

**Description**

Motorized ball valves is using bi-directional motor,and mainly used in central air-conditioning system, heating system,water treatment and production industry to control the flow of chilled/hot medium.



DN12~DN25



DN32~DN50

**Actuator Technical Data**

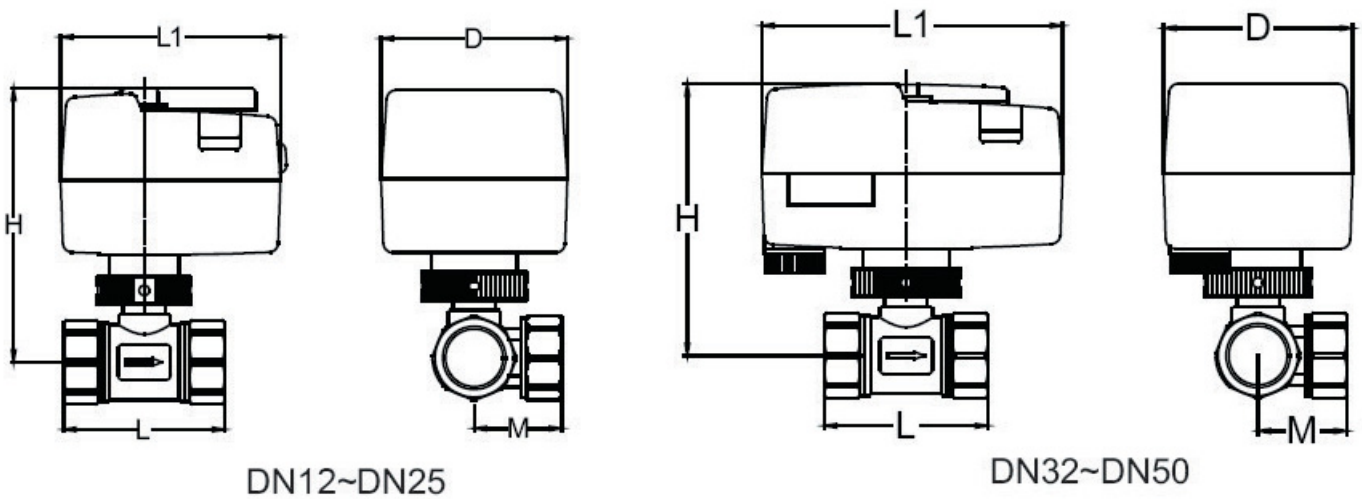
<b>Power Supply</b>	24VAC/1VA	220VAC	24VAC/1VA
<b>Frequency</b>	50/60Hz		
<b>Power</b>	3VA on load	5VA on load	4VA on load
<b>Control Signal</b>	3-point floating/electric on/off		DC0(2)-10V DC4(0)-20mA
<b>Default Setting</b>	-----		Input0-10V DC Feedback 0-10 V DC Running Status DA
<b>Torque</b>	DN12-DN25	>=4Nm	
	DN32-DN50	>=6Nm	
<b>StrokeTime(0-90°)</b>	DN12-DN25	about 45s(50Hz/90°)/ <b>90s for optional</b>	
	DN32-DN50	about 60s(50Hz/90°)/ <b>120s for optional</b>	
<b>Rotation Angle</b>	90°<=Mechanical Limitation< 95°		
<b>Cable</b>	0.5-1mm <sup>2</sup>		
<b>Meterial</b>	Cover	Fire-retardent ABS engineering plastic	
	Chassis	Fire-retardent Reinforced nylon PA6-110	
	Gear	POM,Fire-retardent Reinforced nylon PA-230 Brass HPb59-1	
<b>Temperature</b>	Operating -5~+50°C, Storage -30~+70°C		
<b>Protection Class</b>	IP54		

**Valve Technical Data**

<b>Material</b>	
<b>Valve Body</b>	Forged Brass
<b>Valve Ball</b>	Stainless Steel/Casting Brass(chrome-plate)
<b>Valve Seat</b>	PTFE
<b>Valve Shaft</b>	Stainless Steel/Forged Brass
<b>Seal</b>	NBR

