

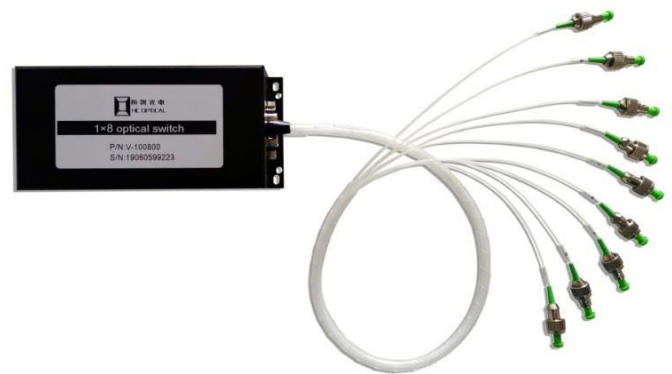
1×N Mechanical Optical Switch

Features

Low insertion loss
Wavelength range
Low crosstalk
High stability and reliability
Parallel Interface (TTL)
Modularized Design

Applications

Laboratory development
system monitoring
configuration OADM
Metropolitan area network
Multiple light monitoring
Optical fiber sensing
Remote optical fiber monitoring system



Technical parameters

Model	HC-FSW-1×N		
Wavelength Range nm	800~1100(MM)	1400 1700 (MM)	1250 1650 (SM)
Test Wavelength nm	850/980	1550	1310/1490/1550/1625
Insertion Loss dB	Typ:0.6 Max:1.0	Typ:0.6 Max:1.0	Typ:0.8 Max:1.3
Return Loss dB	SM≥50、MM≥30		
Channel crosstalk dB	SM≥55、MM≥50		
PDL dB	≤0.05		
PDL dB	≤0.25		
TDL dB	≤0.25		
Repeatability dB	≤±0.02		
Working voltage V	+5 (DC)		
The service life of the time	≥10 ⁷		
Switch time ms	≤10 (Adjacent channel switching)		
Optical Power mW	≤500		



Operating Temperature °C	-20 ~ +70
Storage Temperature °C	-40 ~ +85

Attention: The above is the index without connection head;

Pin definition

DB9 (TTL level) :

Pin number	Signal direction、type (In/Out/Power)	Pin definition	Function Description
1	In	D0	Data bit D3~D0 are a binary number, D3 is high, D0 is low.Up to 16 optical switches can be controlled with 4 data bits. Where 0000b = channel 1; 1111b= channel 16.When used, data is sent based on the actual number of channels of the optical switch.
2	In	D1	
3	In	D2	
4	In	D3	
5	In	/Reset	Low level reset to channel 0, high level data bit available
6	Out	/Ready	Low level ready to reset or receive data
7	Out	Error	High level indicates that the optical module is operating incorrectly.
8	Power	GND	Ground wire
9	Power	DC 5V	DC 5V, 1.0A Working power supply

