



Features:

- Dual display, 4 digits, 7 segments LED display
- TC / RTD input, analog universal input
- PID, PID Autotune, ON-OFF
- 0.3%F.S measuring accuracy
- Bar graphic display indication
- °C/°F display selectable
- Alarm standby function
- Soft-start function for analog output
- Optional features
 - RS485 Modbus RTU Communication
 - PV/SV Re-transmission
 - 2 alarms(standard package with 1 alarm only)

Ordering Information

MTA-48 (48mm*48mm)(Width*Height)	<div style="display: flex; justify-content: space-around; width: 100px;"> 1 2 3 4 5 </div>
MTA-49 (48mm*96mm)(Width*Height)	
MTA-94 (96mm*48mm)(Width*Height)	
MTA-72 (72mm*72mm)(Width*Height)	
MTA-96 (96mm*96mm)(Width*Height)	

1:Input

Blank	No code in this position means standard model, TC/RTD input
A	4-20mA, 0-10Vdc
B	Thermocouple, RTD(PT100), analog 4-20mA, 0-10Vdc input configurable via software, cost is higher

2:Main output

R	Relay output
V	SSR Drive/Voltage pulse output
D	4-20mA output
E	0-10Vdc output

3:Number of Alarms

1	1 alarm
2	2 alarms

4:Power Source

96	85~265Vac 50/60HZ
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5:Process Value Re-transmission output

N	Without Re-transmission
P42	Process value Re-transmitted as 4-20mA
P010	Process value Re-transmitted as 0-10Vdc
S42	Setting value Re-transmitted as 4-20mA
S010	Setting value Re-transmitted as 0-10Vdc

6:RS-485 Communication

N	Without Communication
K	With Modbus RTU RS-485 communication

Things you should know when ordering MTA series controllers

- 1: MTA standard version only supports thermocouple/RTD inputs, blank, no code
- 2: Please specify the code "A" if you need analog input like 0-10V/4-20mA in this case, controller only supports 0-10Vdc/4-20mA analog signal, do not support TC/RTD
- 3: Code "B" is for real universal inputs, you can switch freely between TC/RTD analog inputs, in this case, the controller supports all inputs, TC/RTD/Analog
- 4: For size 48mm*48mm and 72mm*72mm, can not select 2 alarms and re-transmission function at the same time, as these two function share the same terminals, so you can either go with the 2 alarms or re-transmission function. can't have both.
- 5: The analog re-transmission function and main analog control output can not be selected at the same time. for example, if you select 4-20mA as the main control output, then the analog re-transmission will not be available. vice versa.
- 6: This model do not have 24VDC/24VAC version.

Technical Specifications

Display

Digits	4 digits 7 segments LED, Dual display
LED Indicators	OUT1, OUT2, AT, AL1, AL2, AL3, MAN, COM, PRO

Input Specifications

Inputs	Thermocouple(K, J, R, S, B, T, E, N, Wu3_Re25) RTD(PT100) DC Analog Inputs(2-10Vdc, 1-5Vdc, 4-20mA) (0-10Vdc, 0-5Vdc, 0-20mA) (0-50mV, 0-20mV)
Sampling time	500ms
Input Filter(FTC)	0 to 60(1-30 normal, 31-60 enhanced)
Resolution	1/0.1° for TC/RTD only Decimal point position selectable: 1/0.1/0.01/0.001 for analog input
Temperature Unit	°C/°F Selectable
Indication Accuracy	For TC inputs: 0.3% of F.S. ± 1° For R & S type TC inputs: 0.5% of F.S. ± 2° (20 min of warm up time for TC inputs) For RTD inputs: 0.2% of F.S. ± 1° For Analog input: ± 0.5%. ± 1 digit (F.S.=Full Scale)

Output Specifications

Main Control Output	1 main output, heating or cooling selectable
Contact Rating(SPST)	5A @ 250Vac Resistive Load(Main Output) 3A @ 250Vac Resistive Load(Alarm output)
Current	0/4 to 20mA DC(loop impedance: 500Ω max.)
SSR Drive	12V DC(20mA)
Retransmission	
Current	4 to 20mA DC(loop impedance: 500Ω max.)
Voltage	0 to 10Vdc(Load resistance: 10KΩ Min)

Supply Voltage

Supply Voltage	85~265Vac 50/60HZ
Power Consumption	6VA max @230Vac

Environmental Specifications

Temperature	Operating: 0 to 50°C(32 to 122°F) Storage: -20 to 75°C(-4 to 167°F)
Humidity(non-condensing)	95%RH
Weight	0.17kg(48mm*48mm) 0.25kg(48mm*96mm, 96mm*48mm) 0.27kg(72mm*72mm) 0.32kg(96mm*96mm)
Protection	Dust proof for front plate

Functional Specifications

Control Action	1)PID 2)ON-OFF, when P=0 3)Time proportional when P≠0 I=0 D=0
Proportional Band(P)	0.0 to 200.0
Integral Time(I)	0 to 3600 sec
Derivative Time(D)	0 to 3600 sec
Cycle Time	0 to 999 sec
Hysteresis Width	0 to 999
Alarms modes	Deviation high / Deviation low Deviation high/low alarm Deviation band alarm Process high alarm/ Process low alarm
Input offset	-199 to 199
Output lower limit	0.0 to 100%
Output higher limit	0.0 to 100%

