

## Features

- More Than 128Channels
- Low Loss and High Reliability
- Parallel Interface (TTL)
- Modularized Design
- Epoxy-free on Optical Path

## Application

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



## Specifications

Parameters		FSW-1×N			
		1<N≤12	16<N≤32	32<N≤64	64<N≤128
Insertion Loss	dB	Typ:0.8 Max:1.0	Typ:0.8 Max:1.0	Typ:1.2 Max:1.5	Typ:1.7 Max:2.0
Wavelength Range	nm	850nm, 1260~1620nm			
Operating	nm	850/1310//1550/1625			
Return Loss	dB	SM≥50、MM≥30			
Crosstalk	dB	SM≥55、MM≥35			
PDL	dB	≤0.05			
WDL	dB	≤0.25			
TDL	dB	≤0.25			
Repeatability	dB	≤±0.02			
Lifetime	times	10 <sup>7</sup>			
Transmission Power	mW	≤500			
Switch Time	ms	≤10			
Operating	°C	-20~+70			
Storage Temperature	°C	-40~+85			
Power Supply	V	+5 or 12			
Dimension	mm	1<N≤4 (135×40×32)	4<N≤12 (135×64×32)	12<N≤16(184×78×36)	
		16<N≤32 (140×77.5×64)	32<N<88 (184×156×66)	88≤N≤128 (184×220×66)	
		N≤16 (140×77.5×32)			

### Ordering Information

Channel	Mode	Wavelength	Voltage Type	Fiber type	Fiber diameter	Fiber Length	Connector
1~128	S=SM M=MM	85=850nm 13=1310nm 14=1490nm 15=1550nm 162= 1625nm 165=1650nm 13/15=1310/1550nm	3=5V 5=12V	5=50/125 6=62.5/125 9=9/125 X= Other	25=250um 90=900um; 20=2.0mm 30=3.0mm X= Other	05=0.5m 10=1.0m 15=1.5m X=Other	O=None 1=FC 2=SC 3=ST 4=LC

### Pin Configurations

#### DB-9 male connector (max.1×8)

Pin No.	Signal Name	I / O	Description
1	D0	Input	TTL, Channel selection bit 0
2	D1	Input	TTL, Channel selection bit 1
3	D2	Input	TTL, Channel selection bit 2
4	D3	Input	TTL, Channel selection bit 3
5	/RESET	Input	TTL, Low level reset to channel 0. High level means channel selection bits are effective.
6	/READY	Output	TTL, Ready (High=Not ready, Low=Ready)
7	ERROR	Output	TTL, Error (High=Error, Low=No error)
8	GND	Input	Ground
9	+5VDC	Input	5.0±5% VDC Power Supply (max 550mA)

#### DB-15 male connector (max.1×32)

Pin No.	Signal Name	I / O	Description
2	D0	Input	TTL, Channel selection bit 0
3	D1	Input	TTL, Channel selection bit 1
4	D2	Input	TTL, Channel selection bit 2
5	D3	Input	TTL, Channel selection bit 3
6	D4	Input	TTL, Channel selection bit 4
11	/RESET	Input	TTL, Low level reset to channel 0. High level means channel selection bits are effective.
7	/READY	Output	TTL, Ready (High=Not ready, Low=Ready)
8	ERROR	Output	TTL, Error (High=Error, Low=No error)
1, 9	GND	Input	Ground
15	+5VDC	Input	5.0±5% VDC Digital power supply (max 50mA)
12	VM	Input	5.0±5% VDC or 12±5% VDC Drive power supply (max 500mA)
10, 13, 14	NA		

