

SBA05 SERIES BALL VALVE ACTUATOR

DESCRIPTION

SBA05 series ball valve actuator is using bi-directional motor. Matching with SBV series flange cast iron ball valve, it is mainly used in central air-conditioning system, heating system, water treatment, and production industry to control the flow of chilled/hot medium

CHARACTERISTIC

- Bi-directional AC motor
- Easy & flexible installation
- Position feedback auxiliary switch for option
- Die-casting aluminum alloy chassis, fireproof ABS engineering plastic, measure up UL94V-0 standard
- Reliability and safety test passed
- Built-in limiter for power saving and longer motor life
- Suitable for DN65-DN100 flanged cast iron ball valve
- 0(2)~10V dc or 0(4)~20mA dc control input signal, proportional control.
- 0~10V feedback signal.



SBA05 SERIES MODEL SELECTION

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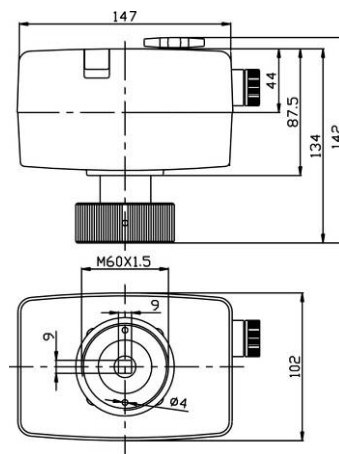
PRODUCT CODE
Ball valve actuator

SERIES CODE
05—The fifth series ball valve actuator

VOLTAGE CODE
024—24Vac 220—220Vac
110—110Vac 230—230Vac
120—120Vac

ADDITIONAL FUNCTION
E—Modulating control, with 0~10V feedback signal
(Only for 24V)

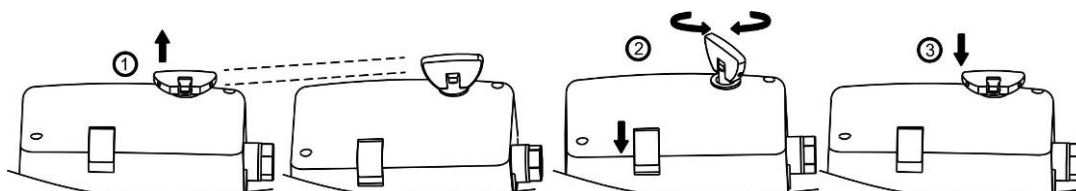
DIMENSIONS



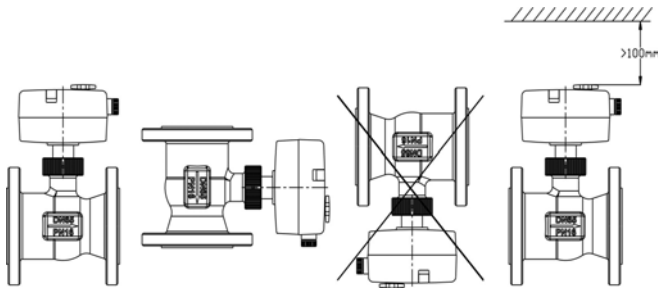
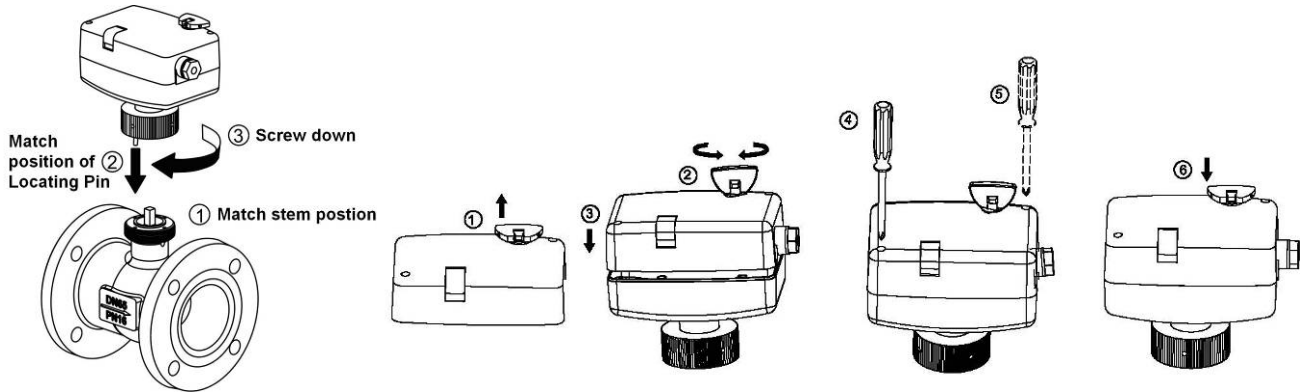
SPECIFICATIONS AND DATA

