1XN Mechanical Optical Switch

1xN multichannel optical switch is based on step motor drives designed, and it is widely used in OADM, OXC, system monitoring and so on. Based on the special optical design, it features excellent optical characteristics with fast switch time, low insertion loss, and high reliability. Moreover, because of its compact structure and small volume, it easy to be integrated with high density in the optical fiber communication system.

Application

- PON Network
- Protection
- Instrumentation
- Network monitor

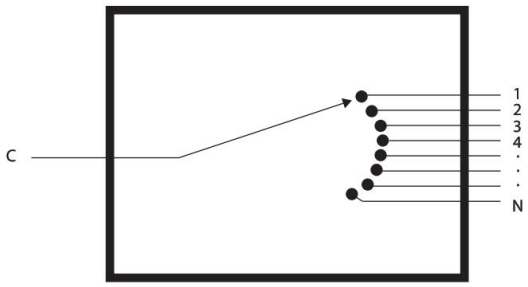
Feature

- Compact structure
- Low IL
- Fast switch time

Specifications

Parameters	Unit	Specifications
Operating Wavelength	nm	1260~1620 for SM, 850~1300 for MM
Insertion Loss	dB	≤1.0（typical：0.8）
Wavelength Dependent Loss	dB	≤0.25
Temperature Dependent Loss	dB	≤0.2
Polarization Dependent Loss	dB	≤0.05
Return Loss	dB	SM≥50, MM≥30
Crosstalk	dB	SM≥55, MM≥50
Repeat ability	dB	≤±0.02
Switch Time	ms	≤8 (adjacent channel)
Durability	times	≥10 billion
Operating Voltage	V	5.0
Optical Power	mw	≤500
Operating Temperature	℃	-5~+70
Storage Temperature	℃	-40~+85
Operating Humidity	℃	5~95
Dimension	mm	2<N≤16 (120×40×32)
		17≤N≤32(120×50×50 or 114x110x32)
		33≤N≤64(120×110×78)
Note: 1.Within operating temperature and all SOP. 2.Excluding connector, and add 0.3dB IL for a pair of connectors.		

Optical Route



Pin Configurations

DB9(TTL level):

NO.	In/Out/Power	Definition	Instruction
1	In	D0	DB(Data Bit). D3~D0 is binary number, and D3 is high-order, D0 is low-order. They are maximum control sixteen channel, and 0000b means channel 1; 1111b means channel 16.
2	In	D1	
3	In	D2	
4	In	D3	
5	In	/Reset	Low level reset to channel 0, and high level is valid.
6	Out	/Ready	Low level ready to reset or receive data.
7	Out	Error	High level means running error.
8	Power	GND	Earth
9	Power	DC 5V	DC 5V，1.0A source

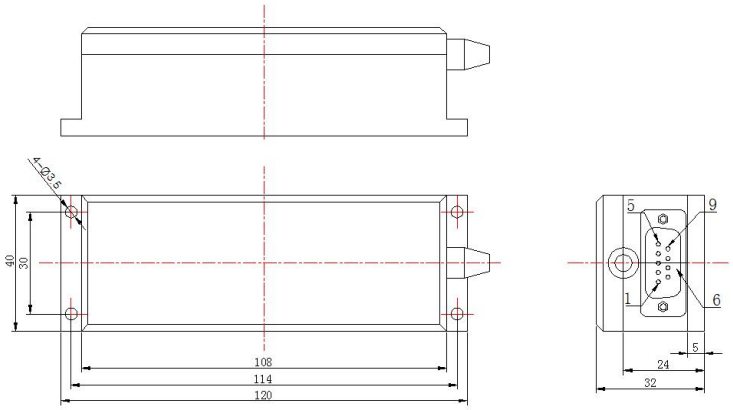
DB15(TTL level)

NO.	In/Out/Power	Definition	Instruction
2	In	D0	DB(Data Bit). D5~D0 is binary number, and D5 is high-order, D0 is low-order. They are maximum control sixty-four
3	In	D1	
4	In	D2	

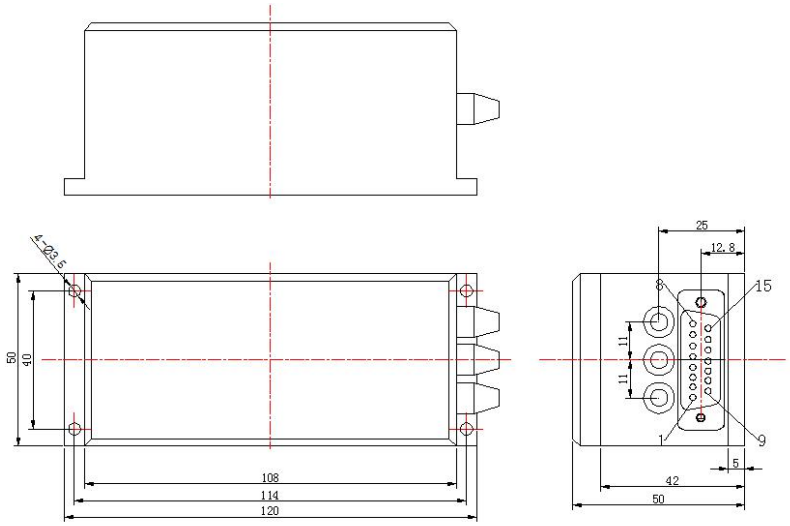
5	In	D3	channel, and 000000b means channel 1; 111111b means channel 64.
6	In	D4	
10	In	D5	
11	In	/Reset	Low level reset to channel 0, and high level is valid.
7	Out	/Ready	Low level ready to reset or receive data.
8	Out	Error	High level means running error.
15	Power	5v	Digital circuit source
12	Power	5v	Step motor source
1,9	Power	GND	Earth
13,14	Free		

