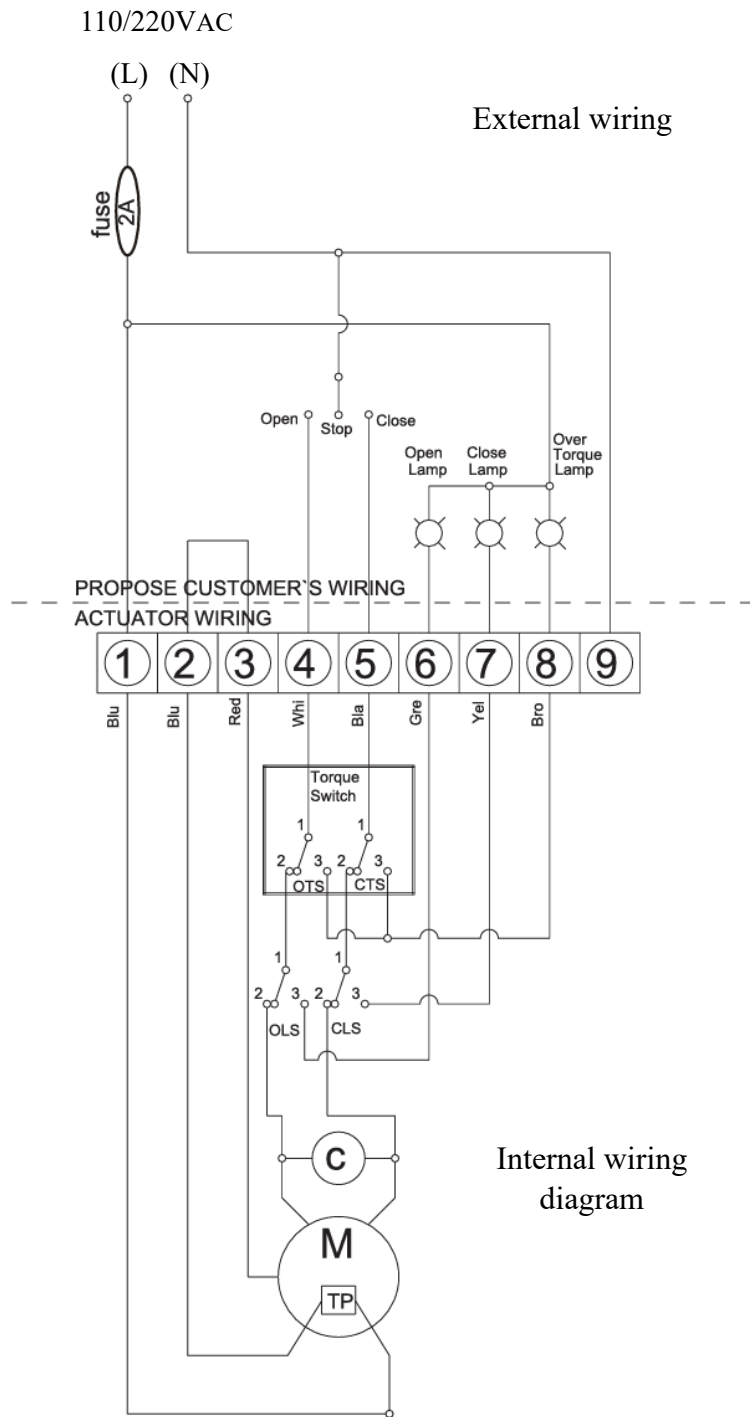


# MK Electric Actuator Wiring Diagram

## • ON / OFF TYPE

110 / 220 V<sub>AC</sub> (Single Phase)

Wiring is connecting TP with supplying power via series wiring mode.

