

# SUBMINIATURE WATERTIGHT SEALED

**P6-3**  
LIMIT  
SWITCHES

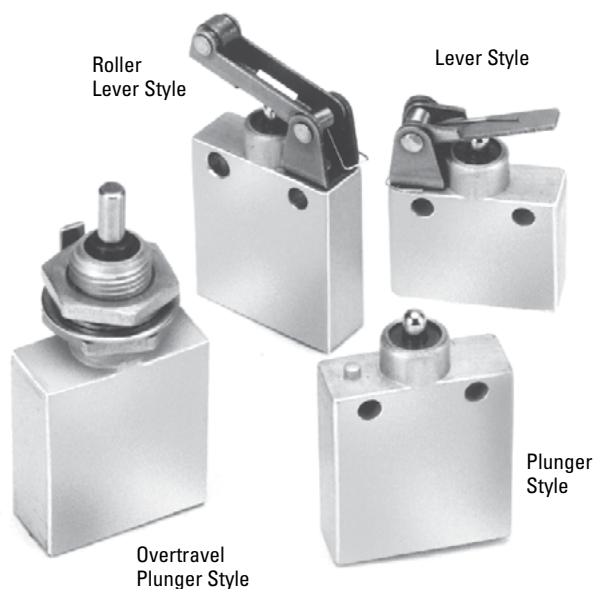
## FEATURING OTTO B5 SERIES BASIC SWITCHES

These subminiature sealed switches are contained in a rugged aluminum housing with choice of lever, roller or plunger. Featuring the B5 series basic switch, the P6-3 series is able to switch up to 10 amps. The high contact pressure and superior wiping action of the OTTO design also makes the P6-3 series an excellent choice when switching logic level loads.

Sealing against water and other liquids is per MIL-PRF-8805. Wire leaded models feature potted leads. The solder terminals are epoxy sealed.

### Features:

- **Compact design**
- **Watertight to MIL-PRF-8805**
- **Choice of four actuator styles**
- **Choice of wire lead or solder termination styles**
- **Up to 10 amps switching capability**
- **High contact pressure for low levels**
- **Precision operating points**
- **Reach compliant**



LIMIT SWITCHES

### Standard Characteristics/Ratings:

| ELECTRICAL RATINGS:    |                                                 | Sea Level @ 28VDC  |            | 50,000 feet @ 28VDC         |                    |            |            |            |
|------------------------|-------------------------------------------------|--------------------|------------|-----------------------------|--------------------|------------|------------|------------|
| Load                   | Single Circuit N.O. or N.C.                     | 2 Circuit Per Pole |            | Single Circuit N.O. or N.C. | 2 Circuit Per Pole |            |            |            |
| Resistive              | 10A                                             | 10A                |            | 10A                         | 10A                |            |            |            |
| Inductive              | 7.5A                                            | 5A                 |            | 3.5A                        | 2A                 |            |            |            |
| Motor                  | 4A                                              | 2A                 |            | N/A                         | N/A                |            |            |            |
| DWV                    | 1000Vrms                                        |                    | 500Vrms    |                             |                    |            |            |            |
| Electrical Life:       | 50,000 cycles                                   |                    |            |                             |                    |            |            |            |
| Mechanical Life:       | 50,000 cycles                                   |                    |            |                             |                    |            |            |            |
| OPERATIONAL:           | P6-31                                           | P6-32              | P6-33      | P6-34                       | P6-35              | P6-36      | P6-37      | P6-38      |
| Operating Force:       | 16 oz max                                       | 40 oz max          | 20 oz max  | 40 oz max                   | 32 oz max          | 60 oz max  | 20 oz max  | 48 oz max  |
| Release Force:         | 4 oz min                                        | 8 oz min           | 4 oz min   | 8 oz min                    | 4 oz min           | 24 oz min  | 4 oz min   | 8 oz min   |
| Movement Differential: | 0.060" max                                      | 0.020" max         | 0.060" max | 0.020" max                  | 0.080" max         | 0.035" max | 0.080" max | 0.040" max |
| Pretravel:             | 0.125" max                                      | 0.050" max         | 0.125" max | 0.070" max                  | 0.125" max         | 0.050" max | 0.125" max | 0.070" max |
| Overtravel:            | 0.025" min                                      | 0.012" min         | 0.025" min | 0.187" min                  | 0.025" min         | 0.012" min | 0.025" min | 0.187" min |
| Strength of Actuator:  | 10.0 lbs.                                       | 25.0 lbs.          | 10.0 lbs.  | 25.0 lbs.                   | 10.0 lbs.          | 25.0 lbs.  | 10.0 lbs.  | 25.0 lbs.  |
| Temperature Range:     | -55°C to +85°C                                  |                    |            |                             |                    |            |            |            |
| Seal:                  | Enclosure Design 3, watertight per MIL-PRF-8805 |                    |            |                             |                    |            |            |            |
| MATERIALS:             |                                                 |                    |            |                             |                    |            |            |            |
| Plunger:               | Corrosion resistant steel                       |                    |            |                             |                    |            |            |            |
| Lever:                 | Corrosion resistant steel (where applicable)    |                    |            |                             |                    |            |            |            |
| Mounting Hardware:     | None provided                                   |                    |            |                             |                    |            |            |            |

