



**M B Control &  
Systems Pvt. Ltd.**

Innovative Electronics For You

# M B THERM PID CONTROLLERS



## APPLICATION

Controlling temperature, humidity, pressure, flow, pH and others

## FEATURE

- PID auto tuning
- Sample rate- two times per second
- Multi range input types- TC, RTD, mV, mA
- Control Output Options: Relay, SSR drive or 4~20mA
- Two-point alarm with twelve alarm modes
- Non-volatile memory
- Self-diagnosis
- Auto zero and Auto span
- Universal Power Supply
- Option for Remote SV
- Optional Re-transmission output 4~20 mA
- Optional RS 485 for MODBUS RTU

## SPECIFICATION

### Input

T/C (Thermocouple) : K, J, E, T – Accuracy 0.5% F.S ±3 LS digits

T/C (Thermocouple) : B, R, S – Accuracy 1% F.S ±2°C

T/C (Thermocouple) : N – Accuracy 1% F.S ±1°C

PT100 – Accuracy 0.5% F.S ±0.3°C

JPT100 – Accuracy 0.5% F.S ±0.3°C

CU50 – Accuracy 0.5% F.S ±3°C

CU100 – Accuracy 0.5% F.S ±1°C

0~50mV – Accuracy 0.5%F.S±3 LS digits

0~400Ω – Accuracy 0.5%F.S±3 LS digits

### Control Mode

ON/OFF (heating or cooling)

PID (heating or cooling mode or heating and cooling)

### Output

Control Relay Output: AC 250V /5A

Control SSR output: DC 24V pulse voltage, load<30mA

Control Current output: DC 4~20mA load<500Ω

Alarm Relay Output: AC 250V /3A

### Mechanical Characteristics

Ambient Working temperature: 0~50°C (no condensation)

Storage temperature: -10~60°C (no condensation)

Working Humidity (non-condensing): 45 ~ 85%RH

Weight: About 400g

### Electric Characteristics

Power supply: AC/DC 100~240V (85-265V)

Power Consumption: < 6VA

Dielectric strength: The shell and panel frame PC/ABS (Flame Class UL94V-0)

ESD: IEC/EN61000-4-2 Contact ±4KV /Air, ±8KV perf. Criteria B

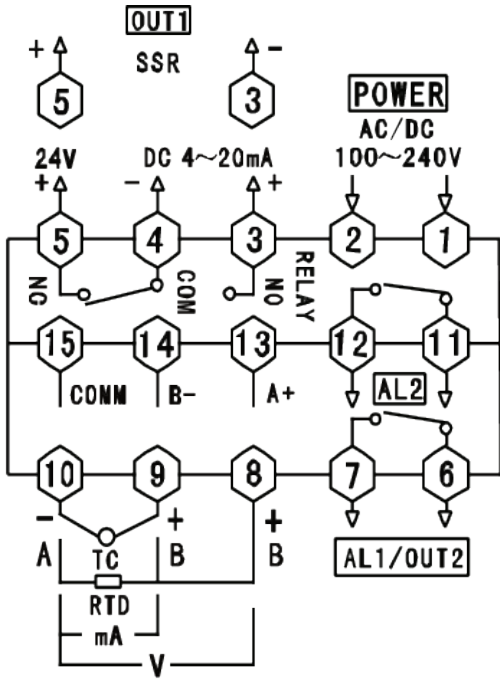
Surge immunity: IEC/EN61000-4-5, ±2KV perf. Criteria B

Voltage drop & short interruption immunity: IEC/EN61000-4-29, 0% ~70% perf. Criteria B

