MTC-48-P/MTC-49-P/MTC-72-P/MTC-96-P

Ramp and Soak Controller/Profile controller

General Features:

- Ramp and soak controller/profile controller
- Maximum 32 segments, can be divided into 4 programs, each program with 8 segments, or you can link all segments together as 1 program at 32 segments
- Relay/SSR drive/4-20mA output, specify when order
- TC/RTD,analog input(have to be specified when order)
- Auto/manual control bumpless transfer on panel(except 48mm*48mm)
- 0.2% F.S accuracy, bar graphic display.
- 0.1 resolution for TC/RTD input, 0.001 resolution for analog input
- System time unit can be second, minute, hour, selectable
- Maximum output of each segment is configurable
- Current running segment and system running time is traceable
- Program can be initiated at "0" or at process value(PV)
- Program can be activated automatically right after power on or you can choose to initiate the program via keys on the front panel, when there is a power failure, the program continues from where it left off before power failure occurs
- When program finished, the same program can repeated automatically. or program can be terminated
- When program or segment finished, an alarm can be triggered when program kicks off, an alarm can be triggered too, the alarm triggered at the end of segement has a reset delay function
- Optional features
  - RS-485 modbus communication
  - PV/SV retransmission
  - Communication master/slave mode

Technical Specifications

Ordering Information

MTC-48-P (48mm*48mm)(width*height)
MTC-49-P (48mm*96mm)(width*height)
MTC-94-P (96mm*48mm)(width*height) 1-2-3-4-5-6
MTC-72-P (72mm*72mm)(width*height)
MTC-96-P (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:Output

R	Relay output for valve opening control
V	SSR Drive output
D	4-20mA
E	0-10VDC

3:Number of Alarms

N	No alarm
1	1 alarm
2	2 alarms
3	3 alarms

4:Power Source

96	85~265Vac 50/60HZ

5:PV re-transmission

N	No re-transmission function
P42	4-20mA re-transmission
P02	0-20mA re-transmission
P010	0-10Vdc re-transmission
S42	4-20mA re-transmission
S02	0-20mA re-transmission
S010	0-10Vdc re-transmission

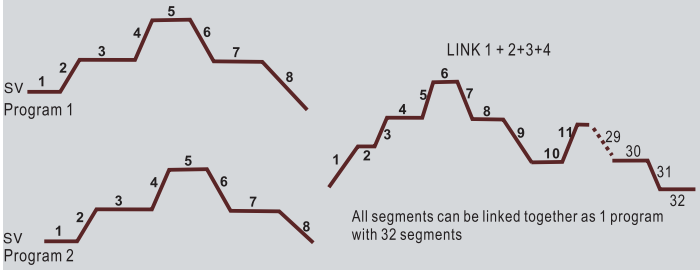
6:RS-485 Communication

N	No communication feature
K	RS-485 modbus RTU communication

eg: MTC-96-P-R-1-96-P42-K
Size 96mm*96mm, TC/RTD input, Relay output, 1 alarm
With process value re-transmitted as 4-20mA
With RS-485 function

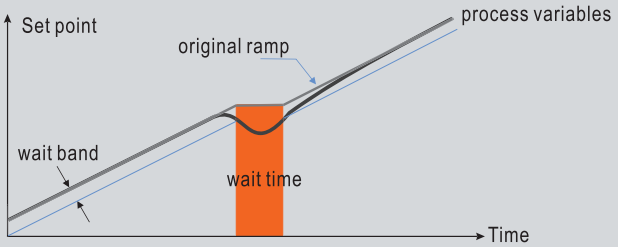
Further elaborate on the features

● Maximum 32 segments, can be divided into 4 programs



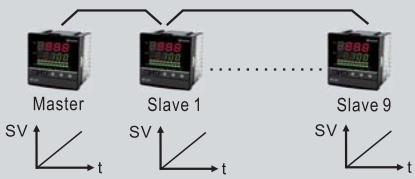
● Auxilary functions

Segment end alarm: when a segment end, an alarm can be triggered
Program end alarm: when a program end, an alarm can be triggered
Power failure retention: when the controller suffers from a power failture, the program can continue to run from where it lefts off
Output limit of segment: The output of each segment can be restrained to preset value to prevent overshoot, for example , you can set the maixmum output to be 60%.
Wait function: please refer to below charts



if the process variable is outside the programmed wait band, the ramp in progress will be stopped; it will be restarted when the process variable returns inside the wait band

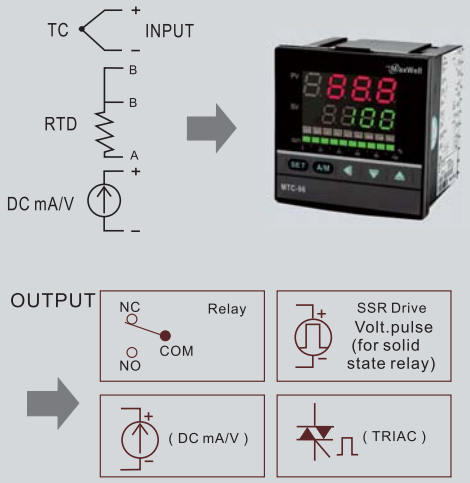
● Master and slave mode



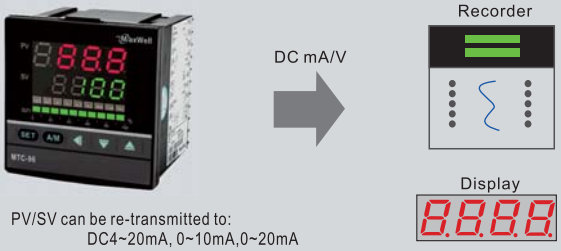
The SV of the master will be inherited to slave controller

