

**WN SERIES**  
**1P7T to 1P10T**  
**MULTI POSITION SWITCH**  
**DC-22 GHz ◆ SMA**



The **WN Series** features SMA connectors and a frequency range of DC to 22 GHz.

This series is available with normally open functions only.

|                            |  |
|----------------------------|--|
| <b>RF Impedance:</b>       | 50 ohms nominal  |
| <b>Temperature Range:</b>  | -35°C to +85°C ambient   |
| <b>Operating Life:</b>     | 2,000,000 cycles min.  |
| <b>Switching Time:</b>     | 15 mSec max.   |
| <b>Switching Sequence:</b> | Break Before Make  |
| <b>Environmental:</b>      | Designed in Accordance to MIL-DTL-3928 (Testing and Operation Modes) |

**SPECIFICATIONS**

| Frequency   | VSWR (max.) | Insertion Loss (dB max.) | Isolation (dB min.) |
|-------------|-------------|--------------------------|---------------------|
| DC-3 GHz    | 1.15        | 0.15                     | 80                  |
| 3-8 GHz     | 1.25        | 0.25                     | 70                  |
| 8-12.4 GHz  | 1.30        | 0.30                     | 60                  |
| 12.4-18 GHz | 1.40        | 0.40                     | 60                  |
| 18-22 GHz   | 1.60        | 0.60                     | 55                  |

| Actuator Current (typical) | 12Vdc | 12-15 Vdc | 20-24 Vdc | 24-30Vdc |
|----------------------------|-------|-----------|-----------|----------|
| Normally Open              | 160mA | 200mA     | 320mA     | 400mA    |

\* If reduced coil current is required, please contact Factory.

**AVAILABLE OPTIONS**

| OPTION 2<br>RF CONNECTORS  | OPTION 4<br>VOLTAGE  | OPTION 5<br>ACTUATOR  | OPTION 6<br>FREQUENCY  | OPTION 8<br>SPECIAL OPTIONS  |
|--|--|---|--|--|
| 4 - SMA  | 1 - 6 Vdc +/- 10%<br>2 - 12 Vdc +/- 10%<br>3 - 24-30 Vdc                                     | Latching Self Cut-Off<br>D- Diodes<br>E- Diodes, Indicators                         | 3 - DC to 22 GHz   | L - TTL (High)<br>LL - TTL (Low)<br>1 - Bracket<br>R - Reset (Latching Only)<br>C - BCD<br>T - Terminated<br>U - USB |
| OPTION 3<br>TERMINALS  | 4 - 48 Vdc +/- 10%<br>5 - 110 Vac +/- 10%<br>6 - 12-15 Vdc<br>7 - 18-20 Vdc<br>8 - 20-24 Vdc | Normally Open<br>G- Diodes, Indicators<br>H- Indicators<br>J- Diodes<br>K- Standard | OPTION 7<br>POLARITY   |  |
| 1 - Solder Terminal<br>2 - Circular Connector<br>3 - Other (Specify) / Molex for USB Option<br>4 - Sub Miniature D-Shell Connector |  |   | 0 - Not Applicable<br>8 - Positive Common<br>9 - Negative Common |  |

