



ELECTRIL ACTUATOR



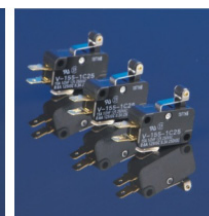
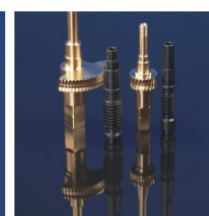
ENTERPRISE BRIEF INTRODUCTION

POV VALVE COMPANY, a professional manufacturer of Automatic control valve established in the year 2003, The company is Automatic control valve factory 2headquartered in Pudong, Shanghai, and its factory is located in Wuhu Industrial Development Zone, Anhui Province, China. After 15 years of development, we have extensive experience in the production and processing of Automatic control valve. Our Automatic control valve stocks have always 2,800 units , which make us to offer the fastest delivery shipment.

All our Automatic control valve molds are designed and manufactured by ourselves. We have a professional technical team and R&D team. 15% of our annual business income is used for new product R&D and design. We can provide you with OEM, ODM services. The main products are:Electric valve, pneumatic valve, pneumatic diaphragm valve, pneumatic angle seat valve and other control valves for medium flow cutoff, flow adjustment.

POV VALVE products have been sold to 80 countries and regions in the world, and more and more countries and regions are expected to choose POV VALVE as their sole distributor at the local market. POV VALVE hopes to establish cooperation with more overseas customers.



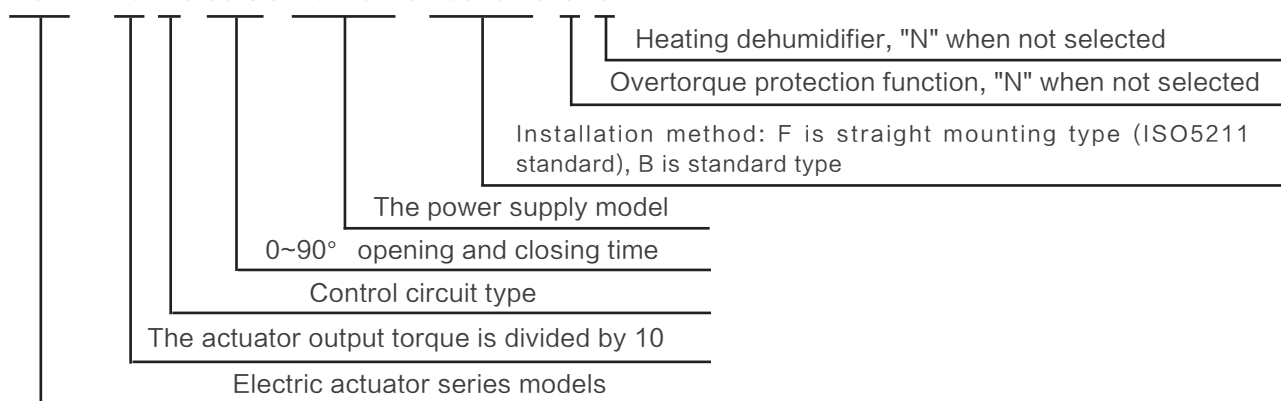


PRODUCT FEATURES

1. Powerful functions: Intelligent regulation type, Proportional type, Switch type、All kinds of signal output;
2. Small and light: The volume and weight are only about 35% of those of traditional products;
3. Beautiful and generous: Aluminum alloy die-cast shell, Exquisite smooth, and can reduce electromagnetic interference;
4. Reliable performance: Bearings, electrical components and other key components imported famous products;
5. Elevation protection: IP67 high standard protection grade (tested by Shanghai instrument automatic control system inspection and testing institute);
6. Precision wear-resisting: Turbine output shaft integrated special copper alloy forging, high strength, good wear resistance;
7. Minimum return difference: The integrated structure avoids the clearance of key connection and high transmission accuracy;
8. Security guarantees: It has passed 1500v withstand voltage test, f-class insulated motor, CE certification and safety guarantee;
9. Simple matching: Single – phase power, simple external line, can do 380V, DC power;
10. Easy to use: No oil, no point inspection, waterproof and rust proof, installation at any Angle;
11. Multiple speeds: Full time: 9 seconds, 13 seconds, 15 seconds, 30 seconds, 50 seconds, 100 seconds, 150 seconds (set before the factory)
12. Intelligent numerical control: Intelligent control module integrated in the electric actuator body, no need for external locator, digital setting, digital setting, highly accurate, self-diagnosis, one machine multi-function.

