

## 1. Introduction

The Valtorc 4-20 MA Board is capable of controlling the actuator's open/close degree over a resolution of 200:1 by a control signal of 4~20mA dc or 2~10vdc.

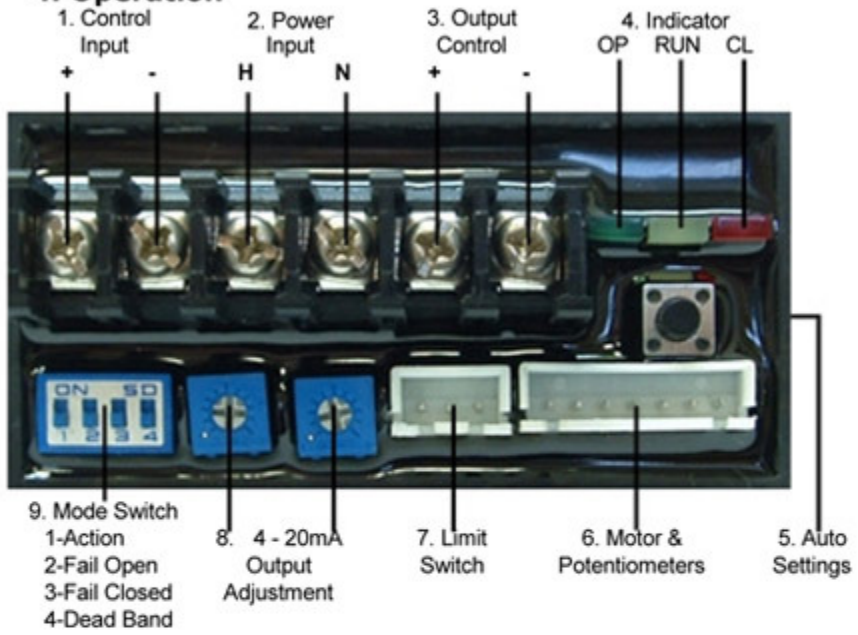
## 2. Features

- Needless adjustment - Full automatic setting
- High rangeability of control - over 200:1 resolution
- Additional functions:
  1. Fail mode (upon control signal loss)
    - Open - fail to open
    - Stop - fail to stop
    - Close - fail to close
  2. Self checking function
    - Check for limit switch
    - Check for potentiometer
    - Check for motor
  3. Electronic brake control
  4. Feedback output : 4 ~ 20mA +/- 1% DC (RL:250ohm)
  5. Small & lightweight

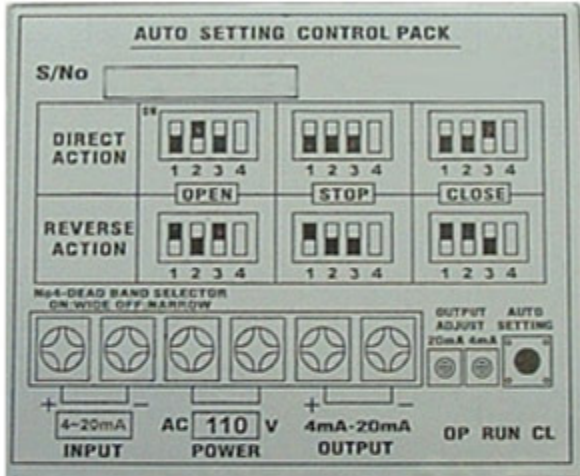
## 3. Electrical Specifications

- Power : 110VAC/60Hz or 220VAC/60Hz
- Control Signal Input : 4 ~ 20mA dc or 2 ~ 10vdc
- Output Signal : 4 ~ 20mA +/- 1% DC (RL:250ohm)
- Calibration : Auto setting
- Resolution : Over 200:1
- Power Consumption : Max 150W @ 110VAC or 200W @ 220VAC

