



XH-OSW-4X8-Q

4×8 Matrix Optical Switch

USER MANUAL

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Introduction

XH-OSW-4X8-Q Matrix 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.

Features

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

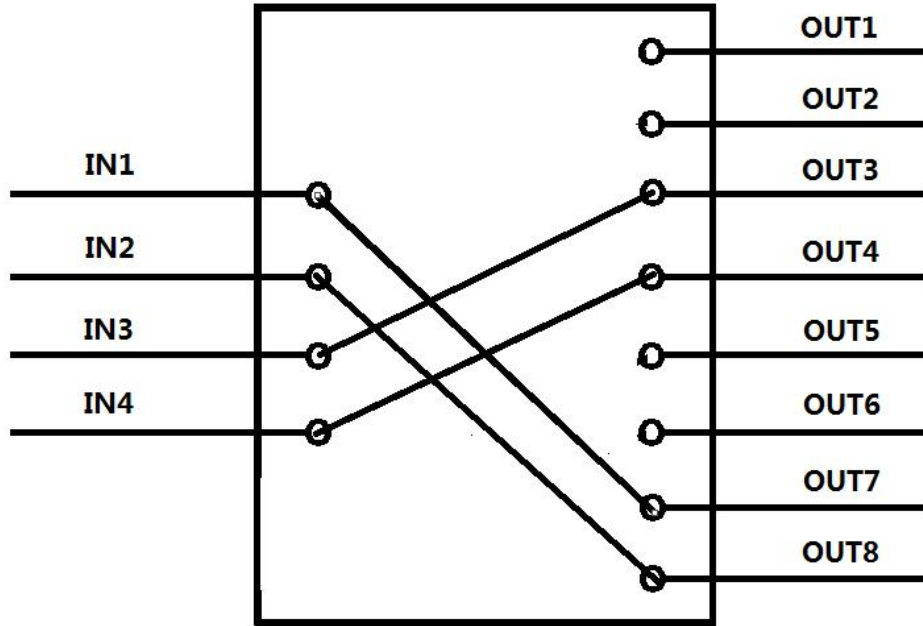
Applications

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

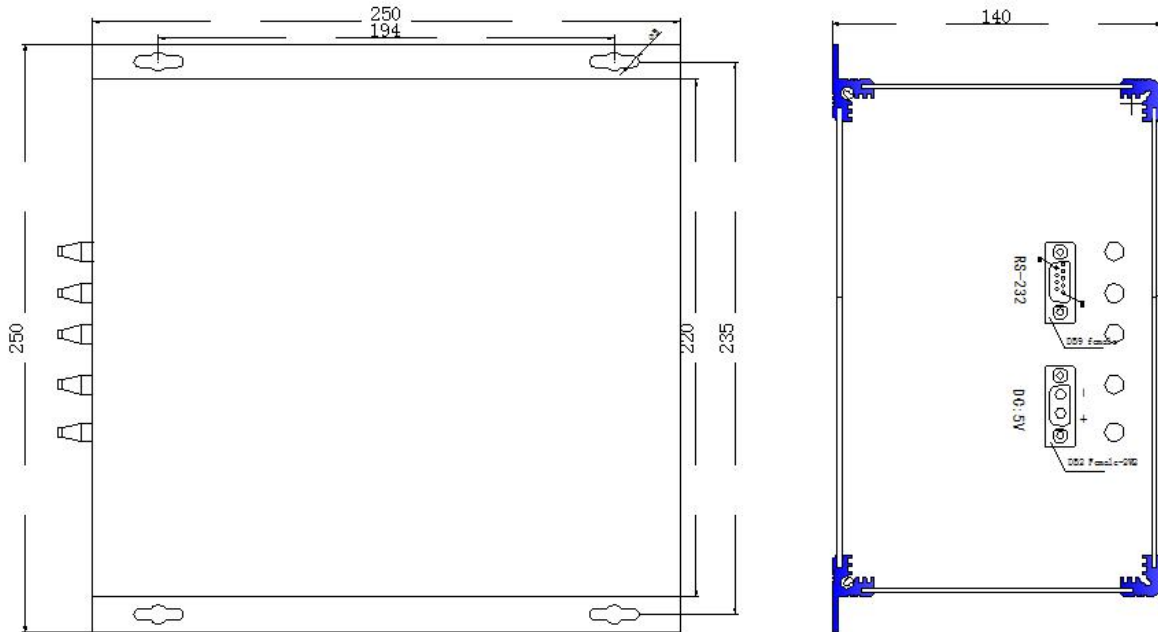
Specifications

Parameter	Parameter Values
Model	XH-OSW-4X8-Q
Insertion Loss	≤ 2.0 dB
Wavelength Range	1260~1650 nm
Fiber Type	9/125um
Return Loss	≥ 50 dB
Crosstalk	≥ 55 dB
PDL	≤ 0.10 dB
WDL	≤ 0.30 dB
TDL	≤ 0.30 dB
Repeatability	≤ 0.05 dB
Lifetime	$> 10^7$
Switching Time	≤ 20 ms (Adjacent channel)
Connector	LC/UPC
Control Mode	RS-232
Working Power Supply	5V/3000 mA
Product Size	250x250x140
Operating Temperature	-20 °C to +70 °C
Operating Temperature	-40 °C to +85 °C

Optical Route



Dimension

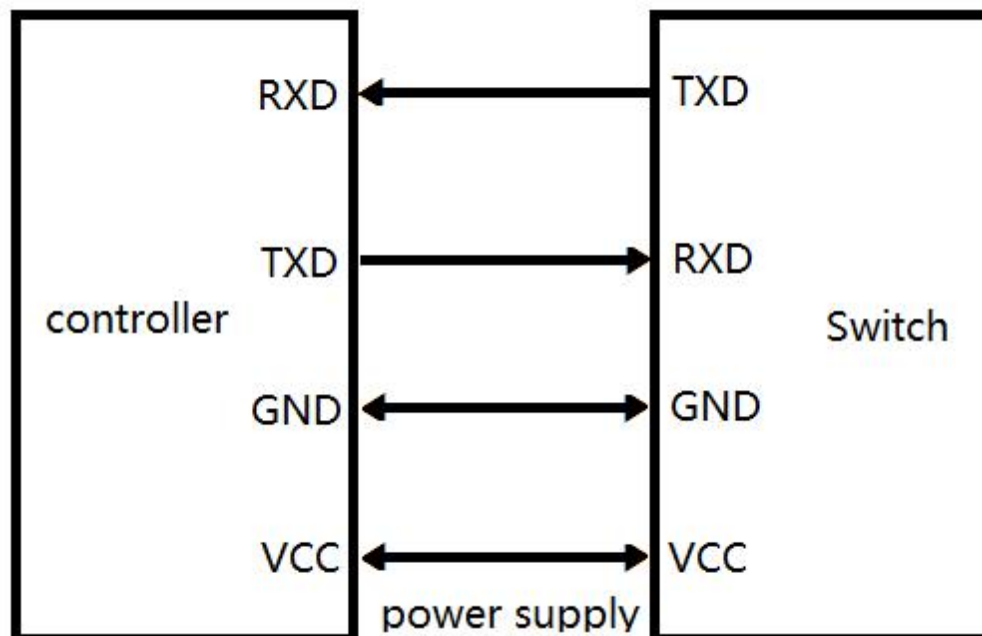


Pin Specifications

DB-9 Female Connector			
Pin No.	I / O	Signal	Description
2	Out	TXD	Send Data
3	Input	RXD	Receive Data
