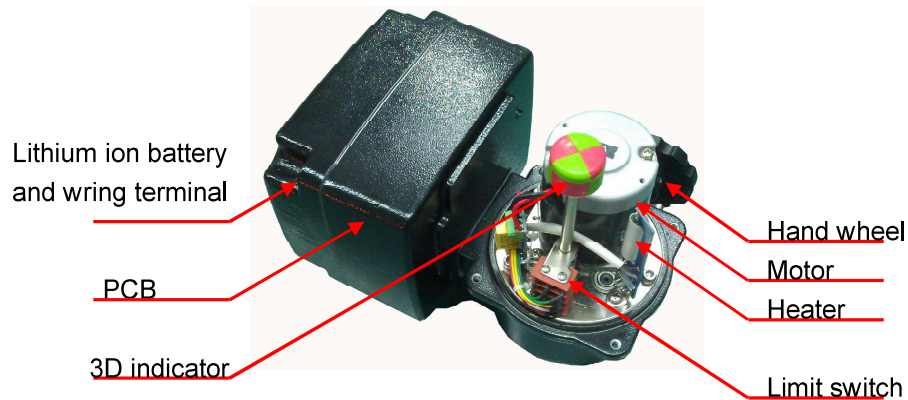


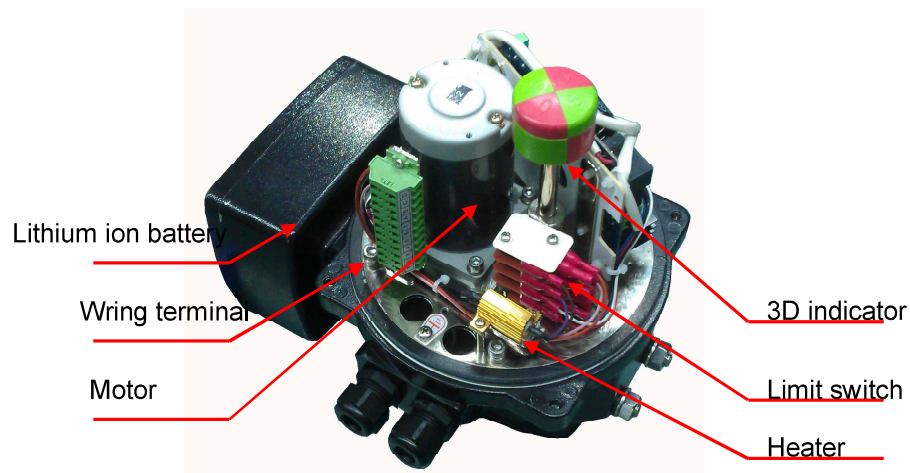
## 1. Function summary:

Battery return series is a new type of electric actuators with the function of battery returning when power failure occurred. It can be preset to “Fully open”, “Fully close”, “No action” or “Stagnation position” and return to a safe position to protect devices or equipment’s safety when power failure occurred.

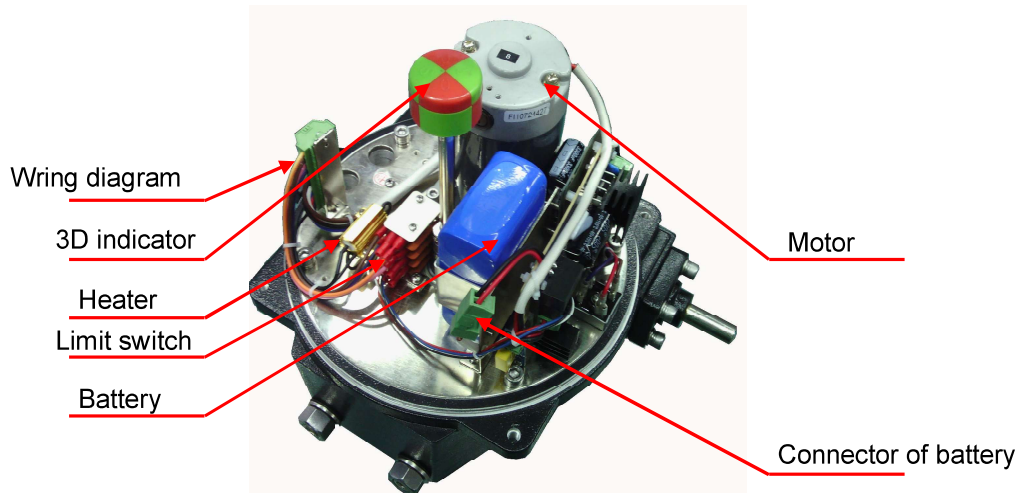
## 2. Inside structure:



