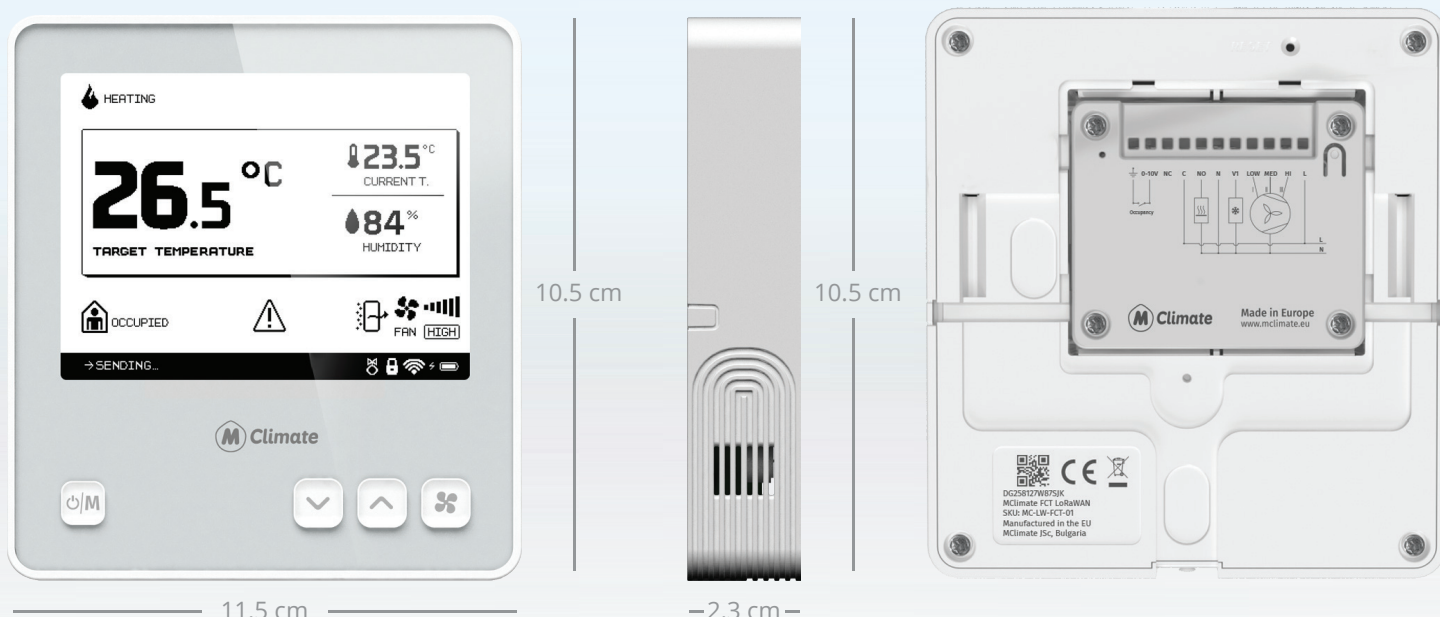




Description

The Fan Coil Thermostat (FCT) is a LoRaWAN device for 2- and 4-pipe Fan Coil Units, accommodating 3-speed or ECM fans. Ideal for building retrofitting, it enhances energy efficiency and reduces heating/cooling expenses significantly. With its 4.2" e-ink fast refresh display it allows the end-users to change the target temperature and see current indoor conditions. Its fully open and transparent communication protocol allows seamless integration into different systems including MClimate Enterprise platform.

SKU: MC-LW-FCT-01

Product features

- Firmware Upgrade Over The Air
- Compatible with 2-pipe and 4-pipe FCUs
- Compatible with ECM or 3 speed fan
- Temperature and Humidity sensor
- 4.2" e-ink fast-refresh display
- Anti-theft stainless steel bracket
- Multipurpose Analog/Digital Input/Output (pipe temperature monitoring; external contact - e.g. door/window sensor or hotel card occupancy; dew point sensor; filter alarm)
- Simple 4 buttons interface - ON/OFF/Mode, Increase temp; Decrease Temp, Select FAN speed.
- Keys lock (select which keys are disabled)

Applications

- Smart Buildings
- Smart home
- Residential buildings
- Commercial buildings
- Hotels

Device specifications

Mechanical specifications

WEIGHT	220gr
DIMENSIONS	105mm X 115mm X 23mm
ENCLOSURE	ABS, Stainless steel, tampered glass
MOUNTING OPTIONS	Screws and dowels on an electrical box or a wall; Anti-theft bracket with secure screw
IP RATING	IP25

Operating conditions

TEMPERATURE	0° - +50°C
HUMIDITY	0-80% RH (non-condensing)

Power supply

POWER SUPPLY	110-230VAC
CONSUMPTION	50mA

Connectivity

WIRELESS TECHNOLOGY	LoRaWAN® 1.0.3
WIRELESS SECURITY	LoRaWAN® End-to-End encryption (AES-CTR)
LORAWAN DEVICE TYPE	Class C End-device
SUPPORTED LORAWAN FEATURES	OTAA, ADR, Adaptive Channels setup
SUPPORTED LORAWAN REGIONS	EU863 – 870; Other LoRaWAN regional settings available upon request
LINK BUDGET	130dB
RF TRANSMIT POWER	14dB

Sensors

Temperature

RESOLUTION	0,1° C
ACCURACY	±0,2 - ±0,7° C

Humidity

RESOLUTION	±2
ACCURACY	±3% r.H.