<b>Working Media</b>	Chilled/hot water or ≤50% glycol
<b>Media Temperature</b>	2~94℃
<b>Rated Body Pressure</b>	PN25
<b>Flow Characteristic</b>	Equal Percentage
<b>Leakage</b>	A.B port 0~0.01%Kv AB PORT 0.5% Kv
<b>Connection Type</b>	Thread
<b>Closing-off Pressure</b>	600kPa
<b>Rotation Angle</b>	90°
<b>Installation Level</b>	Horizontal/Vertical

### Dimensions



Size	Rated Body Pressure	Kv	Dimension(mm)					
			L		H	M	L1	D
			2 way	3 way				
DN12	PN25	4.0	68	68	115	33	92	77
DN18		6.3	68	68	115	34		
DN25		10	82	84	120	43		
DN32		16	98	104	131	50	123	78
DN40		25	105	111	131	50		
DN50		40	122	143	135	61		

# DN65~DN150, 2Way Motrized Ball Valve

## Description

Motorized ball valve is using bi-directional motor, and mainly used in central air-conditioning system, heating system, water treatment and production industry to control the flow of chilled/hot medium.



DN65~DN100



DN125~DN150

## Actuator Technical Data

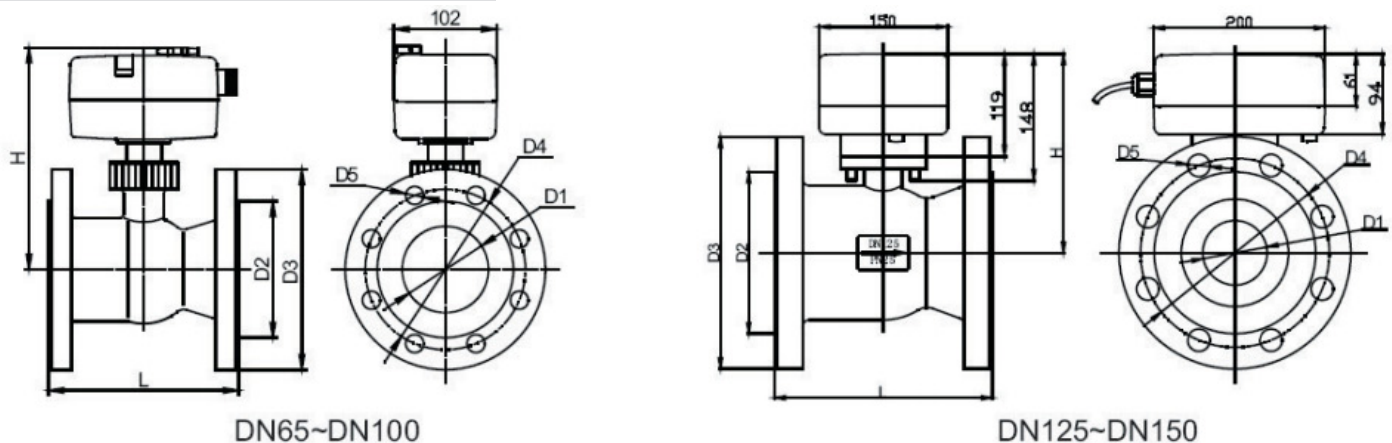
<b>Power Supply(50/60Hz)</b>		24VAC	220VAC	24VAC		
<b>Power</b>	<b>DN65~DN100</b>	4.5VA on load	8.5VA on load	5.5VA on load		
	<b>DN125~DN150</b>	10VA on load		11VA on load		
<b>Control Signal</b>		3-Point floating/electric on/off		DC0(2)~10V DC4(0)~20mA		
<b>Default Setting</b>		-----		Input 0~10V DC Feedback 0~10V DC Running Status DA		
<b>Torque</b>		DN65-DN25		>=25Nm		
		DN32-DN50		>=65Nm		
<b>Stroke Time(0~90°C)</b>		120s(50Hz)				
<b>Rotation Angle</b>		90°<=Mechanical Limitation<95°				
<b>Cable</b>		0.5~1mm <sup>2</sup>				
<b>Material</b>		<b>Cover</b>			Fire-retardent ABS engineering plastic	
		<b>Chassis</b>			Casting Aluminum Alloy	
		<b>Gear</b>		DN65~DN100	POM, Steel	
				DN125~DN150	Brass, HPb59-1, Steel(40Cr, 45)	
<b>Temperature</b>		Operating: -5~+50°C; Storage: -30~+70°C				
<b>Protection Class</b>		IP54				