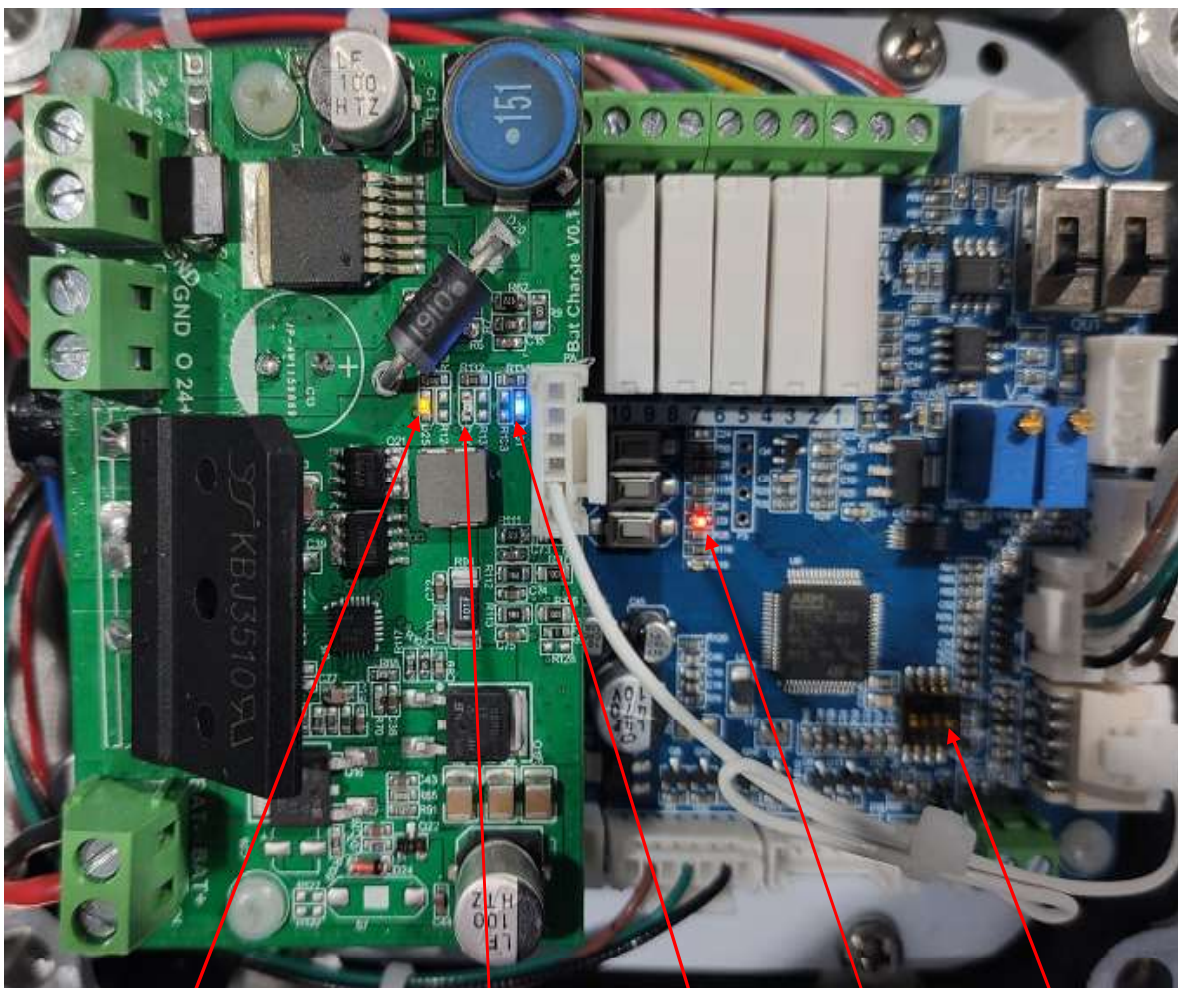
Picture 2.1 Inside structure (EFM1/A/B)



Picture 2.2 Inside structure (EOM2-3)



Picture 2.3 Inside structure (EOM4-12)



Picture 2.4 Charge PCB & Main ctrl PCB

- Battery Charging indicator lamp (Yellow)
- Battery Charge ok indicator lamp (Green)
- Battery Charge board indicator lamp (Blue)
- Main power indicator lamp (Red)
- Select return modes

### 3. Technical parameter:

3.1 **Power:** AC24V standard, transformer or power adapter is needed when power is 110/220VAC;(100VA~500VA)

3.2 **Environment temp:** -20℃-55℃;

3.3 **Related humidity:** <90%;

3.4 **Environment:** Without any high corrosion and explosion medium;

3.5 **Working time:** S2 standard, 60min;

