Technical manual

Tild

Control & monitoring system for pool and spa

Réf : PF10T000

Table of Contents

1. Important warnings and safety instructions

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

- **READ AND FOLLOW ALL INSTRUCTIONS.**
- **WARNING - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times**
- **SAVE THESE INSTRUCTIONS**

SERIOUS BODILY INJURY OR DEATH CAN RESULT IF THIS PRODUCT (UNIT) IS NOT INSTALLED AND USED CORRECTLY.

INSTALLERS, POOL OPERATORS AND POOL OWNERS MUST READ THESE WARNINGS AND ALL INSTRUCTIONS BEFORE USING THIS PRODUCT.

This guide provides installation and operation instructions for the Tild . Consult CCEI with any questions regarding this equipment.

Attention Installer: This guide contains important information about the installation, operation and safe use of this product. This information should be given to the owner and/or operator of this equipment after installation.

Attention User: This manual contains important information that will help you in operating and maintaining this product. Please retain it for future reference.

2. Packing contents

1 product Tild with:

- 1 thermal probe (P/N: SF130004)
- 1 probe holder for 1.5" pipe
- 1 probe holder for 2" pipe
- 2 screws and 2 dowels for wall mounting
- Technical manual (this document)

3. Technical features

Sizes (L x H x D)	8.5" x 8.25" x 4"
Weight	2.6 lbs - 1.2 kg
Installation	Inside and outside, vertically on a wall
Power supply	12 VAC or 24VDC (depending model) 50/60 Hz
Power consumed	2.4W @12VAC
Protection Index	IP 55
Filtration pump compatibility	All 110V - 240V single speed pumps *(Note: A variable speed pump can be connected, Tild will only manage the power supply)* 277 V AC / 30 VDC max - 20A max
Light compatibility	All 12 VAC CCEI lights (or 24VDC depending of the Tild version) (Number of maximum lights depends of the power supply) 12VAC or 24VDC (depending version) / 16A max (divided between the 2 connectors)
Heater	All heaters equipped with a POOL or SPA selection mod via dry contact 277VAC / 30 VDC max - 10 A max
Temperature probe	NTC probes 270 VAC / 30 VDC max - 10 A
Bluetooth	Low energy (V4.x) Conform R&TTE Directive 1999/5/EC 60m range
Wi-Fi	802.11 b/g/n and "dual band" **(2.4 Ghz only)**

4. Wall mounting

For safety reasons and in accordance with the local directives and NEC, the case must be installed in either:

- **more than 3.5 m (11,5 ft) away (or even further if so required by the local legislation) from the edge of the pool. This distance is measured taking into account any workaround obstacles. If the case is installed behind a wall, the measured necessary distance would be measured by the distance to go around the wall and reach the box**

- **or in an underground room in close proximity to the pool. In this case, the room must be accessible by a trap door which requires the use of a tool to be opened**

Before proceeding to the mounting, verify the Wi-Fi signal presence where the product will be placed.

Using the 2 pre-mounted wall fastening lug and the provided screws, fix the Tild on a flat and stable portion.
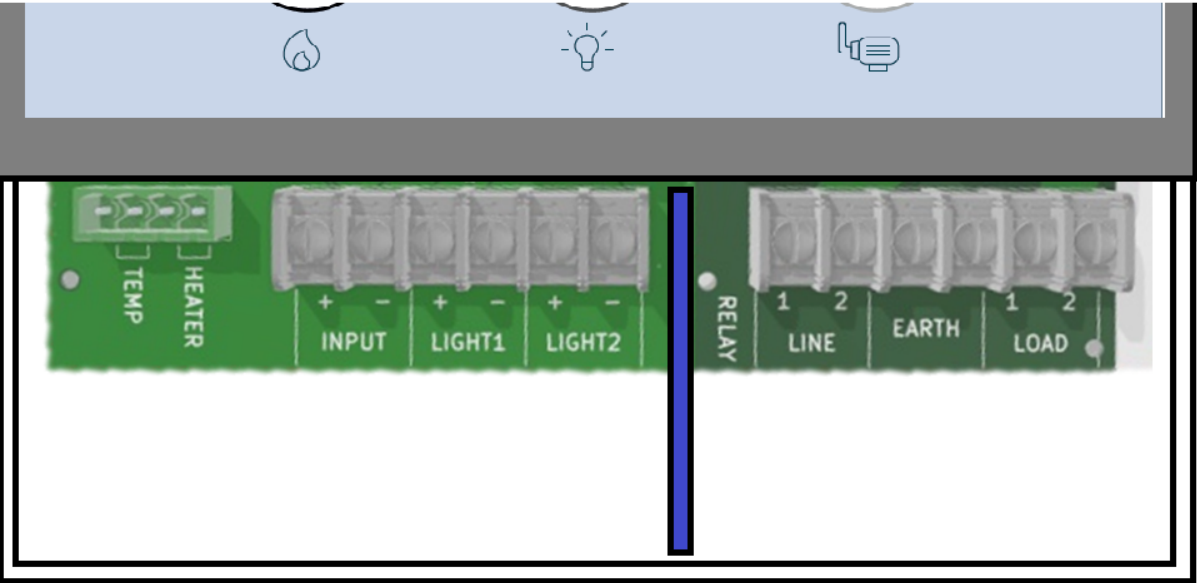