## Valve Technical Data

<b>Working Media</b>	Chilled/hot water or ≤50% glycot
<b>Media Temperature</b>	2~94℃
<b>Rated Body Pressure</b>	PN16/PN25
<b>Flow Characteristic</b>	Equal Percentage
<b>Leakage</b>	Less than 0~0.01%Kv
<b>Connection Type</b>	Flanged
<b>Closing-off Pressure</b>	600kPa
<b>Rotation Angle</b>	90°
<b>Installation Level</b>	Horizontal/Vertical

Material	
<b>Valve Body</b>	Casting Iron
<b>Valve Ball</b>	Stainless Steel
<b>Valve Seat</b>	PTFE
<b>Valve Shaft</b>	Stainless Steel
<b>Seal</b>	NBR

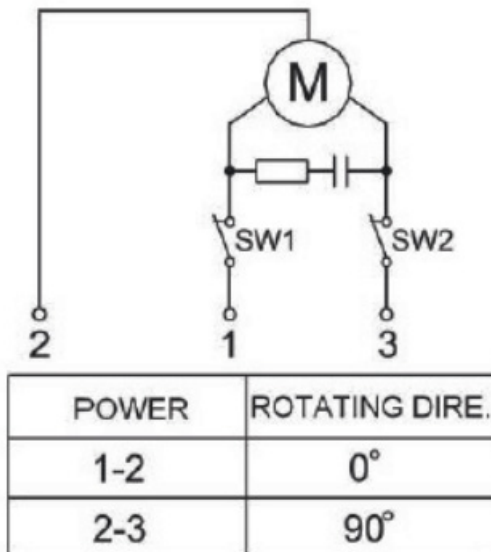
## Dimensions



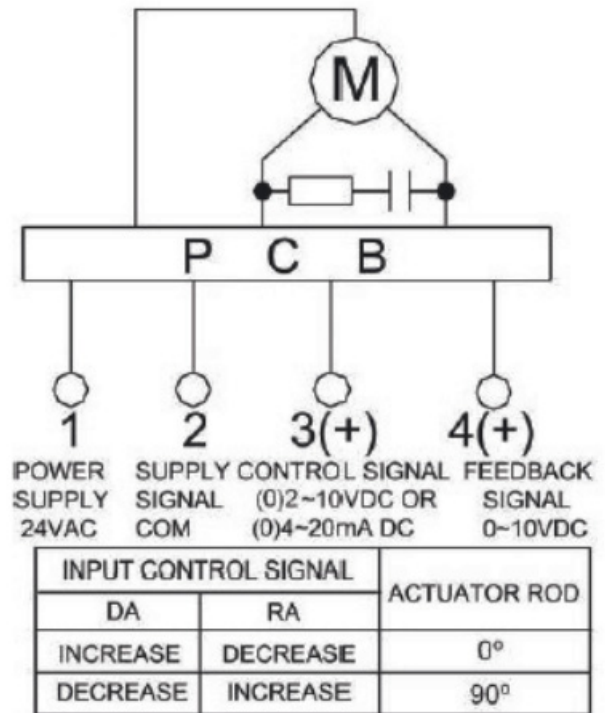
Size	Rated Body Pressure	Kv	Dimension (mm)						
			L	H	D1	D2	D3	D4	D5
DN65	PN16 (PN25)	64	190 (190)	216 (216)	82 (82)	120 (120)	185 (185)	145 (145)	18 (18)
DN80		102	190 (190)	216 (216)	82 (82)	136 (136)	200 (200)	160 (160)	18 (18)
DN100		163	230 (230)	226 (226)	102 (102)	156 (162)	220 (236)	180 (190)	18 (23)
DN125		260	254 (254)	232 (232)	125 (125)	188 (188)	250 (270)	210 (220)	18 (26)
DN150		416	267 (267)	250 (250)	154 (154)	210 (215)	285 (300)	240 (250)	22 (26)

