Valve Terminal

Product Features

- For modular pneumatic control systems.
- Indicator lightis visible at all angles for quick troubleshooting.
- Extremely flexibility and expansibility.
- Up to 24 valve positions.
- 14mm and 10mm widths with various functions optional.
- Protection class IP65.
- Reduced power consumption by 70%.
- Internal and external pilot structure available.



Ordering Code

VPC−FD Series Valve Terminal

VPC-FD - C 14 - E 1C 2D - MC - Q10 L A - U L - Q4

- **Valve type**: C:Sub-side; F:Threaded; B:Sub-base
- **Valve width**: 10:10mm; 14:14mm
- **Pilot air**: Nil:Internal; E:External
- **Valve quantity and function**: Letters represent the function, numbers represent the quantity.
  - C:5/3 mid-position colsed
  - E:5/3 mid-position exhausted
  - P:5/3 mid-position pressurised
  - D:Double solenoid 5/2-way valve
  - NC:2×3/2-way valve NC
  - NO:2×3/2-way valve NO
  - NOC:3/2-way valve NC/NO
  - S:Single solenoid 5/2-way valve
  - B:Black plate
- **Communication**: MC:D-SUB25
- **Inlet fitting specifications**: Nil:No fitting; Q6:6mm quick plug; Q8:8mm quick plug; Q10:10mm quick plug; Q12:12mm quick plug
- **Inlet fitting position**: Nil:Both side; L:Left side mounting, right side blocking; R:Right side mounting, left side blocking
- **Inlet fitting type**: Nil:Straight type; A:90 degree elbow
- **Silencer options**: Nil:No silencer; U:With silencer
- **Silencer position**: Nil:Both side; L:Left side mounting, right side blocking; R:Right side mounting, left side blocking
- **Working port fitting specification**: Nil:No fitting; Q4:4mm quick plug; Q6:6mm quick plug; Q8:8mm quick plug

* When different valves are mixed, the default installation order from left to right is C, E, P, D,NC, NO, NOC, S, and B.
* Near the electrical interface end is defined to the left of the valve terminal.

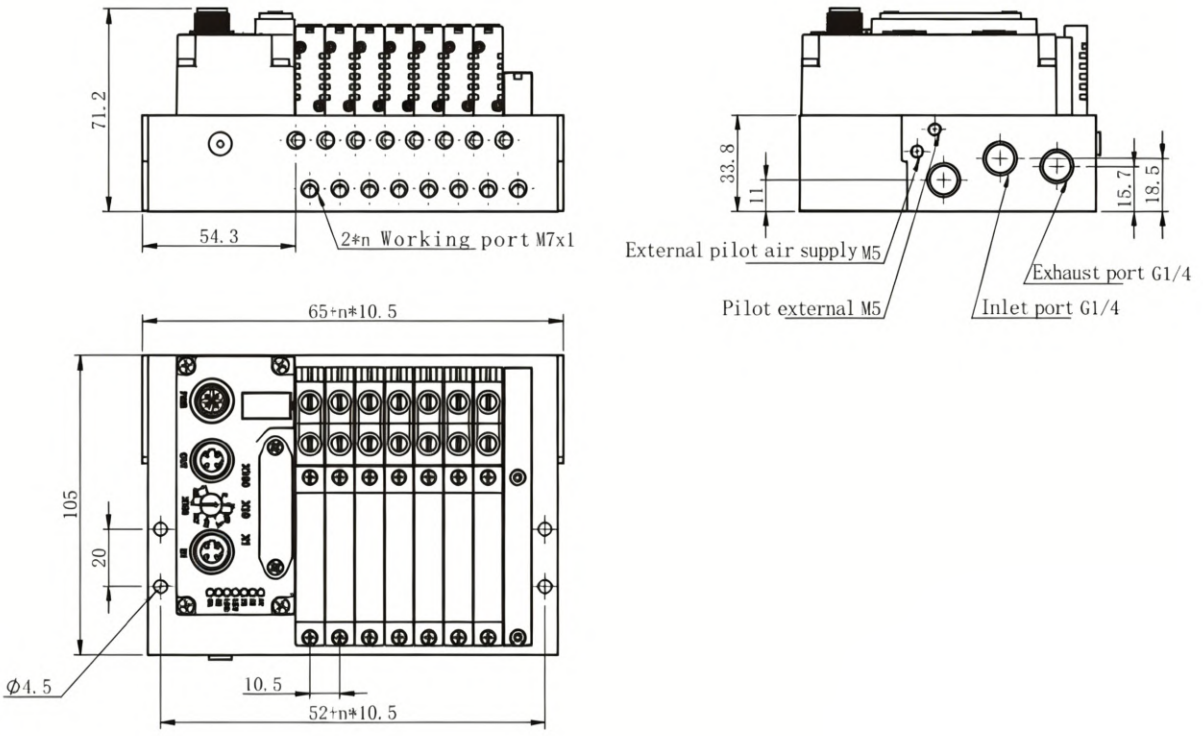
Specifications

Positions		4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 20, 24	
Electrical connection		D-SUB25 pin	
Voltage		24VDC±10%	
Power consumption		Single coil Instant Max 1.2W	
Flow rate		Max 600L/min (According to the valve type)	
Working port		10mm:Supply=Exhaust=G1/4" Working=M7*1	14mm:Supply=Exhaust=G1/4" Working=G1/8"
Working pressure	Pilot pressure	Refer to P6 FDF valve specification	

