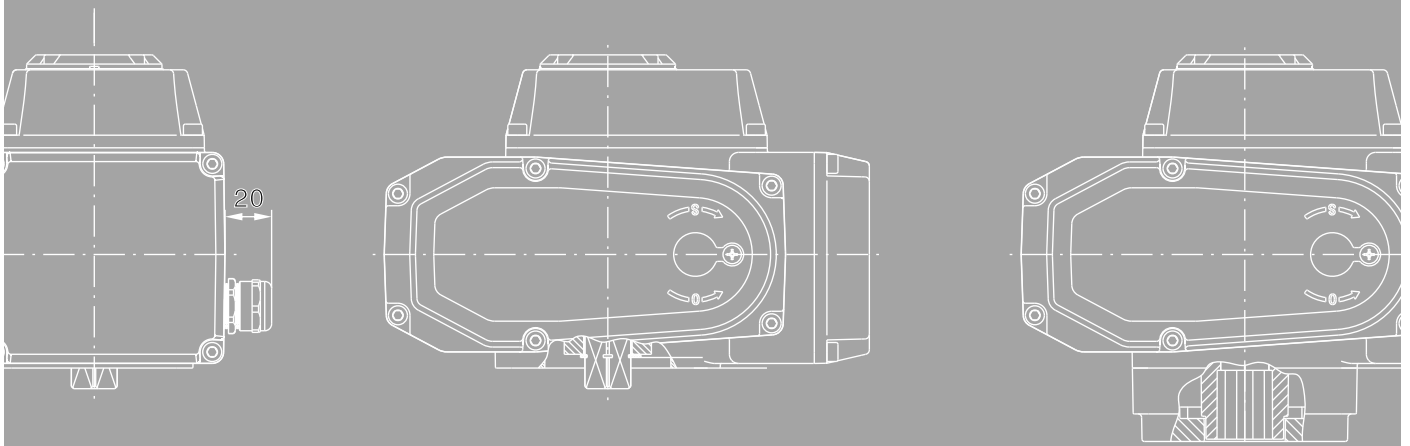


USER MANUAL

LP series electric actuators



THANK YOU for buying LP series electric actuators of our company. Before you install and connect parts and install the equipment on site and conduct control operation, please carefully read this manual. Follow various instructions in the manual and you will get convenience and excellent performance at work.

Cautions

Make sure you observe them

- 1, When it is energized, it is forbidden to operate it manually.
- 2, Inside the actuator, there is a overtemperature protection device, so when electromotor temperature rises beyond 125°C, the overheat protector will turn off the power automatically.
- 3, When using it, you must mount an electricity leakage protection device .
- 4, Please make sure the input voltage and wiring connection points are correct .
- 5, You must not link the power lines of 2 or more electric drive devices in parallel connection . You must not control several electric drive devices from one single connection point.Or else, it may get out of control and the electromotor may superheat.
- 6, The in-leads of wiring must have the sealing for waterproof cable connector according to operation manual . Or else, the electric drive device may be damaged due to intrusion of water or filthy mud.
- 7, The intelligent regulation type must be wired and commissioned according to operation manual, to avoid damage.
- 8, Installation and commissioning staff must have related operation qualification.
- 9, Electric drive devices must not be used under overload .
- 10, The manufacturer does not bear responsibility for improper change or repair of electric drive device.

