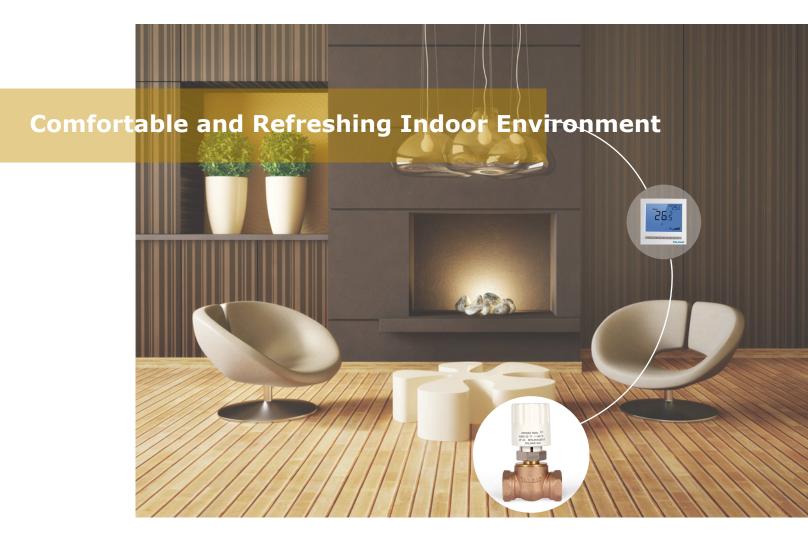
#### **Motorized Control Valves**



#### **Global Flow Control Combination**



### TC90 Series Room Temperature Controllers

**TC 90** series is the new large-screen LCD temperature controller, mainly used for room temperature control of the fan-coil systems in industrial, commercial, and civilian central air conditioning units. It controls the terminal fan-coil control valves to perform opening and closing according to room temperature changes detected by the temperature-sensing elements of their thermometers. In that way, the room temperature is adjusted to provide a comfortable and energy-saving indoor environment.

TC90 series LCD temperature controllers adopt microcomputer control technology with large-screen LCDs. Statuses displayed on the LCD screen: Working status (cooling, heating, and ventilation), fan speed, room temperature, and set temperature. Keys: Power switch key ( $\bigcup$ ), mode switch key (M), fan speed selection key ( $\bigcup$ ), and temperature setting key ( $\blacktriangle \nabla$ ).

#### Product Features

#### **Basic Functions**

- Mode switching of cooling, heating, and ventilation.
- Manually or automatically controlled three-speed switch of the fan.
- Large-screen blue LCD backlight.
- Power-off memory function.
- Room temperature programming function, 4 periods per day.

#### Status Displayed on the Large-Screen LCD

- $\cdot$  Working mode (cooling 🎇 heating  $\bigotimes$  , and ventilation 🤣 )
- Fan speed (low speed **a1**, medium speed **a11**, high speed **a111**, or automation AUTO)
- Motorized valve opening  $~~ \blacksquare~~$
- Room temperature display
- Temperature display setting

#### Key Locking Function

The temperature controller is designed with the key locking function. It automatically locks the keys 30 seconds after the user stops operating it, restricting other people from operating the temperature controller.

#### Low-Temperature Protection Function

When room temperature is below 5 C, the closed temperature controller will turn on to warm up the room automatically and display the icon  $\cancel{2}$  on the screen. The fan will operate at high speed automatically, and then turn on the motorized valve. The temperature controller will automatically turn off when room temperature rises to 7°C.

#### Temperature Adjustment

If the user wishes the temperature displayed on the temperature controller is higher or lower than the actual temperature (±5°C), the following operations can be performed:

When the temperature controller is off, press " $\blacktriangle$ " and " $\checkmark$ " at the same time for 3 seconds, and then "XX°C" will be displayed on the screen (the working mode of the temperature controller is not displayed). Then press " $\blacktriangle$ " or " $\checkmark$ " to adjust the temperature value, which will be automatically confirmed 6 seconds after the adjustment.

#### Alarm Function:

When the sensor fails, the temperature controller will turn off the fan and the motorized valve, and display "E1" or "E2" on the screen.