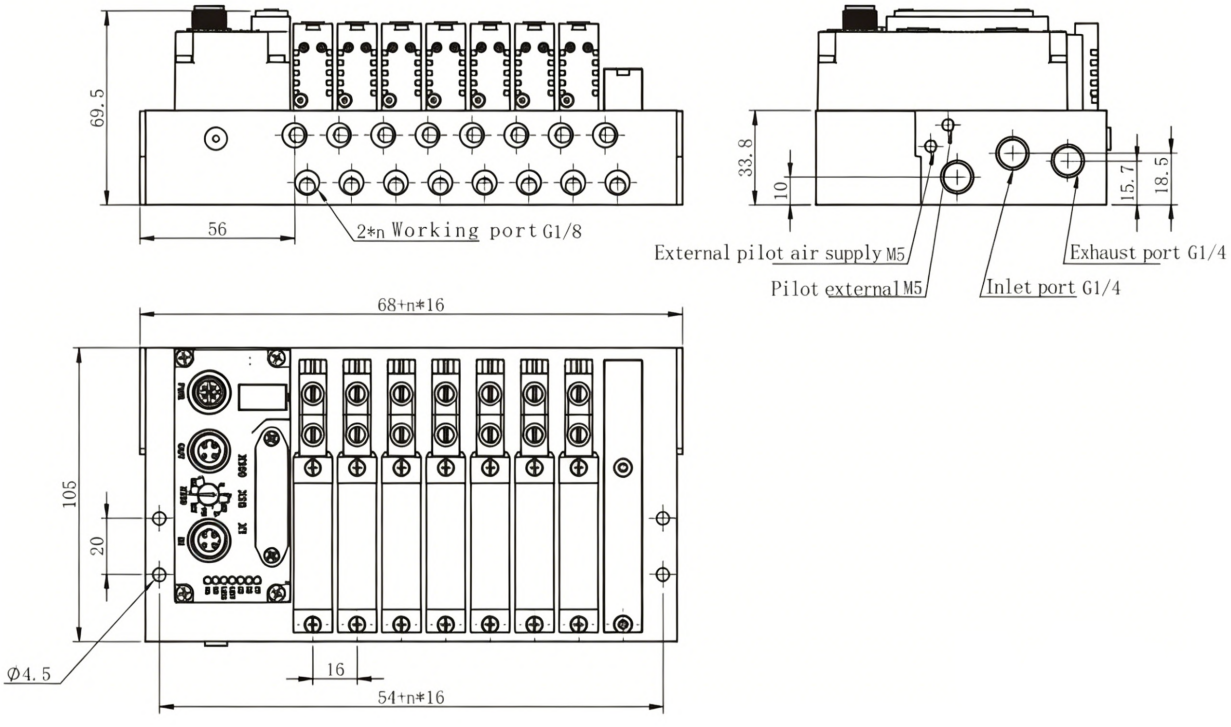
Valve Terminal

Main Dimensions

10mm



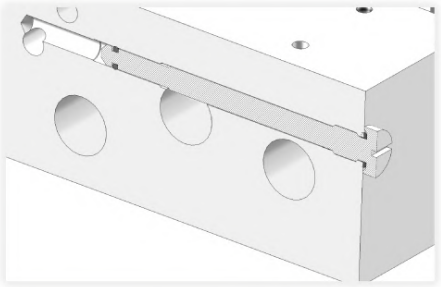
14mm



II

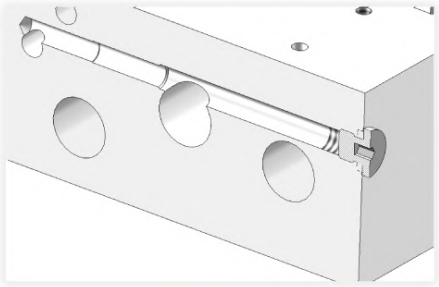
Valve Terminal

Internal and External Pilot Switching



External Pilot

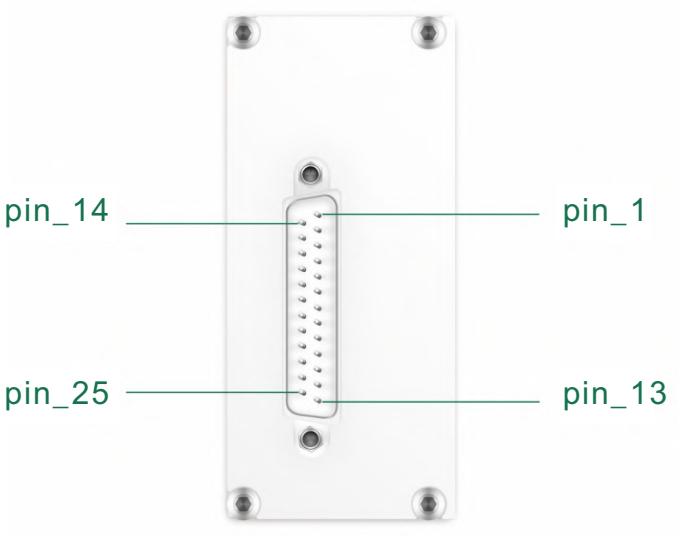
Installing screw at the pilot switching hole can realize the external pilot function, pilotair through the M5 threaded hole at the endface of the bottom plate.



Internal Pilot

Installing M5 plug at the pilot switching hole can realize the internal pilot function, pilot air directly though the air inlet of the bottom plate.

D-SUB25 pin

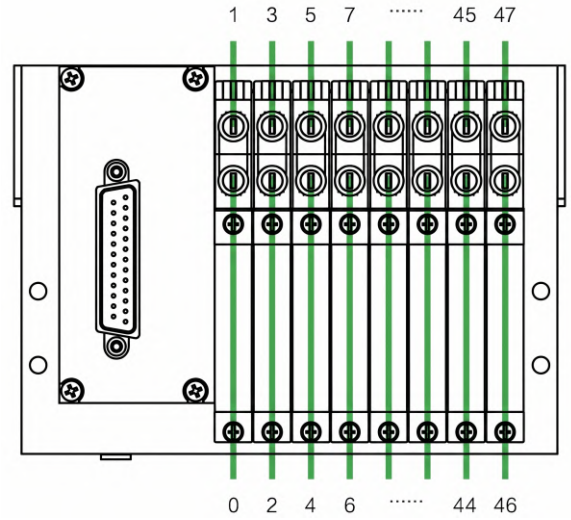


Item	Order code
D-SUB25 pin	V1-25-SUB

Valve terminal can control up to 24 coils depending on the connection mode. Each valve coil of the valve terminal corresponmds to a pin on the multi-pin plug.

