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5 Port Pilot Operated Solenoid Valve

Metal Seal, Plug-in/Non Plug-in

Series VZS3000

Model

Type of actuation		Model	Port size Rc	Flow characteristics						Max. operating cycle (CPM) ⁽¹⁾	Response time (ms) ⁽²⁾	Weight (kg) ⁽³⁾
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → R1/R2)					
				C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv			
2 position	Single	VZS3150	1/4	2.6	0.17	0.58	2.4	0.09	0.53	1200	18 or less	0.22
	Double	VZS3250	1/4	2.6	0.17	0.58	2.4	0.09	0.53	1200	13 or less	0.27
3 position	Closed center	VZS3350	1/4	2.5	0.17	0.56	2.4	0.11	0.52	500	26 or less	0.28
	Exhaust center	VZS3450	1/4	2.5	0.17	0.56	2.4	0.11	0.49	500	26 or less	0.28
	Pressure center	VZS3550	1/4	2.8	0.12	0.60	2.4	0.16	0.53	500	26 or less	0.28
	Double check	VZS3650	1/4	1.1	—	—	1.2	—	—	420	32 or less	0.43



Note 1) Min. operating cycle is based on JIS B 8375 (One time per 30 days).

Note 2) Response time is based on JIS B 8375-1981. (0.5 MPa, without light/surge voltage suppressor)

Note 3) For VZS3□50-□FZ-01

Note 4) "Note 1" and "Note 2" are with controlled clean air.

Reduction of wiring cost
MIL standard D-sub connector
with one-touch connection
 (Plug-in type)

Compact and large valve capacity: Width 18 mm
Flexible to increase and decrease manifold stations
 (Stacking type manifold base)

High frequency/Long service life (more than 30 mil. times)
Possible to use in non-lubrication and dry air
 (Metal seal structure)

Different variations for connection
 Grommet type

L, M plug connector type: Individual take out of A and B sides

K plug connector type: Common take out of A and B sides

DIN terminal type: Individual take out of A and B sides

A little power consumption:
1.8 W DC

For serial transmission



Plug-in type



Non plug-in type

Standard Specifications

Valve specifications	Fluid	Air/Inert gas	
	Maximum operating pressure	1.0 MPa	
	Minimum operating pressure	0.1 MPa	
	Proof pressure	1.5 MPa	
	Ambient and fluid temperature	-10 to 50°C ⁽¹⁾	
	Lubrication	Non-lube ⁽²⁾	
	Pilot valve manual override	Non-locking push type (Flush)	
	Shock/Vibration resistance (m/s²)	150/50 ⁽³⁾	
Electricity specifications	Enclosure	Dustproof (Degrees of protection 0) ⁽⁴⁾	
	Coil rated voltage	100, 200 VAC, 50/60 Hz; 24 VDC	
	Allowable voltage fluctuation	-15 to +10% of rated voltage	
	Coil insulation type	Class E or equivalent (120°C) ⁽⁵⁾	
	Apparent power (AC)	Inrush	4.5 VA/50 Hz, 4.2 VA/60 Hz
		Holding	3.5 VA/50 Hz, 3 VA/60 Hz
	Power consumption (DC)	1.8 W	
	Electrical entry	Plug-in type (FZ)	
		Non plug-in type	
		Grommet (G), Plug connector (L, M, KZ) DIN terminal (D)	



Note 1) Use dry air at low temperatures.

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

Note 3) 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 8.3 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 4) Based on JIS C 0920.

Note 5) Based on JIS C 4003.

Option Specifications

Coil rated voltage	24, 48, 110, 220 VAC (50/60 Hz)
	6, 12, 48 VDC
Manual override	Locking type (Tool required)
Option	With light/surge voltage suppressor ^{Note)}



Note) Plug-in, K plug connector type is standard with light/surge voltage suppressor.

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

EVS

VFN

How to Order

Light/Surge voltage suppressor

Z	With light/surge voltage suppressor
S	With surge voltage suppressor

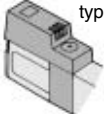
Note) Light/Surge voltage suppressor is provided as standard.

Electrical entry

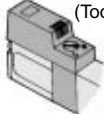
F: Plug-in

Pilot valve manual override

Nil: Non-locking push type (Flush)



B*: Locking type (Tool required)



* Option

Port size

	Without sub-plate
01	Rc 1/8
02	Rc 1/4

Plug-in

VZS3 2 50 — 1 F Z — 01

Non plug-in

VZS3 2 50 — 5 G — 01

Symbol

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
6	3 position double check

Coil rated voltage

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
6 *	12 VDC
9 *	Other

* Option

Option

Nil	None
Z	With light/surge voltage suppressor
S	With surge voltage suppressor

Note) Indicator light is not available for grommet type. With light/surge voltage suppressor is provided as standard for K plug connector type.

* "DOZ" is not available.

Thread type

Standard	Nil	Rc
	N	NPT
Option	T	NPTF
	F	G

Electrical entry

G: Grommet Lead wire length 300 mm	L: L plug connector With lead wire	LN: L plug connector Without lead wire	LO: L plug connector Without connector	D: DIN terminal
H: Grommet Lead wire length 600 mm	M: M plug connector With lead wire	MN: M plug connector Without lead wire	MO: M plug connector Without connector	DO: DIN terminal
	KZ: K plug connector With lead wire	KZN: K plug connector Without lead wire	KZO: K plug connector Without connector	

How to Order Pilot Valve Assembly

SCZS3 A L — 2 — 1

Series VZS3000

Applicable model

A	Single/Double A side
B	Double B side
3A	3 position A side
3B	3 position B side

Electrical entry, Light/Surge voltage suppressor

Symbol	Electrical entry	Body type
F (Note)	Plug-in	Plug-in type
G	Grommet	Non plug-in type
GS	Grommet, With surge voltage suppressor	
L	L plug connector	
LZ	L plug connector, With light/surge voltage suppressor	
M	M plug connector	
MZ	M plug connector, With light/surge voltage suppressor	
K (Note)	K plug connector	
D	DIN terminal	
DZ	DIN terminal, With light/surge voltage suppressor	

Note) Since F and K types are attached without lamp cover, it should be arranged separately.

Coil rated voltage

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
6 *	12 VDC
9 *	Other

* Option

Manual override

Nil	Non-locking push type (Flush)
B *	Locking type (Tool required)

* Option

How to Order Light Cover Assembly

AXT171-3 1 A — 5 FZ

VZS3000 Light cover assembly

Applicable model

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
6	3 position double check

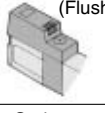
Voltage

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
6 *	12 VDC
9 *	Other


* Option

Pilot valve manual override

Nil: Non-locking push type (Flush)



B: Locking type (Tool required)



* Option

Electrical entry, Light/Surge voltage suppressor

FZ	Plug-in With light/surge voltage suppressor
FS	Plug-in With surge voltage suppressor
KZ	K plug connector With light/surge voltage suppressor
KS	K plug connector With light/surge voltage suppressor