

Description

XH-DSW-1X2 optical switch module is an optical path control device, has the role of controlling the optical path and converting the optical path; it can realize 2-channel optical signal input, select the signal output of one of the channels (support bi-directional use), the module supports key manual switching and RS-232 serial port command control. It has an important role in optical communication applications. Optical switch is mainly used in optical transmission systems for multiple optical monitoring, LAN multi-source / detector automatic switching, and optical sensing multi-point dynamic monitoring system optical test system for optical fiber, optical devices, network and field engineering optical cable testing; optical device installation and adjustment.

Features

- Low insertion loss, wide wavelength range
- Low channel crosstalk, high stability, high reliability
- Support manual key switch and RS-232 command control
- Locking and non-locking control types can be selected

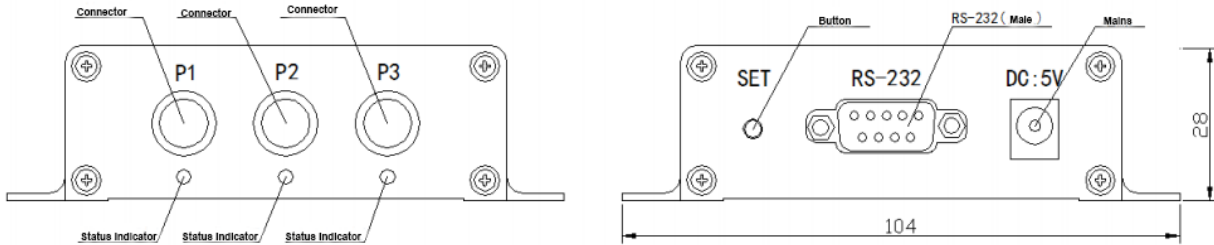


Performance

Parameter	Parameter Values	
Model	XH-DSW-1X2	
Insertion Loss (dB)	Typ : 0.6	Max : 1.2
Wavelength Range (nm)	800~1310	1260~1650
Wavelength Testing (nm)	850/980/1310	1310/1550/1625
Return Loss (dB)	MM≥30	SM≥50
Crosstalk (dB)	MM≥ 35	SM≥55
PDL (dB)	≤0.05	
WDL (dB)	≤0.25	
TDL (dB)	≤0.25	
Repeatability (dB)	≤±0.02	
Lifetime (Times)	≥10 ⁷	
Switching Time (ms)	≤10	
Transmission Power (mW)	≤500	
Operating Voltage (V)	5	
Operating Temperature ()	-20~+70	
Storage Temperature ()	-40~+85	
Dimensions (mm)	(L)104.0×(W)120×(H)28±0.2mm	

Tip: The above are the commonly used optical switch parameters, if there are other requirements can be customized by consulting, Ethernet communication can be added.

Panel

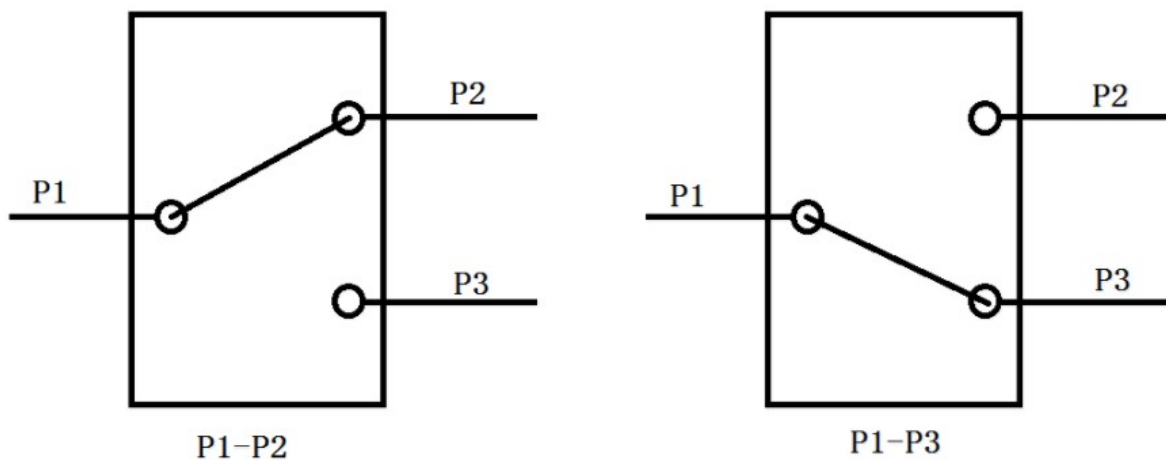


P1, P2, P3 are three connectors, P1 status indicator is the power indicator, P2 status indicator is the optical path status indicator, the light is on to indicate P1 through P2; P3 status indicator is the optical path status indicator, the light is on to indicate P1 through P3; SET button is the manual control switch button; RS-232 is the DB9 male serial communication interface, factory baud rate is 9600, data bit 8 bits, stop bit 1 bit, no check; 5V is the power adapter interface. Data bit 8 bits, stop bit 1 bit, no parity; 5V is the power adapter interface.