Valve Terminal

Definition of D-SUB25 pin module

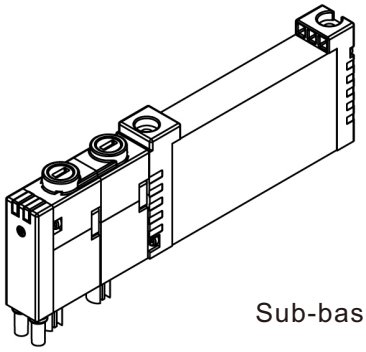


PIN	Position	Max. valve position			
		4 to 12	16	20	24
		Valve No./Coil name			
1	0	0/14	0/14	0/14	0/14
2	1	0/12	0/12	0/12	23/14
3	2	1/14	1/14	1/14	1/14
4	3	1/12	1/12	1/12	22/14
5	4	2/14	2/14	2/14	2/14
6	5	2/12	2/12	2/12	21/14
7	6	3/14	3/14	3/14	3/14
8	7	3/12	3/12	3/12	20/14
9	8	4/14	4/14	4/14	4/14
10	9	4/12	4/12	19/14	19/14
11	10	5/14	5/14	5/14	5/14
12	11	5/12	5/12	18/14	18/14
13	12	6/14	6/14	6/14	6/14
14	13	6/12	6/12	17/14	17/14
15	14	7/14	7/14	7/14	7/14
16	15	7/12	7/12	16/14	16/14
17	16	8/14	8/14	8/14	8/14
18	17	8/12	15/14	15/14	15/14
19	18	9/14	9/14	9/14	9/14
20	19	9/12	14/14	14/14	14/14
21	20	10/14	10/14	10/14	10/14
22	21	10/12	13/14	13/14	13/14
23	22	11/14	11/14	11/14	11/14
24	23	11/12	12/14	12/14	12/14
25	COM				

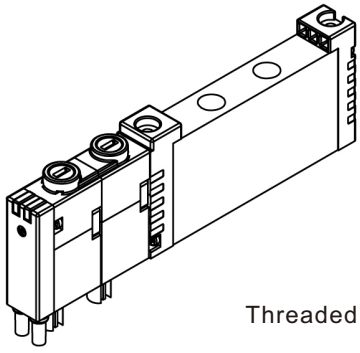
* Double coil valve can be installed at the valve position corresponding to the gray area.

Valve Terminal

Main Dimensions

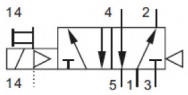
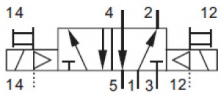
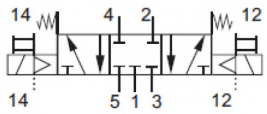
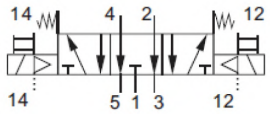
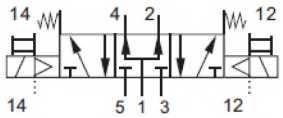
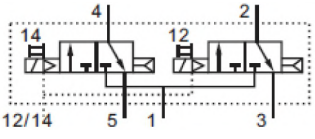
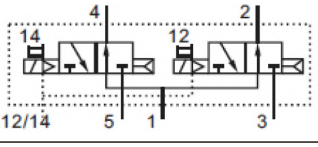
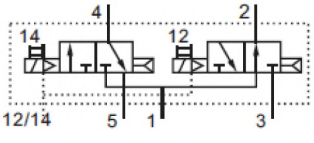


Sub-base



Threaded

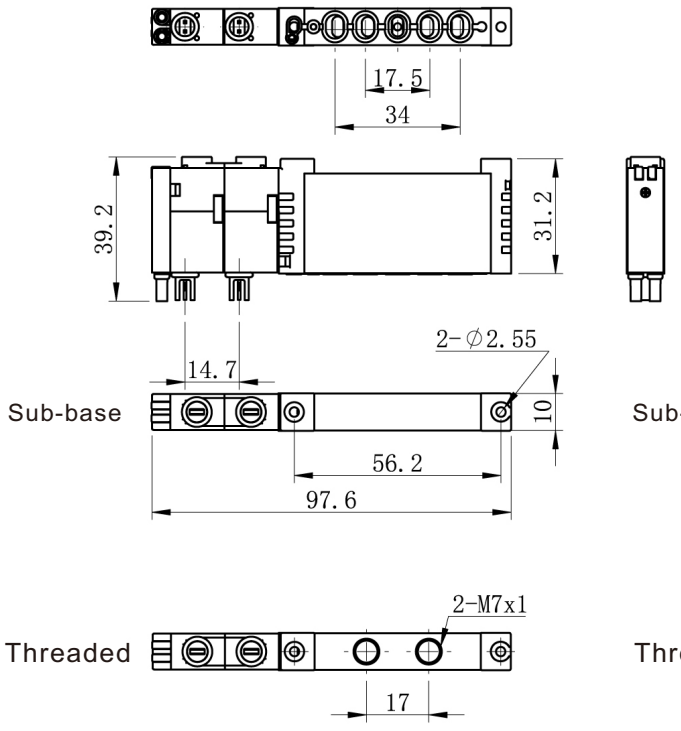
- For sub-base valve, 5 ports are all at the bottom. For semi in-line valve, inlet and exhaust ports are at the bottom 2 working ports are at the top.
- All valves are external pilot, it can be realized by switching screws on the sub-base when internal pilot is needed.