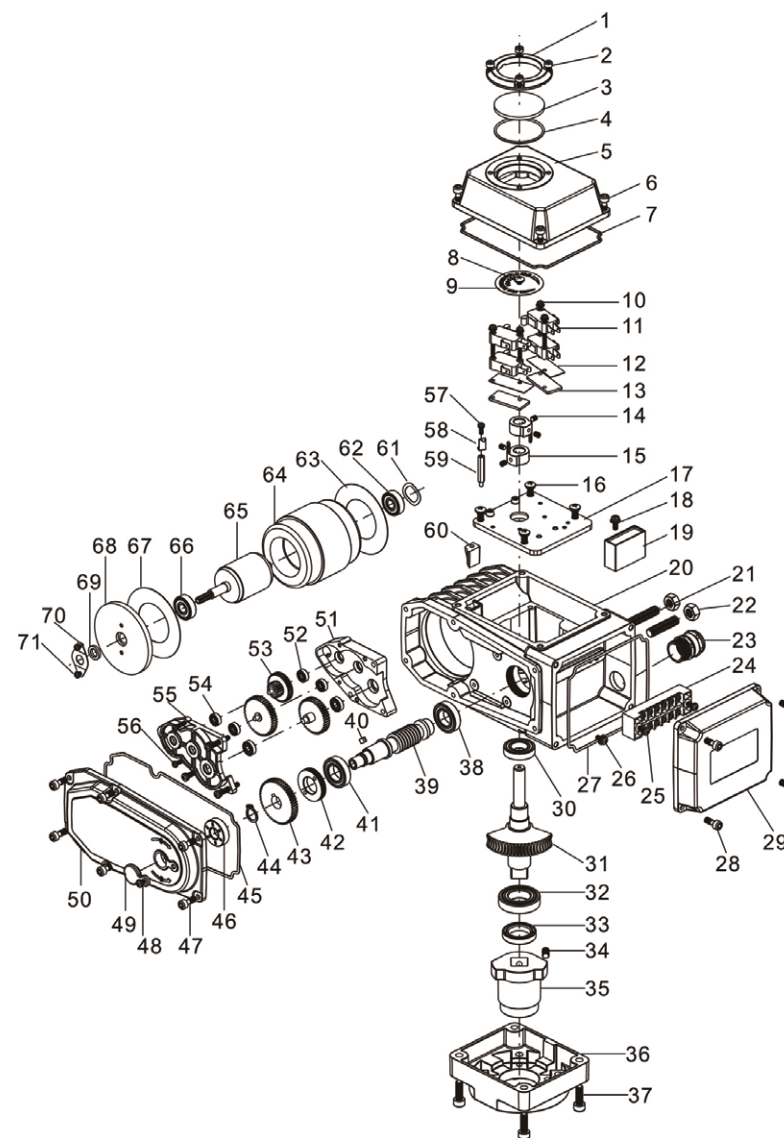
MODEL ESTABLISHMENT

POE – 10 A / 30 S / AC220V / F05-07 / G C



PARTS

NO.	Quantity	Part name	NO.	Quantity	Part name
1	1	Indicates a window cover	37	4	Hexagon socket cap screws
2	4	Hexagon socket cap screws	38	1	Bearing
3	1	Sight glass	39	1	Turbine
4	1	O-rings	40	1	Flat key
5	1	Denso cover	41	1	Bearing
6	4	Detachable hexagon socket screw	42	1	Fasten the screw nut
7	1	O-rings	43	1	Worm gear
8	1	Sight glass	44	1	Retaining ring for shaft
9	1	Dial	45	1	O-rings
10	4	Sight glass(module)	46	1	Grease seal
11	4	Travel switch	47	6	Detachable hexagon socket screw
12	2	Insulation plate	48	1	Sight glass(module)
13	2	insulating padding plate	49	1	Dust plug
14	4	Hexagon socket set screw	50	1	Denso-front cover
15	2	Travel block	51	1	Denso-reduction box1
16	4	Cross screw(module)	52	3	Bearing
17	1	Electrical-inner cover	53	3	Denso-reduction gear assembly
18	1	Cross screw(module)	54	3	Bearing
19	1	Capacitor	55	1	Denso-reduction box2
20	1	Battery – case	56	5	Cross screw(module)
21	2	Limit bolt	57	1	Cross screw(module)
22	2	External and internal angle nut	58	1	Dial pointer
23	1	Waterproof cable joint	59	1	Pointer cup
24	1	Connection terminal	60	1	Rubber plug
25	2	Cross screw	61	1	Wave spring washer
26	1	Cross screw	62	1	Bearing
27	1	O-rings	63	1	Insulation board
28	4	Detachable hexagon socket screw	64	1	Motor stator
29	1	Electric-(incoming cover)	65	1	Motor rotor
30	1	Bearing	66	1	Bearing
31	1	Turbine	67	1	Insulation board
32	1	Bearing	68	1	Motor cover
33	1	Grease seal	69	1	Grease seal
34	1	Set screw, hex socket	70	1	Oil seal bezel
35	1	Connecting bearing(ISO5211)	71	2	Cross screw(module)
36	1	Mounting base(ISO5211)			



Note: the structure diagram is 10B/30S/AC220V/F05~07/NN
(No electric shock type)

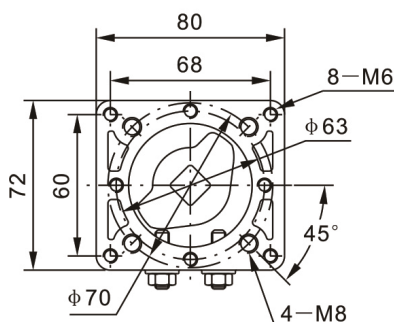
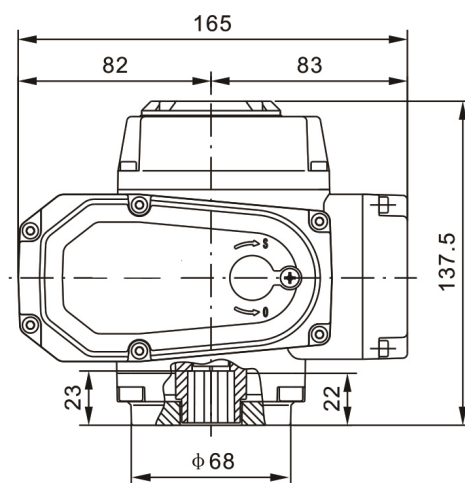
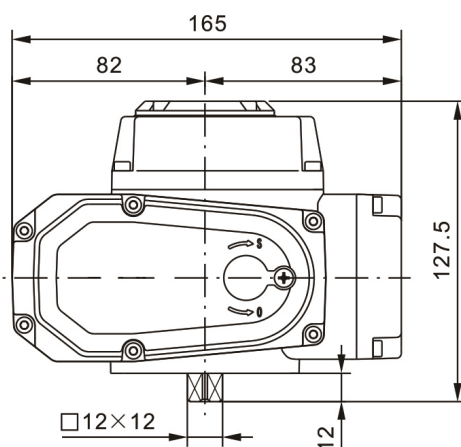
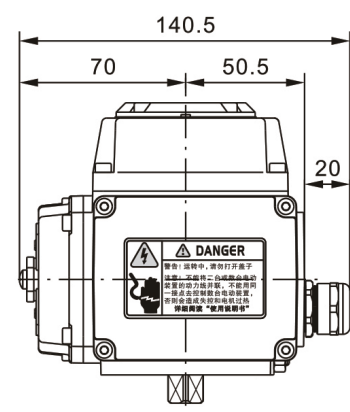
POE-05 OVERALL DIMENSIONS AND PERFORMANCE PARAMETERS