## 4. Operation

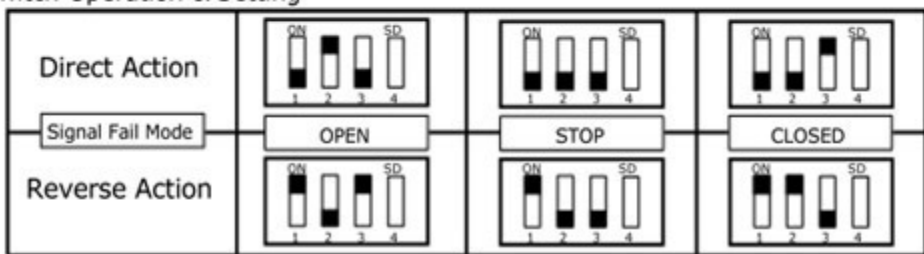


**Board Label**

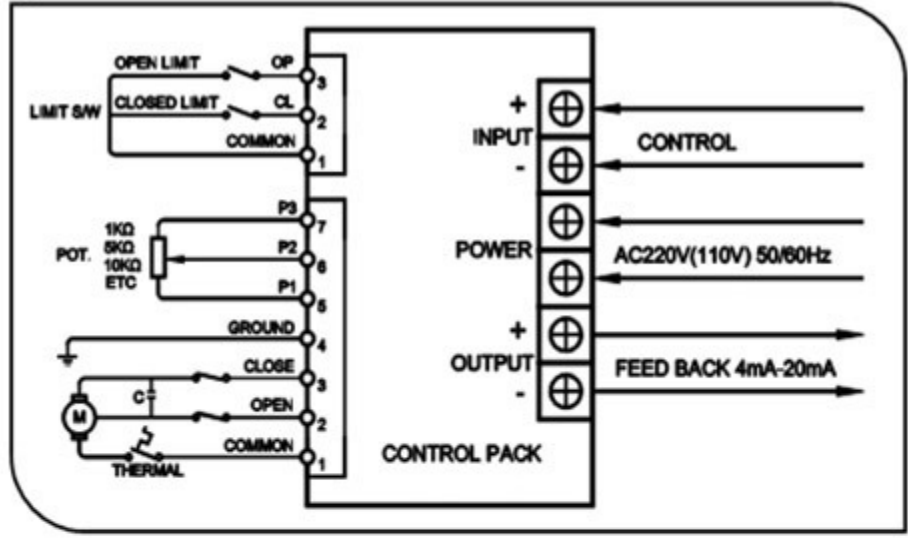


1. Control Input: 4 ~ 20mA or 2 ~ 10vdc
2. Power Input: 110vac or 220vac 50/60Hz
3. Control Output: 4 ~ 20mA +/- 1% DV (RL: 250ohms)
4. Indicator:
  - Green Lamp On - Actuator is Opening
  - Yellow Lamp On - Actuator is Operating
    - o Yellow Lamp Flashing - fully open/closed
    - o Yellow Lamp Flashing Quickly - Fail check limit switch, potentiometer, etc.
  - Red Lamp On - Actuator is Closing

5. Auto Setting Switch: Push & hold for over 3 seconds to cycle auto setting. Actuator will find both limit switches and cycle twice.
6. Motor & Potentiometer
  - Motor common
  - Open motor
  - Close motor
  - Ground
  - Potentiometer P1
  - Potentiometer P2
  - Potentiometer P3
7. Limit switch: input terminal for Digital Limit is Active "A"
  - Limit switch common
  - Close limit switch
  - Open limit switch
8. Output Adjust VR: Sensitive adjustment of "feedback output"
9. Mode Switch Operation & Setting



### 5. Wiring diagram



### 6. Auto setting & Operating Instructions

- Refer to the diagram label on the pack and connect the wires for Power, Input, Output and Turn On Power.
- Push the Auto Setting Switch and hold for 3 seconds. The run(yellow) lamp will go on solid, and the actuator will cycle open(green) & closed(red) 2 times.
- If there are any errors, the run(yellow) lamp will flash quickly and for protection of the product the system is halted. The unit can not be operated until the cause of the error has been cleared. Check the limit switch, potentiometer, motor and other parts as needed.
- After completion of the Auto-setting, to ensure the open degree is accurate, input the following control signals: 0%, 25%, 50%, 75%, and 100%. Connect an indicator (current meter) to the Output Terminals to ensure the output current is accurate. If the open degree is not accurate, check the position of Limit Cam and the position of the potentiometer and try to reset again.