

Tandem-Rotator Reciprocal X-Band "Single Element" SPDT Ferrite Switch

Economical
Small Size
Lightweight
Moderate Power Handling

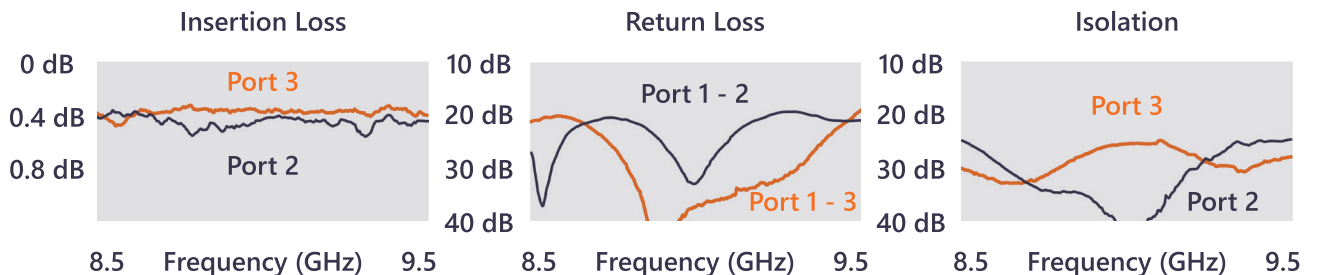


The Tandem-Rotator Reciprocal X-Band Ferrite Switch uses 0° and 90° total Faraday Rotation states to achieve reciprocal connections to the desired ports. This structure operates at moderate isolation levels and moderate peak and average power levels compared with MAG bridge-type switches, but provides a smaller and less expensive package.

A slightly larger variant is available to handle higher average power.

Specifications of MAG's "Single Element" Switch are presented on the back.

Measured values taken at lab ambient



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PARAMETER	VALUE
Frequency	X-Band 8.5 to 9.5 GHz
Isolation (dB)	25
Insertion Loss (dB)	0.5
Return Loss (dB)	17.7
Peak RF Power (Kilowatts)	50
Average RF Power (Watts)	100
Switching Time (Microseconds)	< 25
Size (Inches)	6.18 x 2.3 x 2.84
Weight (Pounds)	1.6
Operating Temperature Range (Degrees C)	-30 to 60

Sample of programs supported by MAG as OEM:

- APQ-164 B-1B ORS
- APQ-181 B-2
- APS-143 CP-140 Imaging
- APY-1/2 E-3 AWACS
- AR320 3D Air Defense
- ARTS-V1 / CLPS
- ARTS-V2
- ASARS-2 Synthetic Aperture
- ARSR-4 FAA Long Range
- ASTOR
- DWSR-2501C Doppler Weather
- Global Hawk Synthetic Aperture
- I-15/23 Reflectarray
- I-30 Simulator
- MPN-14K Landing Control
- PAAS Test Range
- Princeton Plasma Physics Laboratory
- RAC 3D Air Defense
- Skyshield 35 Air Defense
- Smart-L 3D Air Defense
- SPN-35C Approach Control
- SPQ-9B Surveillance / Tracking
- TPAAS Test Range
- TRS-3D Multimode
- TRS22XX 3D Air Defense
- ZPQ-1 Predator TESAR

Outline Drawing

NOTES

1. EXTERIOR HOUSINGS AND WAVEGUIDES ARE AL ALY WITH MIL-C-5541, CL 1A CONVERSION COATING.
2. EXTERIOR HARDWARE IS STAINLESS STEEL.
3. PORTS ARE WR90 FLANGES WITH STANDARD THREADED HOLE PATTERN.
4. WEIGHT: 1.6 POUNDS, 726 GRAMS.
5. DIMENSIONS IN INCHES, MILLIMETERS.

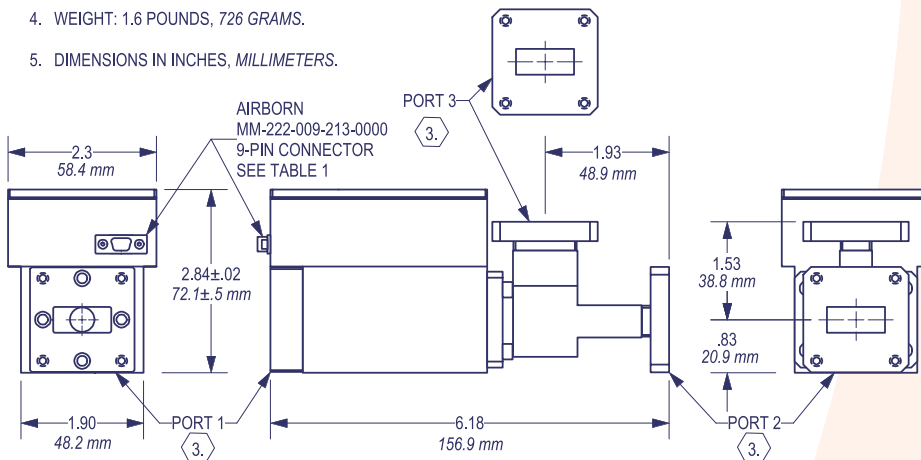


TABLE 1

PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION
1	28V	4	BIT +	7	ENABLE +
2	DIRECTION +	5	BIT -	8	ENABLE -
3	DIRECTION -	6	GROUND	9	GROUND

MAG DMSMS program support:

- MPQ-64 Sentinel SHORAD
- APY-1/2 E-3 AWACS
- BMEWS / PAVE PAWS
- HAWK
- SPN-35C Approach Control
- MSQ-T43 MTE System

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