

3 Port Direct Operated Solenoid Valve

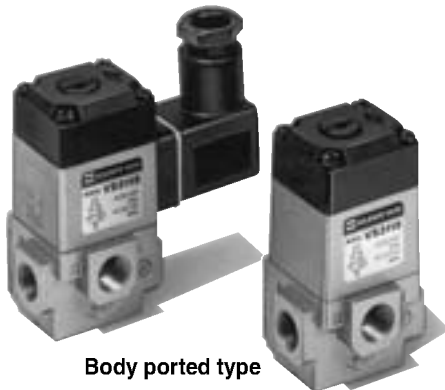
Series VS3115/3110

Metal Seal

Multiple pressure supply is possible with balanced spool sleeve.

Any given port can accept high or low pressure supply without affecting the system life or operation.

No-lubrication and dry-air operation possible.

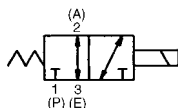


Body ported type



Sub-plate type

JIS Symbol



Standard Specifications

Fluid		Air/Inert gas		
Operating pressure range		0 to 1.0 MPa		
Proof pressure		1.5 MPa		
Ambient and fluid temperature		-20 to 60°C (No freezing)		
Response time ⁽¹⁾		10 ms or less (AC), 45 ms or less (DC)		
Max. operating frequency ⁽²⁾		1,500 c.p.m. (AC), 180 c.p.m. (DC)		
Manual override		Non-locking		
Lubrication		Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)		
Enclosure		Dustproof [Degrees of protection 0] ⁽⁴⁾		
Shock/Vibration resistance (m/s²)		150/50 ⁽⁵⁾		
Electrical entry		Grommet, DIN terminal		
Coil rated voltage	Standard	100, 200 VAC, 50/60 Hz; 24 VDC		
	Option	220, 110, 48, and 24 VAC (50/60 Hz) 100, 48, and 12 VDC		
Allowable voltage fluctuation		-15 to +10% of rated voltage		
Coil insulation type		Class B or equivalent (130°C) ⁽⁶⁾		
Apparent power (VA) (Power consumption (W))	AC	Inrush	50 Hz	51
			60 Hz	45
	Holding	50 Hz	17 (5.3)	
		60 Hz	11 (2.9)	
Power consumption (W)	DC	5.5		
Accessory (Option)		Bracket (AXT338-11)/For body ported type		
		Indicator light		
		Manual override		



Note 1) Based on JIS B 8375-1981. (at 0.5 MPa, without surge voltage suppressor)

Note 2) Minimum operating frequency is once in 30 days. (Based on JIS B 8375.)

Note 3) "Note 1)" and "Note 2)" are with controlled clean air.

Note 4) Based on JIS C 0920.

Note 5) 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. (Values at the initial period)

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

Note 6) Based on JIS C 4003.

Flow Characteristics/Mass

Body type	Valve model	Port size Rc	Flow characteristics						Mass (kg)	
			P → A			A → E			AC	DC
			C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv		
Body ported	VS3115-01 □□	1/8	3.3	0.36	0.86	2.5	0.39	0.66	0.34	0.46
	VS3115-02 □□	1/4	3.8	0.19	0.86	3.6	0.34	0.88	0.34	0.46
Base mounted	VS3110-02 □□	1/4	4.0	0.12	0.93	3.2	0.31	0.76	0.40	0.52
	VS3110-03 □□	3/8	4.0	0.15	0.94	3.6	0.18	0.82	0.40	0.52
For manifold use	VS3114-00 □□		Without sub-plate						0.32	0.44

⚠ Caution

Be sure to read before handling. Refer to front matters 58 and 59 for Safety Instructions and pages 3 to 7 for 3/4/5 Port Solenoid Valve Precautions.

How to Calculate the Flow Rate

For obtaining the flow rate, refer to front matters 44 to 47.

Series VS3115/3110

How to Order

VS311 5 - 01 5 D [] L - []

Piping

5	Body ported type
0	Sub-plate type
4	Manifold type

Port size

01	Rc 1/8
02	Rc 1/4
03	Rc 3/8
00	Without sub-plate

Coil rated voltage

1	100 VAC, 50/60 Hz
2	200 VAC, 50/60 Hz
3	110VAC *
4	220VAC *
5	24 VDC *
9	Other

* Option

Mounting

Nil	Without bracket
B	With bracket

* Bracket is available only on body ported style.