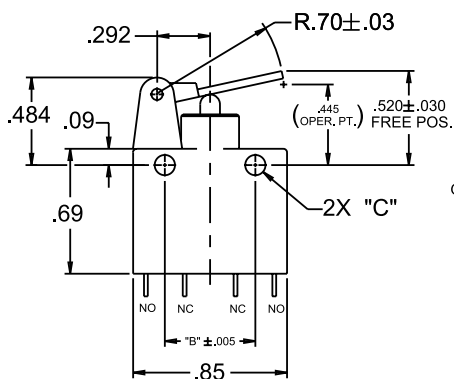
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## P6-3 PART NUMBER CODE

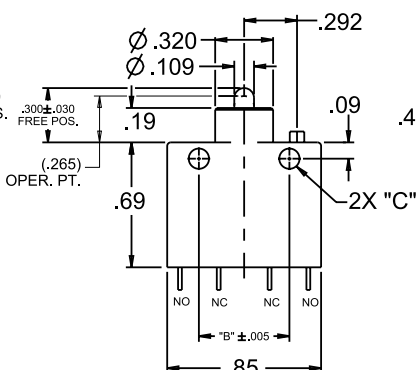
Single Pole

|                                                                    |                                                                                       |                                                                                      |                                                                                     |                             |          |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------|----------|
| <b>P6-3</b>                                                        | <b>X</b>                                                                              | <b>X</b>                                                                             | <b>X</b>                                                                            | <b>X</b>                    | <b>X</b> |
| <b>Actuator Style</b>                                              | <b>Terminal Style</b>                                                                 | <b>Circuitry</b>                                                                     | <b>Mounting Holes</b> (See drawing below.)                                          | <b>Serial Digit</b>         |          |
| 1. Lever<br>2. Plunger<br>3. Roller Lever<br>4. Overtravel Plunger | 1. Solder Terminals<br>1. 1' Potted Leads<br>4. 3' Potted Leads<br>5. 6' Potted Leads | 1. SPNO-DB, Form X<br>2. SPNC-DB, Form Y<br>3. SPDT-SB, Form C<br>4. SPDT-DB, Form Z | 1. No Holes<br>2. 1/2" Centers for #4-40 Screws<br>4. 3/8" Centers for #2-56 Screws | 0. 0 Except for<br>Specials |          |

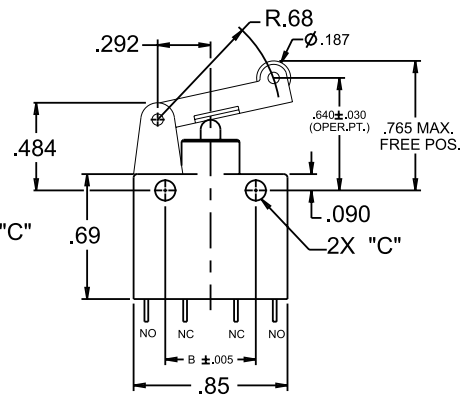
**STYLE P6-31**



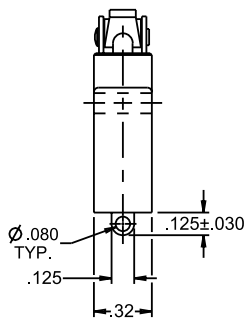
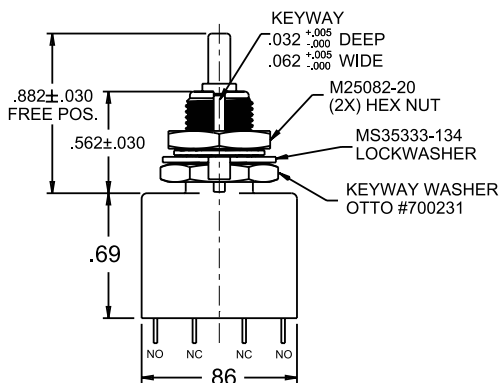
**STYLE P6-32**



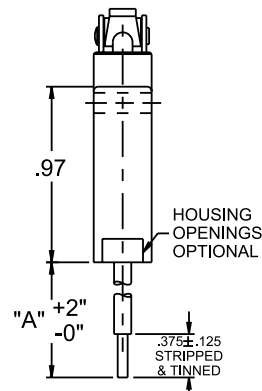
**STYLE P6-33**



**STYLE P6-34**



**SOLDER TERMINAL  
(TERM. STYLE 1  
EXAMPLE)**



**POTTED WIRE LEADS  
(TERM. STYLES 3, 4 & 5  
EXAMPLE)**

| CIRCUIT SCHEMATIC             |                               |
|-------------------------------|-------------------------------|
| <p>SPNO - DB<br/>(FORM X)</p> | <p>SPNC - DB<br/>(FORM Y)</p> |
| <p>SPDT - SB<br/>(FORM C)</p> | <p>SPDT - DB<br/>(FORM Z)</p> |

| POTTED WIRE LEADS |         | MOUNTING HOLES:<br>CODE 2 FOR 4-40 SCREWS<br>CODE 4 FOR 2-56 SCREWS | DIM "B"<br>CNTRS. | DIM "C"<br>DIA. |
|-------------------|---------|---------------------------------------------------------------------|-------------------|-----------------|
| STYLE             | DIM "A" |                                                                     |                   |                 |
| 3                 | 12"     |                                                                     | .500              | Ø.112 ± .003    |
| 4                 | 36"     |                                                                     |                   |                 |
| 5                 | 72"     |                                                                     | .375              | Ø.089 ± .003    |