5. Electrical wiring

Installation of this product involves a hazard of electric shock. We strongly recommend you contract a professional installer. Incorrect installation places you in danger and may irreversibly damaged the product and the equipment connected to it.

Open the bottom of the case by removing the 2 screws on the bottom of the case:

⚠ **When you put back the lower cover, use a torque of 1.2 Nm to tighen the screws and ensure watertightness.**

While the lower cover has been removed you will have access to the following wiring terminal blocks:

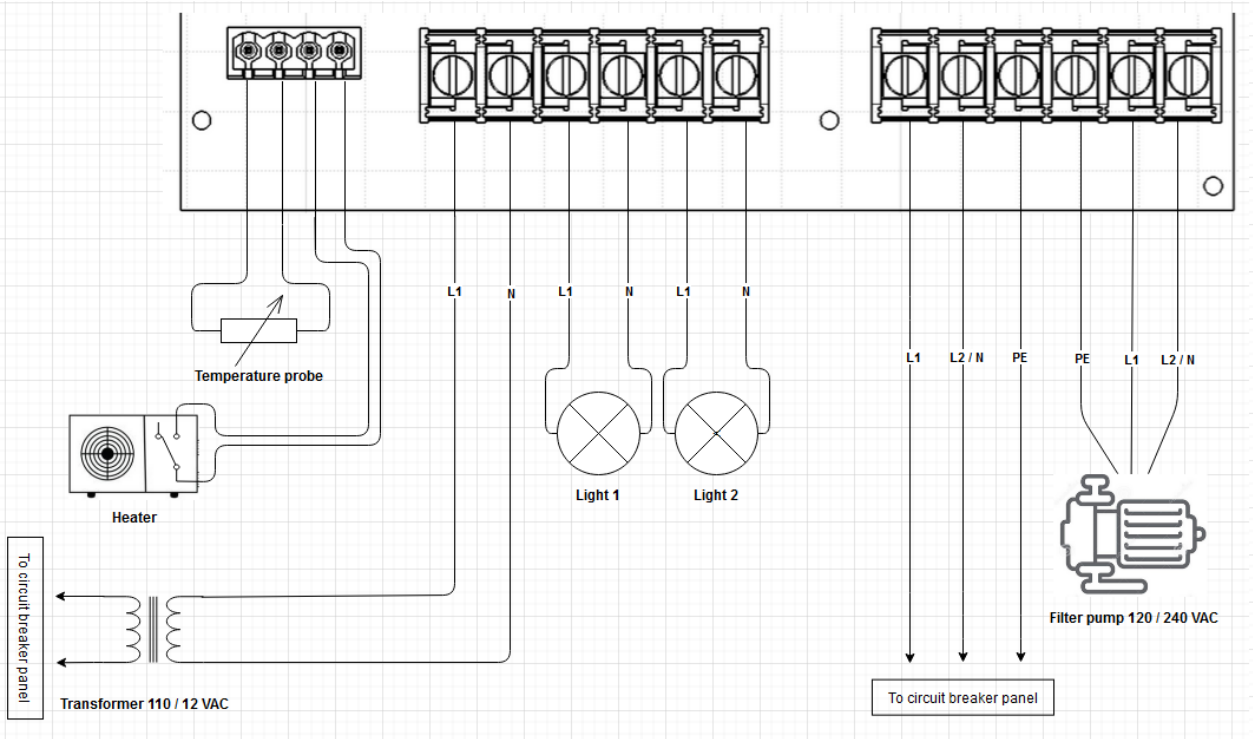| TEMP	Connect the temperature probe (no polarity)
HEATER	Connect the dry contact from you swimming pool heater (no polarity).
INPUT	Terminal block for the 12VAC or 24VDC power supply **(pay attention to the polarity for DC input)**
LIGHT1	Out put for a 12 VAC or 24VDC CCEI LED light(s). **(pay attention to the polarity for DC input)**
LIGHT2	Second out put for 12 VAC or 24VDC CCEI LED light(s) **(pay attention to the polarity for DC input)**
LINE	Connect the power supply of your filtration pump (110 / 240 VAC)
EARTH	Connect the EARTH wire of the pump cable (if there is one)
LOAD	Connect the filtration pump (110 or 240 VAC)