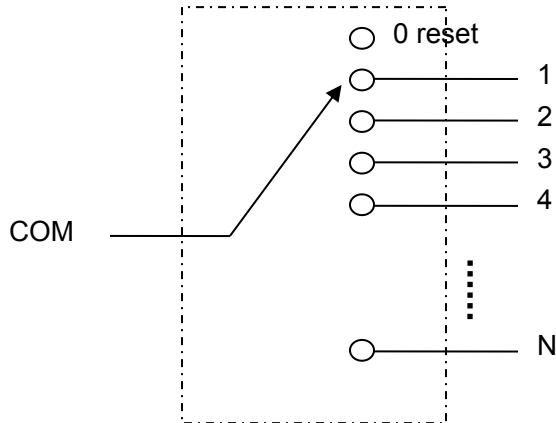
**DB-25 male connector (max.1×128)**

Pin No.	Signal Name	I / O	Description		
15	D0	Input	TTL, Channel selection bit 0		
16	D1	Input	TTL, Channel selection bit 1		
17	D2	Input	TTL, Channel selection bit 2		
18	D3	Input	TTL, Channel selection bit 3		
19	D4	Input	TTL, Channel selection bit 4		
20	D5	Input	TTL, Channel selection bit 5		
21	D6	Input	TTL, Channel selection bit 6		
22	/RESET	Input	TTL, Low level reset to channel 0. High level means channel selection bits are effective.		
2	/READY	Output	TTL, Ready (High=Not ready, Low=Ready)		
3	ERROR	Output	TTL, Error (High=Error, Low=No error)		
1, 10, 14, 23	GND	Input	Ground		
12, 25	+5VDC	Input	5.0±5% VDC Digital power supply (max 50mA)		
13	VM	Input	5.0±5% VDC or	N≤45	Current supply ≤500mA
11, 24			12±5% VDC Drive	N≤88	Current supply ≤750mA
			power supply	N≤128	Current supply ≤1000mA
4, 5, 6, 7, 8, 9	NA				

