

# Conforming to ISO Standard Solenoid Valve (with M Connector)

## Series *EVS1-01/1-02*

(Size 1) (Size 2)



VK  
VZ  
VF  
VFR  
VP4  
VZS  
VFS  
VS4  
VQ7  
**EVS**  
VFN

### Large capacity

	Flow rate	Cylinder driving size
<b>EVS1-01</b> (Size: 01)	1140 L/min (ANR)	ø100
<b>EVS1-02</b> (Size: 02)	560 L/min (ANR)	ø80

### Lightweight

Size 01 (3 position): 0.26 kg  
Size 02 (3 position): 0.18 kg

### ISO 15407-1 Interface

Size 01 (**EVS1-01**) and Size 02 (**EVS1-02**)  
Interface conforms to ISO 15407-1

### Accommodates enclosure IP65

Dust/Splashproof type

# ISO Standard Solenoid Valve Size 1,2/Single Unit

# Series *EVS1-01/1-02*

## How to Order

### Valve

**EVS1-01-FG-S-3** [ ] [ ] [ ] [ ] **M0**

#### Size

<b>01</b>	Size 01
<b>02</b>	Size 02

#### Passage symbol

<b>FG</b>	
<b>FHG</b>	
<b>FJG</b>	
<b>FIG</b>	

#### Number of solenoids

<b>S</b>	Single
<b>D</b>	Double

#### Rated coil voltage

<b>3</b>	24 VDC
<b>4</b>	12 VDC
<b>9</b>	Voltage other than above (50 VDC or less)

#### Thread type

<b>Nil</b>	Rc
<b>F</b>	G
<b>T</b>	NPTF

#### Port size

Symbol	Piping specifications	Size 01	Size 02
<b>Nil</b>	Without sub-plate	○	○
<b>A01</b>	Side ported 1/8	○	○
<b>A02</b>	Side ported 1/4	○	—

#### Sealing type

<b>Nil</b>	Metal seal
<b>R</b>	Rubber seal

#### Option

<b>Nil</b>	None
<b>Z</b>	Light/Surge voltage suppressor

### Sub-plate

**VS1-01-A02** [ ]

#### Size

<b>01</b>	Size 01
<b>02</b>	Size 02

#### Thread type

<b>Nil</b>	Rc
<b>F</b>	G
<b>T</b>	NPTF

#### Port size

Symbol	Piping specifications	Size 01	Size 02
<b>A01</b>	Side ported 1/8	○	○
<b>A02</b>	Side ported 1/4	○	—

### Specifications

Model	Piping specifications			Weight (kg)
	Piping direction	Port size for 1(P), 2(B), 4(A)	Port size for 3(R2), 5(R1)	
<b>VS1-01-A01</b>	Horizontal	1/8		0.14
<b>VS1-01-A02</b>		1/4		
<b>VS1-02-A01</b>	Horizontal	1/8		0.07

Conforming to ISO Standard  
Solenoid Valve (with M Connector) **Series EVS1-01/1-02**

**Model**



**Series EVS1-01**

Positions			Flow characteristics					
			1 → 4, 2 (P → A, B)			4, 2 → 5, 3 (A, B → EA, EB)		
			C	b	Cv	C	b	Cv
2 position	Single	Metal seal	3.10	0.10	0.60	3.40	0.10	0.70
		Rubber seal	4.57	0.24	1.14	4.78	0.20	1.15
	Double	Metal seal	3.10	0.10	0.60	3.40	0.10	0.70
		Rubber seal	4.57	0.24	1.14	4.78	0.20	1.15
3 position	Closed center	Metal seal	3.10	0.10	0.60	3.20	0.10	0.60
		Rubber seal	3.20	0.34	0.80	4.20	0.30	1.00
	Exhaust center	Metal seal	2.70	0.10	0.60	3.30	0.10	0.70
		Rubber seal	3.10	0.26	0.80	4.00	0.25	1.10
	Pressure center	Metal seal	3.20	0.10	0.70	3.20	0.10	0.60
		Rubber seal	4.40	0.25	1.00	3.60	0.25	1.00