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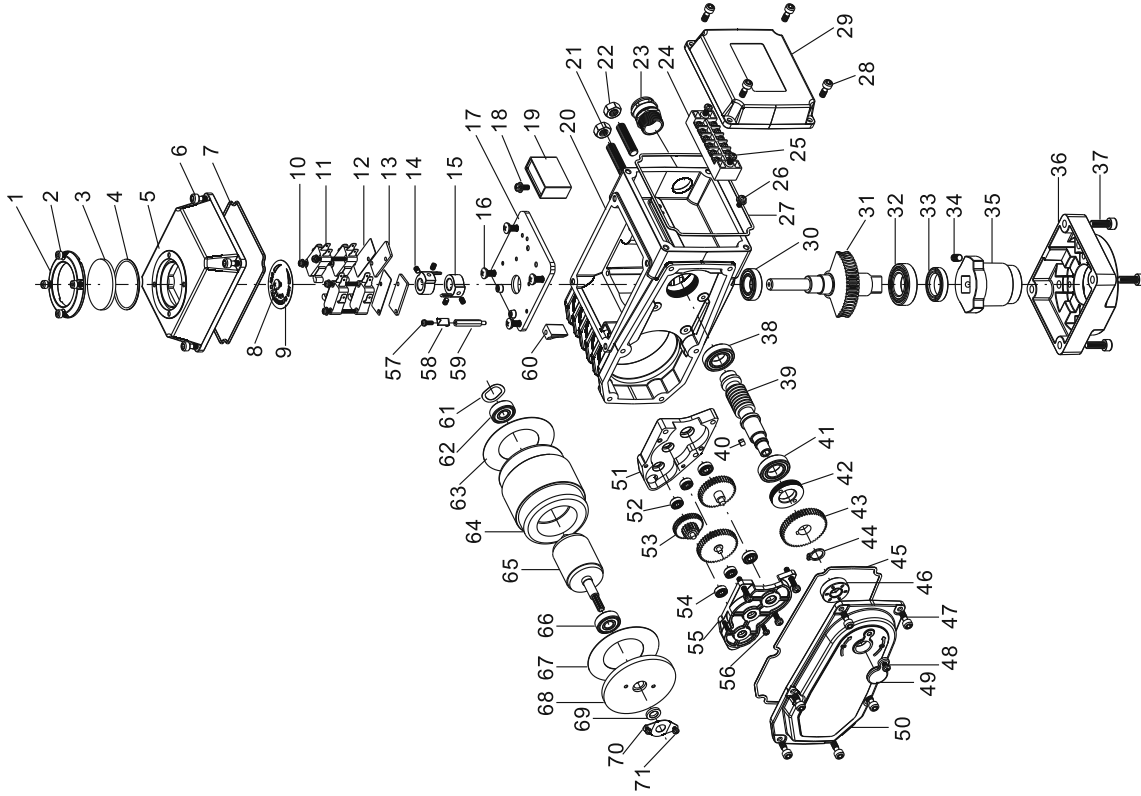
I, Product overview

LP series electric actuators are new generation products we develop after importing foreign latest technology. 90 % of its components are imported with original packaging. So they have adequate assurance of stability of performance. LP series electric actuators have high intelligence, high guarding ability, compactness, high degree of integration, long performance life, stable performance and other merits. It allows operation on site. It also allows remote control. It suits ball valve, butterfly valve, throttle valve separating wall and other equipment that rotate by 90 degrees. It can satisfy various requirements of industrial automation piping control. It has widespread use in many industries. Including : metallurgy, petroleum, chemical engineering, generating station, printing and dyeing, water treatment, shipbuilding, paper-making, food processing, pharmacy and building automation system etc.

II, Product features

- 1, Strong features: intelligent regulation type, proportion type, switch type, various signal out put type, everything that you expect to find;
- 2, Small and light: Its volume and weight are merely equal to about 35 % of traditional products;
- 3, Elegant appearance: aluminum alloy cast shell, refined and fluent, reducing electro-magnetic interference;
- 4, Reliable performance: key components like shaft bearings and electrical elements are imported famous-brand products;
- 5, High protection standard: IP 68 high standard protection level (detected by Shanghai instrumentation and autonomous system inspection and test institute);
- 6, Precise and wear resistant: The worm wheel output shaft adopts integrated forging from special copper base alloy, and has high strength and good wearability;
- 7, Extremely small return difference: its integrated structure avoids the gap of key-joints, and has high driving accuracy;
- 8, Safety guarantee: it has passed 1500 V voltage endurance detection, it has class F insulation electromotor, and it has CE accreditation, so it has higher safety guarantee;
- 9, Simple to mate: it adopts single phase power supply and simple connection loop, and we can also make it 380 V or DC.
- 10, Convenient to use: no need to oil and no need to make spot-check, and it is waterproof and rust-proof, and can install at any angle;
- 11, Multi-speed: its whole range time is 9 Seconds, 13 Seconds, 15 Seconds, 30 Seconds, 50 Seconds, 100 Seconds, and 150 Seconds (already set when leaving factory);
- 12, Intelligent digital control: the intelligent control module is integrated in the electric actuator, so it need not connect an external localizer; digital setting, digital calibration, high precision, self-diagnosis, and multiple - feature in one device.

