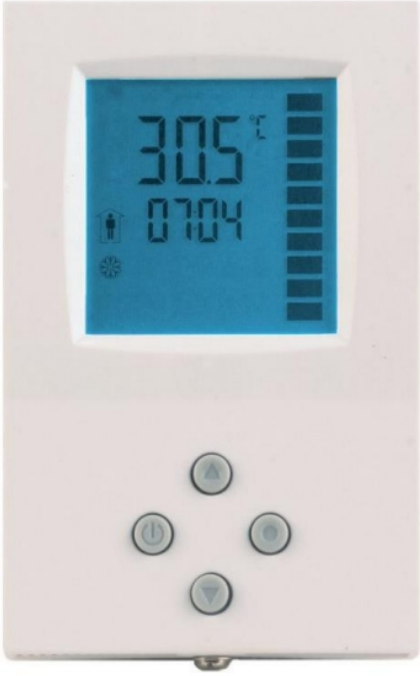
TLC3-FCR-T-U
Intelligent Fan Coil Controller

Features



- The PWM control option reduces room temperature fluctuations and energy consumption
- Low power energy consumption: < 1W per unit
- Temperature control for 2- pipe fan coil systems.
- External sensor or open contact for remote control,
  external heat – cool change or auto-changeover on supply temperature with selectable activation limits
- Automatic fan control for three stage fans.
- Cost saving option with Economy functionality and set point limitations
- Control for single stage heating, cooling and fan only operation modes
- Password protected programmable user and control parameters
  - Setpoint range limitation
  - Access control for setpoints, fan speeds and mode change
  - Access control for heat/cool change and time programs
  - Select your display contents
  - Selectable behavior after return from power failure
- Temperature display in Celsius or Fahrenheit

Deluxe Version:

- Clock and time schedule functions with power failure protection
- Blue backlight for LCD
- Infrared remote controller option:
  With special features for Boost and delayed switching on or off

Applications

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- Air Only Systems:
  - Constant Air Volume systems with three stage fans for single or dual duct systems
- Air/Water Systems:
  - Fan Coil units for 2-pipe systems
  - radiator control, chilled ceiling
- Simple individual room control for hotel rooms, meeting rooms, etc.
- PWM or On-Off-Control of 2 spring return valves or 3-point on-off or floating control of one 3-point valve.

General Description

The TLC3-FCR-T-U is a stand-alone electronic fan coil controller with one control loop. The TLC3-FCR-T-U features 1 NTC temperature sensor input, 1 external NTC or open contact input and four binary outputs (Relays).

A detailed parameterization is possible with the use of a simple configuration routine. The TLC3-FCR-T-U can be configured using the standard operation terminal. No special tools or software is required.

Ordering

Item Name	Item code	Variant	Power	Features
TLC3-FCR-T-U-24 TLC3-FCR-T-U-24-W01	40-10 0139 40-10 0139-01	Standard Cooling only	24VAC/DC	Fan coil controller with: 1 TI int or ext. 3 DO (Relay) Fan control 1 DO (Relay) Binary valve control
TLC3-FCR-T-U-120 TLC3-FCR-T-U-120-W01	40-10 0149 40-10 0149-01	Standard Cooling only	120VAC	
TLC3-FCR-T-U-D-24 TLC3-FCR-T-U-D-24-W01	40-10 0144 40-10 0144-01	Deluxe Cooling only	24VAC/DC	
TLC3-FCR-T-U-D-120 TLC3-FCR-T-U-D-120-W01	40-10 0154 40-10 0154-01	Deluxe Cooling only	120VAC	

Selection of actuators, fans and sensors

Temperature Sensors: Use only our approved NTC sensors to achieve maximum accuracy. Recommended is SDB-Tn10-15 as Duct sensor, SRA-Tn10 as Room sensor and SDB-Tn10-15+AMI-10 as immersion sensor.

