



WECHAT



WEB

Welcome to HEARKEN

Actuators and Controls



The Trusted, Passionate and focused Partner in Valve Automation

At HEARKEN FLOW, The founding principle of Hearkenflow is simple: to Listen our customers needs first, to develop the innovative valve actuators solutions , to meet the unique needs of our customers, Along the way, To help our customers to solve the problems in Valve Automation. We are growing our brand in Pneumatic and Electric Actuators, Accessories..



Experienced team



Large inventory



Convenient consultation



WHY WE ARE DIFFERENT

We offer a complete valve automation solution by the applications experience and customization capabilities, with an experienced support team to guide you in selection, installation, and project support. In addition we maintain an extensive supply of product inventory on hand so that we can quickly fulfill orders and reduce wait times. Our sales and support staff are readily available and accessible so that customers get the answers they need quickly.

THE TARGET WE ARE PURSUING



High-quality



low cost



Reliable solution

- To built A strong Reputation in Providing Quality, Cost Effective , Reliable And Robust Performance Solutions for Valve Automation,
- Included Pneumatic Actuators, Electrically Actuators, Actuated Valves.



COMMITMENT TO QUALITY

At HEARKEN FLOW means performance, All products manufactured by HEARKEN FLOW are warranted against defects in material and workmanship for a period of 18 months from the day of startup. Each of our products are tested at the factory. we are confident that our products meet or exceed all applicable standards before they ever leave our facility. We are an ISO 9001-2008 certified company. Our Valve Actuators Has Applied for SIL3 Certificate, ATEX Certificate ,CE,Explosion-proof Certificate, IP68 Weather proof etc....

HEA-P Series Electric Actuator

— Spring Return Design

Description



HEA-P series spring return electric actuator is designed for fail-safe positioning of valves or dampers upon loss of supply voltage. Mechanical spring return design is used to position controlled devices to either fully open or fully closed positions without any external power source.

Under normal power supply conditions, the actuator is launched by motor driven equipment and the spring stores energy in the mean time. When emergency power is off, the spring releases the energy to drive the actuator and ensures that the equipment and device return to the safe position (full open or full close). The whole process is secure and stable to eliminate the bursting pipes (hammer-blow effect). The interior mechanical part of the spring return electric actuator includes a driver unit, energy storage unit and energy locking unit. The three units constitute an integrated transmission chain system by gear drive.

In addition, the optional manual override ensures that operators can manually rotate the equipment or device to a precise position and get locked with a lock-up button. Manual release is not required during the electric control operation. Fully approved and tested with a series of features and advantages, such as:

- High performance with trusted and engineered reliability
- Fully compliant with the latest international standards and regulations
- Applicable to a wide range of specifications and higher cost performance
- Compact design that facilitates the most demanding industrial applications



Testing For All Actuators



All actuators manufactured by HEARKEN are individually tested. Testing is carried out to check the leakage in both internal and external, the angle of rotation and Torque values. All bodies are stamped with year, month of production, size and serial number.

Structure



1. Product Construction

Compact and designed for small spaces

2. Low Maintenance

Durable hassle-free operation.

Spring effectively drives a 90° full stroke.

Emergency on/off model employs a mechanical buffer without impacting pipes.

3. Secure And Stable

Spring return electric actuator complies with SIL2/SIL3 standard regulations and is maintenance-free with anti-explosive applications.



6. Adaptive Connection Parts

Actuator flange and drive sleeves comply with ISO5211 standards. A versatile design that offers its replacement.

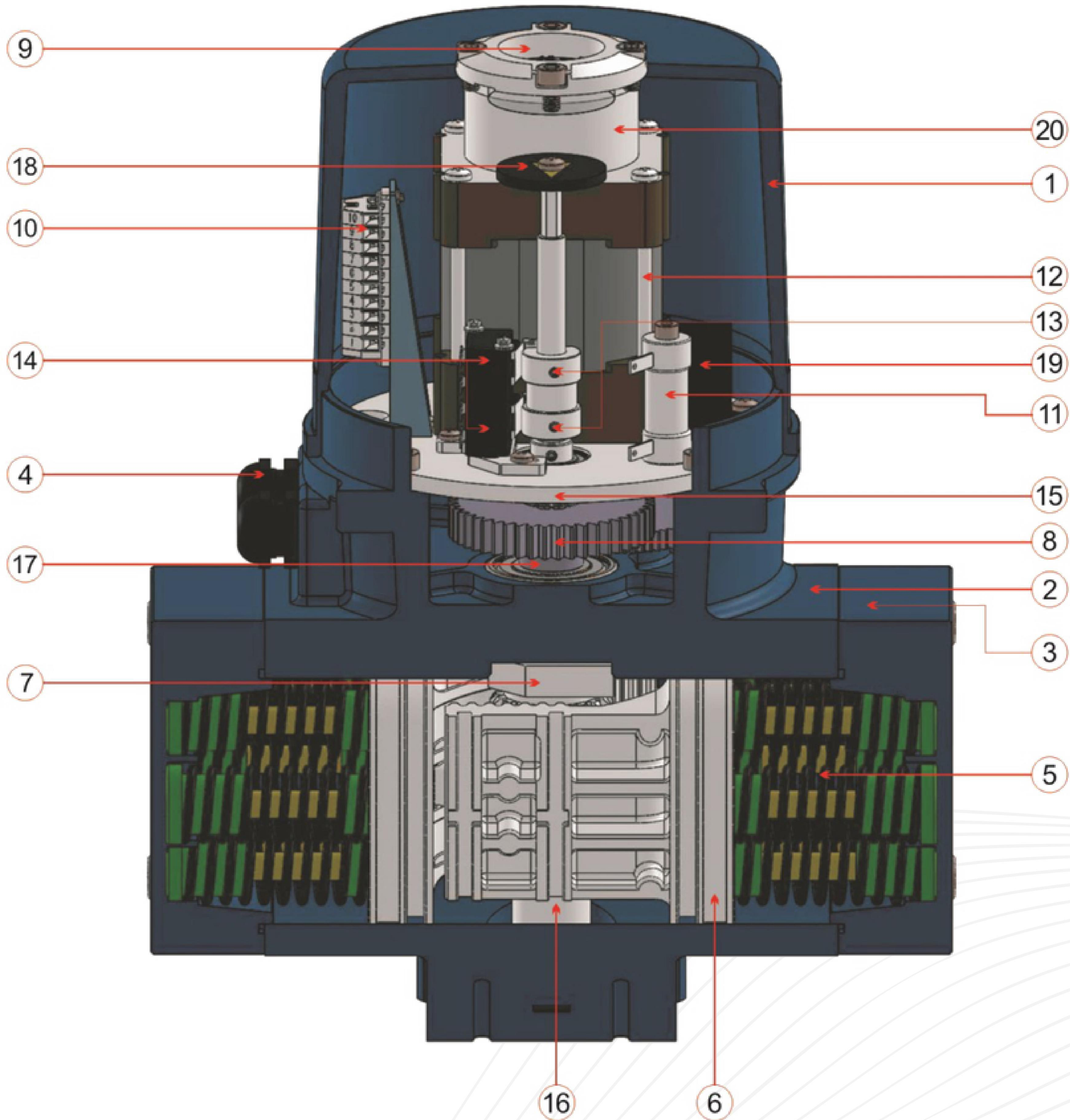
5. Position Detection

Stroke control switch with quick set up and reliability. Three dimensional indicator can be monitored in multi angles. Optional with switching value and analog quantity control.