LP – series product structure diagram

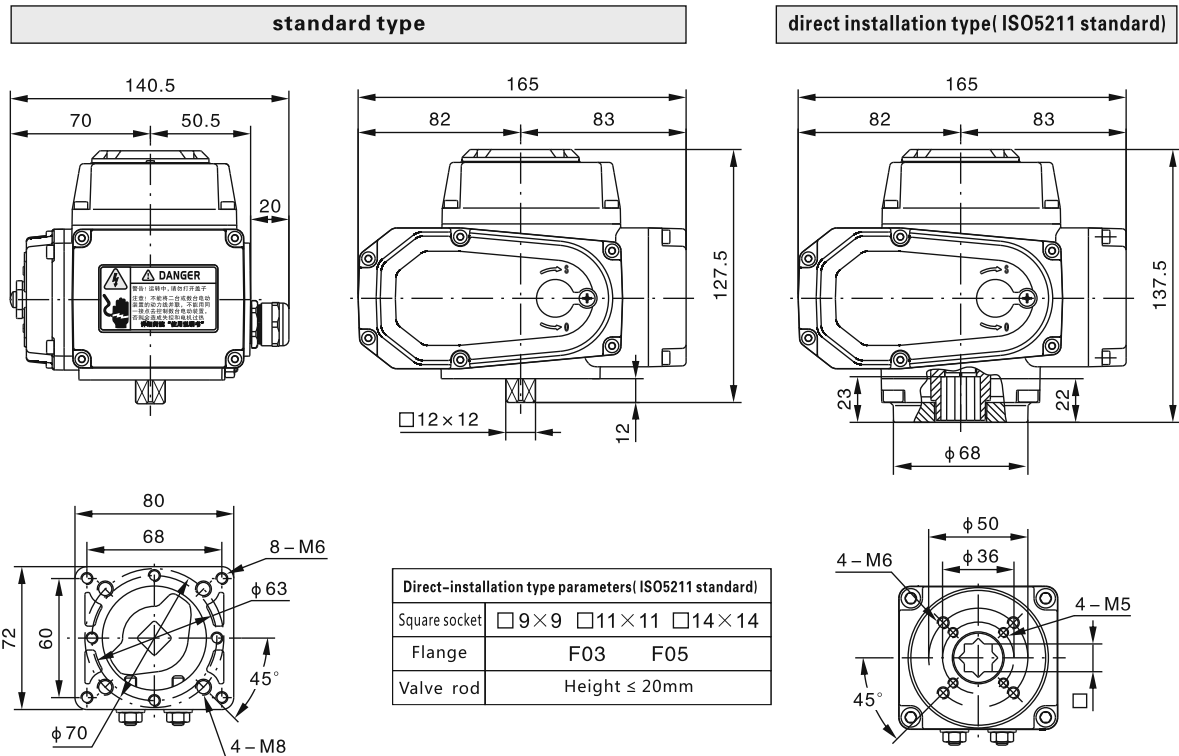


Note: This structure diagram is for LP-10B/30S/AC220V/F05~07/NN (power-less contact point type)