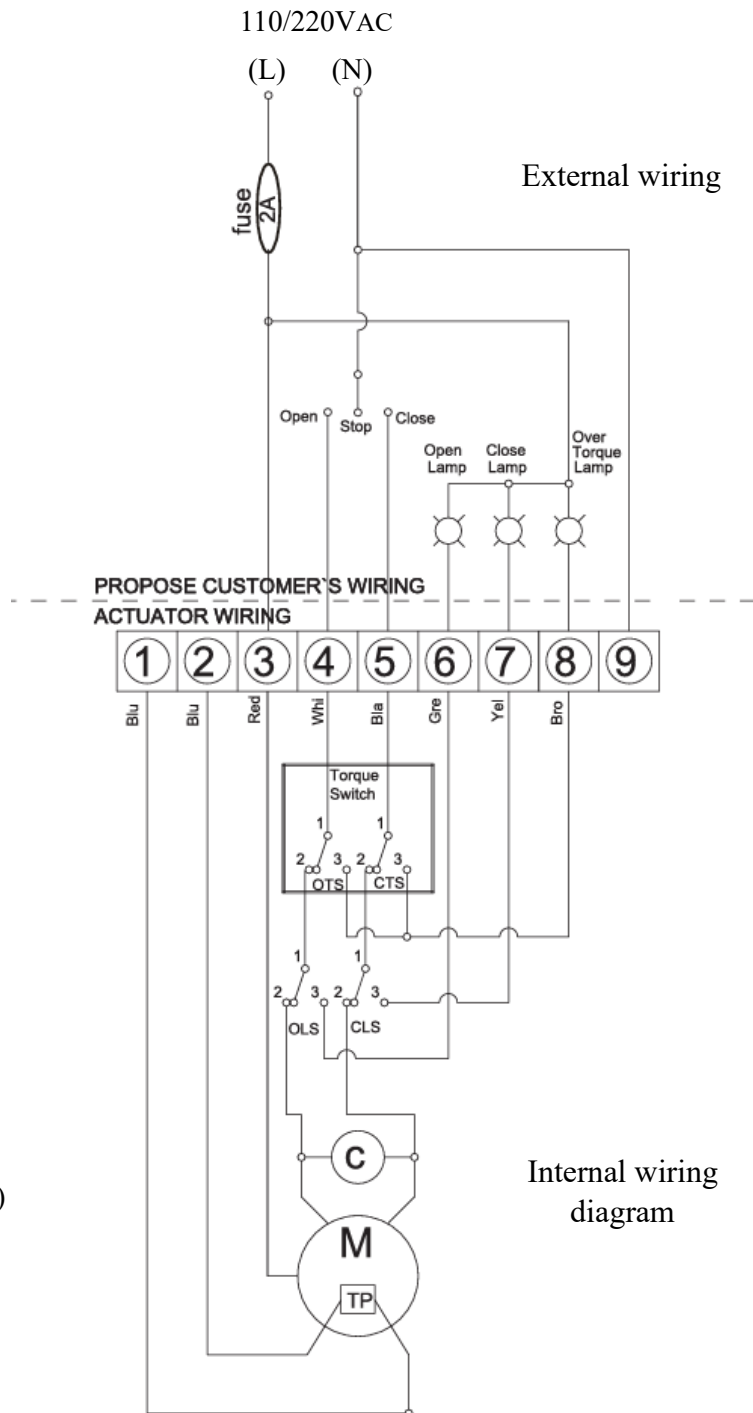


- ①: connect to Power Supply (L)
- ⑨: connect to Power Supply (N)
- ②: connect to ③
- ④: when connected to (N) = "OPEN"
- ⑤: when connected to (N) = "CLOSE"
- ⑥: Open Indicator Lamp
- ⑦: Closed Indicator Lamp
- ⑧: Over-torque Indicator Lamp
- TP: Thermal Protector
- M: Motor
- C: Starting Capacitor
- OLS: Stroke Position Switch (Fully Open)
- CLS: Stroke Position Switch (Fully Closed)
- OTS: Over-torque Switch (Fully Open)
- CTS: Over-torque Switch (Fully Closed)

# MK Electric Actuator Wiring Diagram

## 110 / 220 V<sub>AC</sub> (Single Phase)

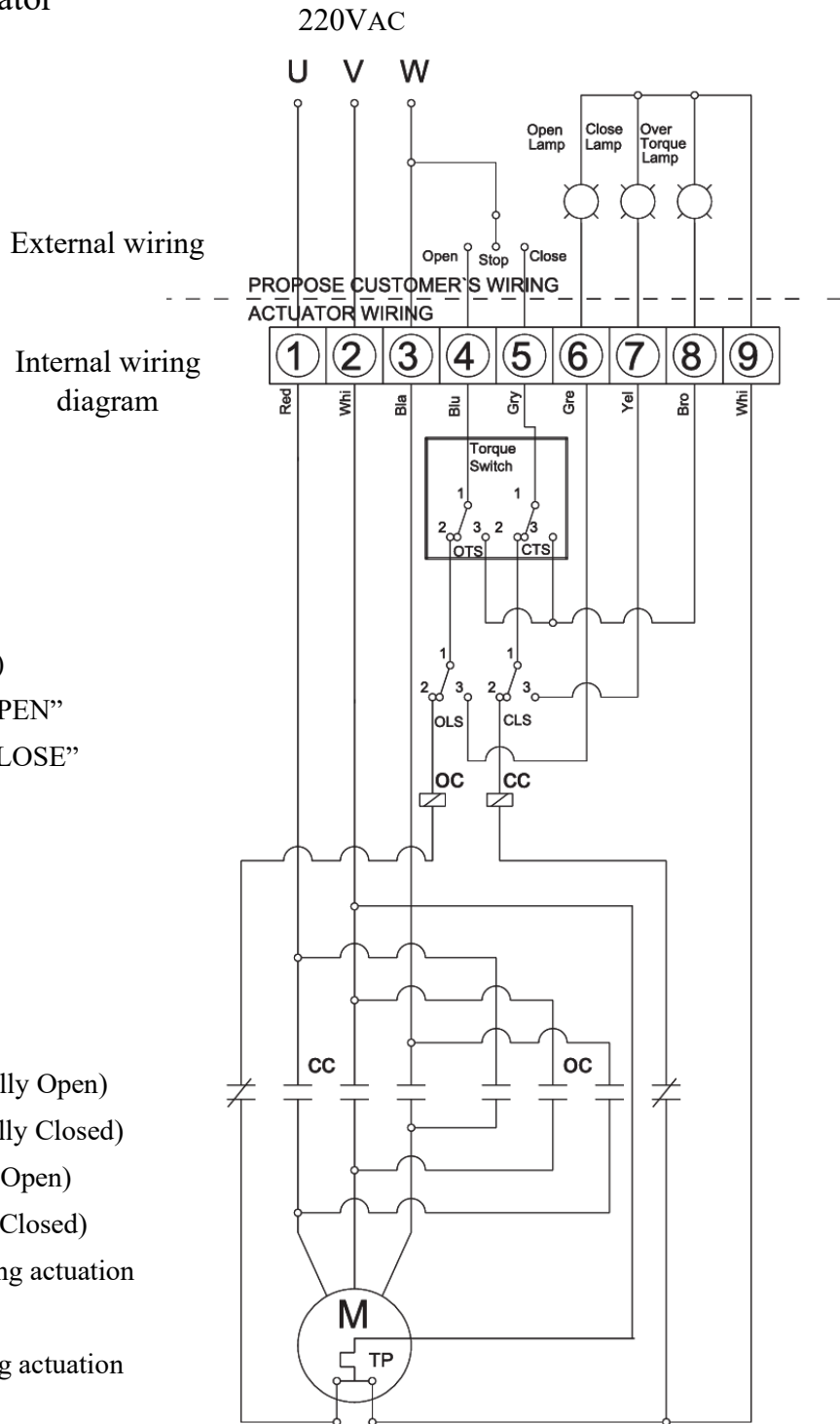
It is available for using TP as dry contacting point.