4. Secure Operation

Under critical conditions, this product provides excellent guarantee stability with mechanical solutions. Spring return electric actuator generates the required torque through energy storage mechanism for returning to safe position with no assistance during the spring return operation process.

Parts and Material



No.	Part Name	Material	No.	Part Name	Material
1	Upper Cap	ADC12	11	Space Heater	Ceramic
2	Body	AL104	12	Electrical Motor	Integrated Set
3	Side Cap	ADC12	13	Adjustment Cam	ADC12
4	Connection Lock	Nylom	14	Microswitch	Integrated Assembly
5	Safety Spring	Spring Steel	15	Mounting Retaining Plate	Q235
6	Piston	ADC12	16	Output Shaft	45# Steel
7	Spacing Block	45# steel	17	Locating Bearing	Bearig Steel
8	Driving Gear	40CR	18	Position Indicator	Nylon
9	Display Window	Tempered Glass	19	Cpacitor	Com[osite Material
10	Wiring Terminal	Flame-retarded Nylon	20	Brake	Integrated Set

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As we are continually developing our products, their design is subject to change without notice, Latest information is available on info@hearkenflow.com www.hearkenflow.com

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1.Body:

Material: aluminium alloy coated with polyester powder.IS012944-6 C3 corrosion-proof grade, CSA test, NEMA 4X/5 outdoor application and IP67 protection grade tested.

2. Convex Position Indicator:

Continuous mechanical position indicator is available at the top of the body on all models for convenient readings of actuator functions.

3. Lubrication:

- ◆ All the gearing sets are factory lubricated.
- ◆ Additional lubrication oil is unnecessary during the product's service life.

4.Starting Frequency:

50% starting frequency (as per IEC standard)

5.Certifications:

CE/CSA/RoHS/REACH

6.Working Condition:

- ◆ Working Temperature:-25°C~65°C
- ◆ Humidity(25°C)95%

7.Safety Integrity Grade:

SIL2

8.Conduit Entry:

Standard:2×M20*1.5

Optional:2×3/4" NPT、2×1/2" NPT

9.Heater:

◆The heater will keep the temperatures at a proper level to avoid freezing lubrication oil caused by low temperature and keep the interior actuator dry to avoid product failure caused by moisture exposure.

◆ Heater is not recommended if the working temperature is above 35°C(95°F).

◆ A temperature control switch of 25°C±5°C (77±9°F) is recommended to be placed in front of the heater in case of large temperature fluctuations between day and night as well as summer and winter.This will allow the heater function to operate properly.



10.Temperature Control Switch:

Temperature control switch for the heater will cut off the circuit to halt the heating process when the interior temperature of the actuator exceeds 25°C±15°C(77±d°F)

11.Supporting Microswitch:

The series comes equipped with a standard full open/full close microswitches (LS1& LS2) and additional two supporting microswitches (LS3 &LS4) can be added to feedback passive contact.

12.Proportional Control:

During the proportional control process, the flow is effectively controlled and output to valve position and then to the central control room by the valve open/close positions control through analog signal.

13. Variable Resistor :

Apply to on/off type or three-point floating type actuator. Resistance value of 1K ohm or 5K ohm are selectable to provide output signal to position indicator.

14.Analog Signal Output Panel:

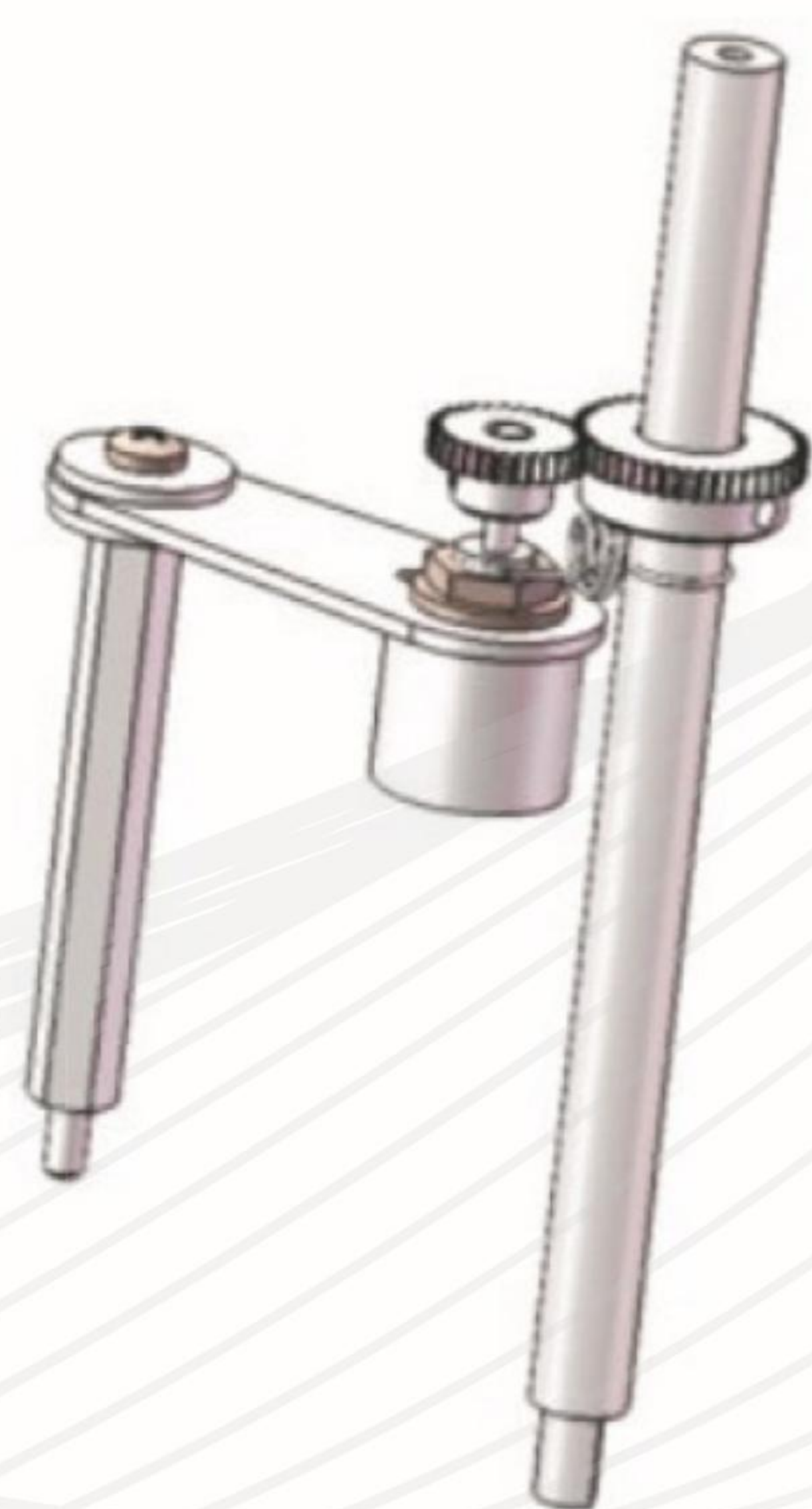
- ◆ Designed for three-point floating type actuator
- ◆ Output signal: 0-20mA/4-20mA/0-5V/0-10V/1-5V/2-10V