Spare and reserve parts

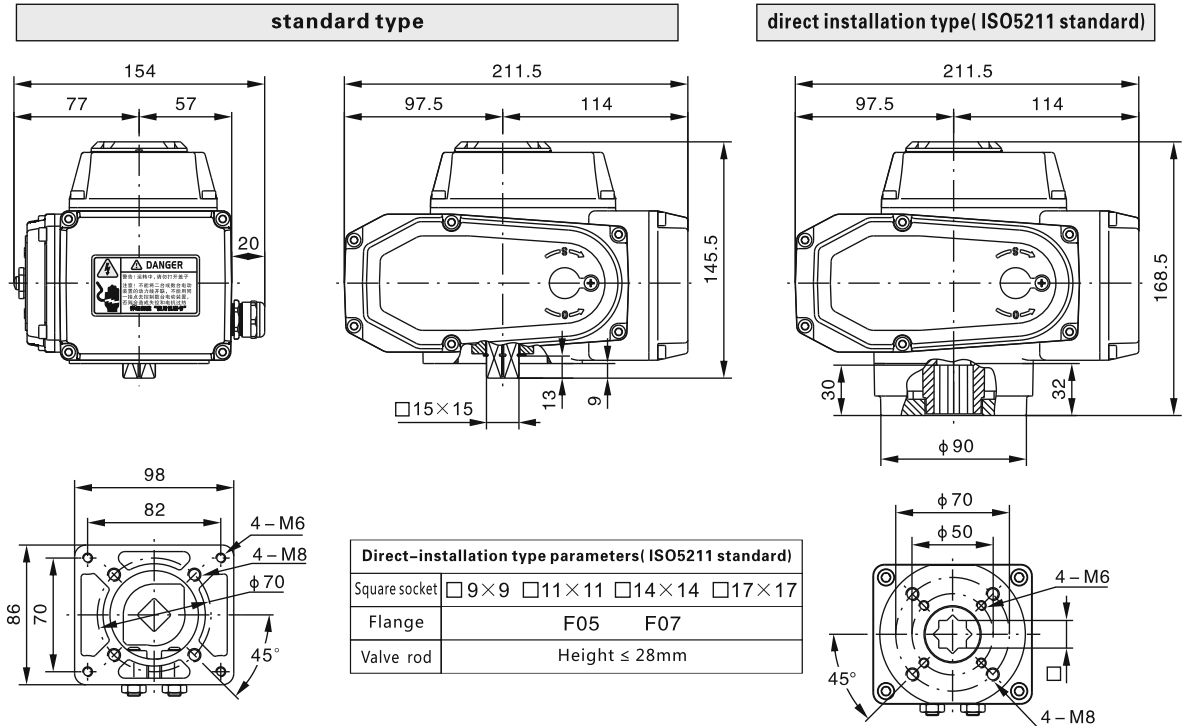
No.	Qty	Part name	No.	Qty	Part name
1	1	Indication window hood	37	4	Internal hexangular fillister head screw
2	4	Internal hexangular fillister head screw	38	1	Bearing
3	1	Viewing glass3	39	1	Worm screw
4	1	O-ring	40	1	Flat key
5	1	Electric fitting: top cap	41	1	Bearing
6	4	Anti-breakoff hex type socket screw	42	1	Locknut
7	1	O-ring	43	1	Gear on worm
8	1	Cross bolt	44	1	Axis shield ring
9	1	Dial	45	1	O-ring
10	4	Cross bolt(component)	46	1	Oil seal
11	4	Travel switch4	47	6	Anti-breakoff hex type socket screw
12	2	Insulation plate guard	48	1	Cross bolt(component)
13	2	Insulating pad	49	1	Dustproof end plug
14	4	hex type socket holding screw	50	1	Electric fitting: front cap
15	2	Stroke dog5	51	1	Electric fitting: speed-down case 1
16	4	Cross bolt(component)	52	3	Bearing
17	1	Electric fitting: inner cap	53	3	Electric fitting: reduction gear component
18	1	Cross bolt(component)	54	3	Bearing
19	1	Electric capacitor	55	1	Electric fitting: speed-down case 2
20	1	Electric fitting: case body	56	5	Cross bolt(component)
21	2	Limit bolt	57	1	Cross bolt(component)
22	2	Hexagonal nut	58	1	Dial needle
23	1	Waterproof cable joint	59	1	Pointer rod
24	1	Connecting terminal	60	1	Rubber end plug
25	2	Cross bolt	61	1	Wavy spring washer
26	1	Cross bolt	62	1	Bearing
27	1	O-ring	63	1	Insulating division board
28	4	Anti-breakoff hex type socket screw	64	1	Electromotor stator
29	1	Electric fitting: lead-in cap	65	1	Electromotor rotor
30	1	Bearing	66	1	Bearing
31	1	Worm wheel	67	1	Insulating division board
32	1	Bearing	68	1	Electromotor cap
33	1	Oil seal	69	1	Oil seal
34	1	hex type socket holding screw	70	1	Oil seal stop plate
35	1	Connecting bushing (ISO5211)	71	2	Cross bolt(component)
36	1	Fixing base (ISO5211)			

