AVANTEC

TA692FC-L

FCU Thermostat Series

Operating Voltage	$230V_{AC}$ ±10%
Measurable range	0 – 50°C, 0.1°C
LoRaWAN	Class C
EU868 band	868.1MHz ~ 868.5MHz

Features

- Wireless thermostats for fan coil units
- 1.5" VA TN with backlit – lite grey text on dark background
- Touch keys x 5
- Flush-mount installation in an 86x86 / British single-gang wall-box
- White gloss housing with light grey silk-printed keys
- Controls:
  - 3-speed or EC fan
  - One or Two DC 0…10V valve actuators
  - One or Two ON/OFF valve controls for heating and cooling
- Used in systems with:
  - Fan coil units
  - Heating and cooling appliances

Technical Specification

Transmitting power	21.0dBm
Receiving sensitivity	-140dBm
Effective range outdoors	TBD
Measuring temperature	0 – 40°C
Controlling temperature	5 – 35°C
Adjustable span	0.5 °C /1.0 °C /1.5°C
Sensing Element	103AT
Storage Temperature	-5 – 50 °C
Measuring accuracy/resolution	±0.5°C
On/Off Relay Contact Rating	$230V_{AC}$ 2(1)A max
AO Contact Rating	$10V_{DC}$ 1mA max
Terminals	2 mm^2 cable
Operating Temperature	0 – 50 °C
Operating Voltage	$230V_{AC}$ ±10%
Operating Humidity	5 - 95%R.H. non-condensing

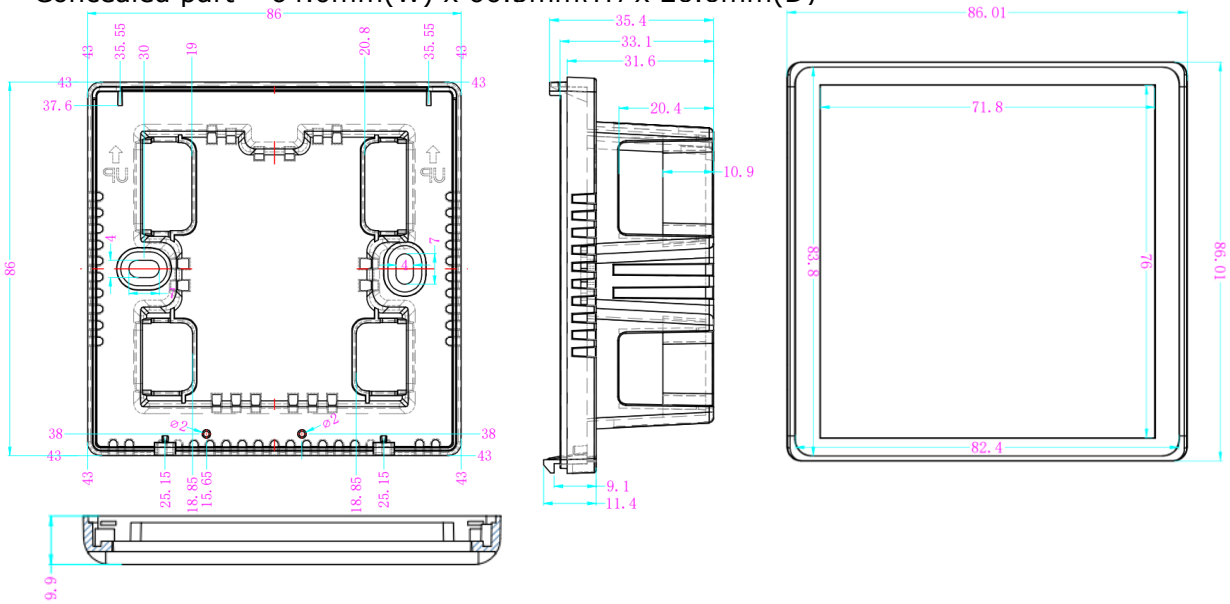
Order Code

Symbols	Fan Control	Heating	Cooling	LoRa	Frequnecy
TA692FC-L-1	3-Speed	On/Off heater	On/Off valve	LoRoWAN endpoint	868.1M~868.5MHz
TA692FC-L-2	0~10V	On/Off heater	On/Off valve	LoRoWAN endpoint	868.1M~868.5MHz
TA692FC-L-3	0~10V	On/Off heater	0~10V modulating	LoRoWAN endpoint	868.1M~868.5MHz
TA692FC-L-4	0~10V	0~10V modulating	0~10V modulating	LoRoWAN endpoint	868.1M~868.5MHz
TA692FC-L-5	**3-Speed**	**- - -**	**0~10V modulating**	**LoRoWAN endpoint**	**868.1M~868.5MHz**

