



# Electric Quarter-turn Actuator HQ-005 Series

## HQ-005 RBP

### Operation Manual

Version 2.9A



Actuated Solutions Ltd

Tel: 01243 827469

Email: [sales@actuated-solutions.co.uk](mailto:sales@actuated-solutions.co.uk)

## C O N T E N T S

1. Check list before using actuator .....	3
2. General Information and Features .....	3~6
3. Operation setting .....	7
4. Battery status check .....	7

### ※ Caution

- In order to use this product safely and accurately, please read this manual carefully before using the product.
- Parts of this content are subject to change without prior notice for the purpose of improving quality, etc.

## 1. Check list before using actuator.

- (1) Check if the supplying voltage matches actuator's specification.
- (2) Turn off the power before wiring.
- (3) The battery needs to be charged for at least 24 hours after fully discharged.
- (4) The battery must avoid continuous direct sunlight exposure.
- (5) To prevent battery discharge, connect jumper connector on J5 when actuator is not in use and connect jumper connector on J4 when actuator is in use.
- (6) Do not disassemble, assemble and adjust the actuator without manufacturer's technical explanation or support. Please contact manufacturer immediately if there is any problem.

## 2. General Information and Features

### (1) Outline

The electric actuator HQ-005 RBP model provides stable and efficient operation for 90 degree quarter turn valves and is capable of emergency operation using a lithium-polymer battery in the event of a power failure in the field.

- When the power is cut off, automatic operation according to user settings or motion control according to external commands is available.
- User can check the battery charge status by using battery check button on control board.
- This product can use 24V AC/DC or single phase AC power.
  - DC - AC / DC 24 V
  - AC - AC 110 / 220 V

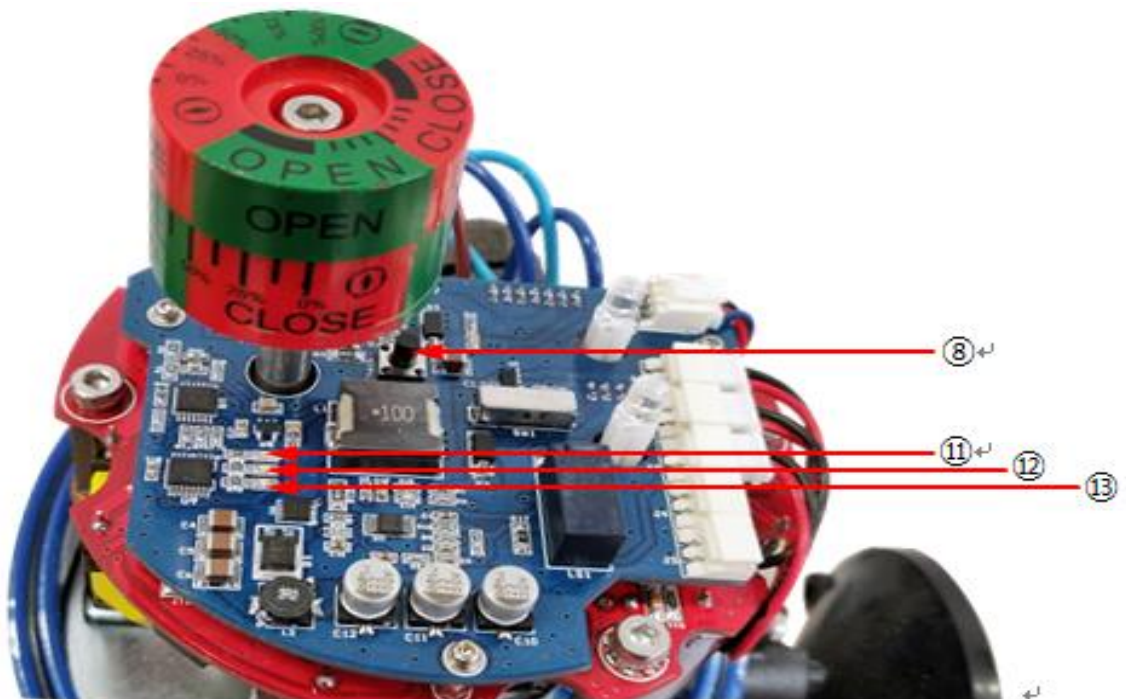
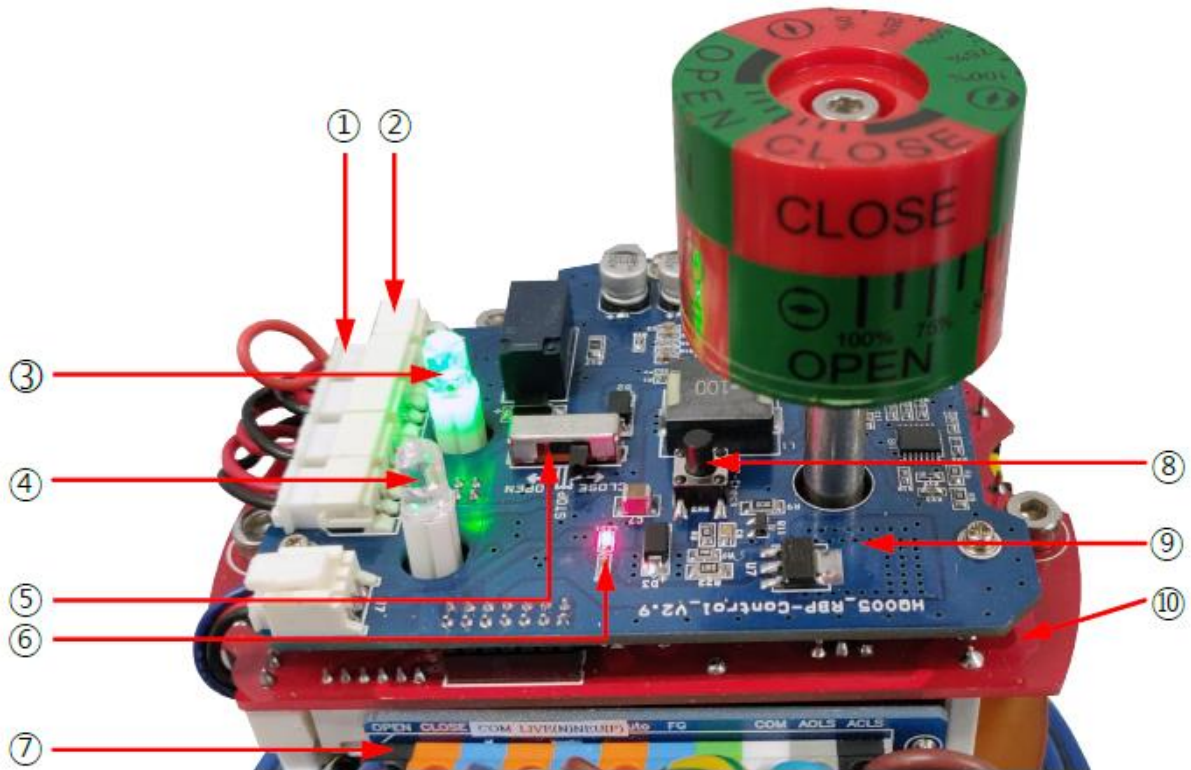
# HQ-005 + RBP