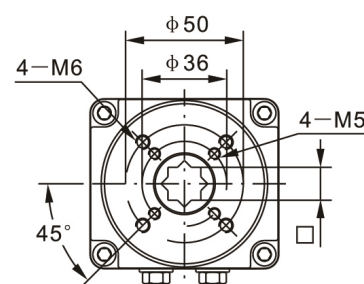
Model Power Performance	POE-05						
	DC12V	DC24V	DC220V	AC24V	AC110V	AC380V	AC220V
Motor Power	20W			10W			
Rated current	3.8A	2A	0.21A	2.2A	0.48A	0.15A	0.24A
Output torque	30Nm/50Nm			15Nm/30Nm/50Nm			
Operation hours	6S/10S			10S/20S/30S			
Control circuit	A type、B type、C type、D type、E type、F type、G type、H						
Swivel angle	0~360° adjustable						
Total Weight	2.4Kg						
Insulation resistance	100MΩ/300VDC			100MΩ/500VDC			
Withstand voltage rating	500VAC/1 minute			1500VAC/1 minute			
Protection class	IP67						
Ambient temperature	-25° ~+60° (Other temperatures can be customized)						
Installation angle	360° Installation at any angle						
Shell material	Aluminum alloy precision die casting						
Optional functions	Heating dehumidifier						

Standard

Direct mount(ISO5211)



Direct mounting parameters(ISO5211)	
Inner heart	□ 9x9 □ 11x11 □ 14x14
Flange	F03 F05
Stem	Height ≤ 20mm



POE-10 OVERALL DIMENSIONS AND PERFORMANCE PARAMETERS



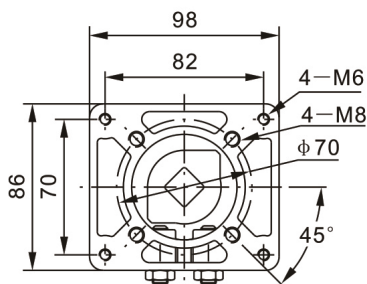
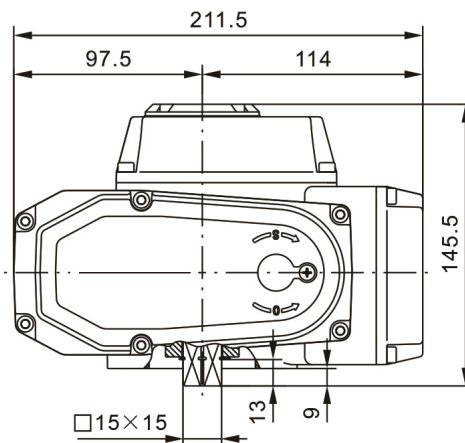
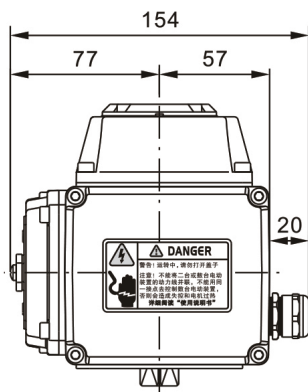
Standard



Direct mount(ISO5211)

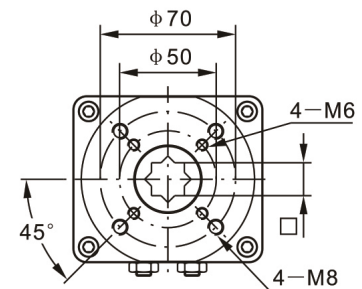
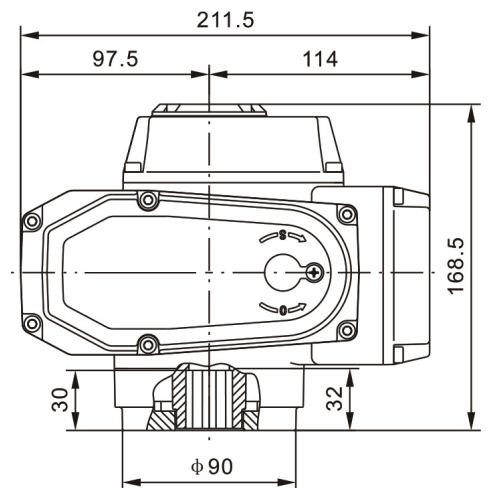
<div>Model</div> <div>Power</div> <div>Performance</div>	POE-10						
	DC12V	DC24V	DC220V	AC24V	AC110V	AC380V	AC220V
Motor Power	40W			23W			
Rated current	4.8A	2.4A	0.32A	3A	0.64A	0.19A	0.32A
Output torque	100Nm			50Nm/60Nm/100Nm			
Operation hours	10S			13S/15S/20S/30S			
Control circuit	A type、B type、C type、D type、E type、F type、G type、H						
Swivel angle	0~90° adjustable						
Total Weight	4.2Kg						
Insulation resistance	100MΩ/300VDC			100MΩ/500VDC			
Withstand voltage rating	500VAC/1 minute			1500VAC/1 minute			
Protection class	IP67						
Ambient temperature	-25° ~+60° (Other temperatures can be customized)						
Installation angle	360° Installation at any angle						
Shell material	Aluminum alloy precision die casting						
Optional functions	Heating dehumidifier						

Standard



Direct mounting parameters(ISO5211)	
Inner heart	□ 9x9 □ 11x11 □ 14x14 □ 17x17
Flange	F05 F07
Stem	Height ≤ 28mm

Direct mount(ISO5211)