⚠ **Tild can be supplied in 12VAC or 24VDC depending the model. To select the good voltage you have to refer to the light that your are using and the P/N (extension /12**

for 12VAC and /24 for 24VDC). If the light(s) is supplied in 12VAC, put a 12VAC power supplied and verify the Tild P/N. If the light is supplied in 24VDC put a 24VDC power supply and verify the Tild P/N.

Pass all the cable of the devices into the dedicated cable gland and connect them to the dedicated terminal block.
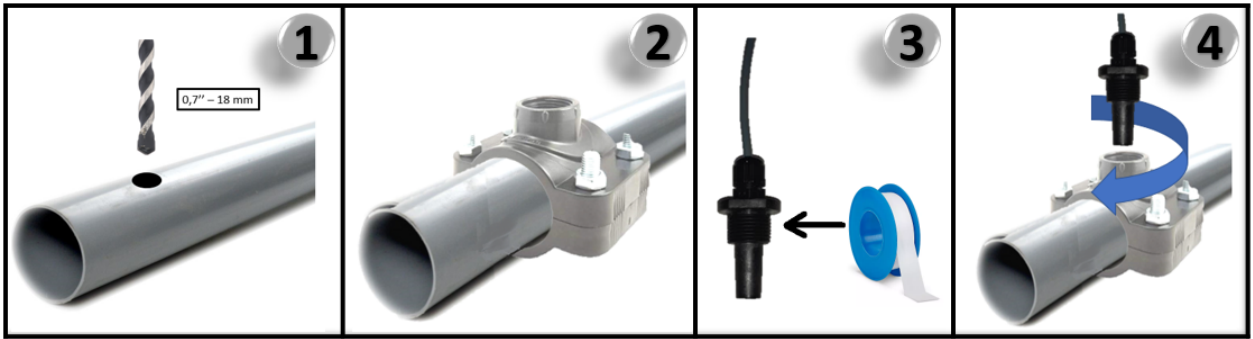
Example of a full wired diagram:

When all the devices are connected, put in place the lower cover and tighten the screws at 1.2 Nm. Tight the cable gland.

5.1. Temperature probe mounting

1. On your piping, drill a 0.7 " (18 mm) diameter hole on the high point of the pipe
2. Fit the collar supplied with the product (select the collar with the appropriate diameter)
3. On the temperature probe, put Teflon on the thread of the probe
4. Screw the probe into the upper hole of the collar

5.2. Heater wiring

Before wiring the heater, read carefully the section dedicated to remote controlling into the heater manual. Process can be different from one heater to another.

Most heaters can use a remote connection and will be compatible with the Tild . When connecting a heater to the Tild , the water temperature sensor must be installed into the plumbing system between the filter pump and filter.
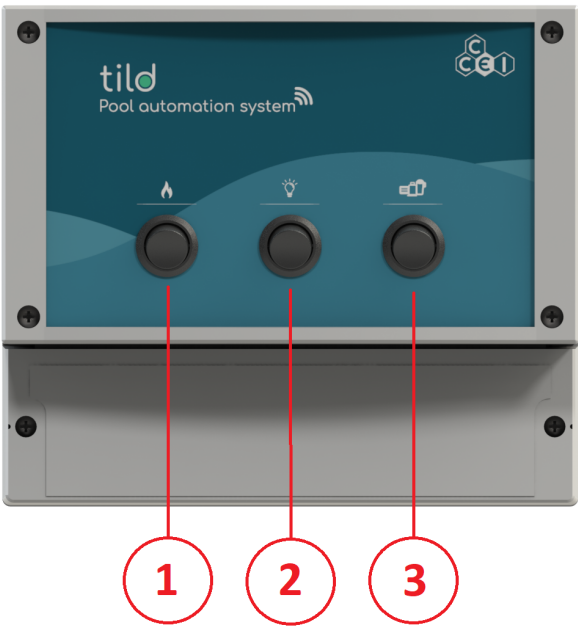
Usually, on the ignition board, you will be able to find a contact named "POOL" and "SPA". Using a 2 wires 22 AWG, connect the heater terminal block from the Tild to the "POOL" and "SPA" entry.

