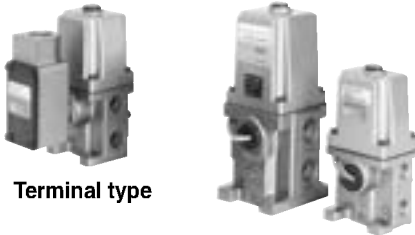


3 Port Direct Operated Solenoid Valve

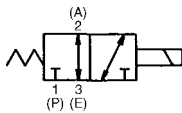
Series VS3135/3145

Metal Seal



Terminal type

JIS Symbol



Specifications

Fluid		Air/Inert gas
Proof pressure		1.5 MPa
Operating pressure range		0 to 1.0 MPa
Ambient and fluid temperature (°C) ⁽¹⁾		-20 to 60
Lubrication ⁽²⁾		Not required
Manual override		Option (Non-locking type available)
Electrical entry		Grommet, Conduit terminal, Dripproof conduit terminal
Coil rated voltage	AC	100, 200 V 50/60 Hz
	DC	24 V
Allowable voltage fluctuation		-15 to +10% of rated voltage
Coil insulation type		Class B or equivalent (130°C) ⁽³⁾
Shock/Vibration resistance (m/s²)		150/50 ⁽⁴⁾



Note 1) If it is low temperature, dry air should be used. (No freezing)

Note 2) Use turbine oil Class 1 (ISO VG32), if lubricated.

Note 3) Based on JIS C 4003.

Note 4) 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)

Model

Valve model		VS3135						VS3145					
Flow characteristics		P → A			A → E			P → A			A → E		
		C	b	Cv	C	b	Cv	C	b	Cv	C	b	Cv
		[dm ³ /(s·bar)]			[dm ³ /(s·bar)]			[dm ³ /(s·bar)]			[dm ³ /(s·bar)]		
	1/4	6.1	0.3	1.5	6.1	0.4	1.6	—	—	—	—	—	—
	3/8	7.2	0.2	1.8	7.3	0.2	1.8	—	—	—	—	—	—
	1/2	9.0	0.2	2.3	9.0	0.3	2.4	18	0.27	4.8	16	0.34	4.1
	3/4	—	—	—	—	—	—	20	0.21	5.1	15	0.46	4.5
Response time ⁽¹⁾ (ms)	AC	30 or less						30 or less					
	DC	60 or less						80 or less					
Max. operating ⁽²⁾ frequency (c.p.m.)	AC	300 or less						180 or less					
	DC	180 or less						180 or less					
Mass (kg)	AC	0.8						1.6					
	DC	1.4						2.4					
Apparent power (VA)	AC	Inrush	50 Hz	100			300						
			60 Hz	90			360						
	Holding	50 Hz	20			50							
		60 Hz	14			60							
Power consumption (W)	DC	13.2						24					



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

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

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

How to Order

VS31 3 5-02 1 - - -

⚠ 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" Port Solenoid Valve Precautions.

How to Calculate the Flow Rate

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

Body size

3	3/8 Standard
4	1/2 Standard

Port size

02	Rc 1/4
03	Rc 3/8
04	Rc 1/2
06	Rc 3/4

Coil rated

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

* Option

Electrical entry

NII	Grommet
T	Conduit terminal
WTB	Dripproof conduit terminal
TZ	Conduit terminal w/ surge voltage suppressor
TL	Conduit terminal w/ indicator light

Thread type

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

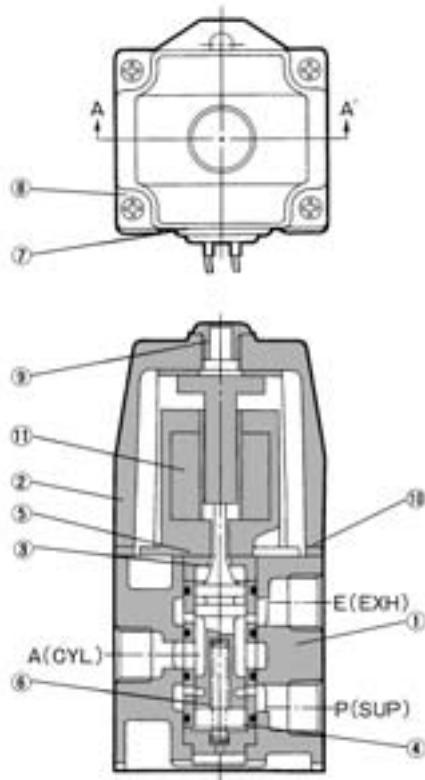
* Option

Option

NII	None
P	Manual override

Series VS3135/3145

Construction



A-A' cross section

Component Parts

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

⑪ Solenoid Coil Assembly Part No.

