Single-Pole-Multi-Throw (SP3T-SP6T)

Latching - Type N - DC to 12 GHz

Series: 13S thru 16S

Features:

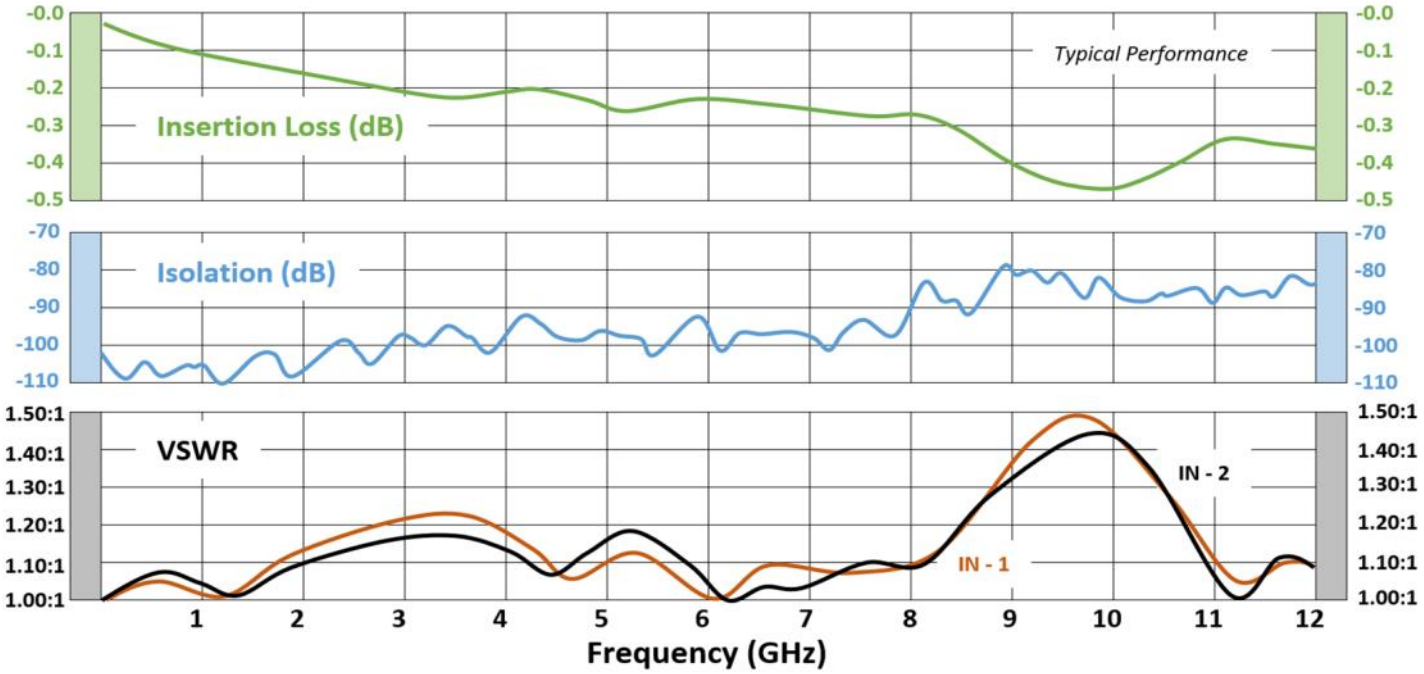
- Broadband: DC - 12 GHz
- Extended Life: 2 million cycles
- High Power: 1Kw CW at 400 MHz
- Low Insertion Loss
- Available in 3, 4, 5 or 6 Positions

RF Specification:

Frequency, (GHz)	DC-1	1-4	4-8	8-12
Ins. Loss dB (max)	0.30	0.40	0.40	0.50
Isolation dB (min)	70	60	60	60
VSWR (max)	1.25:1	1.40:1	1.45:1	1:70:1
Power Handling (W)*	600	300	210	190
Switching Time Switching Action Impedance	20 mS (max) Break-Before-Make 50 ohms			

Description:

High reliability and low loss performance makes these switches ideal for all testing applications. Magnetically latched in place after control voltage is removed. Available in 3, 4, 5 or 6 position versions with a wide selection of features to meet most requirements. Excellent higher power handling. **Applications:** lab testing to production ATE requirements. **Markets:** defense, telecom, aerospace and compliance testing.