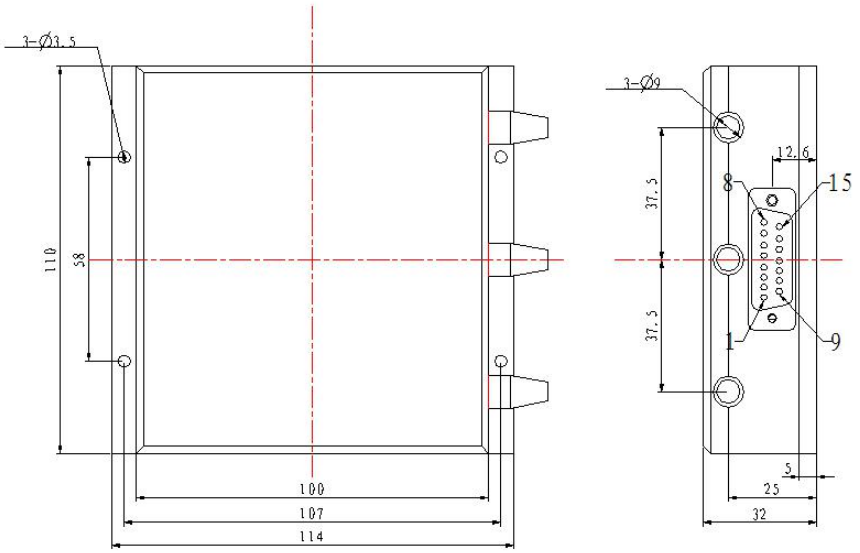
Dimension

1XN (2<N≤16): 120×40×32

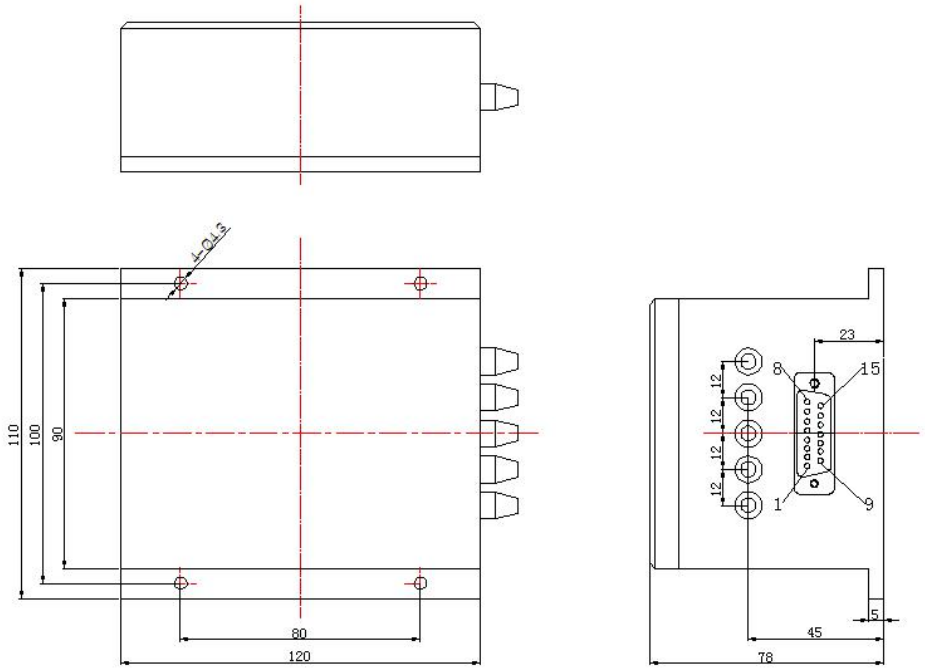


1×N（17≤N≤32）：120×50×50 or 114x110x32





1×N（33≤N≤64）：120×110×78



Ordering Information ： RD-1xN-A-B-C-D-E-F

A	B	C	D	E	F
Channel number	Test Wavelength	Fiber Type	Fiber Dimension	Fiber Length	Connector
1~N	850: 850nm	SM: Single Mode	025: Φ0.25mm	05: 0.5m	00: None
	1310: 1310nm	M1: Multi-mode 50/125	09: Φ0.9mm	10: 1.0m	FP: FC/UPC
	1550: 1550nm	M2: Multi-mode 62.5/125	X: other	15: 1.5m	FA: FC/APC
	D: 1310/1550nm	X: other		X: other	SP: SC/UPC
	X: other				SA: SC/APC
					LP: LC/UPC
					LA: LC/APC
					X: other