MODEL	SBA05-024E	SBA05-024	SBA05-110	SBA05-120	SBA05-220	SBA05-230	SBA05-240
POWER SUPPLY	24Vac	24Vac	110Vac	120Vac	220Vac	230Vac	240Vac
POWER CONSUMPTION	Load 5.5VA	Load 4.5VA		Load 8.5VA			
CONTROL SIGNAL	0(2)~10V dc or 0(4)~20mA dc	—					
DEFAULT SETTING	Input: 0~10Vdc Work mode: DA	—					
CURRENT FREQUENCY	50/60Hz						
TORQUE	≥25Nm						
OPERATION TIME (0~90 °)	121s (50Hz) / 100s (60Hz)						
ROTATABLE ANGEL	90° < Limiter ≤ 95°						
CONNECTING WIRES	0.5~1 mm ²						
MATERIAL	HOUSING	Fireproof ABS engineering plastic					
	CHASSIS	Die-casting aluminum alloy					
	GEAR	POM (polyoxymethylene) + steel					
OPERATION TEMP.	-5~+50°C						
STORAGE TEMP.	-30~+70°C						
IP CLASS	IP54						

MANUAL OPERATION



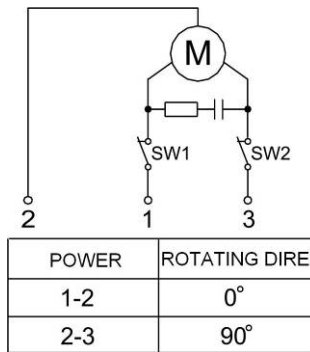
INSTALLATION



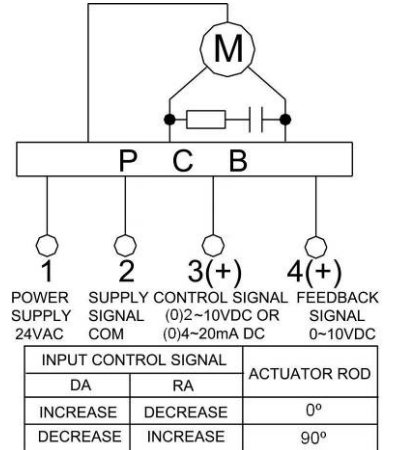
WARNING:

- Cut off power supply when repairing or maintaining.
- Do not connect or disconnect wire when power is on.