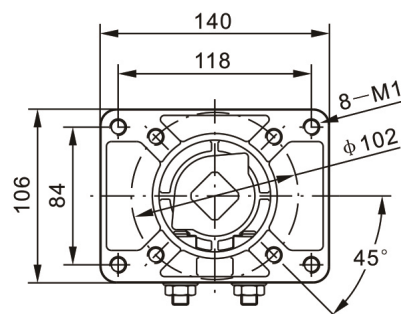
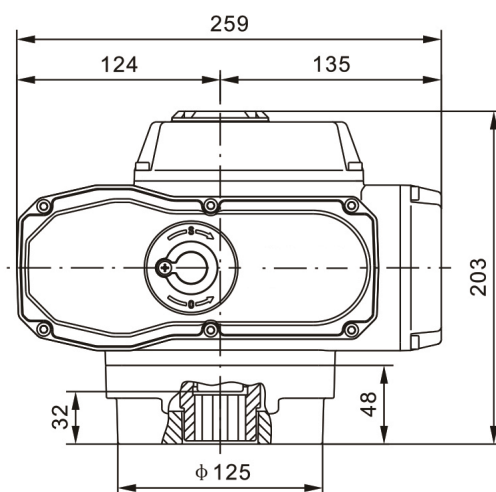
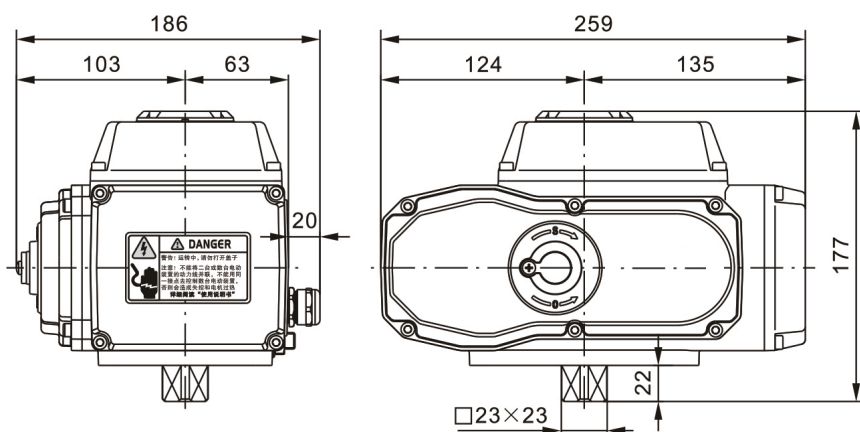
POE-20/40 OVERALL DIMENSIONS AND PERFORMANCE PARAMETERS



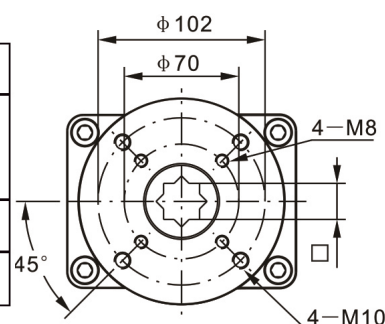
Model Power Performance	POE-20/40					
	DC24V	DC220V	AC24V	AC110V	AC380V	AC220V
Motor Power	40W/60W					
Rated current	8A	0.35A	5A	0.9A	0.25A	0.48A
Output torque	200Nm		200Nm/400Nm			
Operation hours	10S		15S/30S/60S			
Control circuit	A type、B type、C type、D type、E type、F type、G type、H					
Swivel angle	0~90° adjustable					
Total Weight	7.2Kg					
Insulation resistance	100MΩ/300VDC		100MΩ/500VDC			
Withstand voltage rating	500VAC/1 minute		1500VAC/1 minute			
Protection class	IP67					
Ambient temperature	-25° ~+60° (Other temperatures can be customized)					
Installation angle	360° Installation at any angle					
Shell material	Aluminum alloy precision die casting					
Optional functions	Heating dehumidifier					

Standard

Direct mount(ISO5211)



Direct mounting parameters(ISO5211)		
Inner heart	□ 14x14	□ 22x22
	□ 17x17	□ 27x27
Flange	F07	F10
Stem	Height ≤ 30mm	

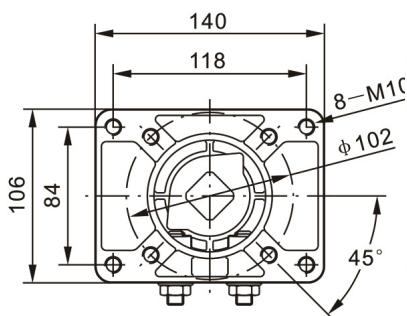
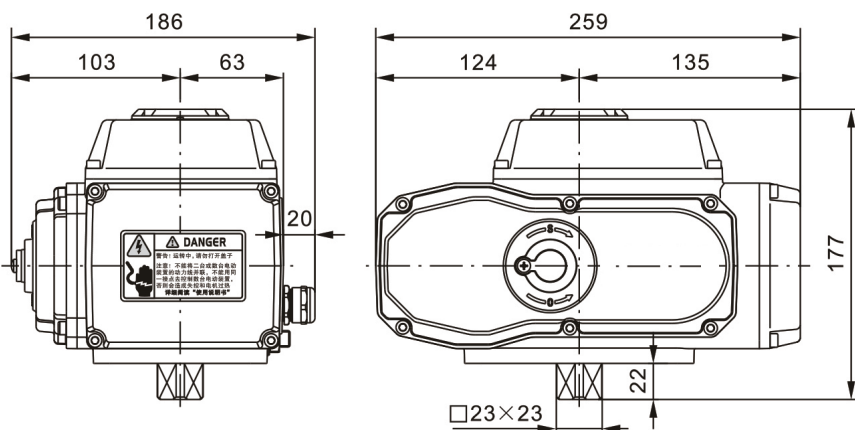


POE-50/60 OVERALL DIMENSIONS AND PERFORMANCE PARAMETERS



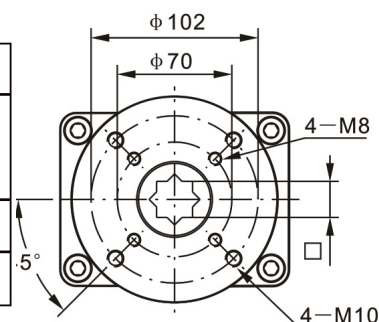
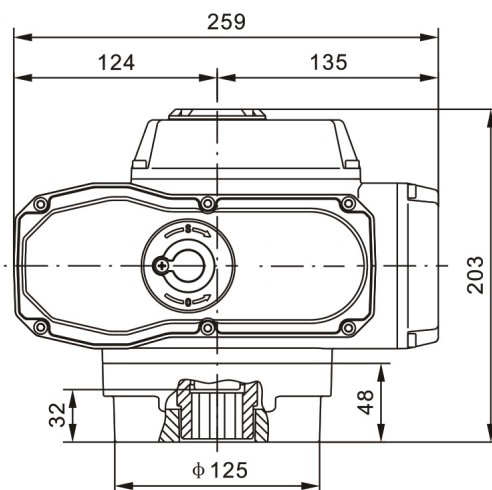
Model Power Performance	POE-50/60					
	DC24V	DC220V	AC24V	AC110V	AC380V	AC220V
Motor Power	90W					
Rated current	7A	0.9A	8A	2A	0.45A	0.92A
Output torque	500Nm/600Nm					
Operation hours	15S/30S/60S					
Control circuit	A type、B type、C type、D type、E type、F type、G type、H					
Swivel angle	90° adjustable					
Total Weight	8Kg					
Insulation resistance	100MΩ/300VDC		100MΩ/500VDC			
Withstand voltage rating	500VAC/1 minute		1500VAC/1 minute			
Protection class	IP67					
Ambient temperature	-25° ~+60° (Other temperatures can be customized)					
Installation angle	360° Installation at any angle					
Shell material	Aluminum alloy precision die casting					
Optional functions	Over-torque protection,Heating dehumidifier					