5	Power	GND	Ground
1,4,6,7,8,9	NC	NC	Vacancy

DB-2(2W2) Female Connector			
Pin No.	I / O	Signal	Description
1	Power	VCC	5.0±5% VDC Power Supply (3000mA)
2	Power	GND	Ground

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 Channel	Send:<OSW_OUT_01_02_03_04> Return1:<OSW_OUT_OK>or Return2:<OSW_OUT_E1> (go beyond)or Return3:<OSW_OUT_E2>(fault)	Setup the optical switch channel to IN1-OUT1,IN2-OUT2,IN3-OUT3,IN4-OUT4,returned successfully;
Query	Send:<OSW_OUT_?>	Query the optical switch channel,returned successfully; IN1-OUT1;

Optical Switch Channel	Return:<OSW_OUT_01_02_03_04>	IN2-OUT2; IN3-OUT3; IN4-OUT4
Query optical switch type	<p>Send: <OSW_TYPE_?></p> <hr/> <p>Return: <OSW_TYPE_XH-OSW-4X8-Q_1260~1650_9/125_90_10_R_FA></p>	<p>Send the query command and it will return following basic information of the switch.</p> <p>Model: XH-OSW-4X8-Q</p> <p>Wavelength Range: 1260~1650</p> <p>Fiber Type: 9/125um</p> <p>Protective Casing: 0.9mm</p> <p>Fiber Length: 1m</p> <p>Control Interface: RS-232</p> <p>Connector: LC/UPC</p>

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)

