

## DESCRIPTION

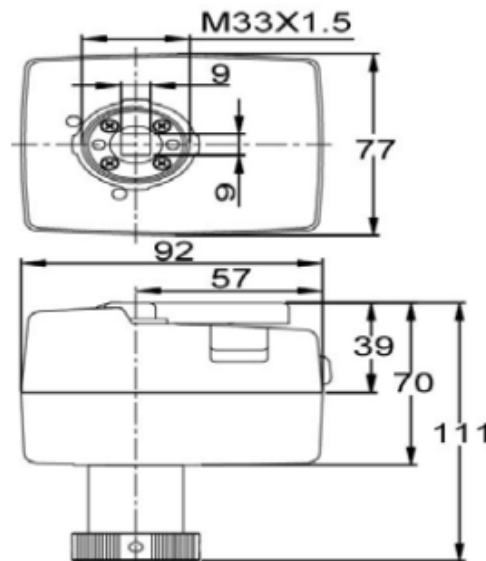
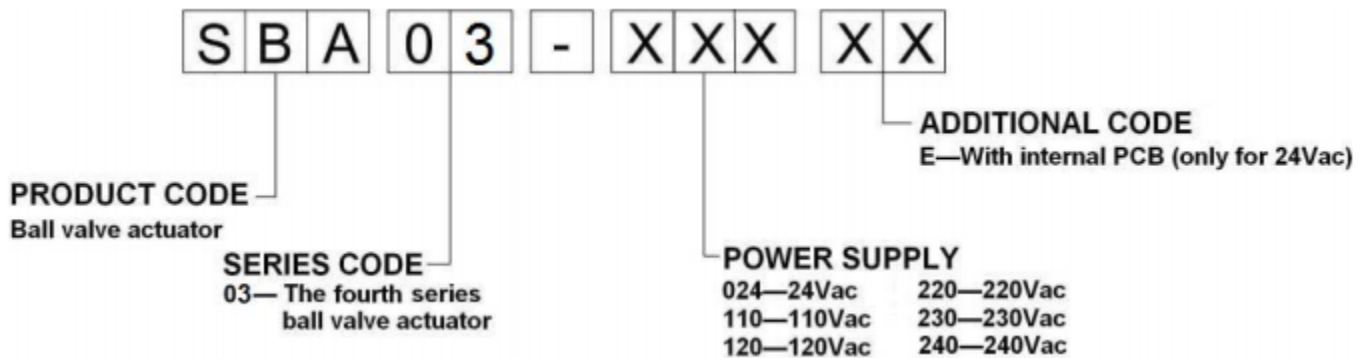
SBA03 series ball valve actuator is using bi-directional motor. Matching with SBV series ball valve, it is mainly used in central air-conditioning system, heating system, water treatment, and production industry to control the flow of chilled/hot medium



## CHARACTERISTIC

- Bi-directional AC motor
- Apply to valves of DN15 to DN25
- Fire-retardant ABS engineering plastic, measure up UL94V-0 standard
- With manual switch and position indicator
- Electrical on/off type or floating (PID adjusting) type
- Detachable design, easy to install and maintain
- Good heat insulation design to avoid overheating inside of actuator
- Reliable and high safety requirement level
- 0(2)~10V dc or 0(4)~20mA dc control input signal, proportional control.
- 0~10V feedback signal.