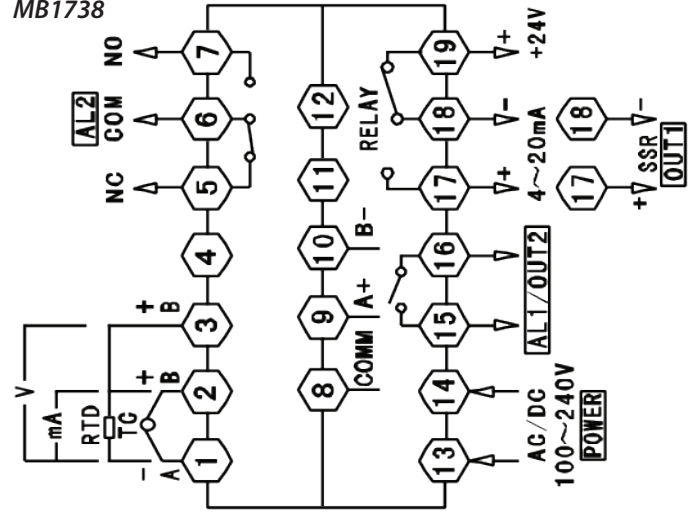


**TERMINAL WIRING DIAGRAM**

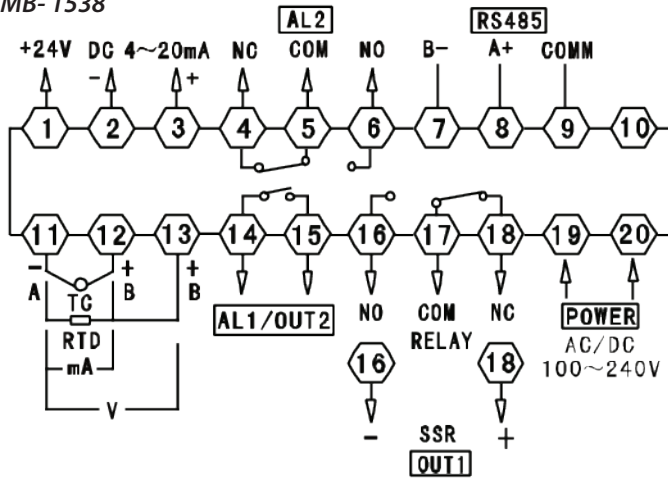
**MB 1438**



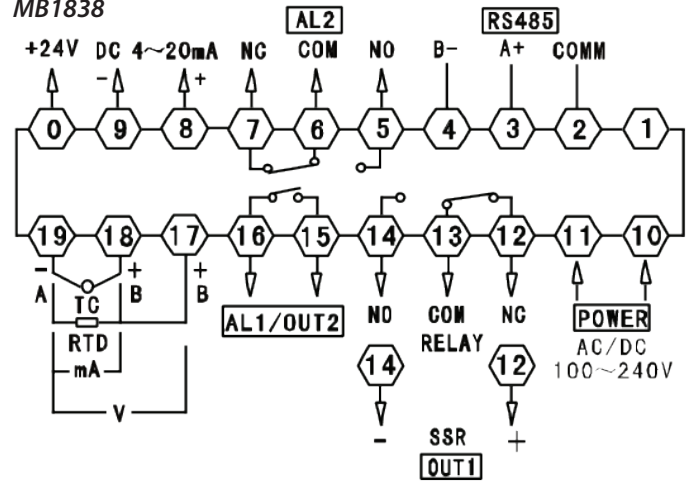
**MB1738**



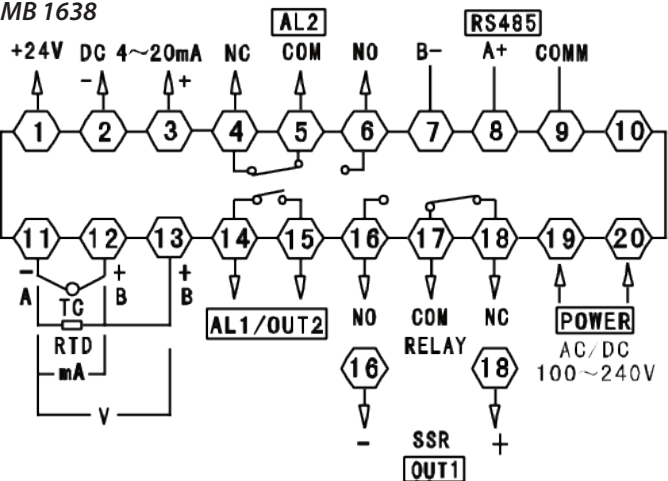
**MB- 1538**



**MB1838**



**MB 1638**



**ORDERING INFORMATION**

A – MB Therm series PID Controller

B – Mode No :

- MB- 1438 with size 48Wx48Hx100L mm (DIN 1/16)
- MB- 1538 with size 48Wx96Hx100L mm (DIN 1/8)
- MB- 1638 with size 96Wx48Hx100L mm (DIN 1/8)
- MB- 1738 with size 72Wx72Hx100L mm
- MB- 1838 with size 96Wx96Hx100L mm

C – Out 1 control output

- 0- None
- 1- Relay output
- 2- SSR Output
- 3- Current 4~20mA

D – Communication

- 0- Without RS-485 communication
- 1- With RS-485 communication

E – Alarm

- 0- None
- 1- One Alarm
- 2- Two Alarm

F – Re-transmission

- 0- None
- 1- 4~20mA

**Order Information**

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