VK

VZ

VF

VFR

VP4

VZS

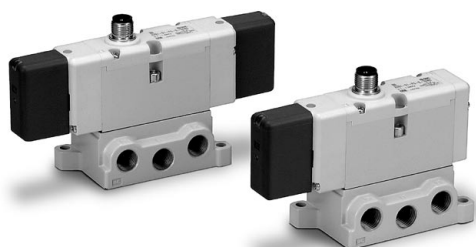
VFS

VS4

VQ7

EVS

VFN



**Series EVS1-02**

Positions			Flow characteristics					
			1 → 4, 2 (P → A, B)			4, 2 → 5, 3 (A, B → EA, EB)		
			C	b	Cv	C	b	Cv
2 position	Single	Metal seal	1.50	0.10	0.30	1.70	0.10	0.30
		Rubber seal	2.20	0.32	0.55	2.32	0.22	0.57
	Double	Metal seal	1.50	0.10	0.30	1.70	0.10	0.30
		Rubber seal	2.20	0.32	0.55	2.32	0.22	0.57
3 position	Closed center	Metal seal	1.50	0.10	0.30	1.60	0.10	0.30
		Rubber seal	2.10	0.20	0.50	2.10	0.10	0.40
	Exhaust center	Metal seal	1.30	0.10	0.20	1.60	0.10	0.20
		Rubber seal	2.00	0.16	0.50	2.10	0.10	0.40
	Pressure center	Metal seal	1.60	0.10	0.20	1.50	0.10	0.20
		Rubber seal	2.20	0.20	0.50	2.10	0.10	0.40

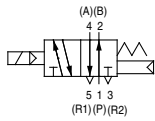
Note) Values for 2 position single from the cylinder port to the exhaust (from 2 to 3 and from 4 to 5) C (Sonic conductance) and b (Critical pressure ration) are subject to ISO 6358/JIS B 8390. Cv (Flow coefficient) is subject to ANSI/CNFPA T3.21.3.

# Series EVS1-01/1-02

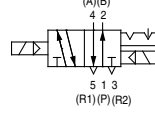
## Standard Specifications

### JIS Symbol

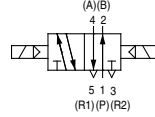
2 position single



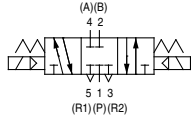
2 position double (metal)



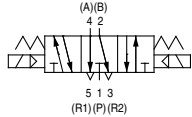
2 position double (rubber)



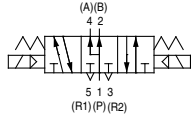
3 position closed center



3 position exhaust center



3 position pressure center



Valve specifications	Valve type		Metal seal	Rubber seal
	Fluid		Air	
	Maximum operating pressure		1.0 MPa	
	Minimum operating pressure	Single	0.1 MPa	0.15 MPa
		Double	0.1 MPa	0.1 MPa
		3 position	0.15 MPa	0.2 MPa
	Ambient and fluid temperature		-10° to 60°C (1)	-5° to 60°C (1)
	Lubrication		Not required (Non-lube type)	
	Manual override		Push type (Tool required)	
	Impact resistance/Vibration resistance		150, 30m/s <sup>2</sup> (2)	
Enclosure		IP65 (Dust/Splashproof type)		
Electric specifications	Rated coil voltage		12 VDC, 24 VDC	
	Allowable voltage fluctuation		±10% of rated voltage	
	Type of coil insulation		Equivalent to class B	
	Power consumption (Current)	24 VDC	1 W DC (42 mA)	
		12 VDC	1 W DC (83 mA)	

Note 1) Use dry air to prevent condensation at low temperatures.

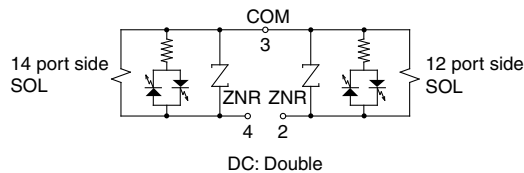
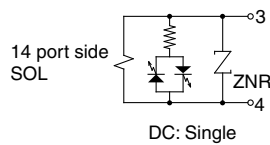
Note 2) Impact resistance: No malfunction resulted during an impact test using a drop impact tester. The test was performed one time each in the axial and right angle directions of the main valve and armature for both energized and de-energized conditions.