## MODEL SELECTION

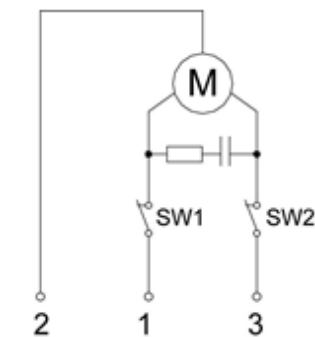


## SPECIFICATIONS AND DATA

<b>MODEL</b>	SBA03-024E	SBA03-024	SBA03-110	SBA03-120	SBA03-220	SBA03-230	SBA03-240
<b>POWER SUPPLY</b>	24Vac	24Vac	110Vac	120Vac	220Vac	230Vac	240Vac
<b>POWER CONSUMPTION</b>	4VA	3VA		5VA			
<b>CONTROL SIGNAL</b>	0(2)~10V dc (input impedance: 200K $\Omega$ ) or 0(4)~20mA dc (input impedance: 500 $\Omega$ )	On/off or floating signal					
<b>FEEDBACK SIGNAL</b>	0~10Vdc (1mA)	—					
<b>DEFAULT SETTING</b>	Input signal: 0~10Vdc; Mode: DA	—					
<b>CURRENT FREQUENCY</b>	50/60Hz						
<b>TORQUE</b>	$\geq 4\text{Nm}$						
<b>OPERATION TIME</b>	$\approx 45\text{s}$ (50Hz, 90°)						
<b>MAXIMUM ANGLE</b>	90° < limiter $\leq$ 95°						
<b>CONNECTING WIRES</b>	0.5~1 mm <sup>2</sup>						
<b>MATERIAL</b>	<b>COVER</b>	Fire-retardant ABS engineering plastic					
	<b>CHASSIS</b>	Fire-retardant Reinforced nylon PA6-110					
	<b>GEAR</b>	POM (polyoxymethylene) + Brass HPb59-1 + iron-base powder metallurgy					
<b>OPERATION TEMP.</b>	-5~+50°C						
<b>STORAGE TEMP.</b>	-30~70°C						
<b>IP CLASS</b>	IP54						

