



**Y// 优立** 温州优立机械有限公司  
WENZHOU YOULI MACHINERY CO., LTD.

# INTELLIGENT CONTROL VALVE SOLUTION PROVIDER

智控阀门方案解决商

**Y// 优立** 温州优立机械有限公司  
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## About us 关于我们

**18<sup>+</sup>**  
年  
从事阀门事业

**50<sup>+</sup>**  
个  
产品应用行业

**200<sup>+</sup>**  
种  
产品种类多元化

**10<sup>+</sup>**  
种  
产品执行标准

温州优立机械有限公司创建于2002年，从事阀门事业近20年。总部位于温州市龙湾区高新技术园区度山工业区。是一家集研发、铸造、生产、销售及服务为一体的全能型阀门制造企业。

企业拥有现代化标准生产车间，雄厚的经济实力，完善的生产设备，专业的技术团队，是富睿稳步发展的基石。富睿产品以品质至上赢得口碑，靠品类丰富占有市场。所生产产品都经过严格的检验与检测，做到有瑕疵产品坚决不进入下一流程，不合格产品坚决不出车间，不会让不良品流入客户手中。为稳步拓展市场，企业现有研发生产的产品种类200多个型号，1000多种规格。

专业制造生产不锈钢阀门系列：电动阀门、气动阀门、L型三通球阀，T型三通球阀，单L型四通球阀、双L四通球阀、T型四通球阀、T型五通球阀、L型五通球阀、非标五通球阀、过滤器，闸阀，止回阀，截止阀，S型截止阀，B型截止阀，旋启式止回阀，立式止回阀，Y型过滤器，对夹式止回阀，快速接头，KJA槽车快速接头，KJB槽车快速接头，不锈钢快速接头，铝合金快速接头，铜制快速接头，液压快速接头，一片式球阀，二片式球阀，三片式球阀，对焊球阀，快装球阀，承插焊球阀，内螺纹球阀，法兰球阀，卫生级球阀，卫生级隔膜阀，卫生级法兰球阀，Z15闸阀，H14止回阀，H12止回阀，JB11截止阀，JS11截止阀，GY11过滤器，H71止回阀，Z41闸阀，H44止回阀，H42止回阀，J41截止阀，GY41过滤器，Q11球阀，Q15球阀，Q14球阀，Q21球阀，Q41球阀，Q61球阀，Q71球阀，Q81球阀，G81隔膜阀，D81蝶阀，管件、弯头、三通、堵头、管帽、活接、外丝、内丝、皮干接、等其它非标产品订做。

公称通径：DN15mm-DN300mm ( 1/4 " -12 " )。  
公称压力：PN0.6Mpa-6.4Mpa ( Class150LB-600LB )。  
连接方式：丝扣，快装，法兰，焊接等方式。  
驱动方式：进口（国产）气动，电动，蜗轮，液动等方式。

产品广泛应用于水务，石油，化工，造纸，电站，船舶，轻纺，建筑，水利，制药，环保等诸多行业。在标准化规范化发展前提下，企业先后获得国家压力管道TS证书、国际质量体系ISO9001-2015证书、欧盟CE证书、多枚国家商标证书、多项专利等证书和荣誉。产品也远销海外，遍及美国，日本，欧洲，东南亚，南非等国家和地区。企业以创新带发展、质量求生存、管理促效益、诚信引客户的经营理念，“诚心服务、注重品牌”取信于新老客户，服务于新老客户。欢迎各界新老朋友来电来函咨询。真诚欢迎各界用户前来参观、考察、洽谈业务！



YouLi Machinery Co., Ltd. was founded in 2002 and has been engaged in valve business for nearly 20 years. The headquarter is located in Dushan Industrial Zone, High-tech Park, Longwan District, Wenzhou City. It is an all-round valve manufacturing enterprise integrating R&D, casting, production, sales and service.

The company has modern standard production workshops, strong economic strength, perfect production equipment, and professional technical team, which are the cornerstones of Fu Rui's steady development. Furui's products have won a reputation for quality first, and they occupy the market with rich categories. The products produced have undergone strict inspection and testing, so that defective products will never enter the next process, unqualified products will never leave the workshop, and defective products will not flow into the hands of customers. In order to steadily expand the market, the company currently develops and produces more than 200 types of products and more than 1,000 specifications.

Professional manufacturing and production of stainless steel valve series: electric valves, pneumatic valves, L-type three-way ball valves, T-type three-way ball valves, single L-type four-way ball valves, double-L four-way ball valves, T-type four-way ball valves, T-type five-way ball valves, L-type five-way ball valve, non-standard five-way ball valve, filter, gate valve, check valve, stop valve, S-type stop valve, B-type stop valve, swing check valve, vertical check valve, Y-type filter, Wafer check valve, quick coupling, KJA tank truck quick coupling, KJB tank truck quick coupling, stainless steel quick coupling, aluminum alloy quick coupling, copper quick coupling, hydraulic quick coupling, one-piece ball valve, two-piece ball valve, Three-piece ball valve, butt welding ball valve, quick-fit ball valve, socket welding ball valve, internal thread ball valve, flange ball min, sanitary ball valve, sanitary diaphragm valve, sanitary flange ball valve, Z15 gate valve, H14 check valve, H12 check valve, JB11 globe valve, JS11 globe valve, GY11 filter, H71 check valve, Z41 gate valve, H44 check valve, H42 check valve, J41 globe valve, GY41 filter, Q11 ball valve, Q15 ball valve, Q14 ball valve, Q21 ball valve, Q41 ball valve, Q61 ball valve, Q71 ball valve, Q81 ball valve, G81 diaphragm valve, D81 butterfly valve, pipe fittings, elbows, three-way, plugs, pipe caps, unions, outer wires, inner wires, skin dry Other non-standard products are customized.

Nominal diameter: DN15mm-DN300mm (1/4"-12").  
Nominal pressure: PN0.6Mpa-6.4Mpa (Class150LB-600LB).  
Connection methods: threaded, quick installation, flange, welding, etc.  
Drive mode: imported (domestic) pneumatic, electric, worm gear, hydraulic, etc.

Products are widely used in water, petroleum, chemical, paper, power station, shipbuilding, textile, construction, water conservancy, pharmaceutical, environmental protection and many other industries. Under the premise of standardized development, the company has successively obtained the national pressure pipeline TS certificate, the international quality system ISO9001-2015 certificate, the EU CE certificate, multiple national trademark certificates, multiple patents and other certificates and honors. Products are also exported to overseas, all over the United States, Japan, Europe, Southeast Asia, South Africa and other countries and regions. With the business philosophy of innovation to drive development, quality to survive, management to promote efficiency, and integrity to attract customers, the company "sincere service and focus on brand" wins the trust of new and old customers and serves new and old customers. Welcome new and old friends from all walks of life to call or write for consultation. Sincerely welcome users from all walks of life to visit, inspect and negotiate business!

# OVERVIEW OF EXPLOSION PROTECTION

## 防爆概述

### 什么是爆炸? What is an explosion?

发爆炸的先决条件是易爆物质必须与氧气有一定程度的混合,在适当的引燃条件下引起化学反应,如果反应速度超过声速,就被定义为爆炸。积累到一定程度的易爆混合物突然爆炸,并以爆炸波的形式造成破坏效应。

The prerequisite for an explosion is that the explosive substance must be mixed with oxygen to a certain extent and cause a chemical reaction under appropriate ignition conditions. If the reaction speed exceeds the speed of sound, it is defined as an explosion. Explosive mixtures that accumulate to a certain extent suddenly explode and cause destructive effects in the form of explosive waves.



### 什么是防爆? What is explosion-proof?

上述三个条件之中的任何一个限制发生,就能防止爆炸,在许多使用现场,易燃物质以及氧气的存在是很难避免的,因此引燃源必须要受到限制。

电气设备是一个潜在的引燃源,在机器运转时导致表面温度升高静电释放或瞬间电流所引起的电火花等。在设计上,防爆型电气设备避免了在其运转过程中表面温度过高和引起电火花。因此,防爆型电气设备不会成为潜在的引燃源。

Any restriction of the above three conditions can prevent explosions. In many usage scenarios, the presence of flammable substances and oxygen is difficult to avoid, so the ignition source must be restricted.

Electrical equipment is a potential ignition source that can cause an increase in surface temperature during machine operation, resulting in electrostatic discharge or electrical sparks caused by instantaneous currents. In terms of design, explosion-proof electrical equipment avoids surface temperatures that are too high and can cause electrical sparks during its operation. Therefore, explosion-proof electrical equipment will not become a potential ignition source.

### 潜在的易燃环境分类 Classification of potential flammable environments

通常爆炸性气体环境用电气设备可分为两类: I类煤矿用电气设备; II类除煤矿外的其它爆炸性气体环境用电气设备。

对于II类电气设备,按照爆炸性气体的最大试验安全间隙(隔爆型)和最小试验引燃电流(本安型)可分为、IIC三个爆炸级别,且B类设备可适用于A设备的使用条件,IIC类设备可适用于A及B设备的使用条件。

对于类电气设备,按照允许的最高表面温度可分为T1(450°C)、T2(300°C)、T3(200°C)、T4(135°)、T5(100°)、T6(85°C)等六个温度组别,且高一温度组别的设备可适用于低一温度组别的使用条件。

90%以上的爆炸性气体包含在A、IIB的爆炸级别和T1T4的温度组别当中。

Electrical equipment for explosive gas environments can generally be divided into two categories: Class I electrical equipment for coal mines; Electrical equipments for Class II explosive gas environments other than coal mines. For Class II electrical equipment, it can be divided into three explosion levels based on the maximum test safety gap (explosion-proof type) and minimum test ignition current (intrinsic safety type) for explosive gases, and Class B equipment can be suitable for the usage conditions of Equipment A, while Class C equipment can be suitable for the usage conditions of Equipment A and B.

For electrical equipment, it can be divided into six temperature groups according to the maximum allowable surface temperature: T1 (450 ° C), T2 (300 ° C), T3 (200 ° C), T4 (135 ° C), T5 (100 ° C), T6 (85 ° C), etc. The equipment in the higher temperature group can be suitable for use in the lower temperature group.

More than 90% of explosive gases are included in the explosion levels of A and B, as well as in the temperature group of T1T4.

|                         |     | 温度组别 Temperature group                                                                                   |                                                                        |                                                                 |                    |            |                                 |
|-------------------------|-----|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------|------------|---------------------------------|
|                         |     | T1(450°C)                                                                                                | T2(3000°C)                                                             | T3(2000°C)                                                      | T3(2000°C)         | T5(1000°C) | T6(85°C)                        |
| 爆炸级别<br>Explosion level | IIA | 丙酮、乙醇、氨、苯、乙酸、甲醇、丙烷、甲苯.....<br>Acetone, ethane, ammonia, benzene, acetic acid, methanol, propane, toluene | 乙醇、丁烷、丁醇、乙烯、二氯乙烷<br>Ethanol, butane, butanol, ethylene, dichloroethane | 苯、柴油、航空燃油、乙烷、燃油<br>Benzene, diesel, aviation fuel, ethane, fuel | 乙醛<br>Acetaldehyde |            |                                 |
|                         | IIB | 燃气 Gas                                                                                                   | 乙烯、乙烯氧<br>Ethylene, ethylene oxide                                     |                                                                 | 乙醚 Ether           |            |                                 |
|                         | IIC | 氢 Hydrogen                                                                                               | 乙炔 Acetylene                                                           |                                                                 |                    |            | 碳、二硫化物<br>Carbon and disulfides |

### 如何实现防爆? How to achieve explosion-proof?

可以有不同的方法使得电器设备适用于易爆的环境中,在GB3836、C60079、EN50014等标准中对这些方法均有详尽的描述。GR防爆系列电机执行机构按防爆类型为“隔爆型”(Exd)的型式制造,符合GB/T38361-2021 GB/3836.2-2021标准要求。

There can be different methods to make electrical equipment suitable for explosive environments, and these methods are detailed in standards such as GB3836, C60079, EN50014, etc.

The GR explosion-proof series motor actuator is manufactured according to the explosion-proof type of "explosion-proof type" (Exd) and meets the requirements of GB/T38361-2021 GB/3836.2-2021 standard.

### 隔爆型(Exd) Explosion proof type (Exd)

隔爆型执行机构中允许在设备内发生爆炸,壳体的隔爆面是按照组织内部火花或爆炸载体与外界发生接触来设计的,合适的隔爆面间歇和足够大的隔爆面长度可确保这一点,同时的壳体可以承受内部爆炸产生的高压而不被破坏。

GR 防爆系列执行机构一下部件是按隔爆型标准来设计和制造:

Explosion is allowed inside the equipment in explosion-proof actuators. The explosion-proof surface of the shell is designed according to the contact between internal sparks or explosive carriers and the outside world. The appropriate interval and sufficient length of the explosion-proof surface can ensure this. At the same time, the shell can withstand the high pressure generated by internal explosions without being damaged.

The following components of the HLZ explosion-proof series actuator are designed and manufactured according to explosion-proof standards:

◇ Motor chamber      ◇ Electrical component chamber      ◇ Wiring chamber

### 防爆等级 Explosion proof level

GR 防爆系列电机执行机构的防爆等级为: ExdbIIBT6Gb  
Ex—防爆标识;  
db—防爆类型,表示为“隔爆型”;  
II—设备类别,表示除煤矿外的其它爆炸性气体环境用电气设备;  
B—爆炸等级,该级别决定执行机构各隔爆接合面的尺寸(长度和间隙);  
T6—温度组别,表示允许执行机构最高表面温度不超过85°C;  
Gb—表示设备保护级别。

The explosion-proof level of the HLZ explosion-proof series motor actuator is ExdbIIBT6Gb  
Ex - Explosion proof label;  
DB is an explosion-proof type, represented as "explosion-proof type";  
Equipment category, representing electrical equipment for explosive gas environments other than coal mines;  
B-explosion level, which determines the size (length and gap) of each explosion-proof joint surface of the actuator;  
T6 is a temperature group that allows the maximum surface temperature of the actuator to not exceed 85 ° C;  
Gb represents the level of device protection.

### 如何使用及维护防爆电气设备?

安装、调试、维护、维修和更换等工作,必须由经过培训的、合格的防爆专业技术人员来进行,并且应严格按照电气设备【使用说明书】的要求来执行。

Installation, debugging, maintenance, repair, and replacement work must be carried out by trained and qualified explosion-proof professional technicians, and should be strictly carried out in accordance with the requirements of the electrical equipment [user manual].

# ACTUATOR SERIES

## 产品集锦

### 防爆型电动执行器

Explosion proof electric actuator

- 防爆等级: ExdIICT4Gb
  - 防护等级: IP68
  - 安装方法: 360°任意角度安装
  - 环境温度: -20°C~+60°C
  - 选装功能: 除湿加热器
  - 用于潜在的易爆环境
  - 配用角行程阀门
- 
- Explosion proof level: ExdIICT4Gb
  - Protection level: IP68
  - Installation method: Install at any angle of 360 °
  - Environmental temperature: -20°C~+60°C
  - Optional function: Heater
  - Used in potentially explosive environments
  - Equipped with angle stroke valves



### 普通电动执行机构

Ordinary electric actuator

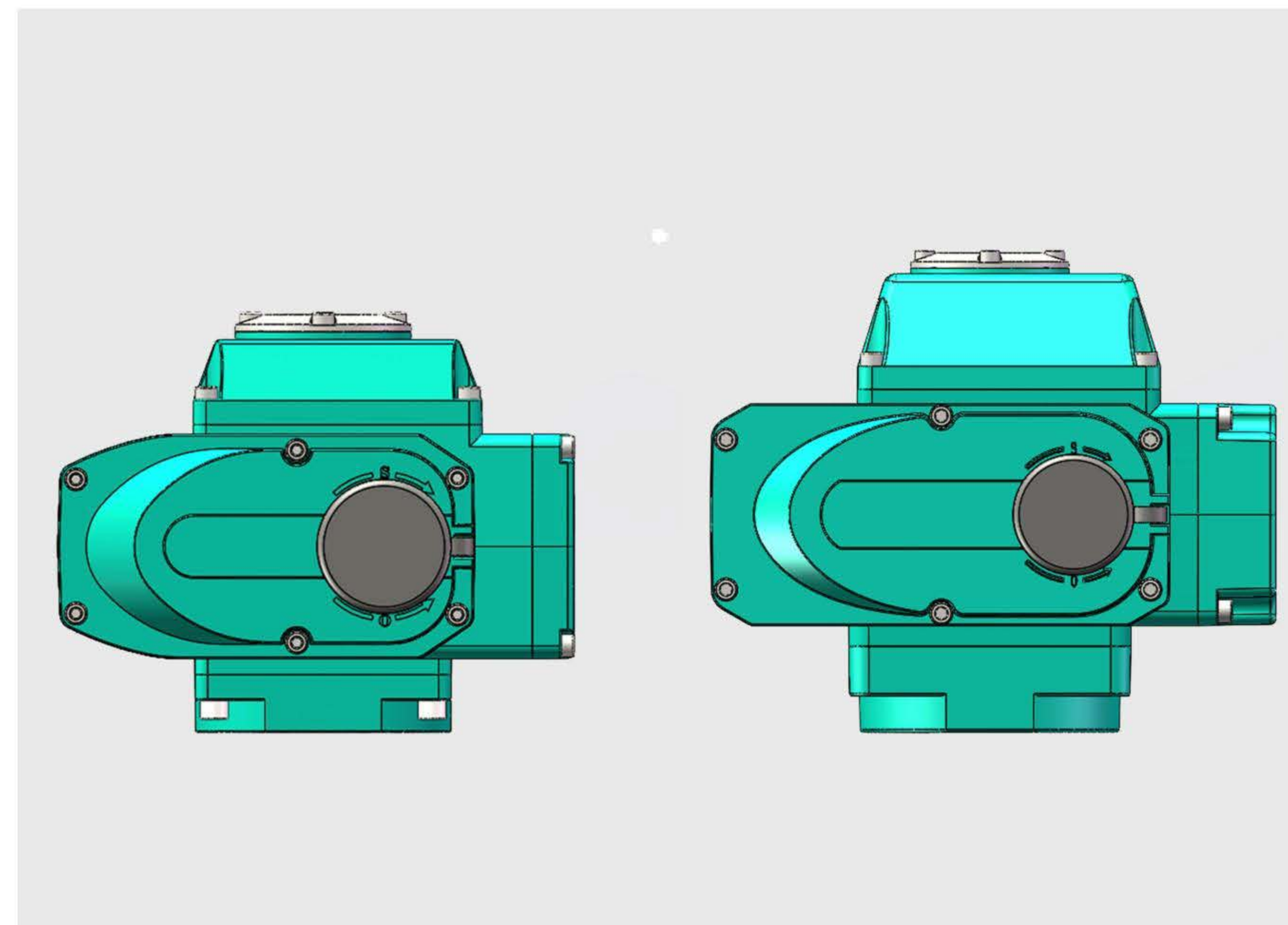
- 防护等级: IP67
  - 安装方法: 360°任意角度安装
  - 环境温度: -25°C~+55°C
  - 选装功能: 除湿加热器、凸式指示器
  - 配用角行程阀门
- 
- Protection level: IP67
  - Installation method: Install at any angle of 360 °
  - Environmental temperature: -25°C~+55°C
  - Optional functions: Heater
  - Equipped with angle stroke valves