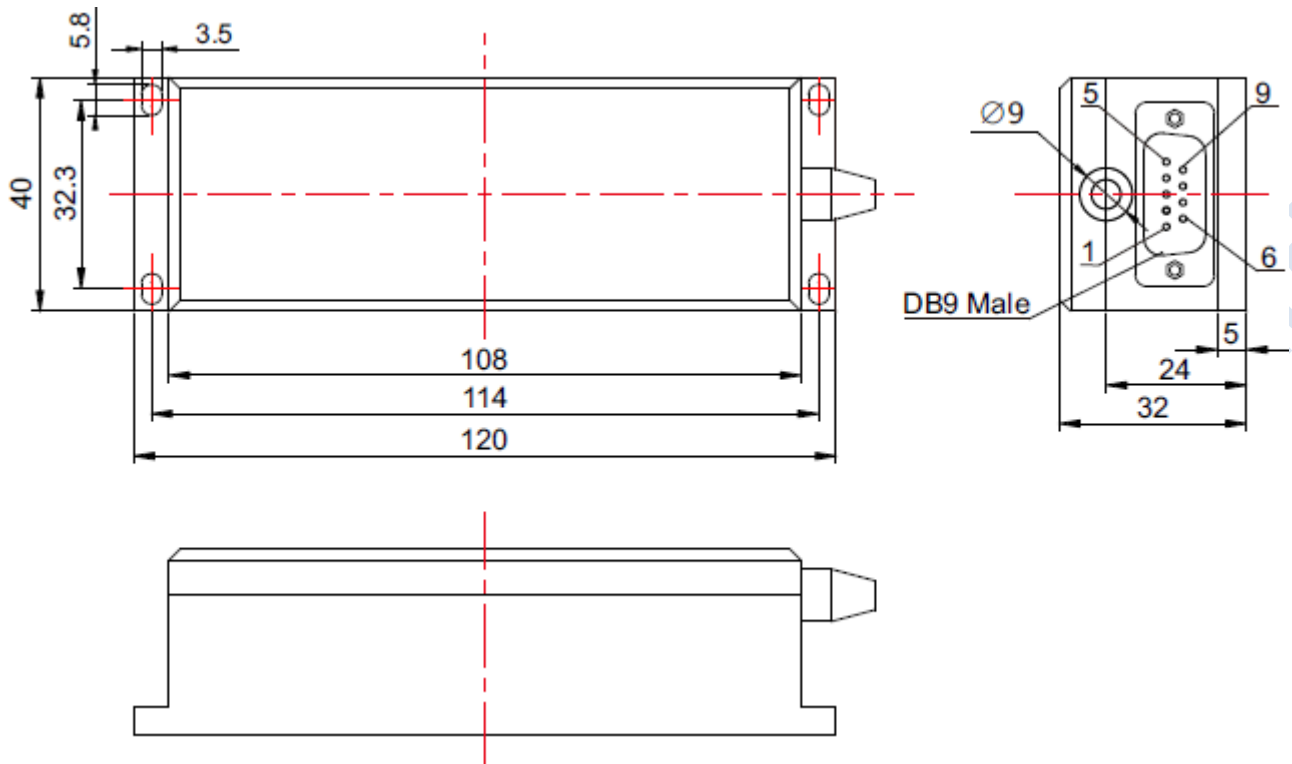
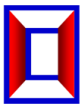


DB15 (TTL level) :