Technical Specifications

Universal input

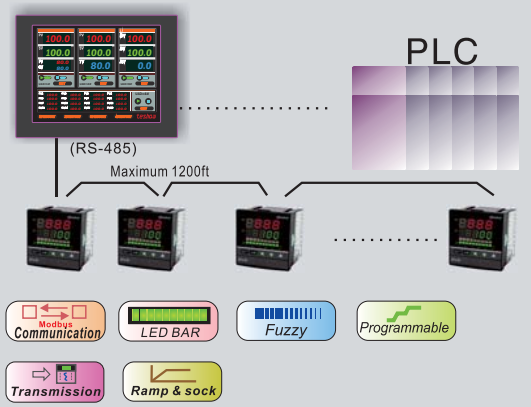


Re-transmission output

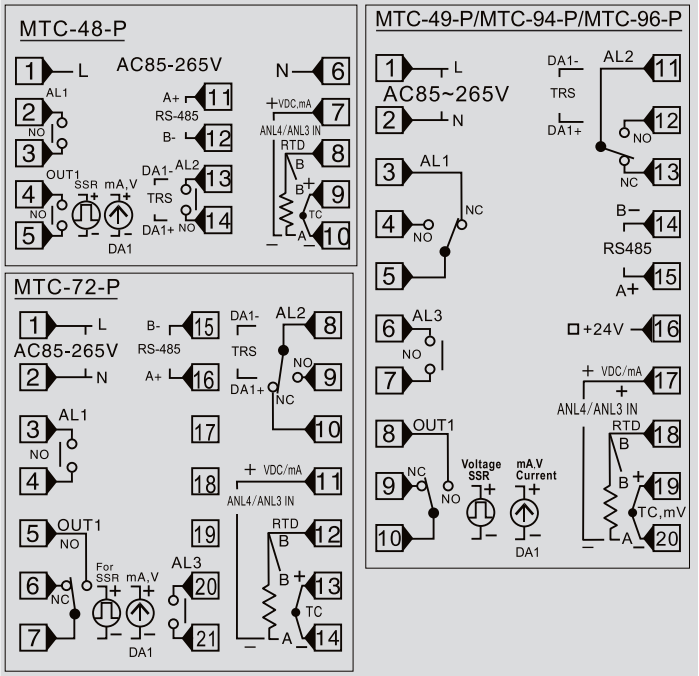


PV/SV can be re-transmitted to:
DC4~20mA, 0~10mA,0~20mA
DC0~1V,0~5V,0~10V,2~10V

RS-485 Modbus Communication



Terminal arrangement



Ratings:
Alarm relay: 250Vac, 3A(Resistive load)
Control relay: 250Vac, 5A(Resistive load)
SSR Drive output: voltage pulse 12VDC(load shall be 600 ohm or more)
Current output: 4-20mA DC(load shall be less than 500 ohm or less
Triac single phase zero-crossing: 100A or less

Input signal and range

Input range			Code	
K1	0.0 to 200.0	℃	2	D2
	0.0 to 400.0	℃	2	D4
K2	0 to 400	℃	K	A4
	0 to 600	℃	K	A6
	0 to 1300	℃	K	B3
E1	0.0 to 200.0	℃	3	D2
	0.0 to 300.0	℃	3	D3
E2	0 to 200	℃	E	A2
	0 to 400	℃	E	A4
	0 to 600	℃	E	A6
J1	0.0 to 300.0	℃	1	D3
	0.0 to 400.0	℃	1	D4
J2	0 to 300	℃	J	A3
	0 to 400	℃	J	A4
	0 to 800	℃	J	A8
T	0.0 to 300.0	℃	T	D3
	0.0 to 400.0	℃	T	D4
S **	0 to 1600	℃	S	B6
R	0 to 1700	℃	R	B7
B	200 to 1800	℃	B	B8
N	0 to 1300	℃	N	B3
Wu3_Re25	600 to 2000	℃	W	B0

Input range			Code	
Pt1 (Pt100)	0.0 to 50.0	℃	P	06
	0.0 to 100.0	℃	P	07
	0.0 to 200.0	℃	P	08
	-50.0 to 100.0	℃	P	13
	-199.9 to +200.0	℃	P	02
Pt2 (Pt100)	0 to 100	℃	D	A1
	0 to 200	℃	D	A2
	0 to 400	℃	D	A4
	0 to 800	℃	D	A8
	-100 to 200	℃	D	C2
	-200 to 400	℃	D	C4
	-200 to 600	℃	D	C6
	-200 to 800	℃	D	C8

Input range			Code	
AN1	0 to 20mV	-1999 to 9999	V	01
AN2	0 to 50mV		V	02
AN3	0 to 5VDC	-199.9 to 999.9	V	03
AN3	0 to 10VDC		V	04
AN4	1 to 5VDC	-19.99 to 99.99	V	08
AN4	2 to 10VDC	-1.999 to 9.999	V	09
AN4	4 to 20mA		A	03
AN3	0 to 20mA		A	02
AN3	0 to 10mA		A	01