Into the Heater parameters, set "POOL" to 0°C and "SPA" to 40°C.

Depending model, other parameters must set ON or OFF, please refer to the heater manual.

6. Front panel description

On the front panel you have the possibility to put ON and OFF a device without using the app:

- If the rocker switch is on its top position (=), the device is set in automatic mode. The app will define if the device has to be running or not.
- On the middle position (**O**), the device won't run. This mode can be used for device servicing.
- On the bottom position (**-**), the device will run. (*For security purpose, the heater can't be run when the pump is not running*)

1. Heater control
2. Light control
3. Pump control

7. Connection indicator

The indicator on the Tild unit lights in different colors depending on the controller status and may also flash. Below is a table listing all conditions:

Flashes blue every 2 seconds	The device is configured for Bluetooth® and is waiting for a smartphone connection
Blue (not flashing)	There is a smartphone connected with the device using Bluetooth®
Flashes green every two seconds	The device is configured for Wi-Fi and is con-nect-ed to the router. It is waiting for a smartphone connection
Green (not flashing)	There is a smartphone connected to the controller using Wi-Fi
2 green flashes per second	SSID configuration in progress - Password to con-nect to the router

Flashes green quickly	Connection fault: SSID entry error or router not accessible

In case of high brightness, the blue LED can be less visible.

8. App connection

8.1. Bluetooth® and Wi-Fi control

The Tild includes a Bluetooth and Wi-Fi transmitter, which allows your device to be controlled by a smartphone or tablet. To be able to control the Tild , you will need an iOS (Apple®) or or Android device with Bluetooth® Low Energy (v4.x) connectivity OR Wi-Fi 502.11 B:N:G. Other operating systems (Windows Phone®,...) or devices equipped with previous Bluetooth® version - lower than 4.0 - **are not supported**. Only one phone / tablet can be connected to the panel. To connect another device, disconnect the first device.

One phone only can be connected to the panel. To connect other advice, **you should be disconnected first**.

If you are connecting via Wi-Fi, you must indicates the Wi-Fi features (ID and SSID) to connect your Tild to the network and pilot the Tild via Wi-Fi.

Only one device (phone / tablet) can be connected to the Tild .

The Bluetooth and the geolocation of your phone must be activated.

8.2. App download

Search "Vigipool" into the App Store or Play Store search engine. Download and install the app.

8.3. First connection

When running the app for the first time, it's scanning all Tild at connection range. Select the first Tild which appears. A message will pop-up mentioning that a pairing is needed.
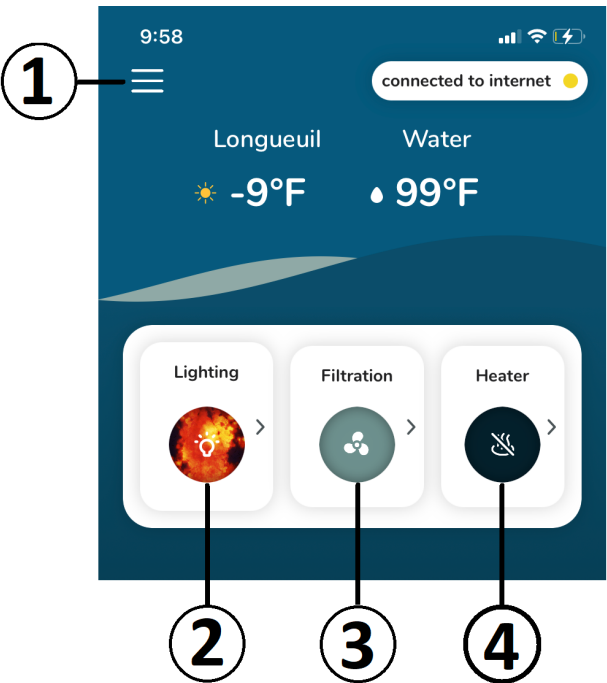
Put your phone on the top right corner of the enclosure. The phone pairing takes 5 to 10 seconds.