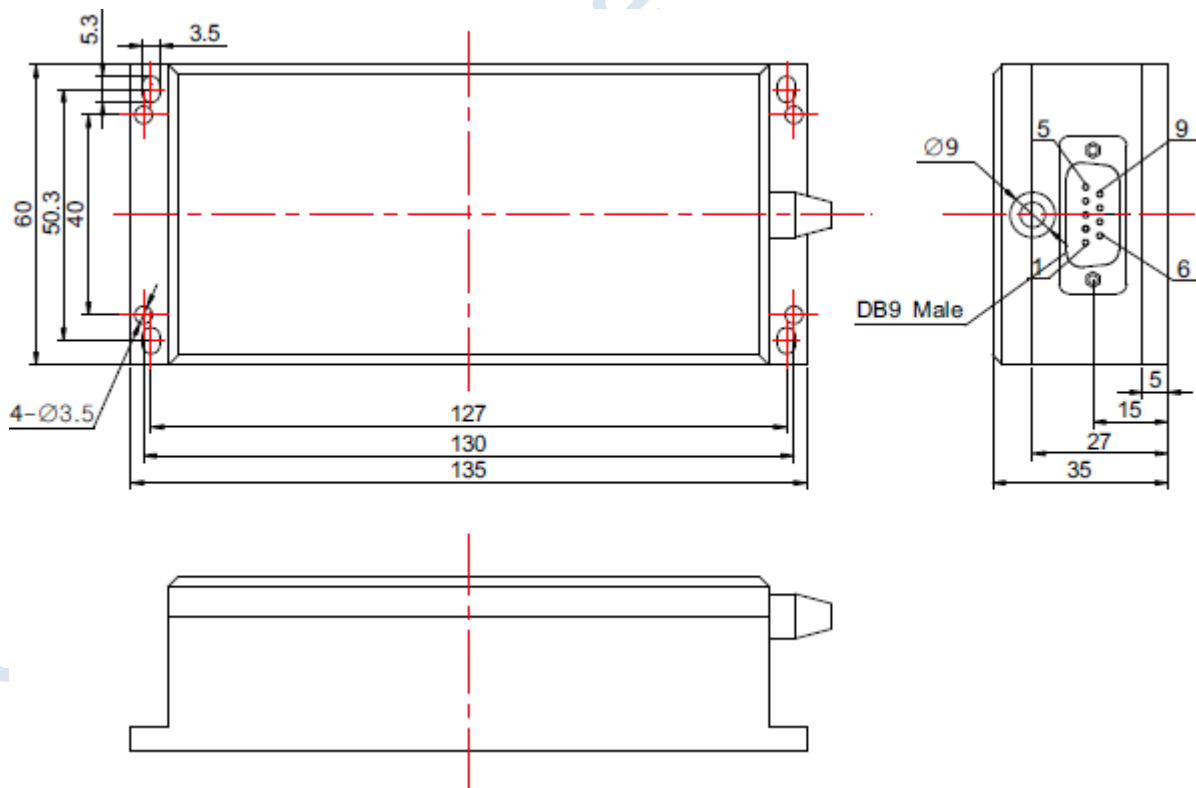
Pin number	Signal direction、 type (In/Out/Power)	Pin definition	Function Description
2	In	D0	Data bit D5~D0 are binary Numbers, D5 is high, D0 is low. The 6-bit binary number can control up to 64 optical switching. Where, 000000b = channel 1; 111111 b = channel 64。 Data should be sent according to the actual optical path of the optical switch.
3	In	D1	
4	In	D2	
5	In	D3	
6	In	D4	
10	In	D5	
11	In	/Reset	Low level reset, high level data bit effective.
7	Out	/Ready	Low level ready to reset or receive data.
8	Out	Error	A high level indicates an error has occurred.
15	Power	5V	Digital circuit power supply
12	Power	5V	The motor power
1, 9	Power	Ground	Common ground
13, 14	Not connected		

Overall dimensions L×W×H (mm)