E1: Sensor short-circuit alarm

E2: Sensor open-circuit alarm

When temperature is higher than 55°C, "HI" will be displayed on the screen; when temperature is lower than 0°C, "LO" will be displayed on the screen.



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#### **Technical Parameters**

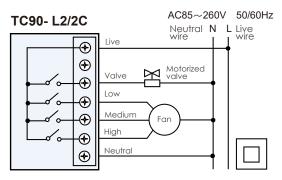
Temperature-Sensing Element: NTC Temperature Control Accuracy:  $\pm 1^{\circ}$ C Temperature Setting:  $5 \sim 35^{\circ}$ C Display Range:  $0 \sim 55^{\circ}$ C Working Environment:  $0 \sim 45^{\circ}$ C Humidity:  $5 \sim 95\%$  RH (no condensation) Key: Press the keys gently. Self-Consumed Power: < 1W Power Supply Voltage: AC85~260V,50/60Hz Terminal Block: Can be connected to 2 \* 1.5 mm<sup>2</sup> or 1 \* 2.5 mm<sup>2</sup> wires Load Current: 2 A (resistive load), 1 A (inductive load) Shell: Fire-retardant PC + ABS Dimensions: 90 \* 88 \* 15.5 mm (width \* height \* thickness) Hole Pitch In Installation: 60 mm (standard) Ingress Protection: IP30

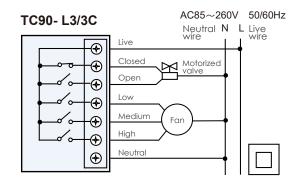
### **Model Descriptions**

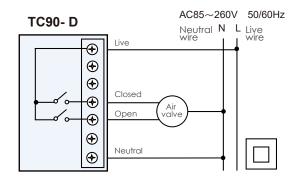
#### TC90 - D/L2/L3/2C/3C/F4

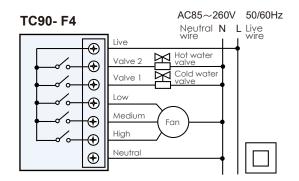
- D Control the motorized air valve or the motorized air outlet.
- L2 Control the motorized valve (two-wire valve) and the three-speed fan. When temperature reaches the specified value, close the motorized valve, leaving the fan to continue to run.
- L3 Control the motorized valve (three-wire valve) and the three-speed fan. When temperature reaches the specified value, close the motorized valve, leaving the fan to continue to run.
- 2C Control the motorized valve (two-wire valve) and the three-speed fan. When temperature reaches the specified value. The motorized valve and the fan will be closed.
- **3C** Control the motorized valve (three-wire valve) and the three-speed fan. When temperature reaches the specified value. The motorized valve and the fan will be closed.
- **F4** Applicable to the four-pipes system. Control the cooling/heating motorized valve (two-wires valve) and the three-speed fan. When temperature reaches the specified value, close the motorized valve, leaving the fan to continue to run.

#### Wiring Diagram









### **FC500** Series **Fan-Coil Motorized Valves**

FC500 series motorized two-way valves are mainly used to control the opening and closing of cold water and hot water in the terminal of the fan coil units of the air conditioning systems in order to provide a comfortable room temperature. When needed, the motorized valve will automatically turn on after receiving the control signal transmitted from the room temperature controller, then cool or warm the room as required. When temperature reaches the specified value, the room temperature controller will automatically cancel the transmitting signal, and the spring within the motorized valve will force it to turn off and bring it back to the original pre-set value.

### **Product Features**

- Forged brass shell, stainless steel valve stem, and aluminum alloy bracket.
- Permanent magnet synchronous motor with a fully enclosed hysteresis clutch structure and spring reset.
- · Synthetic rubber gasket to ensure zero leakage without any bubbles when closed
- · Valve body design offers both a 2-way, normally closed type and a 3-way diverter type.
- Motor operates with low power consumption and minimal noise.
- The driver and valve body are separate, enabling quick and easy assembly and disassembly.
- Includes a built-in return spring and an optimized valve core structure.
- Threaded connections follow BSPT and NPT standards.
- Compact size, lightweight.