Ocder code	Type	Valve width	Function	Symbol
FDF-C14-510	Sub-base	14	5/2-way valve single solenoid	
FDF-F14-510	Threaded			
FDF-C10-510	Sub-base	10		
FDF-F10-510	Threaded			
FDF-C14-520	Sub-base	14	5/2-way valve double solenoid	
FDF-F14-520	Threaded			
FDF-C10-520	Sub-base	10		
FDF-F10-520	Threaded			
FDF-C14-530	Sub-base	14	5/3-way valve mid-position closed	
FDF-F14-530	Threaded			
FDF-C10-530	Sub-base	10		
FDF-F10-530	Threaded			
FDF-C14-533	Sub-base	14	5/3-way valve mid-position exhausted	
FDF-F14-533	Threaded			
FDF-C10-533	Sub-base	10		
FDF-F10-533	Threaded			
FDF-C14-534	Sub-base	14	5/3-way valve mid-position pressurised	
FDF-F14-534	Threaded			
FDF-C10-534	Sub-base	10		
FDF-F10-534	Threaded			
FDF-C14-310	Sub-base	14	2×3/2-way valve NC	
FDF-F14-310	Threaded			
FDF-C10-310	Sub-base	10		
FDF-F10-310	Threaded			
FDF-C14-312	Sub-base	14	2×3/2-way valve NO	
FDF-F14-312	Threaded			
FDF-C10-312	Sub-base	10		
FDF-F10-312	Threaded			
FDF-C14-314	Sub-base	14	2×3/2-way valve NC/NO	
FDF-F14-314	Threaded			
FDF-C10-314	Sub-base	10		
FDF-F10-314	Threaded			

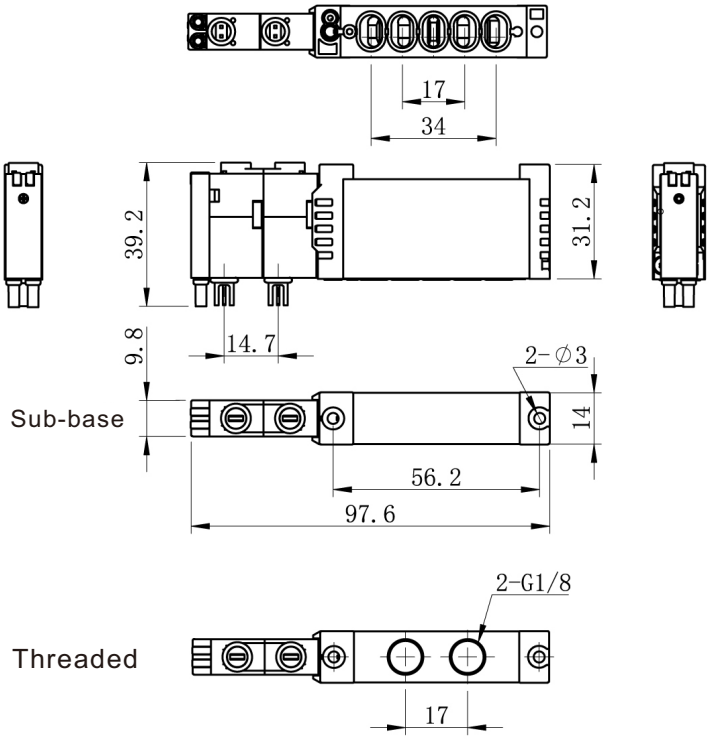
Valve Terminal

Main Dimensions

10mm



14mm



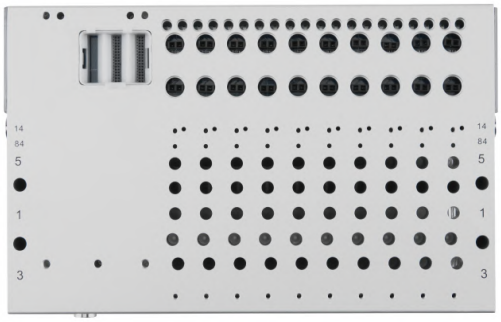
Valve Parameter

Specification		Internal pilot	External pilot		Flow rate(L/min)
		Working pressure(bar)	Pilot pressure(bar)	Working pressure(bar)	
10mm	FDF-510	2~8	2~8	0~8	300
	FDF-520	2~8	2~8	0~8	300
	FDF-530	3~8	3~8	0~8	260
	FDF-533	3~8	3~8	0~8	260
	FDF-534	3~8	3~8	0~8	260
	FDF-310	2.5~8	2.5~8	2~8	280
	FDF-312	2.5~8	2.5~8	2~8	280
	FDF-314	2.5~8	2.5~8	2~8	280
14mm	FDF-510	2~8	2~8	0~8	560
	FDF-520	2~8	2~8	0~8	560
	FDF-530	3~8	3~8	0~8	500
	FDF-533	3~8	3~8	0~8	500
	FDF-534	3~8	3~8	0~8	600
	FDF-310	2.5~8	2.5~8	2~8	600
	FDF-312	2.5~8	2.5~8	2~8	500
	FDF-314	2.5~8	2.5~8	2~8	500

Valve Terminal

Product Features

- There are 2 options for manifold: 10mm and 14mm
- Same manifold is used for sub-base and semi in-line valve.
- PCB board has been integrated into the manifold.



