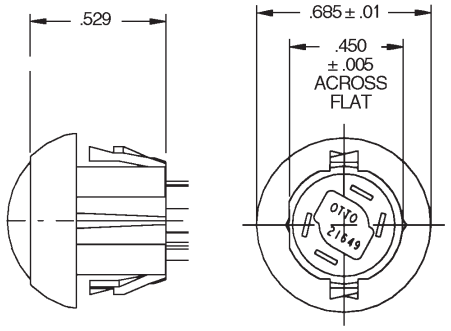

(As viewed from switch bottom.)

### Snap-in Case

| Recommended Panel Openings | | |
|---|---|---|
| *Panel Thickness | Recommended Ø | DIM. Across D-Flat |
| .024* | Ø .505 | .460 |
| .031 | Ø .505 | .460 |
| .118* | Ø .505 | .460 |
| .125 | Ø .505 | .460 |

* Must use panel gasket 401669 supplied with the switch.

- Snap-in Case allows front panel mounting into .024 or .118 thick panels using panel gasket 401669 or into .031 and .125 thick panels
- .110" Quick Connect terminals allow reliable, solderless wire connections
- Flush Neoprene Boot P/N 402339
- Raised Neoprene Boot P/N 402246




**Snap-in Case Detail**
**ONLY ON THIS CASE STYLE**

## Ordering Information

Select the OTTO P9 series features that match your specific application. Standard and special features are shown at right. Specify your choice by building the OTTO Part Numbering code.

Example: P9-211121 specifies raised dome style button, threaded case, solder terminals, N.O. circuit form, standard snap-action, black case/bezel, red button.

**P 9 - X X X X X X ***

**Button and Case Style**
1. Flush Dome with threaded case
2. Raised Dome with threaded case
3. Flush Dome with snap-in case
4. Raised Dome with snap-in case

**Terminal Style**
1. Solder
2. PC pin
3. .110" Quick Connect

***Contact factory for matte finish options***

**** Add "W" suffix for watertight.***

**Circuit Form**
1. N.O.
2. N.C. ①
3. 2-Circuit ①

**Switch Action**
1. Standard Snap-Action
2. Low force Snap-Action
3. Non-Snap Shorting Bar

① Not available in Shorting Bar version.

**Case/Bezel Color**
2. Black
1. Red
3. Orange
4. Yellow
5. Green
6. Blue
7. Purple
8. Gray
9. White

**Button Color**
1. Red
2. Black
3. Orange
4. Yellow
5. Green
6. Blue
7. Purple
8. Gray
9. White