### 新品电动执行器

New electric actors

- 防护等级: IP67
  - 安装方法: 360°任意角度安装
  - 环境温度: -20°C~+60°C
  - 选装功能: 除湿加热器
  - 用于潜在的易爆环境
  - 配用角行程阀门
- 
- Protection level: IP67
  - Installation method: Install at any angle of 360 °
  - Environmental temperature: -20°C~+60°C
  - Optional function: Heater
  - Used in potentially explosive environments
  - Equipped with quarter turn valves



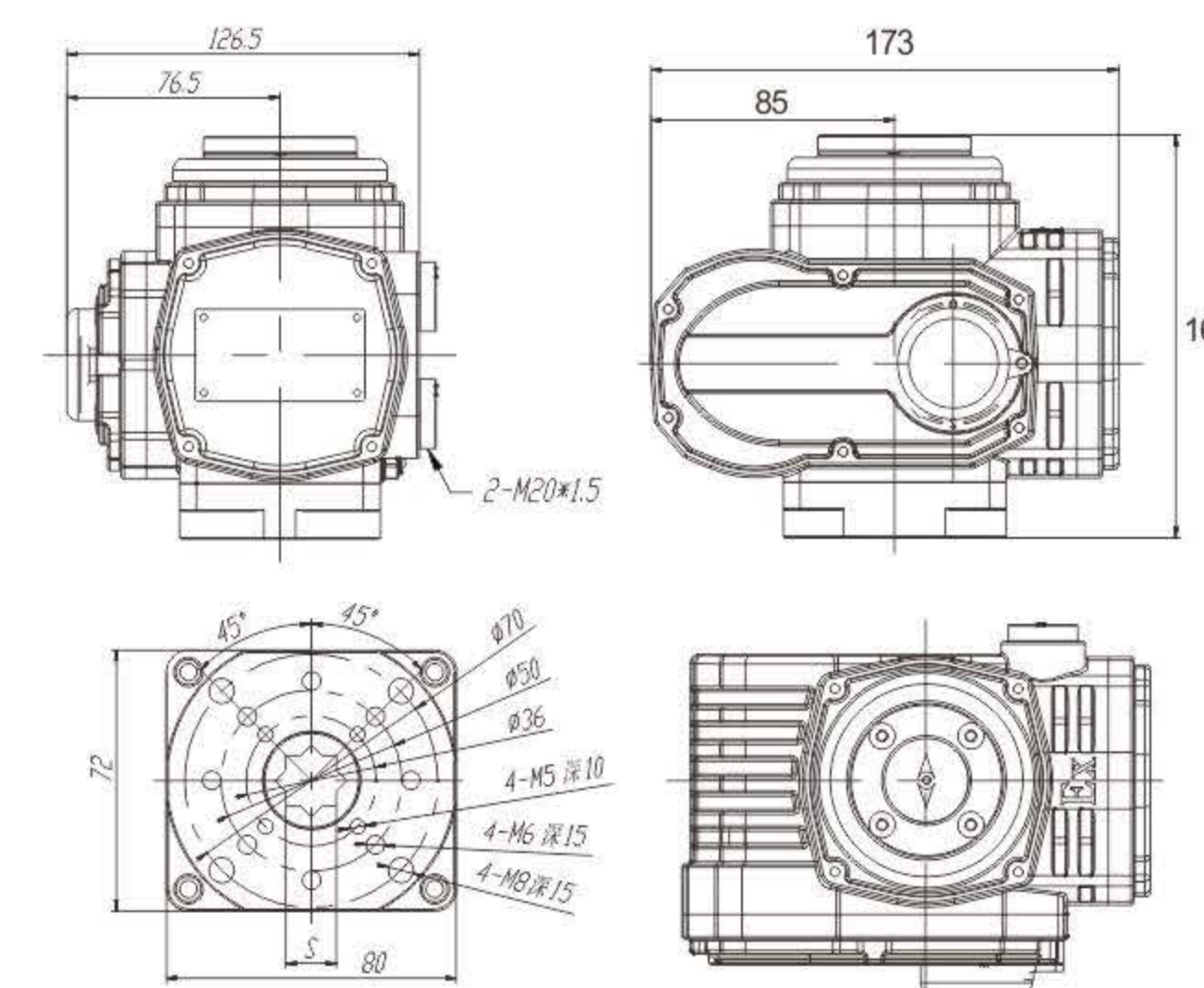
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# EXPLOSION PROOF ELECTRIC ACTUATOR 隔爆型电动执行器



## GRZK-X1-05 隔爆型电动执行器 Explosion-proof electric actuator

GRZK-Ex-05外观尺寸  
GRZK-Ex-05External size



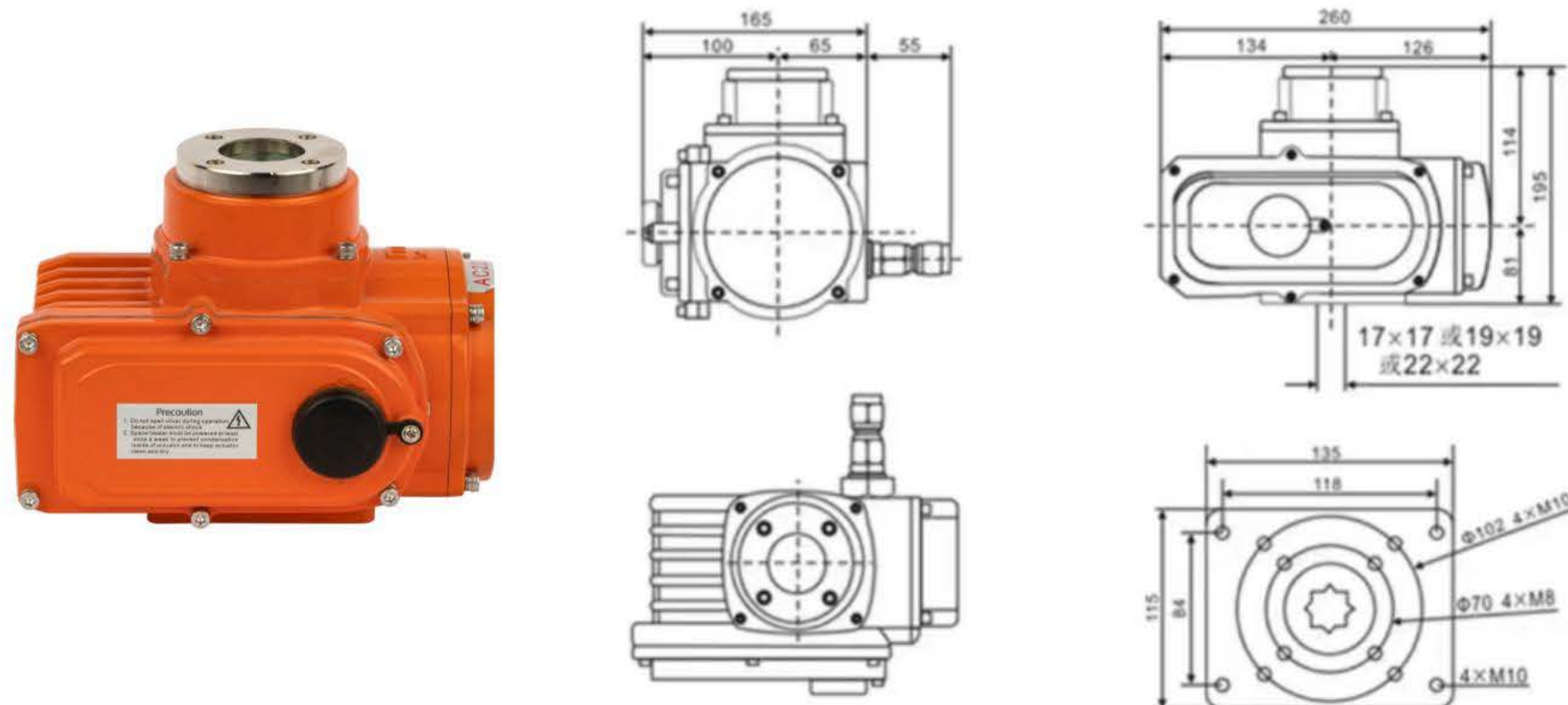
内四方设有14x14 11x11 9x9 深23  
Inner Sifang S has a 14x14 11x11 9x9 depth of 23

### 性能参数 Performance parameter

| 型号 Model                       | GRZK-Ex-05                                                                                                                                                                                     |              |        |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|
| 电源 Voltage                     | DC24V                                                                                                                                                                                          | AC220V       | AC380V |
| 输出力矩 Output Torque             | 50NM                                                                                                                                                                                           | 50NM         | 50NM   |
| 90°动作时间 Motion times(s)        | 10s                                                                                                                                                                                            | 20s          | 20s    |
| 回转角度范围 Rotary Angle            | 0-90°                                                                                                                                                                                          | 0-90°        | 0-90°  |
| 电机功率 Motor power(w)            | 25W                                                                                                                                                                                            | 15W          | 10W    |
| 额定电流 Rated current(A)          | 2A                                                                                                                                                                                             | 0.26A        | 0.1A   |
| A整机重量 Machine weight(kg)       | 3.7kg                                                                                                                                                                                          | 3.7kg        | 3.7kg  |
| 绝缘电阻 Insulation Resistance(MΩ) | 100MΩ/300VDC                                                                                                                                                                                   | 100MΩ/500VDC |        |
| 耐压等级 Voltage Resistance Rating | 500VAC(1分钟)                                                                                                                                                                                    | 1500VAC(1分钟) |        |
| 防护等级 IP Grade                  | IP 67                                                                                                                                                                                          |              |        |
| 安装方位 Installation Position     | 360°任意角度安装 Rotary degree:360°                                                                                                                                                                  |              |        |
| 电气接口 Electriad connection      | 2-M20*1.5防爆堵头,使用时用户应根据所选电缆,加装相应的防爆电缆接头<br>2-M20 * 1.5 explosion-proof plug, users should install corresponding explosion-proof cable joints according to the selected cable during use         |              |        |
| 环境温度 Environment temperature   | -20°C~60°C                                                                                                                                                                                     |              |        |
| 控制电路选项 Control circuit options | 标准型:极限位置开关A型:带中间位置开关B型:带电位器D型:带控制模块(智能型)<br>Standard type: Limit position switch A type: With middle position switch B type: With potentiometer D type: With control module (intelligent type) |              |        |
| 任选功能 Optional function         | 除湿加热器Heater                                                                                                                                                                                    |              |        |
| 防爆等级 Grade                     | Exdb 11BT 6GB                                                                                                                                                                                  |              |        |

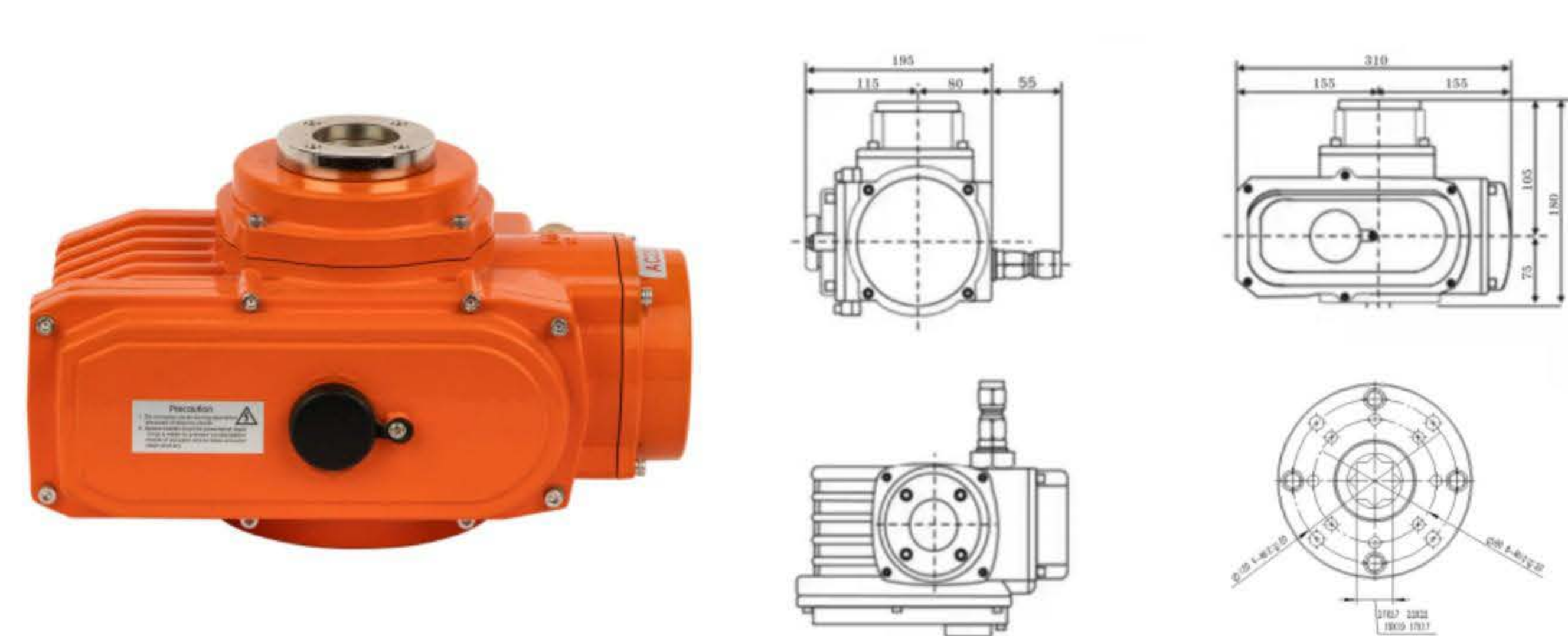
## 隔爆型电动执行器 Explosion-proof electric actuator