## Wiring Diagram

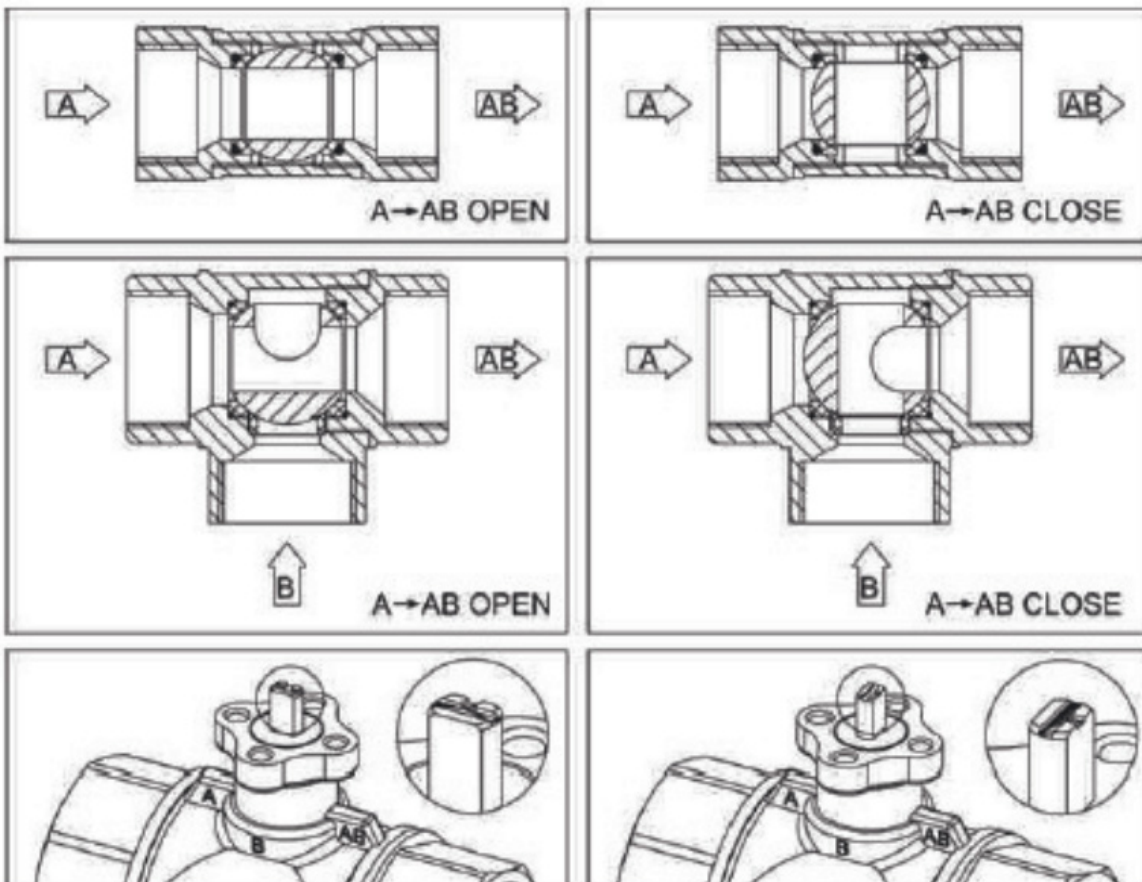
### WIRING



### PCB SETTING



## Piping Diagram



## Closing Test

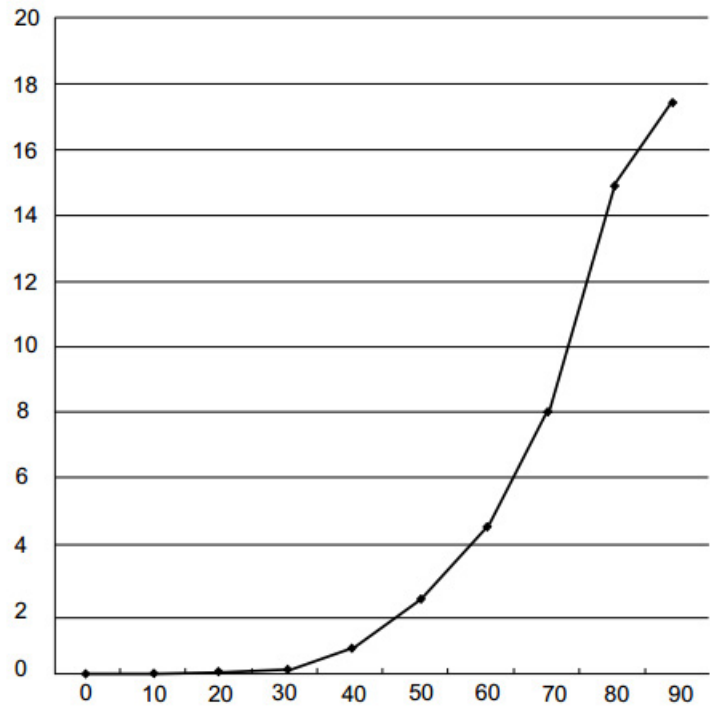
Test No	Input V	Actuator ROD °	Flow Reading m <sup>3</sup> /h	Pressure Before MPa	Pressure After MPa	Differential Pressure MPa	AverageFlow Coeffcient Kv
1	10	90	16.47	0.112	0.019	0.093	17.14
2			16.43	0.111	0.019	0.092	
3			16.43	0.110	0.019	0.091	
4	8.88	80	12.93	0.117	0.017	0.100	13.00
5			12.88	0.117	0.016	0.101	
6			13.57	0.120	0.015	0.105	
7	7.77	70	7.93	0.104	0.016	0.088	8.64
8			9.13	0.120	0.013	0.107	
9			8.89	0.122	0.016	0.106	
10	6.66	60	5.88	0.123	0.020	0.103	5.34
11			5.36	0.121	0.015	0.106	
12			5.25	0.121	0.012	0.109	
13	5.55	50	3.42	0.120	0.020	0.100	3.13
14			3.28	0.119	0.016	0.103	
15			2.75	0.119	0.018	0.101	
16	4.44	40	1.62	0.116	0.018	0.098	1.26
17			1.08	0.115	0.019	0.096	
18			1.05	0.115	0.014	0.101	
19	3.33	30	0.45	0.117	0	0.117	0.28
20			0.26	0.115	0	0.115	
22			0.20	0.117	0	0.117	
23	2.22	20	0.11	0.117	0	0.117	0.11
24			0.13	0.116	0	0.116	
25			0.13	0.117	0	0.117	
26	1.11	10	0.00	0.110	0	0.110	0