Dimensions / Outline

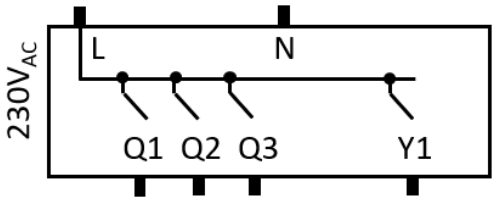
Protruding part – 86.0mm(W) x 86.0mm(H) x 16.5mm(D)

Concealed part – 64.0mm(W) x 66.5mm(H) x 26.6mm(D)



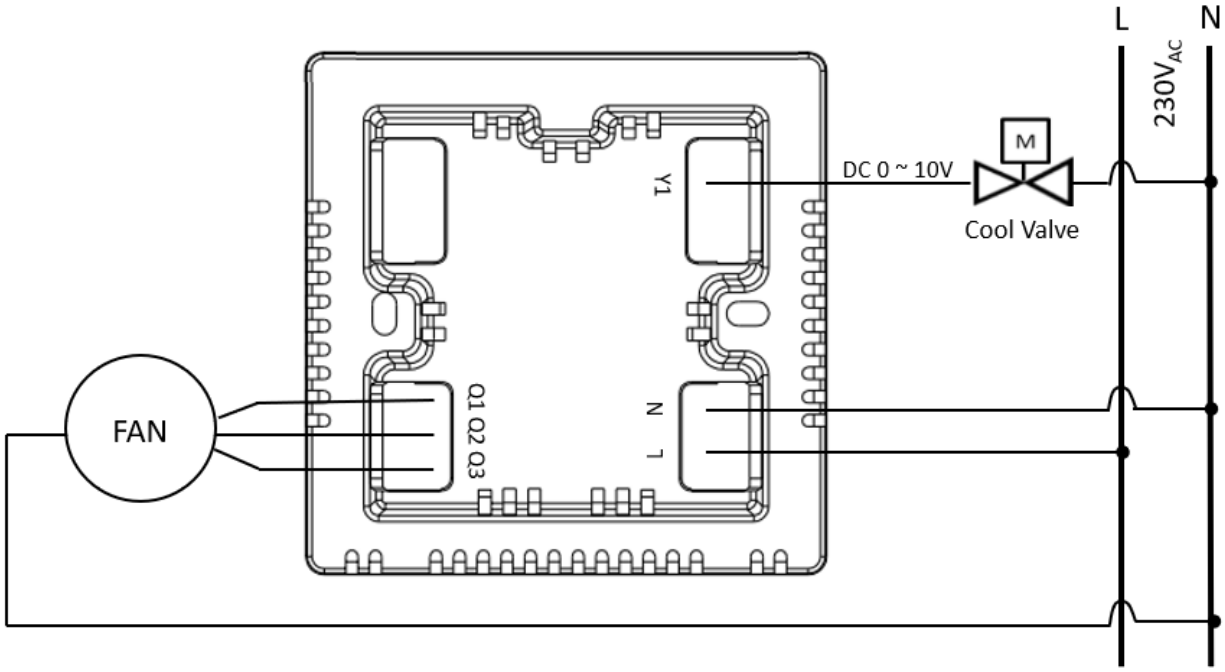
Product pictures

Terminals of TA692FC-L-5



Symbols	Terminals
L	Live
N	Neutral
Q1	Control output Fan speed 1, $230V_{AC}$
Q2	Control output Fan speed 2, $230V_{AC}$
Q3	Control output Fan speed 3, $230V_{AC}$
Y1	Control output to Cooling valve $0...10V_{DC}$

