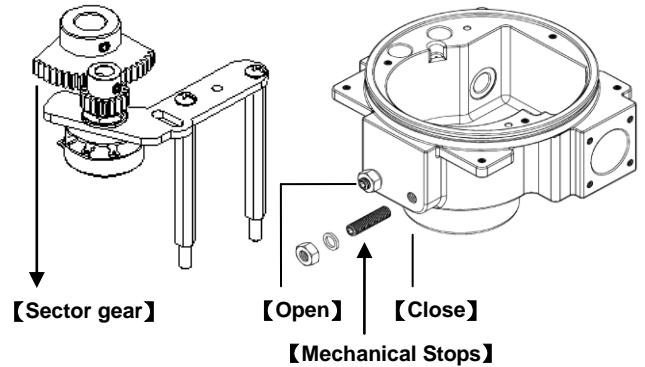


# Operating Instruction

The quarter-turn actuator is provided with a limiting of manual rotation device to avoid over-travel with the hand-wheel. Please follow below adjusting procedures carefully to avoid the damage of the mechanical stops.

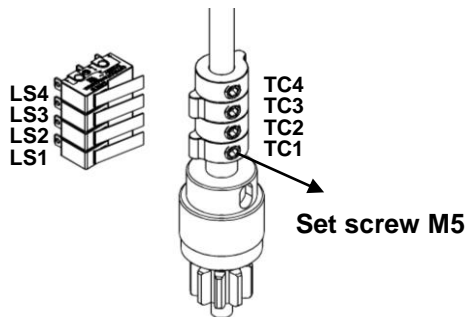
## Mechanical Stops Adjustment [OM-2~13]

1. Turn power off then loosen locknut and unwind it a few turns.
2. Loosen the set screw on the sector gear.
3. Use manual override to turn the actuator to desire limit position.
4. Rotate sector gear clockwise to the end. Then tighten set screw.
5. Tighten the mechanical stop screw until it reaches the shaft, then reverse one cycle.
6. Tighten locknut and check that the electrical limit switches can still be reached.



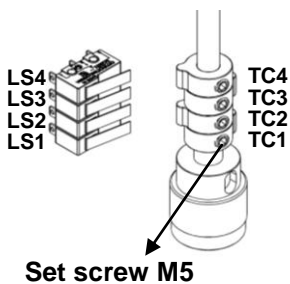
## Travel Switches Adjustment

### [OM-A, OM-A-M]

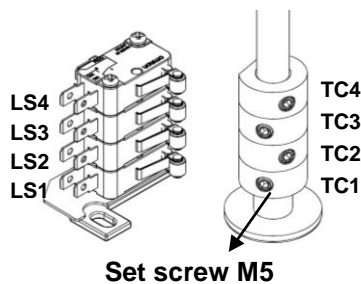


- TC4 Synchronous turn with TC2 (optional)
- TC3 Synchronous turn with TC1 (optional)
- TC2 "CLOSE" ⤴ Clockwise : increase closing degree to fully closed.  
⤵ Counter Clockwise : decrease closing degree.
- TC1 "OPEN" ⤴ Clockwise : decrease opening degree.  
⤵ Counter Clockwise : increase opening degree to

### [OM-1]



### [BM-2, OM-2~13, OM-F, OM-G]



- TC4 Synchronous turn with TC2 (optional)
- TC3 Synchronous turn with TC1 (optional)
- TC2 "CLOSE" ⤴ Clockwise : decrease closing degree.  
⤵ Counter Clockwise : increase closing degree to fully closed.
- TC1 "OPEN" ⤴ Clockwise : increase opening degree to fully open.  
⤵ Counter Clockwise : decrease opening degree.

## Important Notices & Maintenance

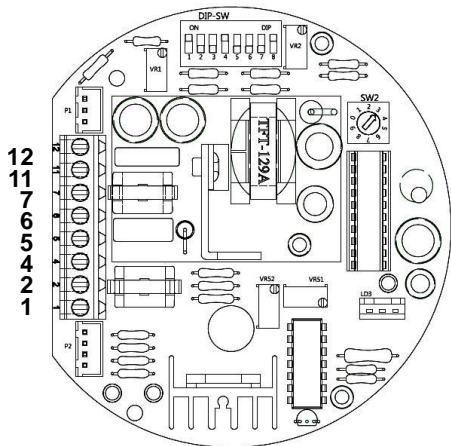
1. Check for correct voltage prior to wiring.
2. Turn power off before servicing or for maintenance purpose.
3. Use sealant to seal conduit connections after wiring to prevent dusting or water contamination.
4. The angle of electric actuator installation must be between 0~180 degree. Do not install upside down or below the horizontal.
5. When more than one electric actuator needed to operate simultaneously, please connect with the individual cables or install the coupling board.
6. Not intended for vacuum spaces and avoid installing near explosive atmospheres.
7. Actuators should be placed at clean and dry place for storage, and protected with outer carton from being affected by great temperature difference or serious vibration.
8. To avoid functional failure caused by statics, do not touch any components on the PCB with metal tools or bare hands.
9. Please connect the ground wire to PE inside the electric actuator.
10. The warranty period of our products is one year.