Specifications	
Oper Temp	-25° C to +70° C
Oper Temp	-54° C to +85° C (ruggedized version)
Storage Temp	-55° C to +100° C
Humidity	Moisture resistant or immersion sealing available
Shock	MIL-STD-202 Method 213, Condition D, 500G (non oper)
Vibration	MIL-STD-202 Method 214, Condition D, 10G RMS (non oper)
Cycle Life	2M cycles (may vary based on selected options)

Voltages and Current				
Nominal Voltage, Vdc	12	15	24	28
Voltage Range, Vdc	11-13	14-16	22-26	26-30
Set current (mA) **	110	205	130	100
Reset current (mA) **	Equals Set current X the number of positions			

*** at nominal voltage and +20°C*

Popular Models	
13S-N2L3-1212	SP3T, TYPE-N, Latching, Indicators, DC-12GHz, 12VDC
13S-N2L4-1212	SP3T, TYPE-N, Latching, +com, DC-12GHz, 12VDC
14S-N2L3-1212	SP4T, TYPE-N, Latching, Indicators, DC-12GHz, 12VDC
14S-N2L3-1212-P	SP4T, TYPE-N, Latching, Indicators, DC-12GHz, 12VDC, Pin
16S-N2L4-1224-T	SP6T, TYPE-N, Latching, +com, DC-12GHz, 24VDC, TTL
16S-N2L3-1224-T	SP6T, TYPE-N, Latching, Indicators, DC-12GHz, 24VDC, TTL
16S-N2L3-1228-T	SP6T, TYPE-N, Latching, Indicators, DC-12GHz, 28VDC, TTL

- See backside for a full list of available features and options
- Contact us for high power and custom designs

* *CW power, +25°C, sea level, ≤1.20:1 load VSWR, cold switching*

 DS32020/_

Single-Pole-Multi-Throw (SP3T-SP6T)

Latching - TYPE-N- DC to 12 GHz

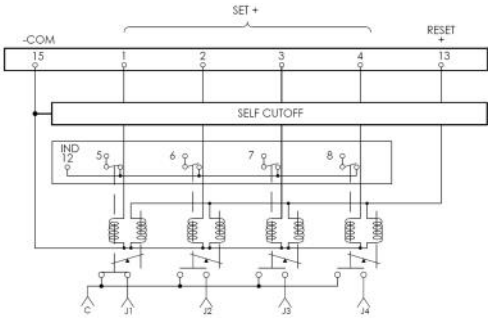
Series: 13S thru 16S

Truth Table / Pin Assignments (SP6T w/Indicators. 25P D-Sub)

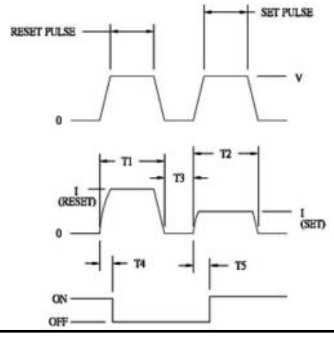
LOGIC INPUT PINS							RF POSITIONS						INDICATOR					
1	2	3	4	5	6	23	J1	J2	J3	J4	J5	J6	9	10	11	12	13	14
1	0	0	0	0	0	0	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
0	1	0	0	0	0	0	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
0	0	1	0	0	0	0	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
0	0	0	1	0	0	0	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
0	0	0	0	1	0	0	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
0	0	0	0	0	1	0	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
0	0	0	0	0	0	1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

