

Description

XH-OSW-1XN-MINI mechanical optical switch is an optical path control device, with the role of controlling the optical path and converting the optical path, the size of this module can be up to 12 channels; can achieve multiple optical signal input, select the signal output of one of the channels or vice versa (to support bidirectional use), the module control mode using TTL high and low logic level control, the microcontroller chip pins can be directly driven 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 systems for optical fiber, optical devices, networks and field engineering optical cable testing; optical device mounting.

Features

- Low insertion loss, wide wavelength range
- Low channel crosstalk, high stability, high reliability
- Imported motor components, higher reliability of life
- Failure self-test function in internal circuit design
- Simple control mode, small size, easy to embed in the system

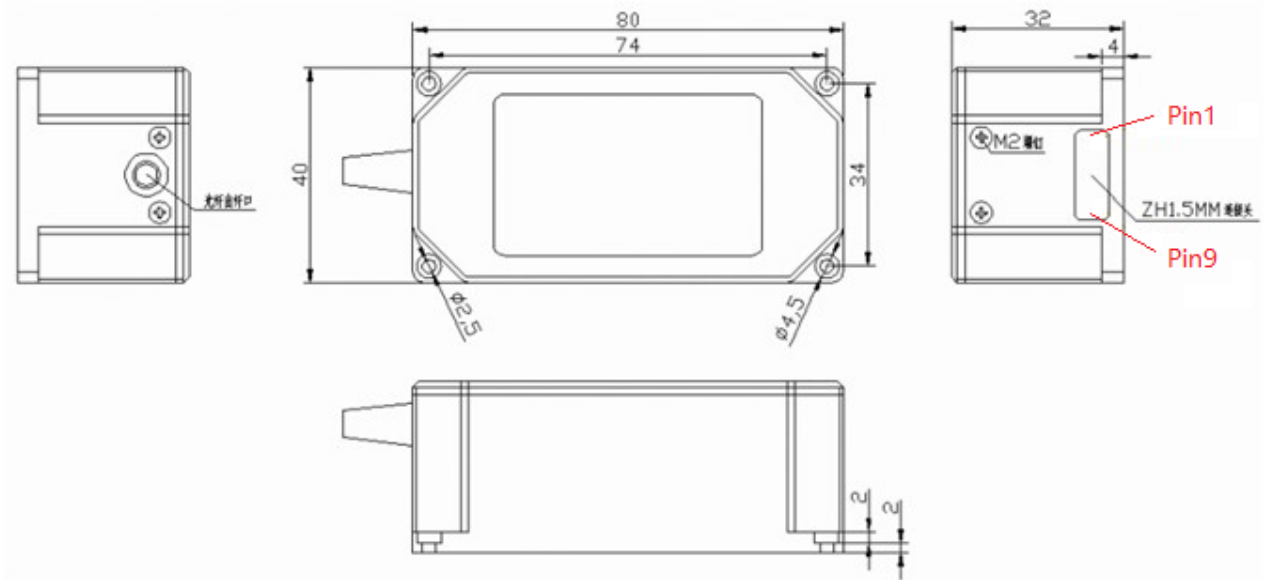


Performance

Parameter	Parameter Values	
Model	XH-OSW-1XN (N≤12) MINI	
Insertion Loss (dB)	Typ : 0.5 Max : 0.8	
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)	≥70	
PDL (dB)	≤0.05	
WDL (dB)	≤0.25	
TDL (dB)	≤0.25	
Repeatability (dB)	≤0.02	
Lifetime (Times)	>10 ⁷	
Switching Time (ms)	≤8	
Transmission Power (mW)	≤500	
Operating power (V/mA)	5/600	
Operating Temperature (°C)	-20~+80	
Storage Temperature (°C)	-40~+85	
Dimension (mm)	80×40×32	

Tip: The above are the commonly used optical switch parameters, if you have other requirements can consult the custom.