Standard



Direct mounting parameters(ISO5211)		
Inner heart	$\square 14 \times 14$ $\square 17 \times 17$	$\square 22 \times 22$ $\square 27 \times 27$
Flange	F07	F10
Stem	Height $\leq 30\text{mm}$	

Direct mount(ISO5211)



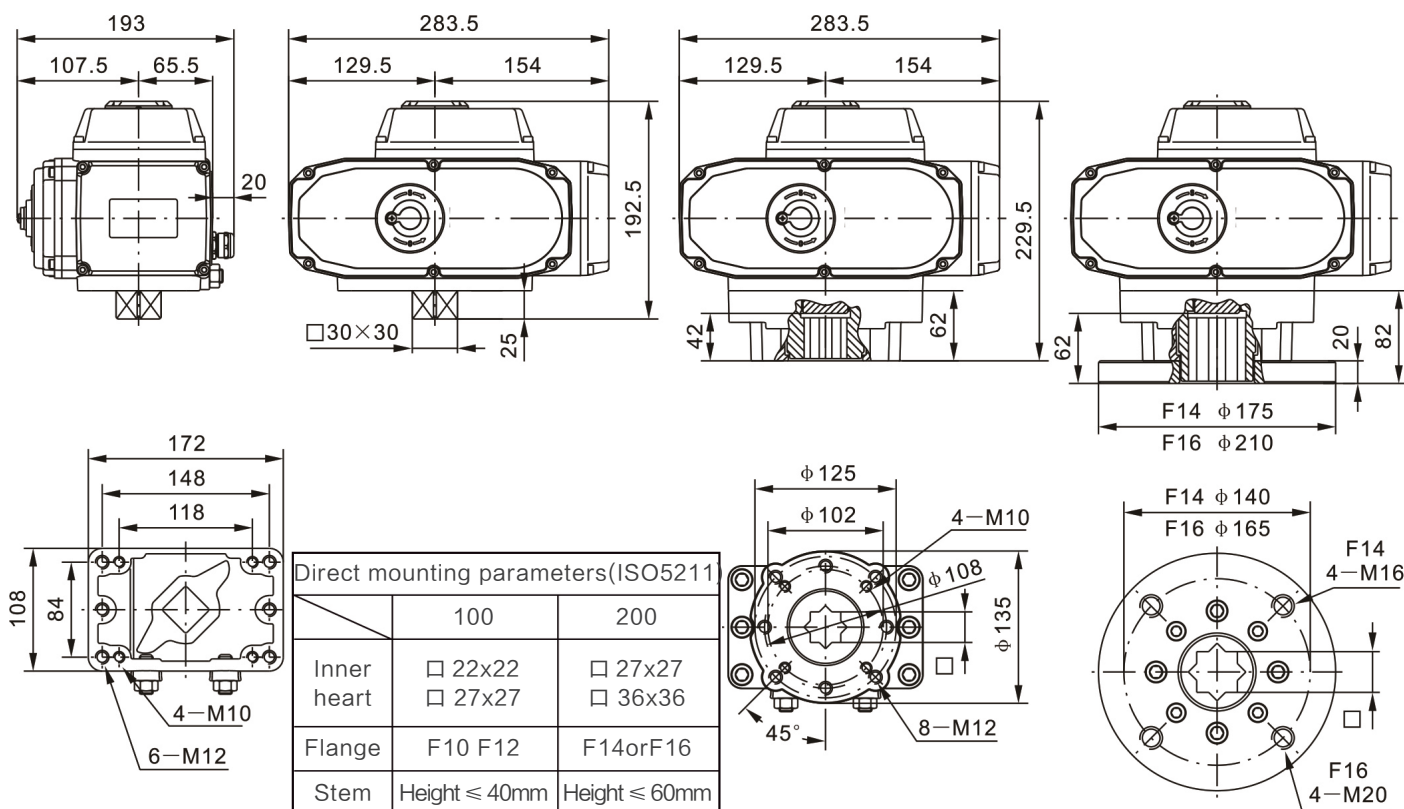
POE-100/200 OVERALL DIMENSIONS AND PERFORMANCE PARAMETERS



Model Power Performance	POE-100				POE-200			
	AC24V	AC110V	AC380V	AC220V	AC24V	AC110V	AC380V	AC220V
Motor Power	100W				200W			
Rated current	9A	2.2A	0.48A	1.2A	9A	2.2A	0.48A	1.2A
Output torque	300Nm/800Nm/1000Nm				2000Nm			
Operation hours	15S/30S/50S				100S			
Control circuit	A type、B type、C type、D type、E type、F type、G type、H							
Swivel angle	0~90° adjustable							
Total Weight	11.5Kg				12.1Kg			
Insulation resistance	100MΩ/500VDC							
Withstand voltage rating	1500VAC/1 minute							
Protection class	IP67							
Ambient temperature	-25° ~+60° (Other temperatures can be customized)							
Installation angle	360° Installation at any angle							
Shell material	Aluminum alloy precision die casting							
Optional functions	Heating dehumidifier							

Standard

Direct mount(ISO5211)