#### **Technical Parameters**

Power Supply Voltage: 220 VAC, 24 VAC ±10% 50 Hz **Power:** < 6.5 W Working Pressure: 1.6 Mpa Medium: Water Medium Temperature:  $5^{\circ}C \sim 90^{\circ}C$  ( $40^{\circ}F \sim 194^{\circ}F$ ) Ambient Temperature:  $0^{\circ}C \sim 60^{\circ}C$  ( $32^{\circ}F \sim 140^{\circ}F$ ) Action Time: Opening Time 10s, Closing Time 5s Ingress Protection: IP40

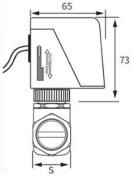
Shaft: Stainless Steel Sealing: NBR or EPDM Shell: High-strength flame-retardant ABS Base: Aluminum Alloy Spring: Stainless Steel

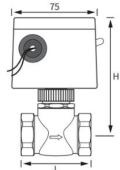
#### **Flow Parameters**

Model	Dimension (In)	Structure	Kv value	Differential pressure (MPa)
T215FC500	1/2"	Two-Way	1.0	0.20
T220FC500	3/4″	Two-Way	2.2	0.15
T225FC500	1″	Two-Way	3.5	0.08
T232FC500	1¼″	Two-Way	4.2	0.06

\* Valves should be open when the system is pressurised.











Body: Brass

#### **Dimensions/Weight**

Model	L	Н	S	Lbs	Kg
T215FC500	49	94	25.5	1.32	0.60
T220FC500	62	101	32.0	1.65	0.75
T225FC500	70	103	38.0	1.76	0.80
T232FC500	72	115	39.0	1.98	0.90

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### FC300 Series Fan-Coil Motorized Heating Valves

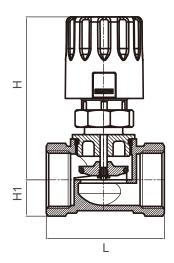
FC300 series motorized-heating two-way valves are mainly used to control the opening and closing of cold water and hot water in the terminal of the fan coil units within the air conditioning systems in order to provide a comfortable room temperature of the fan coil units of the air conditioning systems in order to provide a comfortable room temperature. When needed, the motorized heating valve will automatically turn on after receiving the control signal transmitted from the room temperature controller, then cool or warm the room as required. When temperature reaches the specified value, the room temperature controller will automatically cancel the output signal, and the motorized heating valve will turn off slowly, cutting off the water source. FC300 series motorized heating valves are set to be powered off prior to delivery.

#### **Product Features**

- Forged-brass shell.
- Slow opening and closing, no noise, and reduced water hammer effect.
- Leak-free EPDM/PTFE sealing.
- The body structure is the normally-closed two-way type.
- The body comes with the spring return function.
- The actuator is connected to the ferrule of the body by a loose joint, easy to assemble.
- Thread standards: BSPT and NPT.
- Small size and light weight.



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#### **Technical Parameters**

Power Supply Voltage: 230 VAC, 24 VAC ±10% 50 Hz Power: < 3 W Working Pressure: 1.6 Mpa Medium: Water Medium Temperature: 5°C ~ 90°C (40°F ~ 194°F) Ambient Temperature: 0°C ~ 60°C (32°F ~ 140°F) Action Time: 3 Minutes Ingress Protection: IP44

#### **Materials**

Body: Brass Disc: Brass Shaft: Stainless Steel Spring: Stainless Steel Sealing: EPDM/PTFE Shell: ABS Plastic

**Dimensions/Weight** 

#### Flow Parameters

#### Differential pressure (MPa) Model/Dimension (mm) Lbs Kg Model Dimension (In) Structure **Kv** value Cv value L н **H1** 1/2" T215FC300 2.2 2.5 T215FC300 66 94 16 0.26 二通 0.20 0.57 <sup>3</sup>/4″ T220FC300 66 94 18 0.66 0.30 T220FC300 二通 3.0 3.5 0.18 T225FC300 22 1″ 68 94 T225FC300 二通 6.9 8.0 0.15 0.93 0.42

#### 4

## M22 Radiator Temperature-Control Valves

**M22** temperature-control valves are energy-saving products that help to build a comfortable living environment. They are installed at the inlet ends of the radiators which control the inflow of the radiators according to the temperature signal received. The room temperature can then be adjusted as wished. The exquisite design of the valves complies with EN215 and the valves can be applied to various radiators.

