

NCTMM22CO Modulating RS-485 Modbus Thermostat



Product Description

Networked Modulating Thermostats

NCTMM2 Modulating Thermostats are fully configurable, networked digital thermostats, suitable for modulating controls of 2-pipe or 4-pipe cooling/heating FCU or VAV systems. The communication interface is RS-485 Modbus RTU.

Features

The Thermostat has a big LCD screen showing room temperature and set point. It also has additional digital inputs for energy saving features, for example changing between occupied / unoccupied setpoints and to switch off the unit when a window or a balcony door is opened.

Application

The Thermostat measures temperature of a room or distant space and then output 0(2)-10VDC signal by proportional-integral algorithm to control cooling/heating devices and uses relays to switch fan speeds and extra on/off devices in the HVAC system to maintain the room space temperature at a desired temperature setpoint. The 3-speed fan can be operated in the mode of auto changeover or manual selected continuous mode.

Ordering Codes

NCTMM22CO	Modulating Modbus thermostat, cooling only with additional on/off valve controls
NCTMM22C	Modulating Modbus thermostat, cooling only
NCTMM24	Modulating Modbus thermostat, 4-pipe heating / cooling, auto switching
NCTMM22	Modulating Modbus thermostat, 2-pipe heating / cooling, auto switching
NCTMM22V	Modulating Modbus thermostat, cooling only, VAV

Features & Benefits

- ▶ Stylish Communicating Thermostat
- ▶ Cooling/Heating Controls
- ▶ Modulating 0-10V Control Output
- ▶ Fan Speed Selection Low/Med/High/Auto
- ▶ Models available for 2-pipe and 4-pipe systems, FCU/VAV
- ▶ RS-485 Modbus RTU protocol

Technical Information

Operating Voltage	24VAC 50/60Hz
Communication Interface	RS-485, 2 Wires, Modbus / RTU protocol, 19.2Kbps (configurable)
Temp. Display Range	-30 ... 120 °C
Temp. Display Unit	0.1 °C/°F
Temp. Accuracy	±0.5 °C
Setpoint Range	0 ... 50 °C
Analog Output Signal	0(2)-10 VDC or 10-0(2) VDC, Max. 3mA
Relay Output	SPST relays for fan control: 2A/250VAC, inductive load
Remote Sensor Input Interface	For connecting external NTC Thermistor 3Kohm
Energy Savings Input Interface	Triggered by Normally open (N.O.) or normally closed (N.C.) dry contact
Extra DI Interface:	Triggered by Normally open (N.O.) or normally closed (N.C.) dry contact
Control Performance	Proportional plus Integral (PI) adaptive control
Operating Environment	0 ... 50°C, 5-95% Rh (Non-Condensing)
Wiring	Screw-in terminals, 14 to 22 AWG wires or 1.5 mm ² wires
Dimensions (mm)	118 (H) x 94 (W) x 34 (D)
Mounting	Mounts directly onto wall or standard junction box (hole pitch 60 mm) or standard vertical junction box (2×4 inch, hole pitch 83.5 mm)
Certification	CE certified

Wiring Diagram

