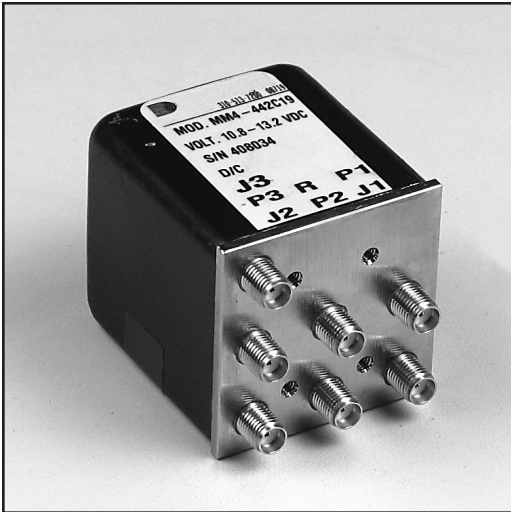


**MM SERIES**  
**4P3T**  
**MULTI POSITION SWITCH**  
**DC-18 GHz** ◆ **SMA**

Click Here to Request Quote



The **MM Series** contains 4P3T electromechanical switches designed for cell sites with three antennas each receiving or transmitting over 120 degrees or one-third of the coverage area for cellular telephone carrier or wireless applications.

This switch features three inputs and three outputs with one redundant port. The MM4 switch can replace three SPDT and SP3T switches or three transfer switches.

|                            |  |
|----------------------------|--|
| <b>RF Impedance:</b>       | 50 ohms nominal  |
| <b>Temperature Range:</b>  | -35°C to +85°C ambient   |
| <b>Operating Life:</b>     | 1,000,000 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    | 1.20        | 0.20                     | 80                  |
| 3-8 GHz     | 1.30        | 0.30                     | 70                  |
| 8-12.4 GHz  | 1.40        | 0.40                     | 60                  |
| 12.4-18 GHz | 1.50        | 0.50                     | 60                  |

| Actuator Current (typical) | 12Vdc    | 12-15 Vdc | 20-24 Vdc | 24-30Vdc |
|----------------------------|----------|-----------|-----------|----------|
|                            | Latching | 150mA     | 150mA     | 120mA    |

\* 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  |
|-------------------------------------|--|---|--|
| 4 - SMA                             | 1 - 6 Vdc +/- 10%<br>2 - 12 Vdc +/- 10%<br>3 - 24-30 Vdc | <b>Pulse Latching</b><br>C - Standard<br>Y - Diodes<br>F - Indicators<br>L - Diodes, Indicators | 3 - DC to 18 GHz   |
|                                     |  |   | OPTION 3<br>TERMINALS  |
| 4 - Sub Miniature D-Shell Connector | 6 - 12-15 Vdc<br>7 - 18-20 Vdc<br>8 - 20-24 Vdc          |   | 0 - Not Applicable<br>8 - Positive Common<br>9 - Negative Common |

Please Note: USB option is not available for this series.

|                 |                              |   |                        |                    |
|-----------------|------------------------------|---|------------------------|--------------------|
| MM              | 4                            | - | 4                      | 3                  |
| Option 1 Series | Option 1 Number of Positions |   | Option 2 RF Connectors | Option 3 Terminals |
|                 |                              |   | Option 4 Voltage       | Option 5 Actuator  |
|                 |                              |   | Option 6 Frequency     | Option 7 Polarity  |

High quality microwave and millimeter wave components and subsystems. Visit Ducommun RF Products online at [www.ducommun.com](http://www.ducommun.com) or contact us at 310.513.7200. All specifications are subject to change without notice.

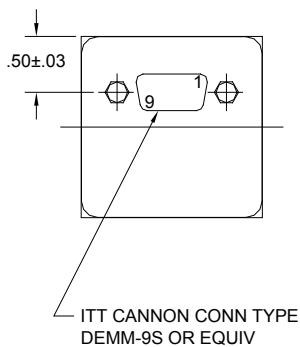
**DC TERMINAL FUNCTION**

| PIN | LATCHING |          |
|-----|----------|----------|
|     | C, Y     | F, L     |
| 1   | P1-J1    | P1-J1    |
| 2   | P1-R     | P1-R     |
| 3   | P2-J2    | P2-J2    |
| 4   | P2-R     | P2-R     |
| 5   | P3-J3    | P3-J3    |
| 6   | P3-R     | P3-R     |
| 7   | N/A      | Spare    |
| 8   | N/A      | Spare    |
| 9   | COM      | COM      |
| 10  | N/A      | Spare    |
| 11  | N/A      | Ind P1-R |
| 12  | N/A      | Ind P2-R |
| 13  | N/A      | Ind P3-R |
| 14  | N/A      | Spare    |
| 15  | N/A      | Ind COM  |

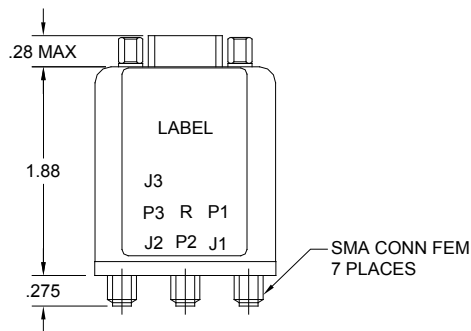
**SCHEMATICS**

| Pages 139-143 |    |
|---------------|----|
| FIG.          | 38 |

**TOP VIEW**



**FRONT VIEW**



**BOTTOM VIEW**

