# Thermostats and Controllers



### TC100 Series Electro-Mechanical Thermostats



The TC100 Series of fan coil thermostats are optimized for office building, hotel and residential applications. The TC100 Series can be used for 2-pipe or 4-pipe applications. Their simple design makes them suitable for any contemporary building. They are both easy to operate and install.

#### Features

- Set-point, fan speed and mode control
- Easy to install and maintain
- Green set-point marking indicates ideal range for energy efficiency

### Functions

Set-point Adjustment - The set-point adjustment dial allows users to select a desired set-point for the space. The green set-point marking provides the user with the ideal range to optimize energy efficiency. The set-point range can also be limited by locking the set-point range.

Fan Speed - Users can select between High, Medium and Low fan speeds by adjusting the fan speed switch.

Mode Control - Users can switch modes from heating to cooling, or turn the thermostat off by adjusting the mode switch.

#### **Specifications**

10 kΩ NTC (3950)
±1.5 °C at 20 °C
5 30 °C
0 45 °C
5 90% RH
230 Vac ±10%, 50/60 Hz
5 A resistive, 2 A inductive
IP20
Flame-retardant PC
86 x 86 x 27 mm (3.38 x 3.38 x 1.06 in.)
60 mm (2.36 in.) (Standard)

Part number	Description	Application
TC103-3A2	FCU Thermostat for 2-position on/off actuator (2-wire)	2-pipe
TC103-3A2C	FCU Thermostat for 2-position on/off actuator w/fan stop (2-wire)	2-pipe
TC103-3B2	FCU Thermostat for 2-position on/off actuator (3-wire)*	2-pipe
TC103-3B2C	FCU Thermostat for 2-position on/off actuator w/fan stop (3-wire)*	2-pipe
TC103-3A4	FCU Thermostat for 2-position on/off actuator (2-wire) 4-pipe	4-pipe

\*Note: 3-wire actuator requires Form C /time-out functionality.



## TC300 Series

### **Digital Thermostats**



#### Features

- Modern appearance
- Large, blue backlit, LCD screen
- Eco button for energy saving
- Button lockout function controls unauthorized operation
- Non-volatile memory (EEPROM) retains user settings during power loss
- Low temperature protection
- Standard 86 x 86 mm box for installation
- Temperature sensors are provided with failure alarm function to facilitate maintenance
- Optional Modbus communication
- Deluxe models include:
- Sleep mode for energy savings
- Occupancy/Card Key input
- Real-time display
- Optional remote temperature sensor

### - Optional Infrared remote control

The TC300 Series fan coil thermostats are optimized for office building, hotel and residential applications. The TC300 Series can be used for two-pipe or four-pipe applications. Their simple design makes them suitable for any contemporary building. They are both easy to operate and install.

The TC300 features microprocessor-based control and a large backlit LCD screen. The LCD display modes include operation status (cooling, heating, and ventilation), fan speed, room temperature, and set-point.

### Specifications

Sensing element	10 kΩ NTC (3950)
Accuracy	±1 °C
Set-point range	5 35 °C
Display range	0 50 °C (shown in 0.5 °C increments)
Operating temperature	0 45 °C
Operating humidity	5 95% RH (non-condensing)
Power requirement	< 1 W
Power supply	85 260 Vac, 50/60 Hz
Terminals	Can be connected to 2 x 1.5 mm2 or 1 x 2.5 mm2 conductors
Communicating speed	4800 bps
Switch current rating	5 A resistive, 3 A inductive @ 230 Vac
Switch power rating	Max. inrush 1385 VA / 150 W
Protection class	IP30
Housing	Flame-retardant PC
Dimensions	88.5 x 86 x 16 mm (3.48 x 3.38 x 0.63 in.)
Hole pitch	60 mm (2.36 in.) (Standard)

Part number	Description	Application	Communication	Real-time
TC303-3A2L	FCU Thermostat for 2-position on/off actuator (2-wire)	2-pipe	None	No
TC303-3A4L	FCU Thermostat for 2-position on/off actuator (2-wire)	4-pipe	None	No
TC303-3A2LM	FCU Thermostat for 2-position on/off actuator (2-wire)	2-pipe	Modbus	No
TC303-3A4LM	FCU Thermostat for 2-position on/off actuator (2-wire)	4-pipe	Modbus	No
TC303-3A2DLS	Deluxe FCU Thermostat for 2-position on/off actuator (2-wire)	2-pipe	None	Yes
TC303-3A4DLS	Deluxe FCU Thermostat for 2-position on/off actuator (2-wire)	4-pipe	None	Yes
TC303-3A2DLMS	Deluxe FCU Thermostat for 2-position on/off actuator (2-wire)	2-pipe	Modbus	Yes
TC303-3A4DLMS	Deluxe FCU Thermostat for 2-position on/off actuator (2-wire)	4-pipe	Modbus	Yes
TC303-3A2DPMS	Deluxe FCU Thermostat for 0 10 V modulating actuator	2-pipe	Modbus	Yes
TC303-3A4DPMS	Deluxe FCU Thermostat for 0 10 V modulating actuator	4-pipe	Modbus	Yes
IR-300	TC3xx IR Remote Control			
RS-03	10k NTC Remote Sensor (10 pcs) - 3 m (9.8 ft.)			

