



Pressure Independent Control Valve

FIG. AUG09 -DF

APPLICATION

- ✓ Fig.AUG09-DF Pressure Independent Balancing & Control Valve is designed in aircondition system and heating system, such as PAU,AHU,MAU and end-equipment.
- ✓ According to temperature requirement of air condition area and signals of control system to regulate terminal flow and maintain constant in pipe network.
- ✓ In order to ensure that terminal is not affected by other devices in the net work, keep the system high efficiency, saving energy and stable.

FEATURES

- Equal percentage flow characteristic
- Constant differential pressure is achieved
- Electronic preset of maximum flow facilitates on-site commissioning
- Fault auto-detection and alarm function
- The range with auto-detect function
- The regulator valve core is designed angular travel and provided three actuator, such as Modulating, Floating point and ON/OFF type

OPERATING PRINCIPLES

- Pressure independent Balancing valve consists of flowing adjustment and dynamic balancing.
- The structure of flowing adjustment can achieve to set and regulate. It equipped with actuator which can realize to electronic regulate and shut off function.
- The structure of dynamic balancing can realize to flow constant. Its core part including diaphragm and spring. Diaphragm can induct diferential pressure among of entrance and chamber of balancing valve core, and then keep constant differential pressure.

Pressure Independent Control Valve

BASIC SPECIFICATIONS

- Size: DN40-DN250
- Working Temperature: -10~120°C
- Working Pressure: Pn16
- Fluid Medium: Water / Ethylene Glycol / Propylene Glycol
- Connection: Flange Connection
- Connection Standard, EN1092-1/2 GB/T 17241.6-2008
- Control Deviation: ≤5%
- Working Voltage: 24VAC
- Control Signal: 0-10VDC/4-20mA
- Working ΔP : 30-420KPa
- IP Grade: IP54/65
- Control Characteristic: Equal percentage

MATERIALS

FIG. AUG09 -DF DN40-DN250

Valve Body: Ductile Iron
Valve Core: Stainless Steel
Valve Stem: Stainless Steel
Membrane: EPDM
Spring: Stainless Steel
Sealing: EPDM
Actuator: Shell: Flame Retardant PC
Internals: Reinforced POM

TECHNICAL SPECIFICATION

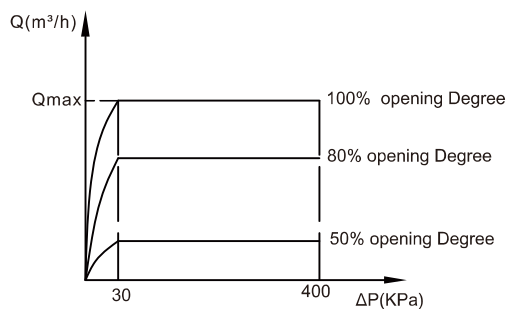
• Valve

Size	Working ΔP (KPa)	Flow Range (m ³ /h)	Actuator Force (N)	Actuating Time (S)
DN 40	30-420	1-8	25	120
DN 50	30-420	1.5-14	25	120
DN 65	30-420	2-24.5	25	120
DN 80	30-420	3-35	65	120
DN 100	30-420	5-50	65	120
DN 125	30-420	8-70	100	140
DN 150	30-420	12-100	100	140

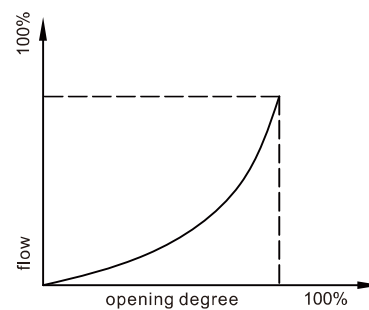
Note: Please Contact us if DN200/DN250 is needed.

Pressure Independent Control Valve

• FLOW CHARACTERISTIC

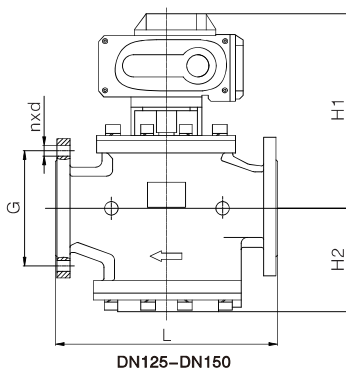
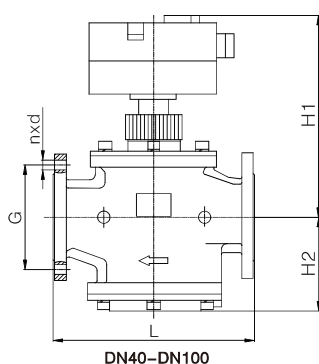