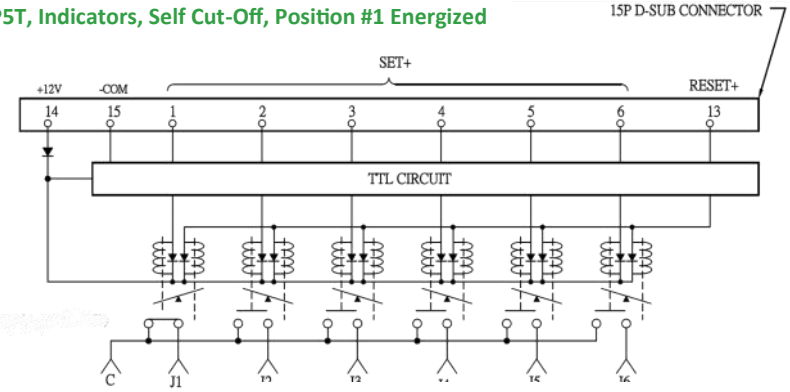
Actuation requires two (2) sequential pulses; Set & Reset whereas :
T1 & T2 = 30 mSec min, T3 = 10 mSec min and T4 & T5 = 20 mSec min

Schematics



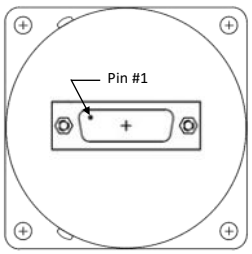
SP5T, Indicators, Self Cut-Off, Position #1 Energized

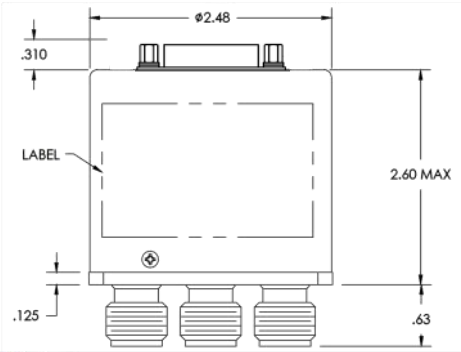


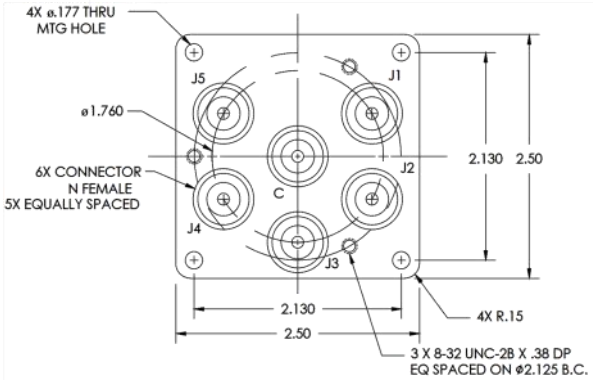


SP6T w/TTL, Position #1 Energized

Outline







SP5T with 15P D-Sub Connector

Model Numbering System

Example: 16S-N2L3-1224-TP

(SP6T, Standard Body, TYPE-N, Latching, Indicators, DC-12GHz, 24VDC, TTL, Solder Pins)

Number of Inputs
Number of Outputs

1 6 S - N2 L3 - 12 24 - TP -

Special

R	Ruggedized
C	Custom Design

Model Type

Standard	S

Connector Type

Type-N	N2
Special	X2

Actuator Type

Latching	L2
Latching, Ind	N3
Latching, +com	N4
Latching, Ind, +com	N5

Frequency (GHz)

03	DC-3
06	DC-6
08	DC-8
12	DC-12

Voltage

05	5 VDC
12	12 VDC
15	15 VDC
18	18 VDC
20	20 VDC
24	24 VDC
28	28 VDC
48	48 VDC

Options

T	TTL Driver
D	TTL Decoder
J	Trans Suppression Diodes
	** 9 or 15 Pin D-Sub Connector*
H	16 or 25 Pin D-Sub Connector
M	Moisture Seal (2 levels available)
P	Solder Pin/Plug (SPMT)
X	Special

* D-Sub connectors are standard for SPMT, no designation on model number needed

RoHS Compliant

ISO 9001