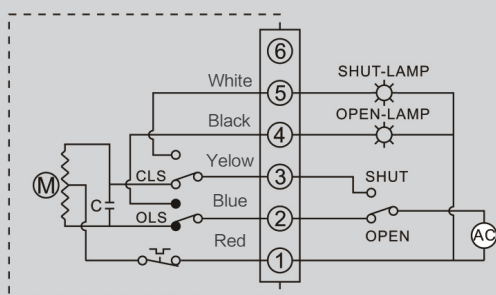


INTELLIGENT ADJUSTMENT (E TYPE) PERFORMANCE PARAMETERS

Model Power Parameter Performance	POE-05E	POE-10E	POE-20E	POE-40E	POE-50E	POE-60E	POE-100E	POE-200E
	DC12V、DC24V、DC220V、AC24V、AC110V、AC220V、AC380V； 50/60Hz							
Motor Power	10W	23W	40W	40W	90W	90W	100W	100W
Rated current	0.24A (AC220V)	0.32A (AC220V)	0.48A (AC220V)	0.48A (AC220V)	0.92A (AC220V)	0.92A (AC220V)	1.0A (AC220V)	1.2A (AC220V)
Output torque	50Nm	100Nm	200Nm	400Nm	500Nm	600Nm	1000Nm	2000Nm
Operation time	30S	30S	30S	30S	30S	30S	50S	100S
Swivel angle	0~90°	0~90°	0~90°	0~90°	0~90°	0~90°	0~90°	0~90°
Total Weight	2.4Kg	4.2Kg	7.2Kg	7.2Kg	8Kg	8Kg	11.5Kg	12.1Kg
Input signal	4~20mADC、1~5VDC、0~10VDC(Others can be selected before delivery)							
Output signal	4~20mADC(Others can be selected before delivery)							
Basic error	Not more than ± 1%							
Return difference	Less than 0.3%							
Dead zone	0.4%~1.5%Adjustable							
Damping characteristic	0							
Mechanism repeatability error	0							
Insulation resistance	DC24V:100MΩ/300VDC			100MΩ/500VDC				
Withstand voltage rating	DC24V:500VAC/1 minute			1500VAC/1 minute				
Protection class	IP67							
Ambient temperature	-25° ~+60° (Other temperatures can be customized)							
Installation angle	360 ° arbitrary installation							
Shell material	Aluminum alloy precision die casting							
Optional functions	Over-torque protection, heating dehumidifier, passive contact type							

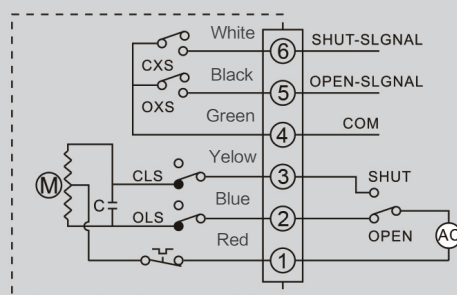
CONTROL CIRCUIT

Ordinary switch type (A type)



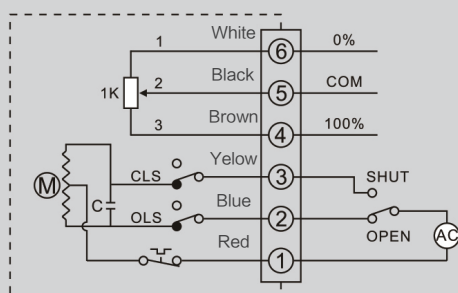
The valve can be opened or closed through the switch circuit, and a set of active position models indicating that the valve is fully open and fully closed are output.

Passive contact type (B type)



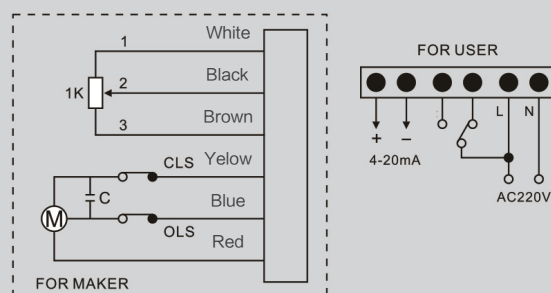
Realize valve opening or closing operation through switch circuit, and output a set of passive position models indicating that the valve is fully open and fully closed

Opening signal type (C type)



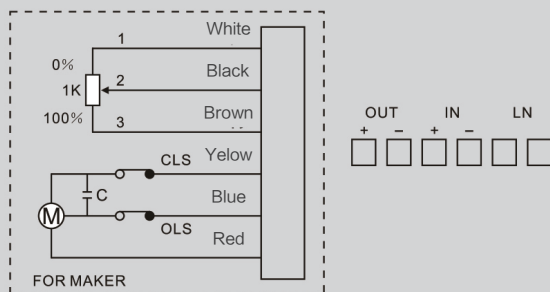
Open or close the valve through the switch circuit, and output a resistance signal corresponding to the opening position

With position transmitter (D type)



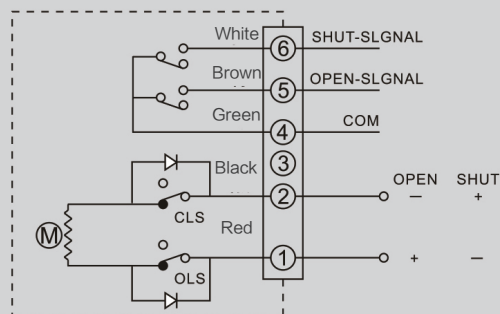
Realize valve opening or closing operation through switch circuit, and output current signal corresponding to valve opening and closing angle at the same time

Intelligent adjustment type (E type)



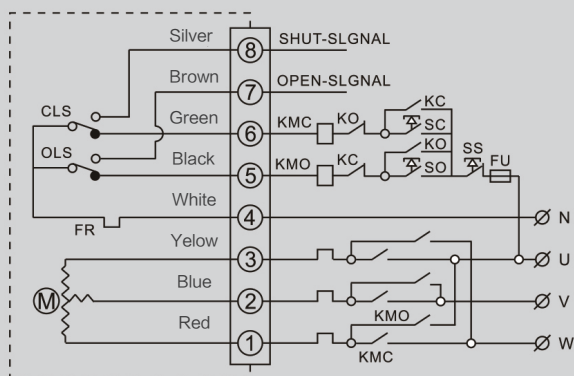
Control the opening and closing angle of the valve through the standard signal input by an external computer or industrial instrument, and synchronously output the corresponding standard signal