Vibration resistance: No malfunction resulted during an one-sweep test between 8.3 and 2000 Hz. The test was performed in the axial and right angle directions of the main valve and armature for both energized and de-energized conditions.

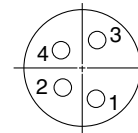
## ⚠ Precautions

### ⚠ Caution

#### Internal Wiring Specifications

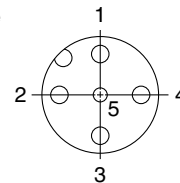


#### M8 Connector: Wiring specifications (EVS1-02)



- Pin no.  
 1: Open  
 2: 12 port side SOL (+)  
 3: COM (-)  
 4: 14 port side SOL (+)

#### M12 Connector: Wiring specifications (EVS1-01)

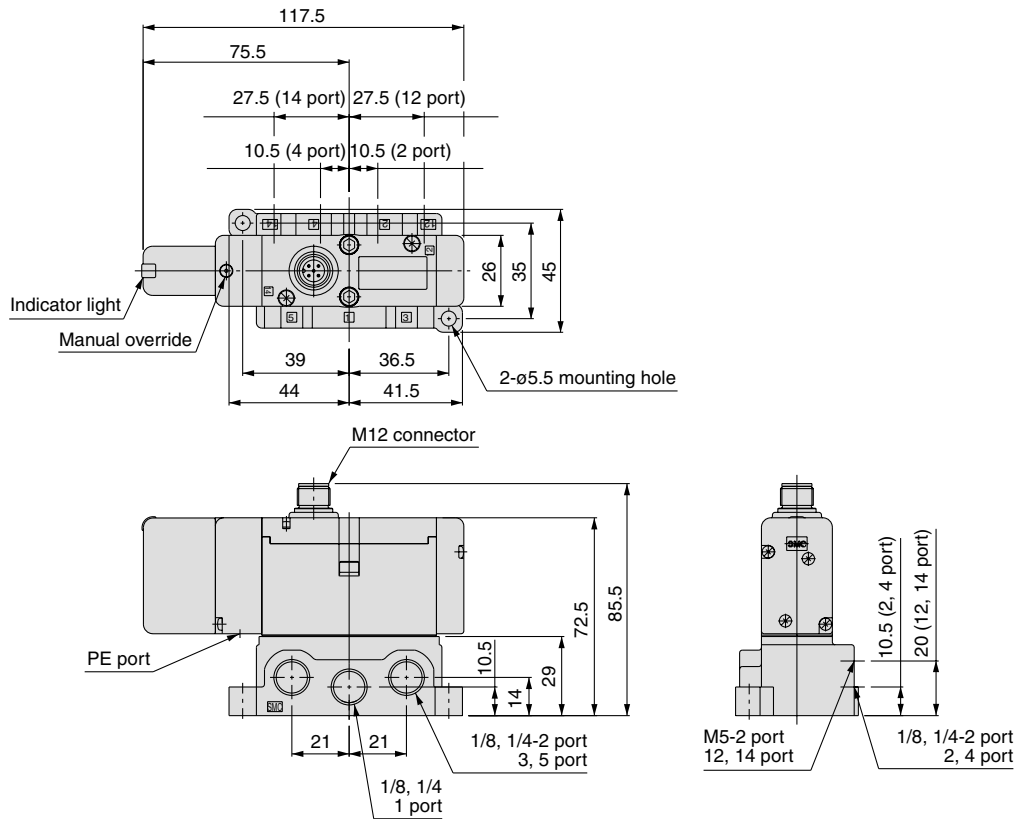


- Pin no.  
 1: Open  
 2: 12 port side SOL (+)  
 3: COM (-)  
 4: 14 port side SOL (+)  
 5: Ground

