TA692C-FC

FCU Thermostat

Operating Voltage	$230V_{AC}$
Installation Type	flush-mounting

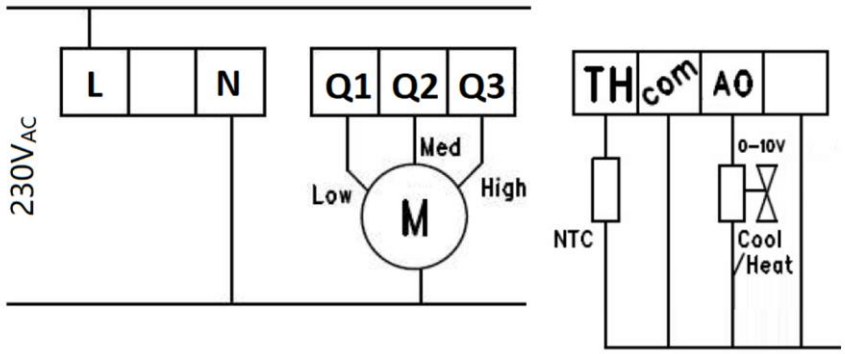
Features

- 2.4” TFT
- Touch keys x 5
- Gloss black lens and matte black casings
- Flush-mount installation in an 86x86 British single-gang wall-box
- Two-pipe Fan Coil application
- Input: access key card holder / open closed detection / external temperature sensor
- Outputs: analog type, digital type x3
- Input
  - External temperature sensor
    - [Optional accessory] 3-meter temperature sensor cable
- Outputs x 5
  - Q_1 Q_2 Q_3
    - Standard three-fan-speed control
  - AO
    - Heat / Cool modulating valve control

Technical Specification

Measuring temperature	0 ~ 40°C
Controlling temperature	5 ~ 35°C
Measuring accuracy/resolution	±0.5°C
Relay Contact Voltage at Q1 Q2 Q3	$230V_{AC}$ max 50/60Hz
Relay Contact Current at Q1 Q2 Q3	5(1)A MAX
AO contact voltage	0 ~ 10V
Output rating at AO	$10V_{DC}$ 10mA MAX
Sensing Element:	103AT
TFT resolution	320 x 240

Wiring Diagram



Touch Keys

Keys	Function
M	Menu Key Short press: change mode Long hold: Internal setting
	Fan Key cycles through Off→Low→Med→High→Auto→Off
	Power On/Off Key
	Setting Up Key
	Setting Down key

Internal Parameter Menu

#	Items	Selection	Default
1	UI Display	Standard Display	--
2	Screen Saver	20 ~ 120 seconds	20 seconds
3	Temperature	°C / °F	°C
4	Calibration (*)	-4°C ~ 4°C	0°C
5 ~ 7	Reserved		
8	Span for Heating	1°C ~ 4°C	1°C
9	Span for Cooling	1°C ~ 4°C	1°C

(*) Calibration applies equally to embedded thermistor and external sensor

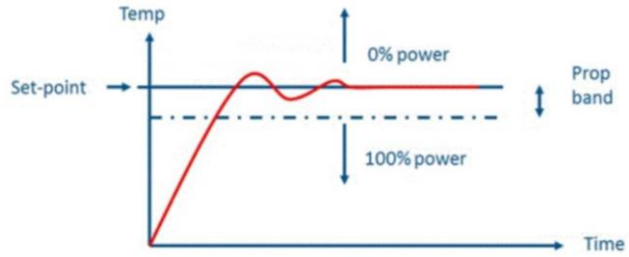
Advanced Parameter Menu

#	Items	Selection	Default
P20	Restore Default	Disable / Enable (dis / en)	dis

Analog Output and PID

TA692C-FC employs proportional integrative control on both Heat / Cool output. AO voltage level is determined dynamically by pre-determined K Factor, P-band and I-Time and the difference between setpoint and ambient temperature sampled in every 10 seconds.

Diagram below illustrates temperature change in heat mode. When room temperature is significantly lower than set-point temperature, say 10 centigrade lower, AO generates $10V_{DC}$. As the room heats up, current temperature surpasses setpoint, AO generates $0V_{DC}$. Room cools down and drops below setpoint AO outputs 1.5V and the curve bends upward. The process continues until equilibrium is reached.



I-Time
The time period or simple time in PI equation. The shorter the time, the more responsive the change in AO.

K-Factor
The coefficient of I-term in PI control. The smaller the number, the faster the response.

Product Appearance

Dimensions / Outline

Protruding part – 86.0mm(W) x 86.0mm(H) x 16.5mm(D)

Inside wall-box – 64.0mm(W) x 66.5mm(H) x 26.6mm(D)