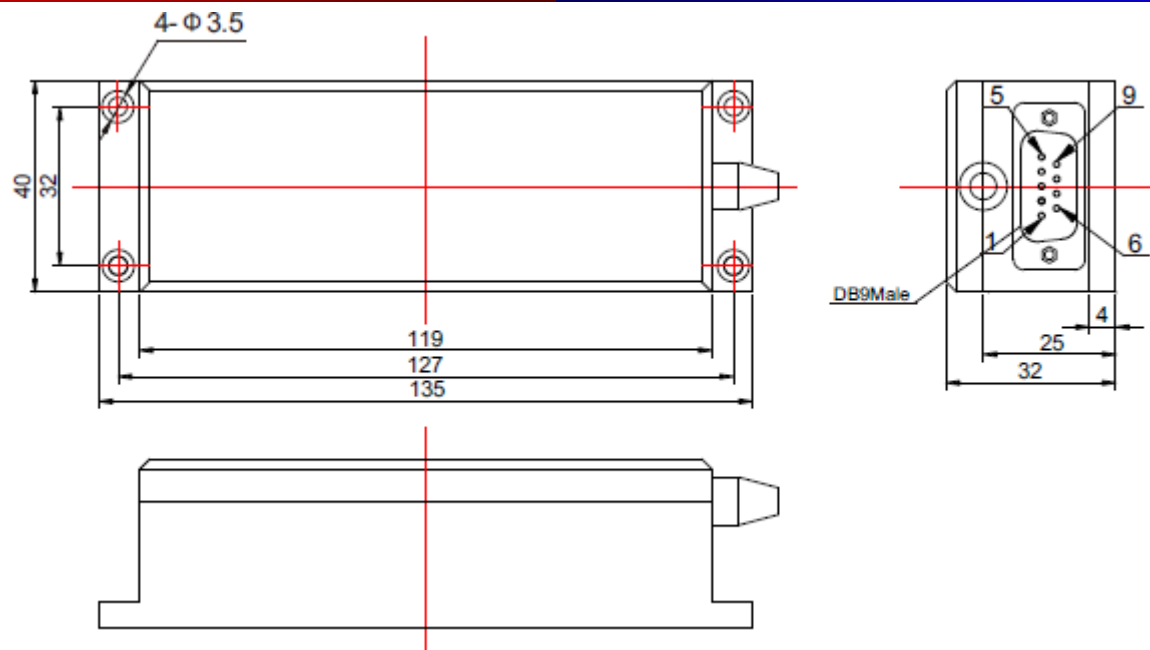
1XN (2<N≤16) Type A:120×40×32



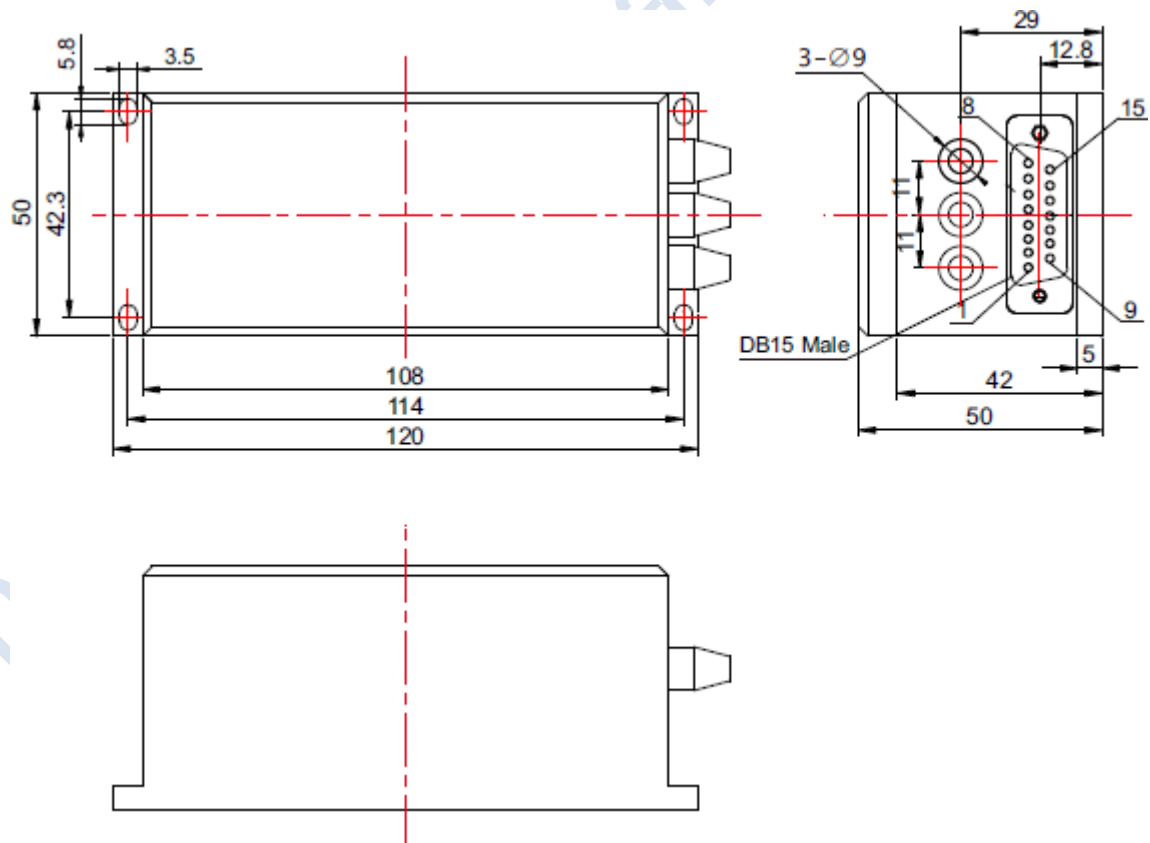
1XN ($2 < N \leq 16$) Type B: 135×60×35