# MK Electric Actuator Wiring Diagram

## 220 V<sub>AC</sub> (Three Phase)

### Three phase electric actuator wiring diagram



- ①: connect to Power Supply (U)
- ②: connect to Power Supply (V)
- ③: connect to Power Supply (W)
- ④: when connected to (W) = "OPEN"
- ⑤: when connected to (W) = "CLOSE"
- ⑥: Open Indicator Lamp
- ⑦: Close Indicator Lamp
- ⑧: Over-torque Indicator Lamp

TP: Thermal Protector

M: Motor

C: Starting Capacitor

OLS: Stroke Position Switch (Fully Open)

CLS: Stroke Position Switch (Fully Closed)

OTS: Over-torque Switch (Fully Open)

CTS: Over-torque Switch (Fully Closed)

OC: Magnet Contactor for opening actuation purpose.

CC: Magnet Contactor for closing actuation purpose.

Notice: If completing external wiring but electric actuator cannot be operated at normal status, please check the phase of U.V.W. whether the wiring is correct or not. If wrong wiring for U.V.W. of three phases, please change the contacting point for U.V.W.

# MK Electric Actuator Wiring Diagram

380 / 440 V<sub>AC</sub> (Three Phase)

Three phase electric actuator wiring diagram

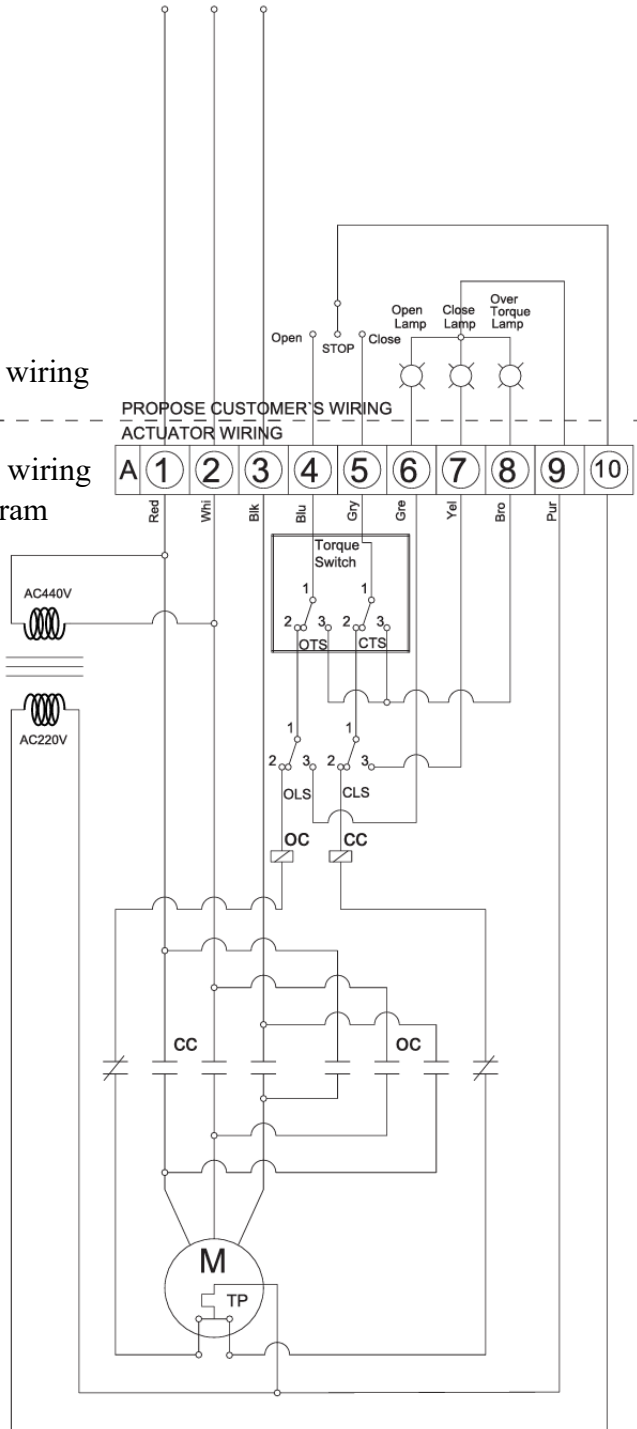
380 / 440VAC

U V W

External wiring

Internal wiring diagram

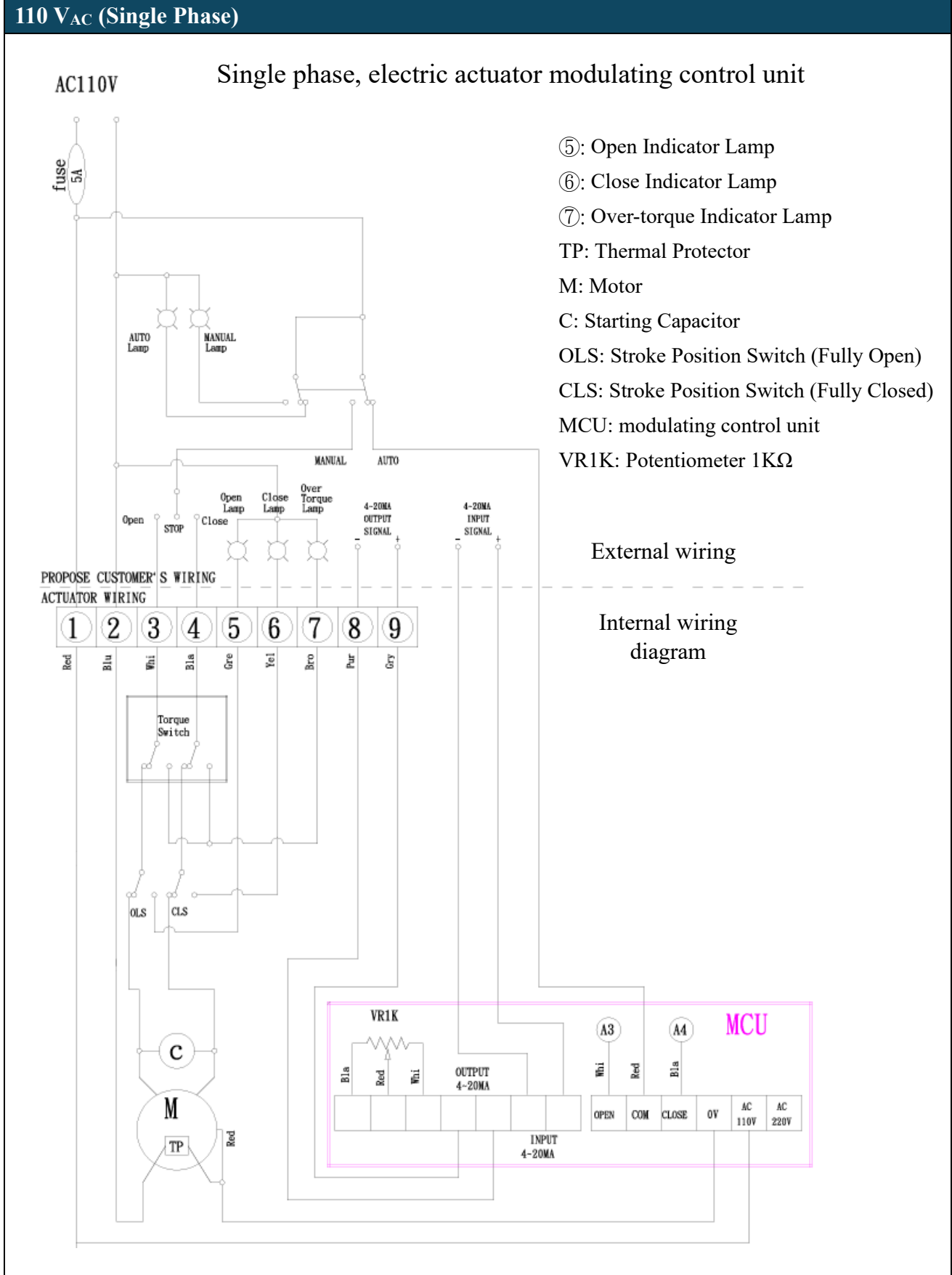
- ①: connect to Power Supply (U)
  - ②: connect to Power Supply (V)
  - ③: connect to Power Supply (W)
  - ④: when connected to (W) = "OPEN"
  - ⑤: when connected to (W) = "CLOSE"
  - ⑥: Open Indicator Lamp
  - ⑦: Close Indicator Lamp
  - ⑧: Over-torque Indicator Lamp
- TP: Thermal Protector  
M: Motor  
C: Starting Capacitor  
OLS: Stroke Position Switch (Fully Open)  
CLS: Stroke Position Switch (Fully Closed)  
OTS: Over-torque Switch (Fully Open)  
CTS: Over-torque Switch (Fully Closed)  
OC: Magnet Contactor for opening actuation purpose.  
CC: Magnet Contactor for closing actuation purpose.