8.4. Vigipool app description

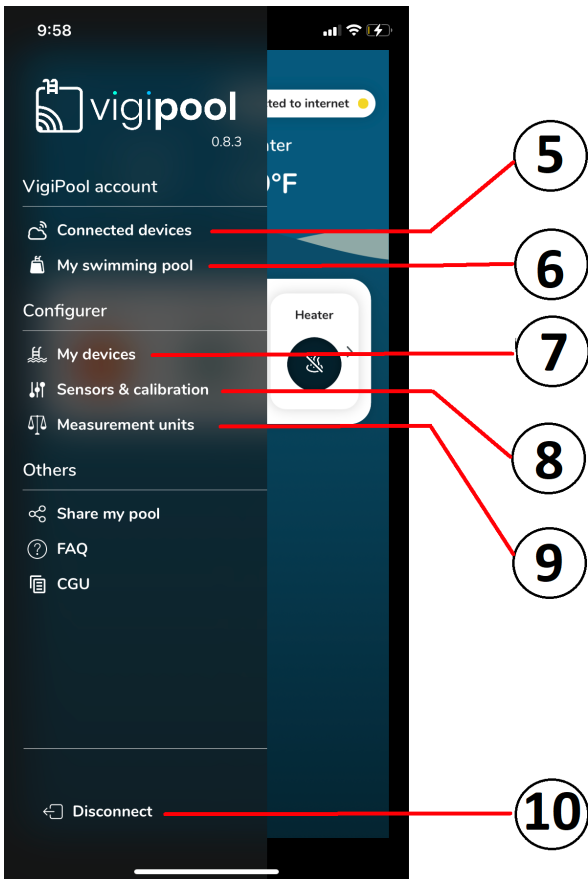When your Tild is connected to your device, the following screen appears:

1- Vigipool General settings	Access to Vigipool settings
2- Lighting	Lighting menu, clicking on this button allow you to put ON or OFF your lights, choose the desired color/show to display and setup a timer. The arrow on the right gives you access to a second menu to manage the color intensity and to setup a schedule.
3- Filtration	Filtration menu, clicking on this button allow you to put ON or OFF your filtration system. (Note: by forcing OFF the filtration, the heater will be automatically shut down) The arrow on the right gives you access to a second menu to setup a schedule.
4- Heater	Heater menu, clicking on this button allow you to put ON or OFF your filtration system. (Note: The heater canno't be put ON if the filtration is not running) The arrow on the right gives you access to a second menu to setup a schedule.

8.5. Vigipool general settings

To access the general setting menu, click on the icon " ≡ ".

5- Connected devices	See all devices which are currently connected to this Vigipool account
6- My swimming pool	Enter your pool data to optimize Vigipool settings
7- My devices	See all devices which can be connected to this Vigippool account
8- Sensor & calibration	Sensor calibration
9- Measurement units	Choose your favourite measurement units to display (°C / °F)
10- Disconnect	Disconnect your account from the app

8.6. Wi-Fi connection / Vigipool account creation

Vigipool is compatible with 2.4 Ghz networks only !

To be able to connect via Wi-Fi the first time, first leave the smartphone's Bluetooth on and activate the phone's Wi-Fi, and check that the phone is connected to an access point. Once all is done, open the app and connect the Tild via Bluetooth. Click on "≡" to access the general settings then click on "My device" and select the device that you want to pair. Click on "Configure Wifi connection". Fill the form with the SSID and the password of your network. If you come back to the main page, you should see on the top right corner the mention "connected to internet".

When the Wi-Fi is correctly setup you can create a Vigipool account to manage you pool remotely. Click on "≡" to access the general settings then click on "Sign in / Sign up". Fill the form to create a Vigipool account. Once done, come back to the menu "Sign in / Sign up", fill the email address used to create the account and your password. The product is added to the menu "My devices" and you can now remotely control it.

A. Technical support / Declaration of conformity

USA: na.ccei-pool.com/us / Tel: +1.213.425.5280

Canada: na.ccei-pool.com/ca / Tel: +1 514.963.4226

CCEI Inc. (Québec 1170122155) declares that the product Tild is compliant with the safety and electromagnetic compatibility requirements   of European directives 2006/95/CE and 2004/108/CE and is UL listed under the number E517110.

c (UL) US		Pierre-Yves Flattot Montreal, on 29/12/2020

Distributor's stamp

Date of sale: . . . . Batch N°: . . . .