Electrical entry

G	Grommet
D	DIN terminal

* DC: DL (With indicator light)

Accessory (Option)

L	With indicator light
P	With manual override

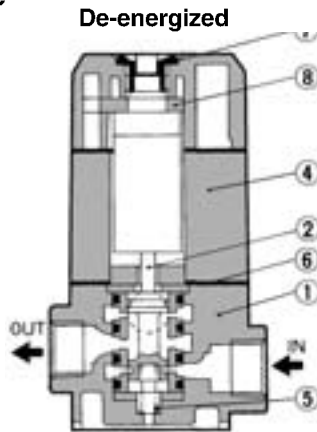
Thread type

Nil	Rc
N*	NPT
T*	NPTF
F*	Parallel thread

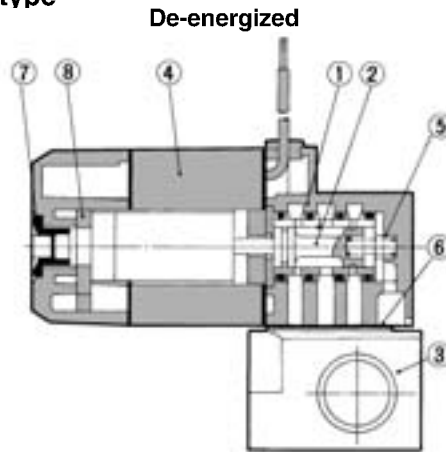
* Option

Construction

Body ported type



Sub-plate type



Sub-plate Assembly Part No.: VS3110-S-⁰²/₀₃

* Mounting bolts and gaskets are not attached.

Part No. for Mounting Bolt and Gasket

BG-VS3010

Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted	Platinum silver
2	Spool/Sleeve	Stainless steel	
3	Sub-plate	Aluminum die-casted	Platinum silver

Replacement Parts

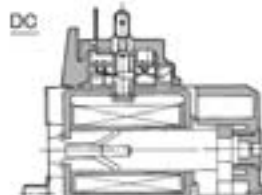
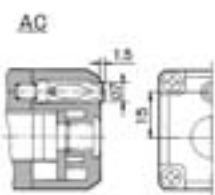
No.	Description	Material	Part no.			
			VS3115-□G	VS3115-□D	VS3110-□G	VS3110-□D
4	Solenoid capsule assembly	AC	SCA006-□	SCAD001-□	SCA006-□	SCAD001-□
		DC	SCA001-□	SCAD001-□	SCA001-□	SCAD001-□
5	Spring	Piano wire AC	AXT338-6			
		DC	AZ832-16			
6	Gasket	NBR	AXT333-14		AXT338-15	
7	Plug for cap	Resin	AXT333-16			
8	Stopper	Resin AC	AXT333-7-11			
		DC	AXT333-32-8			

□: Enter the operating voltage.
(100VAC: 01, 200VAC: 02, 24VDC: 52)

Accessory (Option)

Indicator light

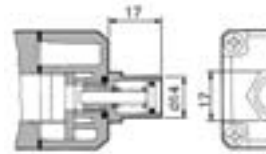
When solenoid is energized, indicator light illuminates, thus the electrical state of the solenoid can be seen from the outside.



Note) There is polarity of (1) +, (2) -.

Manual override

Remove the rubber plug on the top of the solenoid cap to mount the manual override. Push the override with a screwdriver to the required stroke and the valve will shift. Turn to the right or left at 90 degrees to lock it. Turn it back 90 degrees to unlock. Be sure to unlock the override before energizing the valve electrically.



Description	Part no.	
	AC	DC
Manual override (With lock)	PB0111-3 (PB0111)	PB0111-1
Manual override (Non-locking)	PB0101	PB0101-1