Notice: If completing external wiring but electric actuator cannot be operated at normal status, please check the phase of U.V.W. whether the wiring is correct or not. If wrong wiring for U.V.W. of three phases, please change the contacting point for U.V.W.

# MK Electric Actuator Wiring Diagram

## • Modulating TYPE



# MK Electric Actuator Wiring Diagram

380 / 440 V<sub>AC</sub> (Three Phase)

Three phase, electric actuator modulating control unit

TP: Thermal Protector

M: Motor

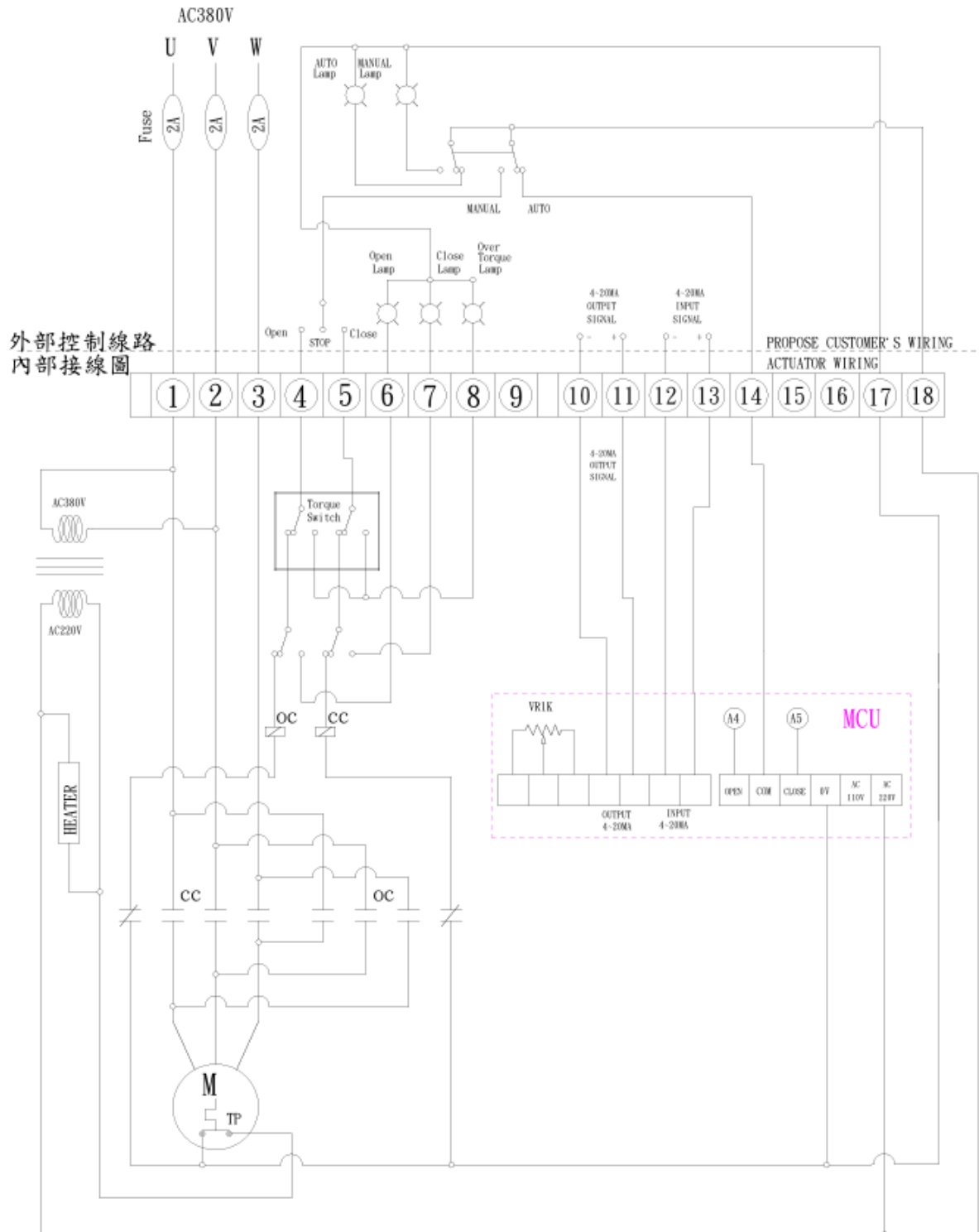
OC: Magnet Contactor for opening actuation purpose.

CC: Magnet Contactor for closing actuation purpose.