GRZK-Ex-10-15外观尺寸  
GRZK-Ex-10-15 External size



## 隔爆型电动执行器 Explosion-proof electric actuator

GRZK-Ex-100-200外观尺寸  
GRZK-Ex-100-200 External size



## 性能参数 Performance parameter

| 型号 Model                       | GRZK-Ex-10                                                                                                                                                                                     |              |        | GRZK-Ex-15   |              |        |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|--------------|--------------|--------|
| 电源 Voltage                     | DC24V                                                                                                                                                                                          | AC220V       | AC380V | DC24V        | AC220V       | AC380V |
| 输出力矩 Output Torque             | 100NM                                                                                                                                                                                          | 100NM        | 100NM  | 150NM        | 150NM        | 150NM  |
| 90°动作时间 Motion times(s)        | 15s                                                                                                                                                                                            | 30s          | 30s    | 15s          | 30s          | 30s    |
| 回转角度范围 Rotary Angle            | 0-90°                                                                                                                                                                                          | 0-90°        | 0-90°  | 0-90°        | 0-90°        | 0-90°  |
| 电机功率 Motor power(w)            | 65W                                                                                                                                                                                            | 25W          | 15W    | 45W          | 25W          | 15W    |
| 额定电流 Rated current(A)          | 4.3A                                                                                                                                                                                           | 0.35A        | 0.15A  | 5.13A        | 0.45A        | 0.15A  |
| A整机重量 Machine weight(kg)       | 6.7kg                                                                                                                                                                                          | 6.7kg        | 6.7kg  | 7kg          | 7kg          | 7kg    |
| 绝缘电阻 Insulation Resistance(MΩ) | 100MΩ/300VDC                                                                                                                                                                                   | 100MΩ/500VDC |        | 100MΩ/300VDC | 100MΩ/500VDC |        |
| 耐压等级 Voltage Resistance Rating | 500VAC(1分钟)                                                                                                                                                                                    | 1500VAC(1分钟) |        | 500VAC(1分钟)  | 1500VAC(1分钟) |        |
| 防护等级 IP Grade                  | IP 67                                                                                                                                                                                          |              |        |              |              |        |
| 安装方位 Installation Position     | 360°任意角度安装 Rotary degree:360°                                                                                                                                                                  |              |        |              |              |        |
| 电气接口 Electriad connection      | 2-M20*1.5防爆堵头,使用时用户应根据所选电缆,加装相应的防爆电缆接头<br>2-M20 * 1.5 explosion-proof plug, users should install corresponding explosion-proof cable joints according to the selected cable during use         |              |        |              |              |        |
| 环境温度 Environment temperature   | -20℃~60℃                                                                                                                                                                                       |              |        |              |              |        |
| 控制电路选项 Control circuit options | 标准型:极限位置开关A型:带中间位置开关B型:带电位器D型:带控制模块(智能型)<br>Standard type: Limit position switch A type: With middle position switch B type: With potentiometer D type: With control module (intelligent type) |              |        |              |              |        |
| 任选功能 Optional function         | 除显加热器Heater                                                                                                                                                                                    |              |        |              |              |        |
| 防爆等级 Grade                     | Exdb 11BT 6GB                                                                                                                                                                                  |              |        |              |              |        |

| 型号 Model                       | GRZK-Ex-100                                                                                                                                                                                    |        |              | GRZK-Ex-200 |              |              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------|-------------|--------------|--------------|
| 电源 Voltage                     | DC24V                                                                                                                                                                                          | AC220V | AC380V       | DC24V       | AC220V       | AC380V       |
| 输出力矩 Output Torque             | 1000NM                                                                                                                                                                                         | 1000NM | 1000NM       | 2000NM      | 2000NM       | 2000NM       |
| 90°动作时间 Motion times(s)        | 20s                                                                                                                                                                                            | 30s    | 30s          | 20s         | 45s          | 45s          |
| 回转角度范围 Rotary Angle            | 0-90°                                                                                                                                                                                          | 0-90°  | 0-90°        | 0-90°       | 0-90°        | 0-90°        |
| 电机功率 Motor power(w)            | 90W                                                                                                                                                                                            | 45W    | 60W          | 90W         | 45W          | 60W          |
| 额定电流 Rated current(A)          | 5.7A                                                                                                                                                                                           | 0.57A  | 0.2A         | 8A          | 0.69A        | 0.2A         |
| A整机重量 Machine weight(kg)       | 11kg                                                                                                                                                                                           | 11kg   | 11kg         | 11.5kg      | 11.5kg       | 11.5kg       |
| 绝缘电阻 Insulation Resistance(MΩ) | 100MΩ/300VDC                                                                                                                                                                                   |        | 100MΩ/500VDC |             | 100MΩ/300VDC | 100MΩ/500VDC |
| 耐压等级 Voltage Resistance Rating | 500VAC(1分钟)                                                                                                                                                                                    |        | 1500VAC(1分钟) |             | 500VAC(1分钟)  | 1500VAC(1分钟) |
| 防护等级 IP Grade                  | IP 67                                                                                                                                                                                          |        |              |             |              |              |
| 安装方位 Installation Position     | 360°任意角度安装 Rotary degree:360°                                                                                                                                                                  |        |              |             |              |              |
| 电气接口 Electriad connection      | 2-M20*1.5 防爆堵头,使用时用户应根据所选电缆,加装相应的防爆电缆接头<br>2-M20 * 1.5 explosion-proof plug, users should install corresponding explosion-proof cable joints according to the selected cable during use        |        |              |             |              |              |
| 环境温度 Environment temperature   | -20°C~60°C                                                                                                                                                                                     |        |              |             |              |              |
| 控制电路选项 Control circuit options | 标准型:极限位置开关A型:带中间位置开关B型:带电位器D型:带控制模块(智能型)<br>Standard type: Limit position switch A type: With middle position switch B type: With potentiometer D type: With control module (intelligent type) |        |              |             |              |              |
| 任选功能 Optional function         | 除湿加热器Heater                                                                                                                                                                                    |        |              |             |              |              |
| 防爆等级 Grade                     | Exdb 11BT 6GB                                                                                                                                                                                  |        |              |             |              |              |

02

# ORDINARY ELECTRIC ACTUATOR

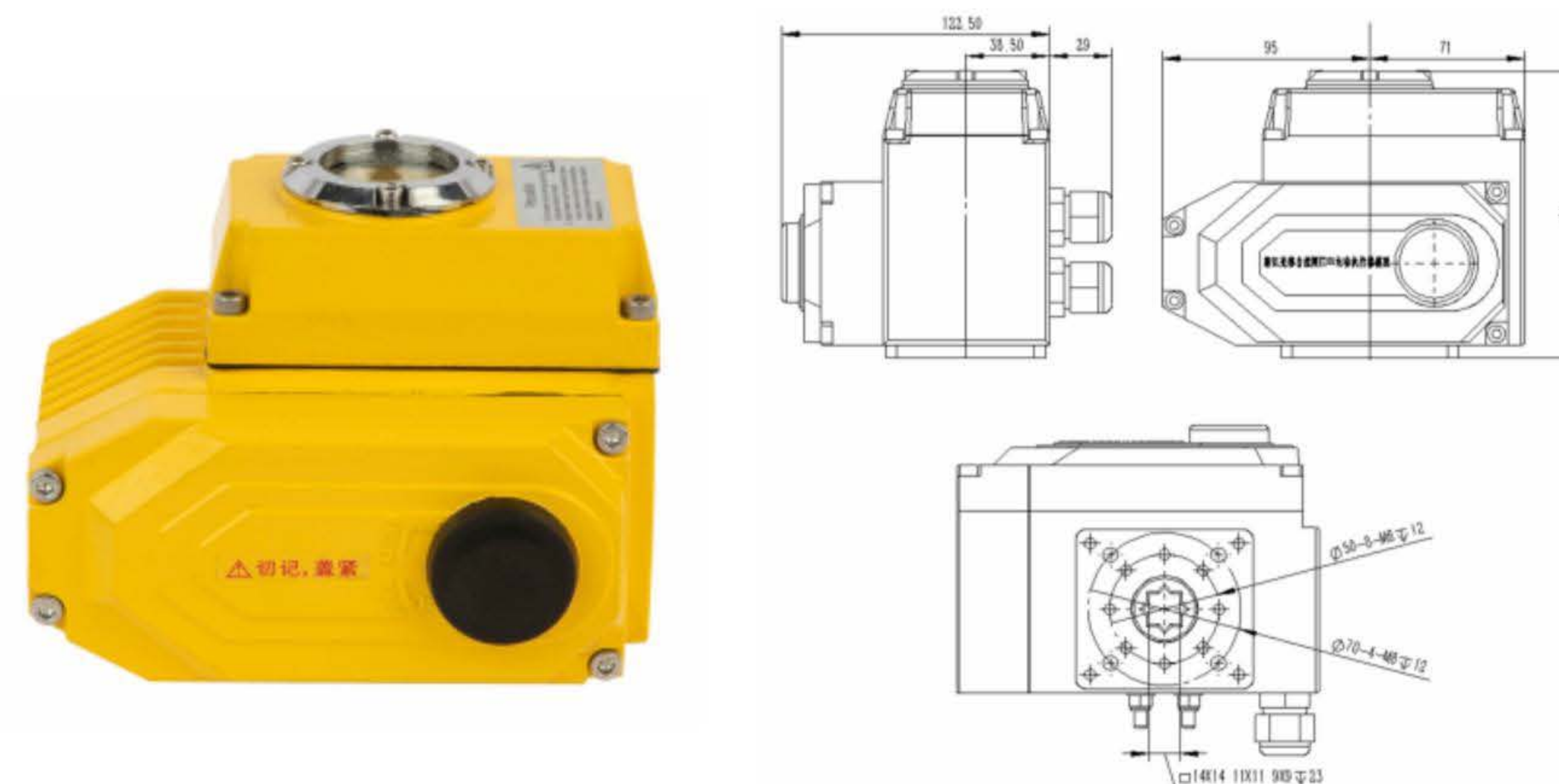
## 普通型电动执行器



### GRZK-05

#### 普通型电动执行器 Ordinary electric actuator

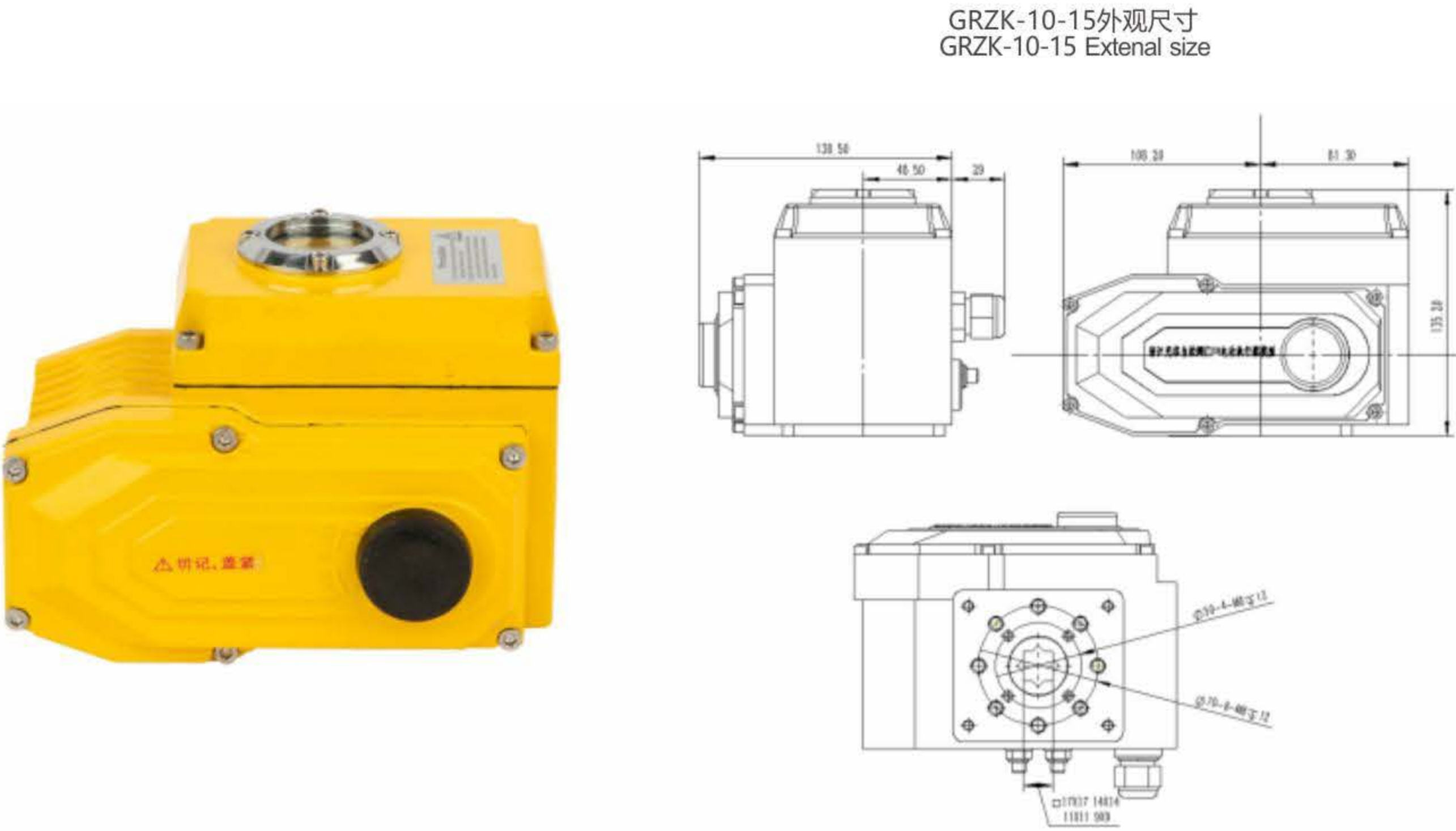
GRZK-05 外观尺寸  
GRZK-Ex-05 Extenal size



#### 性能参数 Performance parameter

| 型号 Model                       | GRZK-05                                                                                                                                                                                        |              |        |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|
| 电源 Voltage                     | DC24V                                                                                                                                                                                          | AC220V       | AC380V |
| 输出力矩 Output Torque             | 50NM                                                                                                                                                                                           | 50NM         | 50NM   |
| 90°动作时间 Motion times(s)        | 10s                                                                                                                                                                                            | 20s          | 20s    |
| 回转角度范围 Rotary Angle            | 0-90°                                                                                                                                                                                          | 0-90°        | 0-90°  |
| 电机功率 Motor power(w)            | 25W                                                                                                                                                                                            | 15W          | 10W    |
| 额定电流 Rated current(A)          | 2A                                                                                                                                                                                             | 0.26A        | 0.1A   |
| A整机重量 Machine weight(kg)       | 3.1kg                                                                                                                                                                                          | 3.1kg        | 3.1kg  |
| 绝缘电阻 Insulation Resistance(MΩ) | 100MΩ/300VDC                                                                                                                                                                                   | 100MΩ/500VDC |        |
| 耐压等级 Voltage Resistance Rating | 500VAC(1分钟)                                                                                                                                                                                    | 1500VAC(1分钟) |        |
| 防护等级 IP Grade                  | IP 67                                                                                                                                                                                          |              |        |
| 安装方位 Installation Position     | 360°任意角度安装 Rotary degree:360°                                                                                                                                                                  |              |        |
| 电气接口 Electriad connection      | M20*1.5 防水电缆接头<br>M20 * 15 Waterproof cable joint                                                                                                                                              |              |        |
| 环境温度 Environment temperature   | -30℃~60℃                                                                                                                                                                                       |              |        |
| 控制电路选项 Control circuit options | 标准型:极限位置开关A型:带中间位置开关B型:带电位器D型:带控制模块(智能型)<br>Standard type: Limit position switch A type: With middle position switch B type: With potentiometer D type: With control module (intelligent type) |              |        |
| 任选功能 Optional function         | 除湿加热器Heater                                                                                                                                                                                    |              |        |

**GRZK-10-15**  
 普通型电动执行器 Ordinary electric actuator



性能参数 Performance parameter

| 型号 Model                       | GRZK-10                                                                                                                                                                                        |              |              | GRZK-15      |              |              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|
| 电源 Voltage                     | DC24V                                                                                                                                                                                          | AC220V       | AC380V       | DC24V        | AC220V       | AC380V       |
| 输出力矩 Output Torque             | 100NM                                                                                                                                                                                          | 100NM        | 100NM        | 150NM        | 150NM        | 150NM        |
| 90°动作时间 Motion times(s)        | 15s                                                                                                                                                                                            | 30s          | 30s          | 15s          | 30s          | 30s          |
| 回转角度范围 Rotary Angle            | 0-90°                                                                                                                                                                                          | 0-90°        | 0-90°        | 0-90°        | 0-90°        | 0-90°        |
| 电机功率 Motor power(w)            | 35W                                                                                                                                                                                            | 25W          | 15W          | 45W          | 25W          | 15W          |
| 额定电流 Rated current(A)          | 4.3A                                                                                                                                                                                           | 0.35A        | 0.15A        | 5.13A        | 0.45A        | 0.15A        |
| A整机重量 Machine weight(kg)       | 5.3kg                                                                                                                                                                                          | 5.3kg        | 5.3kg        | 5.5kg        | 5.5kg        | 5.5kg        |
| 绝缘电阻 Insulation Resistance(MΩ) | 100MΩ/300VDC                                                                                                                                                                                   | 100MΩ/500VDC | 100MΩ/300VDC | 100MΩ/300VDC | 100MΩ/500VDC | 100MΩ/500VDC |
| 耐压等级 Voltage Resistance Rating | 500VAC(1分钟)                                                                                                                                                                                    | 1500VAC(1分钟) | 500VAC(1分钟)  | 500VAC(1分钟)  | 1500VAC(1分钟) | 500VAC(1分钟)  |
| 防护等级 IP Grade                  | IP 67                                                                                                                                                                                          |              |              |              |              |              |
| 安装方位 Installation Position     | 360°任意角度安装 Rotary degree:360°                                                                                                                                                                  |              |              |              |              |              |
| 电气接口 Electriad connection      | M20*1.5 防水电缆接头<br>M20 * 15 Waterproof cable joint                                                                                                                                              |              |              |              |              |              |
| 环境温度 Environment temperature   | -30°C~60°C                                                                                                                                                                                     |              |              |              |              |              |
| 控制电路选项 Control circuit options | 标准型:极限位置开关A型:带中间位置开关B型:带电位器D型:带控制模块(智能型)<br>Standard type: Limit position switch A type: With middle position switch B type: With potentiometer D type: With control module (intelligent type) |              |              |              |              |              |
| 任选功能 Optional function         | 除湿加热器Heater                                                                                                                                                                                    |              |              |              |              |              |