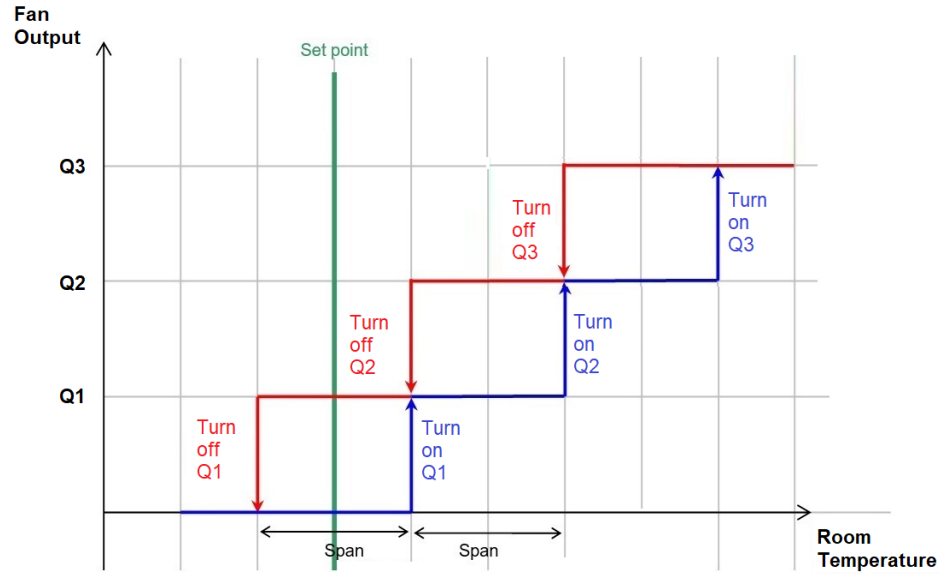
Wiring Diagram for TA692FC-L-5



Output diagrams

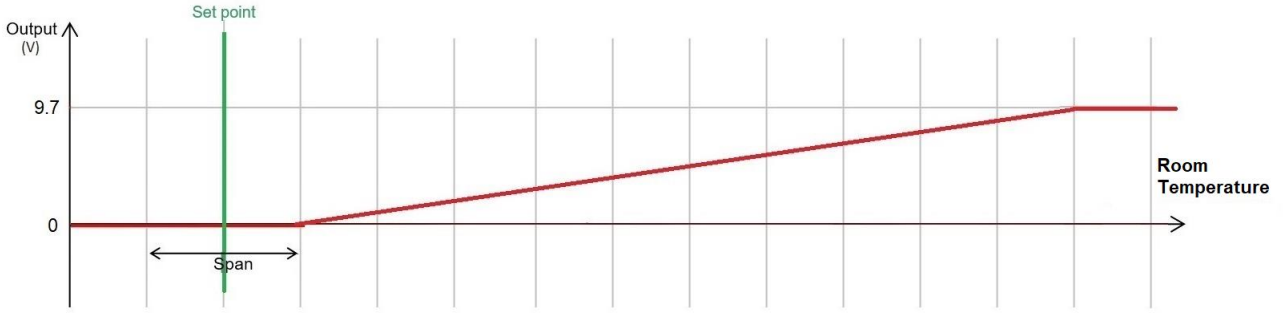
Fan controls – **Q_1 Q_2 Q_3** – in **Auto Fan Mode**

Applicable to TA692FC-L-1, TA692FC-L-5



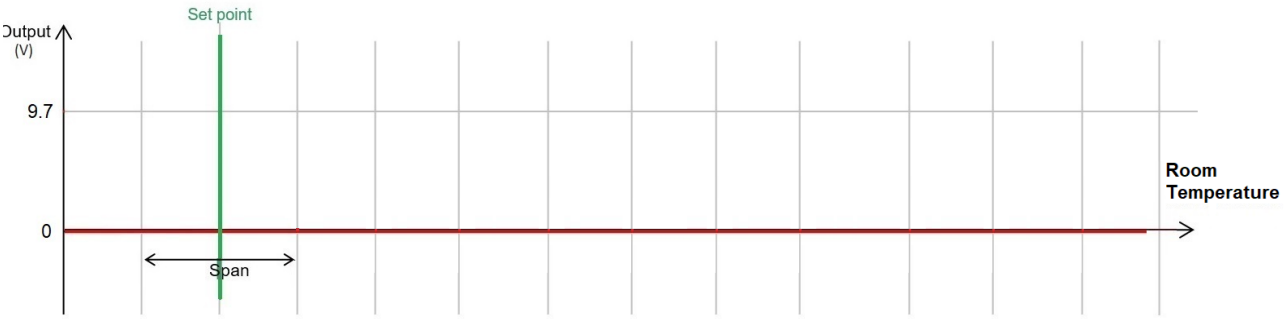
Modulating control (**Y_1**) of Cooling Valve in **Cool Mode**