MCU: modulating control unit

VR1K: Potentiometer 1KΩ

HEATER (optional)



# MK Electric Actuator Wiring Diagram

380 / 440 V<sub>AC</sub> (Three Phase)

Three phase, electric actuator modulating control unit and local control unit

TP: Thermal Protector

M: Motor

OC: Magnet Contactor for opening actuation purpose.

CC: Magnet Contactor for closing actuation purpose.

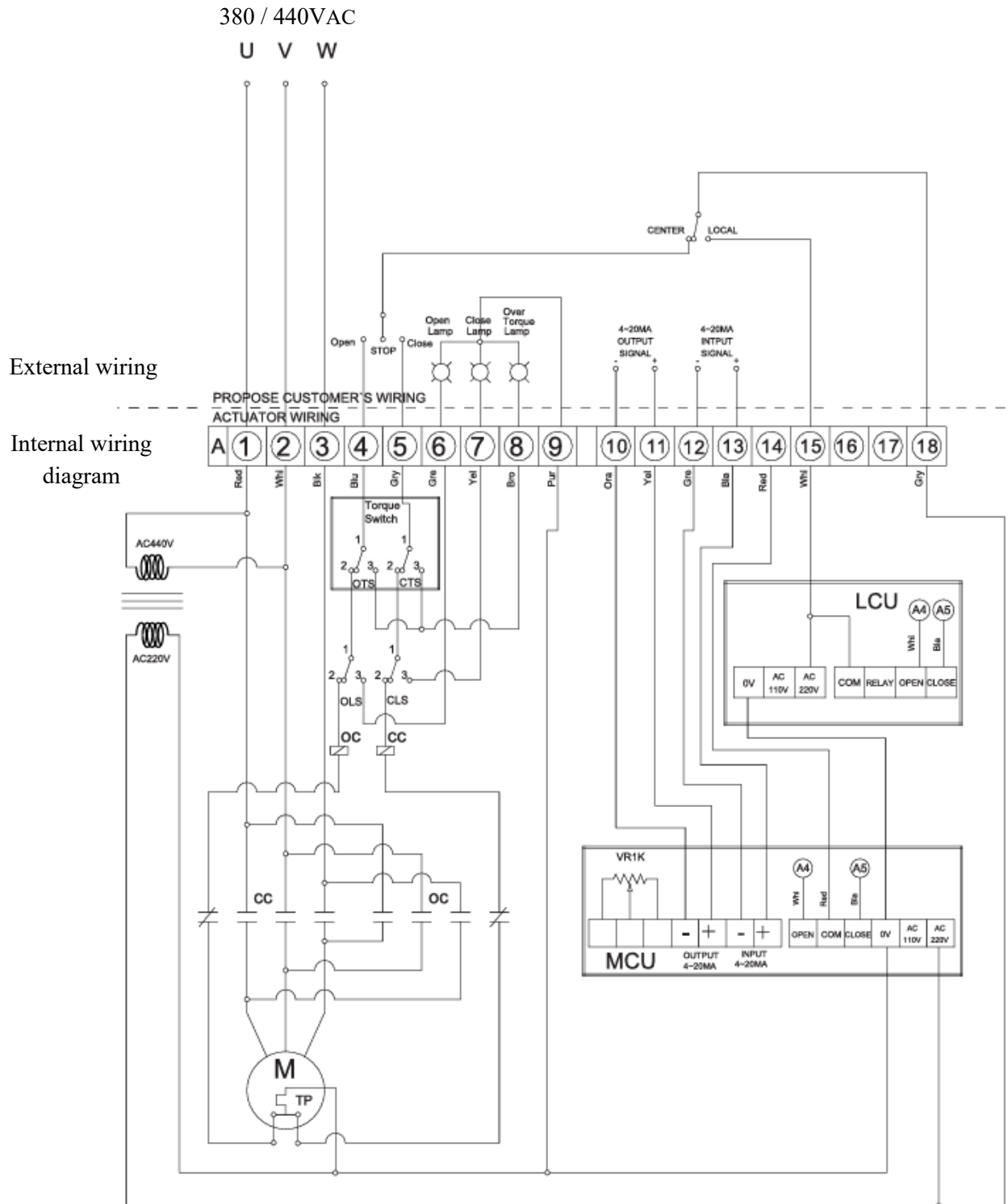
OTS: Over-torque Switch (Fully Open)

CTS: Over-torque Switch (Fully Closed)

MCU: modulating control unit

LCU: Local control unit

VR1K: Potentiometer 1K $\Omega$



# MK Electric Actuator Wiring Diagram

380 / 440 V<sub>AC</sub> (Three Phase)

Three phase, electric actuator modulating control unit and local control unit

TP: Thermal Protector

M: Motor

OC: Magnet Contactor for opening actuation purpose.

CC: Magnet Contactor for closing actuation purpose.

