Installation and operating instructions

Release the front cover by pressing with screwdriver from the ejector latch at the bottom of the thermostat. Open the spring and remove the frame.
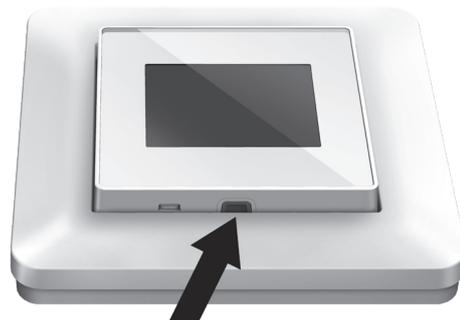
Wires must be stripped 9-10 mm. Wires can be released by pressing the connector's release pin. Floor sensor must be placed into protective tube in concrete. Make sure there is no water in the tube.

Setup

This manual describes the most essential functions and technical specifications of the thermostat. These instructions help the user to control the thermostat, and the electrician to install and setup the thermostat.

Now connect the wires to the thermostat's terminals:

PILOT: Pilot Wire (if applicable)
LOAD (N):   Heating Cable connection (Neutral)
N: Power connection (Neutral)
L: Power connection (Live)
LOAD (L):   Heating Cable connection (Live)
SENSOR: Floor temp sensor NTC type

Technical specifications

Display: 1.8" TFT, 128x160 resolution
Power supply: 230V - 50/60 Hz
Maximum load: 16A (resistive)
Setpoint temperature range: +5 °C/+40 °C
Usage temperature range: 0 °C/+40 °C
Temperature setback: Pilot wire 230V - 50/60 Hz
IP class: IP21
Standard Color: White RAL9003
Sensors: Built-in room sensor and floor sensor NTC 10kΩ included
Wi-Fi: 2.4GHz 802.11bgn (TPT16WF)
Approvals: EN 60730-1, EN 60730-2-9, EN 300 328 V2.2.2

Installation

Installation must be done by a qualified electrician in accordance with wiring and building regulations.
Before installation, disconnect any power to the thermostat's mains. During installation of the thermostat, power to the thermostat must be disconnected or isolated AT ALL TIMES!

Next, position the thermostat and fasten it onto the wall's mounting box using 2-4 screws. Open the frame retaining spring, position the frame and close the spring. Then attach front part, make sure the connector between front and bottom part is correctly placed. Press front part until it snaps in place. Front part can later be removed by pressing the ejector latch.

Start-up

After connecting the power to the thermostat for the first time, or after performing a factory reset, a start-up wizard will prompt the following questions:

Language	Set language
Set timezone	Timezone compared to GMT
Daylight saving	Daylight saving in use Y/N
Date / Time	Set current date & time
Thermostat use	Heating or cooling
Heating system	Floor (Slow), Floor (Fast), Other (Fast)
Floor type	Concrete or wood
Floor Temp limit	6-40 (concrete) 6-27 (wood)
Regulate	Room/floor or power reg.
Load size	Specify load
Gradual heating	ON or OFF, used with new concrete floors to limit temperature rise time

Note: Wooden floor requires that a floor sensor is connected. Thus, floor temp is limited to 27 °C.

Control

The thermostat is controlled directly or via App Frico TPT (TPT16WF), see "Wi-fi settings (TPT16WF)" and "Phone applications (TPT16WF)"

The thermostat has three touch sensitive capacitive buttons. These are:
• Left (Up)
• Center (Confirm)
• Right (Down)

Each button has its own background light. At any time, when any of the buttons' backgroundlight is lit, the button is available for use.

TIP: Holding the left button for 2 seconds at any time, will make a quick return to the main screen.

TIP: While browsing the thermostat's menu, pause at any menu item for a while, and a help text will be shown.

Symbols

Heating enabled

Cooling enabled

Wooden floor has reached the maximum temperature 27°C, thus heating is being limited.

Home

Away

Gradual heating

Anti-frost

Power regulation

Cooling

Schedule

Open window function

Standby and Main screen

When the thermostat remains untouched for a while, it will automatically go to standby screen. While in standby, touching any of the buttons will display the main screen below:
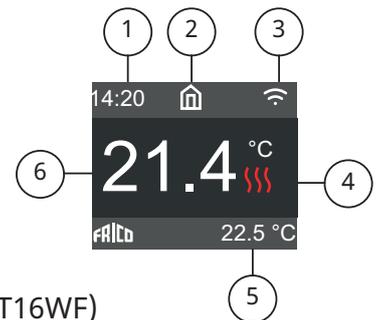
1. Time
2. Operation mode
3. Wi-Fi indicator (TPT16WF)
4. Heating switched
5. Setpoint
6. Measured temp
   (Room or floor sensor)

In the main screen, pressing the center button will access the main menu. Pressing left or right button will change the set temperature.