27	0	0	0.00	0.110	0	0.110	0

## Opening Test

Test No	Input V	Actuator ROD °	Flow Reading m <sup>3</sup> /h	Pressure Before MPa	Pressure After MPa	Differential Pressure MPa	AverageFlow Coeffcient Kv
1	0	0	0	0.115	0	0.115	0
2	1.11	10	0	0.110	0	0.110	0
3	2.22	20	0.11	0.117	0	0.117	0.10
4			0.09	0.117	0	0.117	
5			0.13	0.117	0	0.117	
6	3.33	30	0.11	0.117	0	0.117	0.16
7			0.20	0.117	0	0.117	
8			0.20	0.116	0	0.116	
9	4.44	40	0.74	0.117	0.011	0.106	0.87
10			0.95	0.116	0.011	0.105	
11			0.98	0.116	0.011	0.105	
12	5.55	50	2.46	0.121	0.012	0.109	2.61
13			2.76	0.120	0.012	0.108	
14			2.89	0.119	0.013	0.106	
15	6.66	60	4.51	0.124	0.016	0.108	4.83
16			5.03	0.121	0.012	0.109	
17			5.57	0.121	0.012	0.109	
18	7.77	70	7.67	0.124	0.016	0.108	8.00
19			7.63	0.119	0.026	0.093	
20			9.06	0.120	0.012	0.108	
21	8.88	80	12.06	0.119	0.019	0.100	12.94
22			12.88	0.117	0.016	0.101	
23			13.63	0.113	0.018	0.095	
24	10	90	16.47	0.112	0.019	0.093	17.17
25			16.43	0.111	0.020	0.091	
26			16.43	0.110	0.019	0.091	

## Average flow curve

Opening test (average flow coefficient  $K_v$ )



Closing test (average flow coefficient  $K_v$ )