Manifold assembly

Order code

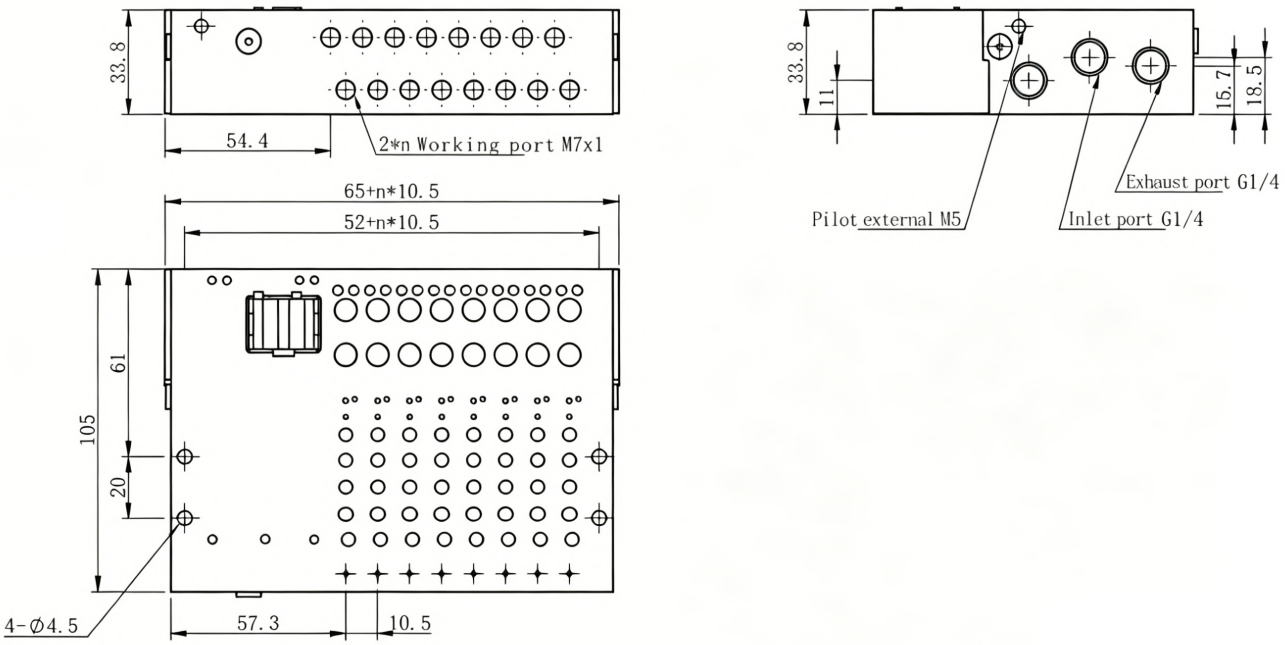
Specifications		Valve width	Position number
10mm	FDM-C10-4F	10	4
	FDM-C10-5F	10	5
	FDM-C10-6F	10	6
	FDM-C10-7F	10	7
	FDM-C10-8F	10	8
	FDM-C10-9F	10	9
	FDM-C10-10F	10	10
	FDM-C10-12F	10	12
	FDM-C10-16F	10	16
	FDM-C10-20F	10	20
	FDM-C10-24F	10	24

Specifications		Valve width	Position number
14mm	FDM-C14-4F	14	4
	FDM-C14-5F	14	5
	FDM-C14-6F	14	6
	FDM-C14-7F	14	7
	FDM-C14-8F	14	8
	FDM-C14-9F	14	9
	FDM-C14-10F	14	10
	FDM-C14-12F	14	12
	FDM-C14-16F	14	16
	FDM-C14-20F	14	20
	FDM-C14-24F	14	24

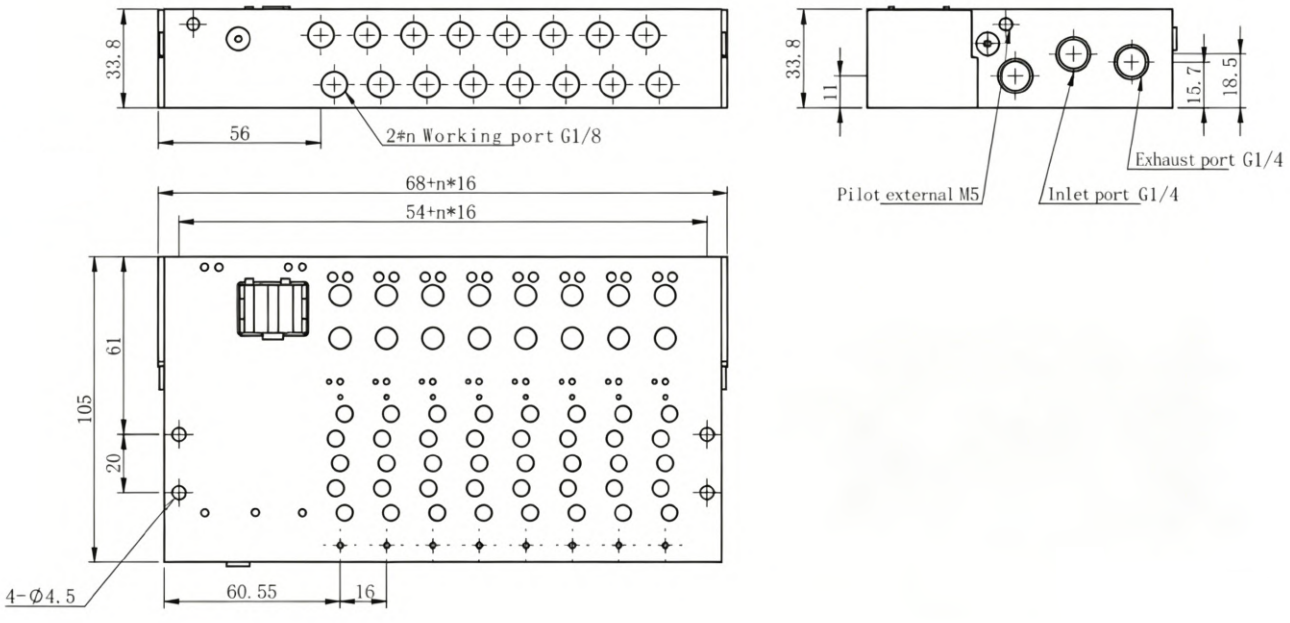
Valve Terminal

Main Dimensions

10mm



14mm



II

Valve Terminal

Additional Accessories

Cable for multi-pin plug	Item	Order code
	Communication (VPC-FD female-scatter) 2.5M	VPC-FD-M-2.5
	Communication (VPC-FD female-scatter) 5M	VPC-FD-M-5