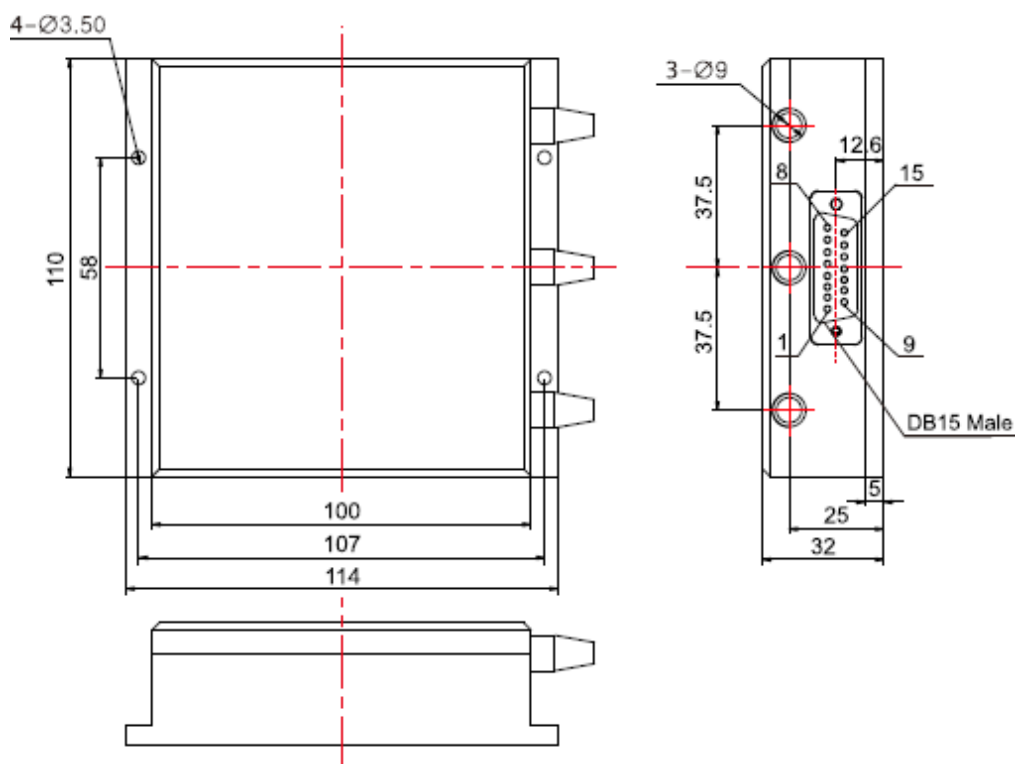
1XN ($2 < N \leq 16$) Type C: 135×40×32



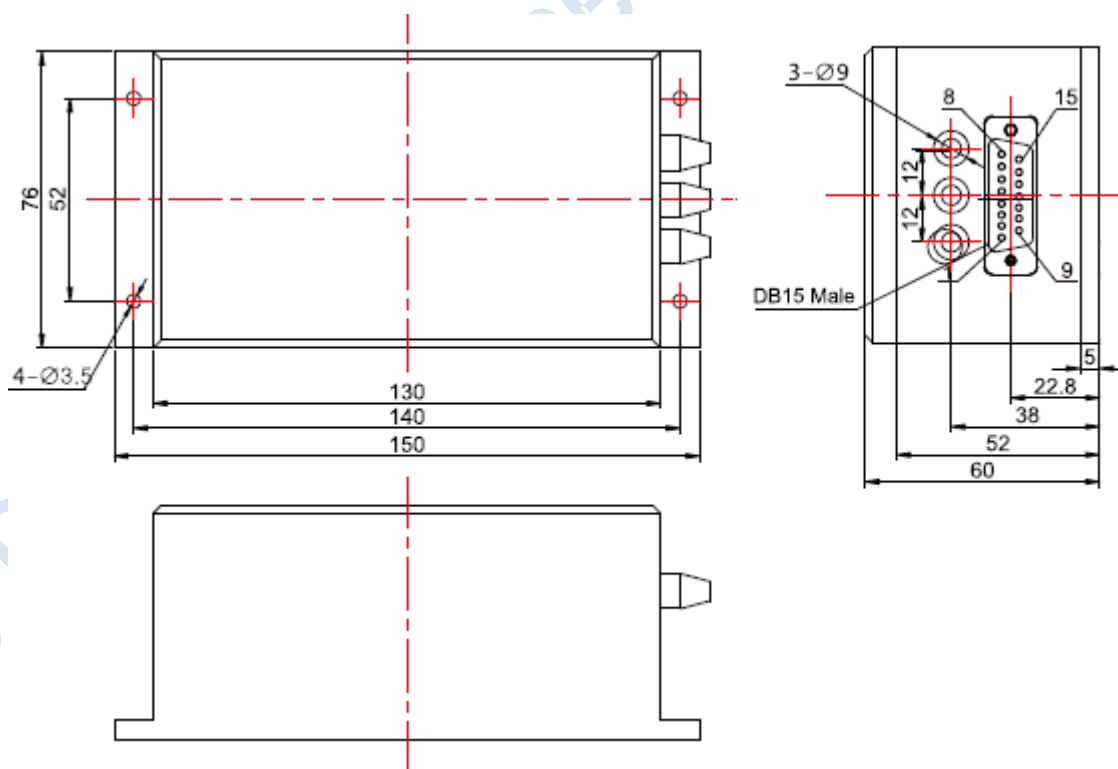
