

MaxWell

Digital Temperature Controller

MTB Series

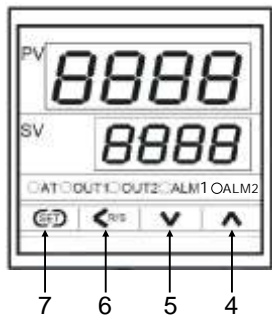
Standard Version

Standard Four digits PID



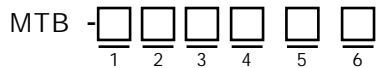
- Selectable input (TC, RTD, Analog)
- PID with auto-tuning
- Accuracy 0.5% F.S
- 90~260 VAC, 24VDC power supply optional
- SSR drive/Relay/4-20mA/Thyristor trigger output
- Dual line four digits display
- Panel mount
- Auxiliary power supply for sensors optional

Panel Description



- 1: Process value or parameter display
- 2: Setting value or parameter value display
- 3: Indication lamps
AT---Auto-tuning indication
OUT1---For output 1 indication
OUT2---For output 2 indication
ALM1 ---For first alarm indication
ALM 2---For second alarm indication
- 4: Increase key
- 5: Decrease key
- 6: Shift key or Run/Stop key
- 7: Set key

Ordering Information



1: Size Information

- 48:** 48mm(Width)*48mm(Height)
- 49:** 48mm(Width)*96mm(Height)
- 72:** 72mm(Width)*72mm(Height)
- 96:** 96mm(Width)*96mm(Height)
- 94:** 96mm(Width)*48mm(Height)

2: Output 1

- R:** Relay
- V:** SSR drive
- D:** 4-20mA

3: Output 2

- R:** Relay
- V:** SSR drive
- D:** 4-20mA
- N:** Without output 2

4: Alarm

- 1:** 1 alarm output
- 2:** 2 alarm output

5: Power Supply

- 96:** 90~260VAC
- 24:** 24VDC

6: Auxiliary Power supply

- 1:** 24VDC
- N:** Without auxiliary power supply

Remark: Output 2 is not available when output 1 selected as "4-20mA"

Specifications

Power Supply	:90~260VAC/24DC
Power Consumption	:5 VA(Maximum)
Display	:Dual Line four digits.7 segments LED display
Control method	:P,PID,PI, PD,ON/OFF(P=0)
Input	:Thermocouple(K,J,R,S,B,E,N,T,U,L,PLII,W5Re/W26Re) RTD(Pt100, JPT100) Voltage and Current(0-5VDC,1-5VDC,0-20mADC,4-20mADC)
Output	:Relay(10A /220VAC) SSR DRIVE(12VDC 50mA max) Current output(4-20mA/0-10mA)
Auxiliary output	:24VDC(48mm*48mm not available)
Measuring Accuracy	:0.5%F.S
Control Accuracy	:+/- 1 Celsius
Alarm output	:1 alarm or 2 alarms optional
Alarm mode	:Deviation high Deviation low Deviation high/low Band alarm Process high Process low
Proportional band(P)	:0.1-999.9/1-9999(default 30)
Integral time(I)	:1-3600S(default 240S)
Derivative times(D)	:1-3600S(default 60S)
Control Time(T)	:1-100S(default 20S for replay output, 2S for SSR drive and 4-20mA output)
Sampling time(T)	:0.5 second
Ambient Temperature	:0°C~50°C
Memory retention	:yes
Ambient humidity	:45%-85% RH(None Freeze)
Weight	:MTB-48(0.17kg) MTB-49(0.22kg) MTB-94(0.22kg) MTB-72(0.22kg) MTB-96:(0.31kg)
Size and dimensions	:MTB-48--48mm*48mm cutout(45mm*45mm*78mm) MTB-49--48mm*96mm cutout(45mm*91.5mm*70mm) MTB-72--72mm*72mm cutout(67.5mm*67.5mm*92mm) MTB-96--96mm*96mm cutout(91.5mm*91.5mm*70mm) MTB-94--96mm*48mm cutout(91.5mm*45mm*70mm)

Temperature Controller/Solid State Relay/Rotary Encoder

Input Signals

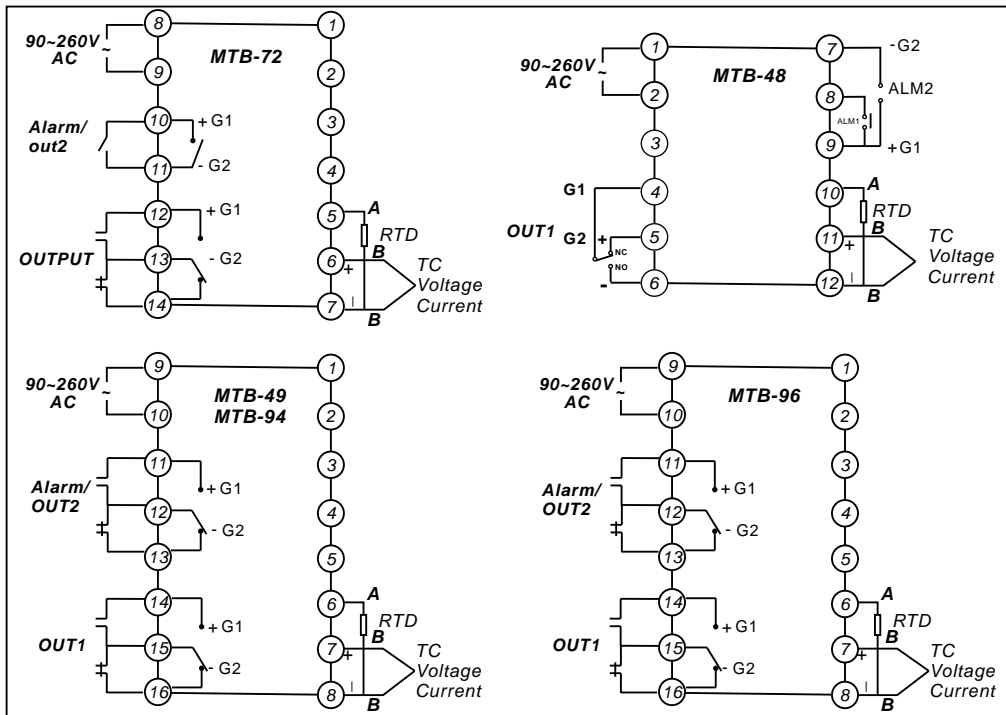
Thermocouple :K(0°C-1372°C) J(0°C-1200°C) R(0°C-1769°C)
 S(0°C-1769°C) B(0°C-1820°C) E(0°C-1000°C)
 T(-199°C-400°C) N(0°C-1300°C) U(-199°C-600°C)
 L(0°C-900°C) PLII(0°C-1390°C)
 W5Re/W26Re(0°C-2320°C)

