T3035.10
Touch Button Fan Coil Thermostat

For 2-pipe and 4-pipe Fan Coil Units

Features

- Manual or automatic 3-speed fan control
- On/Off control heating/cooling valves
- Auto, Heat, Cool and Ventilation modes
- Manual or automatic heating/cooling changeover
- Fan Only, Heating and Fan, Cooling and Fan options
- Universal input for external sensor or windows/energy saving contact etc.
- Automatic heating/cooling changeover via changeover sensor
- Automatic heating/cooling changeover via changeover contact
- Remote On/Off via contact
- User setpoint limitation
- Clock and time schedule functions
- Key lock
- Configurable user parameters
- Modern styling and capacitive touch buttons
- White backlight LCD
- Different colour options; black and white
- EU box flush-mount

Applications

T30x5 Series Fan Coil Thermostats used in individual rooms or zones in buildings. It is designed for two and four pipe fan coil units. T3035 has one universal input as external sensor or open/close contact input, five relay outputs. It controls the fan coil unit depending on the internal room sensor or external return sensor temperature.

Notes on Usage

Please, read this datasheet carefully. T3035 thermostat safety rules in accordance with the latest technological developments designed and manufactured. To avoid injury and property damage safety warnings must be observed.

Security Advice-Caution

Assembly, maintenance, diagnostic and repair must be done by authorized service. The power supply of the device is 230 V AC and it has no internal fuse. External protection with max C 10 A circuit breaker required in all cases. Disconnect from power supply before separating front plate.

Ordering Information

Product Code	Description	Power
T3035.10	3 Digital Outputs (Relay) Fan Control 2 Digital Outputs (Relay) Valve Control 1 Universal Input	220 V AC

Technical Specification

|	
Power Supply	150-240 V AC 50/60 Hz
Power Consumption	Max ~3.0 VA
Electrical Connection	Terminal Connectors
Battery for Real Time Clock (RTC)	Lithium CR1220 3.3V
Measuring Range	-10°C … +100°C (+14°F … +212°F)
Resolution	0.1°C (1°F)
Inputs	1 Universal Input (NTC 10K or Dry Contact)
Outputs	5 Digital Output (5 x 5 (2) A Relay)
Temperature Setting	5°C … 99,9°C (Adjustable) (41°F … 212°F (Adjustable))
Dimensions	86 x 86 x 52 mm
Mounting	Flush Mounted (Standard EU box)

Mounting Location

Thermostat is suggested to be installed indoor, a place with around 1.5m height above the floor where represents the average room temperature. It should be away from direct sunlight, any cover or any heat source, to avoid false signal for temperature control.

CAUTION: Power off supply at circuit breaker or fuse before installation to avoid fire, shock or death!

Mounting Instructions
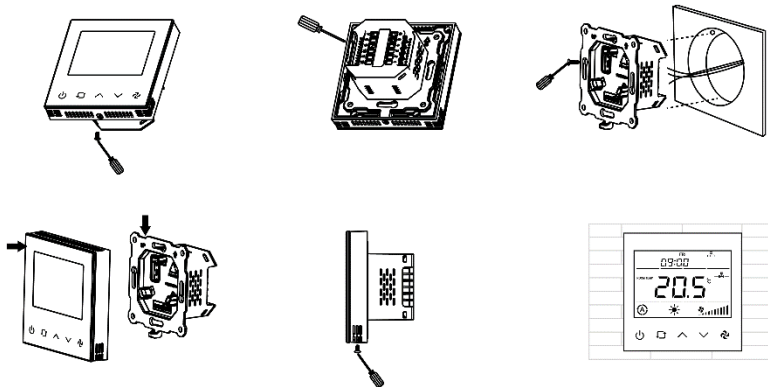
Please follow below instructions during mounting.

Step 1: Take the thermostat out from the package. Get the datasheet inside the package.
Step 2: Connect the wires well according to the wiring diagram below.
Step 3: Separate the front plate and the back plate, and then use screwdriver to fix the back plate into the electric box with 4 screws.
Step 4: Attach the front plate to the back plate, making sure the pin plates on each side are well matched.
Step 5: Refer to the picture after installation.
**Step 6:** Power on the thermostat to work.

Important Note 1: It is recommended to use the following flush mount boxes for better mounting:
Alternative 1: Manufacturer: Viko by Panasonic, Part Number: 90926006 (Depth must be minimum 50 mm!)
Alternative 2: Manufacturer: Legrand, Part Number: 0 801 21 (Depth must be minimum 50 mm!)