1×N (17≤N≤32) Type A:120×50×50



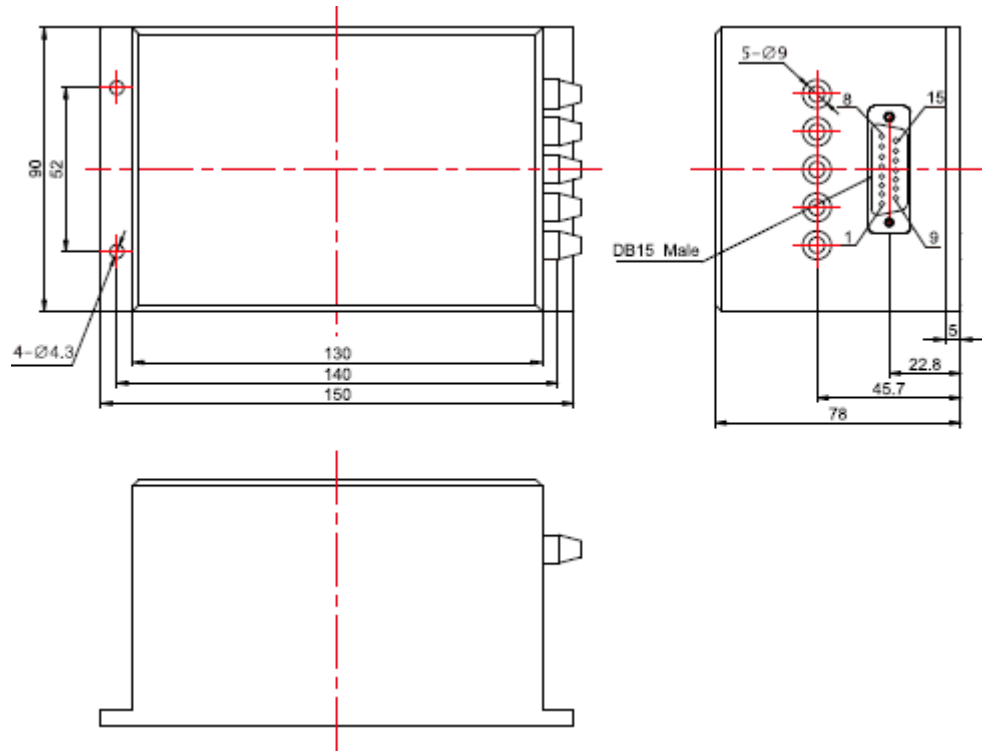
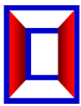
1×N (17≤N≤32) Type B: 114x110x32