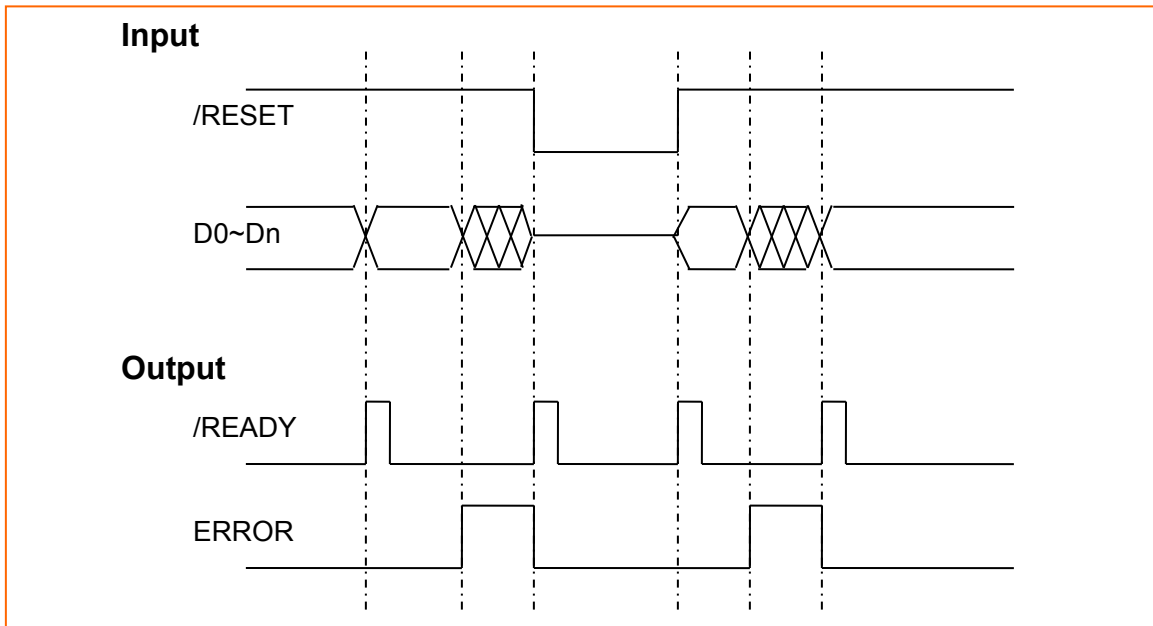
**Channel Selection Table**

Max Channel	Input								Active Channel
	/RESET	D6	D5	D4	D3	D2	D1	D0	
N=16	0	x	x	x	x	x	x	x	0 reset
	1	x	x	x	0	0	0	0	COM → 1
		x	x	x	0	0	0	1	COM → 2
		x	x	x	0	0	1	0	COM → 3
		x	x	x	...	...	...	...	...
		x	x	x	1	1	1	1	COM → 16
N=128	0	x	x	x	x	x	x	x	0 reset
	1	0	0	0	0	0	0	0	COM → 1
		0	0	0	0	0	0	1	COM → 2
		0	0	0	0	0	1	0	COM → 3
		...	...	...	...	...	...	...	...
		1	1	1	1	1	1	1	COM → 128