Differential Pressure Flow Characteristic



Opening Flow Characteristic

DIMENSIONS

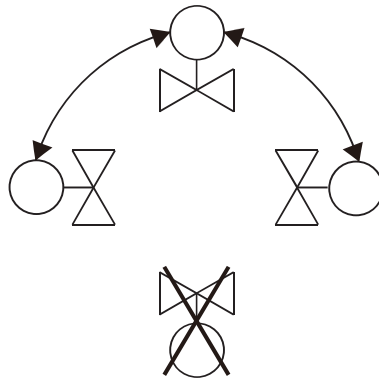


Size	Connection Dimension (mm)			Appearance Dimension (mm)		
		G	N x Φd	L	H1	H2
DN 40	Flange	110	4x $\Phi 18$	200	240	92
DN 50		125	4x $\Phi 18$	230	255	110
DN 65		145	4x $\Phi 18$	290	265	136
DN 80		160	8x $\Phi 18$	310	280	142.5
DN100		180	8x $\Phi 18$	350	300	148.5
DN125		210	8x $\Phi 18$	400	335	188
DN150		240	8x $\Phi 22$	480	370	205

Pressure Independent Control Valve

INSTALLATION CAUTIONS

1. Please read the instructions carefully before installation, check product type and parameter. According to requirements set working voltage and input signals.
2. Ensure vertical installation as much as possible, and make room for maintenance.
3. The direction of the arrow head on the valve body must accord with the direction of the flow. Wrong installation will lead to clog in the system.
4. It is suggested that the design system should be connected by the bypass, and the filling should be done by the by-pass to flush the impurities in the line, otherwise the valve will be blocked
5. Before and after installation shall ensure that the valve set aside a certain length of straight pipe, general reserved diameter of 10 times the length of the straight pipe at the inlet pipe, diameter 5 times the length of straight pipe at the export pipe.



Downward Installation Prohibited

AUG09A SERIES ACTUATOR



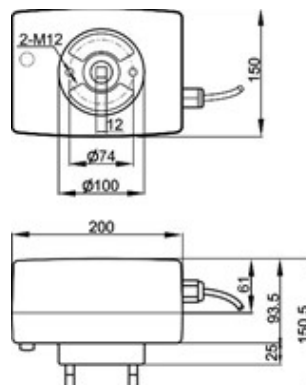
DESCRIPTION

AUG09A series actuator is using bi-directional motor. Matching with Fig.1230-DF Pressure Independent Balancing and Control 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
- High strength die-casting aluminum alloy chassis, fireproof ABS engineering plastic, measure up UL94V-0 standard
- Built-in limiter for power saving and longer motor life
- Suitable for DN125-DN200 flanged ball valve
- 0(2)~10V DC or 0(4)~20mA DC control input signal, proportional control, and 0~10V DC feedback signal.

