## SEALED DOME PUSHBUTTON SWITCHES

The P9 Dome switches feature a contoured dome style pushbutton and share similar size and characteristics to the P7-D series. There are two button versions: flush button profile and raised button profile, and two bezel versions: standard and small.

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 and offers excellent mechanical and electrical performance while operating under severe conditions.
The P9 Dome series is offered in dusttight and moistureproof sealed construction. Mechanical life is 1.25 million operations and the electrical life is 25,000 operations at full rated load.

Watertight sealing to IP68S and IP69K is available simply by adding a "W" suffix to the part number.
The P9 Dome series is available in standard and low-force double break snap-action. 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 as well as full rated service. Solder, PC Pin, and $0.110^{\prime \prime}$ Quick Connect termination options are also available.

Positive tactile feedback signals the operator when the switch is actuated.

The 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.

## Features:

- Flush and raised dome button styles in gloss or matte finish
- Small bezel option
- Double break, 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
- Mechanical life is $\mathbf{1 . 2 5}$ million cycles
- Solder, PC Pin \& 0.110" Ouick Connect terminal styles
- Moistureproof \& dusttight to IP64 or watertight to IP68S and IP69K
- RoHS compliant


| Standard Characteristics/Ratings: |  |  |  |
| :---: | :---: | :---: | :---: |
| ELECTRICAL RATINGS: |  |  |  |
| Load | N.O./N.C. | 2 Circuit | Life |
| Resistive: 28VDC | 5A | 4A | 25,000 cycles |
| Resistive: 115VAC, 60Hz | 3A | 1A | 25,000 cycles |
| Inductive: 28VDC | 2A | 2A | 25,000 cycles |
| DWV | 1050Vrms |  |  |
| Logic Level | 10 mA @ 5 |  | 1,250,000 cycles |
| Mechanical Life: | 1,250,000 c |  |  |
| Seal: | IP64 or IP6 | d IP69K |  |
| Operating Temp Range: | $-40^{\circ} \mathrm{C}$ to + |  |  |
| Operating Force: | Standard: Low Force | $\begin{aligned} & \text { s. +/- } 0.5 \mathrm{lb} \\ & \mathrm{z}+/-4 \mathrm{oz} \end{aligned}$ |  |
| Total Travel: | 0.080 inche |  |  |
| Overtravel: | 0.010 inche |  |  |
| MATERIALS: |  |  |  |
| Case: | Thermopla |  |  |
| Button: | Thermopla |  |  |
| Terminals: | Brass with |  |  |
| Terminal Hardware: | None provi |  |  |
| Mounting Hardware: | Hex nut, lo <br> Panel gas | sher en applic |  |

CHOICE OF SNAP-ACTION \& SHORTING BAR ACTION



Flush Dome Small Bezel Style


Threaded Case Terminal Detail


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


0.110" Ouick Connect Detail


Wire Leads with Quick Connect

| Recommended Panel Openings |  |  |
| :---: | :---: | :---: |
| ${ }^{*}$ *Panel Thickness | Recommended $\varnothing$ | DIM. Across D-Flat |
| $0.024^{*}$ | $\varnothing 0.505$ | 0.460 |
| 0.031 | $\varnothing 0.505$ | 0.460 |
| $0.118^{*}$ | $\varnothing 0.505$ | 0.460 |
| 0.125 | $\varnothing 0.505$ | 0.460 |

* Must use panel gasket C401669-000025 supplied with the switch.
- Snap-in case allows front panel mounting into 0.024 " or $0.118^{\prime \prime}$ thick panels using panel gasket C401669-000025 (C807516-000025 for case styles 9 and A) or into 0.031 " and 0.125 " thick panels
- 0.110" Quick Connect terminals allow reliable, solderless wire connections
- Flush Neoprene Black Boot P/N C402339
- Raised Neoprene Black Boot P/N C402246
- Flush Silicone Translucent Boot P/N C402599-1
- Raised Silicone Translucent Boot P/N C402611-1