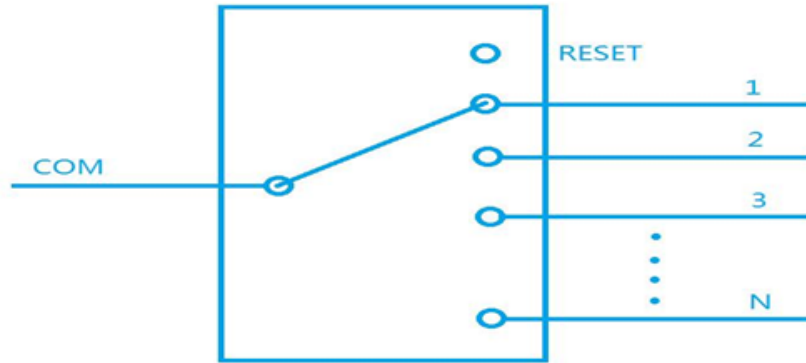
Dimension



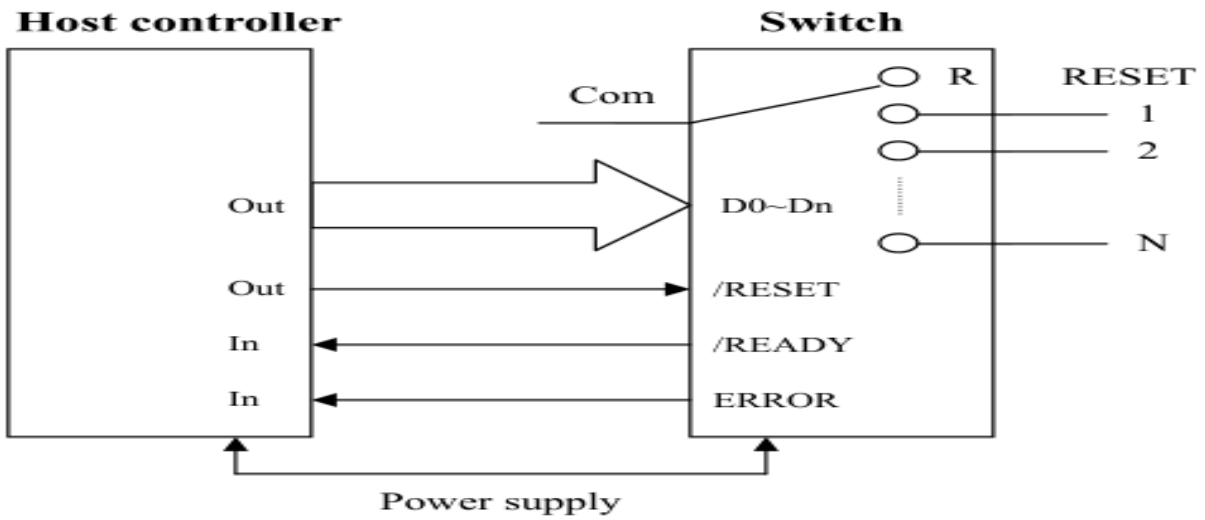
Pins

ZH1.5MM Connector			
Pins	Type	Name	Functions
1	Input	D0	D3~D0 are the channel selection data bits, D3 is the high bit, D0 is the low bit
2	Input	D1	
3	Input	D2	
4	Input	D3	
5	Input	RESET	low level indicates that the channel is reset, and a high level indicates that the data bits are active.
6	Out	READY	low level indicates that the optical switch channel switching is completed, and a high level indicates that the optical switch channel is switching.
7	Out	ERROR	low level indicates that the optical switch is operating normally, and a high level indicates that the optical switch channel selection data bit signal is overflowing or there is a fault inside the optical switch.
8	Power	GND	Power supply ground
9	Power	VCC	Positive power supply

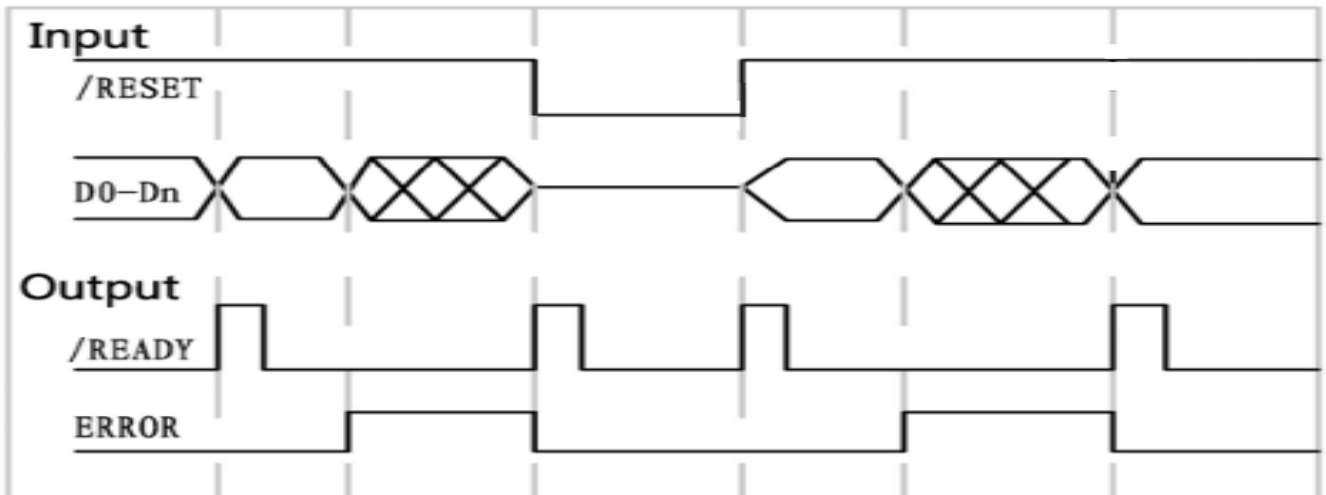
Optical Route



Control Schematic



Control timing diagram



Control Logic Table

Channel	D0	D1	D2	D3	RESET
COM-0	x	x	x	x	0
COM-1	0	0	0	0	1
COM-2	1	0	0	0	1
COM-3	0	1	0	0	1
COM-4	1	1	0	0	1
COM-5	0	0	1	0	1
COM-6	1	0	1	0	1
COM-7	0	1	1	0	1
COM-8	1	1	1	0	1
COM-9	0	0	0	1	1
COM-10	1	0	0	1	1
COM-11	0	1	0	1	1
COM-12	1	1	0	1	1

Description: 0 for low level, 1 for high level, the pins used to add a 5V 10K pull-up resistor, can support 3.3V microcontroller chip pin control. For example: the purchase is a 4-way optical switch, only to D0, D1 pins. At the factory, D0 and D1 are connected to 5V 10K pull-up resistors, and D2 and D3 are internally connected to 10K pull-down resistors, so that users can conveniently dangle D2 and D3 pins.

Ordering Information : XH-OSW-1XN-A-B-C-D-E

Channel(N)	Wavelength(A)	Fiber Type(B)	Fiber Diameter(C)	Fiber Length(D)	Connector(E)
N:≤12	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 X:Others	25::250um 90:900um X:Others	05:0.5m 10:1.0m 15:1.5m X:Others	NO:None FP: FC/PC FA: FC/APC SP: SC/PC SA: SC/APC LP: LC/PC LA: LC/APC X:Others