#### **Product Features**

- Adjustment range can be locked or set at any time.
- Automatic control by the temperature sensor according to ambient temperature.
- Straight-through and right-angle body structures are available.
- The temperature-control valve's head and body are easily connected and can be replaced at any time.
- Externally threaded connector with a loose joint.
- The shell of the temperature-control valve's head is made of enhanced nylon + ABS plastic.
- Brass body, stainless steel shaft, and EPDM seat.
- Comply with EN215.

### **Technical Parameters**

Working Pressure: 1.6 Mpa Medium: Water Ambient Temperature: -20°C ~ 50°C Adjustment Range: 7°C ~ 28°C Body Temperature: 5°C~ 100°C

0	0	0	* ∘	° 1 °	• 2••	o o 3 o c	• 4 •	• 5
2°C			7°C	14°C	16°C	20°C	24°C	28°C

#### kvs Values

Pipe System	Low-Resistance	Single-Pipe System

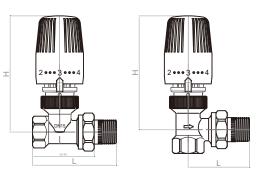
1/2"	1.0	1/2"	2.6
<sup>3</sup> ⁄4"	2.2	3/4"	3.8
1"	2.8	1"	4.6

#### Dimensions

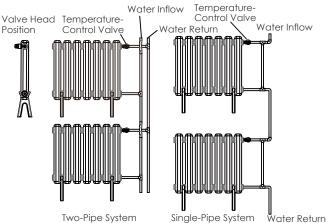
Regular Two-P

Type/Dimension	In	H(mm)	L(mm)
	1/2"	102	79
Straight-Through	3/4"	105	94
	1"	107	94
	1/2"	100	54
Right-Angle	3/4"	102	62
	1"		





### Installation and Application



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### ES and BL Series Motorized Control Valves

Brass threaded motorized control valves of E\$100/E\$150 and BL220/BL350 series apply to HVAC (heating, ventilation, and air conditioning), and building automation systems. Once the motorized control valves receive signals transmitted by computers or other devices, they can then adjust temperature, pressure and control system parameters such as flow rate and liquid level. The valves are mainly used to convey mediums such as cold water, hot water, and ethylene glycol solution.



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#### **Product Features**

- Have the equal percentage flow and the quick opening characteristics.
- The control valve's body has a built-in distribution plate that helps the flow control performance more stable.
- High-precision control offers precise actions.
- Low power consumption and low noise.
- Double O-shaped sealing design.
- Multiple signal controls: 2-point, 3-point, DC 0-10 V, and DC 4-20 mA.
- ABS shell with the advantages of small size and light weight.
- Easy installation and maintenance.

### **Technical Parameters**

Valve Type: Two-way valve, three-way valve

Material: Shell: brass; dall: stainless steel; stem: brass sealing: RPTFE

Working Pressure: 2.0 Mpa

Medium: Cold water, hot water vapor, and the aqueous solution

of ethylene glycol (concentration within 50%) Medium Temperature: -20°C  $\sim$  120°C

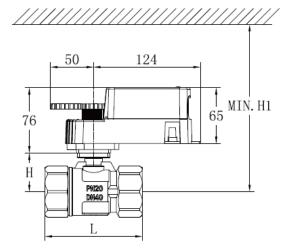
Flow Characteristic: Equal percentage curve,quick opening characteristic

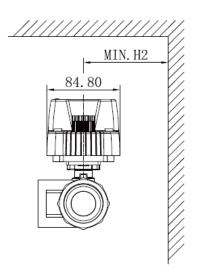
Leakage Volume: Below 0.01% of kv value End Type: BSPT or NPT threaded