## 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 Number 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.

P9 PART NUMBER CODE

| P9 - X X | X |  | X |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Button \& Case Style** | Terminal Style | Circuit Form | Switch Action | Case/ <br> Bezel Color | Button Color |
| 1. Flush Dome \& Threaded Case, Std. Finish | 1. Solder | 1. N.O. | 1. Standard Snap-Action | 1. Red | 1. Red |
| 2. Raised Dome \& Threaded Case, Std. Finish | 2. PC Pin | 2. N.C. 3) | 2. Low Force Snap-Action | 2. Black | 2. Black |
| 3. Flush Dome \& Snap-In Case, Std. Finish | 3. 0.110" Quick | 3. 2 Circuit (3) | 3. Non-Snap Shorting Bar | 3. Orange*** | 3. Orang |
| 4. Raised Dome \& Snap-In Case, Std. Finish | Connect (0C) |  |  | 4. Yellow*** | 4. Yellow |
| 5. Flush Dome \& Threaded Case, Matte Finish | 4. $0.1100^{\prime \prime} 0$ with 2 |  |  | 5. Green*** | 5. Green |
| 6. Raised Dome \& Threaded Case, Matte Finish | Wire Leads (1) |  |  | 6. Blue*** | 6. Blue |
| 7. Flush Dome \& Snap-In Case, Matte Finish | 5. 0.110 OC with 4 |  |  | 7. Viole*** | 7. Violet |
| 8. Raised Dome \& Snap-In Case, Matte Finish | Wire Leads (2) |  |  | 8. Gray*** | 8. Gray |
| 9. Flush Dome \& Snap-In Case, Std. Finish, Small Bezel | (1) For Circuit Form 1 and 2. (1 black \& 1 white lead) 9. White 9. White |  |  |  |  |
| A. Raised Dome \& Snap-In Case, Std. Finish, | (2) For Circuit Form 3 . (2 black \& 2 white leads) |  |  |  |  |
| Small Bezel | ${ }^{3}$ Not available in Shorting Bar version. |  |  |  |  |
|  | * Add "W" suffix for watertight to IP68S and IP69K (will include panel gasket). |  |  |  |  |
|  | ** Contact factory for std./matte button/case combination options. |  |  |  |  |
| *** Contact factory for minimum requirement. |  |  |  |  |  |

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## OTTO:

P9-113121W P9-113122W P9-113125W P9-213129W P9-313121W P9-313125W P9-313122W P9-413129W $\underline{\text { P9-211222W P9-111326 P9-321121 P9-121125 P9-311228 P9-421123W P9-111128 P9-131324W P9-132121 }}$ P9-211126 P9-211323 P9-212125 P9-232221 P9-331125W P9-411225W P9-113229 P9-122221 P9-131121 P9-
711228 P9-811126 P9-111228 P9-111321W P9-113126W P9-113196 P9-321224 P9-331129 P9-413129 P9- 433124 P9-511129 P9-533124 P9-512121 P9-711121 P9-711322W P9-712121 P9-831122 P9-333121 P9-
411128 P9-411228W P9-411322 P9-431222 P9-511121W P9-111144 P9-331128 P9-331224 P9-411226 P9-
412122 P9-431122W P9-311121W P9-311129W P9-311221 P9-311122W P9-311222 P9-111126 P9-231222 P9-
221126 P9-231123 P9-231126W P9-231228 P9-233121 P9-211225 P9-213129 P9-222225W P9-231121W P9-
231129 P9-231221 P9-331124 P9-332199 P9-511226 P9-513128 P9-633229 P9-713125 P9-113129 P9-121224 P9-131129 P9-211125W P9-211127 P9-211128 P9-331123 P9-112125 P9-111166 P9-111321 P9-112124 P9112222 P9-513224 P9-613129 P9-711221 P9-231121 P9-231125W P9-311321W P9-113128 P9-113192 P9121222