DC switch type (F type)



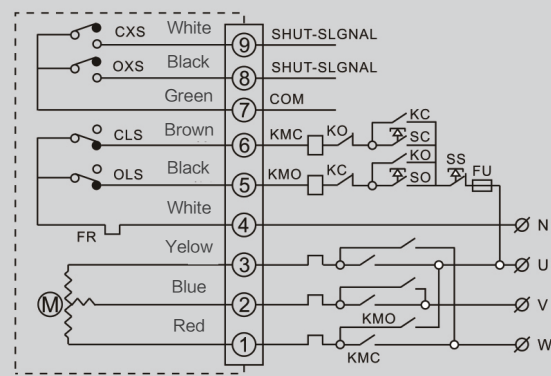
By switching the positive and negative poles of the external DC power supply, the valve can be "opened" and "closed", and a set of passive contact signals indicating that the valve is fully open or closed can be output

Three-phase switch type (G type)



The valve is opened or closed through the switch circuit, and a set of active position signals indicating the valve is fully open and fully closed is output.

Three-phase passive contact type (H type)



Realize valve opening or closing operation through switch circuit, and output a set of passive position signals indicating that the valve is fully open and fully closed

Note: The dashed line in the control circuit is the internal circuit of the electric device. The parts outside the dashed line are only for reference when the user is wiring.

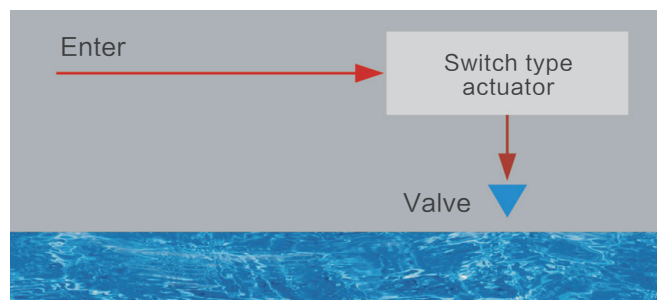
CONFIGURATION AND FUNCTION

SWITCH TYPE ACTUATOR

A / B / G / H CONTROL CIRCUIT

The switch type only has the fully open and fully closed extreme positions. After receiving the appropriate instruction, the actuator drives the door to the fully open and fully closed positions.

S2 working system, continuous running time does not exceed 15 minutes.

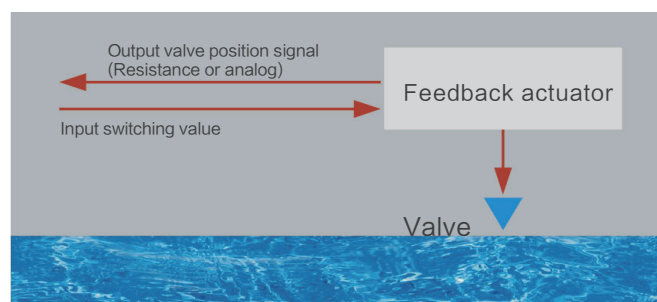


FEEDBACK ACTUATOR

C/D CONTROL CIRCUIT

When the actuator is driving the valve, it simultaneously feeds back the valve position signal to the central control system, the C-type feedback resistance valve position signal, and the D-type analog valve position signal.

Using S2 short-time working system, continuous running time does not exceed 15 minutes.

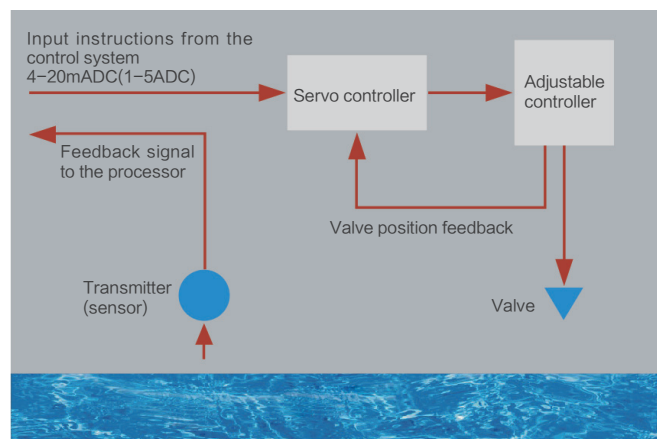


INTELLIGENT REGULATING ACTUATOR

E-TYPE CONTROL CIRCUIT

The intelligent module is placed inside the actuator, and according to the changes of the controlled variables (flow, pressure, temperature, liquid level) in the pipeline, it accepts the instructions of the central control system to drive the valve to the appropriate opening position.

Using S4 intermittent working system, the working frequency can reach 1200 times per hour.

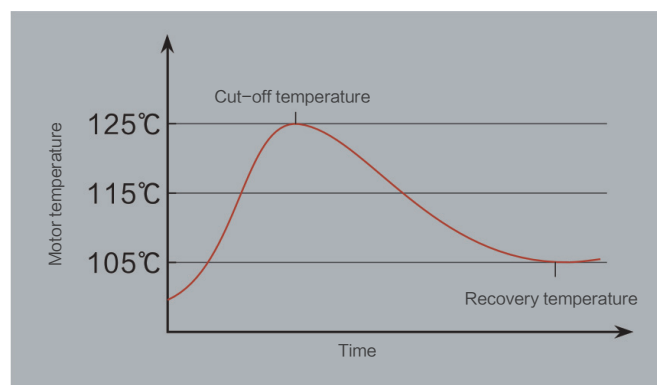


MOTOR

Due to the working characteristics of the valve, the actuator of the valve is required to have full-load starting capability in the open, closed, and any position in the middle. This requires the motor of the actuator to have a high starting torque. At the same time, due to the adjustment of flow (opening), the motor must also have a small moment of inertia. POE series electric actuator motors are specially designed to meet these requirements.