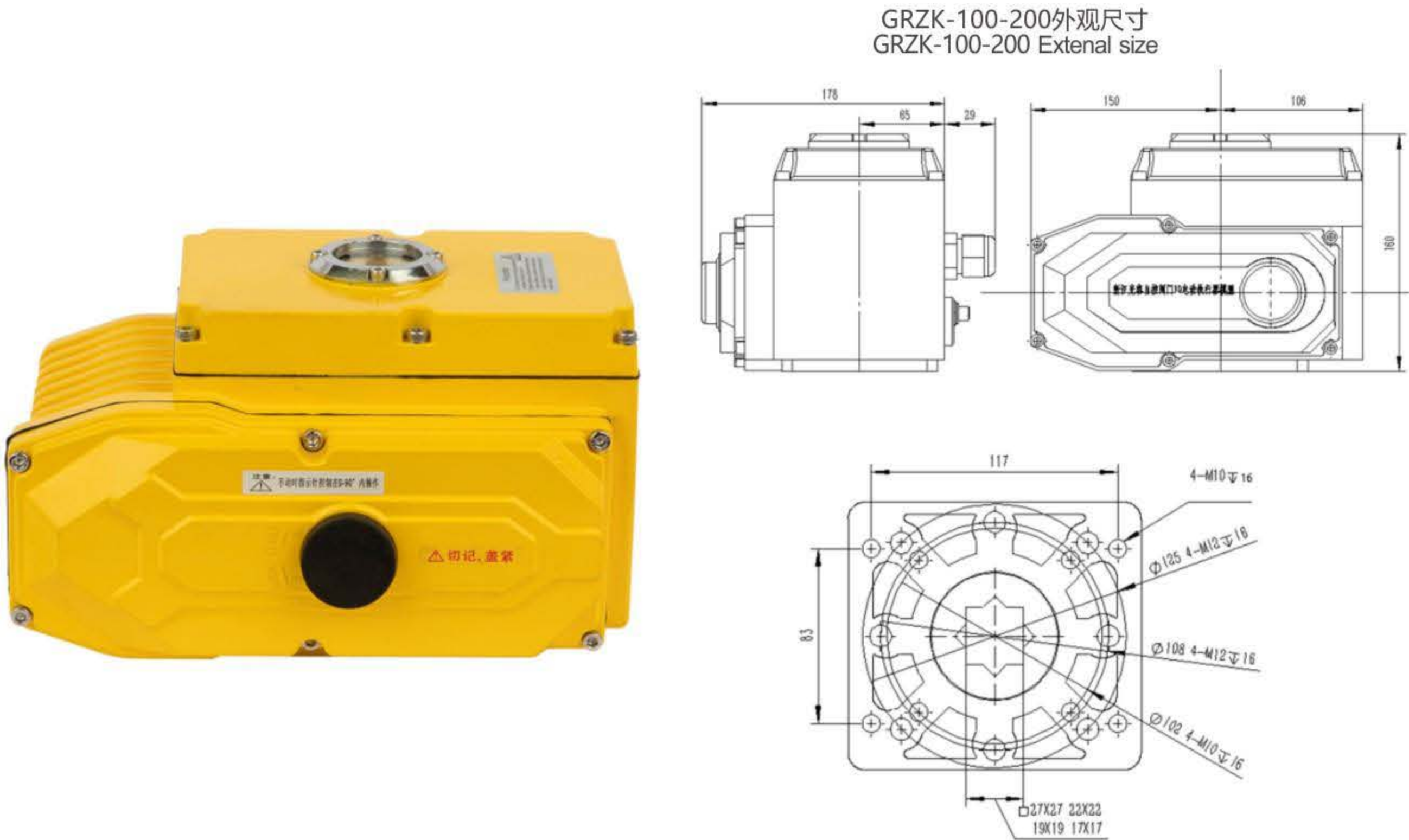
**GRZK-20-60**  
 普通型电动执行器 Ordinary electric actuator



性能参数 Performance parameter

| 型号 Model                       | GRZK-20                                                                                                                                                                                        |              |              | GRZK-60      |              |              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|
| 电源 Voltage                     | DC24V                                                                                                                                                                                          | AC220V       | AC380V       | DC24V        | AC220V       | AC380V       |
| 输出力矩 Output Torque             | 200NM                                                                                                                                                                                          | 200NM        | 200NM        | 600NM        | 600NM        | 600NM        |
| 90°动作时间 Motion times(s)        | 20s                                                                                                                                                                                            | 30s          | 30s          | 20s          | 45s          | 45s          |
| 回转角度范围 Rotary Angle            | 0-90°                                                                                                                                                                                          | 0-90°        | 0-90°        | 0-90°        | 0-90°        | 0-90°        |
| 电机功率 Motor power(w)            | 90W                                                                                                                                                                                            | 45W          | 60W          | 90W          | 45W          | 60W          |
| 额定电流 Rated current(A)          | 5.7A                                                                                                                                                                                           | 0.57A        | 0.2A         | 8A           | 0.69A        | 0.2A         |
| A整机重量 Machine weight(kg)       | 11kg                                                                                                                                                                                           | 11kg         | 11kg         | 11.5kg       | 11.5kg       | 11.5kg       |
| 绝缘电阻 Insulation Resistance(MΩ) | 100MΩ/300VDC                                                                                                                                                                                   | 100MΩ/500VDC | 100MΩ/300VDC | 100MΩ/300VDC | 100MΩ/500VDC | 100MΩ/500VDC |
| 耐压等级 Voltage Resistance Rating | 500VAC(1分钟)                                                                                                                                                                                    | 1500VAC(1分钟) | 500VAC(1分钟)  | 500VAC(1分钟)  | 1500VAC(1分钟) | 500VAC(1分钟)  |
| 防护等级 IP Grade                  | IP 67                                                                                                                                                                                          |              |              |              |              |              |
| 安装方位 Installation Position     | 360°任意角度安装 Rotary degree:360°                                                                                                                                                                  |              |              |              |              |              |
| 电气接口 Electriad connection      | M20*1.5 防水电缆接头<br>M20 * 15 Waterproof cable joint                                                                                                                                              |              |              |              |              |              |
| 环境温度 Environment temperature   | -30°C~60°C                                                                                                                                                                                     |              |              |              |              |              |
| 控制电路选项 Control circuit options | 标准型:极限位置开关A型:带中间位置开关B型:带电位器D型:带控制模块(智能型)<br>Standard type: Limit position switch A type: With middle position switch B type: With potentiometer D type: With control module (intelligent type) |              |              |              |              |              |
| 任选功能 Optional function         | 除湿加热器Heater                                                                                                                                                                                    |              |              |              |              |              |

**GRZK-100-200**  
 普通型电动执行器 Ordinary electric actuator

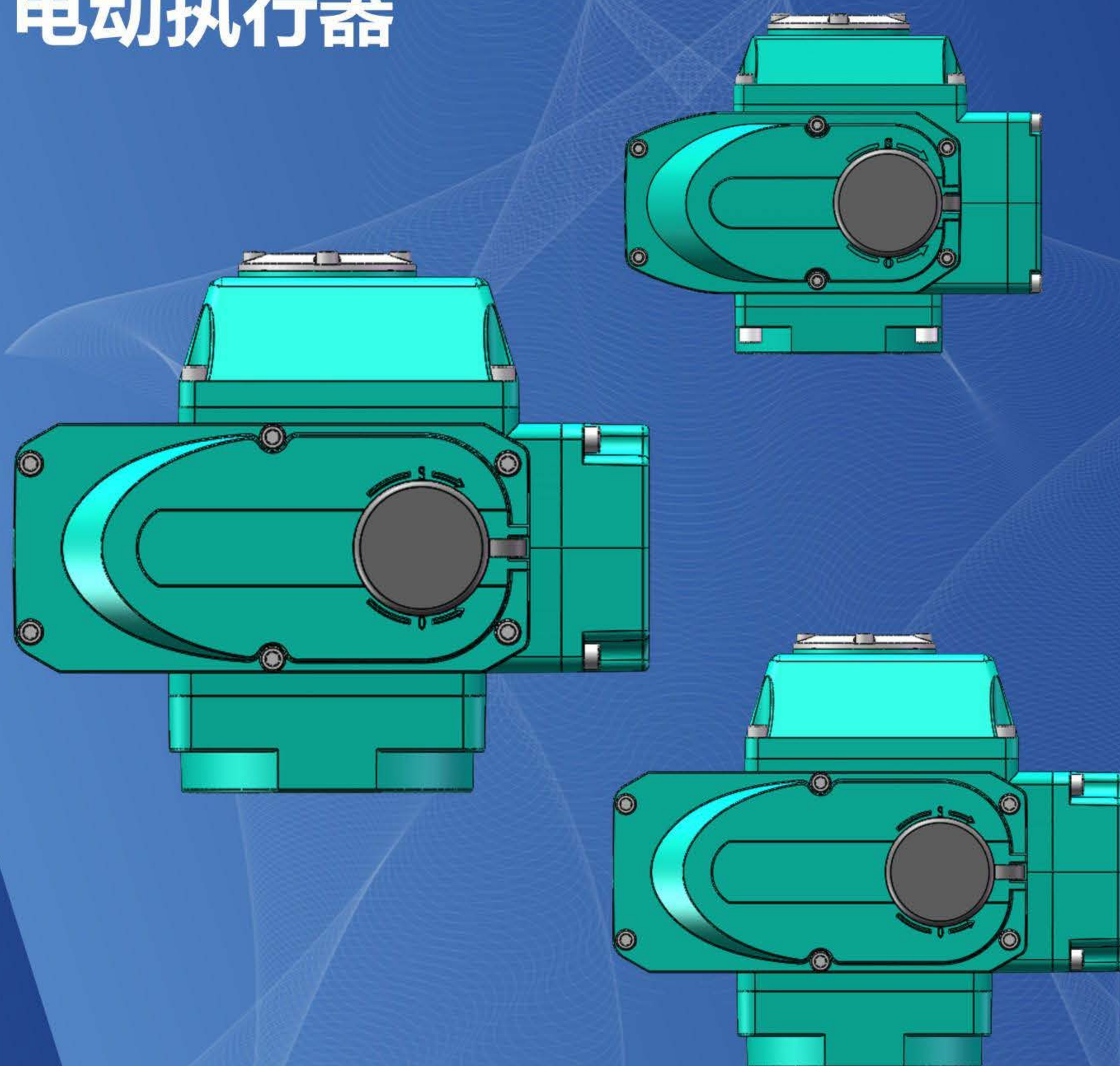


性能参数 Performance parameter

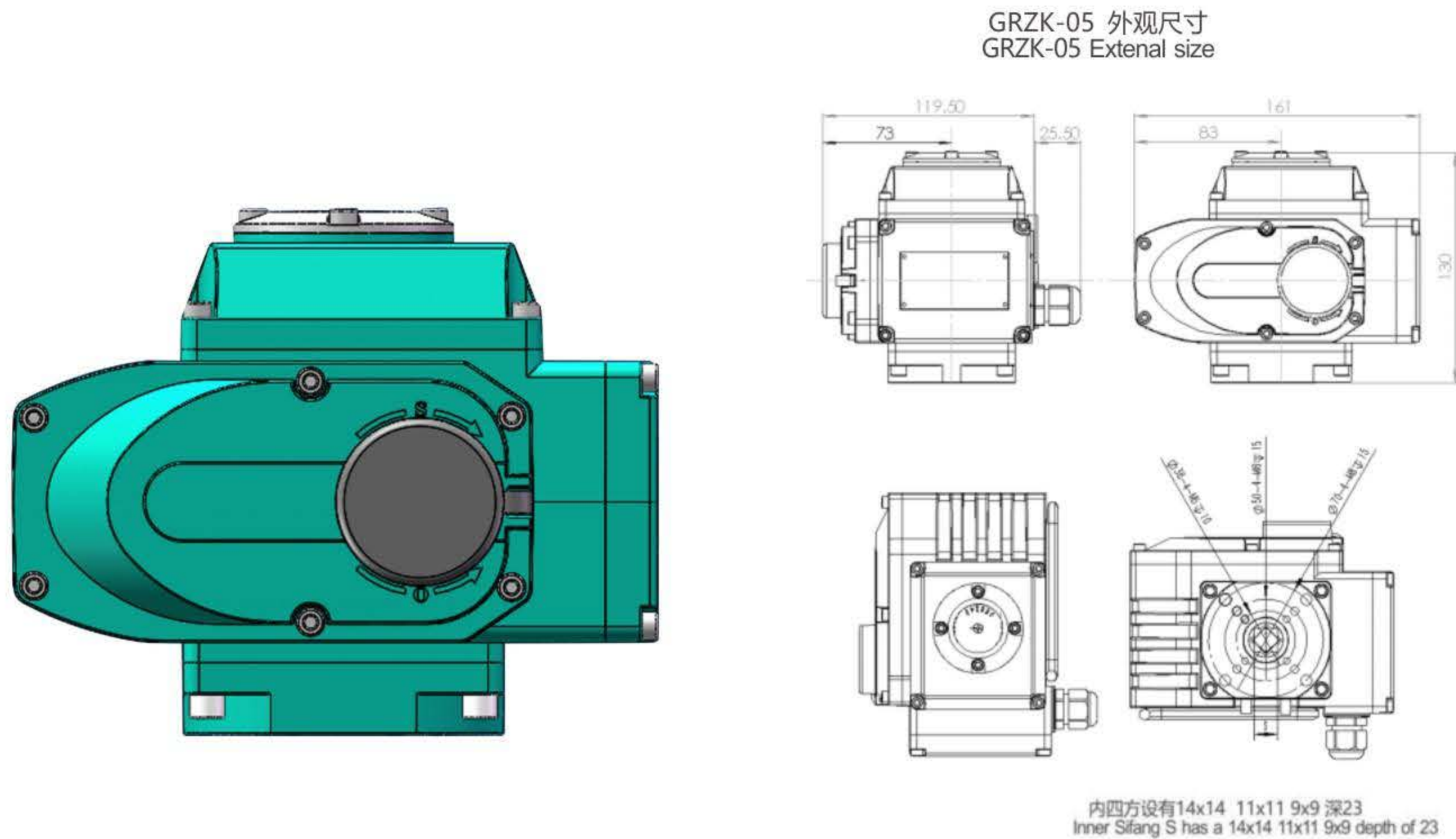
| 型号 Model                       | GRZK-100                                                                                                                                                                                       |              |        | GRZK-200     |              |        |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|--------------|--------------|--------|
| 电源 Voltage                     | DC24V                                                                                                                                                                                          | AC220V       | AC380V | DC24V        | AC220V       | AC380V |
| 输出力矩 Output Torque             | 1000NM                                                                                                                                                                                         | 1000NM       | 1000NM | 2000NM       | 2000NM       | 2000NM |
| 90°动作时间 Motion times(s)        | 20s                                                                                                                                                                                            | 30s          | 30s    | 20s          | 45s          | 45s    |
| 回转角度范围 Rotary Angle            | 0-90°                                                                                                                                                                                          | 0-90°        | 0-90°  | 0-90°        | 0-90°        | 0-90°  |
| 电机功率 Motor power(w)            | 90W                                                                                                                                                                                            | 45W          | 60W    | 90W          | 45W          | 60W    |
| 额定电流 Rated current(A)          | 5.7A                                                                                                                                                                                           | 0.57A        | 0.2A   | 8A           | 0.69A        | 0.2A   |
| A整机重量 Machine weight(kg)       | 11kg                                                                                                                                                                                           | 11kg         | 11kg   | 11.5kg       | 11.5kg       | 11.5kg |
| 绝缘电阻 Insulation Resistance(MΩ) | 100MΩ/300VDC                                                                                                                                                                                   | 100MΩ/500VDC |        | 100MΩ/300VDC | 100MΩ/500VDC |        |
| 耐压等级 Voltage Resistance Rating | 500VAC(1分钟)                                                                                                                                                                                    | 1500VAC(1分钟) |        | 500VAC(1分钟)  | 1500VAC(1分钟) |        |
| 防护等级 IP Grade                  | IP 67                                                                                                                                                                                          |              |        |              |              |        |
| 安装方位 Installation Position     | 360°任意角度安装 Rotary degree:360°                                                                                                                                                                  |              |        |              |              |        |
| 电气接口 Electriad connection      | M20*1.5 防水电缆接头<br>M20 * 15 Waterproof cable joint                                                                                                                                              |              |        |              |              |        |
| 环境温度 Environment temperature   | -30°C~60°C                                                                                                                                                                                     |              |        |              |              |        |
| 控制电路选项 Control circuit options | 标准型:极限位置开关A型:带中间位置开关B型:带电位器D型:带控制模块(智能型)<br>Standard type: Limit position switch A type: With middle position switch B type: With potentiometer D type: With control module (intelligent type) |              |        |              |              |        |
| 任选功能 Optional function         | 除湿加热器Heater                                                                                                                                                                                    |              |        |              |              |        |