WIRING

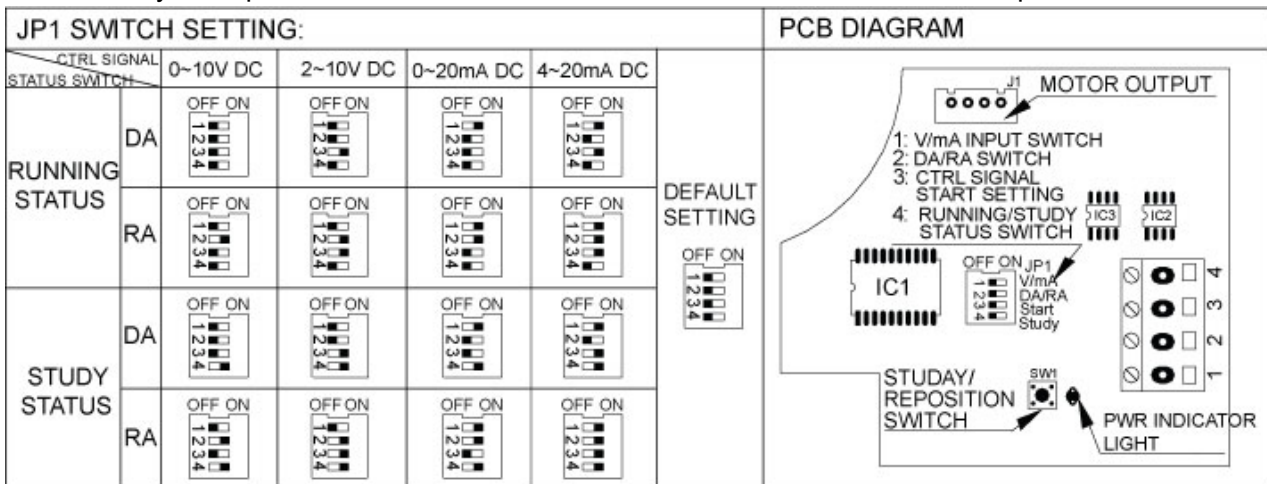


PCB SETTING



PCB SETTING

- Study status:** After power is on, set JP1 switch as request (refer to the following list). First, switch "4" of JP1 to position ON, then press SW1 STUDY/REPOSITON button, buzzer will sound every 5 seconds, and the actuator stem is going down (opening valve) until gears are blocked (has reached the maximum stroke). Then the stem will go upward until gears are blocked again (has been in the initial position). Buzzer will make a long sound to indicate the study status is over. MCU will keep the data in memory even power is off.
Then switch "4" of JP1 back to position OFF to transform to running status. If this step is missed, the actuator will operate as usual, but it will go through the study status every time when power is on.
- Running status:** The actuator will return to fully closed position every time when power is on. It will close the valve at first, and then the buzzer will make a long sound to indicate the actuator is ready for control signal.
- Study/running status shift:** If user needs to switch study/running status, make sure the JP1 has been set correctly, then press SW1 STUDY/REPOSITON button. Don't need to cut off power.



NOTICE: We strongly recommend that JP1 switch should be set on running status in normal use.

Note: If power supply is switched from 50Hz to 60Hz, please operate Study/running status shift again. For a fully function of the actuator, Please indicate current frequency of local power in orders.

SBV SERIES

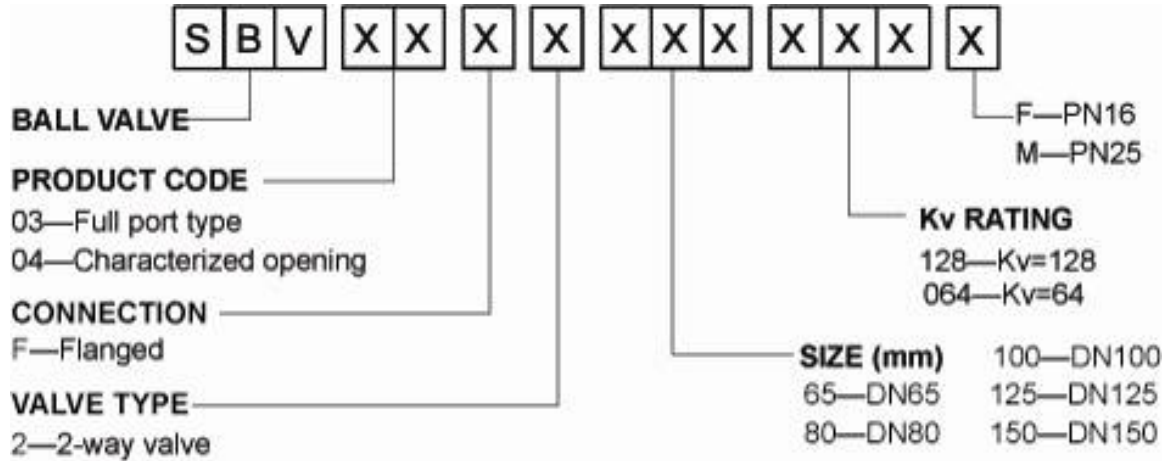
FLANGE CAST IRON BALL VALVE BODY

DESCRIPTION

SBV series flange casting iron ball valve bodies are widely used to control water flow in central air-conditioning, heating system. Matched with SBA05 and SBA06 series actuator, the valve is driven by actuators and can be rotated to different angle. There are five sizes: DN65, DN80, DN100, DN125 and DN150. And there are full port and characterized opening types.