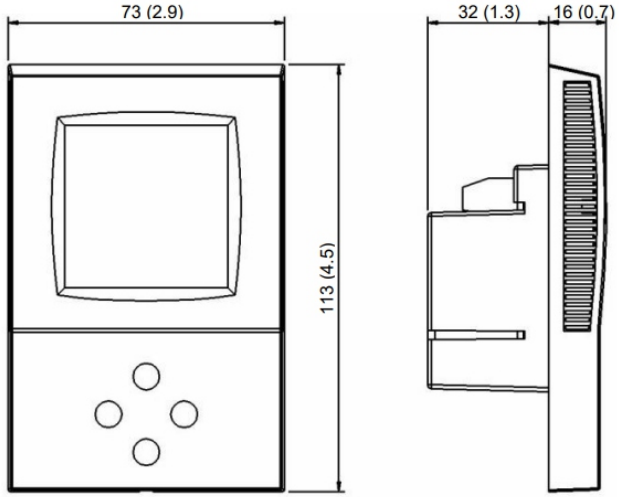
Binary auxiliary devices: E.g. fans, on/off valves, etc. Do not directly connect devices that exceed 2A. Observe startup current on inductive loads! Do not connect more than one fan coil unit to one controller.

Technical Specification

Power Supply	Operating Voltage	-24	-120
	AC voltage: 50/60Hz	22-26V AC/DC	100-130 VAC
	Power Consumption	Max 1W, 1.5 VA	
	Electrical Connection	Terminal Connectors	
	Deluxe type only: Power backup for real time clock	Min 48h if charged for 24h	
Signal Inputs	Temperature Inputs Range Accuracy	RT Internal, External (Sxx-Tn10 sensor) 0…50 °C (32…122 °F) 0.5°C (1°F)	
Signal Outputs	Digital Switching Outputs Switching Type Max. Switching power	DO1 to DO4 Relays 1385VA / 150W each output	
	Insulation strength between relays contacts and system electronics: between neighboring relays contacts:	 4000V AC to EN 60 730-1 1000V AC to EN 60 730-1	
	Operation Climatic Conditions Temperature Humidity	To IEC 721-3-3 class 3 K5 0°C …50°C (32°F…122°F) <95% R.H. non-condensing	
Environment	Transport & Storage Climatic Conditions Temperature Humidity Mechanical Conditions	To IEC 721-3-2 and IEC 721-3-1 class 3 K3 and class 1 K3 -25°C…70°C (-13°F…158°F) <95% R.H. non-condensing class 2M2	

Standards	Product standards Automatic electrical controls for household and similar use Special requirement on temperature dependent controls		 EN 60 730–1 EN 60 730–2–9
	Electromagnetic compatibility for domestic sector		Emissions: EN 60 730-1 Immunity: EN 60 730-1
	Degree of Protection		IP30 to EN 60 529
	Pollution Class		II (EN 60 730-1)
	Safety Class:	for -24 types for -120 types	III (IEC 60 536) II (IEC 60 536)
	Overvoltage Category:	for -24 types for -120 types	I (EN 60 730-1) III (EN 60 730-1)
	Overvoltage Category: for -24 types for -120 types		I (EN 60 730-1) III (EN 60 730-1)
General	Dimensions (H x W x D)	Front: Power case:	16 x 73 x 113mm (0,7 x 2.9 x 4.5 in.) 60 x 50 x 32mm (2.4 x 2.0 x 1.3 in.)
	Material:	Cover, back part Mounting Plate	ABS plastic (UL94 class V-0) Galvanized Steel
	Weight (including package)	for -24 types for -120 types	Standard: 265g (9.3oz), deluxe: 275g (9.7oz) Standard: 295g (10.5oz), deluxe: 305g (10.8oz)

Dimensions



Space required in flush mounting box:
(H x W x D)
60 x 50 x 32mm (2.4 x 2.0 x 1.3 in.)

Distance for mounting screws:
Horizontal 55 to 60mm (2.2 to 2.4 in.)
Vertical: 55 to 93mm (2.2 to 3.7 in.)

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