15. Floating Control:

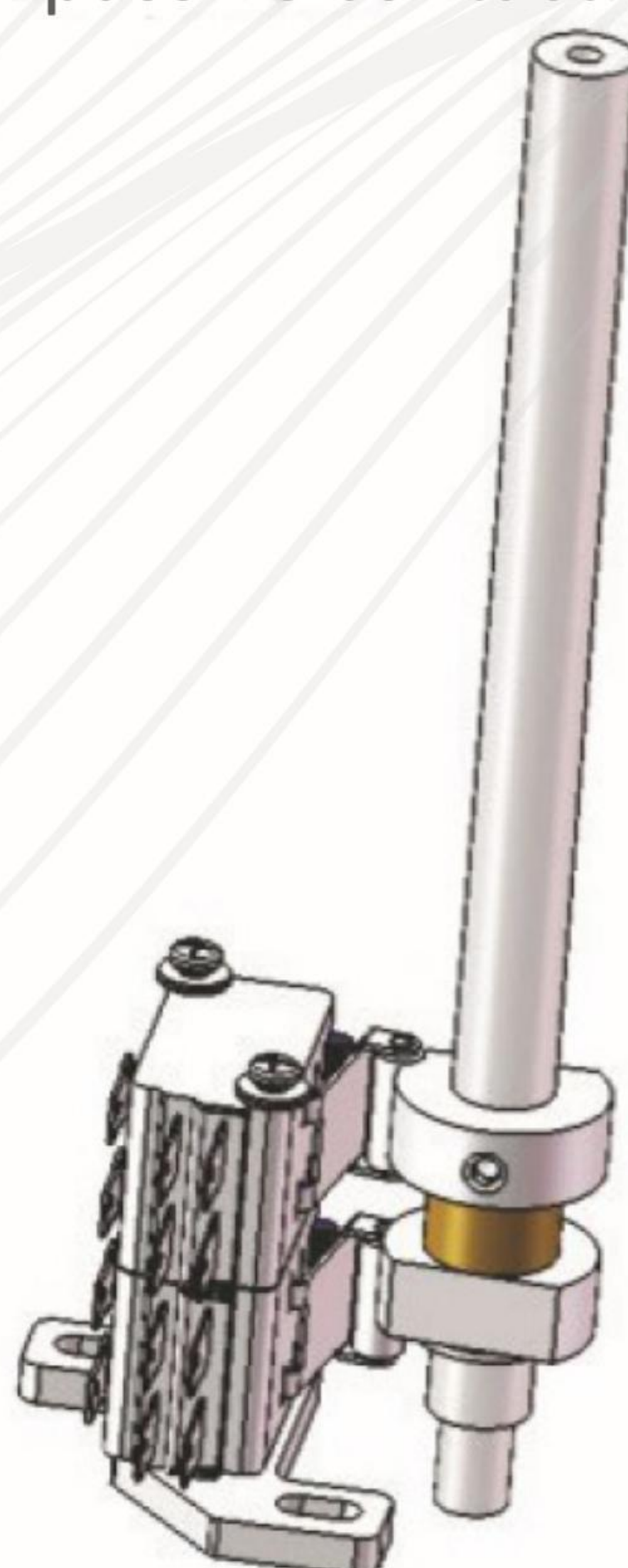
- ◆ The actuator can be controlled to open, close or stop functions at intermediate positions between 0° and 90° via external signal.
- ◆ In case of a power outage, the actuator can still operate clockwise or counter-clockwise to the end position and then stop via spring drive.

16.Operating Direction:

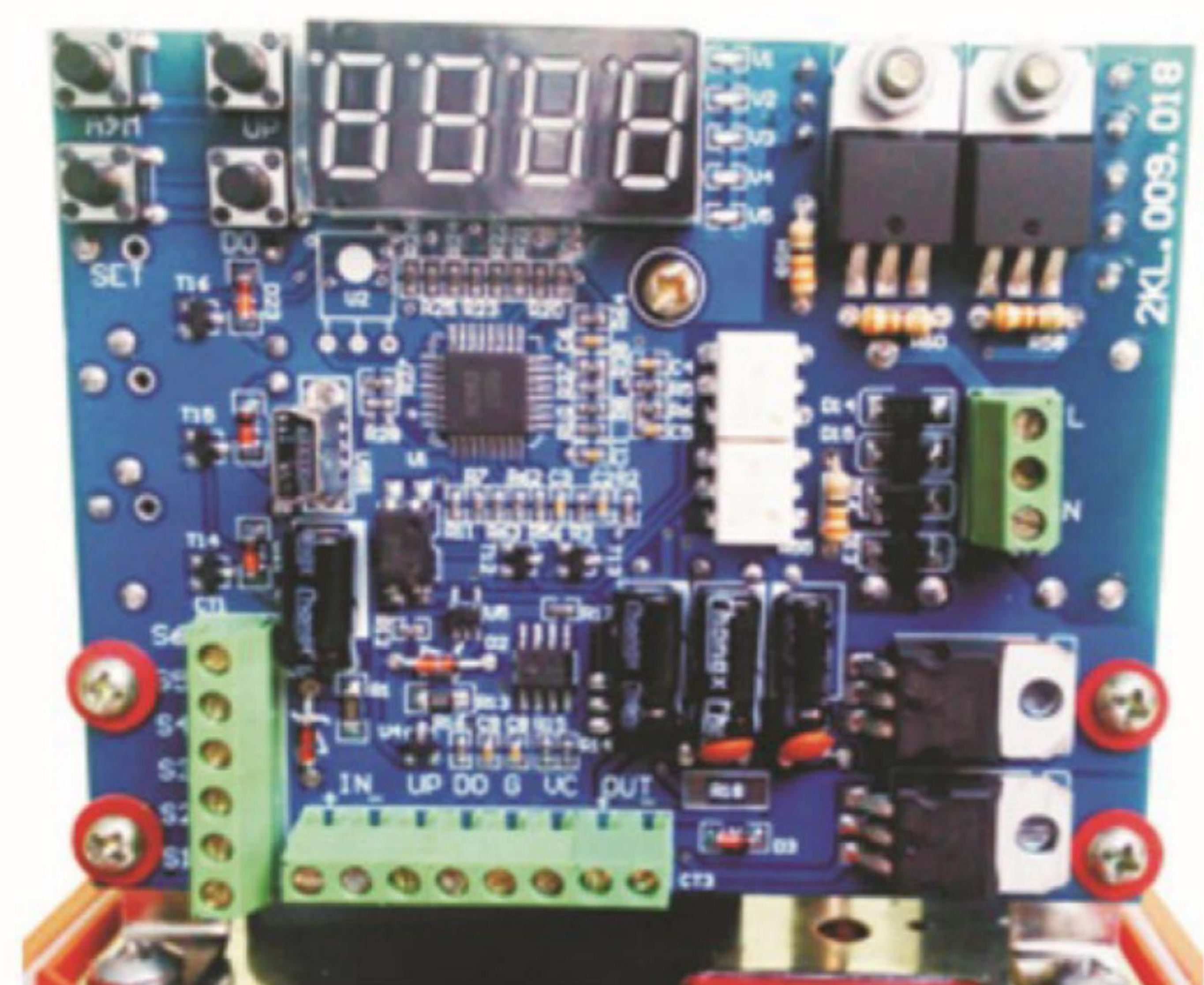
- The actuator rotation direction is not adjustable and comes equipped with factory settings. Customer needs to clarify in PO the preferred operating direction, clockwise or counter-clockwise.
- ◆ Standard: the spring is released in power failure condition and drive output shaft rotate clockwise.
 - ◆ Optional: the spring is released during a power failure situation and the drive output shaft will