#### **Actuator Parameters**

	Rated voltage	AC/D	AC/DC 24V			
	Rated voltage range	AC 19.228.8V	DC 21.626.4 V	AC 1842 76 V		
Electrical	Power consumption	2.2	2W	3.2W		
Parameters	Wire specification	4.	4A	6.4A		
	Terminal specification					
	Torque		4Nm/8Nm			
	Suitable ball valve	4Nm: ½"~ 1-½";8Nm: 1-¼"~2"				
Function	Manual operation	Press the manual button and then manual operation is available.				
Parameters	Rotation angle	М	aximum: 95°, mechanically adjusta	able		
	Running time		70 s (no load)			
	Noise		45dB			
	Appliance class	III (low-vo	oltage and safe)	II (double insulated)		
Working	Ingress protection		IP44			
Environment	Working temperature					
	Humidity testing	95%RH, no condensation				

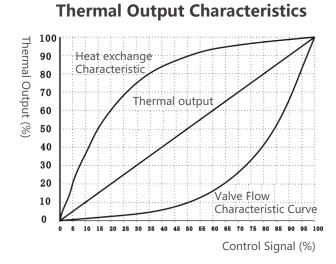
#### **Dimensions**



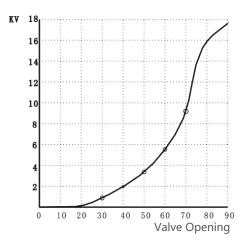


Model/Dimension		In	m	m		mum on space	Model/Dimension			mm		Minim installatio	
wodel/Dimension	mm	In	L	н	H1	H2	Model/Dimension mm		In	L	н	H1	H2
T215ES100/BL220	15	1/2	63	30	180	72	T232ES100/BL220	32	1-1/4	108.5	43.5	190	80
T220ES100/BL220	20	3/4	73	35	185	72	T240ES100/BL220	40	1-1/2	117	48	195	80
T225ES100/BL220	25	1	94	38	188	72	T250ES100/BL220	50	2	139	53	200	80
T315ES150/BL350	15	1/2	63	32	180	72	T332ES150/BL350	32	1-1/4	98.5	43.5	190	80
T320ES150/BL350	20	3/4	66	35	185	72	T340ES150/BL350	40	1-1/2	106	48	195	80
T325ES150/BL350	25	1	94	38	188	72	T350ES150/BL350	50	2	123	53	200	80

### **Flow Characteristics**



#### **Measured Valve Flow Characteristic**

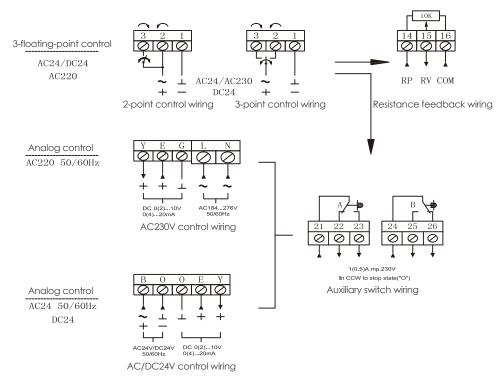


#### **Valve Selection** $\frac{600}{500}$ [m<sup>3</sup>/h] 30 ΔPmax: The maximum allowable differential pressure 200 when the valve is fully opened V<sub>100</sub> | 100 80 under normal working conditions. 60 50 40 30 ΔPmax: The maximum allowable differential pressure Kys 63 under low-noise condition. 20-(A Kys 40 DN-Kvs $\Delta P_{100}$ : Differential pressure when the ball valve Kvs 25 10 Kvs 16 is fully opened. DN50-63 Kvs 10 V100: Rated flow rate when the differential DN50/DN40-40 Kvs 6.3 3 DN40/DN32-25 pressure is at $\Delta P_{100}$ . 2-Kvs 4 DN32/DN25-16 DN15/DN20/DN25-10-0. DN20/DN15-6.3 $\frac{V_{100}}{\sqrt{\frac{\Delta P_{100}}{100}}}$ 0.6 vs= DN20/DN15-4 -0. 0.3 0.2 0.1 20 20 50 60 80 100 $300 \\ 400$ 200 2 ΔP<sub>100</sub> [KPa] Maximum allowable differential pressure $\Delta P$ max:

0.4 Mpa (0.2 Mpa is the differential pressure under low-noise operation) Shutoff pressure differential Δps: 1.4 Mpa

Note: Shutoff differential pressure  $\Delta_{PS}$ : The shut-off differential pressure when the actuator is fully closed with the allowable leakage.

