

# ACTIVAL Motorized Two-Way Valve (JIS10K-FC200, SCS13A) | VY51 Series

The VY51 series of ACTIVAL motorized two-way valves consists of rotary-type motorized two-way valves with flange connections and valve sizes from DN15 to DN80 (1/2" to 3"). The valve and actuator are integrated into a single unit.

The valve can be used for the control of chilled/hot water and steam, and the valve body pressure rating complies with JIS10K.

The actuator has a reversible synchronous motor, which operates at a low voltage of 24 Vac.



## Specifications

Type	Two-way valve, flanged connection type
Valve body pressure rating	JIS10K (max. working pressure: 1.0 MPa)
Nominal size	DN15 (1/2"), DN25 (1"), DN40 (1 1/2"), DN50 (2"), DN65 (2 1/2"), DN80 (3")
Cv value	1.0, 2.5, 6.0, 1.6, 4.0, 10, 16, 25, 40, 65, 95, 125
Piping connections	JIS10K flange, flat face (FF); FC200 body, large raised face (RF); SCS13A body
Applicable fluids	Chilled/hot water, brine (glycol concentration: 50% or less) (VY51#0/1), steam (VY51#5/6)
Rated power supply voltage	24 Vac ± 15% 50/60 Hz
Power consumption	F motor type: 7 VA Other than F motor type: 8 VA
Turn-on time	63 s (50 Hz) / 53 s (60 Hz) ± 5 s
Control signal	Nominal 135 Ω feedback potentiometer, nominal 135 Ω resistance input, 4–20 mAdc input (input impedance: 100 Ω), 2–10 Vdc input (input impedance: 150 kΩ or more)
2–10 Vdc valve opening output signal (with input of 4–20 mAdc or 2–10 Vdc)	Output voltage range: 2 Vdc (at 0% opening) to 10 Vdc (at 100% opening) Allowable load resistance: 10 kΩ or more (max. output current 1 mA)
Protective structure	IEC IP54 (protection against dust and splashing)

Weight (common to JIS10K-FC200 and JIS10K-SCS13A)	Model No.	Nominal size	Weight
	VY51□□J0011	DN15	4.6 kg
	VY51□□J0012	DN15	4.6 kg
	VY51□□J0013	DN15	4.6 kg
	VY51□□J0014	DN15	4.6 kg
	VY51□□J0015	DN15	4.6 kg
	VY51□□J0021	DN25	6.6 kg
	VY51□□J0022	DN25	6.6 kg
	VY51□□J0041	DN40	10 kg
	VY51□□J0042	DN40	10 kg
	VY51□□J0051	DN50	11.5 kg
	VY51□□J0061	DN65	16 kg
	VY51□□J0081	DN80	18.5 kg

## Model No. configuration

Ex.: VY5110J0011

### JIS10K-FC200

Basic model No.	Actuator/valve		Actuator		Valve specification	Description
	Control signal	Rating/material	Type	Option	Nominal size/Cv value	
VY51						Motorized two-way valve with flanged-end connection
	1					Nominal 135 Ω feedback potentiometer (F motor type)
	2					Nominal 135 Ω resistance input (E motor type)
	3					4 to 20 mAdc input with 2 to 10 Vdc feedback signal
	4					2 to 10 Vdc input with 2 to 10 Vdc feedback signal
		0				JIS 10K-FC200 (for chilled/hot water)
		5				JIS 10K-FC200 175 °C (for steam)
		A				JIS 10K-FC200 200 °C (for steam)
				J		IEC IP54 (protection against dust and splashing) with standard torque-type terminal block
					00	No option
					11	DN15, Cv 1.0
					12	DN15, Cv 2.5
					13	DN15, Cv 6.0
					14	DN15, Cv 1.6
					15	DN15, Cv 4.0
					21	DN25, Cv 10
				22	DN25, Cv 16	
				41	DN40, Cv 25	
				42	DN40, Cv 40	
				51	DN50, Cv 65	
				61	DN65, Cv 95	
				81	DN80, Cv 125	

Note: As a separately-ordered part, the following power transformer is available.  
AT72-J1: 100, 200, 220/25 Vac 50 to 60 Hz

# ACTIVAL Motorized Two-Way Valve (JIS10K-FC200, SCS13A) | VY51 Series

## Model No. configuration

Ex.: VY5111J0011

### JIS10K-SCS13A

Basic model No.	Actuator/valve		Actuator		Valve specification	Description
	Control signal	Rating/material	Type	Option	Nominal size/Cv value	
VY51						Motorized two-way valve with flanged-end connection
	1					Nominal 135 Ω feedback potentiometer (F motor type)
	2					Nominal 135 Ω resistance input (E motor type)
	3					4 to 20 mAdc input with 2 to 10 Vdc feedback signal
	4					2 to 10 Vdc input with 2 to 10 Vdc feedback signal
		1				JIS 10K-SCS13A [for chilled/hot water]
		6				JIS 10K-SCS13A 175 °C [for steam]
		B				JIS 10K-SCS13A 200 °C [for steam]
			J			IEC IP54 (protection against dust and splashing) with standard torque type terminal block (applicable nominal size: DN15 to DN50)
				00		No option
					11	DN15, Cv 1.0
					12	DN15, Cv 2.5
					13	DN15, Cv 6.0
					14	DN15, Cv 1.6
					15	DN15, Cv 4.0
					21	DN25, Cv 10
					22	DN25, Cv 16
					41	DN40, Cv 25
					42	DN40, Cv 40
					51	DN50, Cv 65
					61	DN65, Cv 95
					81	DN80, Cv 125

Note: As a separately-ordered part, the following power transformer is available.  
AT72-J1: 100, 200, 220/25 Vac 50 to 60 Hz

### Optional parts (sold separately)

Name	Model No.
Power transformer	AT72-J1
Waterproof connector	83104346-003
Auxiliary switch*	83165274-001
Auxiliary potentiometer*	83165275-001

\*Either an auxiliary switch or an auxiliary potentiometer can be added. Both cannot be added at the same time.

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