**WN**

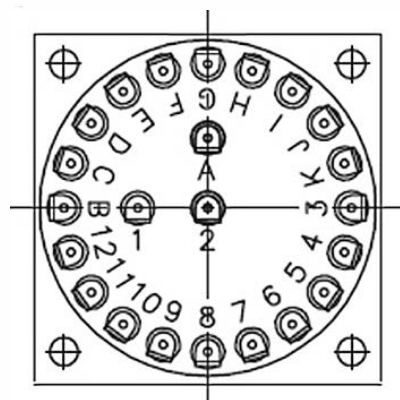
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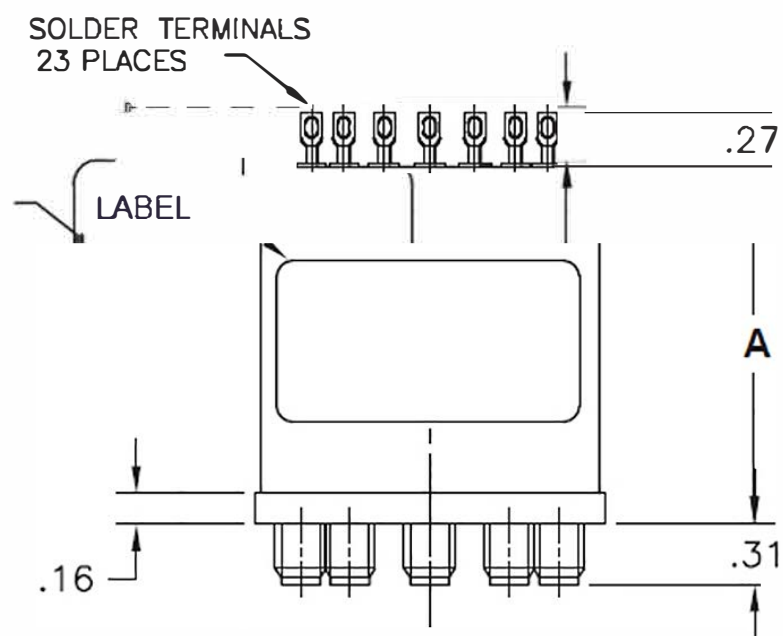
**3**

|                        |                                     |                               |                           |                         |                          |                           |                          |                                 |
|------------------------|-------------------------------------|-------------------------------|---------------------------|-------------------------|--------------------------|---------------------------|--------------------------|---------------------------------|
| <b>Option 1 Series</b> | <b>Option 1 Number of Positions</b> | <b>Option 2 RF Connectors</b> | <b>Option 3 Terminals</b> | <b>Option 4 Voltage</b> | <b>Option 5 Actuator</b> | <b>Option 6 Frequency</b> | <b>Option 7 Polarity</b> | <b>Option 8 Special Options</b> |
|------------------------|-------------------------------------|-------------------------------|---------------------------|-------------------------|--------------------------|---------------------------|--------------------------|---------------------------------|