Fitting	Item	Order code
	G1/8-4	VPOC4-G01
	G1/8-6	VPOC6-G01
	G1/8-8	VPOC8-G01
	G1/4-8	VPOC8-G02

Fitting	Item	Order code
	M5-4	VPOC4-M5C
	M5-6	VPOC6-M5C
	M7-4	VPOC4-M7C
	M7-6	VPOC6-M7C

Blanking plug	Item	Order code
	M5	TTY-GDTM5
	M7	TTY-GDTM7
	G1/8	TTY-GDT1/8
	G1/4	IBP-G02

Silencer	Item	Order code
	Silencer	PSU-A-8
	Separator for pressure zones	VPC-FD-FQDT

Pilot switching screw	Item	Order code
	Pilot switching screw	VPC-FD-QHLD

Blanking plate	Item	Order code
	10MM	FDF-C10-B
	14MM	FDF-C14-B

Valve Terminal

Product Features

- Inlet and exhaust ports are centrally arranged, compact interface.
- Up to 24 single coil valves can be integrated.
- D-SUB25 interface to save wiring time and labor cost.
- Double coll solutions available.
- Each valve is equipped with working indicator light, convenient for debugging.



Ordering Code

VPC-SY Series Valve Terminal

VPC-SY - 300 - 1C 2D - MC

- VPC-SY: Type code
- 300: Series
  - 300 Series
  - 500 Series
  - 700 Series
- 1C 2D: Valve quantity and function
  - Letters represent the function, numbers represent the quantity.
  - C:5/3 mid-position colsed
  - E:5/3 mid-position exhausted
  - P:5/3 mid-position pressurised
  - D:Double solenoid 5/2-way valve
  - S:Single solenoid 5/2-way valve
  - B:Black plate
- MC: Communication
  - MC:D-SUB25 pin

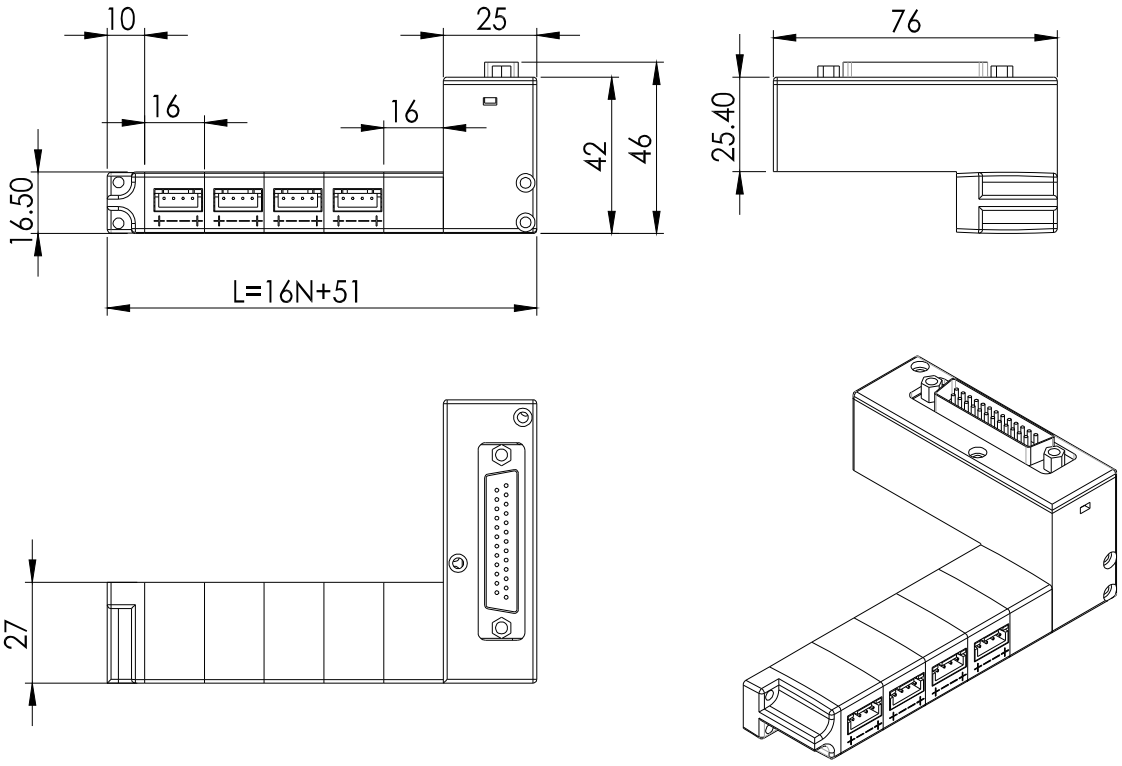
Specifications

Model	VPC-SY-300			VPC-SY-500			VPC-SY-700		
Valve function	D	S	C E P	D	S	C E P	D	S	C E P
Working medium	Clean air (40μm filteration)								
Working pressure (MPa)	0.15~0.7	0.1~0.7	0.2~0.7	0.15~0.7	0.1~0.7	0.2~0.7	0.15~0.7	0.1~0.7	0.2~0.7
Working temperature	-10 to 60℃								
Max.working frequency	10Hz	10Hz	3Hz	5Hz	5Hz	3Hz	5Hz	5Hz	3Hz
Response time	<12ms	<12ms	<15ms	<19ms	<19ms	<32ms	<27ms	<31ms	<50ms
Exhaust way	Centralized exhaust								
Lubrication	No								
Installation type	Free								
Impact resistance Vibration resistance	150/30m/s²								
Protective class	IP65								
Joint size	1/8"			1/8"			1/4"		

