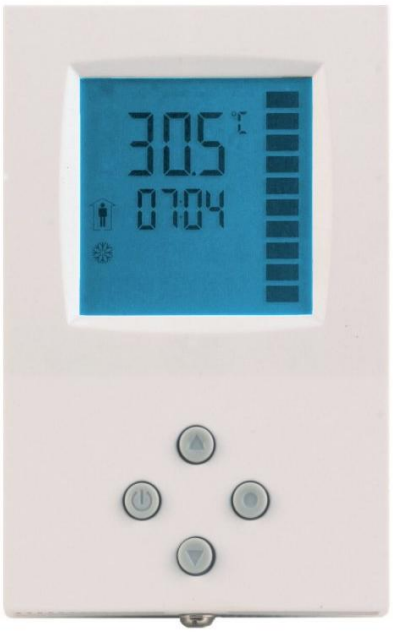
TLC3-FCR-2T-U
Intelligent Fan Coilcontroller

Features

- Temperature control for 2- and 4-pipe fan coil systems: heating, cooling or fan only
- Automatic or manual control of 3-speed fans
- On-off, PWM or 3-point floating control for reduced room temperature fluctuations
- Economy mode and setpoint limits for energy saving
- Password-protected user and control parameters
- Low power consumption < 1 W, display in °C or °F
- Deluxe version: clock with time schedules, blue backlight, infrared remote control option



Applications

- Fan coil units in 2- or 4-pipe systems, radiators and chilled ceilings
- Constant air volume systems with 3-stage fans
- Individual room control in hotel rooms, meeting rooms and offices
- On-off or PWM control of 2 spring return valves, or on-off or floating control of one 3-point valve

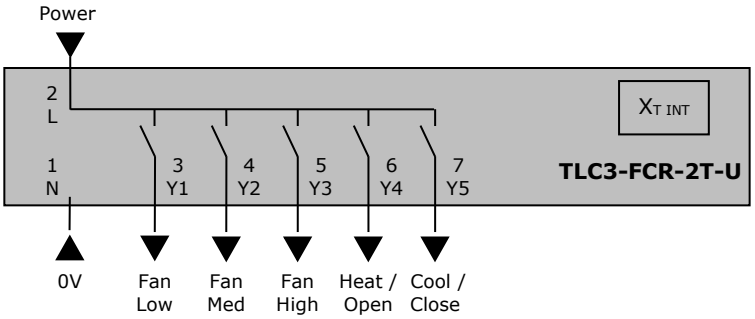
General Description

The TLC3-FCR-2T-U is a stand-alone electronic fan coil controller with one control loop, 1 internal NTC temperature sensor and 5 binary outputs: 3 for the fan speeds low, medium and high, and 2 for two spring return or thermal valves or one 3-point floating valve. It is configured with the standard operation terminal; no special tools or software are required.

Ordering

Item Name	Item code	Variant	Power	Features
TLC3-FCR-2R-U-24 TLC3-FCR-2R-U-24-W01	40-10 0140 40-10 0140-01	Standard Cooling only	24VAC/DC	Fan coil controller with: 1 TI int 3 DO (Relay) Fan control 2 DO (Relay) Binary valve control
TLC3-FCR-2R-U-D-24 TLC3-FCR-2R-U-D-24-W01	40-10 0145 40-10 0145-01	Deluxe Cooling only	24VAC/DC	
TLC3-FCR-2T-U-120 TLC3-FCR-2T-U-120-W01	40-10 0150 40-10 0150-01	Standard Cooling only	120VAC	Fan coil controller with: 1 TI int 3 DO (Relay) Fan control 2 DO (TRIAC) Binary valve control
TLC3-FCR-2T-U-D-120 TLC3-FCR-2T-U-D-120-W01	40-10 0155 40-10 0155-01	Standard Cooling only	120VAC	
TLC3-FCR-2T-U-230 TLC3-FCR-2T-U-230-W01	40-10 0120 40-10 0120-01	Standard Cooling only	230VAC	
TLC3-FCR-2T-U-D-230 TLC3-FCR-2T-U-D-230-W01	40-10 0121 40-10 0121-01	Deluxe Cooling only	230VAC	

Wiring Diagram



Description:

