ALTEC®

MTC35-F10 Temperature Controller

Instruction Manual

1. Introduction

MTC35-F10 is a particularly flexible controller, which allows On/Off control of your refrigeration(dehumidification) or heating(humidification) plant.

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

The controller has one output which is controlled by a MCU according to value programmed for the parameters in Parameter List.

2. Coding

MTC35-F10-1T-1R-220V
(1) (2) (3) (4)

(1) Software Function

F10	Single input temperature controller

(2) Input

1T	1 temperature sensor

(3) Output

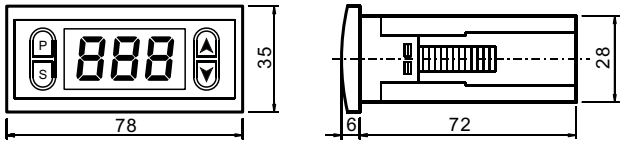
1R	1 Relay

(4) Power

24V	24V AC/DC
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.

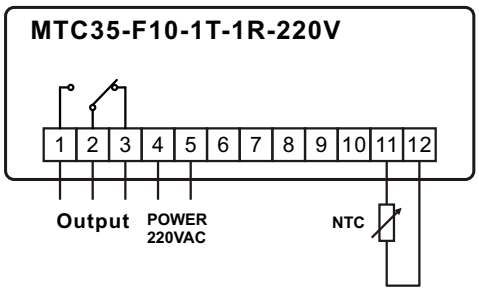


Note:
Please completes waterproof processing properly, in order to avoid seeps causes the instrument damage.

4. Front Panel Layout

①. Up Key
②. Down Key
③. Dispaly, indicates PV, Parameter, Value
④. Setting Key(S)
⑤. Parameter Key(P)
⑥. Output 1 indicator(RL1)

5. Electrical Connection



6. Operation

6.1 Viewing the PV

Mounting and wire up the controller and switch on, 3 seconds later, the Process Value(PV) will appear on display.

6.2 Setpoint Adjusting

During the basic functioning, press key 'P' and hold for 1 second, setpoint SL1 appears on the display. Press key 'S', the value of SL1 appears; press keys ▲ or ▼ to increase or decrease setpoint. Keeping it pressed results in a progressively faster variation. Press key 'P' again, next parameter HYS1 appears, setting its value in the same way.

6.3 Output Action

For Cooling application, configure Act as dir; while for heating application, configure Act as rEv.

While the controller was configured for cooling applications, to avoid compressor switch off and on frequently, must set the minimum off time(rt1) between the switch OFF and switch on, regardless of the input value.

The control algorithm is ON/OFF, SV is SL1, Hysteresis is HYS1.

6.4 Parameter List

Switch off the controller; press keys ▲ and ▼ and hold on, switch the controller on again. Parameter SPH 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	SL1	Setpoint	SPL~SPH	Operation parameter
2	HYS1	Hysteresis	1~10℃	
3	SPH	Setpoint high limit	-50℃~150℃	to limit SL1's adjustable range
4	SPL	Setpoint low limit	-50℃~150℃	
5	rt1	Min. off time for relay	0~10 minutes	Compressor protection
6	PF1	Sensor failure output	on OFF	Relay 'ON' while sensor failure Relay 'OFF' while sensor failure
7	AdJ	Sensor adjustment	-5~5℃	
8	Act	Control action	dir rEv	Direct(cool) Reverse(heat)

6.5 Sensor Failure

While sensor connection breakdown or is displayed,or while overrange Snb is displayed.

In this case, relay output is determined by PF1 as shown in the parameter list.

Technical data

Measurement Range	-50~150℃
Resolution	1℃
Sample Rate	125ms
Temperature Sensor	NTC, PVC Wire, 2.0m
Relay Contact Rating	5(8)A/250VAC
Control Algorithm	ON/OFF
Power	220VAC, 24V AC/DC, ≤2.0W
Dimensions	W78×H35×D78mm
Environmental	Temp:-20~55℃, Humidity:≤85%

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