# Adjustment – Modulating Control Board

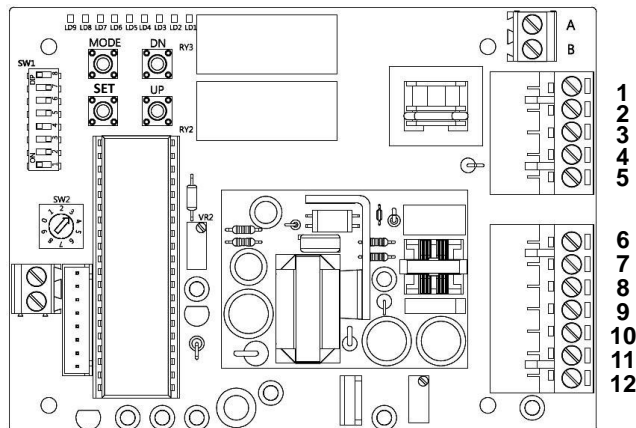
**⚠ To avoid functional failure caused by statics, do not touch any components on the PCB with metal tools or bare hands.**

1. **Surface** The surface is based on the actuator in 110 / 220V voltage.

**OM-1、OM-A、OM-A-M**



**OM-2~OM-13、OM-F、OM-G**

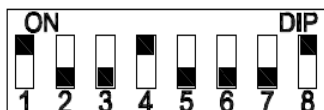


▼To adjust the following settings, turn power

## 2. Dip-Switch Setting (SW1)

Factory setting: 1,4,8 ON

\* S1, S2 : Input Signal Select.



Input Signal	S1	S2
2~10V	OFF	ON
4~20mA	ON	OFF
1~5V	OFF	OFF

\* S3, S4, S5 : Output Signal Select.

Output Signal	S3	S4	S5
2-10V	ON	OFF	ON
4-20mA	OFF	ON	OFF

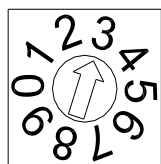
\* S6 : Direction of travel in response to the control

S6	Symbol
OFF	
ON	

\* S7 & S8 : Actuator response to the loss of control signal. (S6-OFF)

When signal fails	S7	S8
Fully closed	OFF	ON
Fully open	ON	OFF
Stops	ON	ON

## 3. Sensitivity Switch Setting(SW2) (Factory: 3)



- When switch to "1": The highest sensitive and the 0~90 degree can be divided up to around 50 times movement.
- When switch to "0": The lowest sensitive and the 0~90 degree can be divided up to around 10 times movement.
- The sensitivity decreases 5 times movement by sectors from SW1 to SW2, SW2 to SW3, SW3 to SW4 and so on.

LD1 : Fully - closed	LD6 : Motor thermostat turn off
LD2 : Fully - open	LD7 : Output signal short circuit
LD3 : Power	LD8 : Motor current is excessive
LD4 : Abnormal voltage	LD9 : Manual mode
LD5 : Wrong Input signal	

## 4. Setting for Open and Close (OM-1、OM-A、OM-A-M)

### Adjust output signal/input signal

- VR1 — Adjust 10V,20mA (Input signal: fully-open)
  - VR51 — Adjust 10V,20mA (Output Signal : fully-open)
  - VR2 — Adjust 2V,4mA (Input Signal : fully-closed)
  - VR52 — Adjust 2V,4mA (Output Signal : fully-closed)
- The function of VR

**Note: If it is necessary to adjust VR51 and VR52, VR1 and VR2 also need to be adjusted accordingly.**

- Rotate VR1 counterclockwise until a light click is heard, then supply 10V (or 20mA) to modulating board. Slightly rotate VR1 clockwise until green LED keeps on. Adjust VR51 to complete.

VR51 : ⤴ Clockwise: decreasing signal.

⤵ Counter Clockwise: increasing signal.

- Rotate VR2 clockwise until a light click is heard, then supply 2V (or 4mA) to modulating board. Slightly rotate VR2 counterclockwise until red LED keeps on. Adjust VR52 to complete.

VR52 : ⤴ Clockwise: decreasing signal.

⤵ Counter Clockwise: increasing signal.

## 5. Setting for Open and Close (OM-2~OM-13、OM-F、OM-G)

### Open setting

- Keep pressing "SET" for 2 seconds, then LD 9 comes on, it will enter to the manual mode.
- Keep pressing "UP" until actuator runs to fully-open position, LD2 comes on, then supplies the input signal (5V or 10V or 20mA).
- Press "MODE" once. The OPEN setting is completed.

### Close setting

- Keep pressing "DOWN", until actuator runs to fully-closed position, LD1 comes on, then supplies input signal (1V or 2V or 4mA).
- Press "MODE" once. The CLOSE setting is completed.

**After completing the above settings, press "SET" once**

### Adjust output signal

VR2 ⤴ Clockwise: increasing signal.

⤵ Counter Clockwise: decreasing signal.