N	Power supply:	0V Neutral
L	Power supply:	-24: 24VAC/DC, -120: 120VAC, -230: 230VAC
Y1	Binary output:	Fan speed low
Y2	Binary output:	Fan speed medium
Y3	Binary output:	Fan speed high
Y4	Binary output:	Heating Valve or OPEN if in 3-point floating mode
Y5	Binary output:	Cooling Valve or CLOSE if in 3-point floating mode

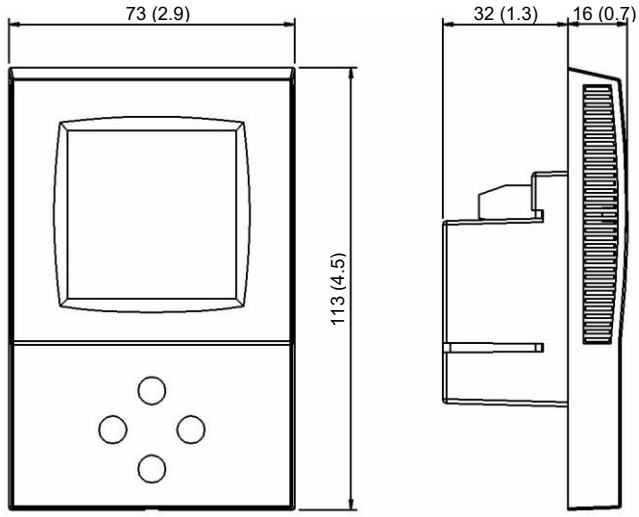
© Vector Controls GmbH, Switzerland

Technical Specification

Caution! This device is intended to be used for comfort applications. Where a device failure endangers human life and/or property, it is the responsibility of the owner, designer and installer to add additional safety devices to prevent or detect a system failure caused by such a device failure. Vector Controls or its affiliates cannot be held liable for any damage caused by such a failure. Failure to follow specifications and local regulations may endanger life, cause equipment damage and void warranty.

Power Supply	Operating Voltage	-24	-120	-230
	AC voltage: 50/60Hz	22-26VADC	100-130 VAC	210–250 VAC
	Power Consumption	Max 1W, 1.5 VA		
	Electrical Connection	Terminal Connectors		
	Deluxe only:Power backup for real time clock	Min 48h if charged for 24h		
Signal Inputs	Temperature Inputs Range Accuracy	RT Internal 0…50 °C (32…122 °F) 0.5°C (1°F)		
Signal Outputs	Digital Switching Outputs Switching Type AC Switching power	DO1 to DO3 Relays 250V AC 2A max. each output		
	Digital Switching Outputs Switching Type AC Switching power	DO4…DO5 -24: Relays 2A max.	-120-230:	TRIAC 0.3A max
	Insulation strength between contacts and system electronics: between neighboring contacts	 3750V AC to EN 60 730-1 1250V AC to EN 60 730-1		
Environment	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		
	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	CE conformity EMC Directive Low Voltage Directive	 2004/108/EC 2006/95/EC		
	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 and -230 types	III (IEC 60 536) II (IEC 60 536)		
	Overvoltage Category: for -24 types for -120 and -230 types	I (EN 60 730-1) III (EN 60 730-1)		
General	Dimensions (H x W x D) Front part: 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	Fire proof ABS plastic Galvanized Steel		
	Weight (including package) for -24 types for -120 and -230 types	standard: 255g (9.0oz), deluxe: 265g (9.3oz) 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.)

© Vector Controls GmbH, Switzerland

Selection of valve actuators and fans

Binary auxiliary devices: E.g. fans and on/off valves. Observe switching power as detailed under technical specifications! Do not connect more than one fan coil unit to one controller.

Mounting and installation

Mount the controller on an interior wall, approx. 1.5 m above the floor, in a place with average room temperature. Avoid direct sunlight, heat sources, doors, outside walls and air outlets. The location is less critical if an external temperature sensor is used.

Mount and connect the controller as shown in the installation sheet supplied with the device, and wire it according to the wiring diagram on page 1.

© Vector Controls GmbH, Switzerland

Smart Sensors and Controls Made Easy!

Quality - Innovation – Partnership

Vector Controls GmbH
Switzerland

info@vectorcontrols.com
www.vectorcontrols.com/

© Vector Controls GmbH, Switzerland