LP-05 series dimensions and performance parameters



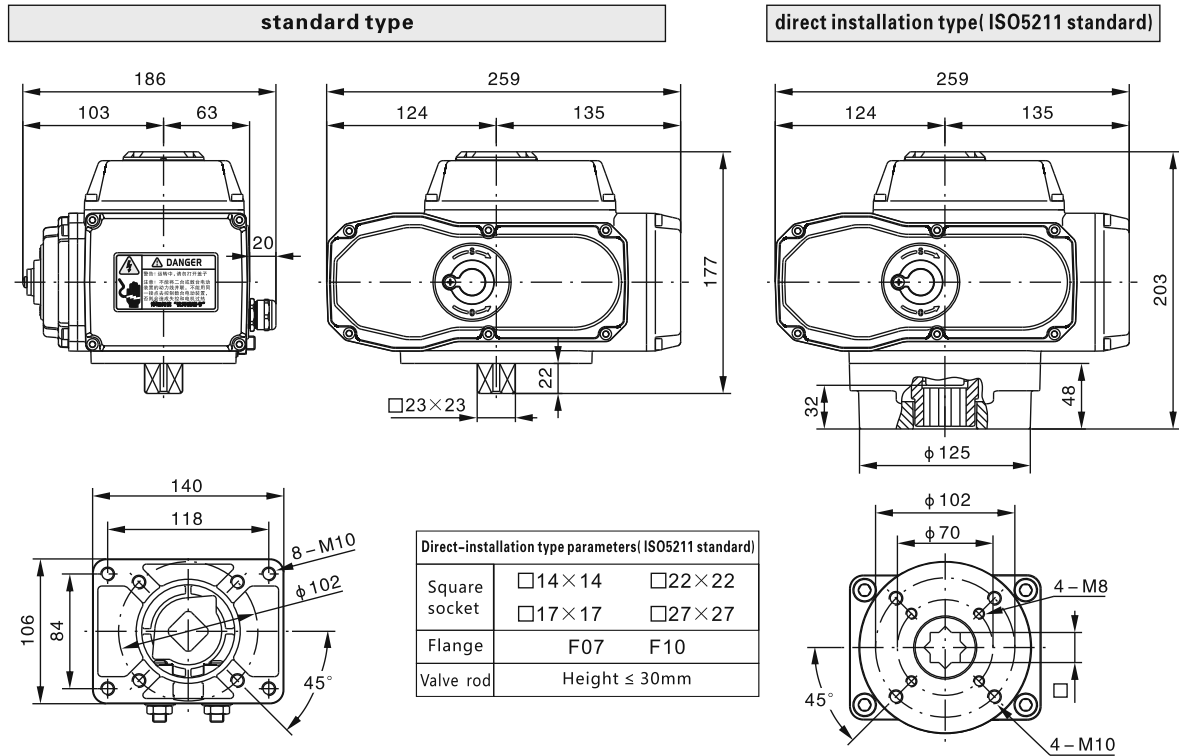
Model Parameters Performance	LP-05						
	DC12V	DC24V	DC220V	AC24V	AC110V	AC380V	AC220V
Power	20W			10W			
Rated current	3.8A	2A	0.21A	2.2A	0.48A	0.15A	0.24A
Output moment	30Nm/50Nm			15Nm/30Nm/50Nm			
Running time	6S / 10S			10S / 20S / 30S			
Control loop	Type A, B, C, D, E, F, G, H						
Rotation angle	0~360° adjustable						
Whole machine weight	2.4Kg						
Insulation resistance	100MΩ/300VDC			100MΩ/500VDC			
Voltage endurance level	500VAC/1 minute			500VAC/1minute			
Protection level	IP67						
Ambient temperature	- 25°C ~ +60°C (other temperature range is open for customizing)						
Installation angle	360°, any angle						
Shell material	Aluminum alloy precision press-forged piece						
Optional features	Heater Dehumidifier						