Applicable to TA692FC-L-3, TA692FC-L-4, TA692FC-L-5

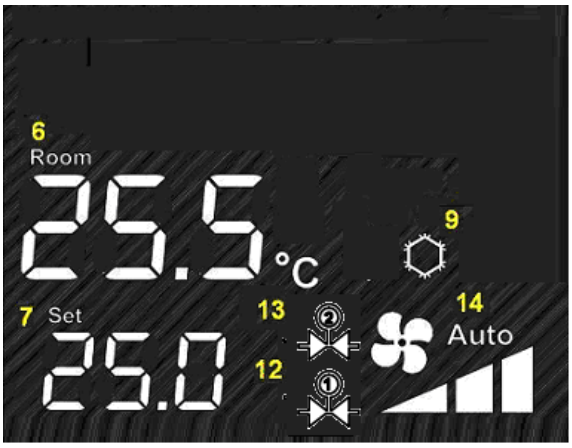


Modulating control (**Y_1**) of Cooling Valve in **Fan-Only Mode**

Applicable to TA692FC-L-3, TA692FC-L-4, TA692FC-L-5



LCD Display Content



Icons

Label	Description
6	Room temperature
7	Temperature Setpoint
9	System Mode icon Cool mode Heat mode no icon – Fan-Only mode
12	Y1 status indicator
13	Y2 status indicator
14	Fan status indictor Auto Auto Fan Mode no icon – Manual Fan Mode
	High Fan Speed indicator
	Med Fan speed indicator
	Low Fan speed indicator

Buttons

Keys	Function
M	Menu Key Short press: change mode Press-n-hold: Internal setting
	Fan Speed
	Power On/Off Key
	Traverse Up in Setting Menu
	Taverse Down in Setting Menu

Payload format in LoRA packet used by TA692FC-L-5

Uplink | port 10			
Byte	Data	Content	Range
0	data.RoomTemperature (High Byte)	Room Temperature(°C) = D_Room_Temperature/10	0 ~ 400
1	data.RoomTemperature (Low Byte)		
2	data.SetTemperature (High Byte)	Set Temperature(°C) = D_Set_Temperature/10	0 ~ 400
3	data.SetTemperature (Low Byte)		
4	data.CoolProportionalOutput	Cool Proportional Output : 0-100%	0 ~ 100
5	data.FanMode	0:OFF 1:LOW 2:MED 3:HIGH 4: AUTO	0 ~ 4
6	data.FanState	0:OFF 1:LOW 2:MED 3:HIGH	0 ~ 3
7	data.threshold (*)	Temperature change: 0.2°C ~ 5.0°C	2 ~ 50
8	data.SystemMode	0:OFF 1:COOL 2:FAN-ONLY	0 ~ 2

Downlink | port 90			
Byte	Data	Content	Range
0	data.RoomTemperature (High Byte)	Set Temperature(°C) = D_Set_Temperature/10	0 ~ 400
1	data.RoomTemperature (Low Byte)		
2	data.FanMode	0:OFF 1:LOW 2:MED 3:HIGH 4:AUTO	0 ~ 4
3	data.threshold (*)	Temperature change: 0.2°C ~ 5.0°C	2 ~ 50
4	data.SystemMode	0:OFF 1:COOL 2:FAN-ONLY	0 ~ 2

(*) D_update_threshold determines the minimum change in ambient room temp required to trigger a send event i.e. uplink. The range is from 0.2 to 5 centigrade. However, this parameter is limited by another named, "sending interval", hardcoded 15 seconds.

e.g. if change in temp > 0.2°C, or, fan status change, or user press a button etc., sends uplink immediately

Downlink | port 91			
Byte	Data	Content	Range
0	data.RoomTemperature (High Byte)	Set Temperature(°C) = D_Set_Temperature/10	0 ~ 400
1	data.RoomTemperature (Low Byte)		

Downlink | port 92			
Byte	Data	Content	Range
0	data.FanMode	0:OFF 1:LOW 2:MED 3:HIGH 4:AUTO	0 ~ 4

Downlink | port 93			
Byte	Data	Content	Range
0	data.threshold (*)	Temperature change: 0.2°C ~ 5.0°C	2 ~ 50

(*) D_update_threshold determines the minimum change in ambient room temp required to trigger a send event i.e. uplink. The range is from 0.2 to 5 centigrade. However, this parameter is limited by another named, "sending interval", hardcoded 15 seconds.

e.g. if change in temp > 0.2°C, or, fan status change, or user press a button etc., sends uplink immediately

Downlink | port 94			
Byte	Data	Content	Range
0	data.SystemMode	0:OFF 1:COOL 2:FAN-ONLY	0 ~ 2