Important Note 2: It is recommended to use the screws included in the product box. Otherwise, there could be fitting problems during the mounting.
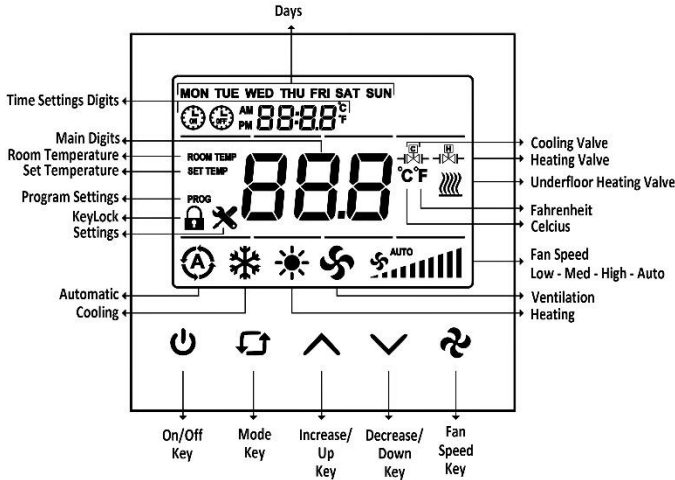
Connection Diagrams
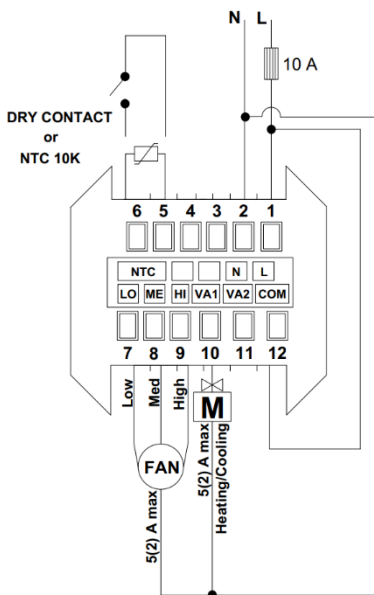
Connection Diagram for 2-Pipe Fan Coil
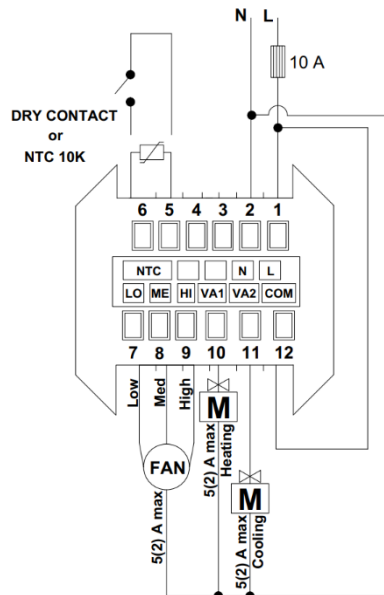
Connection Diagram for 4-Pipe Fan Coil

Note: Thermostat has no internal fuse. External protection with max C 10 A circuit breaker required in all cases. Isolate the cables of NTC-dry contact with L, N from 230 V power supply.

Display and Operations

- **Mode Selection:** Press the **MODE** key to change the mode of the device. Active mode options are as follows.

	AUTOMATIC	COOL	HEAT	FAN
FAN ONLY	-	-	-	√
COOLING + FAN	-	√	-	√
2 PIPE SYSTEM	-	√	√	√
HEATING + FAN	-	-	√	√
4 PIPE SYSTEM	√	√	√	√

- **Fan Selection:** When the **FAN SPEED** key is pressed, fan speed can be changed as Low, Med, High, Auto.

- **Time Settings:** After pressing the **MODE** key for 3 seconds, year digits flashes on the panel. **MODE** key is pressing once again, month digit flashes on the panel. **MODE** key is pressed once again, day digit flashes on the panel. **MODE** key is pressed once again, hour digit flashes on the panel. **MODE** key is pressed once again, minute digit flashes on the panel. **MODE** key is pressed once again, day of week digit flashes on the panel. Year, month, day, hour, minute, day of week information are be changed by **INCREASE** and **DECREASE** keys.
  Order: Year -> Month -> Day -> Hour -> Minute -> Day Of Week