DIMENSIONS

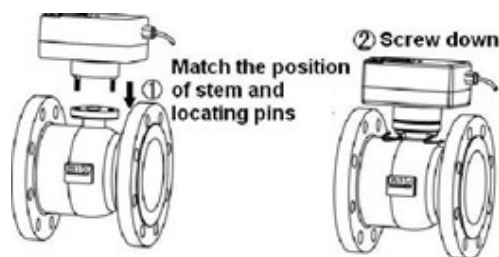


AUG09A SERIES ACTUATOR

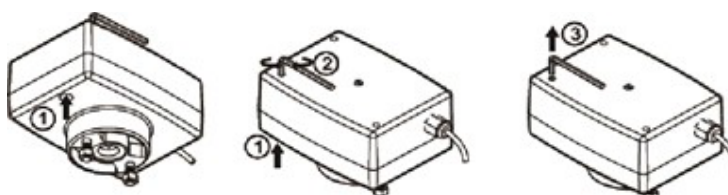
SPECIFICATIONS AND DATA

MODEL		VA C06 - 024E	VA C06 - 024	VA C06 - 220	VA C06 - 230
POWER SUPPLY		24VAC	24VAC	220VAC	230VAC
POWER CONSUMPTION		Load 11VA	Load 10VA		
CONTROL SIGNAL		0(2)~10V DC (input impedance:200KΩ)or 0(4)~20mA DC (input impedance:500Ω)	3 point floating signal		
FEEDBACK SIGNAL		0~10V DC(1mA)			
DEFAULT SETTING		Input signal: 0~10VDC; Mode: DA			
CURRENT FREQUENCY		50/60Hz			
TORQUE		≥65Nm			
OPERATION TIME (0~90°)		120s (50Hz) / 100s(60Hz)			
ROTATABLE ANGLE		90°<Limiter≤95°			
CONNECTING WIRES		0.5~1 mm ²			
MATERIAL	HOUSING	Fireproof ABS engineering plastic			
	CHASSIS	Die-casting aluminum alloy			
	GEAR	Brass HPb59-1; Steel40Cr,45			
OPERATION TEMP.		-5~+50℃			
STORAGE TEMP.		-30~+70℃			
IP CLASS		IP54			

INSTALLATION

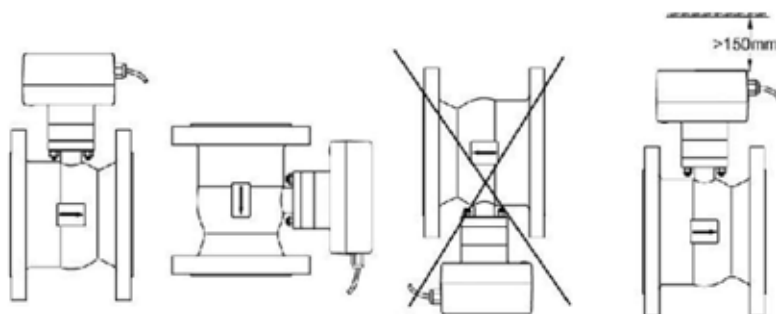


MANUAL LEVER

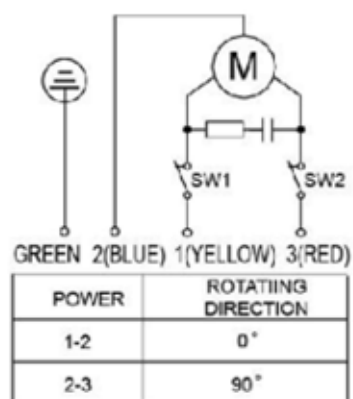


AUG09A SERIES ACTUATOR

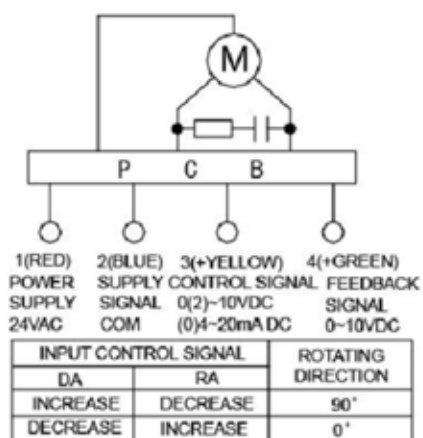
DIMENSIONS



WIRING



PCB WIRING



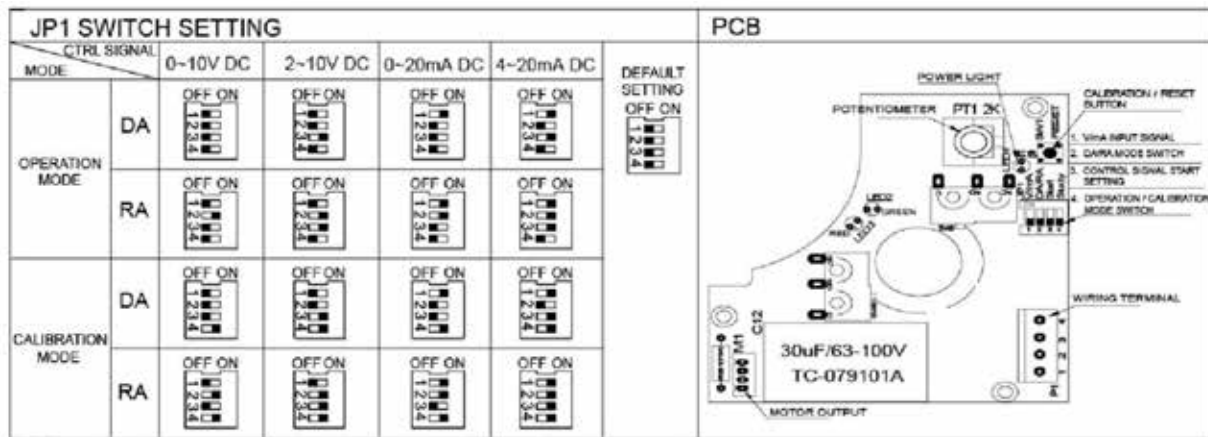
AUG09A SERIES ACTUATOR

WARNING

- Cut off power supply when repairing or maintaining.
- Do not connect or disconnect wire when power is on.
- Please install the actuator cover properly when the actuator is working.