OTS: Over-torque Switch (Fully Open)

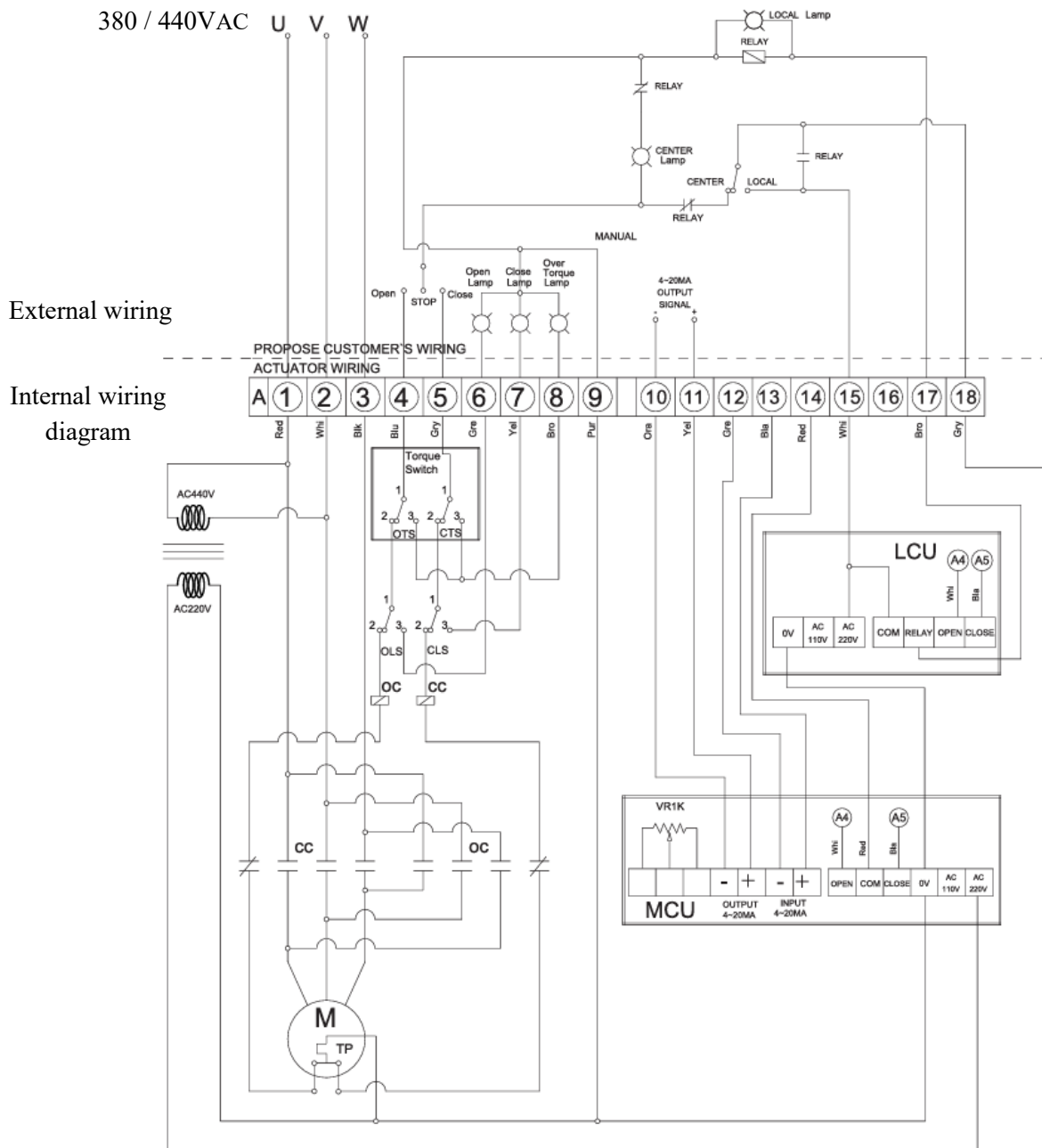
CTS: Over-torque Switch (Fully Closed)

MCU: modulating control unit

LCU: Local control unit

VR1K: Potentiometer 1K $\Omega$

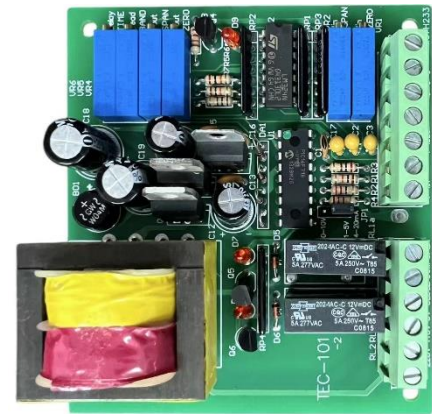
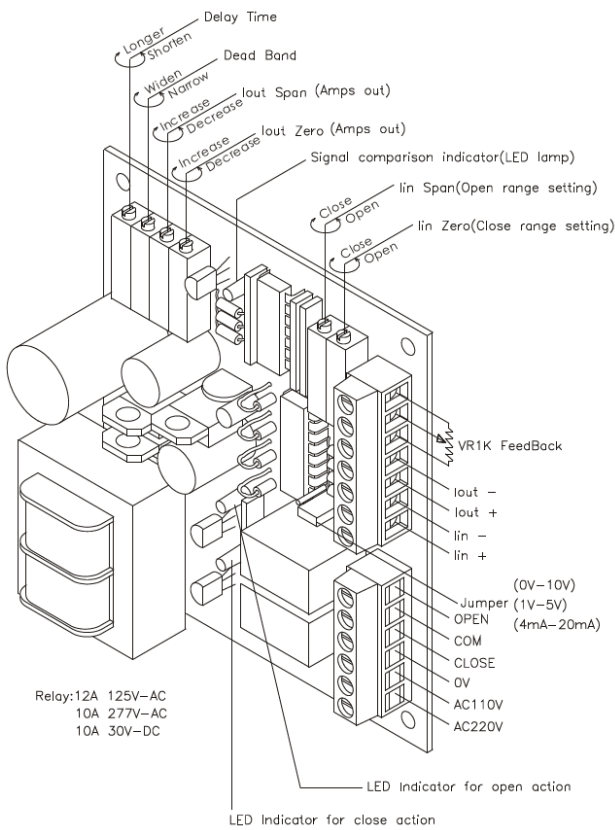
This external wiring system to use in the Relay Contacting point of LCU (Local Control Unit / Site Control System), when the external remote controller to change to the site (LCU), after pressing the button of LCU, the priority belongs to Local Control Unit (LCU), After completing operation, and push the remote button, then external wiring system will work.