03

ELECTRIC  
ACTUATOR  
电动执行器



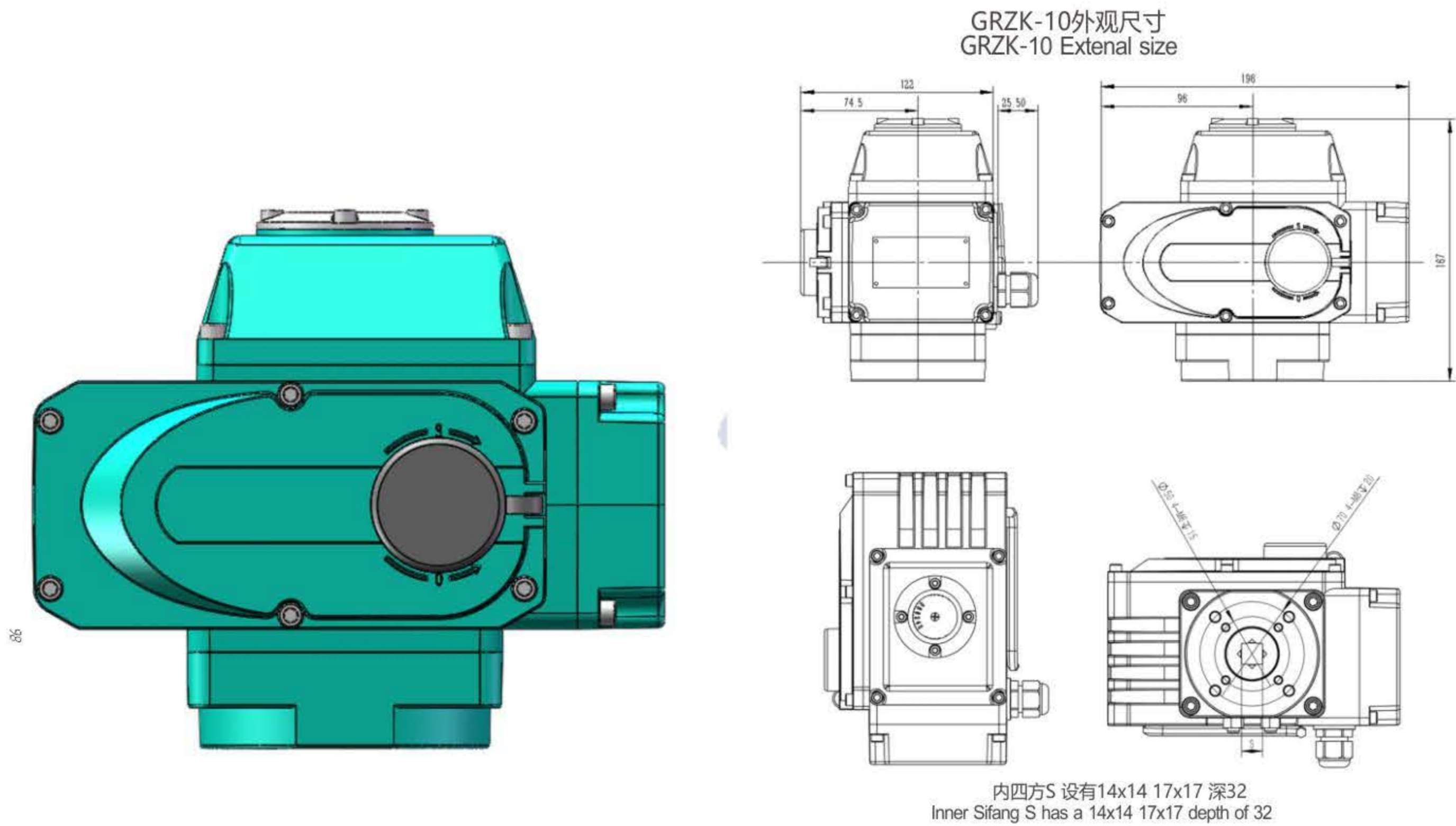
**GRZK-05**  
 新型电动执行器 New electric actors



性能参数 Performance parameter

| 型号 Model                       | GRZK-05                                                                                                                                                                                                                                                                  |        |        |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| 电源 Voltage                     | DC24V                                                                                                                                                                                                                                                                    | AC220V | AC380V |
| 输出力矩 Output Torque             | 50NM                                                                                                                                                                                                                                                                     | 50NM   | 50NM   |
| 90°动作时间 Motion times(s)        | 10s                                                                                                                                                                                                                                                                      | 20s    | 20s    |
| 回转角度范围 Rotary Angle            | 0-90°                                                                                                                                                                                                                                                                    | 0-90°  | 0-90°  |
| 电机功率 Motor power(w)            | 13W                                                                                                                                                                                                                                                                      | 10W    | 10W    |
| 额定电流 Rated current(A)          | 1.28A                                                                                                                                                                                                                                                                    | 0.24A  | 0.18A  |
| A整机重量 Machine weight(kg)       | 2.2kg                                                                                                                                                                                                                                                                    | 2.2kg  | 2.2kg  |
| 绝缘电阻 Insulation Resistance(MΩ) | DC24V:100MΩ/250VDC AC110V/220V: 100MΩ/500VDC                                                                                                                                                                                                                             |        |        |
| 耐压等级 Voltage Resistance Rating | DC24V:500 VAC;AC110V220V:1500VAC;ACV380V:1800VAC.(1分钟1 Minute)                                                                                                                                                                                                           |        |        |
| 防护等级 IP Grade                  | IP 66                                                                                                                                                                                                                                                                    |        |        |
| 安装方位 Installation Position     | 360°任意角度安装 Rotary degree:360°                                                                                                                                                                                                                                            |        |        |
| 电气接口 Electriad connection      | M18*1.5防水电缆接头M18*1.5 Waterproof cable joint                                                                                                                                                                                                                              |        |        |
| 环境温度 Environment temperature   | -30°C~60°C                                                                                                                                                                                                                                                               |        |        |
| 控制电路选项 Control circuit options | 标准型:极限位置开关A型:带中间位置开关B型:带电位器C型:带电位器和中间位置开关<br>D型:带伺服控制器(调节型)<br>Standard type: Limit position switch A type: With middle position switch B type: With potentiometer C type: With potentiometer and middle position switch D type: With servo controller (adjustable type) |        |        |
| 任选功能 Optional function         | 电机过热保护器除湿加热器Motor overheat protector dehumidification heater                                                                                                                                                                                                             |        |        |

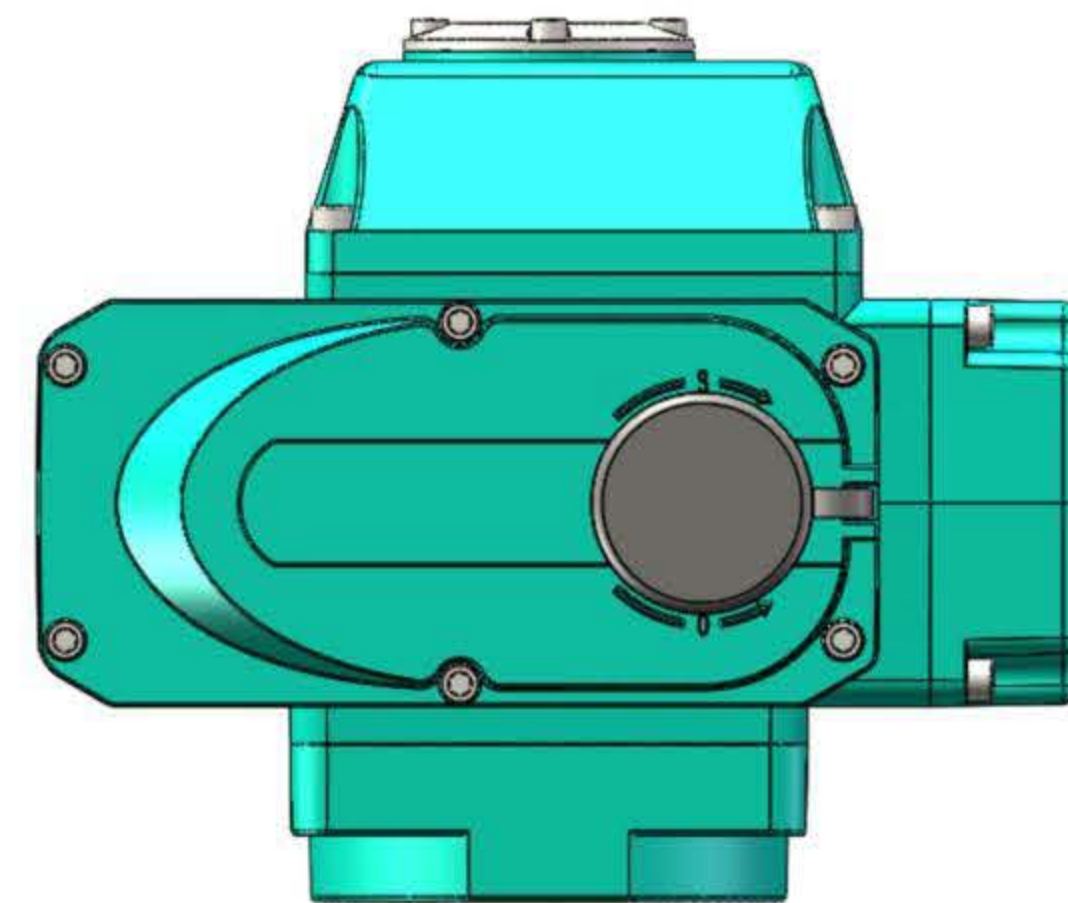
**GRZK-10**  
 新型电动执行器 New electric actors



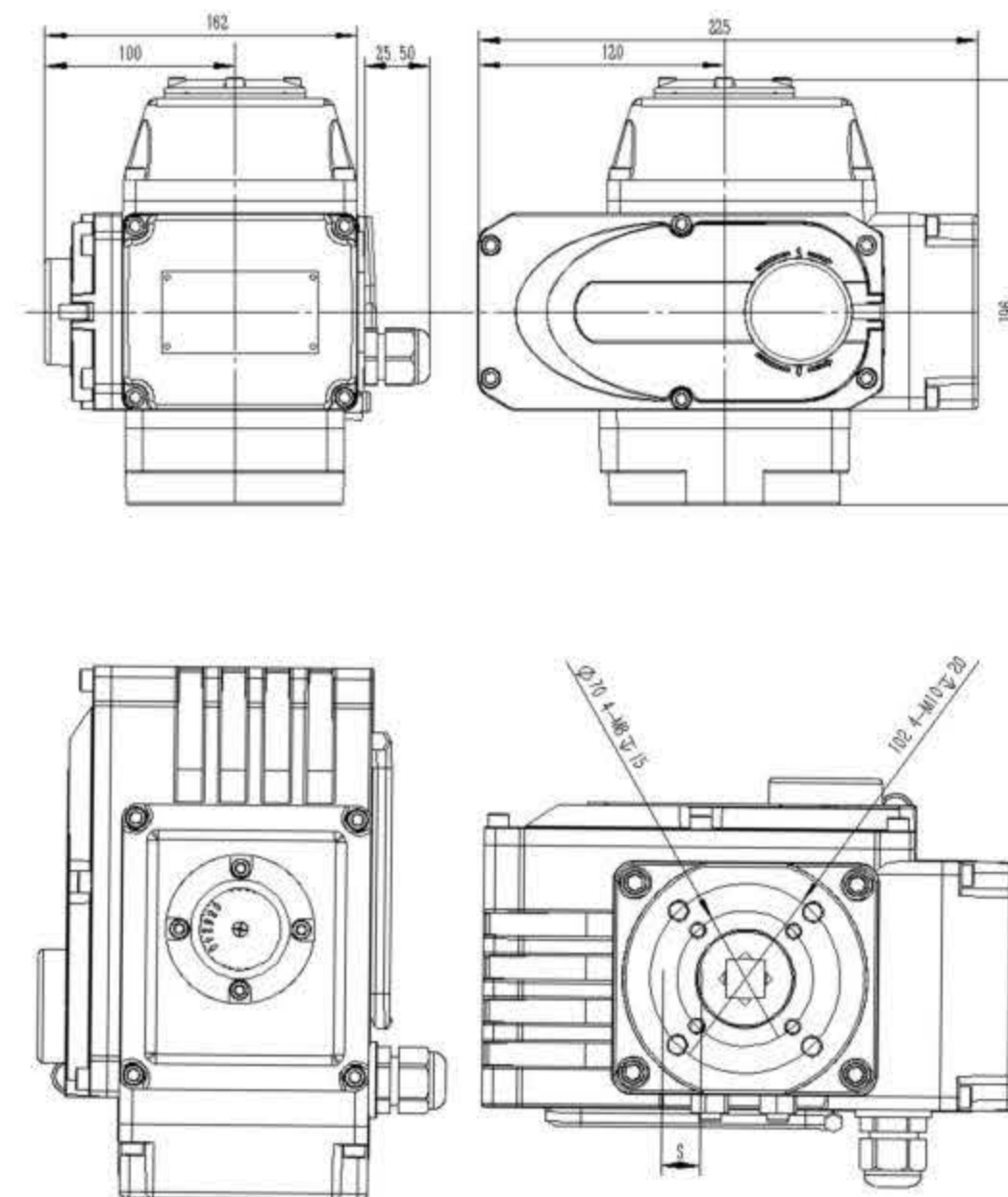
性能参数 Performance parameter

| 型号 Model                       | GRZK-10                                                                                                                                                                                        |         |         |         |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|
| 电源 Voltage                     | DC24V                                                                                                                                                                                          | AC110V  | AC220V  | AC380V  |
| 输出力矩 Output Torque             | 100NM                                                                                                                                                                                          | 100NM   | 100NM   | 100NM   |
| 90°动作时间 Motion times(s)        | 30s/60s                                                                                                                                                                                        | 30s/60s | 30s/60s | 30s/60s |
| 回转角度范围 Rotary Angle            | 0-90°                                                                                                                                                                                          | 0-90°   | 0-90°   | 0-90°   |
| 电机功率 Motor power(w)            | 25W                                                                                                                                                                                            | 25W     | 25W     | 25W     |
| 额定电流 Rated current(A)          | 2.03A                                                                                                                                                                                          | 0.57A   | 0.35A   | 0.10A   |
| A整机重量 Machine weight(kg)       | 4.0kg                                                                                                                                                                                          | 4.0kg   | 4.0kg   | 4.0kg   |
| 绝缘电阻 Insulation Resistance(MΩ) | DC24V:100MΩ/250VDC AC110V/220V: 100MΩ/500VDC                                                                                                                                                   |         |         |         |
| 耐压等级 Voltage Resistance Rating | DC24V:500 VAC;AC110V220V:1500VAC;ACV380V:1800VAC.(1分钟1 Minute)                                                                                                                                 |         |         |         |
| 防护等级 IP Grade                  | IP 66                                                                                                                                                                                          |         |         |         |
| 安装方位 Installation Position     | 360°任意角度安装 Rotary degree:360°                                                                                                                                                                  |         |         |         |
| 电气接口 Electriad connection      | M20*1.5防水电缆接头M20*1.5 Waterproof cable joint                                                                                                                                                    |         |         |         |
| 环境温度 Environment temperature   | -30°C~60°C                                                                                                                                                                                     |         |         |         |
| 控制电路选项 Control circuit options | 标准型:极限位置开关A型:带中间位置开关B型:带电位器D型:带控制模块(智能型)<br>Standard type: Limit position switch A type: With middle position switch B type: With potentiometer D type: With control module (intelligent type) |         |         |         |
| 任选功能 Optional function         | 电机过热保护器除湿加热器Motor overheat protector dehumidification heater                                                                                                                                   |         |         |         |

## GRZK-20-60 新型电动执行器 New electric actors



GRZK-20-60外观尺寸  
GRZK-20-60 External size



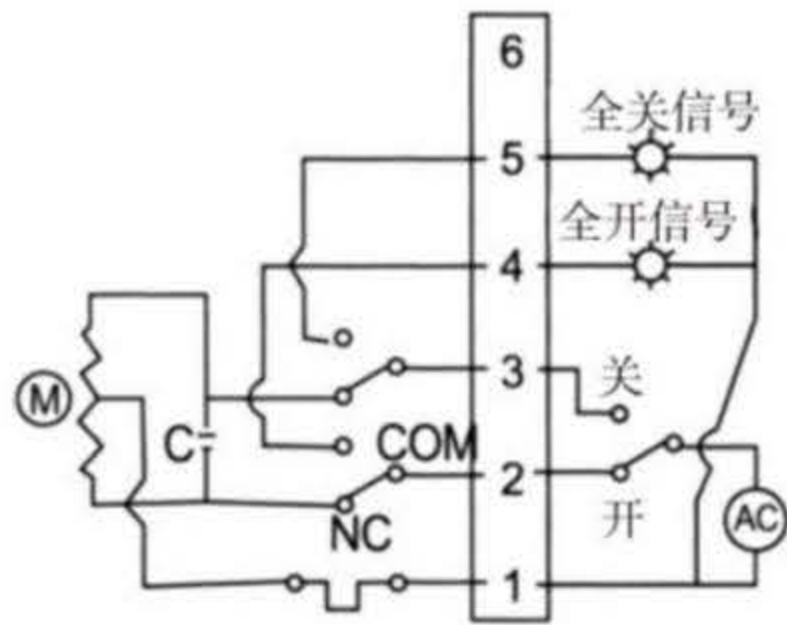
内四方S 设有17x17 22x22 深32  
Inner Sifang S has a 17x17 22x22 depth of 32

### 性能参数 Performance parameter

| 型号 Model                       | GRZK-20                                                                                                                                                                                        | GRZK-40     | GRZK-60 |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|
| 输出力矩 Output Torque             | 20kgf.m                                                                                                                                                                                        | 40kgf.m     | 60kgf.m |
| 90°动作时间 Motion times(s)        | 15s/30s/45s                                                                                                                                                                                    | 30S/45s     | 30s/45s |
| 回转角度范围 Rotary Angle            | 0-90°                                                                                                                                                                                          | 0-90°       | 0-90°   |
| 电机功率 Motor power(w)            | 40w/30w                                                                                                                                                                                        | 90w/60w     | 100w    |
| 额定电流 Rated current(A)          | 0.37A/0.25A                                                                                                                                                                                    | 0.69A/0.51A | 0.85A   |
| A整机重量 Machine weight(kg)       | 11Akg                                                                                                                                                                                          | 11Akg       | 11.3Akg |
| 电源 Voltage                     | DC24V AC110V AC220V ± 10%50HZ/60HZ AC380V                                                                                                                                                      |             |         |
| 电机保护Motor protection           | 内藏式过热保护Built-in thermal protection                                                                                                                                                             |             |         |
| 绝缘电阻 Insulation Resistance(MΩ) | 100MΩ/500VDC                                                                                                                                                                                   |             |         |
| 耐压等级 Voltage Resistance Rating | 1500VAC(1分钟1Minute)                                                                                                                                                                            |             |         |
| 手动操作Manual operation           | 附带不锈钢手柄It comes with stainless steel handles                                                                                                                                                   |             |         |
| 防护等级 IP Grade                  | IP 66                                                                                                                                                                                          |             |         |
| 安装方位 Installation Position     | 360°任意角度安装Rotary degree:360°                                                                                                                                                                   |             |         |
| 电气接口 Electriad connection      | M20*1.5 防水电缆接头 M20*1.5 waterproof cable joint                                                                                                                                                  |             |         |
| 限位原件Limiting element           | 极限位开关Limit switch, 机械程当夫Mechanical stroke block                                                                                                                                                |             |         |
| 环境温度 Environment temperature   | -20°~60°                                                                                                                                                                                       |             |         |
| 控制电路选项 Control circuit options | 标准型:极限位置开关A型:带中间位置开关B型:带电位器D型:带控制模块(智能型)<br>Standard type: Limit position switch A type: With middle position switch B type: With potentiometer D type: With control module (intelligent type) |             |         |