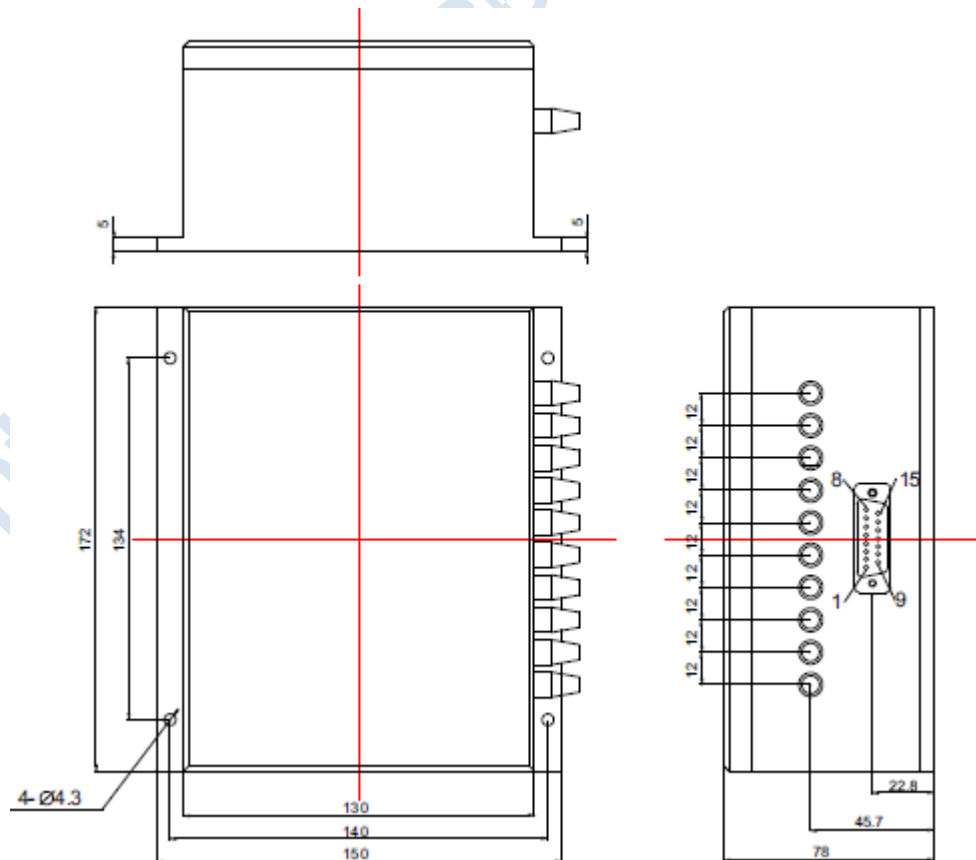
1×N (17≤N≤32) Type C: 150x76x60

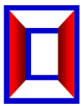


1×N (33≤N≤64) : 150×90×78



1×N (65≤N≤128) : 172×150×78





Order information HC - FSW-1×N-A-B-C-D-E-F

N	A	B	C	D	E
channel number	Optical fiber specification	Working wavelength	Optical fiber diameter	Fiber Length (Contain the connector)	Connector
1 ~ 128	SM: SM, 9/125 M5: MM, 50/125 M6: MM, 62.5/125	850: 850nm 1310: 1310nm 1550: 1550nm 1310/1550: 1310/1550nm X: other	90: 900um 20: 2.0mm 30: 3.0mm X: Others	05: 0.5m±5cm 10: 1.0m±5cm 15: 1.5m±5cm X: Others	OO: None FP: FC/PC FA: FC/APC SP: SC/PC SA: SC/APC LP: LC/PC LA: LC/APC X: Others

F (Size code)	Applicable models	Dimensions (mm)
1	1XN (2<N≤16)	Type A: 120×40×32
2	1XN (2<N≤16)	Type B: 135×60×35
3	1XN (2<N≤16)	Type C: 135×40×32
4	1×N (17≤N≤32)	Type A: 120×50×50
5	1×N (17≤N≤32)	Type B: 114×110×32
6	1×N (17≤N≤32)	Type C: 150×76×60
7	1×N (33≤N≤64)	150×90×78
8	1×N (65≤N≤128)	172×150×78