Potentiometer 1K
Resistance Output



On/Off Type Passive Contact

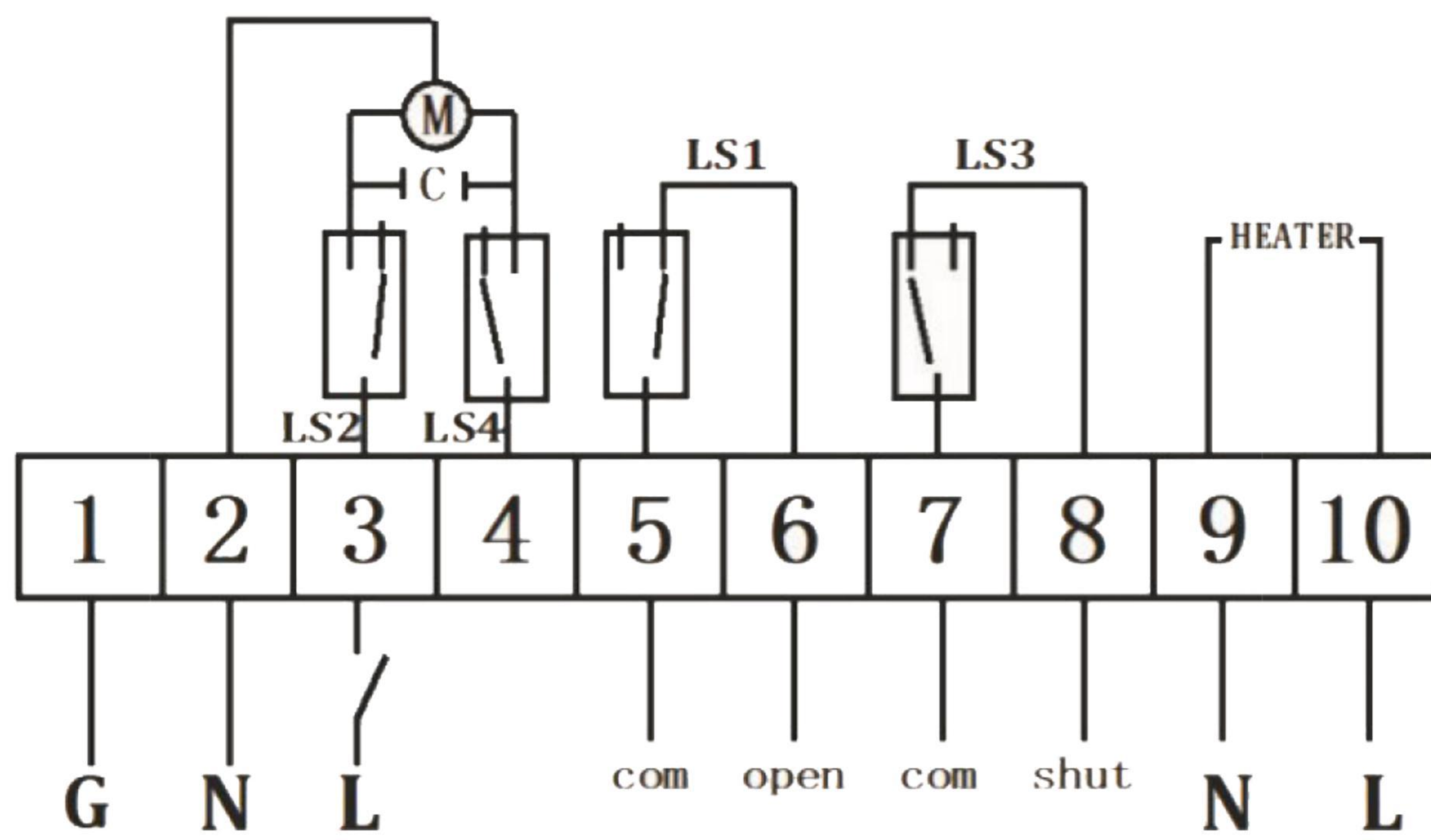


Analog Quantity Control Panel

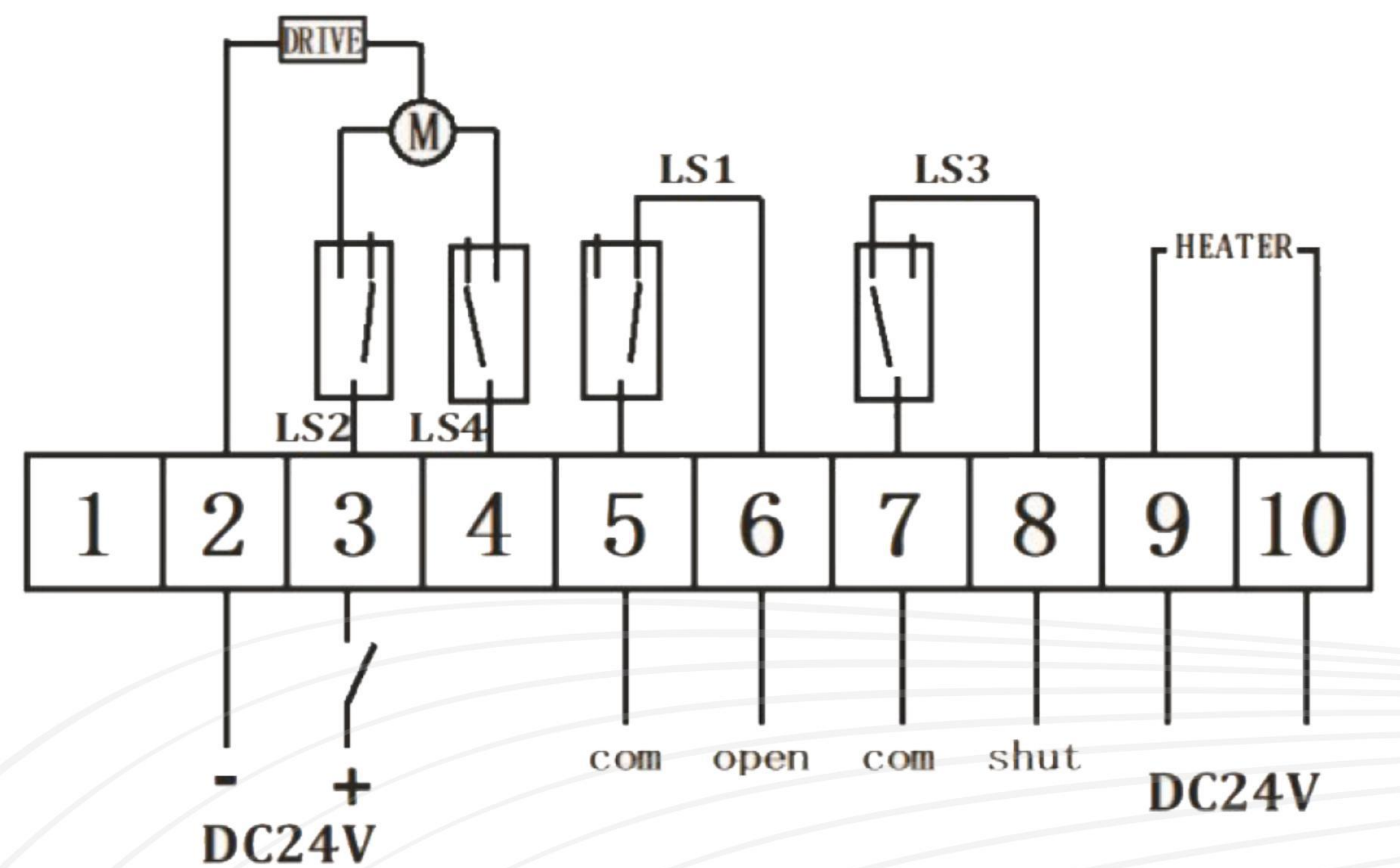
Electrical Information

Model	Torque (N.m)	Operating Time (Sec/90°)		Electric Current					
				AC110V(50/60Hz)		AC220V(50/60Hz0		DC24V	
		Electrical	Spring	Operation	Locking	Operation	Locking	Operation	Locking
HEA-P1-50	50	8	≤3	1.8A	0.1A	0.7A	0.1A	3.0A	0.1A
HEA-P1-70	70	8	≤3	1.8A	0.1A	0.7A	0.1A	3.0A	0.1A
HEA-P2-140	140	10	≤3	4.3A	0.2A	2.2A	0.2A	9.0A	0.2A
HEA-P3-200	200	12	≤3	5.2A	0.2A	3.2A	0.2A	21A	0.2A
HEA-P3-300	300	12	≤3	5.2A	0.3A	3.2A	0.3A	21A	0.3A