## (2) Specification

ITEMS	CONDITIONS
Enclosure Rated	Weatherproof IP67
Enclosure	High grade aluminum alloy, anti-corrosion coated
Supplying Electric Power	- AC/DC 24V, 50/60Hz - AC 110/220V, 50/60Hz
Motor	BLDC motor
Limit Switches	2x open/close SPDT, 250V AC 5A
Auxiliary Limit Switches	2x open/close SPDT, 250V AC 5A
Indicator	Continuous position indicator & Full position LED lamp
Manual Override	Manual Lever
Battery	Lithium Polymer(Li-Po) 3.7V / 650mAhx3
Temperature / Humidity	-20°C ~ 70°C, 60% RH
Adjustment Device (Switch)	- STOP : Operation by external command in case of power failure - OPEN: Fail Open operation in case of power failure. - CLOSE: Fail Close operation in case of power failure.
Battery Status Check	-Green LED on: Fully charged -Yellow LED on: About 50% charged -Red LED on: Discharged or almost discharged

# HQ-005 + RBP

## (3) Internal Parts



Internal Parts	
1	Connector (Jumper)
2	Terminal (J1 ~ J5)
3	LED (OPEN / GREEN)
4	LED (CLOSE / RED)
5	Switch (OPEN/STOP/CLOSE)
6	LED1 (POWER / RED)
7	Terminal (No.2~No.12)
8	Battery check button
9	RBP Control board (Top)
10	RBP Control board (Bottom) : Board color – 85~265V AC board (RED), 24V AC/DC board (BLUE)
11	Battery status LED-H Green on: Fully charged
12	Battery status LED-M YELLOW on: Middle level
13	Battery status LED-L RED on: Discharged or almost discharged

## 3. Operation Setting

(1) Power connection

- DC power: Terminal No.5 \_ DC -24V (N) or AC 24V

Terminal No.6 \_ DC+24V (P) or AC 24V

- AC power: Terminal No.5 \_ AC 95~265V (LIVE)

Terminal No.6 \_ AC 95~265V (NEU)

(2) After power on, check LED1 (RED) lighting.

(3) Connect J5's Jumper connector to J4.

(4) Fail OPEN/CLOSE/STOP switch setting

- In case of power failure, actuator operates according to switch setting.

(Actuator is set to 'STOP' when it is released)

STOP	OPEN	CLOSE
External command	Fail OPEN	Fail CLOSE

(5) Operation control setting

- OPEN control: Connect Terminal No.2 (OPEN) and Terminal No.4 (COM)

- CLOSE control: Connect Terminal No.3 (CLOSE) and Terminal No.4 (COM)

## 4. Battery Status Check

(1) Battery status check

-Battery status check by pressing (8) button on control board.

-Green LED on: Battery is fully charged

-Yellow LED on: Battery is charged about 50%

-Red LED on: Battery is discharged or almost discharged