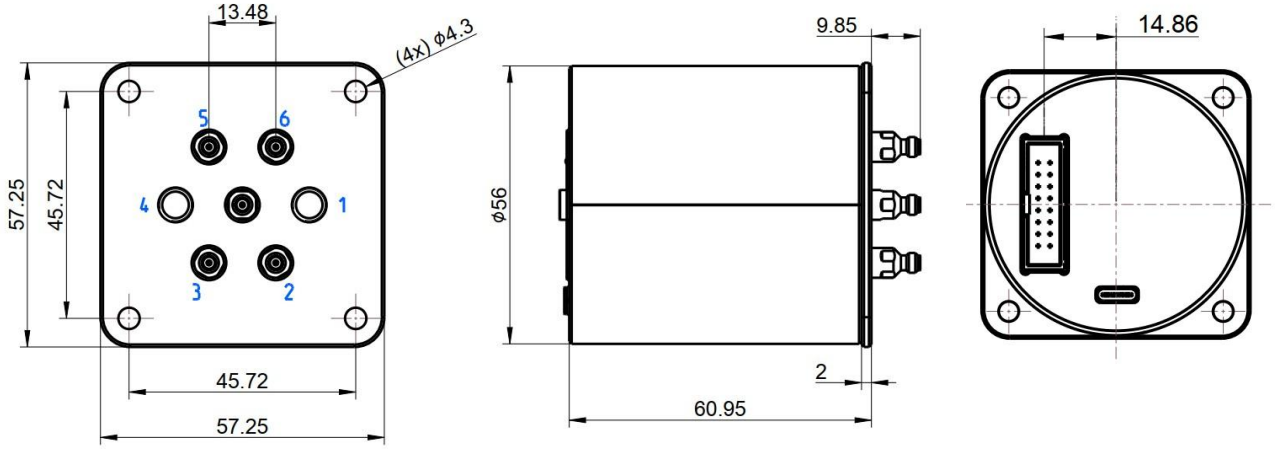
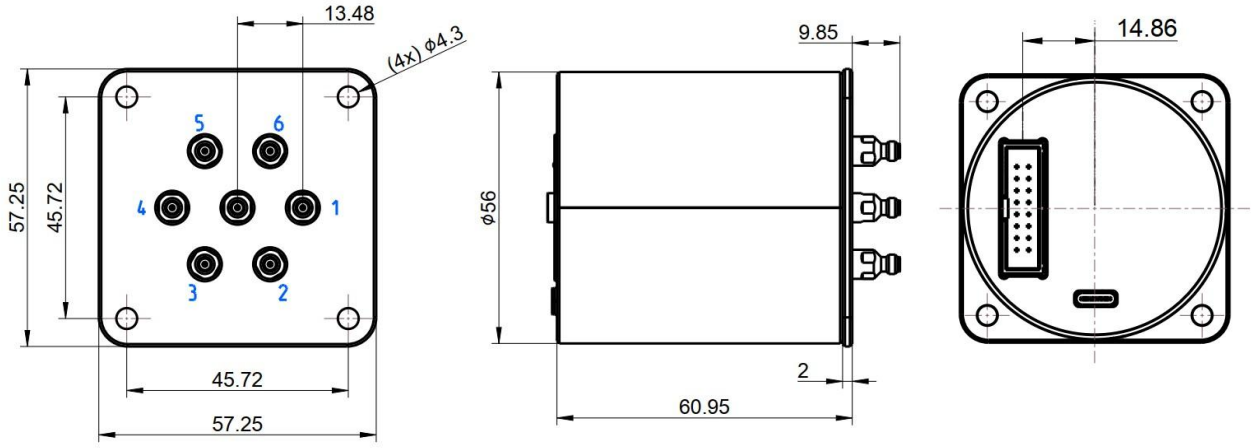
Coaxial Switch Datasheet

SWH-1P4/6T-90-xNT

1P4T



1P6T



Dimensions in mm

Typical Tolerance ± 0.5mm

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Configuration

Connector Type	1.0 Female
Switch Sequence	Break-Before-Make
Switching Speed	≤15ms
Control Interface	Type-C /JTAG 2*8P (2.54)

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Electrical Characteristics

Impedance	50Ω
Frequency Range	DC to 90GHz
Isolation	DC to 9 GHz: 95 dB 9 to 26.5 GHz: 85 dB 26.5 to 40 GHz: 75 dB 40 to 54 GHz: 70 dB 54 to 67 GHz: 65 dB 67 to 90 GHz: 60 dB
Return loss (VSWR) maximum	DC to 4 GHz: 23.1 dB (1.15) 4 to 12.4 GHz: 20.8 dB (1.20) 12.4 to 20 GHz: 16.5 dB (1.35) 20 to 30 GHz: 15.6 dB (1.40) 30 to 54 GHz: 12.7 dB (1.60) 54 to 67 GHz: 10.0 dB (1.92) 67 to 90 GHz: 8.09 dB (2.3)
Insertion Loss	0.35 + 0.023 x frequency (GHz)
Supply Voltage	20V-32VDC
Supply Current	200mA
Supply Current (Quiescent)	50mA