- **Schedule Operations:** Be sure to set the time settings, before making schedule operations. After setting the day, to enter the Schedule menu, press the **MODE** key one time. While in the Schedule menu, "**Monday opening time hour digit**" flashes on the panel. When the **MODE** key is pressed once again, "**Monday opening time minute digit**" flashes on the panel. Then, when the **MODE** key is pressed one more time, "**Monday closing time hour digit**" flashes on the panel. After that when the **MODE** key is pressed once again, "**Monday closing time minute digit**" flashes on the panel. While the digits flashing, hour and minute can be changed by **INCREASE** and **DECREASE** keys. Use the **MODE** key to set the other days' schedule.
 **Note: When the time schedule is set, the on/off lock will be activated.**

• **Key Lock Operations:** Pressing both **MODE** and **INCREASE** keys, key lock digit displays on the panel. The panel is locked. When the panel is locked, press the **MODE** and **INCREASE** keys to unlock panel. "Key Lock" options can be changed via parameter P6. To lock two or more keys at the same time; sum the numbers of the keys. To lock mode key and on/off key, 1 (on/off) and 2 (mode) should be added and written 3 to parameter P6. To lock setpoint and fan speed, 4 (setpoint) and 8 (fan speed) should be added and written 12 to parameter P6.

Configuration
Configuration Menu Description

When the device is on or off position, press together **Main Parameter Increase Key** and **Value Decrease Key** for 3 seconds, to enter the Configuration Menu. In the password screen, Password digits can be changed by **Main Parameter Increase Key**, Password value can be changed by **Value Increase Key** and **Value Decrease Key**. Password must be entered as **"203"** and **Main Parameter Decrease Key** must be pressed to confirm. When the correct password is written, the configuration menu will be entered. If the wrong password is entered, it will fail, and the password will reset. Password screen will return to main screen without an action 10 seconds. Parameter setting screen will return to main screen without any action in 30 seconds. All parameters are stored within device memory ensuring no data loss if the Thermostat is powered off.
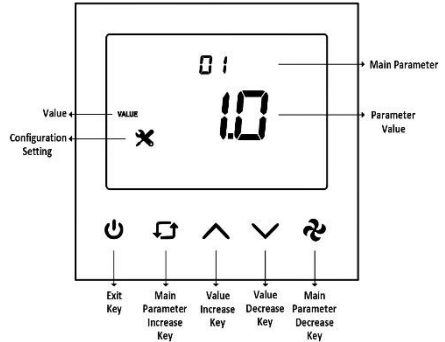
Energy Saving Mode (ECO Mode) (via Parameter P16)

Economy mode is activated from the authorization point (P16). When economy mode authorization is activated, the device will operate in economy mode instead of OFF state. In ECO mode, the system will operate according to the set point value for heating and cooling.

The situations that will be affected by the economy mode are as follows;

• Auto mode authorization will be turned off.

• Fan/Valve control will operate as Valve Dependent.

NOTE: Economy mode will not be activated when Universal Input is selected Changeover.

Universal Input (Parameter P32)

- External Sensor for room (parameter P32 = 1)

The device operates according to external temperature sensor value read from universal input.
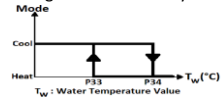
- External Sensor (parameter P32 = 2)

The device operates according to internal temperature sensor value. The temperature read from the universal input can be monitored from **P36**.

- Changeover sensor (parameter P32 = 3)

If "Universal Input" value is selected as changeover, "dead zone" cannot be used.

Changeover sensor only valid when "Fan Coil Type" is set to 2.

When the water temperature is above **P34** the thermostat changes over to heating mode. It stays in heating mode until the temperature falls below **P33**.

When the water temperature is below **P33**, the thermostat changes over to cooling mode. It stays in cooling mode until the temperature rises above **P34**.

- Changeover contact-On/Off (NC Contact) (parameter P32 = 4)

Changeover sensor only valid when "Fan Coil Type" is set to 2.

When this contact is closed, the device will operate according to the cooling mode. When the contact is opened, it will operate according to the heating mode.

- Changeover contact-Off/On (NO Contact) (parameter P32 = 5)

Changeover sensor only valid when "Fan Coil Type" is set to 2.

When this contact is opened, the device will operate according to the cooling mode. When the contact is closed, it will operate according to the heating mode.

- Windows contact/Energy saving-On/Off (NC Contact) (parameter P32 = 6)

When this contact is closed, the device is in the "ON" position. When this condition is not met, the device shows "OPEN" on the panel and the outputs of the device are passive.

