OSW-1X8-300UM

1×8 Mechanical Optical Switch，900-1700nm, 300um 0.5m fiber, COM FC/UPC, 2xoutput SMA905 connectors, 6xoutput FC/UPC connectors.

1x8 mechanical optical switch is a kind of light path control equipment. It can realize multi-channel fiber optic light path switching. In the optical fiber transmission system, it is used for multi-channel fiber monitoring, multi light source/detector selection, and optical fiber path protection etc. Besides, it is also used in optical fiber test system for optical fiber and related component test, outdoor cable test and multi-spot optical sensors monitoring system.

Feratures

- Low Loss and High Reliability
- erial Interface (RS-232)
- •Modularized Design
- Epoxy-free on Optical Path

Applications

- Ring Network
- Remote Monitoring in Optical Network
- Testing of Fiber Optical Component

Specifications

Parameter	Parameter Values
Model	OSW-1X3-300UM
Insertion Loss	Typ.:1.0 dB Max.:1.2 dB
Wavelength Range	900-1700 nm
Test Wavelength	850 nm
Fiber Type	300UM (NA=0.22)
Return Loss	≥30 dB
Crosstalk	≥50 dB

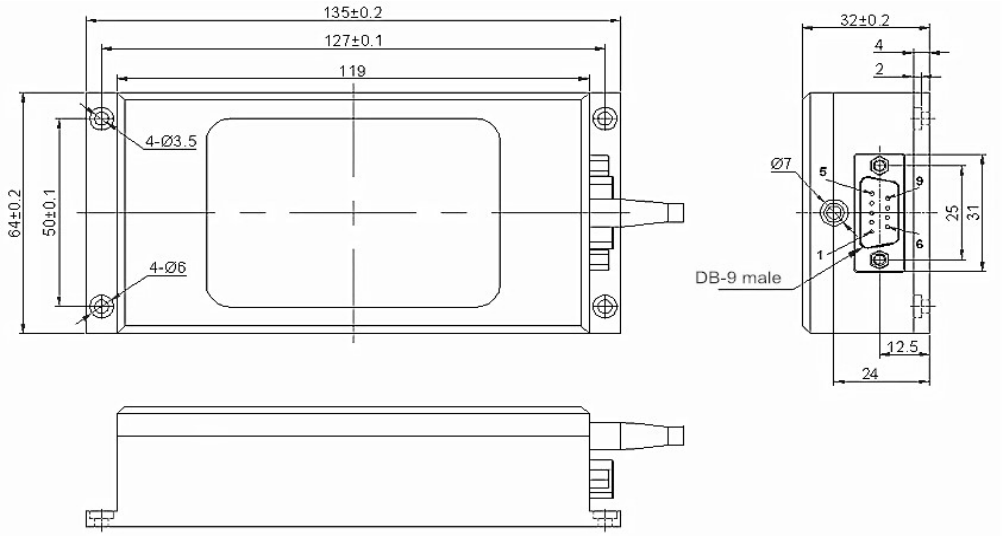
PDL	≤0.05 dB
WDL	≤0.25 dB
TDL	≤0.25 dB
Repeatability	≤0.03 dB
Lifetime	$>10^7$
Switching Time	≤20 ms （Adjacent channel）
Optic Power	≤500 mW
Connector	FC、LC、SC、ST
Control Mode	RS-232
Working Power Supply	5V/600 mA
Product Sze	130 x 64 x 32
Operating Temperature	-20 ℃ to +70 ℃
Operating Temperature	-40 ℃ to +85 ℃

Pin Specifications

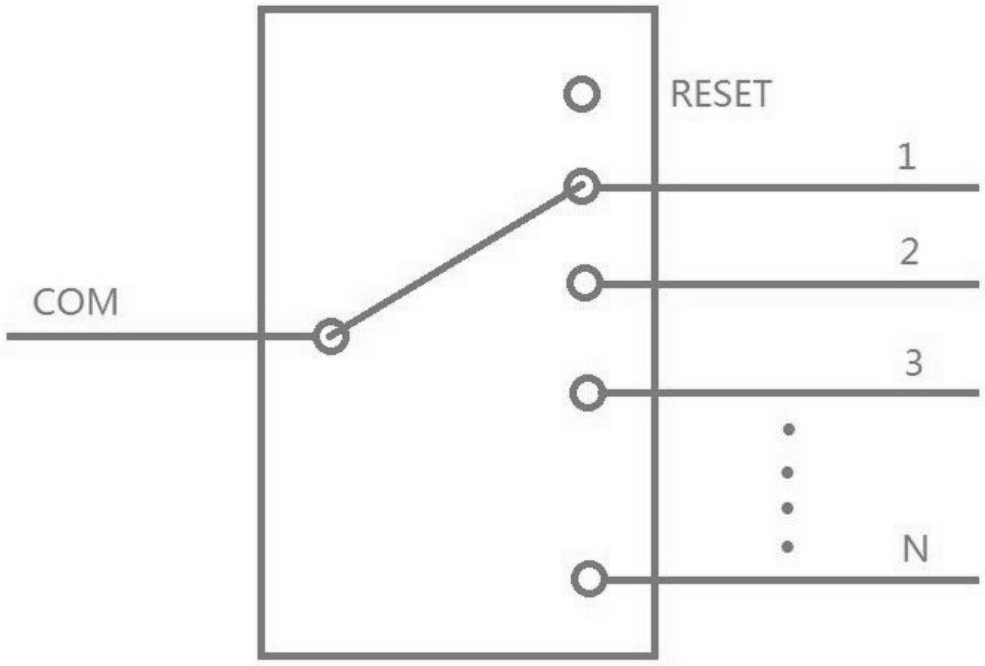
DB-9 Male Connector			
Pin No.	**I / O**	**Signal**	**Description**
2	Input	RXD	Receive Data
3	Out	TXD	Send Data
5	Power	GND	Ground
8	Power	GND	Ground