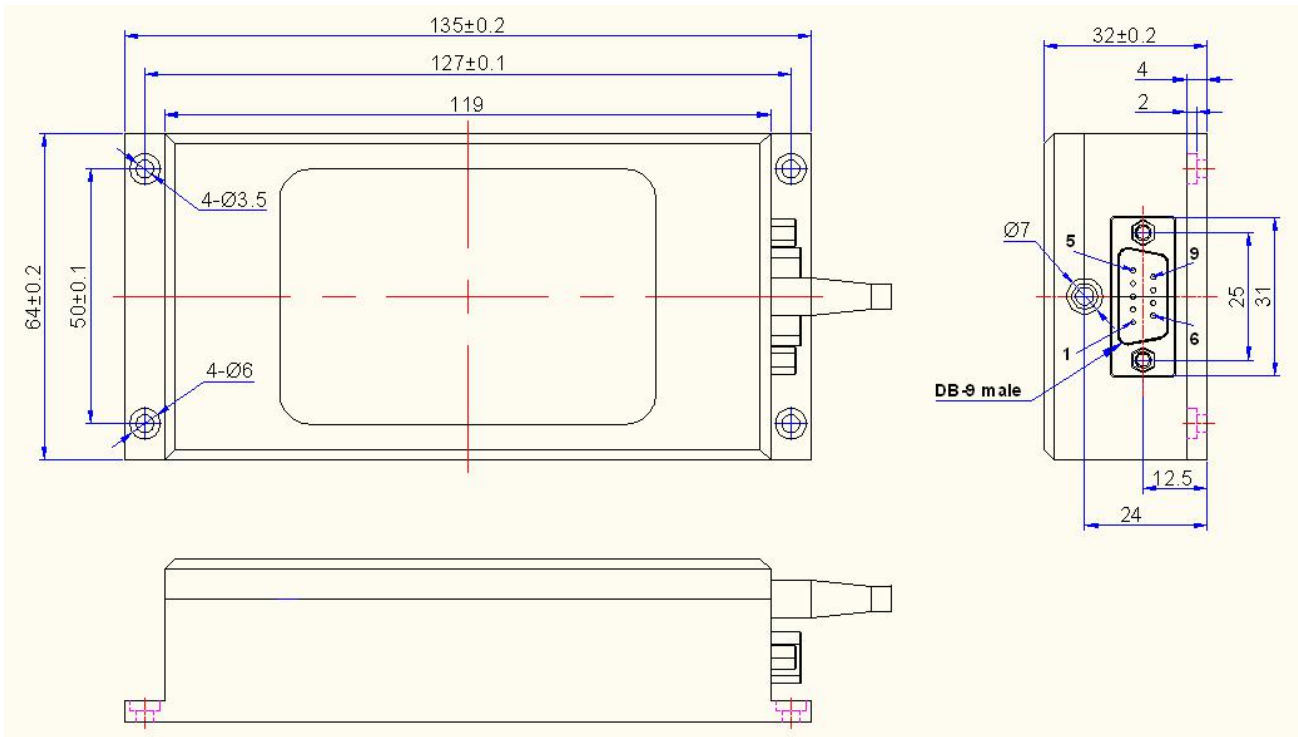
### Optical Route



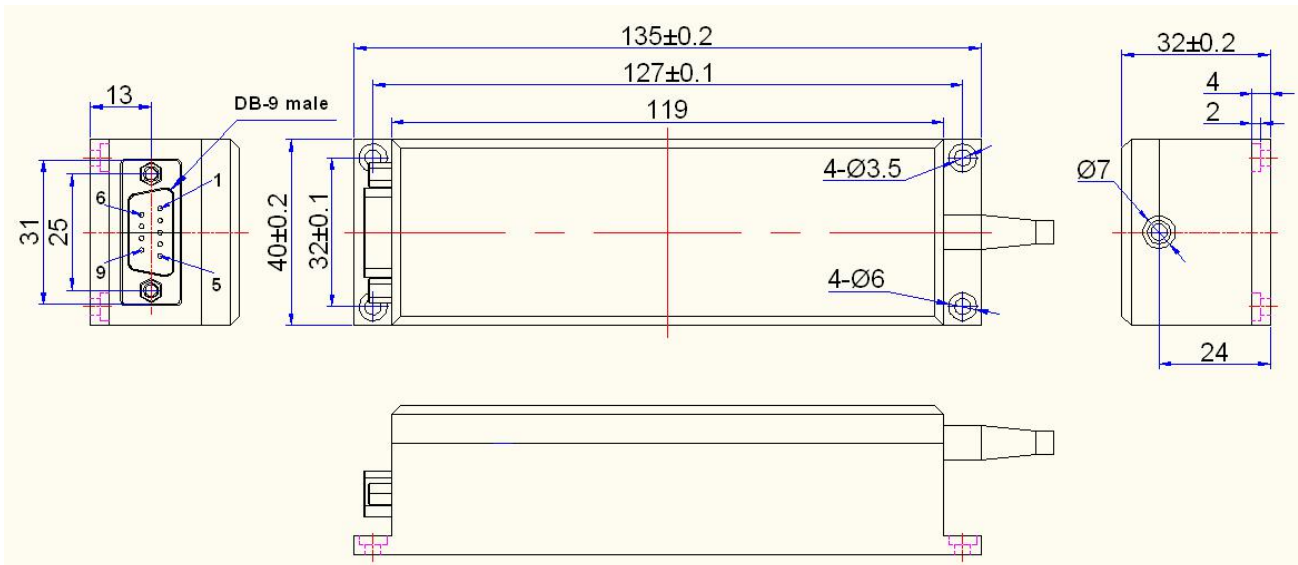
### Timing Diagram