- Windows contact/Energy saving-Off/On (NO Contact) (parameter P32 = 7)

When this contact is opened, the device is in the "ON" position. When this condition is not met, the device shows "OPEN" on the panel and the outputs of the device are passive.

- Remote Control (NC Contact) (parameter P32=8)

When this contact is open, the device is in the "Off-ECO" position. When the contact is turned off, the device will switch to the "On" position. In this case, On/Off key will be locked, and Time Schedule will be disabled.

- Remote Control (NO Contact) (parameter P32=9)

When this contact is closed, the device is in the "Off-ECO" position. When the contact is turned on, the device will switch to the "On" position. In this case, On/Off key will be locked, and Time Schedule will be disabled.

- Remote Off-ECO (NC Contact) (parameter P32=10)

When this contact is open, the device is in the "Off-ECO" position. If the contact is closed, the device will continue to operate in its previous position. When the device is in the "Off" position On/Off key will be locked, and Time Schedule will be disabled.

- Remote Off-ECO (NO Contact) (parameter P32=11)

When this contact is closed, the device is in the "Off-ECO" position. If the contact is open, the device will continue to operate in its previous position. When the device is in the "Off" position, On/Off key will be locked, and Time Schedule will be disabled.

Hysteresis (Parameter P40)

The output diagram of the valve according to the relation between T_S and T_R is given below.
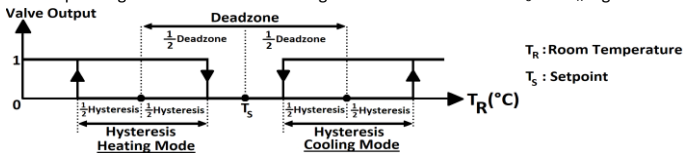
Fan/Valve Control Selection (Parameter P41)

In valve independent mode, the fan operates according to manual fan selection or automatic fan control. When valve is closed, the fan will go on to operate.

In valve dependent mode, the fan will be closed when the valve is closed. If the valve is open, the fan will operate according to manual fan selection or automatic fan control.

Restore Factory Setting (Parameter P45)

The device can load the factory setting parameters via parameter P45, by changing the value to "1", and pressing button **Exit** Key. The display shows top and bottom lines loaded step by step during reload process approximately 3 seconds.

Alarms

Alarm Code will appear on the screen, during alarm. If there is more than one alarm, alarms are shown alternately.

- Onboard Sensor Alarm

If the onboard sensor is broken down from the device displayed "**AL01"** on the panel and "Err" on the Main Digits. During the alarm, device outputs will be closed. During the alarm, If the "Universal Input" is selected to "External Sensor", the device continues normal operation.

- External Sensor Alarm

If the "Universal Input" is selected to "External Sensor" also the sensor is broken down, displayed "**AL02**" on the panel and "Err" on the Main Digits. During the alarm, device outputs will be closed. "Universal Input" is set to "Not Used" to eliminate the alarm.

- Changeover Sensor Alarm

If the "Universal Input" is selected to "Changeover Sensor" also the sensor is broken down, displayed "**AL03**" on the panel and "Err" on the Main Digits. During the alarm, device outputs will be closed. "Universal Input" is set to "Not Used" to eliminate the alarm.

Configuration Menu Parameters

No.	Name of Parameter	Parameter Definition	Factory Default
P1	Hardware Version	Device hardware version	2.1
P2	Firmware Version	Device firmware version	2.9
P3	Setpoint High Limit	Range: 5°C … 99,9°C (Range: 41°F … 212°F)	30°C (86°F)
P4	Setpoint Low Limit	Range: 5°C … 99,9°C (Range: 41°F … 212°F)	5°C (41°F)
P5	Main Screen	0 = Room temperature 1 = Setpoint temperature 2 = Swap Room Temperature and Setpoint Temperature	0
P6	Key Lock	0 = Unlocked 1 = Lock On/Off 2 = Lock Mode 4 = Lock Setpoint 8 = Lock Fan Speed 16 = Lock Time Settings 32 = Lock Time Schedule Settings 63 = Locked All (*) To lock two or more buttons at the same time; sum the numbers of the buttons. To lock setpoint and fan speed, 4 (Setpoint) and 8 (Fan Speed) should be added and written 12.	0
P7	Celsius or Fahrenheit	0 = Celsius 1 = Fahrenheit	0
P8	Time Format	0 = 24 hours clock 1 = 12 hours clock (AM/PM) (*) The system Time Format is 24 hours clock. This parameter adjusts how to clock format on the panel/screen will shows.	1
P9	Time Schedule Enable	0 = Disable 1 = Enable	1
P10	Screen Saver	0 = Screen Saver Disabled 1 = Display On 2 = Display Off 3 = Only Room Temperature 4 = Room Temperature and Clock 5 = Swap Room Temperature and Setpoint with Clock	4