9	Power	VCC1	5.0±5% VDC Power Supply (600mA)
1,4,6,7,10	NC	NC	Vacancy

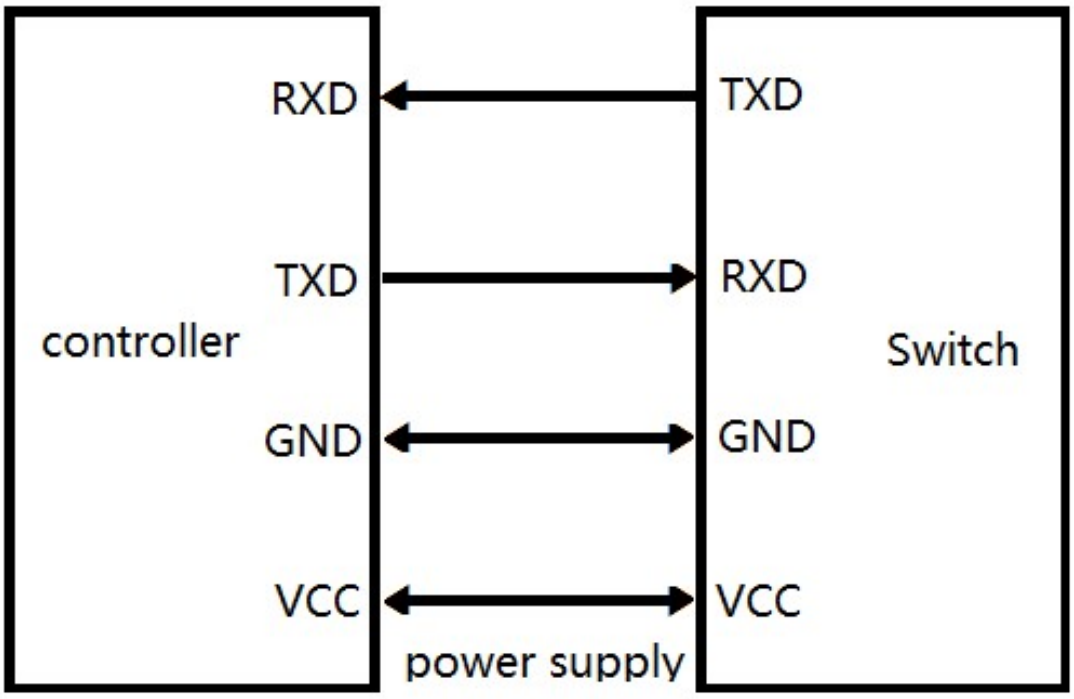
Dimension



Optical Route



Control Chart



Communication Protocol

●“_” expression underline.

● Communication protocols are all capital letters.

● The communication protocol commands, "<" as the start,">" as a terminator.

Usage	Instruction	Description

Set optical switch channels	Send: <OSW_OUT_XX> Return1: <OSW_OUT_OK> Return2: <OSW_OUT_OVERFLOW>	Set the "XX" value to select the fiber channel. When "XX" is 00, the switch will be reset. Set 01 to select channel 1. A successful setup will return 1. It returns 2 when "XX" is larger than total channel amount.
Query optical switch channels	Send: <OSW_OUT_?> Return: <OSW_OUT_XX>	Send the query command and it will return an "XX" value to indicate the current channel.

Query optical switch type	Send: <OSW_TYPE_?>	Send the query command and it will return following basic information of the switch. Model: OSW-1X3 Wavelength Range: 900-1700nm Fiber Type: 300UM Protective Casing: 0.9mm Fiber Length: 1m Control Interface: RS-232 Connector: SMA905
	Return: <OSW_TYPE_OSW-1X3_900-1700_300UM_900_10_R_SMA>	

Note: COM settings , Baud rate: 9600, Data bits: 8 bit, Stop bit: 1 bit , parity bit: None, Command error return “<OSW_ERROR>” .

Operation

(1) The optical switch transmits the command to control the optical switch through RS232 serial communication. The optical switch receives the command successfully and returns the response.

(2)To program the switch directly over USB (RS232 control), we would throw in a DB9 to USB adaptor (connector), and then the switch can be connected to the USB port on your device.

(3) The optical switch is bidirectional in operation.

Software Control Chart (For Reference Only)