Electrical entry	Voltage	Part no.	
		VS3135	VS3145
Grommet	100 VAC	A01-01	A12-01
	200 VAC	A01-02	A12-02
	24 VDC	A07-52	A08-52
Conduit terminal	100 VAC	A01-01-63	A12-01-63
	200 VAC	A01-02-63	A12-02-63
	24 VDC	A07-52-63	A08-52-63

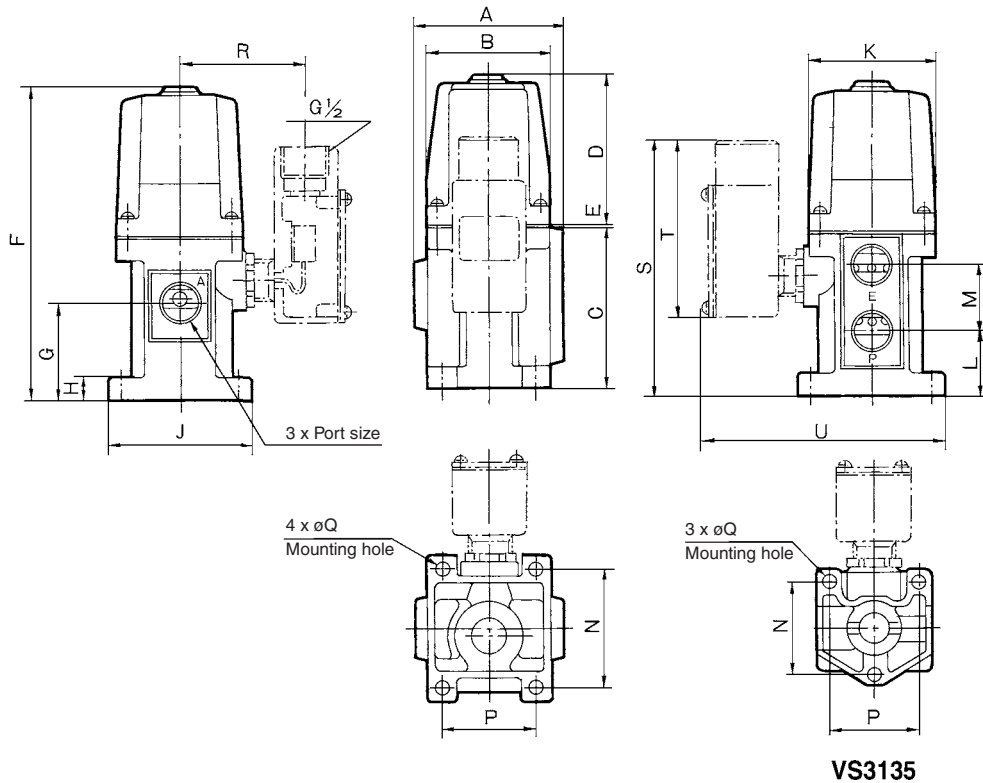
Replacement Parts

No.	Description	Material	Part no.	
			VS3135	VS3145
4	Cap	Resin	XT019-6	AXT103-4
5	Bushing	Resin	XT013-13-2	XT021-12
6	Spring	Steel wire	XT010-15	XT103-5
7	Rubber plug for wire	NBR	XT010-20	XT010-20
8	Round head combination screw	Steel wire	XT010-21	XT010-21
9	Plug for cover	NBR	XT041-1	XT041-1
10	Gasket	NBR	XT013-31-2	NXT030-8

3 Port Direct Operated Solenoid Valve Series VS3135/3145

Dimensions

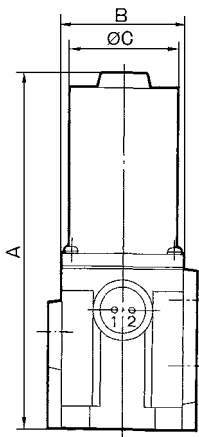
VS3135/3145



VS3135

Model	Port size Rc	A	B	C	D	E	F	G	H	J	K	L	M	N	P	øQ	Terminal dimensions			
																	R	S	T	U
VS3135-02																				
VS3135-03	1/4, 3/8, 1/2	64	64	65	70	1	136	35	9	64	54	19	32	50	50	7	60	120	96	118
VS3135-04																				
VS3145-04	1/2, 3/4	82	68	88	92	1	181	53	12	81	70	35	36	66	52	9	66	140	96	133
VS3145-06																				

DC



Model	Port size Rc	A	B	øC
VS3135-02				
VS3135-03	1/4, 3/8, 1/2	163	64	50.8
VS3135-04				
VS3145-04	1/2, 3/4	196	68	60.5
VS3145-06				