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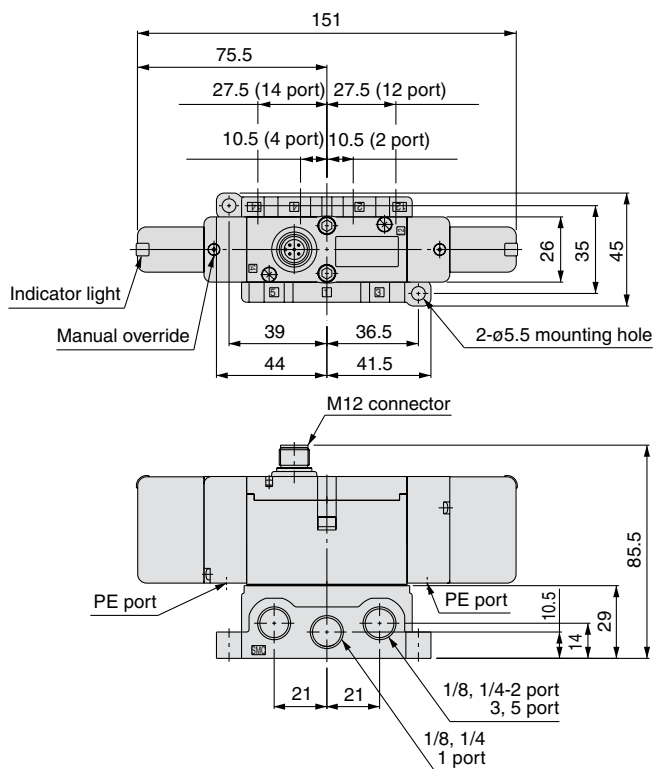
**Dimensions**