RS-232 Pins :

Pins	Type (I/O)	Name	Functions
2	Input	RXD	Serial Receiver
3	Out	TXD	Serial Transmitter
5	Power	GND	Public
1,4,6,7,8,9	NC	NC	Air

Optical Route



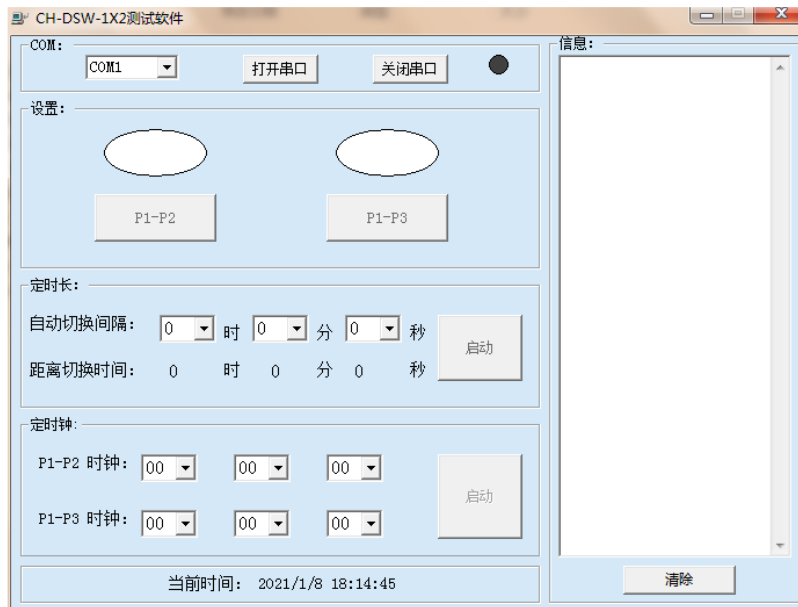
Control instruction

- (1) 、 “_”Indicates underscore.
- (2) 、 All letters in the communication protocol are in upper case.
- (3) 、 Instrument can only execute one command at a time. Return the corresponding value before entering and sending the next command.
- (4) 、 Actual operation is to enter a pointed bracket "<" as the start character and a pointed bracket ">" as the end character.

Name	Instructions	Descriptions
Set channel	Command:<OSW01_OUT_02>	Command indicates that the optical switch channel with address 01 is set to 02; success returns response 1; set channel data overflow returns response 2; optical switch failure returns response 3.
	Response 1:<OSW01_OUT_OK> or Response 2:<OSW01_OUT_E1>(overflow) or Response 3:<OSW01_OUT_E2>(Fault)	
Inquiry channel	Command:<OSW01_OUT_? >	Command indicates that the current channel of the optical switch with the query address 01; the return response indicates that the current channel is 02.
	Response:<OSW01_OUT_02>	
Setting device address	Command:<OSW01_ADD_02>	Command indicates that the optical switch address set to 01 is modified to 02; the response is returned successfully.
	Response:<OSW02_ADD_OK>	
Query device address	Command:<OSW_ADD_?>	Command indicates that the current address of the optical switch device is queried; the returned response indicates that the address is 01
	Response:<OSW01_OK>	
Set baud rate	Command:<OSW01_BAUD_9600>	Command indicates that the baud rate of the serial port of the optical switch device with address 01 is set to 9600; the response is returned successfully.
	Response:<OSW01_BAUD_OK>	
Query Baud Rate	Command:<OSW01_BAUD_?>	Command indicates that the query address is 01 optical switch device serial port baud rate; the return response indicates that the device serial port baud rate is 9600.
	Response:<OSW01_BAUD_9600>	
Locking button	Command:<OSW01_KEY_OFF>	Command indicates that the key lock of the optical switch device with address 01 is set; the response is returned successfully.
	Response:<OSW01_KEY_OK>	
Unlocking button	Command:<OSW01_KEY_ON>	Command indicates that the key of the optical switch device with address 01 is set to unlock; the response is returned successfully.
	Response:<OSW01_KEY_OK>	
Query button status	Command:<OSW01_KEY_?>	Command indicates that the query address is 01 optical switch device key status; return response ON indicates that the key is allowed to use; return response OFF indicates that the key is locked.
	Response:<OSW01_KEY_ON> or Response:<OSW01_KEY_OFF>	

Rebooting devices	Command:<OSW01_RESET>	Command indicates that the optical switch device with address 01 is set to reset and restart; the response is returned successfully.
Inquiry Information	Command:<OSW01_TYPE_?>	Command indicates that the query address is 01 optical switch equipment information; the returned response indicates
	Response:<OSW01_TYPE_CH-DSW-1X2_1260~1650NM_SM9/125um_FP>	Equipment model: CH-DSW-1X2; wavelength range: 1620~1650nm. Fiber type: SM(9/125um); connector: FC/PC.
Query Version	Command:<OSW01_VERSION_?>	Command indicates that the query address is 01 optical switch device version; the returned response indicates
	Response:<OSW01_VERSION_HARDWARE:V1.0.1SOFTWARE:V1.0.1>	Hardware version : V1.0.1 Software version : V1.0.1

Simple control software diagram



Ordering Information: XH-DSW-1X2-A-B-C-D

wavelength(A)	Fiber Type(B)	Switch Type(C)	Connection(D)
850:850nm 1310:1310nm 1550:1550nm 1310/1550:1310nm/1550nm X:Others	SM:SM,9/125 M5:MM,50/125 M6:MM,62.5/125	L:Locking N:No-Locking	FP:FC/PC FA:FC/APC SP:SC/PC LP:LC/PC X:Others

Warm tip: The module comes standard with 5V power adapter and serial cable.