PCB SETTING

- **Calibration mode:** After power is on, set JP1 switch "4" to position "ON" as request (refer to the below JP1 switch setting diagram) , then press SW1 calibration/reset button, power LED is flashing during calibration, and the actuator stem is rotating till to the end (has reached the end position of ball valves). Afterward the stem will rotate back to initial position. Power LED will stop flashing after the calibration mode is over. MCU will keep the position data in memory even power is off. Then JP1 switch "4" is needed to set to "OFF" after the calibration is finished and back to operation mode. If this JP1 switch"4" is forgotten to set to "OFF" during operation, the actuator will operate as usual, but it will go through the calibration mode every time when power is on.
- **Operation mode:** When power is on, the actuator will work according to the control signal.
- **Calibration/operation mode shift:** If user needs to switch calibration/operation mode, make sure the JP1 has been set correctly, then press SW 1 calibration/reset button. Don't need to cut off power.



NOTE: we strongly recommend that JP1 switch should be set on operation mode in normal use.

AUG09A SERIES ACTUATOR



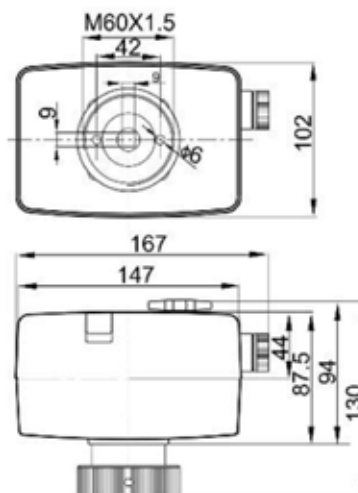
DESCRIPTION

GBA05 series actuator is using bi-directional motor. Matching with Fig.AUG09-DF Pressure Independent Balancing and Control 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
- Pass reliability and safety test
- Built-in limiter for power saving and longer motor life
- Suitable for DN65-DN100 flanged ball valve
- 0(2)~10V DC or 0(4)~20mA DC control input signal, proportional control, and 0~10V DC feedback for option.

DIMENSIONS

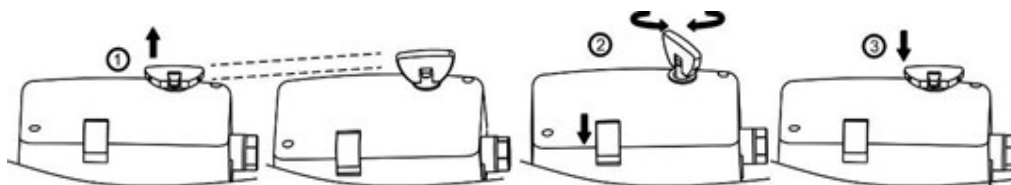


AUG09A SERIES ACTUATOR

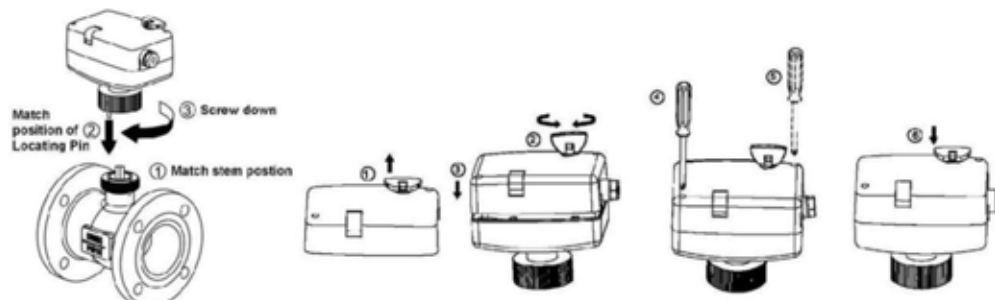
SPECIFICATIONS AND DATA

MODEL		VA C05 - 024E	VA C05 - 024	VAC05-110	VAC05-220
POWERSUPPLY		24VAC	24VAC	110VAC	220VAC
POWERCONSUMPTION		Load 5.5VA	Load 4.5VA		Load 8.5VA
CONTROLSIGNAL		0(2)~10V DC (input impedance: 200KΩ) or 0(4)~20mA DC (input impedance: 500Ω)	3 point floating signal		
FEEDBACKSIGNAL		0~10VDC (1mA)			
DEFAULT SETTING		Input: 0~10VDC; Mode:DA			
CURRENTFREQUENCY		50/60Hz			
TORQUE		≥25Nm			
OPERATION TIME(0~90°)		160s (50Hz) / 133s(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