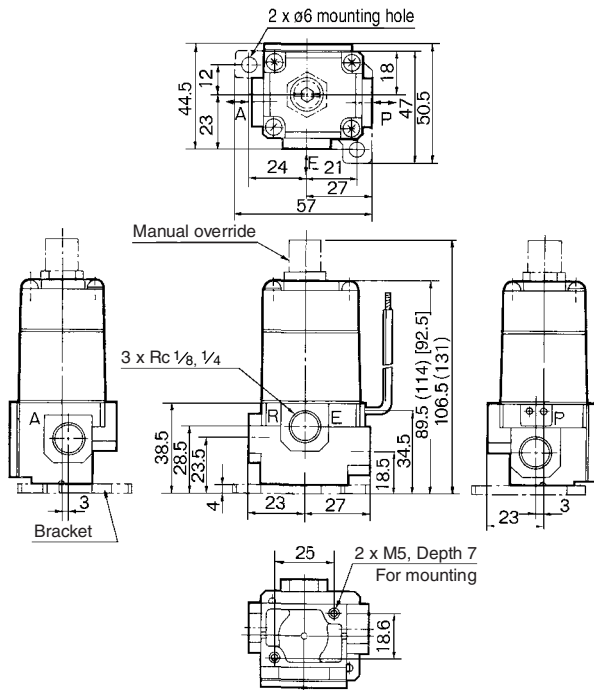
(): With indicator light

3 Port Direct Operated Solenoid Valve Series VS3115/3110

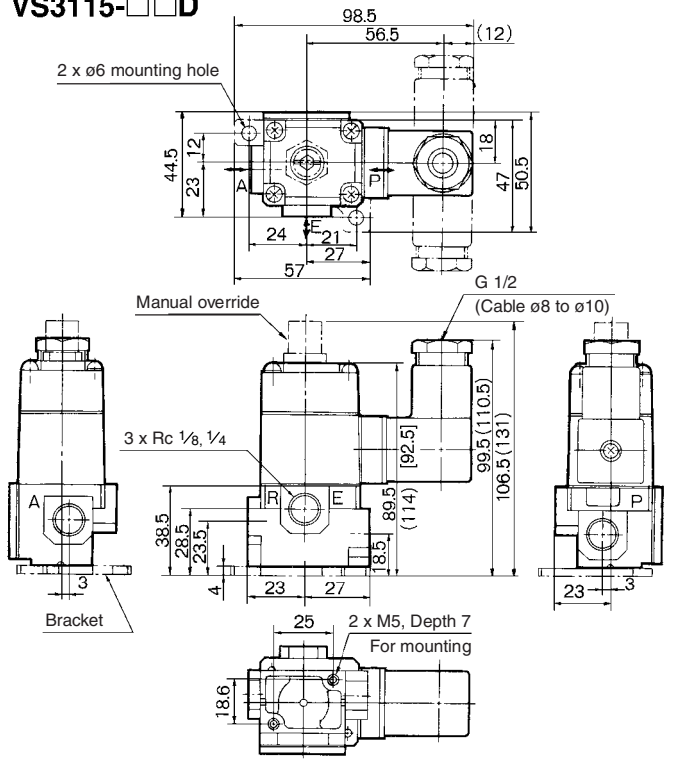
Dimensions

Body ported type

VS3115-□□G



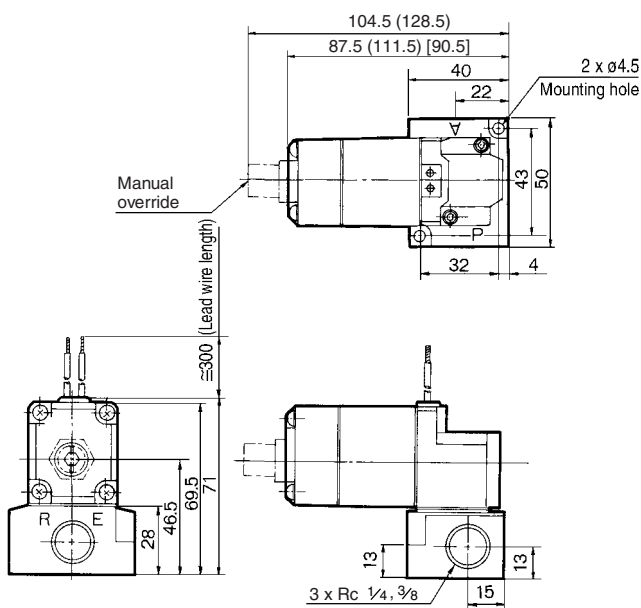
VS3115-□□D



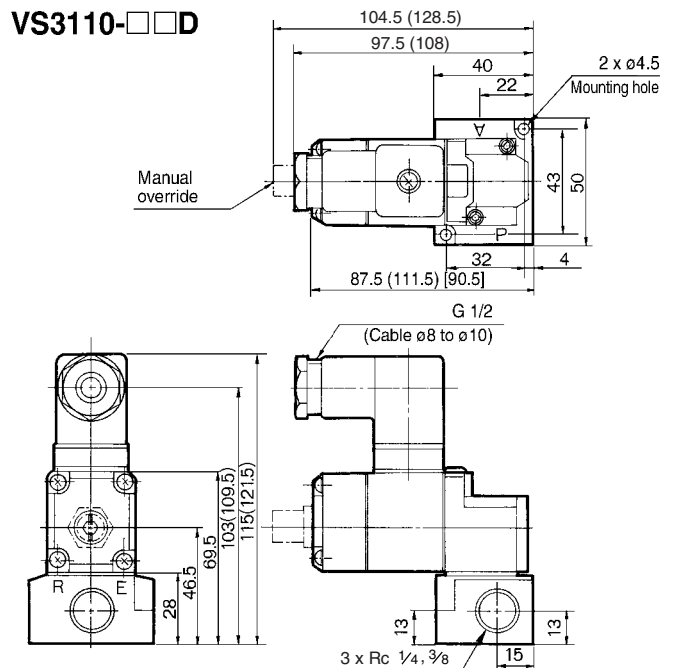
(): DC
 []: AC, with indicator light

Sub-plate type

VS3110-□□G



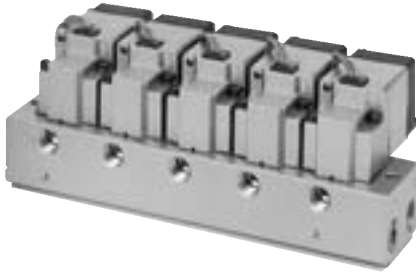
VS3110-□□D



(): DC
 []: AC, with indicator light

Series VS3115/3110

Manifold Specifications



Specifications

Manifold type			B mount				
Max. number of stations			10 stations				
Exhaust type	Port location/Port size			Port direction			Applicable valve model
	P	A	E	P	A	E	
