

LOGIC LEVEL MOMENTARY ACTION, ATTRACTIVE & RUGGED FOR WET & DUSTY ENVIRONMENTS

The P9L Dome series logic level pushbutton switches feature a contoured dome style pushbutton and share similar size and characteristics to the 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 P9L comes with a threaded case for hex nut mounting or with a snap-in case. The switch series features a short behind panel depth. They also offer excellent mechanical and electrical performance while operating under severe conditions often found in demanding applications.

The P9L Dome series is offered in dusttight and moistureproof sealed construction. Watertight sealing is available. Simply add a "W" suffix to the part number to specify an IP68S & IP69K rating.

The P9L has an electrical and mechanical cycle life of one million operations.

The P9L 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 logic level switching capability. Solder, PC Pin, and 0.110" Quick Connect termination options are also available.

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

The P9L Dome series is a quality precision switch designed for use in panels, control grips, computers, instruments and other demanding applications where attractive, rugged logic level pushbutton switches are required.

## Features:

- Logic level switch
- Attractive dome style button, 2 button heights
- Small bezel option
- Double break or shorting bar, momentary action
- All plastic housing & button construction
- Threaded body or snap-in panel mounting
- Withstands extreme shock & vibration
- Positive tactile feedback contact transfer on snap-action models
- Solder, PC Pin & 0.110" Quick Connect terminal styles
- Moistureproof & dusttight to IP64 or watertight to IP68S and IP69K
- UL recognized & CSA certified
- RoHS compliant





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### Standard Characteristics/Ratings:

#### ELECTRICAL RATINGS:

Load	Sea Level @ 5VDC
Resistive	10mA
DVV	1050Vrms
<b>Electrical Life:</b>	1,000,000 cycles (25,000 Shorting Bar)
<b>Mechanical Life:</b>	1,000,000 cycles
<b>Seal:</b>	IP64 or IP68S and IP69K
<b>Operating Temp Range:</b>	-40°C to +85°C
<b>Operating Force:</b>	Standard: 1.7 lbs. +/- 0.5 lb. Low Force: 12 oz +/- 4 oz Shorting Bar: 18 oz +/- 6 oz
<b>Total Travel:</b>	0.080 inches max
<b>Overtravel:</b>	0.010 inches min

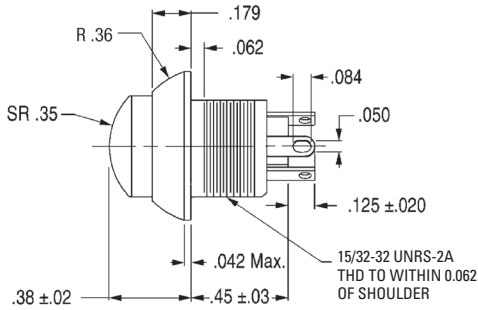
#### MATERIALS:

<b>Case:</b>	Thermoplastic
<b>Button:</b>	Thermoplastic
<b>Terminals:</b>	Brass with gold
<b>Terminal Hardware:</b>	None provided
<b>Mounting Hardware:</b>	Hex nut, lockwasher Panel gasket when applicable

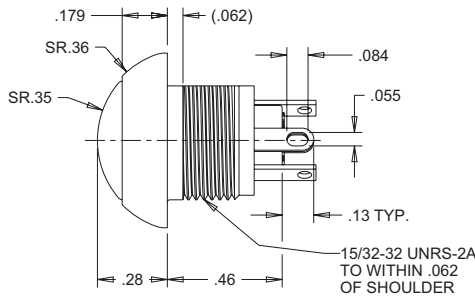
# SEALED DOME PUSHBUTTON SWITCHES

**P9L**  
DOME  
PUSHBUTTONS

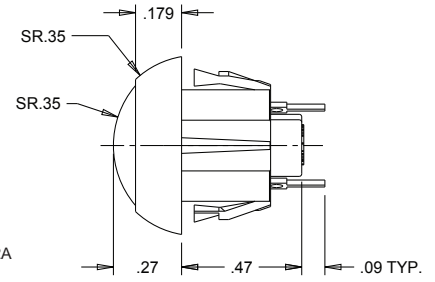
## CHOICE OF SNAP-ACTION & SHORTING BAR ACTION