#### **Electrical Wiring Diagrams**



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### UL and AF Series Motorized Control Valves

Stainless-steel threaded motorized control valves of UL330/350 and AF550/572 series apply to HVAC and building automation systems. Once the motorized control valves receive signals transmitted by computers or other devices, they can then adjust temperature, pressure and control system parameters such as flow rate and liquid level. The valves are mainly used to convey mediums such as cold water, hot water, and ethylene glycol solution.



#### **Product Features**

- Adopt the AC synchronous hysteresis clutch motor. When the limited position is reached, the hysteresis clutch disengages the motor's output shaft from the transmission part to protect the motor.
- High-precision control offers precise actions.
- Low power consumption and low noise.
- Have the self-adaptive valve travel function.
- Multiple signal controls: Increment/floating-point signal, voltage 0 10 V, current 4 20 mA.
- ABS shell and cast-aluminum bracket with the advantages of small size and light weight.
- Easy installation and maintenance.

#### **Technical Parameters**

Valve Type: Two-way valve, three-way valve
Material: Shell:stainless steel; disc/stem: stainless steel; sealing: PTFE
Working Pressure: 2.5 Mpa
Medium: Cold water, hot water, vapor, and the aqueous solution of ethylene glycol (concentration within 50%)
Medium Temperature: 0°C ~ 110°C/0°C ~ 150°C with a heat dissipation device
Flow Characteristic: Equal percent curve/equivalent linear
Leakage Volume: Below 0.02% of Kv Value
End Type: BSPT or NPT threaded

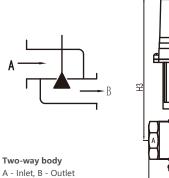
#### **Actuator Parameters**

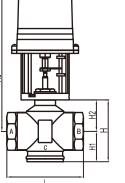
Item	Performance parameters				
Model	UL series (incremental control model) AF series (proportional adjustment model)				
Power Supply	AC 24 VAC/220 VAC	± 10%, 50 Hz/60 Hz			
Force	500N,	1000N			
Power Consumption	< 5	5VA			
Operating Speed	0.20mm/	/s (50Hz)			
Control Signal	Increment/floating-point signal	0 ~ 10VDC or 4 ~ 20 mA			
Working Temperature	-10°C ~ 50°C	(50°F ~ 120°F)			
Humidity	10% ~ 90% RH,	no condensation			
Maximum Travel	25 mm				
Actuator Weight	2.4Lbs/1.1 kg ;	2.7Lbs//1.2 kg			
Materials of Main Parts	Fire-retardant ABS plastic shell	and die-cast aluminum bracket			
Waterproof Rating	IP	54			
Power-Off State	Stay in the cu	rrent position			
Valve Opening Before Delivery	Middle	position			
Manual Function	Have manu	al operation			
Valve Opening Indication	Have valve ope	Have valve opening indication			
Insulation Resistance	Resistance between the power supply terminal and the shell: $\geq$ 5	50 MΩ; that between the input terminal and the shell: $\geq$ 20 MΩ.			
Dielectric Strength		Dielectric strength between the power supply terminal and the shell: 500 V, 50 Hz for AC24V equipment; 1,500 V, 50 Hz for AC220 equipment; that between the input terminal and the shell: 500 V, 50 Hz			

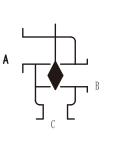


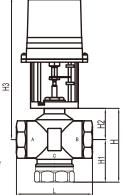
#### **Dimensions**

In		1/2	3/4	1	1 1/4	1 1/2	2
	mm	15	20	25	32	40	50
	L	85	85	90	105	120	140
н	Two-way valve	81	81	85	95	111	123
п	Three-way valve	100	100	106	113	131	156
114	Two-way valve	41	41	39	43	51	56
H1	Three-way valve	60	60	60	61	70.5	88.5
H2	Two-way valve/three-way valve	40	40	46	52	60	67
H3	Two-way valve/three-way valve	246	246	252	258	266	273









Three-way merging/diverging integrated valve During merging: A/C - Inlet, B - Outlet During diverging: B - Inlet, A/C - Outlet

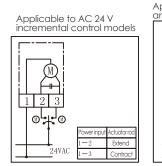
**Note:** Please note that the flow direction of the medium in pipelines is the same as the direction of the valve body's arrow during design and installation.