### Dimension

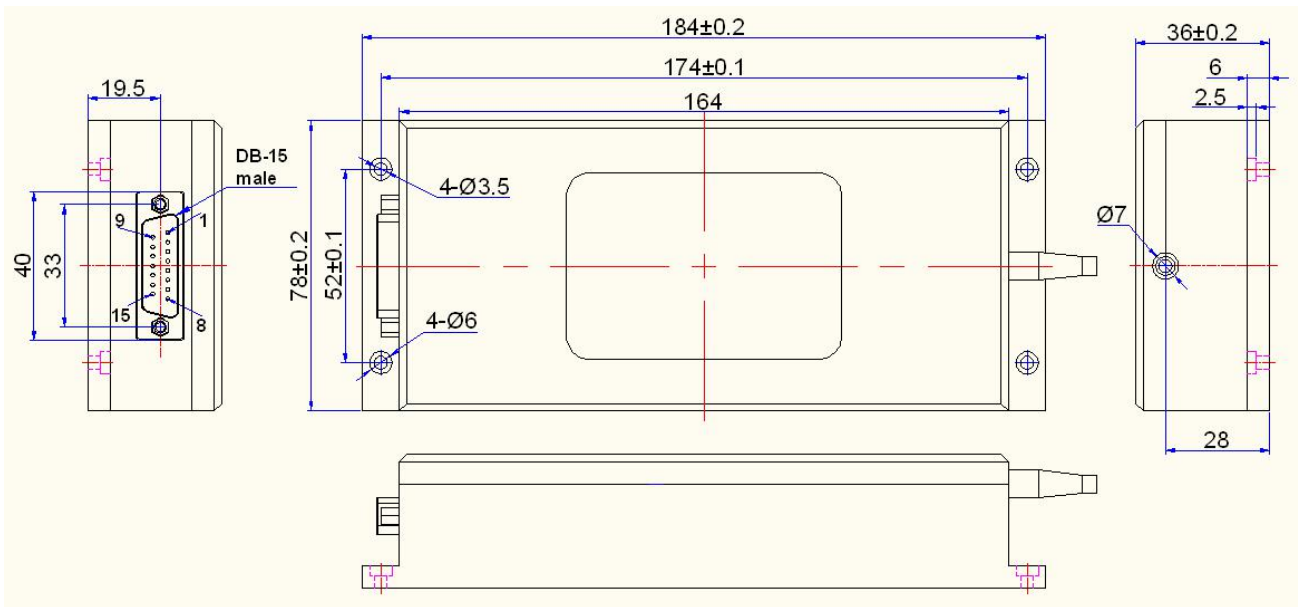


**1: 135×40×32 (N≤4, DB-9 male)**

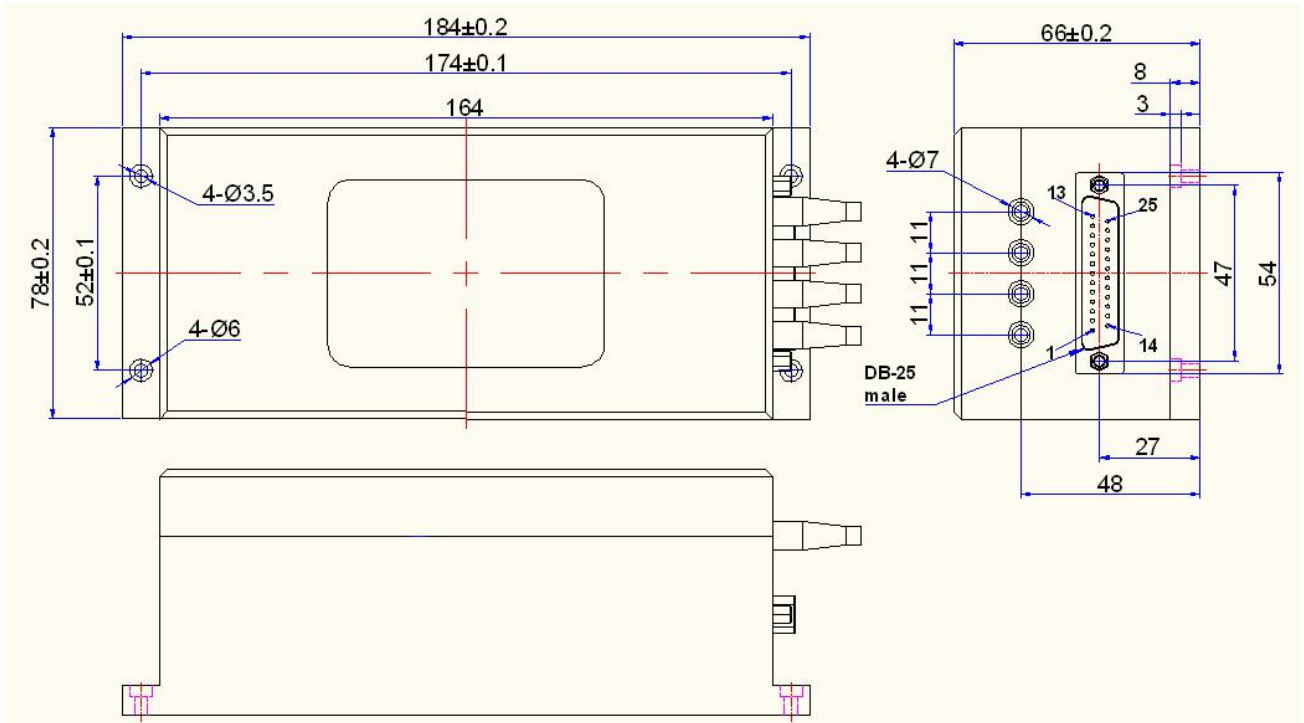