Menu items

Operation mode	See "Operation Mode"
Schedule	See "Schedule"
Settings	Adjust settings
Wi-Fi	Adjust Wi-Fi settings (TPT16WF)
Energy consumption	Show energy consumption
Child Lock	Activate key lock
Info	Thermostat information
Shut down	Switch thermostat on/off
Back	Go back to main screen

TIP: "Energy Consumption" shows consumption statistics over different time periods. Press center button to change unit or to reset statistics.

TIP: Select "Child Lock" and press center button three times to activate/deactivate key lock.

Operation mode
The thermostat has three main modes: Home, Away and Schedule. The additional modes are Anti-frost and Power regulation.

Home
Pre-set temperature while you are home. The temperature setting can be changed by the user and it is saved.

Away
Pre-set (reduced) temperature while you are away. The temperature setting can be changed by the user and it is saved. External pilot signal will also change operation mode between Home and Away.

Schedule
Thermostat follows the settings programmed in the Schedule menu. Programming can also be done with phone application(TPT16WF).

Anti-frost
This mode drops setpoint to 7 °C. It can be used e.g. in summer cottage during winter time.

Power regulation
Fixed power mode, which operates without feedback from sensors. Relay conduction time is selected e.g. 20% which means relay is ON 20% and 80% OFF during the cycle time. Cycle time is 30 minutes.

Open window function
If the room temperature drops rapidly, the mode will be changed to Anti-Frost mode. When the temperature raises, thermostat will return to earlier used mode. The Open window function will automatically deactivate after 30 minutes. The function is disabled as default.

Schedule
Create customized daily schedules to minimize energy consumption and maximize comfort. There can be up to five set points per day. A set point is given a target set time and a target set temperature for the thermostat to regulate automatically.

You can view your daily heating schedule in this menu. Set points can be added and removed according to your preferences.

TIP: Create a daily schedule for a weekday according to your preferences. Then use the copy/paste function to duplicate the given day's scheme to other weekdays.

Settings

Language	Set language
Brightness	Adjust display brightness
Color theme	Dark/Light
Standby screen	ON/OFF
Backlight delay	5-30s
Show help	No/2-15s
Advanced settings	Go to advanced settings
Back	Go back to main screen

Advanced settings

WARNING: Advanced Settings is recommended only for expert users. Consult your supplier or use with extreme caution! Incorrect settings may damage your floor or heating system! Advanced settings menu contains the following items:

Heating Setup	Change heating or cooling setup
NTC sensor	Change NTC type
Hysteresis	Change temp variation
Calibration	Fine tune temp measuring
Temperature limits	Set limits for room and floor temp
Pilot wire	Change pilot wire settings
*Adaptivity	See below.
Factory reset	Perform full factory reset
Restart device	Perform reboot
Back	Go back to settings

*ADAPTIVITY: The thermostat will automatically start/stop heating proactively to reach the set temperature at the set time. If adaptivity is switched off, the thermostat will start/stop heating at the set time instead of operating proactively to reach the set temperature at the set time.

Wi-Fi settings (TPT16WF)

When the thermostat is not connected to the cloud "Connect to cloud" can be started from Wi-Fi settings menu. Connection is done together with phone application "Add thermostat". Thermostat will show two three digit PIN codes, which will be copied to the phone application. The password for the selected Wi-Fi network will be given in the phone application.

CONNECT TO CLOUD

134

458

Cancel
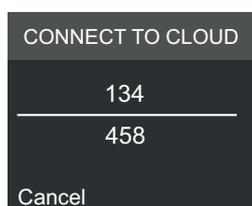
When the Add Thermostat operation is finalized thermostat will reboot. After the thermostat is connected to the cloud the Wi-Fi settings menu will offer possibility to turn Wi-Fi OFF/ON. Existing Wi-Fi settings will be used when turning Wi-Fi back to ON. To change Wi-Fi network or password please use Connect to cloud menu together with phone application's Reconfigure Wi-Fi menu.

Phone applications (TPT16WF)

Download "Frico TPT" from App store or Google Play.

Packaging

Packaging materials are chosen with consideration to the environment and are therefore recyclable.

Handling of product at end of working life

This product may contain substances necessary for the functionality of the product but potentially dangerous for the environment. The product should not be disposed of mixed with general household waste but delivered to a designated collection point for environmental recycling. Please contact the local authority for further details of your nearest designated collection point.

Wiring diagrams
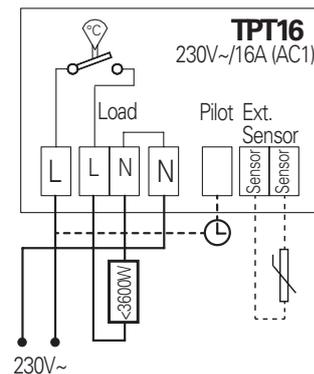
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