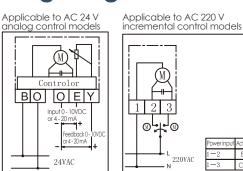
#### Kv (Flow Rate Value), Travel, and Close-Off Differential Pressure

Dimension (In)			Closed-off differential press	ure (MPa) two-way/three-way
Dimension (In)	Kv value (m³/h)	Travel (mm)	500N	1000N
1/2	3	13	0.35	0.70
3/4	5	13	0.35	0.70
1	8	13	0.30	0.65
1¼	13	13	0.23	0.60
11/2	21	19	0.19	0.47
2	35	19	0.15	0.30

Note: The closed-off differential pressure listed in this table refers to the calibration value when the medium is water at 25°C.

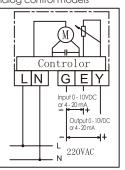
### **Electrical Wiring Diagrams**



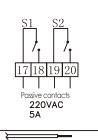


Applicable to AC 220 V analog control models

Extend



Applicable to all actuator models with passive contacts



Wire: Max. 2.0 mm<sup>2</sup>

10

### VF and NL Series Motorized Control Valves

Ductile iron motorized control valves of VF730/750 and NL800/870 series apply to HVAC and building automation systems. Once the motorized control valves receive signals transmitted by computers or other devices, they can then adjust temperature, pressure and control system parameters such as flow rate and liquid level. The valves are mainly used to convey mediums such as cold water, hot water, and ethylene glycol solution.



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#### **Product Features**

- Adopt the AC synchronous hysteresis clutch motor. When the limited position is reached, the hysteresis clutch disengages the motor's output shaft from the transmission part to protect the motor.
- High-precision control offers precise actions.
- Low power consumption and low noise.
- Have the self-adaptive valve travel function.
- Multiple signal controls: Increment/floating-point signal, voltage 0 10 V, current 4 20 mA.
- ABS shell and die-cast aluminum bracket with the advantages of small size and light weight.
- Easy installation and maintenance.

#### **Technical Parameters**

Valve Type: Two-way Valve/three-way Valve Material: Shell:ductile iron; disc/stem: stainless steel; Sealing: PTFE

Working Pressure: 1.6 Mpa/2.5 Mpa

Medium: cold water, hot water, and the aqueous solution of ethylene glycol (concentration within 50%)

Medium Temperature: -10°C ~ 120°C/-10°C ~ 180°C with a heat sink Flow Characteristic: Equal percentage curve/equivalent linear Leakage Volume: Below 0.02% of kv value End Type: Flanges (ANSI B16.1/16.5 or EN1092)