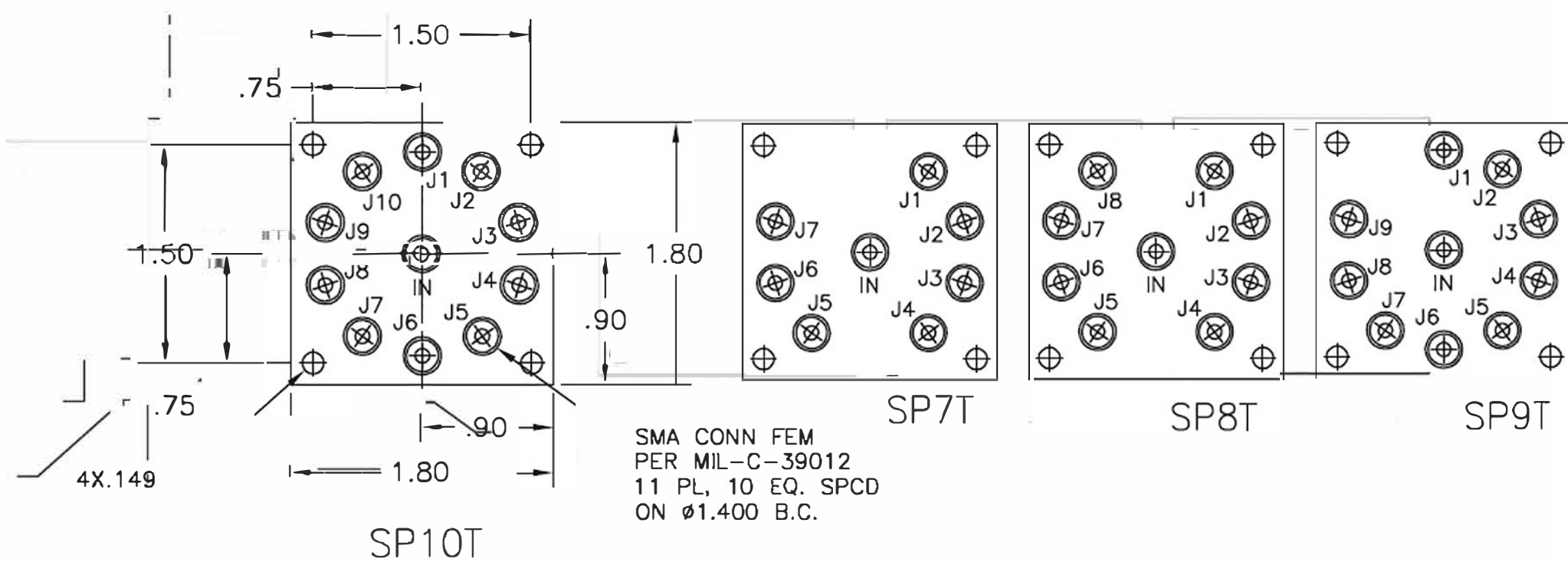
**TOP VIEW**



**FRONT VIEW**



**BOTTOM VIEW**



**DC TERMINAL FUNCTION**

| PIN | NORMALLY OPEN |      |     |     |        |     | w/ TTL |
|-----|---------------|------|-----|-----|--------|-----|--------|
|     | J             | J, K | K   | H   | G, H   | G   |        |
| 1   | N/A           | N/A  | N/A | +A  | N/A    | N/A | +A     |
| 2   | COM+/-        | COM  |     | -B  | COM+/- | COM | -B     |
| 3   | 1 1-/+        | 1    |     |     | 1 1-/+ |     |        |
| 4   | 2-/+          |      | 2   | 2   | 2-/+   | 2   | 2      |
| 5   | 3-/+          |      | 3   | 3   | 3-/+   | 3   | 3      |
| 6   | 4-/+          |      | 4   | 4   | 4-/+   | 4   | 4      |
| 7   | 5-/+          |      | 5   | 5   | 5-/+   | 5   | 5      |
| 8   | 6-/+          |      | 6   | 6   | 6-/+   | 6   | 6      |
| 9   | 7-/+          |      | 7   | 7   | 7-/+   | 7   | 7      |
| 10  | 8-/+          |      | 8   | 8   | 8-/+   | 8   | 8      |
| 11  | 9-/+          |      | 9   | 9   | 9-/+   | 9   | 9      |
| 12  | 10-/+         |      | 10  | 10  | 10-/+  | 10  | 10     |
| A   | N/A           | N/A  | N/A | N/A | COM    | COM | COM    |
| B   | N/A           | N/A  | 1   | N/A | 1      | 1   |        |
| C   | N/A           | N/A  | N/A | N/A | 2      | 2   | 2      |
| D   | N/A           | N/A  | N/A | N/A | 3      | 3   | 3      |
| E   | N/A           | N/A  | N/A | N/A | 4      | 4   | 4      |
| F   | N/A           | N/A  | N/A | N/A | 5      | 5   | 5      |
| G   | N/A           | N/A  | N/A | N/A | 6      | 6   | 6      |
| H   | N/A           | N/A  | N/A | N/A | 7      | 7   | 7      |
| I   | N/A           | N/A  | N/A | N/A | 8      | 8   | 8      |
| J   | N/A           | N/A  | N/A | N/A | 9      | 9   | 9      |
| K   | N/A           | N/A  | N/A | N/A | 10     | 10  | 10     |

NOTE#1: RESET IF (R) OPTION IS SELECTED, OTHERWISE N/A

**SCHEMATICS**

Pages 139-141

| FIG. | 29 | 29 | 30 | 29 | 29 | 30 |
|------|----|----|----|----|----|----|
|------|----|----|----|----|----|----|

**OUTLINE DRAWING DIMENSION "A"**

| 2.0" | 2.0" | 3.0" | 2.5" | 2.50" | 3.0" |
|------|------|------|------|-------|------|
|------|------|------|------|-------|------|