



MTC35-C30
Environmental Temperature Controller
Instruction Manual

1. Introduction

The MTC35-C30 Temperature Controller is a particularly flexible controller, which allows On/Off control of room temperature for energy saving.

The controller has two temperature sensors(one for indoor, other for outdoor) as input and two outputs which are controlled by a MCU according to value programmed for the parameters in Parameter List.

Temperature sensor: NTC, range: -50~150 °C.

To get the best performance, before installing and using it, read this instruction manual carefully.

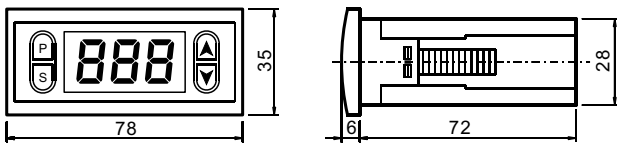
2. Coding

MTC35-C30-2T-2R-220V
 ① ② ③ ④

① Software Function	③ Output
C30 Environmental Temp. controller	2R 2 Relays
② Input	④ Power Supply
2T 2 temperature sensors	220V 220V AC

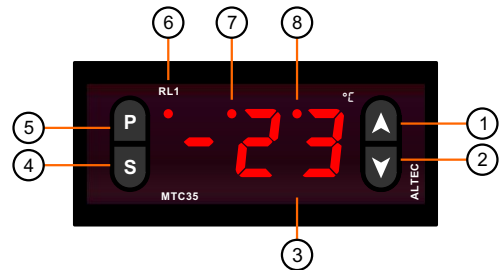
3. Dimensions and Mounting

- 1) Prepare a rectangular cut-out in the mounting panel to the size 72×30mm.
- 2) Insert the controller from the front panel cut-out.
- 3) From behind of the panel, slide the mounting brackets into the guides on the side of the housing. The flat faces of the mounting brackets must lie against the housing.
- 4) Push the mounting brackets up to the back of the panel, and tighten them evenly.



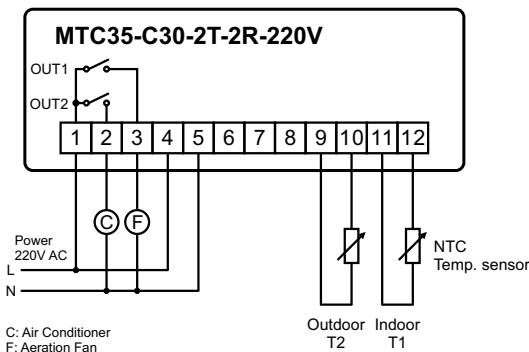
Note:
 Please completes waterproof processing properly, in order to avoid seeps causes the instrument damage.

4. Front Panel Layout



- ①. Up Key
- ②. Down Key
- ③. Display Indicates PV, Parameters and Values
- ④. Setting Key(S)
- ⑤. Parameter Key(P)
- ⑥. Output 1 indicator(RL1)
- ⑦. Output 2 indicator(RL2)
- ⑧. PV2 displaying indicator(PV2) lit when outdoor temperature is displaying

5. Electrical Connection



6. Operation

6.1 Viewing the PV

Mounting and wire up the controller and switch on, 3 seconds later, the indoor measured temperature will appear on display. Indoor temperature T1 and outdoor temperature T2 displaying can be exchange by pressing S key. When the 'Outdoor Temp. displaying indicator' is lit, the display indicates the outdoor temperature.

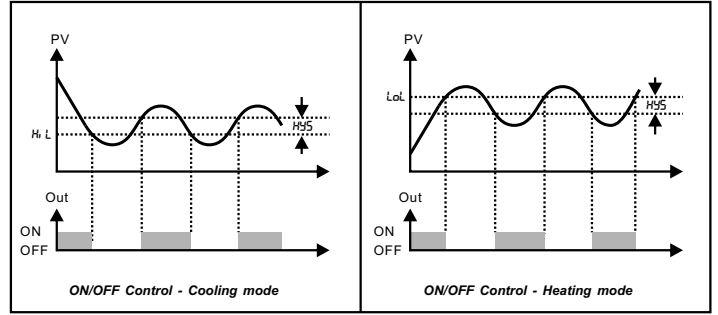
6.2 Setpoint Adjusting

During the basic functioning, press key 'P' and hold for 1 second, temperature setpoint H L appears on the display. Press key 'S', the value of H L appears; press keys ▲ or ▼ to increase or decrease setpoint. Keeping it pressed results in a progressively faster variation. Press key 'P' again, next parameter L L appears, setting its value in the same way.

6.3 Output Action

- When the indoor temperature $T1 > H_i L$, or $T1 < L_o L$, relay OUT2 will be 'ON' start the air conditioner to cool or heat.
- When the indoor temperature $T1 > R_L i$ and temperature difference $(T1-T2) > d t$, relay OUT1 will be 'ON' start the aeration fan to cool.

In order to avoid compressor switch off and on frequently, must set the minimum off time $r t_1$, $r t_2$ between the switch OFF and switch ON, regardless of the input value.



6.4 Parameter List

Switch off the controller; press keys ▲ and ▼ and hold on, switch the controller on again. Parameter $H_y S$ appears on display. Parameter selection and the display of the value is obtained by pressing key S repeatedly; change with keys ▲ and ▼ and store with S.

SN	Mnemonic	Parameter	Adjustable Range	Parameter Description
1	$H_i L$	Indoor setpoint high limit	20~50 °C	Operation parameter
2	$L_o L$	Indoor setpoint low limit	0~20 °C	
3	$R_L i$	Aeration temperature	0~50 °C	
4	$d t$	Temp. difference setpoint	1~25 °C	
5	$H_y S$	Hysteresis range	1~25 °C	to limit $H_y S$'s adjustable range
6	$r t_1$	Relay OUT2 min. off time	0~10 minutes	Compressor protection
7	$P F_1$	Indoor sensor failure output	on OFF	OUT1 'ON' while sensor failure OUT1 'OFF' while sensor failure
8	$R d_1$	Indoor temperature sensor T1 adjustment	-5~5 °C	
9	$r t_2$	Relay OUT1 min. off time	0~10 minutes	Compressor protection
10	$P F_2$	Outdoor sensor failure output	on OFF	OUT2 'ON' while sensor failure OUT2 'OFF' while sensor failure
11	$R d_2$	Outdoor temperature sensor T2 adjustment	-5~5 °C	

6.5 Sensor Failure

While temperature sensor connection breakdown $w r$ is displayed, or while overrange $S n b$ is displayed.

At this time, relay output are determined by $P F_1$ as shown in the parameter list.

Technical Data

Measurement range	-50~150 °C
Resolution	1 °C
Sample rate	125ms
Temperature sensor	NTC, PVC Wire, 2.0m
Relay contact rating	5(8)A/250VAC
Control algorithm	ON/OFF
Power supply	220V AC, ≤2.0W
Dimensions	W78×H35×D78mm
Environmental	Temp: -20~55 °C, Rel. Humidity: ≤85%