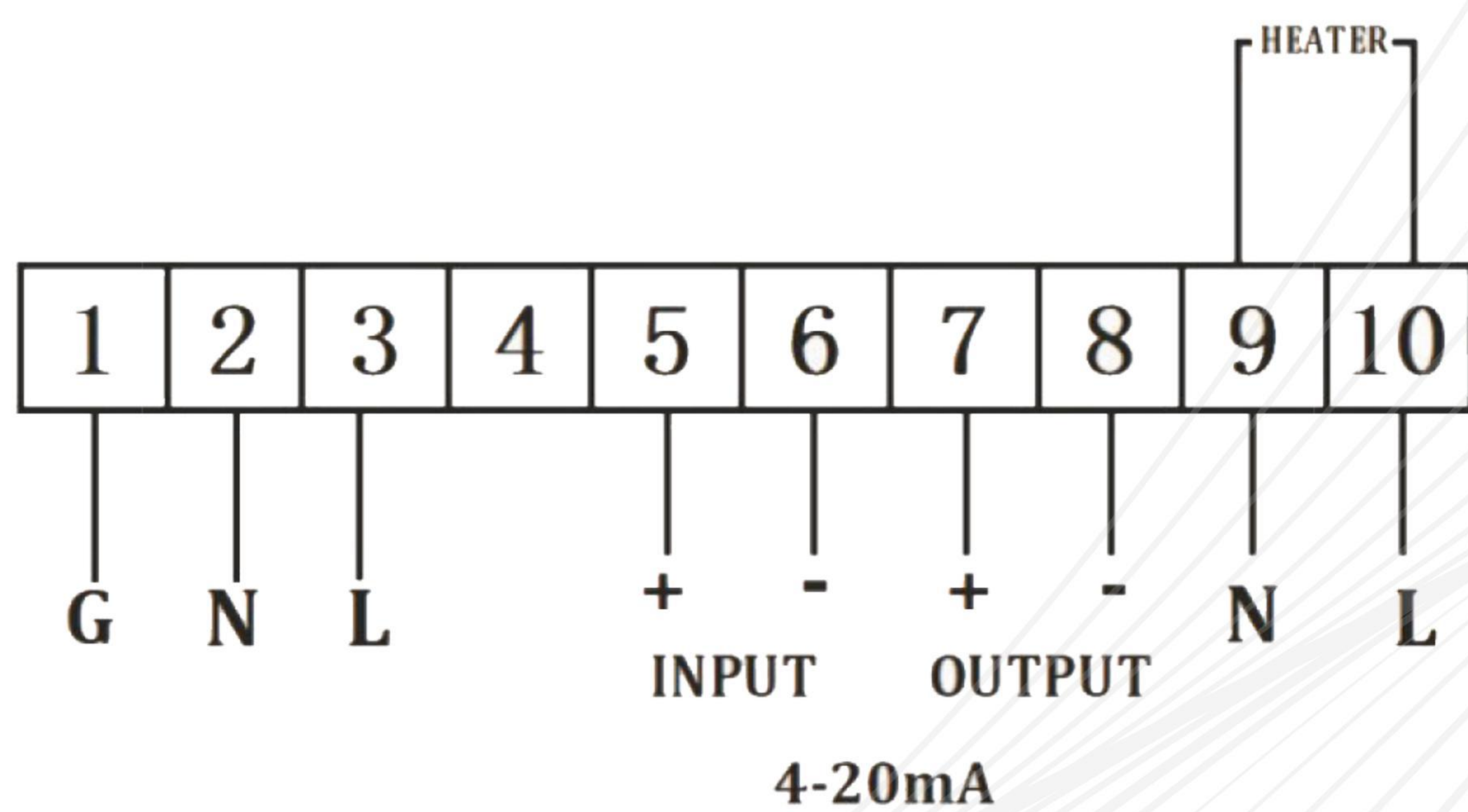
Wiring Diagram



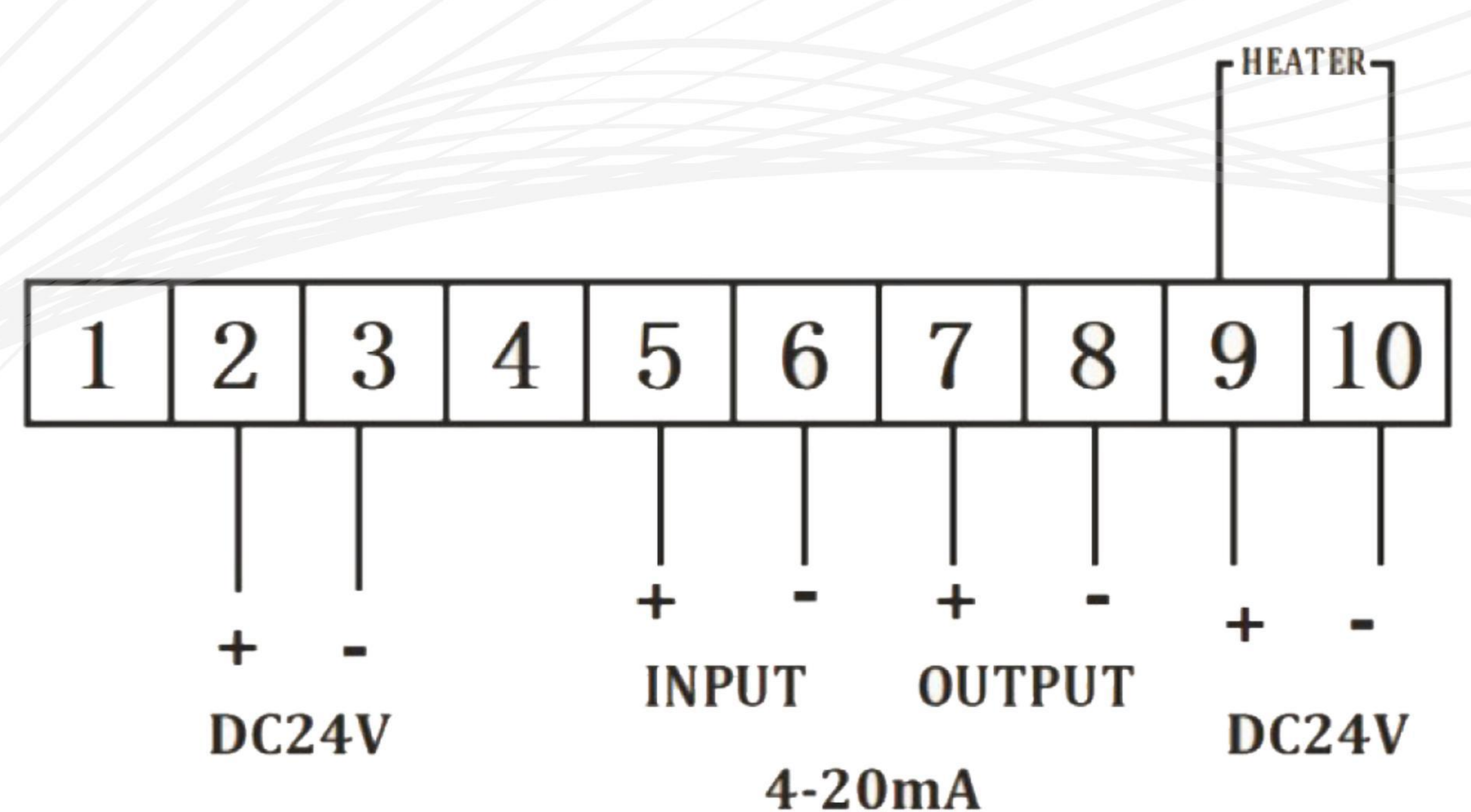
Single -phase AC110V/AC220V On/Off Type