## 防爆线路图-1

### Exploration proof wiring diagram-1



#### (1)AC220V开关型线路图

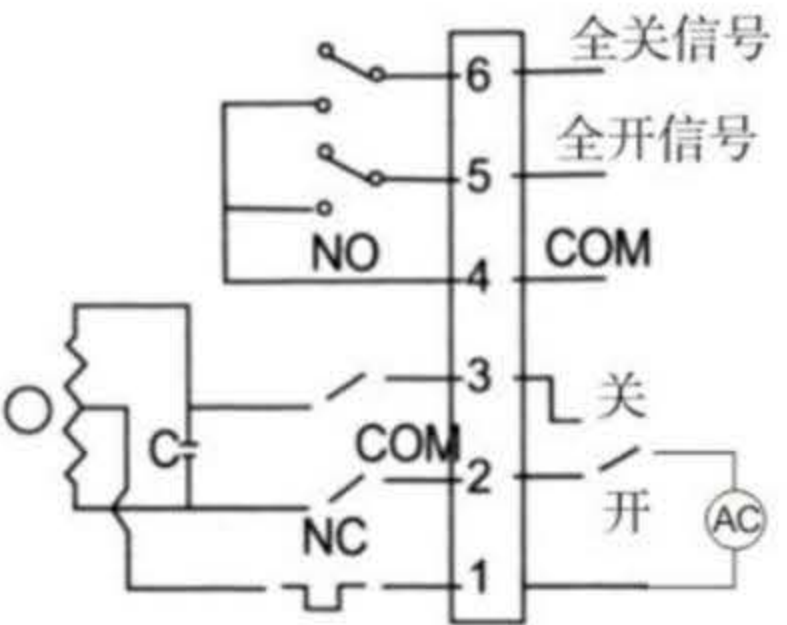
##### (1) AC220V switch type circuit diagram

A型:极限位置开关

功能:通过开关电路实现开启、关闭操作并输出一组有源触点信号

Type A: Limit position switch

Function: Implement opening and closing operations through switch circuits and output a set of active contact signals



#### (2)AC220V无源触点线路图

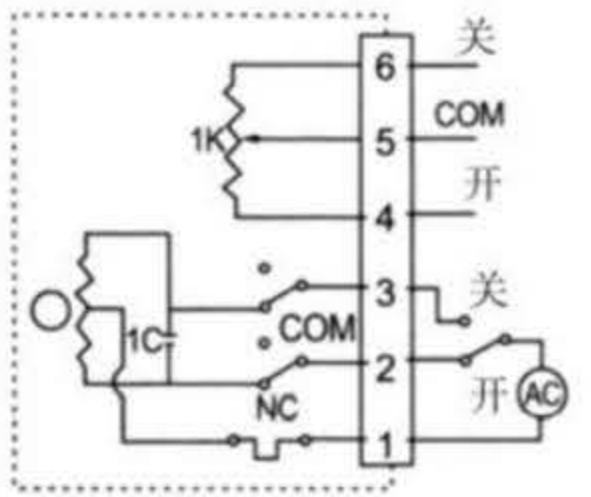
##### (2) AC220V Passive Contact Circuit Diagram

B型:极限位置开关无源触点

功能:通过开关电源实现开启、关闭操作,并输出一组指示阀全开、全关到位的无源触点信号

Type B: Passive contacts for limit position switches

Function: Implement opening and closing operations through a power switch, and output a set of passive touchpad signal indicating that the valve is fully open and fully closed in place



#### (3)AC220V开度信号线路图

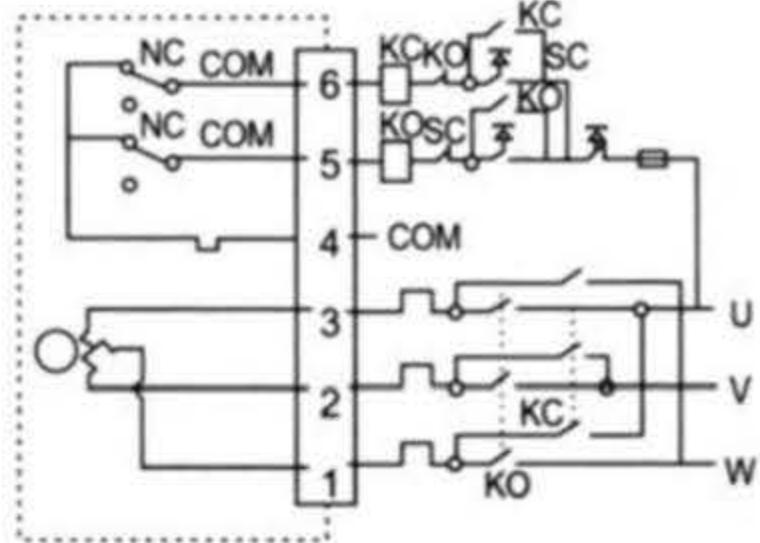
##### (3) AC220V opening signal circuit diagram

C型:带电位器

功能:通过开关电路控制阀门开启角度并输出与开度位置对应的电阻信号

Type C: With potentiometer

Function: Control the valve opening angle through a switch circuit and output a resistance signal corresponding to the opening position



#### (4)AC380V标准型线路图

##### (4) AC380V Standard Circuit Diagram

A型:极限位置开关

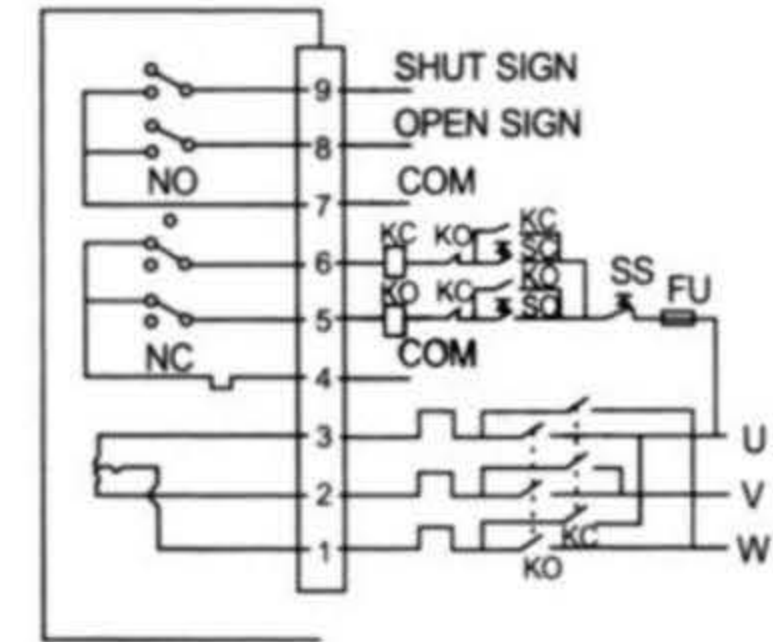
功能:通过开关电路实现开启、关闭操作、并输出一组有源触点信号

Type A: Limit position switch

Function: Implement opening and closing operations through switch circuits, and output a set of active contact signals

## 防爆线路图-2

### Exploration proof wiring diagram-2



#### (5)AC380V无源触点线路图

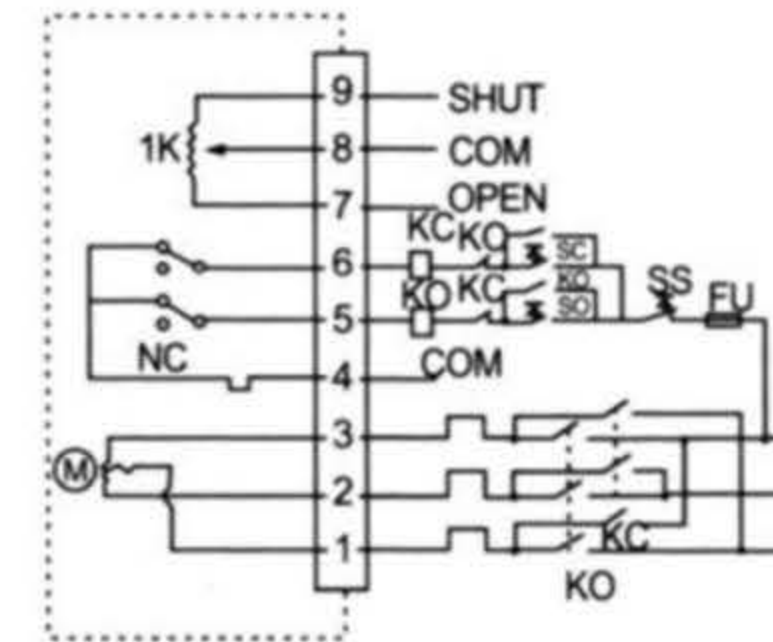
##### (5) AC380V Passive Contact Circuit Diagram

B型:极限位置开关无源触点

功能:通过开关电源实现开启、关闭操作,并输出一组指示阀全开、全关到位的无源触点信号

Type B: Passive contacts for limit position switches

Function: Realize opening and closing operations through a switching power supply, and output a set of passive contact signals indicating that the valve is fully open and fully closed in place



#### (6)AC380V开度信号线路图

##### (6) AC380V opening signal circuit diagram

C型:带电位器

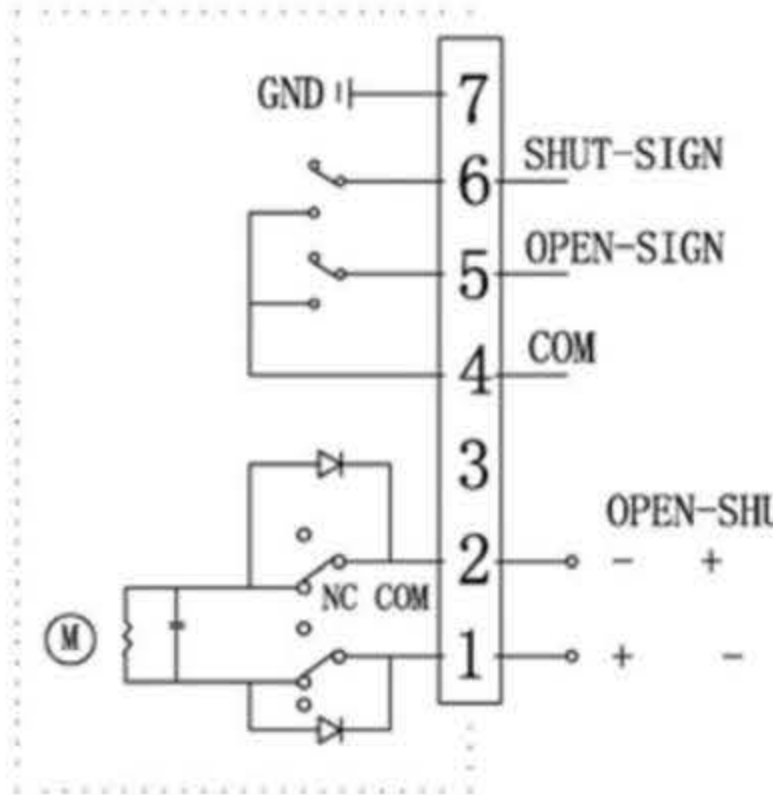
功能:通过开关电源控制阀门开启角度并输出与开度位置对应的电阻信号。

结构:带500Ω或1000Q电位器

Type C: With potentiometer

Function: Control the valve opening angle through a switch circuit and output a resistance signal corresponding to the opening position.

Structure: With a 500 Ω or 1000Q potentiometer



#### (7)直流无源触点线路图

##### (7) DC Passive Contact Circuit Diagram

D型:直流普通开关型

功能:通过切换外部电源的正负极,实现阀门的开启、关闭操作,同时输出一组无源触点信号。

Type D: DC ordinary switch type

Function: By switching the positive and negative poles of the external power supply, the valve can be opened and closed, while outputting a set of passive contact signals.

(8)整体开关型—F型  
(9)整体调节型—E型  
(10)智能开关型—MK型  
(11)智能调节型—MT型

接线图  
详见模块说明

#### (8)整体开关型-F型 Integrated switch type - F type

#### (9)整体调节型-E型 Overall adjustment type - E type

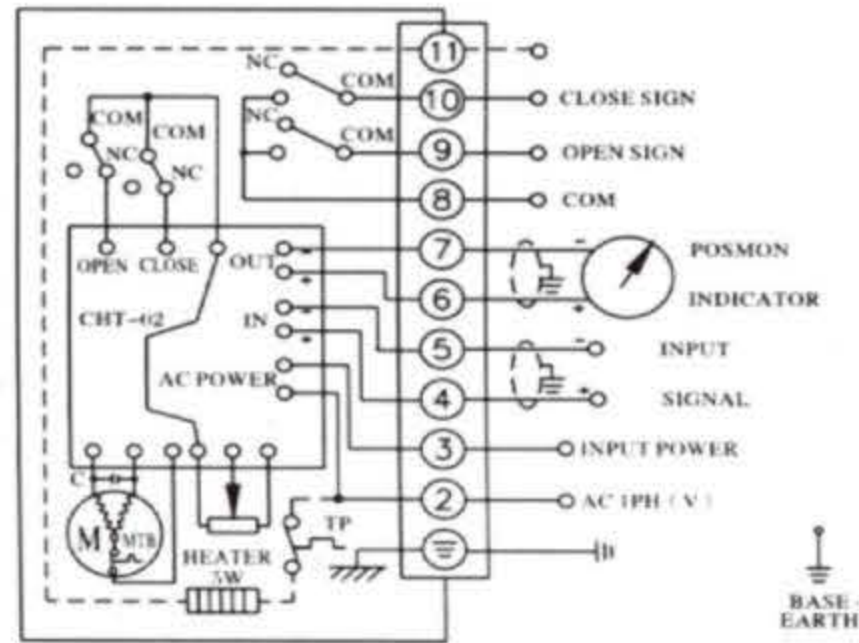
#### (10)智能开关型-MK型 Intelligent switch type - MK type

