



Manifold Specifications

Model		D-sub connector		Non plug-in
		Type 10FA	Type 10FB	Type 10
Manifold type		Connector type		Individual wiring
1 (SUP), 3 (EXH)		Common SUP, EXH		
Valve stations		1 to 12 stations (Max. 7 stations if all valves have double solenoid.)	1 to 12 stations	1 to 12 stations
Applicable connector		D-sub connector 15 pins	D-sub connector 26 pins	
		Refer to page 19.		
Internal wiring		Non-polar, +COM., -COM.		+COM., -COM.
2a, 2b port piping specification		Location	Valve	
		Direction	Side, Upward, Downward (Using elbow fittings for upward or downward)	
Port size	1 (SUP), 3 (EXH) port ^{Note 1)}	C4, C6, N3, N7		
	2a, 2b port	C2, C4, N1, N3		
Mass W (g)	n: Valve stations ^{Note 2)}	W = 56 + n		

Note 1) Supply to 3 port and exhaust from 1 port for V120 type (N.O.).

Note 2) The mass W is the value for the manifold only. (It is applied when the SUP/EXH block fitting is straight type.)
The mass of solenoid valve should be added by the number of stations.

Solenoid Valve Specifications

Fluid			Air	
Operating pressure range (MPa)	Positive pressure		0 to 0.7	
	Vacuum pressure	N.C.	1 port: -100 kPa to 0.6/3 ports: -100 kPa to 0	
		N.O.	1 port: -100 kPa to 0/3 ports: -100 kPa to 0.6	
Ambient and fluid temperature (°C)			-10 to 50 (No freezing)	
Maximum operating frequency (Hz)			20	
Lubrication			Not required	
Mounting orientation			Unrestricted	
Shock/Vibration resistance (m/s ²) ^{Note 1)}			150/30	
Enclosure			Dustproof	
Coil rated voltage			24 VDC, 12 VDC	
Allowable voltage fluctuation			±10% of rated voltage ^{Note 2)}	
Power consumption (W)	Standard		0.4	
	With power saving circuit (Continuous duty type)		0.15	
Surge voltage suppressor			Diode	
Indicator light			LED	

Note 1) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Value in the initial state)

Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000Hz. Test was performed in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states for each condition. (Value in the initial state)

Note 2) For the allowable voltage fluctuation for Z and T types (with power saving circuit), observe the following range because there is voltage drop due to internal circuit.

Z type 24 VDC: -7% to +10% T type 24 VDC: -5% to +10%
12 VDC: -4% to +10% 12 VDC: -6% to +10%

Response Time

Response time ms (at 0.5 MPa)
7 or less

Mass

Valve model	Number of solenoids	Port size	Mass (g)
V110□-C2/C4	1 pc. (Single)	C2, C4	31
	2 pcs. (Double)	(ø2, ø4 one-touch fitting)	40

Flow Characteristics

Port size		Flow characteristics			
1(P)	2a, 2b	1(P)→2a/2b		2a/2b→3(E)	
		C [dm ³ /(s·bar)]	b	C [dm ³ /(s·bar)]	b
C6	C2	0.03	0.22	0.05	0.31
	C4	0.03	0.19	0.05	0.29

* The effective area S (mm²) is approximately 5 times as large as the sonic conductance (S = C x 5).