P11	Screen Saver Mode Delay	Range: 10 … 150 seconds	60 sec.
P12	LCD Brightness	Range: 1 … 5 stage	5
P13	Buzzer Stage	Range: 0 … 5 stage	3
P14	Power Failure	This parameter adjusts the condition that the device will continue when the power failure. 0 = Device starts off 1 = Device starts on 2 = Keep State Before Power Failure	2
P15	Screen Off State Status	0 = Screen off 1 = Room Temperature 2 = Room Temperature and Off 3 = Room Temperature and Clock	1
P16	ECO Mode Activation	0 = Eco Mode authorization turned off 1 = Eco Mode authorization turned on	0
P17	ECO Mode Cooling Mode Set Point	Set Point Low Limit … Set Point High Limit	21°C (69,8°F)
P18	ECO Mode Heating Mode Set Point	Set Point Low Limit … Set Point High Limit	21°C (69,8°F)
P19 …. P26	Reserved	-	-
P27	Underfloor Heating Activation	0 = Underfloor heating disable 1 = Underfloor heating enable	0
P28	VA1 Direction	0 = Normal Direct 1 = Reverse Direct	0
P29	VA2 Direction	0 = Normal Direct 1 = Reverse Direct	0
P30	Fan Coil Type	0 = Fan Only 1 = 2 pipe system Cooling + Fan 2 = 2 pipe system 3 = 2 pipe system Heating + Fan 4 = 4 pipe system	4
P31	Internal Temperature Sensor Calibration	Range: -10°C ... 10°C and 0.1°C steps (Range: -18°F ... 18°F and 1°F steps)	0°C (0°F)
P32	Universal Input	0 = Not used 1 = External Temperature sensor for room (NTC 10K) 2 = External Temperature sensor (NTC 10K) (Monitoring purpose) 3 = Changeover sensor (NTC 10K) 4 = Changeover contact-On/Off (NC Contact) 5 = Changeover contact-Off/On (NO Contact) 6 = Windows contact/Energy saving-On/Off (NC Contact) 7 = Windows contact/Energy saving-Off/On (NO Contact) 8 = Remote Control (NC Contact) 9 = Remote Control (NO Contact) 10 = Remote Off (NC Contact) 11 = Remote Off (NO Contact)	0
P33	Changeover Temperature for Cooling	Range: 10°C ... 25°C. Only valid when P32 is set to 3 (Range: 50°F ... 77°F. Only valid when P32 is set to 3)	16°C (60°F)
P34	Changeover Temperature for Heating	Range: 26°C ... 45°C. Only valid when P32 is set to 3 (Range: 78°F ... 113°F. Only valid when P32 is set to 3)	28°C (82°F)
P35	Mode Change Delay	Range: 0 … 255 minutes	3 min.
P36	Universal Input Temperature	If P32 is "1", "2" or "3", this parameter shows the sensor temperature.	0°C (0°F)

P37	Universal Input Temperature Calibration	Range: -10°C ... 10°C and 0.1°C steps (Range: -18°F ... 18°F and 1°F steps)	0°C (0°F)
P38	Auto Mode Enable	0 = Disable 1 = Enable Only valid when P30 is set to 4	1
P39	Dead Zone	Range: 0°C ... 15°C. Only valid when P38 is set to 1 (Range: 0°F ... 27°F. Only valid when P38 is set to 1)	2°C (3°F)
P40	Hysteresis	Range: 0°C ... 15°C (Range: 0°F ... 27°F)	1°C (1°F)
P41	Fan/Valve Control Selection	0 = Valve independent 1 = Valve dependent	1
P42	Fan Stage Change Delay	Range: 0 ... 5 seconds	2 sec.
P43	Fan Off Delay	Range: 0 ... 60 seconds	0 sec.
P44	Reserved	-	-
P45	Restore Factory Setting	0 = Factory Setting Disable 1 = Factory Setting Started	0
P46 ... P48	Reserved	-	-
P49	Parameter Menu Password	Range: 001 ... 999 (Read Only)	203

Dimensions (mm)