DC24V On/Off Type

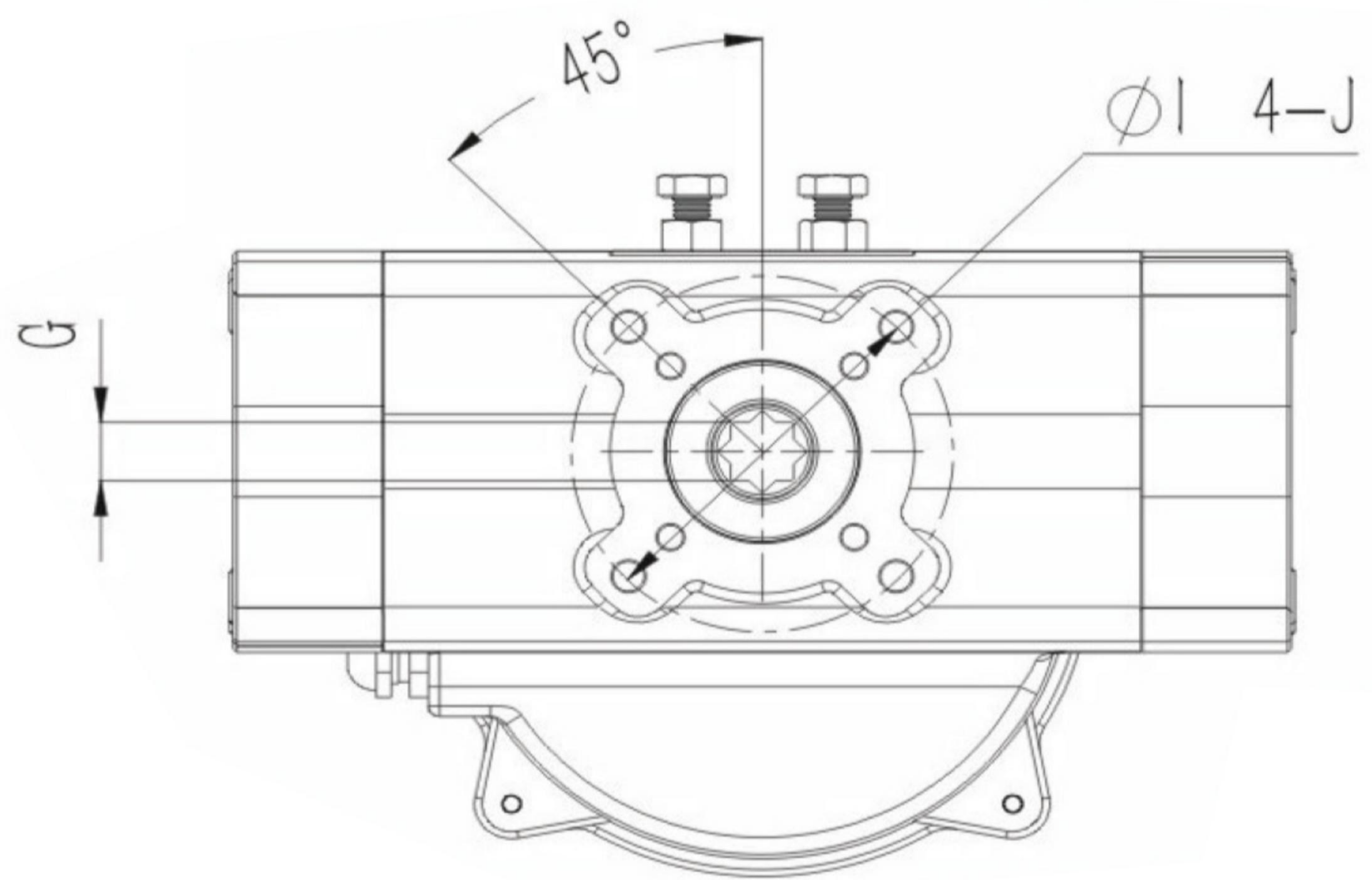
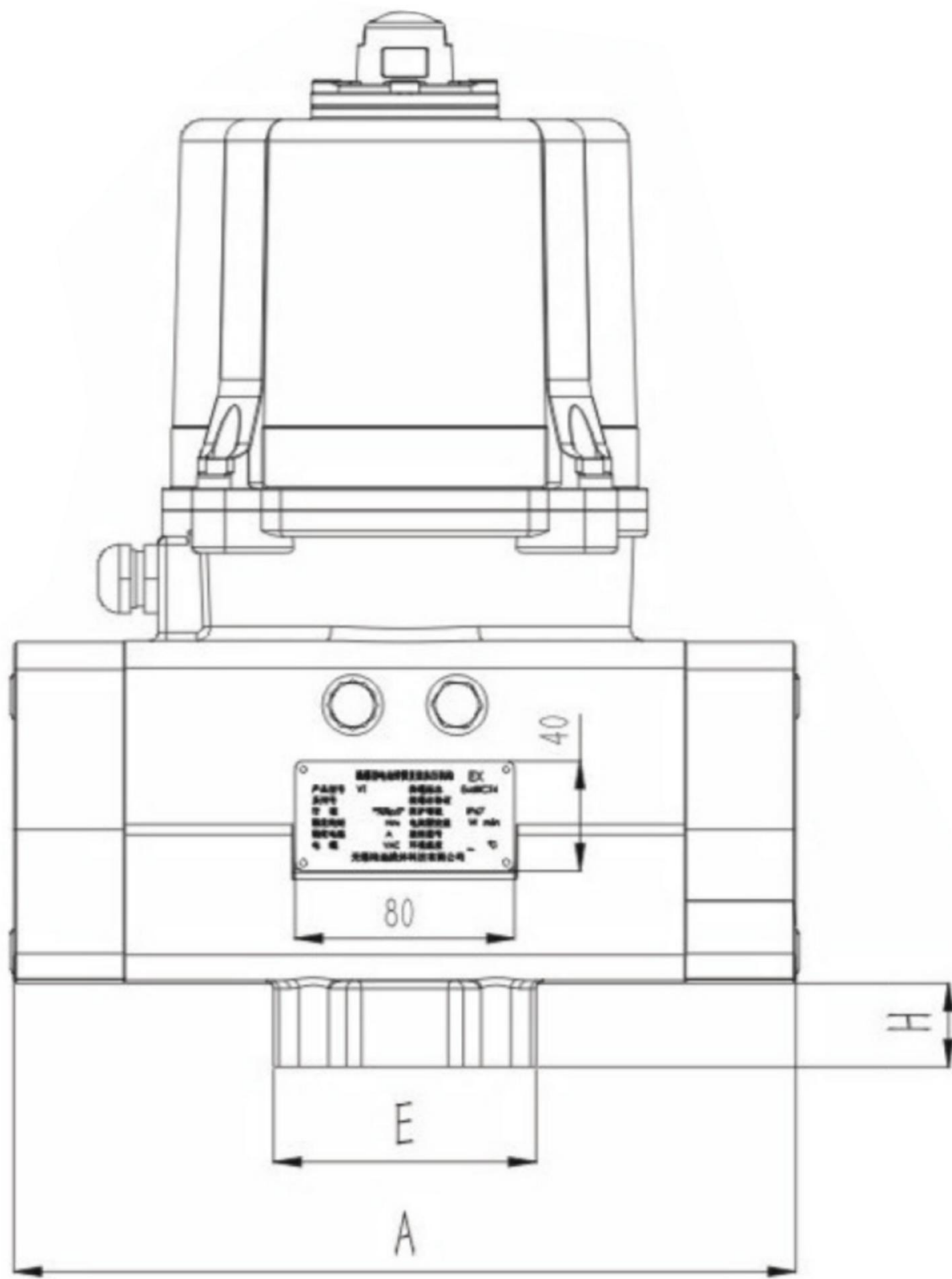
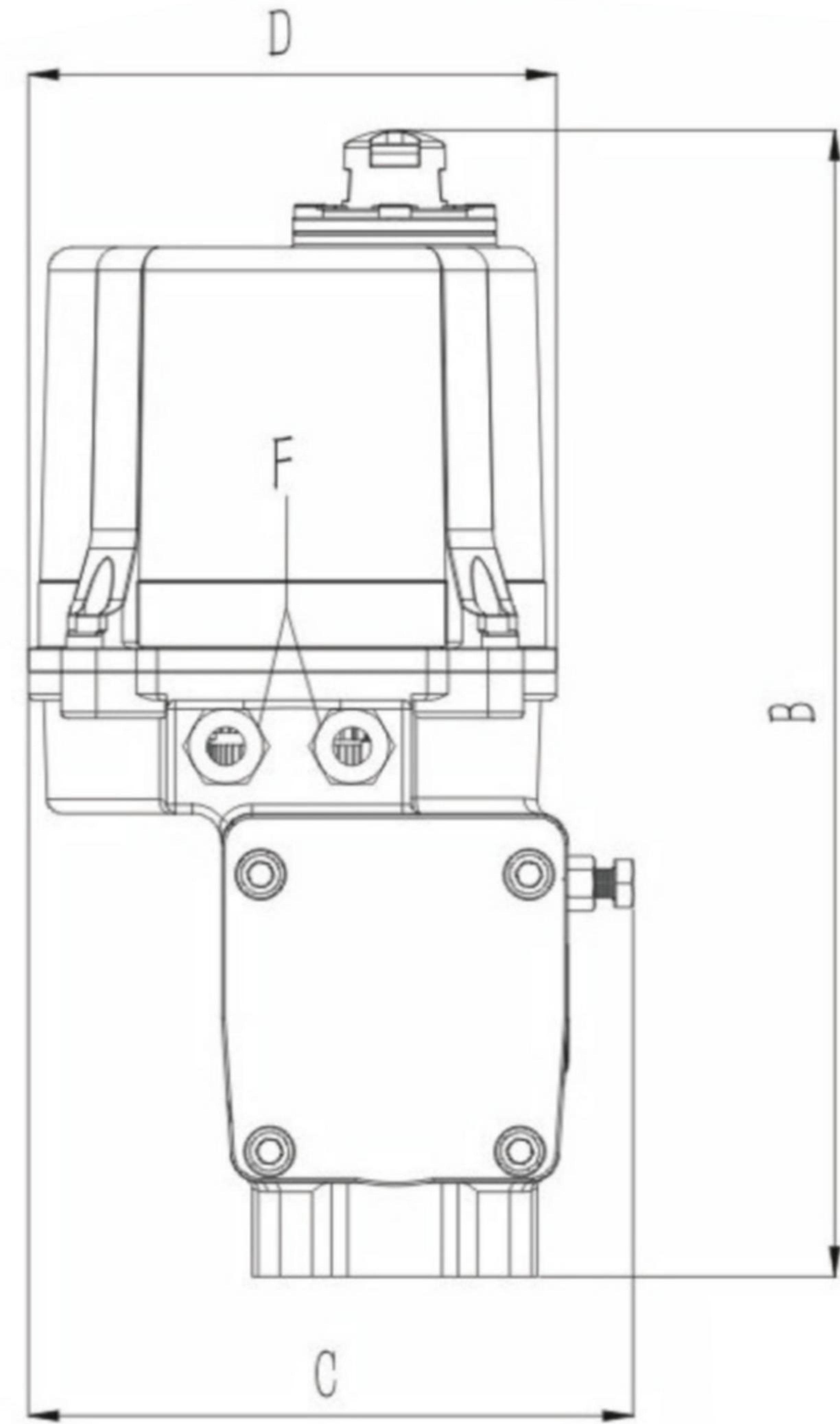