**2: 135×64×32 (N≤12, DB-9 male)**

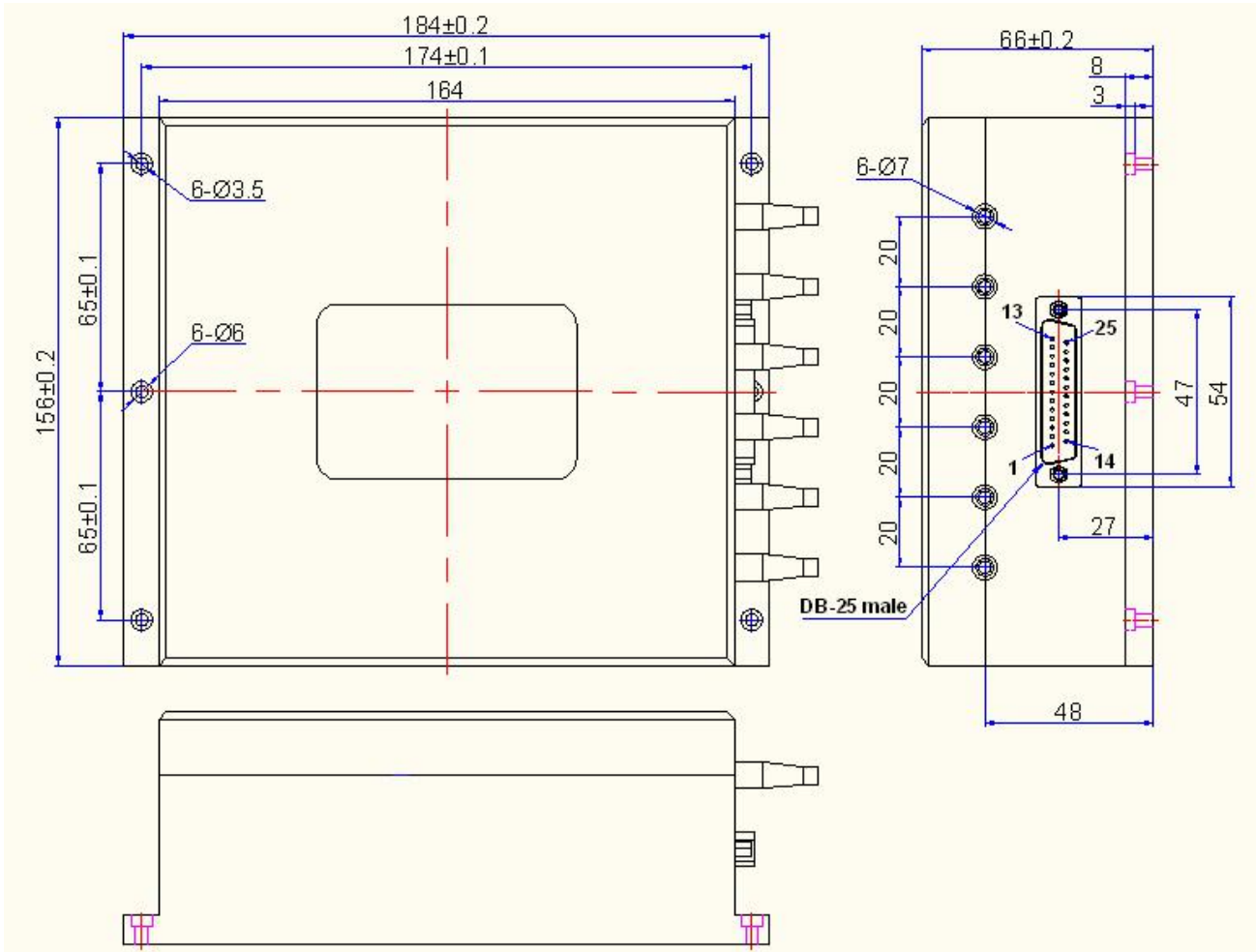
**3: 184×78×36 (N≤16, DB-15 