

**INSTRUCTION MANUAL**  
**LQ0 Electric Actuator For Valves**  
**(Non Explosion Proof)**

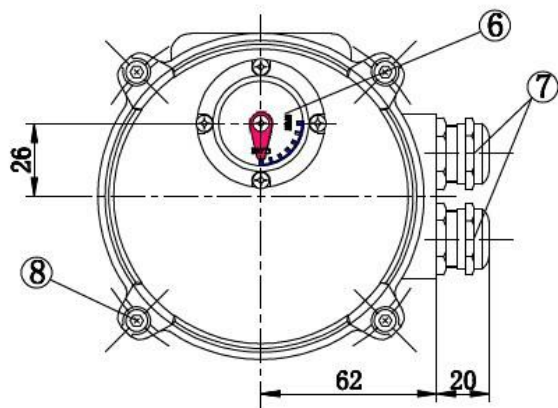
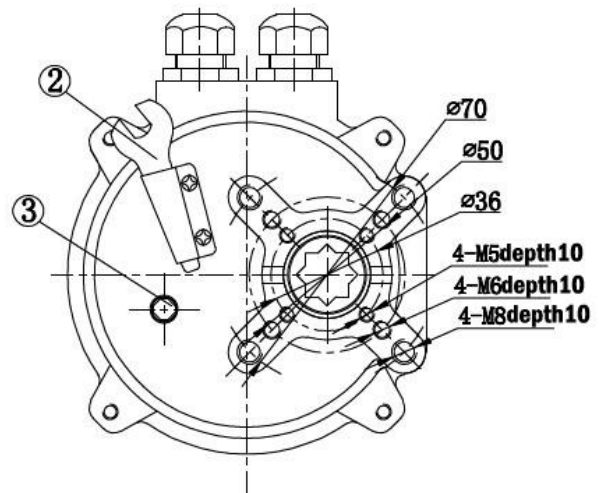
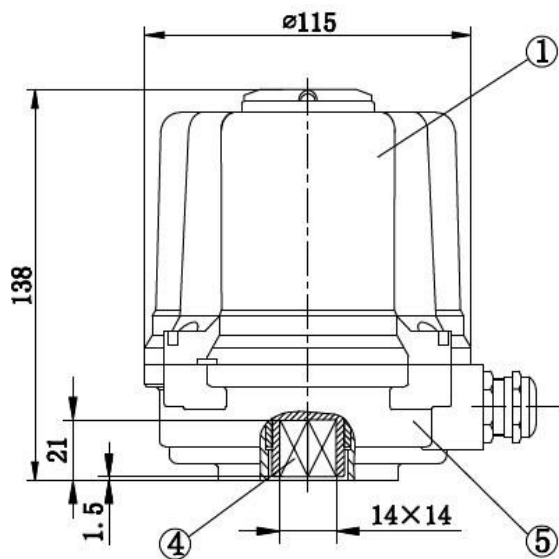
# Summary

LQ valve actuators are the new generation product of our company and can be used for driving and controlling the butterfly valves, ball valves, plug valves (part-turn valve with 90° movement). They are widely used in the fields such as oil, chemistry, power generation, water treatment, paper making.

This operation manual is applied for Non explosion proof type. For special type actuators, the addition manual will be provided.

- ◆ comply with JB/T 8219-1999.
- ◆ Can be used outside, IP65.
- ◆ Ambient temperature: -20~60°C.
- ◆ Height above sea level ≤ 1000m
- ◆ Humidity ≤ 90% (25°C)
- ◆ Non explosion-proof products can't be used at mixed explosive gas environment.
- ◆ Short time work: 30Min.
- ◆ No strong vibrance.

## Appearance and name of parts



NO.	Name	material/specification
1	top cover	ZL102
2	handle	6.7×6.7
3	Manual shaft	6.5×6.5
4	output shaft	14×14
5	body	ZL102
6	indicator	0-90°
7	PG13.5 Wire lock	M20×1.5
8	Hexagon screw	M5×22

## Main Structure

- ◆ Motor: for valve specially, built-in thermal protection device.
- ◆ Speed reducer: All Straight gear reducer mechanism.
- ◆ Travel control and position direction:from the output shaft to lead out the cam shaft to make 90° rotation,and the limit cam can also make 90° rotation to control the travel.The position indicating plate is co-axial with the cam shaft to make 90° rotation and indicate the valve position.
- ◆ Manual control:use the enclosed handle to rotate the bottom of Manual shaft.

## Connection of electric actuator and valve

This kind of electric actuator is comply for internation standard F03,F05,F07.and the inner square size of output shaft is 14x14. Also we can use the more small adaptor to become 11x11 and 9x9..Can be matched with valve directly,don't need brackets.

## Wiring drawing

◆Remove the box cover:Use “L” spanner,loose the four hex screws of the box(Please just release them),then remove the box cover from the box.You can find the wiring diagram from the inside of box cover.

◆Wiring:in accordance with the schematic,power cables and control cables come through the electrical connector and connect with the terminal,cable jacket should be ensured that the sealing rubber plug in the cable connector hole.

The size of wire lock is PG13.5,outside diameter of cable should be  $\phi 8\sim\phi 12$ .

Make sure the power voltage is same as the specification of nameplate.

After finish the wiring,please tighten all of the screws,and also make sure the good sealing.

★Please don't contact actuators more than two sets in a parallel circuit.Also can't use the same connection point to contact them above two sets,otherwise,the actuator will be out of control,or the motor will overheat.

★when use the 3PH power supply, please pay attention to the order of the phase line, ensure that the travel switch can control the opening and closing of the valve, otherwise cause out of control and damage of electrica actuator.

