

ISO Interface Solenoid Valve/SIZE^② Metal Seal

Series VS7-8



Note:

Please note that single subplates and manifolds have changed colour from platinum silver to white as standard. Valves will remain platinum silver.

2 position	Single solenoid (FG-S)	Double solenoid (FG-D)	Reverse pressure (YZ-S)*	Reverse pressure (YZ-D)*
3 position	Closed centre (FHG-D)	Exhaust centre (FJG-D)	Double pilot check (FPG-D)	Pressure centre (FIG-D)*

* Option

Standard Specifications

Fluid	Air/Inert gas
Operating pressure	0.1 to 1.0MPa
Ambient and fluid temperature	5 to 60 °C
Manual override	Non-locking style, Locking style*
Electrical entry	DIN connector
Lubrication	Non-lube
	If provided, use turbine oil (ISO, VG32)
Shock/Vibration resistance ⁽¹⁾	150/50 m/s ²
Applicable sub-plate	VS7-2 (ISO size ②)



* Option

NOTE 1): Shock resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed on the axis and right angle directions of the main valve and armature, for both energized and de-energized states. (Value in the initial stage.)

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000 Hz. Test was performed at both energized and de-energized states to the axis and right angle directions of the main valve and armature. (Value in the initial stage.)

Pilot Valve/Specifications

Part No.	AXT511C-1 (V)	AXT511C-2 (V)	AXT511C-3 (V)	AXT511C-4 (V)
Rated voltage (V)	100V AC 50/60 Hz	200V AC 50/60 Hz	24V DC	12V DC
Inrush current (A)	0.049/0.043	0.024/0.021	0.075	0.15
Holding current (A)	0.031/0.02	0.015/0.01		
Allowable voltage (V)	85 to 110% of rated voltage			
Insulation	Class B (130°C) or equivalent			



(V): Pilot EXH individual style.

Option/Interface Regulator

Interface regulator model ⁽¹⁾	ARB350		
Applicable solenoid valve	VS7-8		
Regulation port	A	B	P
Proof pressure	1.5MPa		
Max. operating pressure	1.0MPa		
Set pressure range	0.1 to 0.83 MPa		
Ambient and fluid temperature	5 to 60°C		
Pressure gauge port size	1/8		
Weight (kg)	0.83		
Air supply side eff. area S (P=0.7MPa, P1=0.5MPa) ⁽²⁾ (mm ²)	P/A	40	31
	P/B	31	34
Air exhaust side eff. area S (P2=0.5MPa) ⁽²⁾	A/EA	60 mm ²	
	B/EB	53 mm ²	



Note 1) Use "ABR210" for pressure centre style and reverse pressure style.

Note 2) Synthesized effective area with 2 position single style solenoid valve.

Option

Blank plate	AXT512-9A
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Model

No. of positions	Model	Effective area (With 3/8 sub-plate) (mm ²) (N/min)	Max. operating rate ⁽¹⁾ (cycle/sec)	Response time ⁽²⁾ (sec)	Weight ⁽³⁾ (kg)
2 (Single)	VS7-8-FG-S-□-Q	58 (3140.80)	15	0.040 or less	0.655
2 (Double)	VS7-8-FG-D-□-Q	58 (3140.80)	15	0.020 or less	0.74
3 (Closed centre)	VS7-8-FHG-D-□-Q	58 (3140.80)	10	0.05 or less	0.89
3 (Exhaust centre)	VS7-8-FJG-D-□-Q	58 (3140.80)	10	0.05 or less	0.89
3 (Pilot check)	VS7-8-FPG-D-□-Q	40 (2159.30)	8	0.06 or less	2.12



(1) Min. operating frequency is based on JIS B8375. (Once in 30 days) (3) Weight without sub-plate (Sub-plate: 0.37kg)

(2) Based on JIS B8375-1975 (At 0.5MPa)

(4) (1) and (2) are the rates in the condition of controlled clean air.