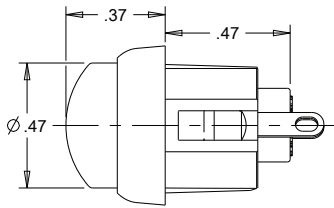
**Raised Dome Button Style**



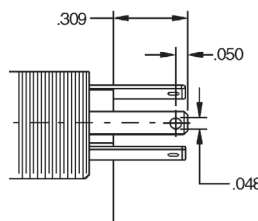
**Flush Dome Button Style**



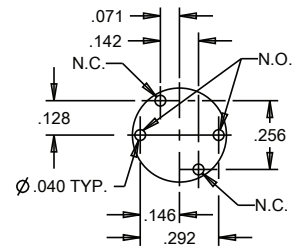
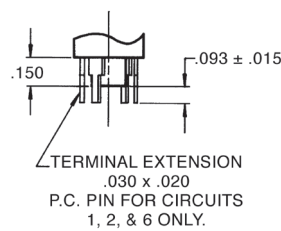
**Snap-In Case**  
(PC Terminals Shown)



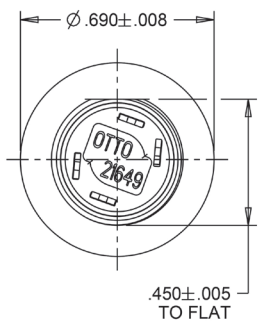
**Raised Dome Button Style with Snap-in Case and Small Bezel**



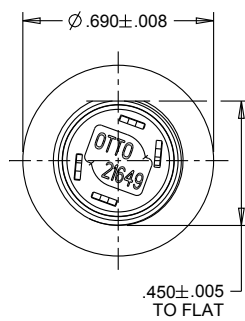
**0.110" Quick Connect Detail**



**Component Side P.C. Mounting Pattern**  
(As viewed from switch bottom)



**Solder Terminals**  
(Terminals not orientated to flat)  
Threaded Case



**PC Pin**  
(Orientated to case flats as shown)  
Snap-In Case

Recommended Panel Openings		
*Panel Thickness	Recommended Ø	DIM. Across D-Flat
0.024*	Ø 0.505	0.460
0.031	Ø 0.505	0.460
0.118*	Ø 0.505	0.460
0.125	Ø 0.505	0.460

\* Must use panel gasket 401669 supplied with the switch.

- Snap-in case allows front panel mounting into 0.024" or 0.118" thick panels using panel gasket 401669 or into 0.031" and 0.125" thick panels
- 0.110" Quick Connect terminals allow reliable, solderless wire connections
- Flush Neoprene Boot P/N 402339
- Raised Neoprene Boot P/N 402246

## ORDERING INFORMATION:

Select the OTTO P9L series features that match your specific application. Standard and special features are shown at right. Specify your choice by building the OTTO Part Number code.

**Example:** P9L-211121 specifies raised dome style button, threaded case, solder terminals, N.O. circuit form, standard snap-action, black case/bezel, red button.

P9L - X  
Button & Case Style\*\*

1. Flush Dome & Threaded Case, Std. Finish
2. Raised Dome & Threaded Case, Std. Finish
3. Flush Dome & Snap-In Case, Std. Finish
4. Raised Dome & Snap-In Case, Std. Finish
5. Flush Dome & Threaded Case, Matte Finish
6. Raised Dome & Threaded Case, Matte Finish
7. Flush Dome & Snap-In Case, Matte Finish
8. Raised Dome & Snap-In Case, Matte Finish
9. Flush Dome & Snap-In Case, Std. Finish, Small Bezel
- A. Raised Dome & Snap-In Case, Std. Finish, Small Bezel

## P9L PART NUMBER CODE

X	X	X	X	X	*
Terminal Style	Circuit Form	Switch Action	Case/Bezel Color	Button Color	
1. Solder	1. N.O.	1. Standard Snap-Action	1. Red	1. Red	
2. PC Pin	2. N.C. ①	2. Low Force Snap-Action	2. Black	2. Black	
3. 0.110" Quick Connect	3. 2 Circuit ①	3. Non-Snap Shorting Bar	3. Orange***	3. Orange	
			4. Yellow***	4. Yellow	
			5. Green***	5. Green	
			6. Blue***	6. Blue	
			7. Violet***	7. Violet	
			8. Gray***	8. Gray	
			9. White	9. White	

① Not available in Shorting Bar version.

\* Add "W" suffix for watertight to IP68S and IP69K.

\*\*\* Contact factory for std./matte button/case combination options.

\*\*\* Contact factory for minimum requirement.