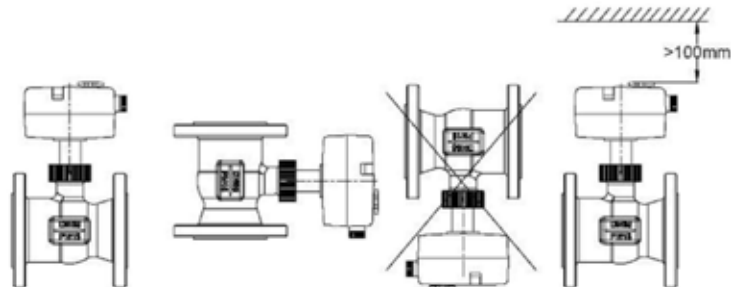


INSTALLATION

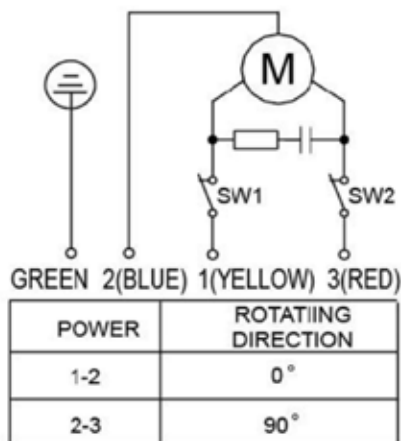


AUG09A SERIES ACTUATOR

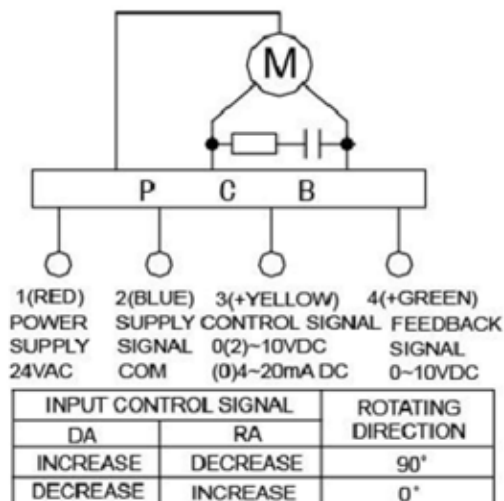
DIMENSIONS



WIRING



PCB WIRING



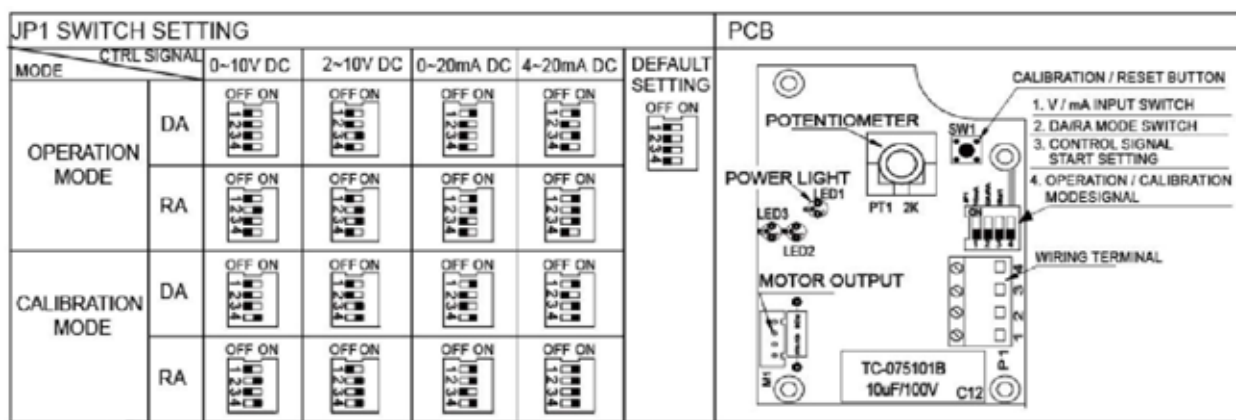
AUG09A SERIES ACTUATOR

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PCB SETTING

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