Valve Terminal

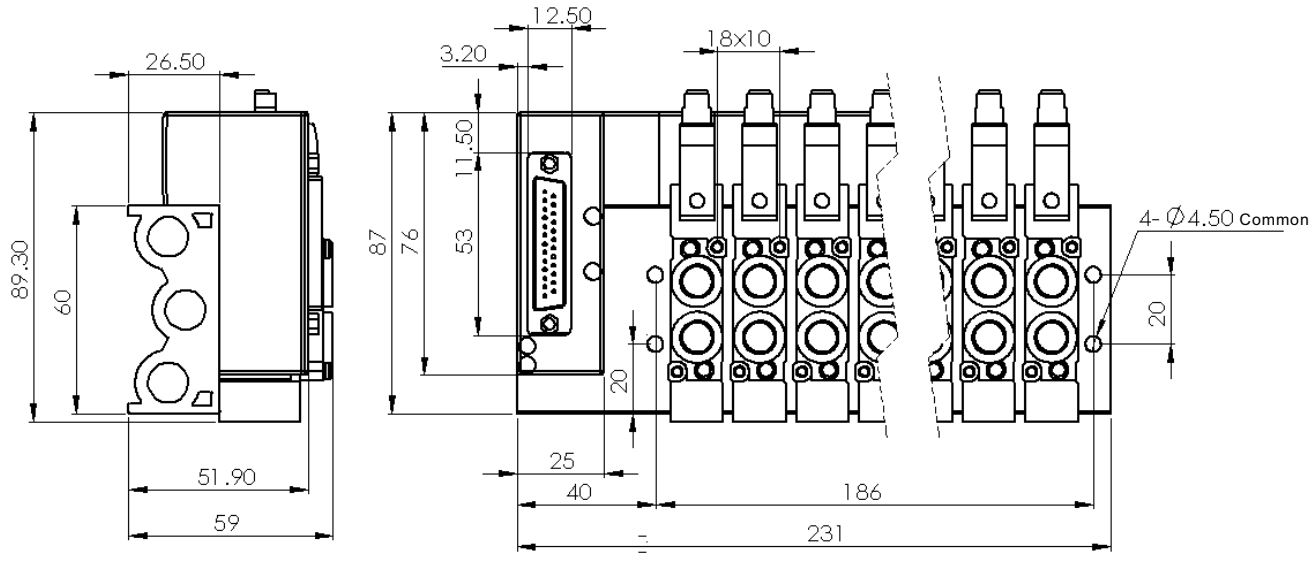
Main Dimension Universal Valve Island F1 Valve Island

The F1 valve island adopts the original manifold base of each respective solenoid valve series; therefore, there is no unified overall dimension. The following shows the dimensions of the manifold module.



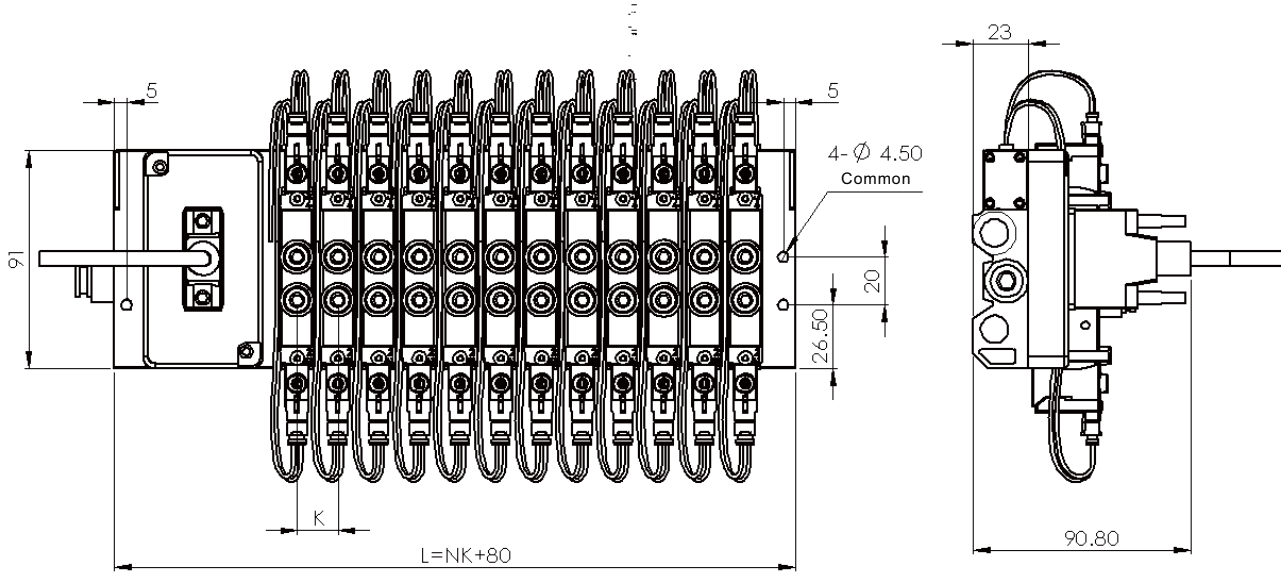
Station	4	5	6	7	8	9	10	11	12
L	115	131	147	163	179	195	211	227	243

SY5120 10-Station Manifold Valve Island



Valve Terminal

Main Dimensions F2 Valve Island



Station	4	5	6	7	8	9	10	···	24
L	4K+80	5K+80	6K+80	7K+80	8K+80	9K+80	10K+80	···	24K+80

* The K value is the spacing between solenoid valves (generally the standard manifold spacing plus 1mm).

Additional Accessories

VPC-SY Series cable	Order code
Communication (SY female-scatter) 2.5M	SY-M-2.5
Communication (SY female-scatter) 5M	SY-M-5

Valve Terminal

Product Features

- Inlet and exhaust ports are centrally arranged, compact interface.
- Up to 14 single coil valves can be integrated.
- D-SUB25 interface to save wiring time and labor cost.
- Double coil solutions available.
- Each valve is equipped with working indicator light, convenient for debugging.