#### (11)智能调节型-MT型 Intelligent adjustable MT

## 普通线路图 Ordinary Wiring Diagram

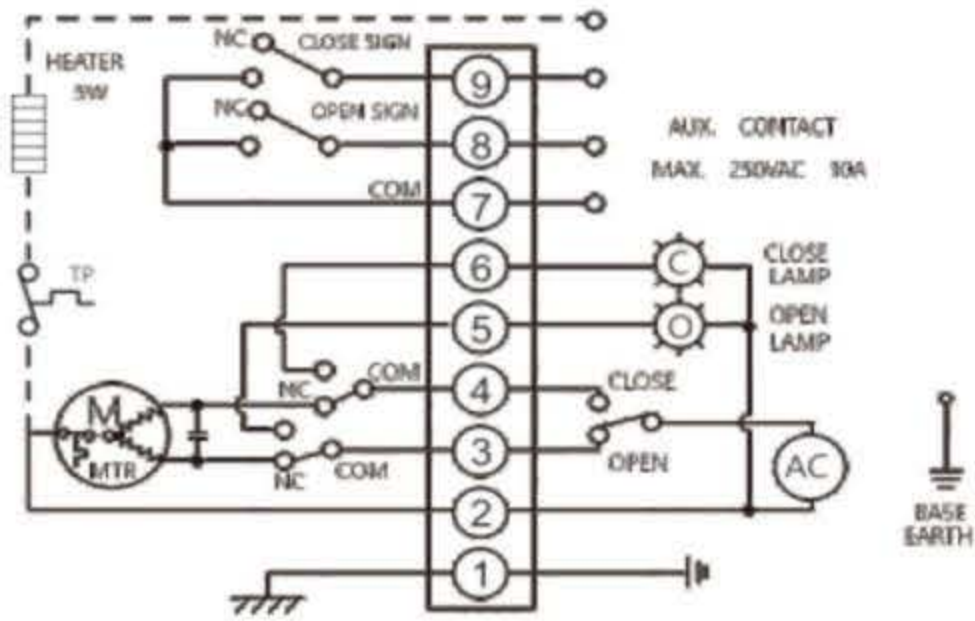
### 模拟量无源触点信号输出线路图

Analog passive contact signal output circuit diagram



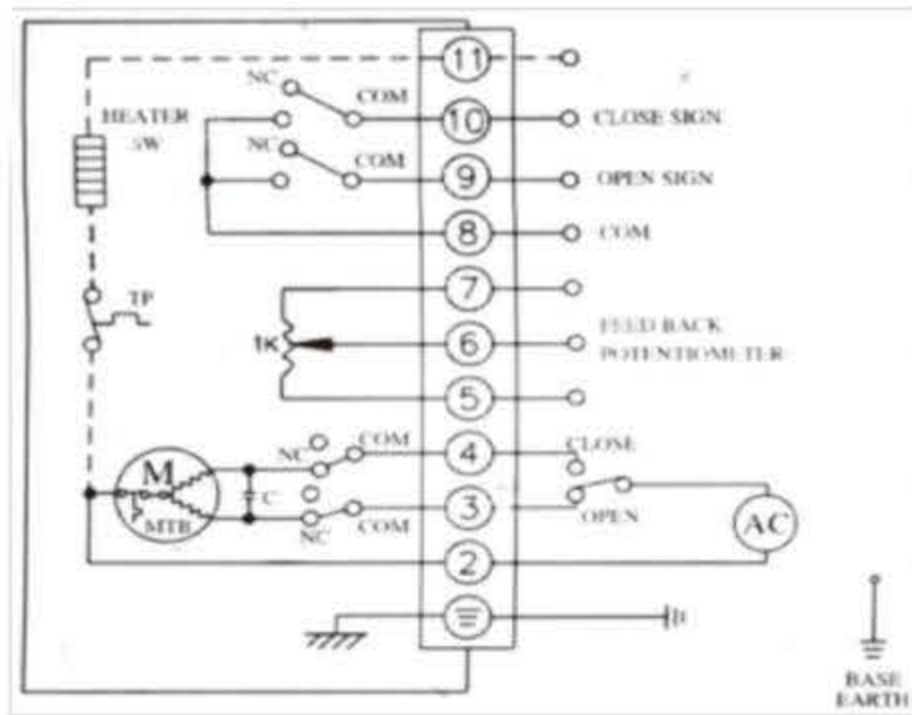
### 标准开关无源触点信号输出线路图

Standard Switch Passive Contact Signal Output  
Circuit Diagram



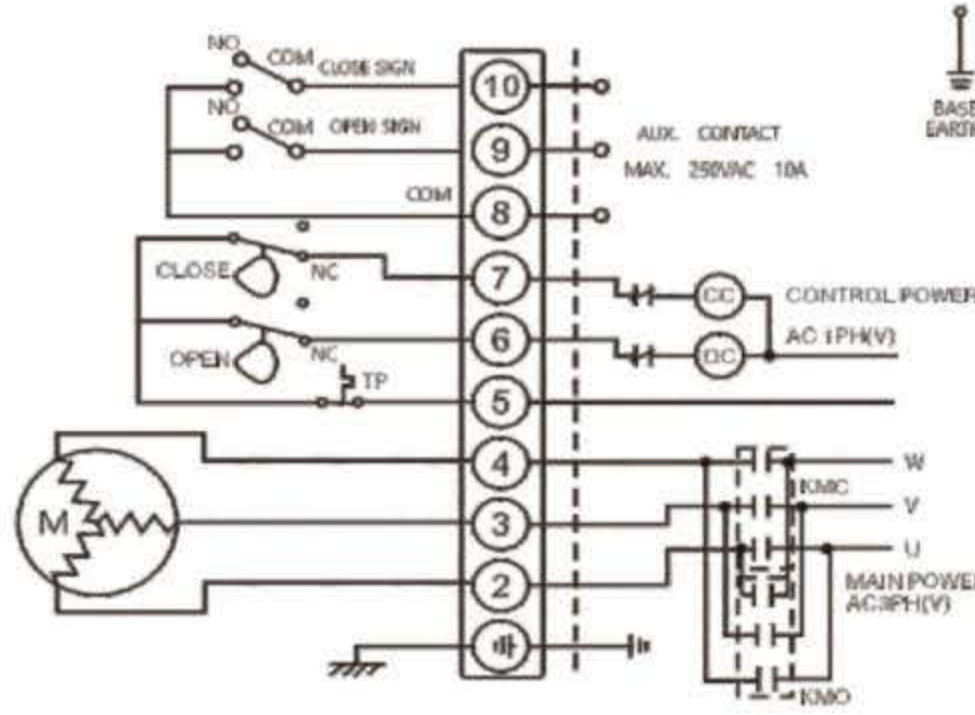
### 角度与无源触点信号输出线路图

Angle and passive contact signal output circuit diagram



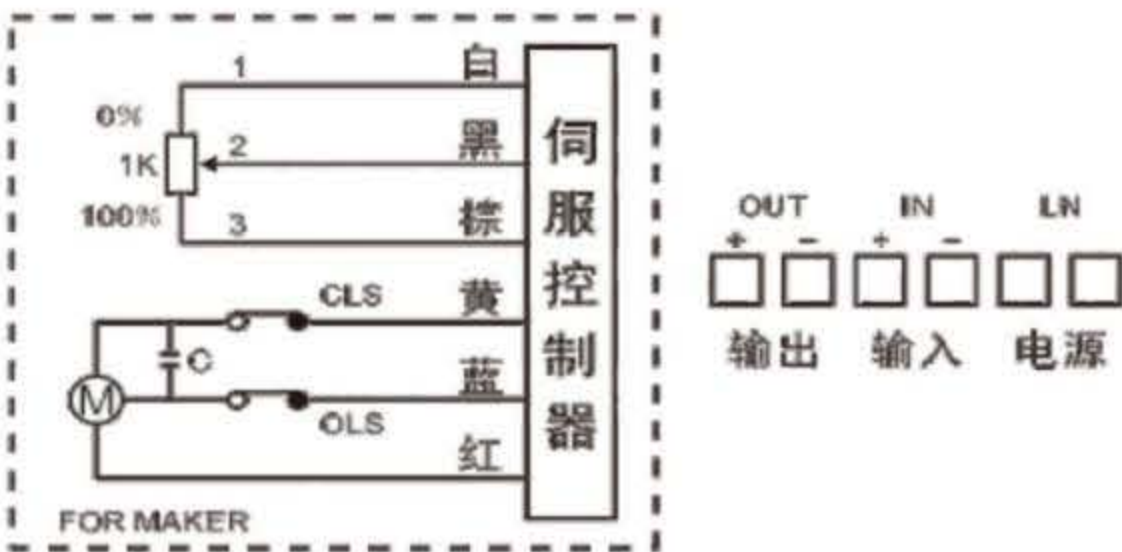
### 380V1440VAC/50/60Hz,3相(外置控制开关型)

380V1440VAC/50/60Hz, 3-phase (external control switch type)



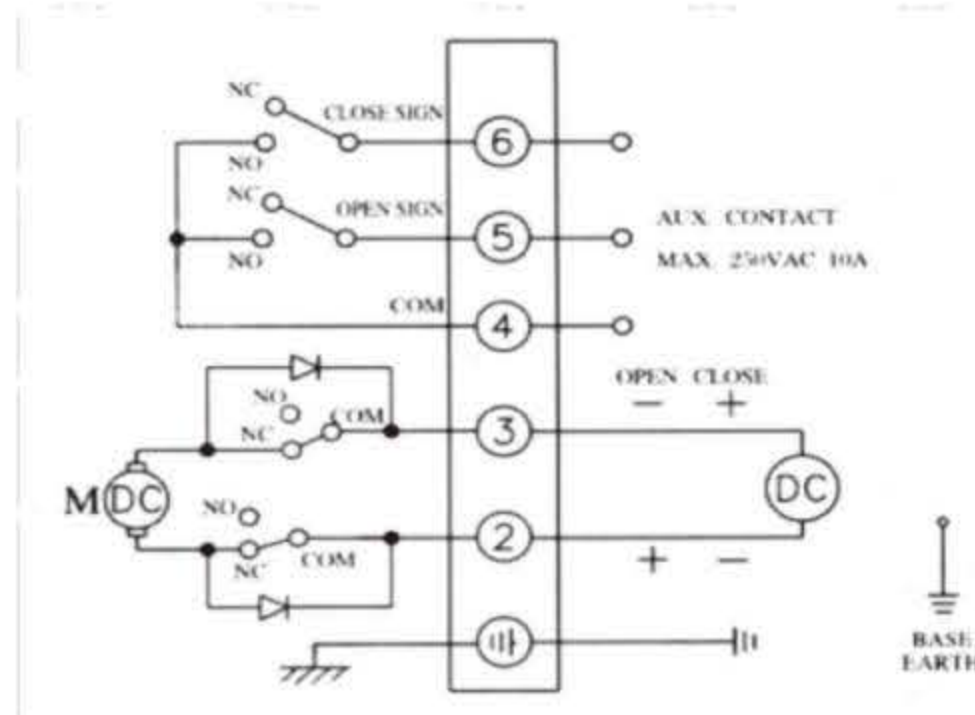
### 开关量输入4~20mA信号及开关信号输出线路图

Circuit diagram of switch input 4-20mA signal and switch  
signal output

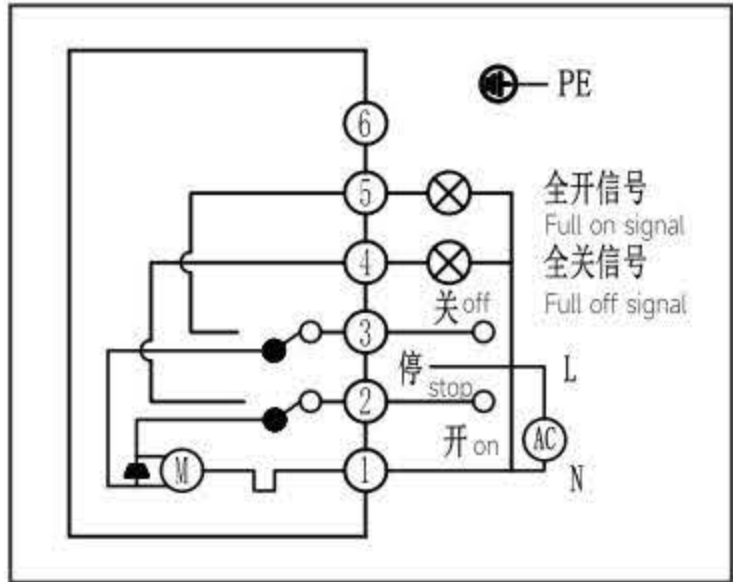


### 直流标准开关无源触点信号输出线路图

DC standard switch passive contact signal output circuit diagram



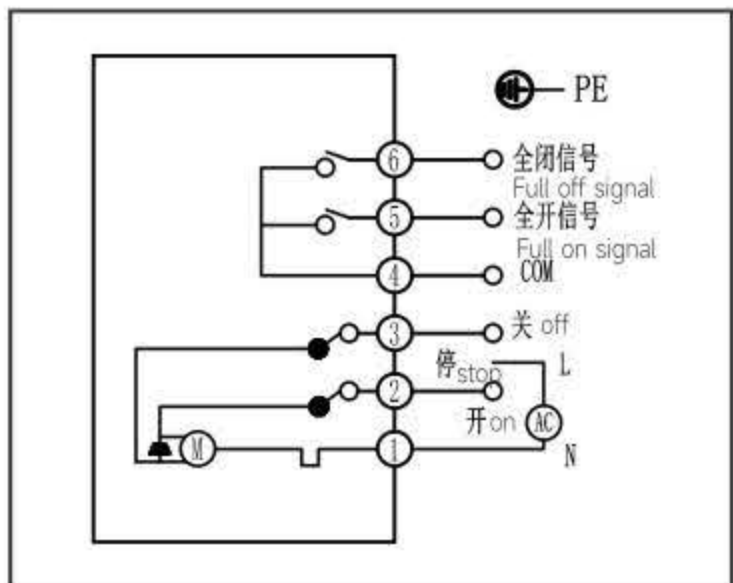
## 新型线路图 New type of road map



### 标准型：带极限位置开关(有源触点)

Standard type: with limit position switch (active contact)

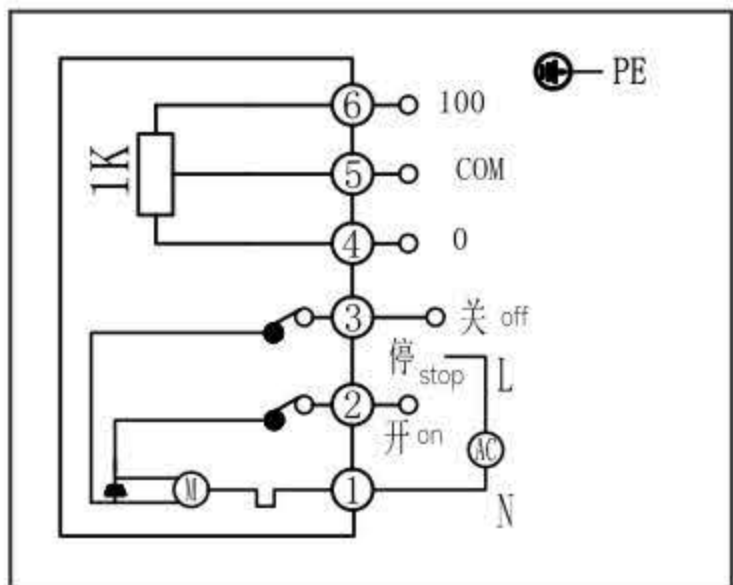
通过开关电路实现“开”“关”操作,并有一组全开和全关有源信号  
Realize "on" and "off" operations through switch circuits, and have a set of active signals for full open and full close



### A型:带中间位置开关(无源触点)

Type A: With intermediate position switch (passive contact)

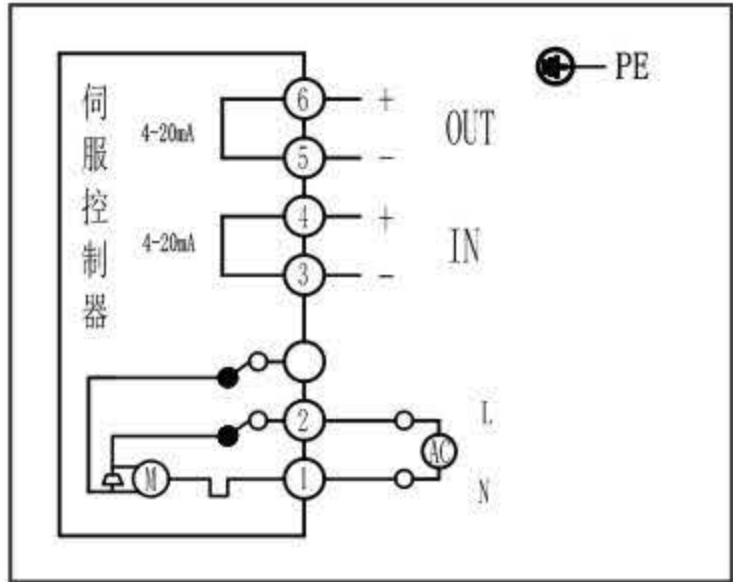
通过开关电路实现“开”“关”操作,并有一组全开和全关有源信号  
Realize "on" and "off" operations through switch circuits, and have a set of active signals for full open and full close



### B型:带1K(或500Ω)电位器

Type B: With a 1K (or 500 Ω) potentiometer

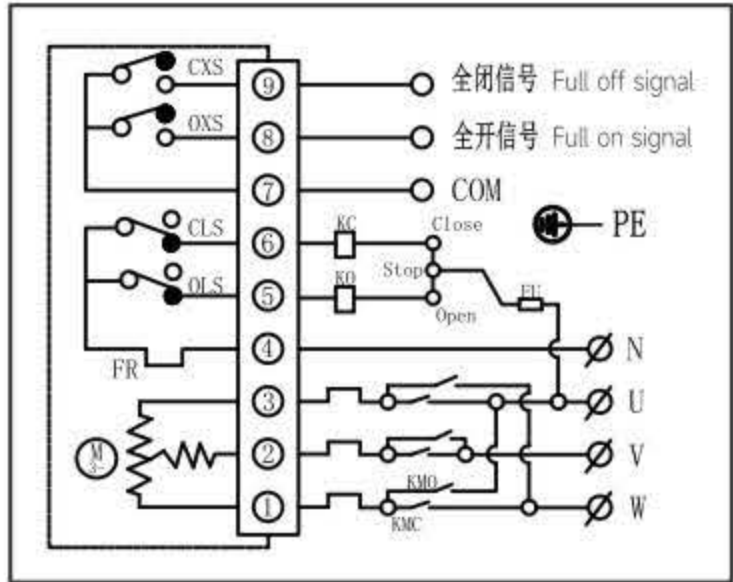
通过开关电路实现“开”“关”操作,并输出与开度位置相对应的电阻量信号  
Realize "on" and "off" operations through switch circuits, and output resistance signals corresponding to the opening position



### D型:带伺服控制器(调节型)

Type D: With servo controller (adjustable type)