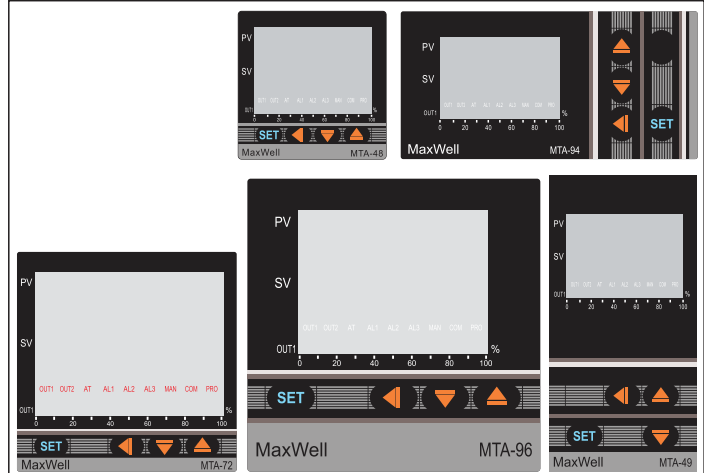
Optional features

Serial communication	
Interface standard	RS-485
Communication address	0 to 127, maximum 36 units per line
Transmission mode	Half duplex
Transmission protocol	Modbus RTU
Transmission format	Support 03 read command, 06 and 10 write command 1 start bit+8 digital bit+N+1 stop bit(8.N.1) 1 start bit+ 8 digital bit+N+2 stop bit(8.N.2)
Transmission speed	2400, 4800, 9600, 19200(9600 default)

Compliance

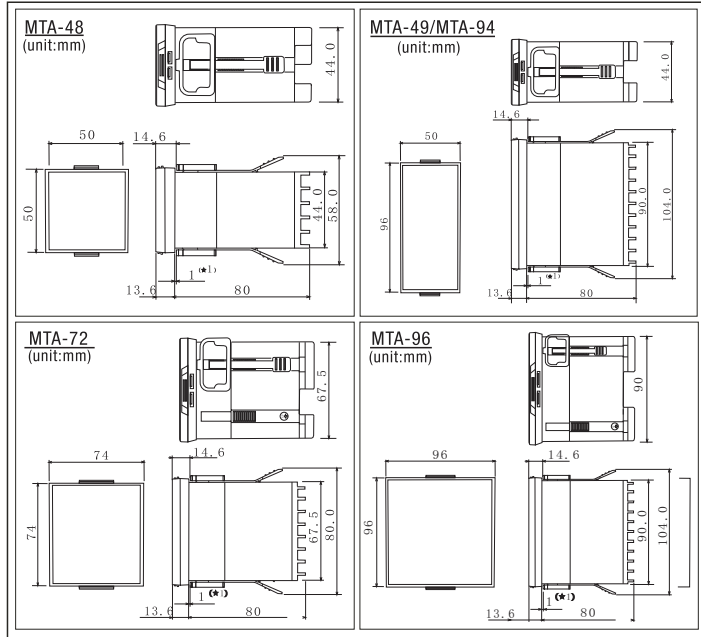
IEC/EN 61326(EMI/EMC)
IEC/EN 61010 Revision 3 2010 Edition(Safety)

Panel Layout

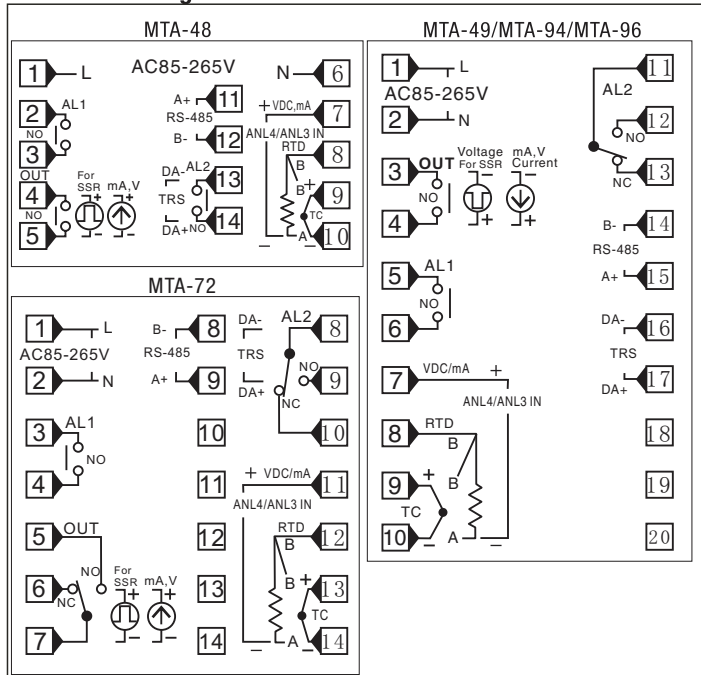


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|---|------------------------------|
| PV window, display PV or parameter notation | OUT1: Output 1 indicator |
| SV window, display SV or parameter value | OUT2: Output 2 indicator |
| Bar graphic, shows the output percentage | AT: Auto-tuning indicator |
| : Function key | AL1: Alarm 1 indicator |
| : Shift key | AL2: Alarm 2 indicator |
| : Decrement key | AL3: Alarm 3 indicator |
| : Increment key | MAN: Reserved indicator |
| | COM: Communication indicator |
| | PRO: Reserved indicator |

Dimensions



Terminal Arrangement



This is a general connection diagram please always refer to connection stickers on the side of the controller for details connection in field application