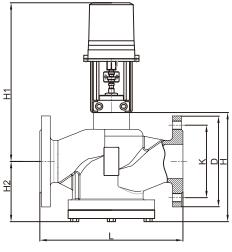
#### **Actuator Parameters**

Item	Performance parameters			
Model	VF series (incremental control model)	NL series (proportional adjustment model)		
Power Supply	AC 24 VAC/220 VAC	± 10%, 50 Hz/60 Hz		
Motor	AC synchro	nous motor		
Force	1000 N, 150	00 N, 3000 N		
Power Consumption	6 -18	3 VA		
Operating Speed	1¼″ -2″ 0.20 mm/s (1000 N) 2½″ 0.25 m	m/s (1500 N) 4" - 8" 0.32 mm/s (3000 N)		
Control Signal	Increment/floating-point signal	0 ~ 10VDC or 4 ~ 20 mA		
Working Temperature	-10°C ~ 50°C	(50°F ~ 120°F)		
Humidity	10% ~ 90% RH, no condensation			
Maximum Travel	1000N 22mm; 1500N 22mm; 3000N 5	5mm; 6500N 60mm; 10000N 100mm		
Actuator Weight	1000N 2.7Lbs/1.2 kg; 1500N 3.3	Lbs/1.5 kg ; 3000N 7.7Lbs/3.5 kg		
Materials of Main Parts	Fire-retardant ABS plastic shell	and die-cast aluminum bracket		
Waterproof Rating	IP	54		
Valve Opening Before Delivery	Middle	position		
Manual Function	Have manu	al operation		
Valve Opening Indication	Have valve ope	ening indication		
Insulation Resistance	Resistance between the power supply terminal and the sh	ell: $\geq$ 50 MΩ; that between the input terminal and the shell: $\geq$ 20 MΩ.		
Dielectric Strength	Dielectric strength between the power supply terminal and the shell: 500 V, 50 Hz for AC24V equipment; 1,500 V, 50 Hz for AC220 equipment; that between the input terminal and the shell: 500 V, 50 Hz			

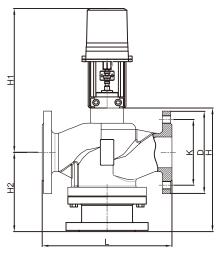


#### **Dimensions**

In		1 1/2	2	2 1/2	3	4	5	6	8	10
mm		40	50	65	80	100	125	150	200	250
L		200	230	290	310	350	400	480	495	622
Н	Two-way valve	165	175	215	235	265	295	320	405	489
	Three-way valve	242	259	273	291	323	363	395	492	643
H1	Two-way valve	329	332	333	344	421	437	451	475	938
	Three-way valve	329	332	333	344	421	437	451	475	938
H2	Two-way valve	79	86	125	134	154	168	179	240	241
	Three-way valve	156	170	183	190	212	236	254	327	395
D		150	165	185	200	220	250	295	340	405
К		110	125	145	160	180	210	240	295	355
Number of flange holes and number of bolts		4-M16	4-M16	4-M16	8-M16	8-M16	8-M16	8-M20	12-M20	12-M24

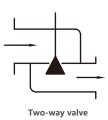


Motorized two-way control valve



Motorized three-way control valve

#### **Flow Direction of Medium**







**Note:** Please note that the flow direction of the medium in pipelines is the same as the direction of the valve body's arrow during design and installation.

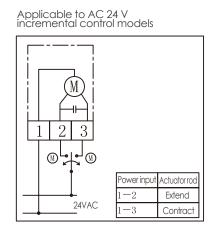


#### Kv (Flow Rate Value) and Close-Off Differential Pressure

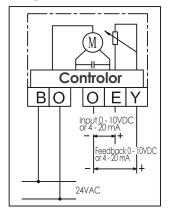
In	11/2	2	21/2	3	4	5	6	8	10
mm	40	50	65	80	100	125	150	200	250
Kv value (m <sup>3</sup> /h)	21	35	52	88	140	200	280	410	630
Close-off differential pressure (MPa)	0.47	0.30	0.40	0.30	0.35	1.0	1.0	1.0	0.2
Force	1000N		1500N		3000N				6500N

Note: The closed-off pressure differential listed in this table refers to the calibration value when the medium is water at 25°C.

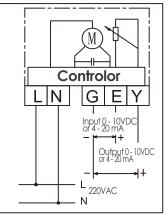
### **Electrical Wiring Diagrams**

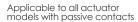


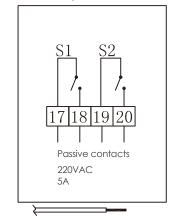
Applicable to AC 24 V analog control models



Applicable to AC 220 V incremental control models Applicable to AC 220 V analog control models







Wire: Max. 2.0 mm<sup>2</sup>

Note: The power switch must be closed during the normal operation of the actuator, and it is strictly forbidden to run the actuator when it is not connected to the valve body.





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\* For any data errors or questions, please contact the manufacturer. \* TALOAR reserves the right to change drawings, content, modifying or data updating herein without further notice.