**EVS1-01-FG-S-□□M0**

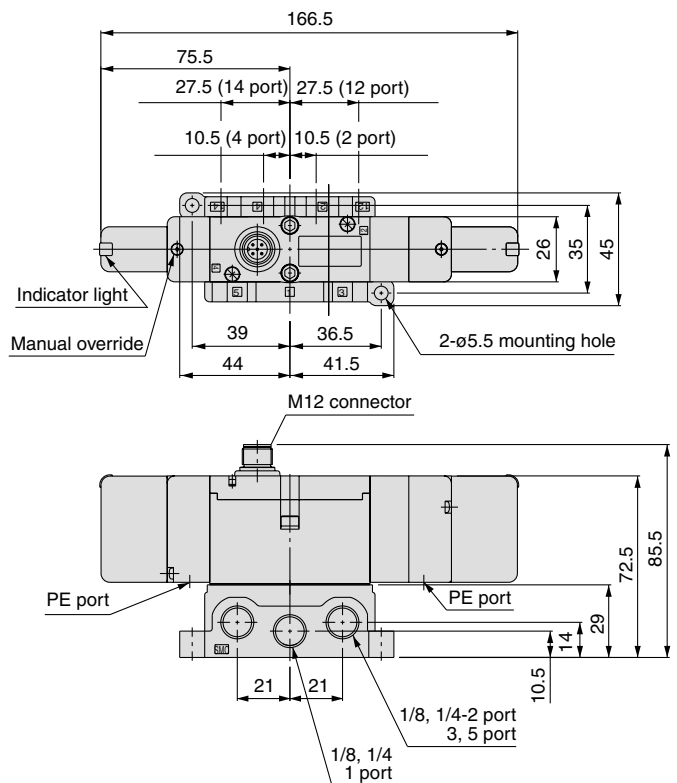


- VK
- VZ
- VF
- VFR
- VP4
- VZS
- VFS
- VS4
- VQ7
- EVS**
- VFN

**EVS1-01-FG-D-□□M0**



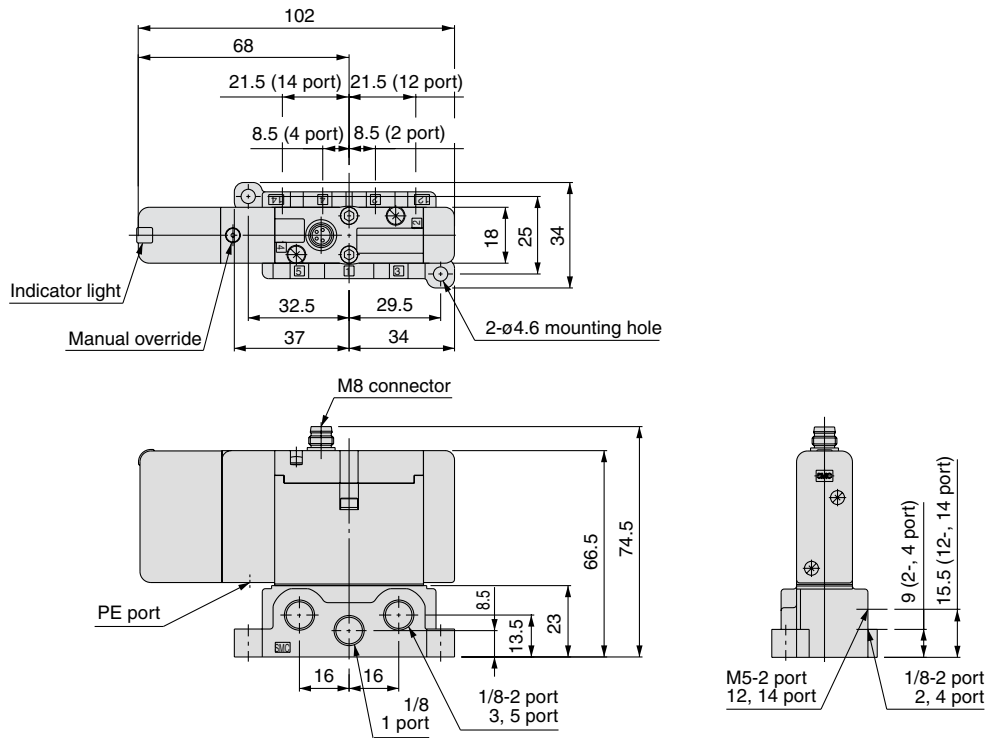
**EVS1-01-F<sup>H</sup>J G-D-□□M0**



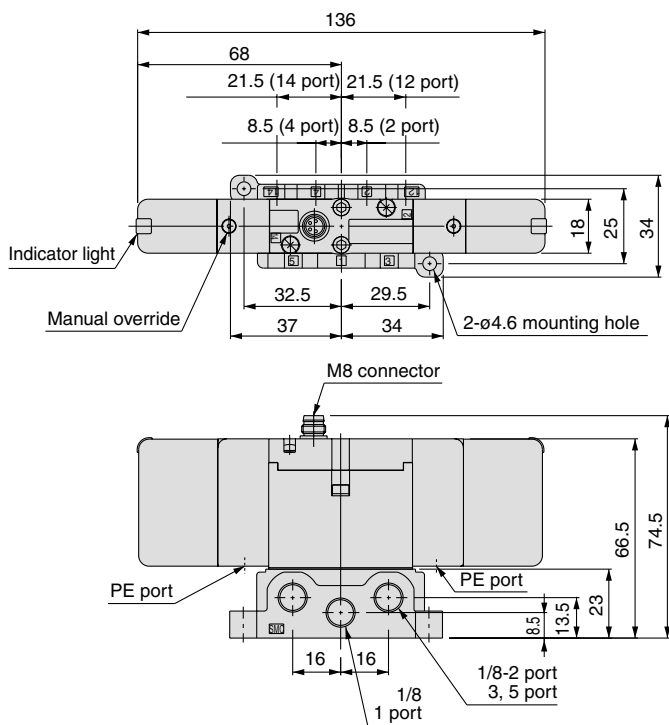
# Series EVS1-01/1-02

## Dimensions

### EVS1-02-FG-S-□□M0



### EVS1-02-FG-D-□□M0



### EVS1-02-F<sup>H</sup>J<sup>I</sup>G-D-□□M0