Ordering Code

4VS Series Valve Terminal

4VS - 100 - 4S - 2D - 1C 1E 1P - DC24V

- 4VS: Type code
- 100: Series — 100 Series, 200 Series
- 4S: Coil and position number — Nil:No single coil; 4S:Single coil
- 2D: Coil and position number — Nil:No single coil; 2D: Double coil
- 1C 1E 1P: Coil and position number — Nil: Dual-solenoid three-position solenoid valve; 1C: Dual-solenoid three-position sealed type (1 unit); 1E: Dual-solenoid three-position vented type (1 unit); 1P: Dual-solenoid three-position pressure type (1 unit)
- DC24V: Voltage — DC24V

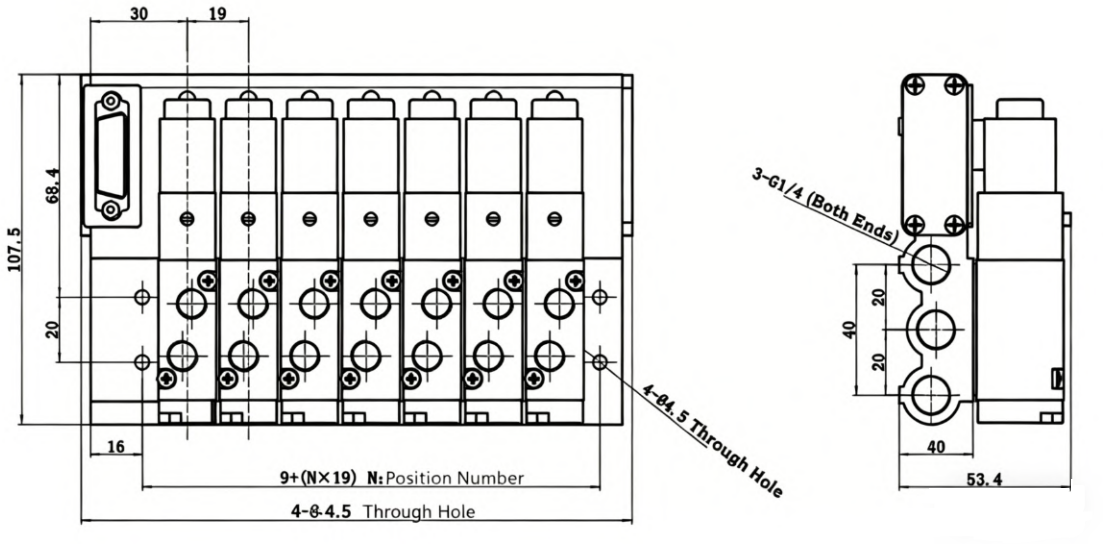
Specifications

Model	100 Series			200 Series		
Function	5/2 single coil	5/2 double coil	5/3 double coil	5/2 single coil	5/2 double coil	5/3 double coil
Net section area	12mm²(CV=0.67)		9mm²(CV=0.5)	16mm²(CV=0.89)		12mm²(CV=0.5)
Joint size	Inlet and exhaust= G1/4 Working =G1/8			Inlet and exhaust= G1/4 Working =G1/4		
Working medium	Clean air (40μm filteration)					
Acting type	Internal pilot					
Working pressure	0.15 to 0.8MPa					
Max. pressure	1.2MPa					
Working temperature	-10℃ to 60℃					
Voltage range	24VDC±10%					
Power consumption	Single valve 2.5W			Single valve 3W		
Protective class	Level F					
Max. frequency	5 times/s					
Min. excitation time	0.05s					

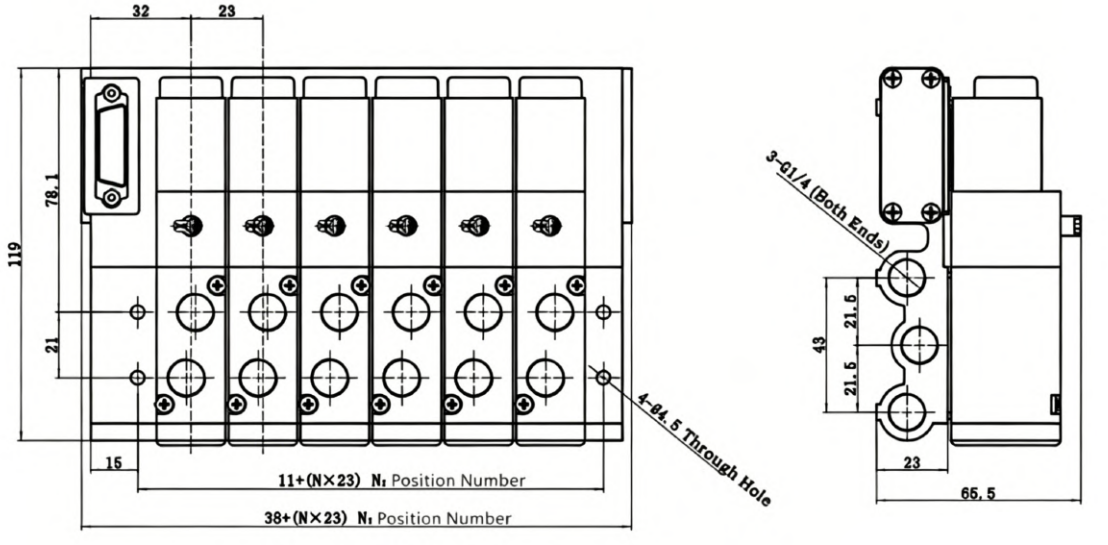
Valve Terminal

Main Dimension

4VS-100



4VS-200



Additional Accessories

4VS Series cable	Order code
4VS Series 3M	4VS-X-3
4VS Series 5M	4VS-X-5