Common	Base 3/8	Base 1/4	Base 3/8	Side	Side	Side	VS3114-00□□
				Side	Bottom	Side	
Accessory		Blanking plate (With gaskets and screw)			AXT338-17A		

How to order manifold

VVS31 0 - 05 **1** -

Valve stations

05	5 stations		
10	10 stations		

EXH port type

1	Common EXH
---	------------

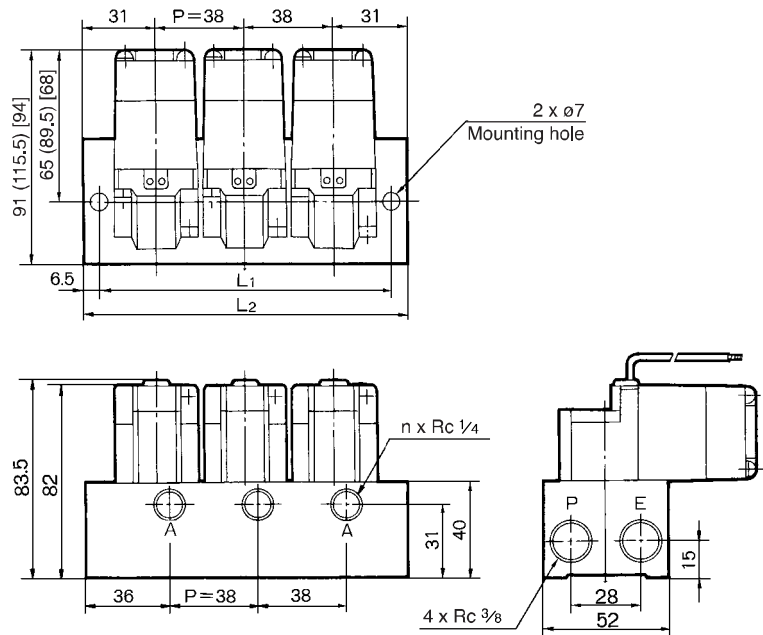
Thread type

Nil	Rc
N*	NPT
T*	NPTF
F*	Parallel thread

* Option

	P	A	E
0	Side	Side	Side
1	Side	Bottom	Side

Dimensions



(): DC
[]: AC, with indicator light

L	n	2	3	4	5	6	7	8	9	10
L ₁		87	125	163	201	239	277	315	353	391
L ₂		100	138	176	214	252	290	328	366	404

L₁ = 38n + 11, L₂ = 38n + 24 n: Station
Formula for manifold weight M = 0.16n + 0.1 (kg)