Accessories

Mounting bolt (with washer)	TA-B-6 X 45
Packing	AXT510-13
Indicator light	(Option)

Optional Specifications

Surge voltage suppressor	Available
Reverse pressure	R1/R2 port: Pressure in R1=P1 pressure R2=P2 pressure, P1≤P2

How to Order

Thread

—	Rc (PT)
F	G (PF)
N	NPT
T	NPTF

Symbol

FG		FJG	
YZ*		FPG	
FHG		FIG*	

* Option

Ordering source area code

Code	areas
-	Japan, Asia Australia
E	Europe
N	North America

No. of solenoids

S	Single
D	Double

Rated voltage

1	100V AC
2	200V AC
3	24V DC
4	12V DC
9	Others (250V or less)

Option

—	None
N	Indicator light
M	Direct manual override
Z	Indicator light with surge voltage suppressor
MR	Wedge packing style with direct manual override
R	Wedge packing style
V	Individual pilot EXH

Port size of sub-plate

—	Without sub-plate
A03	Side piping 3/8
A04	Side piping 1/2
A06	Side piping 3/4
B03	Bottom piping 3/8
B04	Bottom piping 1/2
B06	Bottom piping 3/4

Connector

—	Connector
0	W/o connector

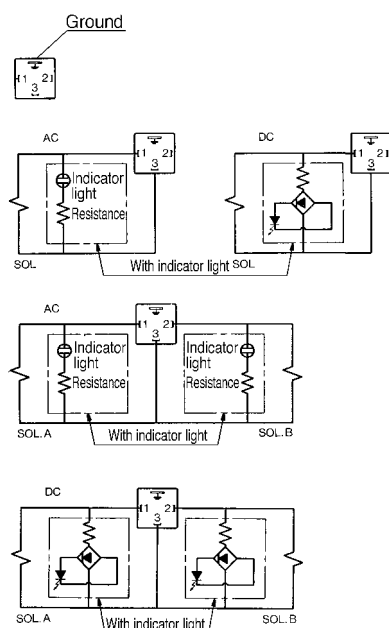
Note:
Manifold exploded view see page 1.19-34 for details.

⚠ Precautions

Be sure to read before handling. Refer to p.0-33 to 0-36 for Safety Instructions and common precautions.

⚠ Caution

DIN Connector (Wiring)



Power Source and Wiring

- Make sure all contacts are secure.
- Voltage should be held within the allowable voltage range.

Interface Regulator Specifications

Specifications

Interface regulator model	ARB350		
Applicable solenoid valve	VS7-8		
Regulation port	A	B	P
Max. operating pressure	1.0MPa ⁽¹⁾		
Set pressure range	0.1 to 0.83MPa ⁽²⁾		
Ambient and fluid temperature	5 to 60°C ⁽³⁾		
Pressure gauge port size	1/8		
Weight (kg)	0.83		
Air supply side eff. area (mm ²)	P→A	40	31
S (P=0.7MPa, P1=0.5MPa)	P→B	31	34
Air exhaust side eff. area	A→EA	60 mm ²	
S (P2=0.5MPa)	B→EB	53 mm ²	

Note 1) Maximum operating pressure of solenoid valve is 0.9 MPa.

Note 2) Be sure to set pressure within setting pressure range of the solenoid valve.

Note 3) Solenoid valve: Max. 50°C

Note 4) Synthesized effective area with 2 position single style solenoid valve.

Note 5) •Supply pressure to interface regulator only from P port except when it is used with reverse pressure style valve.

•Use the ARB210 or ARB310 model to combine a pressure centre valve and the A and B port pressure reduction of a spacer style regulator.

•Use the ARB210 or ARB310 model to combine a reverse pressure valve and a spacer style regulator. The P port pressure reduction cannot be used.

•To use a perfect valve and a spacer style regulator, use a manifold or a sub plate as the standard and stack in the following order: the perfect spacer, spacer style regulator, and the valve.

•When a closed centre valve is combined with the A and B port pressure reduction of a spacer style regulator, it cannot be used for intermediate stops of the cylinder because of the leakage from the relief port of the regulator.

How to calculate flow rate

Refer to p.0-36 for flow rate calculation.