male)**



**4: 184×78×66 (N≤45, DB-25 male)**

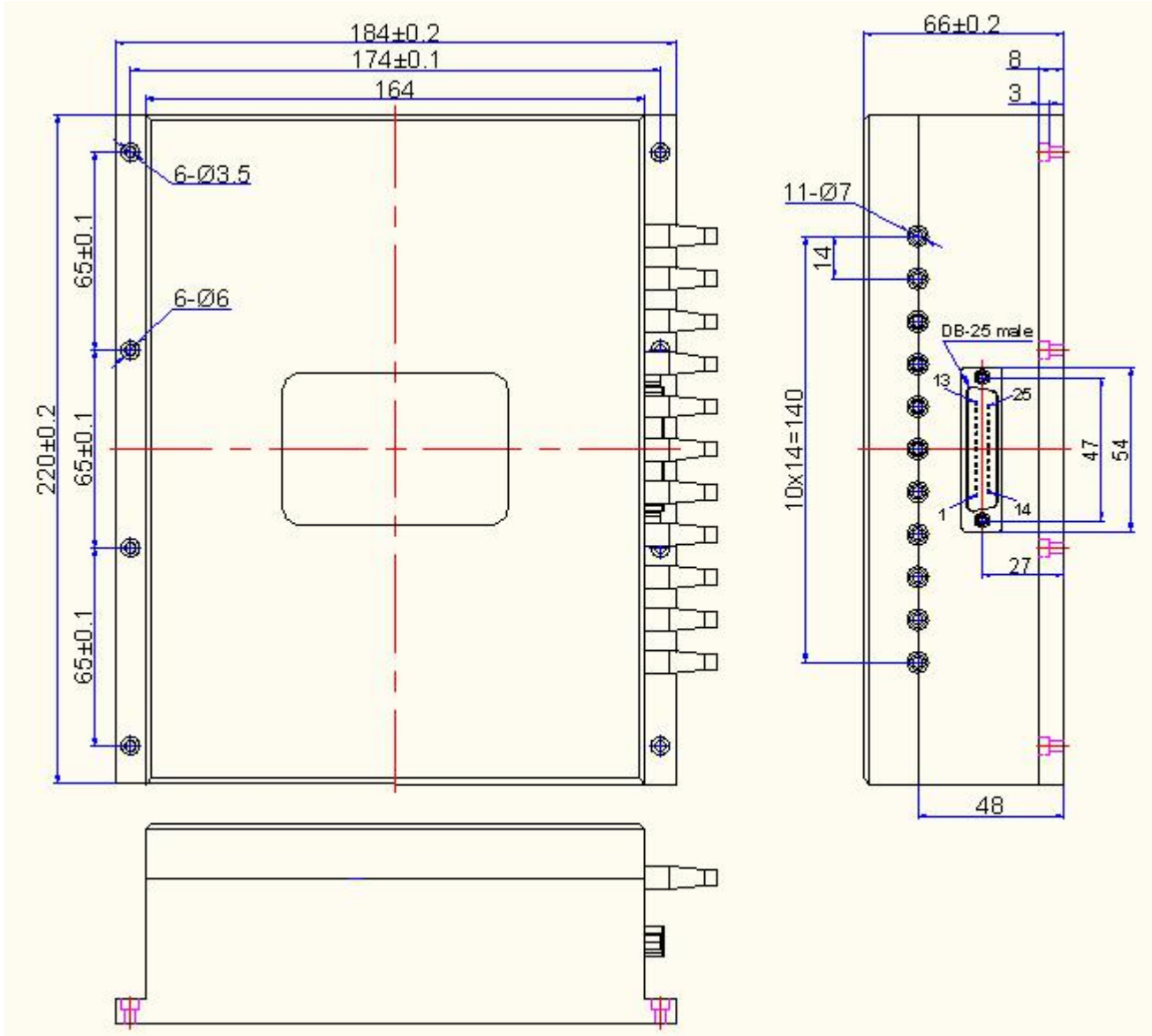


5: 184×156×66 (N≤88, DB-25 male)