# MK Electric Actuator Wiring Diagram

## Modulating Control Unit Operation Manual



The TEC-101 proportional controller allows for three selectable input signals (0~10V, 1~5V, 4~20mA) using a jumper and provides a 4~20mA output signal.

### • Six adjustable knobs:

1. **Delay time:** Longer times increase stability; shorter times allow faster response.
2. **Dead band:** Wider bands increase stability; narrower bands enhance precision.
3. **lout span (Amps out): 20mA**
4. **lout zero (Amps out): 4mA**
5. **lin span (open range setting): 20mA**
6. **lin zero (close range setting): 4mA**

### • Three signal indicator lamps

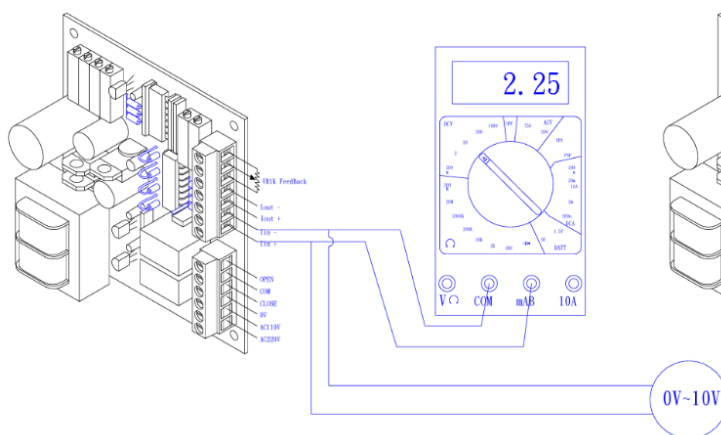
1. Signal comparison indicator.
2. LED indicator for open action
3. LED indicator for close action

### • Two input voltages:

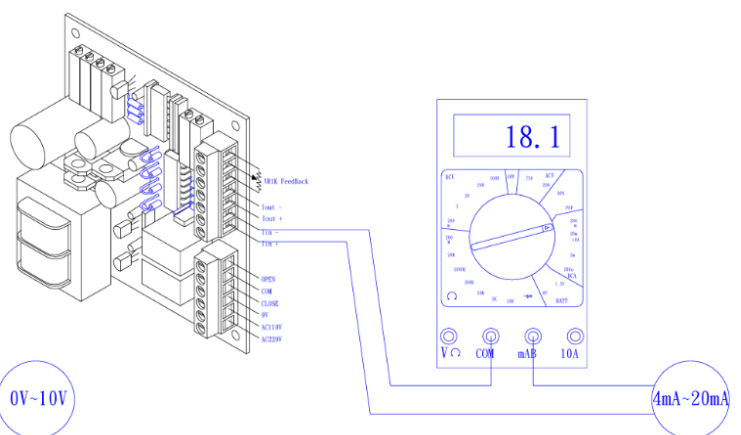
1. AC110V
2. AC220V

**Note:** When connecting the power supply, ensure the correct voltage is used. Incorrect voltage may damage the circuit board.

- Three input signals: 0V~10V, 1V~5V, 4mA~20mA
- Voltage signals (0V~10V or 1V~5V) are not recommended for long-distance applications as they may attenuate due to line resistance.
- Current signals are suitable for long-distance applications because the voltage increases as line current decreases to maintain the required current.
- Both voltage and current signals are DC. When wiring, pay attention to the polarity. Incorrect wiring will prevent the equipment from functioning but will not cause damage.



For on-site adjustment of voltage signals (0~10V or 1~5V), set a multimeter to the DVC 20V range and connect it in parallel with the INPUT signal to monitor the voltage value, making adjustments more convenient.



For on-site adjustment of current signals (4mA~20mA), set a multimeter to the DCA 200mA range and connect it in series with the INPUT signal to monitor the current value, making adjustments more convenient.