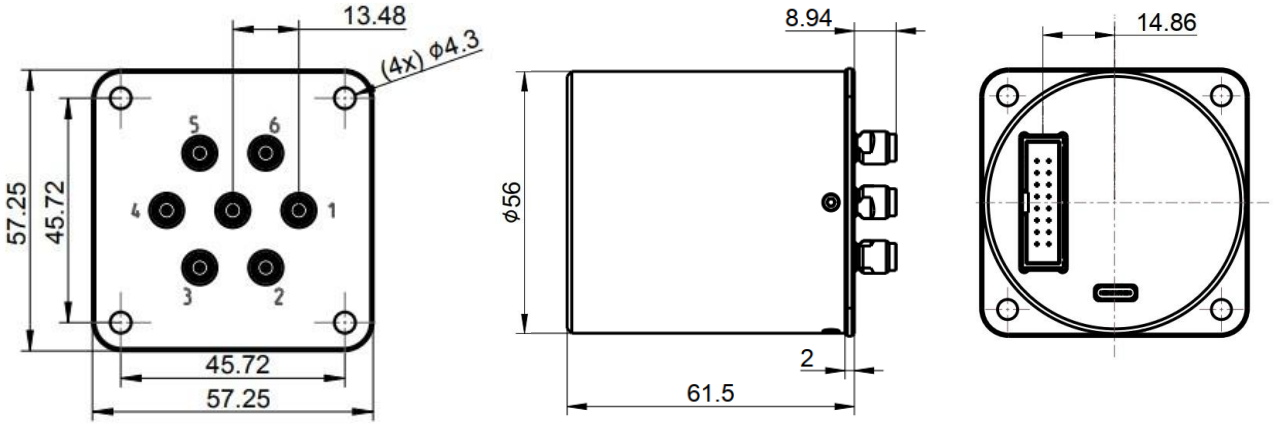
Coaxial Switch Datasheet

SWH-1P4/6T-67-xNT



Dimensions in mm

Typical Tolerance ± 0.5mm

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Configuration

Connector Type	1.85 Female
Connector Outer Contact	Stainless steel (SUS303), Passivation
Connector Center Contact	Beryllium Copper, Gold
Switch Sequence	Break-Before-Make
Switching Speed	≤15ms
Control Interface	Type-C /JTAG 2*8P (2.54)

Electrical Characteristics

Impedance	50Ω
Frequency Range	DC to 67GHz
Isolation	70dB DC-12GHz 60dB 12GHz-18GHz 55dB 18GHz-26.5GHz 50dB 26.5GHz-40GHz 50dB 40GHz-50GHz 50dB 50GHz-67GHz
VSWR	≤1.3 DC-12GHz ≤1.5 12GHz-18GHz ≤1.7 18GHz-26.5GHz ≤1.8 26.5GHz-40GHz ≤2.0 40GHz-50GHz ≤2.2 50GHz-67GHz
Insertion Loss	0.3dB+0.015x f(GHz), DC-26.5GHz 0.030x f(GHz)-0.1dB,26.5GHz-40GHz 0.35 + 0.023 x frequency (GHz), 40GHz-67GHz
Supply Voltage	24VDC

Supply Current	200mA
Supply Current (Quiescent)	50mA

Mechanical Properties

Contactor Mating Cycle	500 times
Operating Life	2 million Cycles @ 25 °C

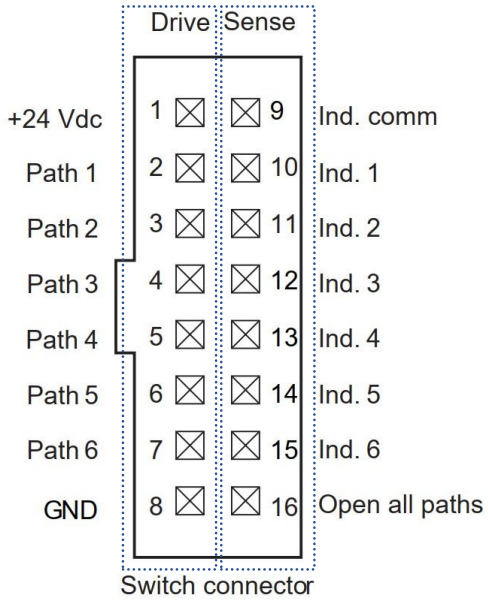
Environment Data

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

Order Information

P/N	Description
SWH-1P4T-67-1NT	1P4T Coaxial Switch 1.85 Connector have Load TTL(5V), Common GND, DC-67GHz
SWH-1P4T-67-0NT	1P4T Coaxial Switch 1.85 Connector have Load Non-TTL, Common GND, DC-67GHz
SWH-1P6T-67-1NT	1P6T Coaxial Switch 1.85 Connector have Load TTL(5V), Common GND, DC-67GHz
SWH-1P6T-67-0NT	1P6T Coaxial Switch 1.85 Connector have Load Non-TTL, Common GND, DC-67GHz

Non-TTL Standard drive



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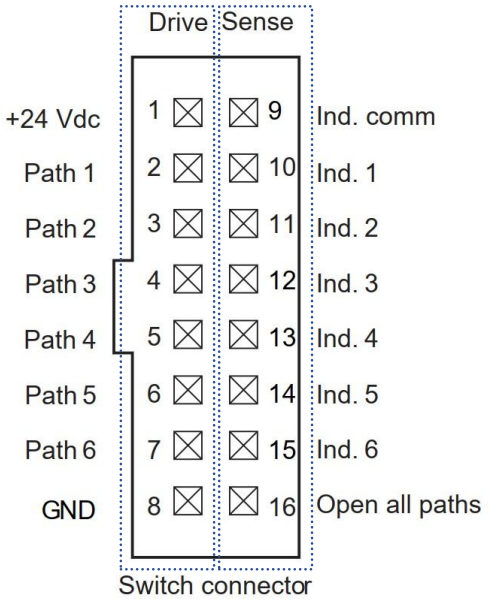
Notes:

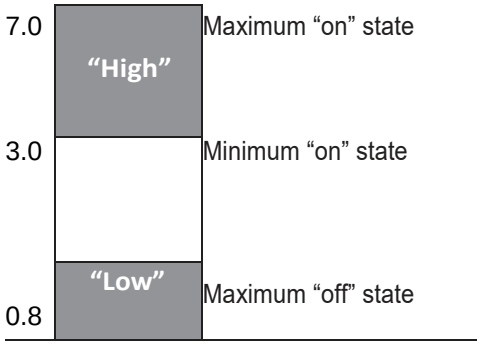
1、Connect pin 1 to 24 VDC;

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





TTL control voltage states

Instructions TTL drive:

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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.

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.