RTD :PT100(-199.9°C-649.0°C) Jpt100(-199.9°C-649.0°C)

Analog :0-5VDC(-1999-9999 range configurable)
 1-5VDC(-1999-9999 range configurable)
 0-10mADC(-1999-9999 range configurable)
 4-20mADC(-1999-9999 range configurable)

Remark: Be sure to parallel connect a 250 ohm to the input terminal when input is 0-10mA or 4-20mA

Terminal Arrangement



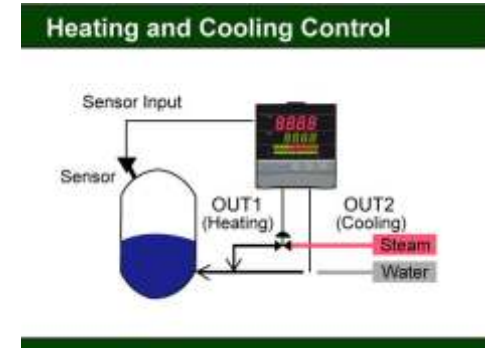
Remark: Parallel a 250 Ohm resistor to the input terminal when input is current(0-10mA/4-20mA)

Remark: G1 G2 for zero crossing thyristor trigger output

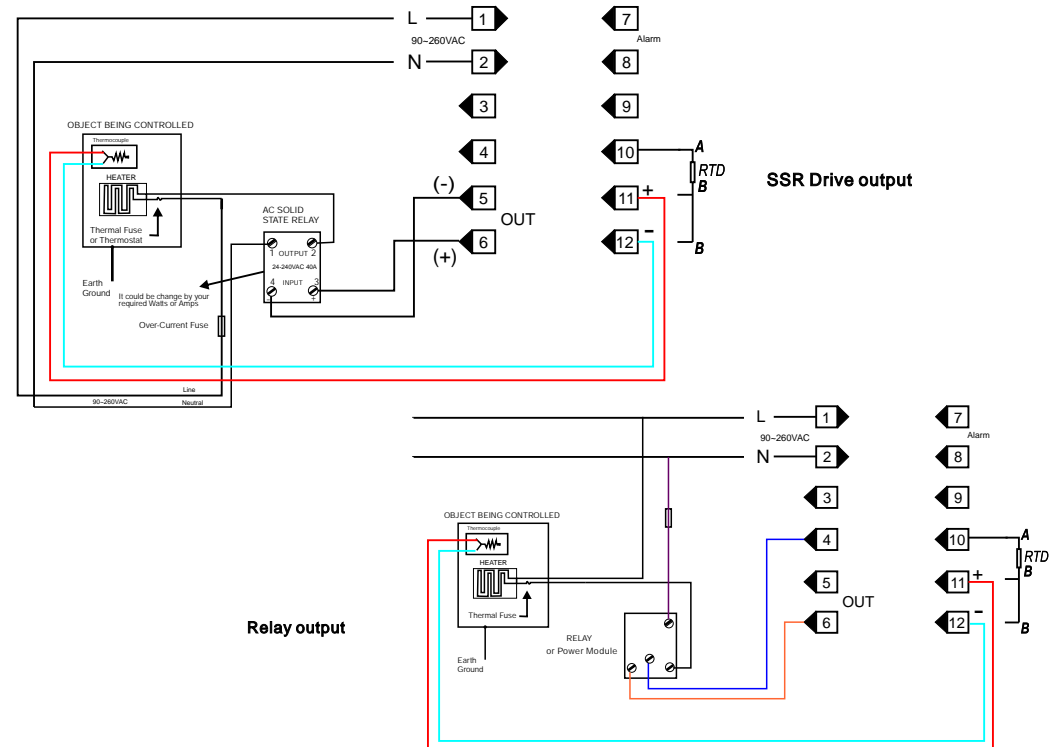
Useful Features

Auxiliary Power Supply :24VDC auxiliary power supply are available for all sizes except 48mm*48mm controller, it is a great features when controller used for process control such as pressure controller, 24VDC can be a power source for pressure transducer.

Heating & Cooling Control



Detailed Wiring Diagram For Most Popular Size 48mm*48mm



Temperature Controller/Solid State Relay/Rotary Encoder