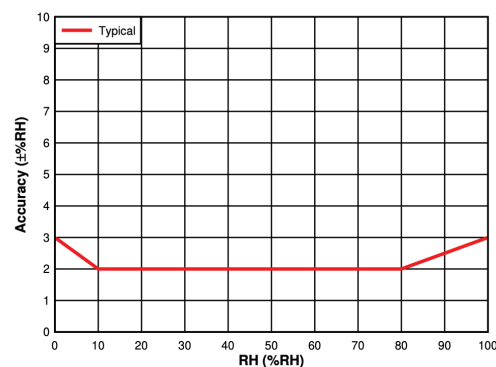
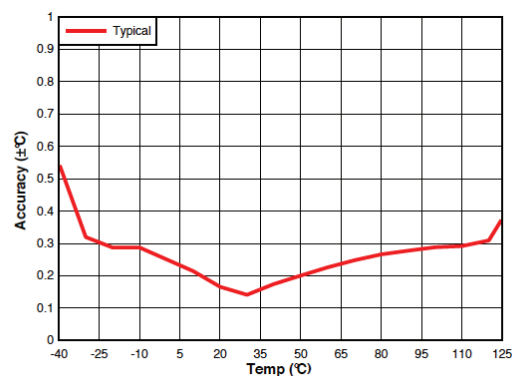
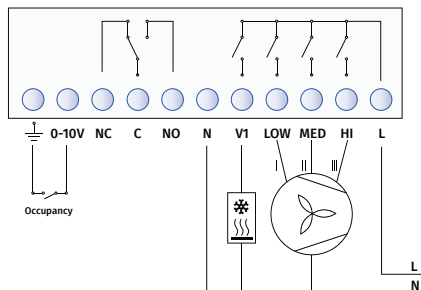


Figure 6-1. RH Accuracy vs. RH

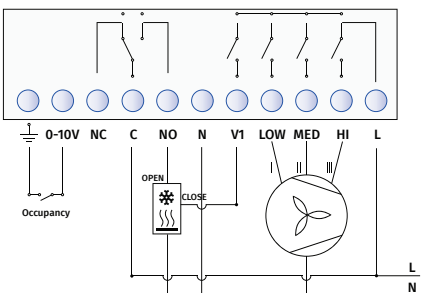
Wiring diagrams

HEATING AND COOLING WITH 3-SPEED FAN

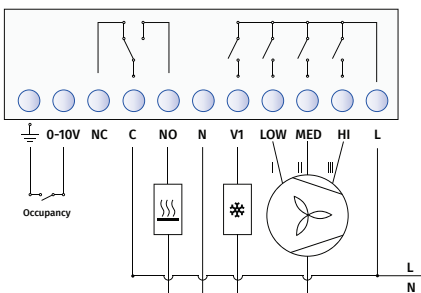
2-pipe ON/OFF,
3 speed fan



2-pipe ON/OFF 3-wire valve (220VAC);
3 speed fan; TiO2/ESP

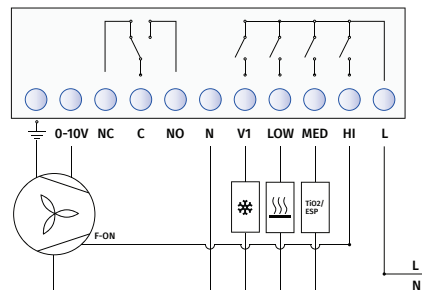


2-pipe ON/OFF 3-wire valve (220VAC);
3 speed fan; TiO2/ESP

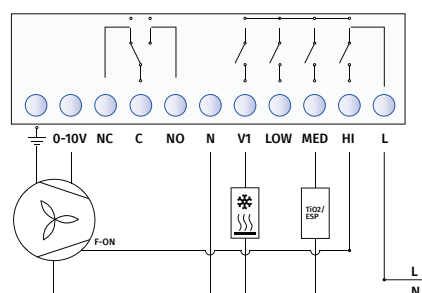


HEATING AND COOLING WITH EC FAN

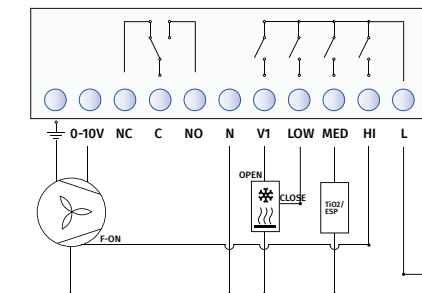
4-pipe ON/OFF; ECM FAN;
optional TiO2/ESP



2-pipe ON/OFF; ECM FAN;
optional TiO2/ESP



2-pipe ON/OFF; ECM FAN;
3-wire valve; optional TiO2/ESP



2-pipe ON/OFF; ECM FAN;
optional TiO2/ESP, optional floor heating