Single-Phase AC110/AC220V Modulating Type



DC24V Modulating Type

HEA-P Outline Dimension Diagram



Model	A	B	C	D	E	F	G	H	∅I	J
HEA-P1	266	380	199	177	96	2*M20*1.5	17	19	F05/07	M6/M8
HEA-P2	377	436	240	206	120	2*M20*1.5	22	25	F07/10	M8/M10
HEA-P3	406	535	280	260	120	2*M20*1.5	27	30	F10/12	M10/M12

Technical Data

Model	HEA-P1	HEA-P2	HEA-P3		
Torque(N.m)	50	70	140	200	300
Power(W)	60	60	120	200	200
Voltage(DC/AC)	110VAC/220VAC、24VDC				
Frequency(Hz)	50/60				
Operation Mode	S2-20Min				
Start Time(S)	8	8	10	12	12
Spring Return Time(S)	3	3	5	5	5
Spring Circle Life(Times)	100000	100000	100000	100000	100000
Ambient Temperature	-25℃~65℃				
Ambient Humidity(25℃)	95%				
Protection Class	IP67				
Manual Override	Optional with open, need to be customized				
Manual Override Method	Operation under power off (system power supply interrupted)				
Power Loss Return Direction	Close (or open)				
Half Stop	Electromagnetic brake control)				
Cable Entry	2*M20*1.5				
Lubrication	Grease				
Limit Method	Electronic control:electronic limit Spring return at power failure:mechanical limit				
On-Off Type Signal	Passive feedback,two-wire/three-wire				
Mechanical Stopper	Full close/open machanical stopper				
Anti-Explosion Class	Ex d II b(c)T4(6)				
Color	Available for customization as per customer requirement				