3.6 **Control signal:** 24VDC/24VAC, 110/220VAC on / off control signal;

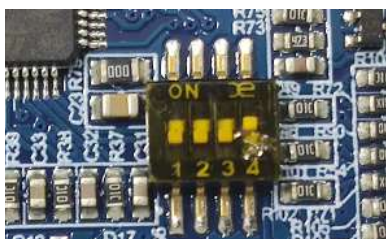
3.7 **IP class:** IP67;

3.8 **Battery parameters:** 24VDC, Charging time is 5 hours;

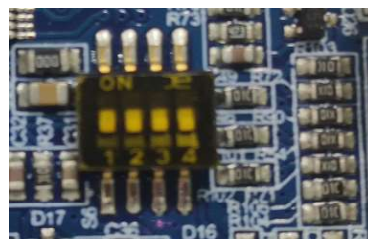
3.9 **Power failure modes:** Fully open, fully shut

3.10 **return cycles:** ≥ 5 (open → shut→open);

3.11 Select return modes according to the following pictures.



Return to F.O



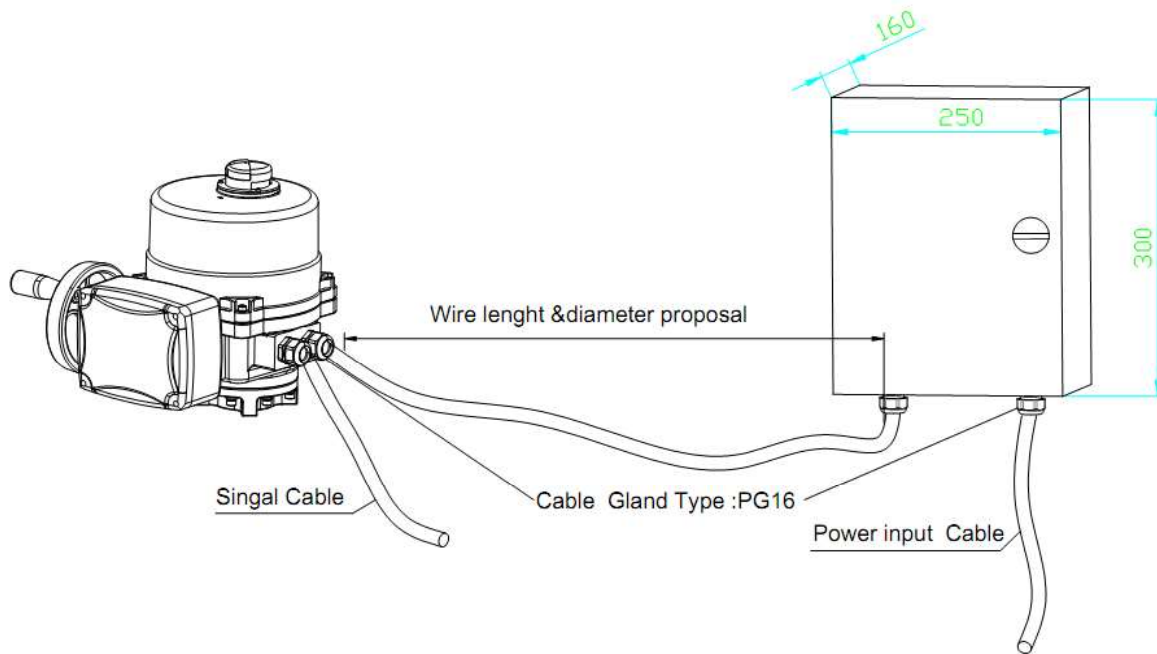
Return to F.C(Default)

Picture 3.11 return modes selection

#### Back up Battery pack

Specification	Li-ion Battery Pack DC25.5V (1.5Ah&3Ah)	
Life Cycle	500 times. With 100% Brand New Battery, spend 80% Capacity and charge x3 times-it is one time.	
Periodic Inspection	Even if User does Not operate Actuator. There Self Discharging by itself. Recommend to make Recharge at least one time per month. At least `1 time per 3~6 months.	
Replacement Cycle	Recommending at least time per every 1 year.	
Warranty	6 months Average, it is available to use 2~3 years but it depends on the Recharging and Ambient Temp.	

#### 4 Installation wire Cable length and diameter proposal



Picture 5.1 Wire Cable Instruction

Table 5.1 Wire Cable length and diameter

Transformer Model	Length (m)	Diameter of signle wire (mm <sup>2</sup> )
100VA 24Vac	50	2
	100	3.5
250VA 24Vac	50	3.5
	100	6
500VA 24Vac	50	10
	100	20

✧ Cable Gland type: PG16

✧ Please ensure the diameter of the cable is 10~14mm.