LP-10 series dimensions and performance parameters



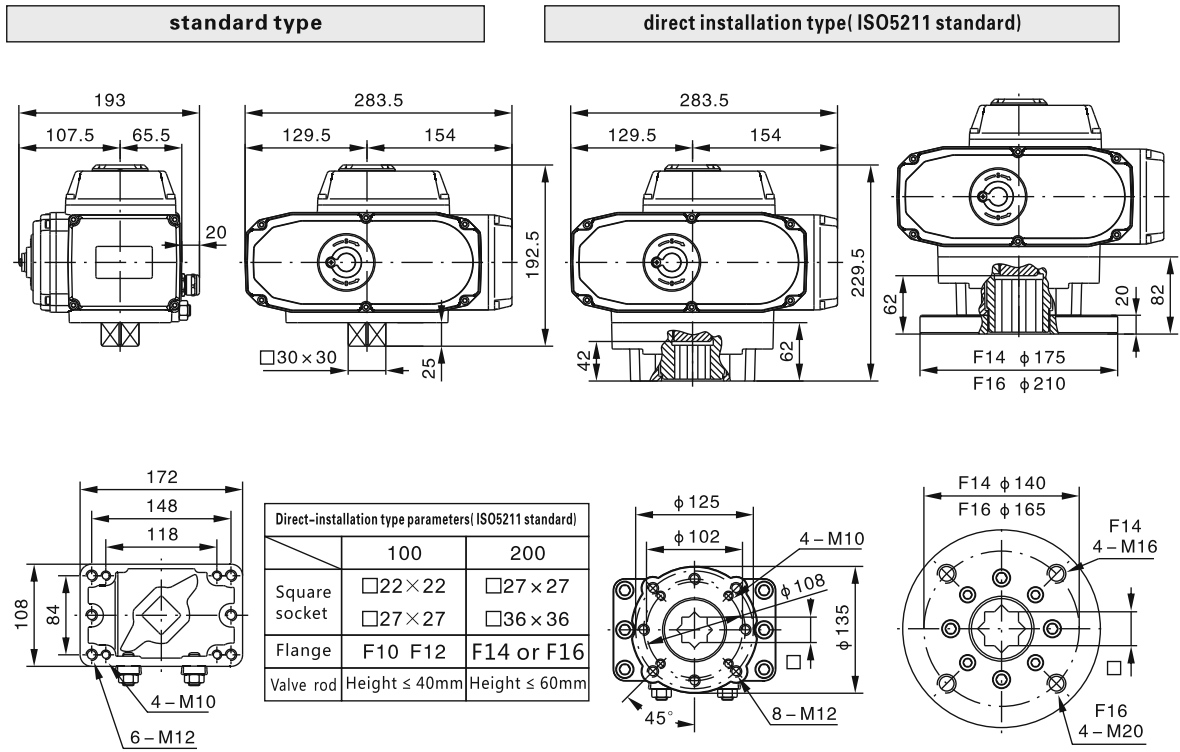
Model Parameters	LP-10						
	Power supply		Performance				
Power supply	DC12V	DC24V	DC220V	AC24V	AC110V	AC380V	AC220V
Power	40W			23W			
Rated current	4.8A	2.4A	0.32A	3A	0.64A	0.19A	0.32A
Output moment	100Nm			50Nm/60Nm/100Nm			
Running time	10S			13S /15S /20S/ 30S			
Control loop	Type A, B, C, D, E, F, G, H						
Rotation angle	0~90° adjustable						
Whole machine weight	4.2Kg						
Insulation resistance	100MΩ/300VDC			100MΩ/500VDC			
Voltage endurance level	500VAC/1 minute1			1500VAC/1 minute1			
Protection level	IP67						
Ambient temperature	- 25°C ~ +60°C(other temperature range is open for customizing)						
Installation angle	360°, any angle						
Shell material	Shell materialAluminum alloy precision press-forged piece						
Optional featuresHeater	Over-moment protection, heater dehumidifier						