MODEL SELECTION



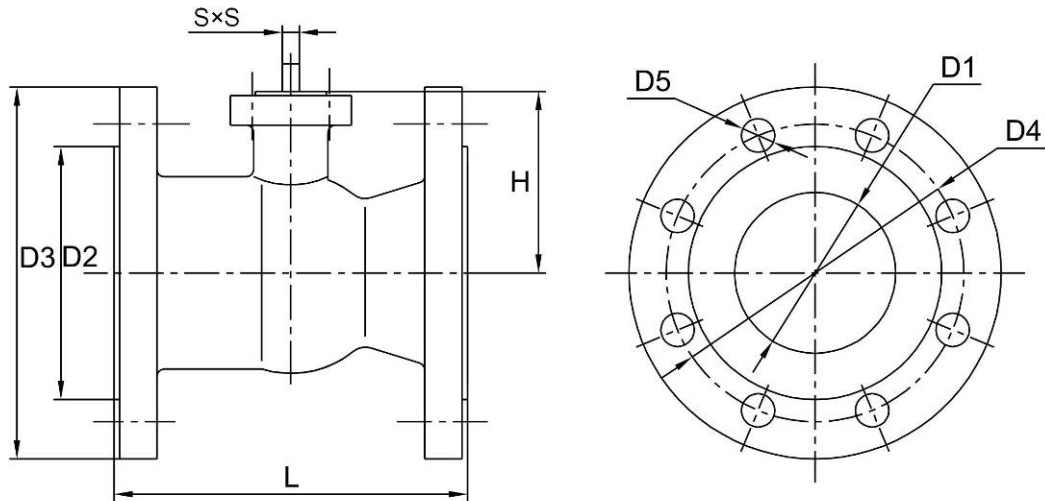
TECHNICAL DATA

MODEL	TYPE	FLOW RATE		SIZE	CLOSS OFF PRES. (MPa)	RATED BODY PRES. (MPa)
		Kv	Cv			
SBV03F265128F(M)	2-way full port	128	150	DN65	0.6	1.6 (2.5)
SBV04F265064F(M)	2-way chara. opening	64	75			
SBV03F280136F(M)	2-way full port	136	159	DN80		
SBV04F280102F(M)	2-way chara. opening	102	119			
SBV03F2100218F(M)	2-way full port	218	255	DN100		
SBV04F2100163F(M)	2-way chara. opening	163	190			
SBV03F2125274F(M)	2-way full port	274	320	DN125		
SBV04F2125260F(M)	2-way chara. opening	260	304			
SBV03F2150507F(M)	2-way full port	507	593	DN150		
SBV04F2150416F(M)	2-way chara. opening	416	487			

MATERIALS & TECHNICAL DATA

MATERIAL	VALVE BODY	HT250
	BALL	304 SS
	VALVE SEAT	PTFE
	VALVE STEM	304 SS
	O-RING	NBR
WORKING TEMP.		Cold/hot water, ≤50% glycol
MEDIA TEMP.		2~94℃

DIMENSIONS (MM)



DIMENSIONS		L	H	D1	D2	D3	D4	D5	S×S	QTY OF FLANGE HOLES	HOLE THREAD
SIZE											
DN65	PN16	190	98	82	120	185	145	18	9×9	4 / 8	M16
	PN25										
DN80	PN16	190	98	82	136	200	160	18	9×9	8	M16
	PN25										
DN100	PN16	230	108	102	156	220	180	18	9×9	8	M16
	PN25				162	235	190	23			M20
DN125	PN16	254	115	125	188	250	210	18	12×12	8	M16
	PN25					270	220	26			M24
DN150	PN16	267	133	154	210	285	240	22	12×12	8	M20
	PN25				215	300	250	26			M24

INSTALLATION & ADJUSTMENT

SBV series 2-way valve is match to SBA series actuator. Please notice that the mark “—” on valve stem indicates the ports on the valve ball. And make sure the Installation Mark is match with the slot on the actuator stem.