★In order to prevent the condensation of inside , please make sure the heater space is powered at least one day a week.

★In any work environment, even though the products no work, wire lock plugs must also be sealed. Electric actuators in are carefully inspected before shipment. If the device can not be installed on time, it should be stored in a dry place, do not remove the plugs to prevent corrosion damage before finish wiring.

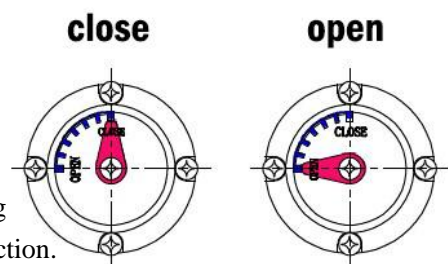
## Manual operation

★Note: When powered on, the manual operation is prohibited.

◆The device is equipped with a handle at the bottom of actuator, can be used directly.

◆Use the handle rotate the manual shaft as the right chart, according to the manual suggestions,the output shaft can drive to on - off direction.

◆When finished, put the handle into the handle seat to prevent loss.

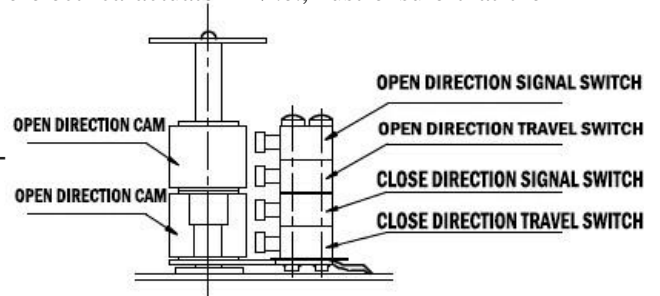


## Adjustment

Notes before working:when the electric actuator runs at the first time,you must confirm the direction of motor rotation is correct,if not correctly,it may damage the electrica actuator。 (i.e.,must ensure that the power supply phase sequence is correct) .

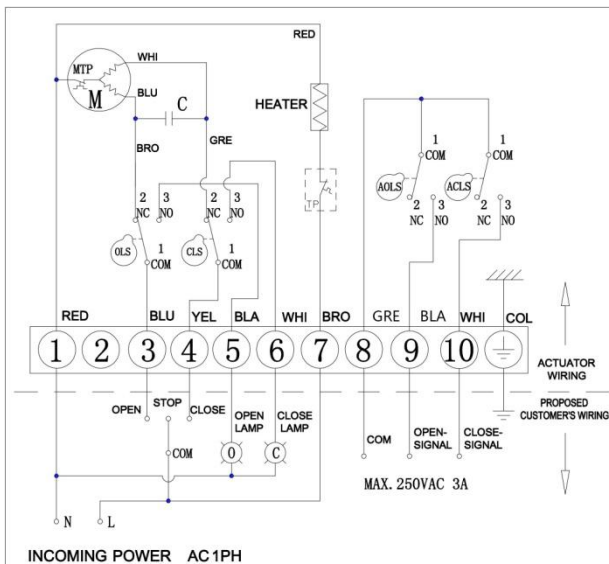
- ◆Use 2mm “L” spanner,loosen the screws on the CAM.
- ◆Rotate the angle of CAM to change the open/close angle of limit switch,and the open/close action can output a “click” sounds,then tighten the screws.

★Valve position can be adjusted several times in order to match the same with open/close of valve.

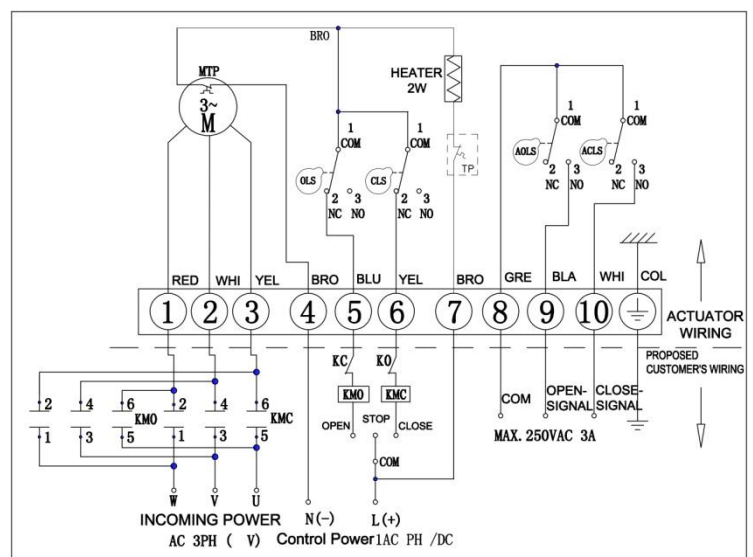


## wiring drawing

AC110V/220V 50/60HZ



AC380V/415V/440 50/60HZ



## Technical parameters

Item	Torque (N. m)	90° working time (S)	motor power (W)	rated current ( A )					motor class	circle number of handwheel	weight (Kg)
				AC110V	AC220V	AC380V	AC415V	AC440V			
LQ0-5	50	21	10	0.25	0.15	0.09	0.11	0.13	E	10	2

## Failure checking

Motor no working:

- ◆check the main power supply,check whether the motor overheat or not,check whether the limit switches normal or not, check whether the capacitance damaged or not,rotate manual shaft to check the valve and indicator whether normal or not.

Valve can not complete on-off

- ◆check the limit switch whether normal or not, readjust the angle of CAM.