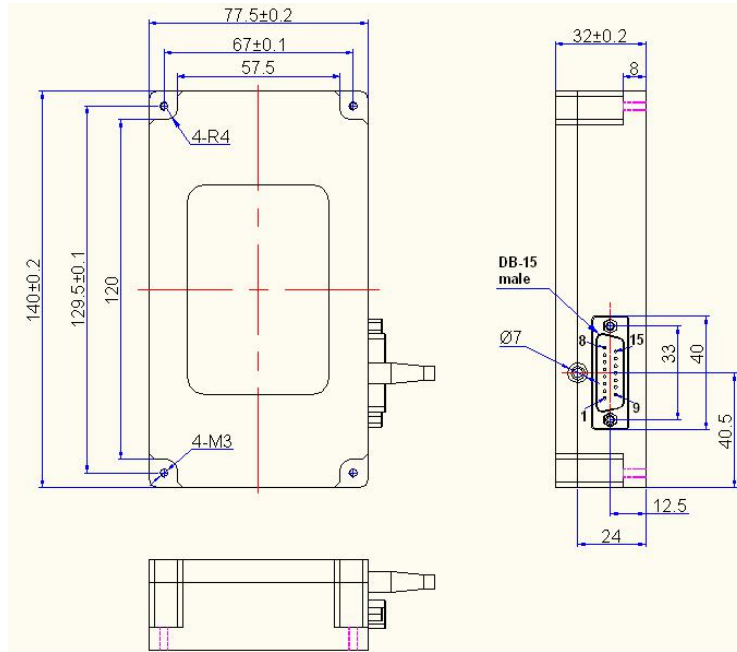




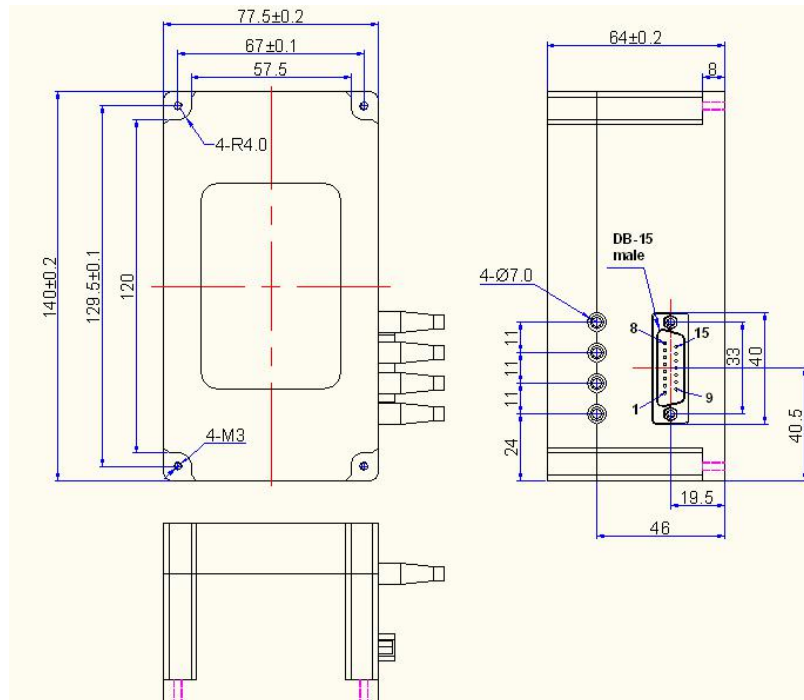
**6: 184×220×66 (N≤128, DB-25 male)**



**7: 140×77.5×32 (N≤16, DB-15 male)**



8: 140×77.5×64 (N≤32, DB-15 male)



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