LP-20/40/50/60 series dimensions and performance parameters



Model Power supply Parameters Performance	LP-20/40						LP-50/60					
	DC24V	DC220V	AC24V	AC110V	AC380V	AC220V	DC24V	DC220V	AC24V	AC110V	AC380V	AC220V
Power	40W/60W						90W					
Rated current	8A	0.35A	5A	0.9A	0.25A	0.48A	7A	0.9A	8A	2A	0.45A	0.92A
Output moment	200Nm		200Nm/400Nm				500Nm/600Nm					
Running time	10S		15S/30S/60S				15S /30S/ 60S					
Control loop	Type A, B, C, D, E, F, G, H											
Rotation angle	0~90° adjustable											
Whole machine weight	7.2Kg						8Kg					
Insulation resistance	100MΩ/300VDC		100MΩ/500VDC				100MΩ/300VDC		100MΩ/500VDC			
Voltage endurance level	500VAC/1 minute1		1500VAC/1 minute1				500VAC/1 minute1		1500VAC/1 minute1			
Protection level	IP67											
Ambient temperature	- 25°C ~ + 60°C(other temperature range is open for customizing)											
Installation angle	360°, any angle											
Shell material	Shell materialAluminum alloy precision press-forged piece											
Optional featuresHeater	Over-moment protection, heater dehumidifier											

LP-100/200 series dimensions and performance parameters



Model Power supply Parameters Performance	LP-100				LP-200			
	AC24V	AC110V	AC380V	AC220V	AC24V	AC110V	AC380V	AC220V
Power	100W				100W			
Rated current	9A	2.2A	0.48A	1.2A	9A	2.2A	0.48A	1.2A
Output moment	300Nm/800Nm/1000Nm				2000Nm			
Running time	15S/30S/50S				100S			
Control loop	Type A, B, C, D, E, F, G, H							
Rotation angle	0~90° adjustable							
Whole machine weight	11.5Kg				12.1Kg			
Insulation resistance	100MΩ/500VDC							
Voltage endurance level	1500VAC/1 minute1							
Protection level	IP67							
Ambient temperature	- 25°C ~ +60°C(other temperature range is open for customizing)							
Installation angle	360°, any angle							
Shell material	Shell materialAluminum alloy precision press-forged piece							
Optional featuresHeater	Over-moment protection, heater dehumidifier							

Intelligent adjustment type (E type) performance parameters

Model Power supply Parameters Performance	LP-05E	LP-10E	LP-20E	LP-40E	LP-50E	LP-60E	LP-100E	LP-200E
	DC12V、DC24V、DC220V、AC24V、AC110V、AC220V、AC380V; 50/60Hz							
Electromotor 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 moment ⁵	50Nm	100Nm	200Nm	400Nm	500Nm	600Nm	1000Nm	2000Nm
Running time	30S	30S	30S	30S	30S	30S	50S	100S
Rotation angle	0 ~ 90°	0 ~ 90°	0 ~ 90°	0 ~ 90°	0 ~ 90°	0 ~ 90°	0 ~ 90°	0 ~ 90°
Whole machine weight	2.4Kg	4.2Kg	7.2Kg	7.2Kg	8Kg	8Kg	11.5Kg	12.1Kg
Input signal	4~20mA DC, 1-5VDC, 0~ 10VDC (others can be selected before leaving factory)							
Output signal	4-20mA DC (others can be selected before leaving factory)							
Basic deviation	*no greater than ±1%							
Return difference	*less than 0.3%							
Dead zone	0.4%-1.5% adjustable							
Damping feature	0 times							
Device repetitive error	0%							
Insulation resistance	DC24V: 100MΩ/300VDC			100MΩ/500VDC				
Voltage endurance level	DC24V: 500VAC/1 minute			1500VAC/1minute				
Protection level	IP67							
Ambient temperature	-25°C ~ +60°C(other temperature range is open for customizing)							
Installation angle	360°, any angle							
Shell material	Aluminum alloy precision press-forged piece							
Optional features	Over-moment protection, heater dehumidifier, power-less contact point type							