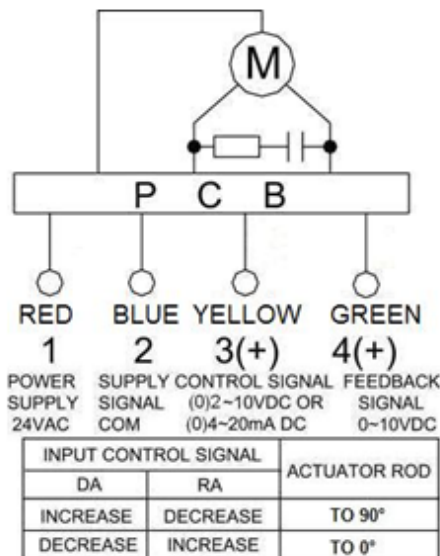
## Wiring Diagram

### WIRING

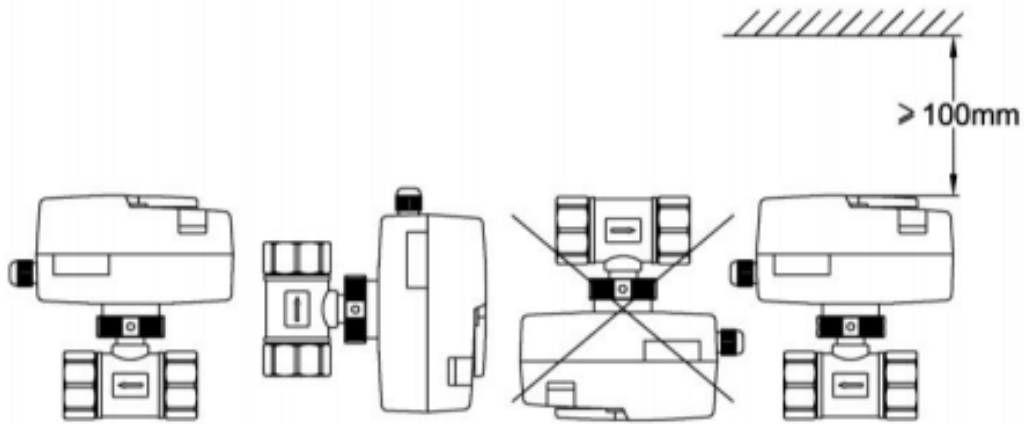


POWER SUPPLY	ROTATE TO
1-2	0°
2-3	90°

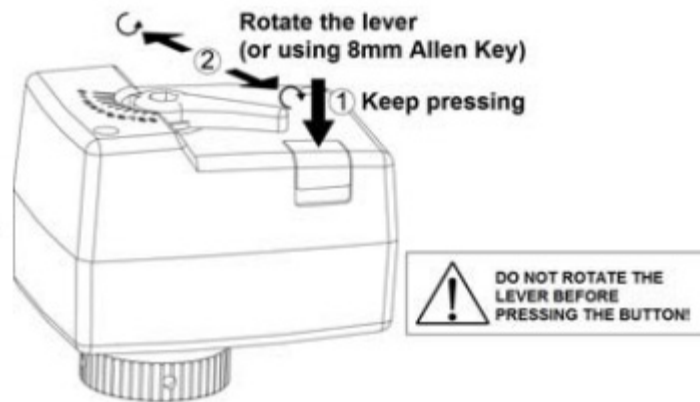
### PCB WIRING



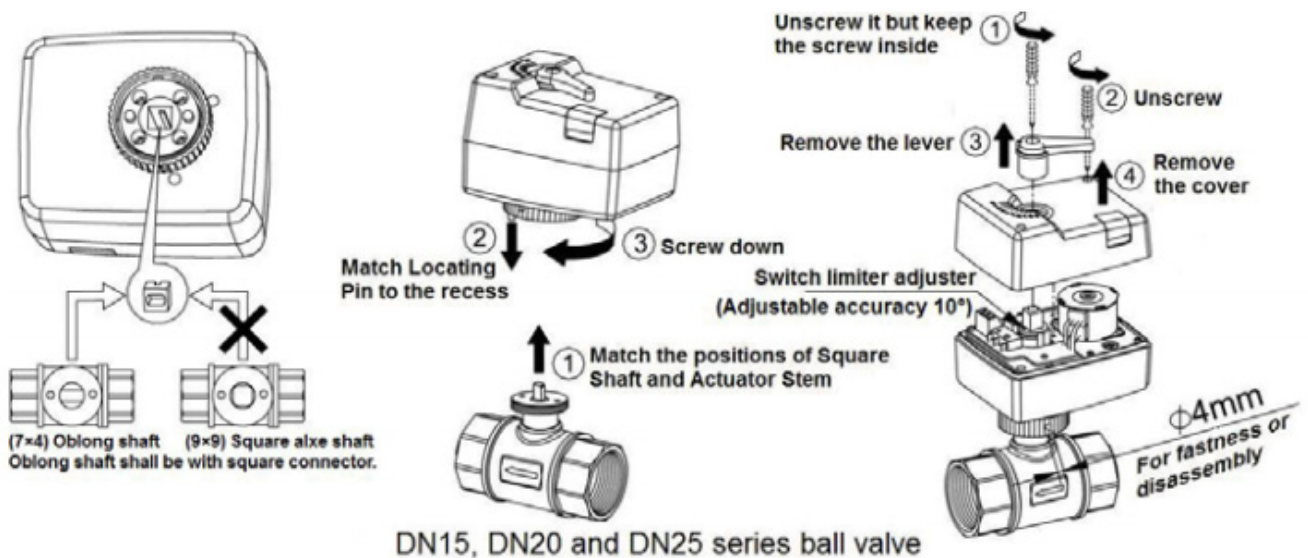
## INSTALLATION INSTRUCTION



## MANUAL SWITCH



## INSTALLATION INSTRUCTION



## 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, power light will twinkle, and the actuator stem is rotating to the end of stroke (has reached the maximum stroke). Then the stem will rotate back to initial position. Power light will stop twinkling and be turned on 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 power light will be turned on 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

JP1 SWITCH SETTING					PCB:
CTRL SIGNAL STATUS SWITCH	0~10V DC	2~10V DC	0~20mA DC	4~20mA DC	
RUNNING STATUS	DA				<b>DEFAULT SETTING</b> 
	RA				
STUDY STATUS	DA				
	RA				

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.