Mechanical Properties

Contactor Mating Cycle	500 times
Operating Life	1 million Cycles @ 25 °C

Environment Data

Working Temperature	-25℃ ~ +75℃
Storage Temperature	-55℃ ~ +85℃

Non-TTL Standard drive

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1	9
2	10
3	11
4	12
5	13
6	14
7	15
8	16

1: +24Vdc	9: IND.Com
2: Drive P1	10: IND P1
3: Drive P2	11: IND P2
4: Drive P3	12: IND P3
5: Drive P4	13: IND P4
6: Drive P5	14: IND P5
7: Drive P6	15: IND P6
8: GND	16: RST

Notes:

1、Connect pin 1 to 24 VDC;

2、Connect pin 8 to GND;

3、Select (close) desired RF path by applying ground to the corresponding “drive” pin; for example, ground pin 2 to close RF path 1.

TTL Standard drive

1	9	1: +24Vdc	9: IND.Com
2	10	2: Drive P1	10: IND P1
3	11	3: Drive P2	11: IND P2
4	12	4: Drive P3	12: IND P3
5	13	5: Drive P4	13: IND P4
6	14	6: Drive P5	14: IND P5
7	15	7: Drive P6	15: IND P6
8	16	8: GND	16: RST

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Instructions TTL drive:

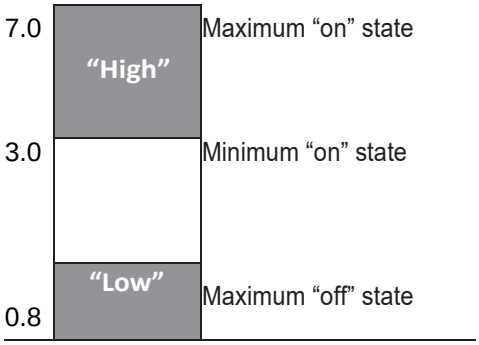
1、Connect pin 1 to 24 VDC

2、Connect pin 8 to GND (Notes1).

3、Select (ON) desired RF path by applying TTL "High" to the corresponding "drive" pin; for example apply TTL “High" to pin 3 to ON RF path 2.

4、To select another path, ensure that all unwanted RF path "drive" pins are at TTL "Low" (to prevent multiple RF path engagement). Apply TTL "High" to the "drive" pin which corresponds to the desired RF path (Note 3).

5、To open all RF paths, ensure that all RF path "drive" pins are at TTL “Low." Then, apply TTL "High" to pin 16.



TTL control voltage states

Notes

1. Pin 8 must always be connected to ground to enable the electronic position-indicating circuitry and drive logic circuitry.
CAUTION: IF PIN 8 IS NOT CONNECTED TO POWER SUPPLY GROUND, CATASTROPHIC FAILURE WILL OCCUR.
2. After the RF path is switched and latched, the drive current is interrupted by the electronic position-sensing circuitry. Pulsed control is not necessary, but if implemented, the pulse width must be 15 ms minimum to ensure that the switch is fully latched.
3. The default operation of the switch is break-before-make. Make-before-break switching can be accomplished by simultaneously selecting the old RF path “drive” pin and the new RF path “drive” pin. This will simultaneously close the old RF path and the new RF path. Once the new RF path is closed (15 ms), deselect the old RF path “drive” pin while leaving the new RF path “drive” pin selected. The switch circuitry will automatically open the old RF path while leaving the new RF path engaged.

Order Information

P/N	Description
SWH-1P4T-90-1NT	1P4T Coaxial Switch 1.0 Connector have Load TTL, DC-90GHz
SWH-1P4T-90-0NT	1P4T Coaxial Switch 1.0 Connector have Load Low level, DC-90GHz
SWH-1P6T-90-1NT	1P6T Coaxial Switch 1.0 Connector have Load TTL, DC-90GHz
SWH-1P6T-90-0NT	1P6T Coaxial Switch 1.0 Connector have Load Low level, DC-90GHz
SWH-1P4T-90-1N	1P4T Coaxial Switch 1.0 Connector have Load TTL, No load, DC-90GHz
SWH-1P4T-90-0N	1P4T Coaxial Switch 1.0 Connector have Load Low level, No load, DC-90GHz