## TC350 Series

### **Digital Thermostats**



#### Features

- Modern appearance
- Large, blue backlit, LCD screen
- Eco button for energy saving
- Weekly scheduling application
- Button lockout function controls unauthorized operation
- Non-volatile memory (EEPROM) retains user settings during power loss
- Low temperature protection
- Standard 86 x 86 mm box for installation
- Temperature sensors are provided with failure
- alarm function to facilitate maintenance • Deluxe models include:
  - Occupancy/Card Key input
  - Real-time display
  - Optional remote temperature sensor
  - Optional Infrared remote control

The TC350 Series fan coil thermostats are optimized for office building, hotel and residential applications. The TC350 Series can be used for two-pipe or four-pipe applications. Their simple design makes them suitable for any contemporary building. They are both easy to operate and install.

The TC350 features microprocessor-based control and a large backlit LCD screen. The LCD display modes include operation status (cooling, heating, and ventilation), fan speed, room temperature, and set-point.

### Specifications

Sensing element	10 kΩ NTC (3950)
Accuracy	±1 °C
Set-point range	5 35 °C
Display range	0 50 °C (shown in 0.5 °C increments)
Operating temperature	0 45 °C
Operating humidity	5 95% RH (non-condensing)
Power requirement	< 1 W
Power supply	85 260 Vac, 50/60 Hz
Terminals	Can be connected to 2 x 1.5 mm2 or 1 x 2.5 mm2 conductors
Switch current rating	5 A resistive, 3 A inductive @ 230 Vac
Switch power rating	Max. inrush 1385 VA / 150 W
Protection class	IP30
Housing	Flame-retardant PC
Dimensions	88.5 x 86 x 16 mm (3.48 X 3.38 X 0.63 in.)
Hole pitch	60 mm (2.36 in.) (Standard)

Part number	Description	Application	Scheduling	Real-time
TC353-3A2L	FCU Thermostat for 2-Position On/Off Actuator (2-Wire)	2-pipe	Yes	No
TC353-3A4L	FCU Thermostat for 2-Position On/Off Actuator (2-Wire)	4-pipe	Yes	No
TC353-3A2DLS	FCU Thermostat for 2-Position On/Off Actuator (2-Wire)	2-pipe	Yes	Yes
TC353-3A4DLS	FCU Thermostat for 2-Position On/Off Actuator (2-Wire)	4-pipe	Yes	Yes
IR-300	TC3xx IR Remote Control			
RS-03	10k NTC Remote Sensor (10 pcs) - 3 m (9.8 ft.)			

## KLR-E/RTR-E/FR-E Series

### **Room Controllers**



### KLR-E

This selection of air conditioning controllers offer a variety of features most commonly required for the control of heating and cooling in residential and office applications.

Part number	Description
KLR-E 517 7801	0 10 Vdc Outputs + On/Off Heat with LCD
KLR-E 517 7805	0 10 Vdc Outputs + On/Off Heat & Fan with LCD
KLR-E 517 7810	0 10 Vdc Outputs + On/Off Heat + Fan Speed with LCD
KLR-E 525 52 HP	On/Off Outputs with Power Indicator + Fan Speed
KLR-E 525 52 4P	On/Off Outputs with Mode Indicators + Fan Speed
KLR-E 525 55	0 10 Vdc Outputs
KLR-E 525 56	0 10 Vdc Outputs + Fan Speed
KLR-E 527 23	On/Off Outputs + Fan Speed with LCD
KLR-E 527 24	On/Off Outputs + Fan Speed + Mode Select with LCD
KLR-E 7009	On/Off Outputs + Fan Speed
KLR-E 7010	On/Off Outputs + Fan Speed + Mode Select
KLR-E 7011	On/Off Outputs + Fan Speed
KLR-E 7012	On/Off Outputs + Fan Speed + Mode Select
KLR-E 7026	On/Off Output + Fan Speed
KLR-E 7038	On/Off Outputs + Fan Speed + Mode Select
KLR-E 7202	On/Off Outputs without Indicators
KLR-E 7203	On/Off Outputs + Fan Speed without Indicators
KLR-E 7204	On/Off Outputs + Fan Speed with Indicators
KLR-E 7611	On/Off Output + On/Off





### RTR-E

These electronic room controllers offer a basic form of on/off heat or heat/cool control within a 75 x 75 mm enclosure.

Description
On/Off output with set-point, indicator and On/Off switch
On/Off output with set-point only
On/Off output with set-point and On/Off switch
Change-over output without indicator

### FR-E

An electronic temperature controller with remote temperature sensor suitable for electric floor heating systems.

Part number	Description
FR-E 525 31	Floor Heating Controller with Remote Sensor

### Accessories

For mounting controllers to nearly all conduit boxes used internationally.

Part number	Description
ARA 1.7 E	KLR-E Series Plastic Adaptor Frame
ARA 1 E	RTR-E Series Plastic Adaptor Frame