输入4-20mADC或1-5VDC,输出420mADC  
Input 4-20mADC or 1-5VDC, output 420mADC



### H型:三相交流控制电路,带无源触点开关

H-type: three-phase AC control circuit with passive contact switch

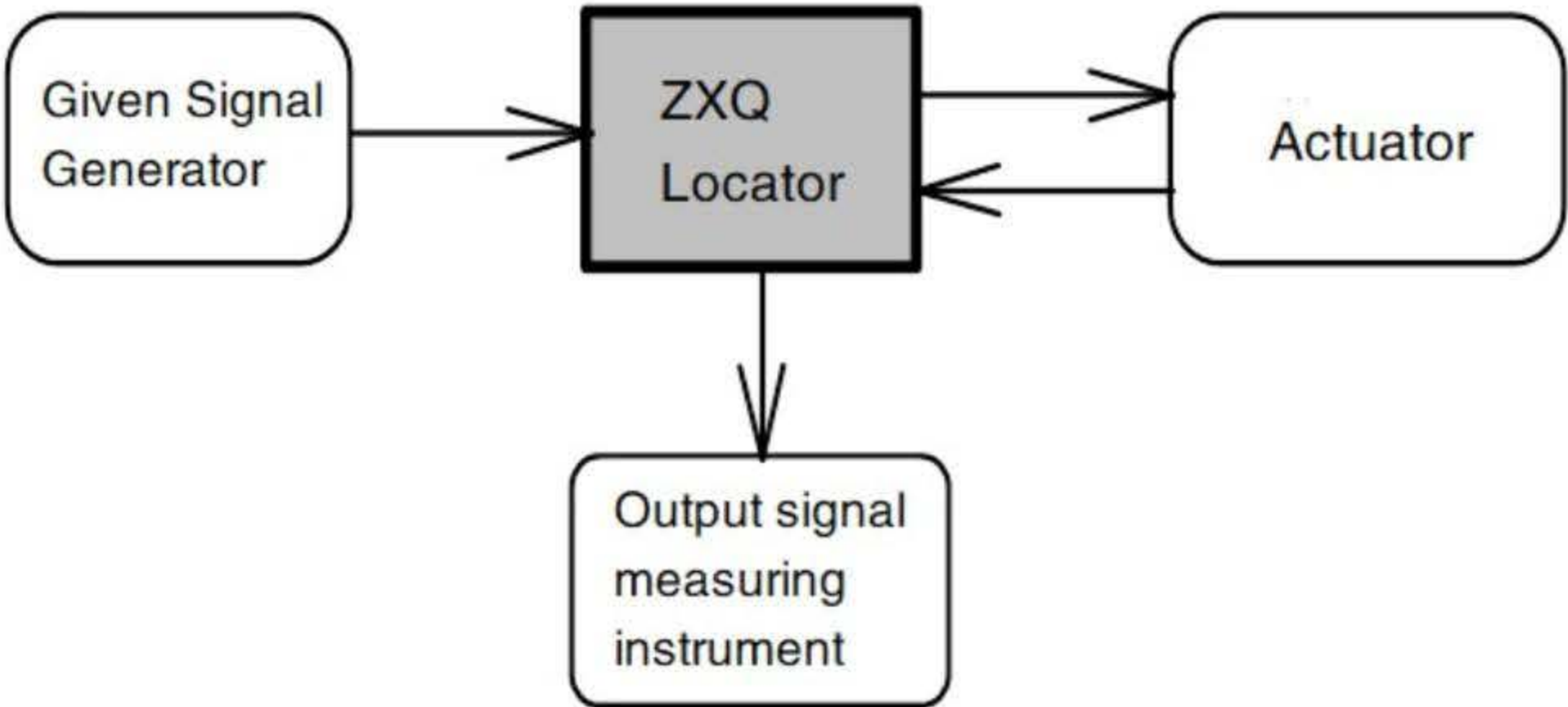
通过外部倒相电路,使电机正反转,从而实现开“关”操作,并有一组全开和全关无源信号。  
By using an external reverse phase circuit, the motor is operated in both forward and reverse directions to achieve on/off operation, with a set of passive signals for full on and full off.

## SET OPERATION METHOD

### Voltage current switch Settings.

1. Press the "A/M" key to electricity, the A/M key not to put at the same time displays for LD01 by "down" button, select current mode.
2. Press the "A/M" key on electricity, "A/M" key not to put at the same time displays for LD02 by "down" button, select voltage mode.

Note: set the input voltage current mode must match the current use of input methods.



According to the wiring diagram fitting of a given signal source, the locator, electric actuator, connection between the output signal measuring instrument and power.

1. Electricity, show the actual valve position opening value, locator is in a state of automatic measurement and control. If disconnect the input signal with the handle after shaking actuators, valve position of the opening of the actual value increases with the opening of the actuator, such as a non with the trend of change, please check whether the positioner and actuator potentiometer feedback signal is connected correctly.
2. Press the A/M key switch for manual status, press ▼ and ▲ about respectively, detection of actuator response should be "OPEN" and "closed" trend, otherwise check locator (COM, OPEN, SHUT) and actuators (COM, OPEN and closed) between the wiring is correct.
3. Automatic mode, press ▲ to check valve position of the opening of the set value, at this time to view the change trend of the input signal and.

### Parameters List

| Parameters | Display | Meaning                                                                                                                                                                                      | Factory Value                                      |
|------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| U0         | 00x.0   | X=1 Allow electronic brake, X=0, do not allow electronic brake.                                                                                                                              | 1.0                                                |
|            | 000.x   | (1) x=0 are not allowed to change the location accuracy, but allow reset time change.<br>(2) x=1, 2, 3, don't change the reset time, but allow to change the location accuracy.              |                                                    |
| U1         | 00x.0   | Set a positive and negative effect, x=0 is positive, x=1 is negative.                                                                                                                        | 1.2                                                |
|            | 000.x   | Interrupt signal model, x=0(ignore) x=1(open) x=2(stop) x=3(closed).                                                                                                                         |                                                    |
| U2         | xxx.x   | Control the output threshold limit $0 \leq U2 < 100.0$ , manual and calibration of zero and full process is not restricted by this parameter.                                                | 0.0                                                |
| U3         | xxx.x   | Control output ceiling limit $0 < U2 < U3 \leq 100.0$ , manual and calibration of zero and full process is not restricted by this parameter.                                                 | 100.0                                              |
| U4         | 00x.x   | Adjustable precision, equal $x.x / 100$ .                                                                                                                                                    | 0.4                                                |
| U5         | xxx.x   | Operating password, (U5 = 003.1 is for calibration into the opening of the actuator).                                                                                                        | 000.5                                              |
| U6         | xxx.x   | Actuator zero confirmed, ▲ ▼ key operation, when arrived zero, press A/M, zero confirmed, and then enter the U7 (the currently displayed values do not represent the actual valve position). | Display values do not represent the valve position |
| U7         | xxx.x   | Actuator full confirmed, ▲ ▼ key operation, when arrived full, press A/M, full confirmed (the currently displayed values do not represent the actual valve position).                        |                                                    |

Note: other parameters factory reserves the use, please consult customer service.

## SET OPERATION METHOD

### Calibration actuators of zero and full.

(locator first used with actuator, the actuator must be carried out in the corner of the calibration, since the locator can work normally, the calibration of the locator input and output signal has no effect.)

#### Method one: simple automatic calibration method (the calibration requirements of actuator electric limit or mechanical limit).

At the same time in the automatic state press A/M after press ▼ at the same time to loosen up the automatic calibration, actuators make sure zero, moves in the direction of the small open degree, the action to the opening of the minimum limit judge about 15 seconds later identified as zero (corresponding to the valve position is 0.0).

Zero is determined, the actuators in the biggest opening action, the action to the opening of the biggest limit to judgment about 15 seconds after a corresponding valve position (100.0), after the completion of the calibration return status automatically.

#### Method 2: freedom to set calibration method: (in the process of this method to ensure that the calibration button idle time less than 8 seconds).

Automatic state press A/M 4 seconds into the U5, press A/M after the modification of U5=003.1.

(1) Get into the U6 parameters, press ▲ or ▼, actuator corresponding operation in the direction of the "open" or "closed", at the same time show the actual valve position of the opening value also gradually become bigger or smaller accordingly. When get to the expected zero (if already with visual valve opening, the valve can be generally located in full closed position), press A/M, zero confirmation, enter the U7 parameters.

(2) Under U7 parameters displayed in the same way press ▲ or ▼ to expect a full (such as visual valve opening is valve can, general is in full open position), press A/M full confirmation, return U5.

(3) Modify U5=000.5, return measurement and control.

### Locked-rotor handler.

Such as under the control of electric actuator motor potentiometer value judgment in a stalled position within the time parameters (Ud) did not change, the locator judged to be blocked, quote - 07 E or E - 06, locked-rotor alarm response and handler.

Note: locked-rotor judgment time = 5 ud 2 seconds, locked-rotor after stop output = 10 ud seconds, after the failure have been circulating. When blocked, there are the trends for a given signal, immediately respond to a given signal, locked-rotor interval reset.

Ud values range 1.6-6.0.

(Close direction display direction of E-06, E-07 fault code, the code flashing in the game with the valve position, the controller disconnect motor drive power supply), the above failure process such as think failure has been ruled out by dynamic panel key or electricity back on measurement and control.

Alarm output, such as product appear the fault code, alarm relay by the normally open normally closed. Code disappear, alarm relay also restore normally open, completely and fault code synchronization, for passive contact output (2 a, 265 v).

Note: actuator overheating protection, big actuator drive gear clearance, potentiometer gear clearance, such as quality of potentiometer will response for plugging turn control program, therefore appeared the fault, actuators and valve problems first, please.

### Modules, restore the factory values

Method 1: According to the operation flow into the U5, U5 = 12.1, press A/M good recovery factory calibration data, then actuators angle calibration.

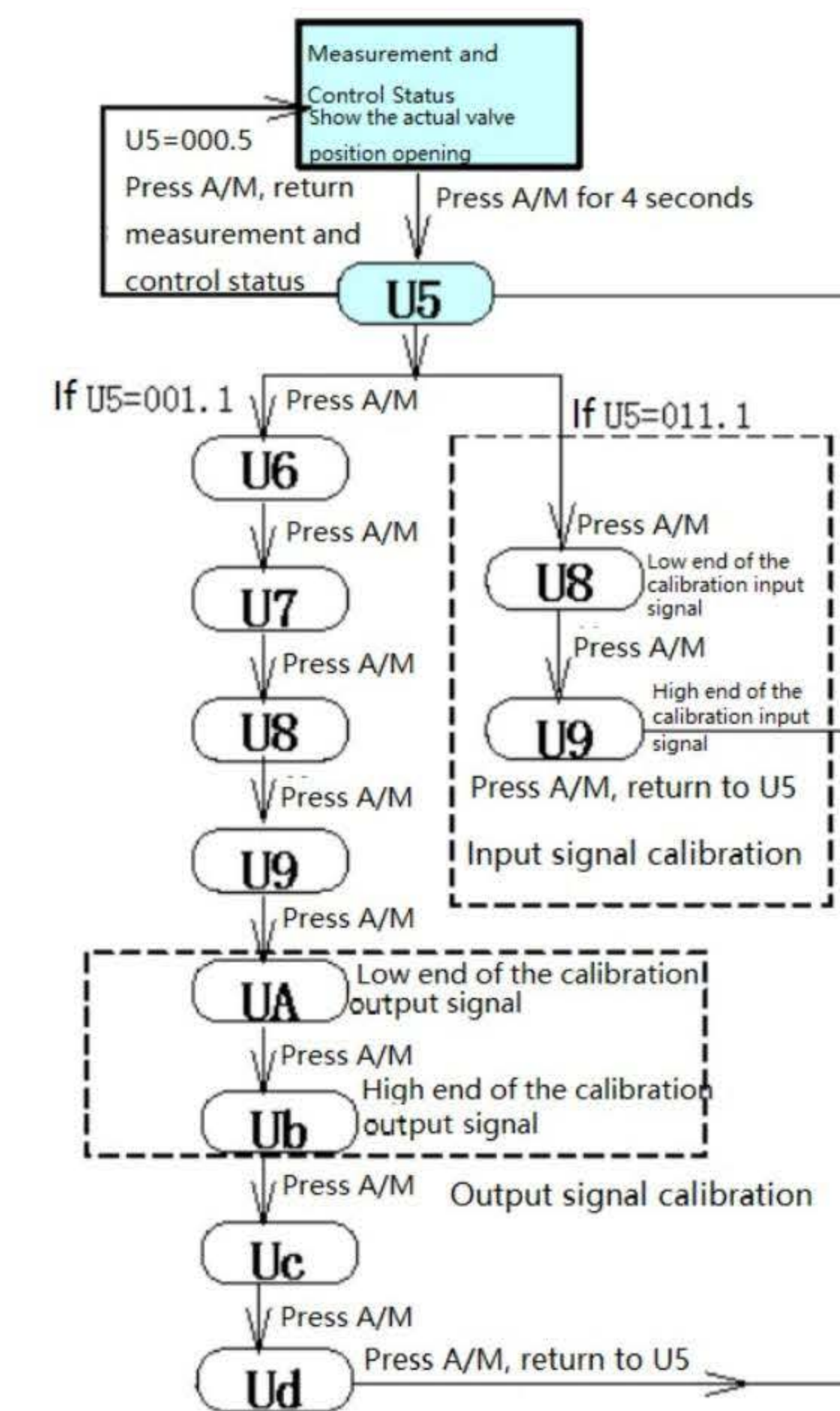
Method 2: If the module power off, hold down the A/M, and then to electricity (hold down the A/M not loosen), screen display Ld00. Press ▼ button, the data transferred to the LD01 let go after 4-20 ma factory calibration data recovery.

The data transferred to the LD02 let go after the restoration of 0 to 10 v factory calibration data, then actuators Angle calibration.

Note:

- 1, Restore the factory can choose to restore to voltage mode or restore to the current mode, method for a while back to the factory default mode, method 2 May choose to switch mode.
- 2, The operation mode of the module displays the electric moment on the module.
- 3, Good recovery factory calibration data can refer to the 'Save the calibration parameters operation process' of instruction to update the data.

## SET OPERATION METHOD

[illegible]

- Products of escalating may lead to the change of partial data, if there are any changes, without prior notice.

■ \*Save the calibration parameters of operation process, it is suggested that under the guidance of the engineer,

- The parameters of the current signal of the product:  $U_0 \sim U_F$  modified with  $U_5 = 0.24.1$ .



## 售后服务和质量保证承诺

### 一、售前服务

做到技术与销售的无缝对接服务，让用户的每一次采购都有服务的体验。

- ①进行采购前产品技术沟通和交流，主动给予建议。
- ②在进行产品型号选择时考虑是否成本最低化，效率最大化。
- ③不能达到使用要求时，根据客户的特殊要求，安排设计师合理改善。

### 二、售中服务

尊重每位用户；给用户一份轻松，放心的整体价值服务。

- ①进行性价比：比价格，比质量，比服务，反思是否有不做到位的地方。
- ②在合作过程中，依照合同，保质保量准时交货，随时保持与用户联系。
- ③生产期间，相关技术人员可来我司进行产品监造和检验，同时，我司会提供该产品的结构图及详细文件资料，来做监造文件。
- ④使用定做的产品，可协商专业技术人员亲临现场指导。
- ⑤我公司在发货前以电话进行产品型号、规格、数量、件数的确认。

### 三、售后服务

完善的服务铸就完美的企业让客户无后顾之忧。

- ①按合同要求提供产品的合格证、生产许可证、检验报告、安装说明书等。
- ②顾客在验收产品过程中，如出现与合同要求不符时，我司接到顾客通知后两小时内给予处理。
- ③我司提供十二个月的产品质保期，时间从验收合格之日起计算。
- ④在正确安装和使用下，出现产品质量问题，本公司将负责到底。

### 四、包修包换承诺

- ①在正常的储运、安装、保养、使用条件下，因产品的质量不能正常使用时，提供三保四包：保质、保量、保及时、包修、包换、包退、包损失。
- ②在接到质量信息反馈时，将在48小时内提出处理意见及解决方案。
- ③可根据用户需求协商提供备品、备件和安装、调试、维修服务。

以上四点是我公司对售后服务的承诺。竭诚欢迎广大用户指导修正，请提出宝贵意见，参照改进。真诚希望我们之间合作愉快。



## AFTER-SALES SERVICE AND QUALITY ASSURANCE COMMITMENT

### 1. Pre-sales service

Achieve the seamless connection between technology and sales, and let users have a service experience with every purchase.

- ① Conduct product technical communication and exchange before purchase, and offer suggestions actively.
- ② When select product models, considering whether to minimize costs and maximize efficiency.
- ③ If the requirements of use cannot be met, the designer shall be arranged for reasonable improvement according to the special requirements of customers.

### 2. On-sale service

Respect every user; Give every user a relaxed and assured overall value service.

- ① Compare performance with price: compare price, quality and service, and reflect on whether there is something that is not done well.
- ② In the process of cooperation, according to the contract, deliver goods on time with quality and quantity guaranteed, and keep in touch with users at any time.
- ③ During production, relevant technical personnel can come to our company for product supervision and inspection. At the same time, our company will provide the structure diagram and detailed documents of the product to make supervision documents.
- ④ For the use of customized products, professional technicians can be consulted for on-site guidance.
- ⑤ Our company confirms the product model, specification, quantity and quantity by telephone before delivery.

### 3. After-sales service

Perfect service creates perfect enterprise, so that customers have no worries.

- ① Provide product certificates, production licenses, inspection reports, installation instructions, etc. according to the contract requirements.
- ② In the process of customer acceptance, if there is any discrepancy with the contract requirements, our company will deal with it within two hours after receiving the customer's notice.
- ③ Our company provides a 12-month product warranty period from the date of acceptance.
- ④ Under the correct installation and use, the company will be responsible for the product quality problems.

### 4. Commitment to repair and replacement

- ① Under normal storage, transportation, installation, maintenance and use conditions, if the product cannot be used normally due to quality problems, some guarantees shall be provided: quality assurance, quantity assurance, timeliness assurance, repair assurance, replacement assurance, return assurance and loss assurance.
- ② When receiving the feedback of quality information, we will put forward handling suggestions and solutions within 48 hours.
- ③ Spare parts and installation, commissioning and maintenance services can be provided through negotiation according to user needs.

The above four points are our company's commitment to after-sales service. We sincerely welcome the majority of users to guide the correction. Please put forward your valuable suggestions for reference and improvement. We sincerely hope that our cooperation will be pleasant.