When the actuator is blocked, the temperature of the motor will rise rapidly. When the motor temperature rises

to 125 ° C, the PTC overheat protector buried in the motor windings will cut off the electrical appliances, thereby protecting the motor and the control system. When the motor temperature drops to 90 ~ 105 ° C , the circuit will resume.



CONFIGURATION AND FUNCTION

HIGH-PERFORMANCE INTELLIGENT MODULE GROUND

POE's unique circuit design, all imported industrial-grade electronic components, uses an intelligent signal acquisition and control module with an industrial single-chip microcomputer as the core, and integrates signal acquisition, processing, feedback and control. Adopt advanced hybrid integrated circuit, good stability, control accuracy up to 1/1000.

Small size, easy installation and simple operation.



MANUAL OPERATION

Each POE series actuator comes with a handle when it leaves the factory. If there is a power failure in the field control, you can directly insert the handle into the manual operation port to drive the valve. When not in use, you can remove the handle and store it separately; Fasten with screws.

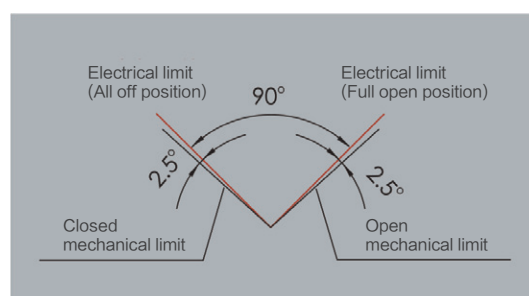


ELECTRICAL AND MECHANICAL LIMIT FUNCTIONS

Electrical stroke limit function: When the actuator reaches the fully open and fully closed limit positions, the built-in electrical limit switch will cut off the circuit to protect the actuator.

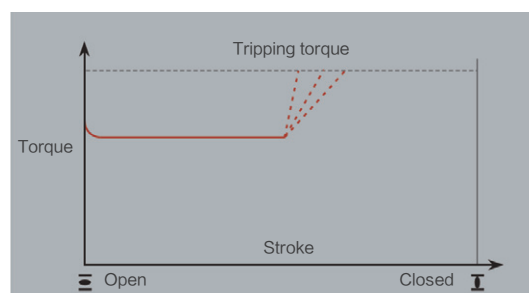
Output shaft mechanical limit function: When the electrical stroke limit function fails, the output shaft of the actuator will be locked by the mechanical limit device, thereby protecting the valve from damage.

The picture shows the position relationship between electrical limit and mechanical limit.



OVER-TORQUE PROTECTION FUNCTION (OPTIONAL)

When the valve is stuck due to impurities, foreign matter in the pipeline or other reasons during the working process (intermediate position), the output torque of the actuator will increase rapidly. When the set value (tripping torque) is reached, the torque switch will The circuit is opened, protecting the valve and actuator from damage.



HEATING DEHUMIDIFICATION FUNCTION (OPTIONAL)

The electric cavity of the POE series actuator can be equipped with PTC electric heating elements, which are used in places with large temperature differences between day and night and in humid places to prevent damage to electrical components caused by condensation. The heater works continuously, so it is charged, even when the actuator is not running.

ELECTRIC VALVE SELECTION CONFIGURATION TABLE

Model	Standard	Optional	Power supply	Soft seal butterfly valve	Hard seal butterfly valve	Ventilation butterfly valve	Ball valve
	Time / torque	Time / torque		≤ 1.0Mpa	≤ 1.6Mpa	≤ 0.1Mpa	≤ 1.6Mpa
POE-05	30S/50N.m	10S/15N.m	AC24V AC110V AC220V AC380V DC12V DC24V DC220V	DN25~DN65	DN40	DN50~DN80	DN15~DN32
		20S/30N.m					
POE-10	30S/100N.m	15S/50N.m	AC24V AC110V AC220V AC380V DC12V DC24V DC220V	DN80~DN125	DN40~DN65	DN100~DN200	DN40~DN50
		20S/60N.m					
POE-20	30S/100N.m	9S/80N.m	AC24V AC110V AC220V AC380V DC24V DC220V	DN150~DN200	DN80~DN125	DN250~DN300	DN65~DN80
		15S/100N.m					
		60S/200N.m					
POE-40	30S/400N.m		AC24V AC110V AC220V AC380V DC24V DC220V	DN200~DN250	DN125~DN150	DN350~DN400	DN80~DN100
POE-50	30S/500N.m	9S/150N.m		DN250~DN300	DN150~DN200	DN400~DN500	DN100~DN125
		15S/250N.m					
		20S/300N.m					
		60S/500N.m					
POE-60	30S/600N.m		AC24V AC110V AC220V AC380V	DN300	DN200	DN500~DN600	DN125
POE-100	50S/100N.m	15S/300N.m		DN300~DN350	DN250	DN600~DN800	DN125~DN150
		30S/800N.m					
POE-200	100S/2000N.m		AC24V AC110V AC220V AC380V	DN400~DN500	DN300~DN400	DN800~DN1000	DN200~DN250

Note: The matching data of the actuator and valve in the table is for reference only, and the torque value provided by the valve manufacturer shall prevail.

Due to the large number of valve types, the torque values of the valves of the same specifications and models are different due to different manufacturing processes, quality levels, structural forms, and material of the valve body. In actual use, often due to the pressure of the system Variations in factors such as fluctuations, media types, field environment, and operating characteristics can also cause large changes in valve opening and closing torques. In order to ensure the stable and reliable operation of the actuator, it is recommended to leave a sufficient safety factor in the selection, that is: safety factor = "output torque of the actuator" or "valve pressure test torque" ≥ 1.2~1.3 times.





Electric 3pc ball valve



Electric 3 way ball valve



Electric 3pc ball valve



Electric flange ball valve



Electric flange ball valve



Electric flange ball valve



Electric plastic flange ball valve



Electric plastic double control ball valve



Electric valve controller

PROFESSIONAL MADE



Electric Wafer Neutral
Butterfly Valve



Electric plastic
butterfly valve



Electric three eccentric hard
seal butterfly valve



Electric Wafer Centerline
Butterfly Valve



Electric Wafer Centerline
Butterfly Valve



Electric Wafer Centerline
Butterfly Valve



Electric Wafer Centerline
Butterfly Valve



Electric three eccentric
hard seal butterfly valve