tild VP

Wifi / Bluetooth connect-
ed electric control box

Réf : PF10Y700 (/701 /702) V02

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Read these instructions carefully before installing, commissioning and using this product.

1. Technical specifications

Dimensions	410 x 310 x 150mm
Electricity supply	230V AC. **PF10Y700**: 30mA ground fault circuit breaker to be provided upstream. **PF10Y701** and **PF10Y702**: ground fault circuit breaker built into the control box.
Weight	6.5 kg
Protection rating	IP-55
Compatible filtering pumps	1.5 HP - Single phase. C16 protection.
Auxiliary output	1.5HP max if booster pump - Single phased. Max 230V. C16 protection
Light output	12V / 100VA. C10 protection
Heat pump output **(PF10Y700 / 702 only)**	230V. D16 protection for heat pump
Bluetooth®	Low Energy (v4.x) Conforms to the R&TTE Directive 1999/5/EC
Wifi	802.11 b/g/n and "dual band" (2.4 Ghz only)

2. Pack contents

1 control box with **tild VP** module shipped with cable glands and grommet. 1 temperature sensor with Ø50mm 1/2" fixing collar	4 fixing screws and anchors (bag) 1 Technical manual (this document) and 1 wiring diagram

3. Compatible with the Vigipool environment

The **tild VP** box is compatible with all the devices in the Vigipool environment. The Vigipool environment gathers together many interconnected water treatment and maintenance appliances that can be controlled by a single application: Vigipool.

The appliances exchange the different measurement data and their actions with each other using a wireless proprietary connection between the appliances. Different appliances are available (electric filtration box, LED control, pH regulation, connected pH / ORP analyser, remote touch display, etc.).

3.1. Bluetooth® and Wifi control

The **tild VP** control box has an embedded Bluetooth® and Wifi transmitter used to control your appliance from a smartphone or tablet. To be able to control the **tild VP**, you need an iOs (Apple®) or Android smartphone or tablet running Bluetooth® Low Energy (v4.x) or Wifi 802.11 b/n/g. Other operating systems (Windows Phone®,...) or devices not running the above-mentioned pre-requisites **are not supported**.

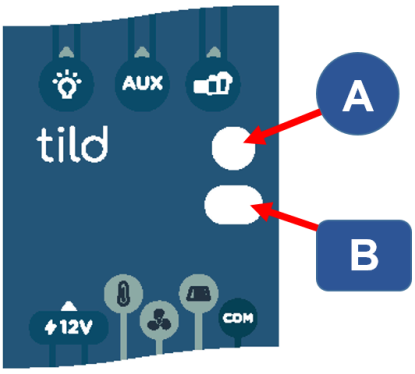
For a Wifi connection, the local Wifi details (SSID and password) need to be entered and a Vigipool account created to connect your **tild VP** to the Wifi router and control the **tild VP** using local Wifi and remotely. (see attached specific "Vigipool World" leaflet)

With Bluetooth, only one telephone / tablet can be connected to the control box at a time. To connect from another device first disconnect the device which is already connected.

The software embedded in the appliance can be updated automatically. To do this, it must be connected to WiFi or to another Vigipool appliance that is itself connected to WiFi. If you only use the appliance with Bluetooth, you can create an access point from your phone to temporarily connect the appliance and update its software if necessary.

3.1.1. Bluetooth® pairing

On the first connection (using Bluetooth), after having selected your appliance from the list, to pair your smartphone with the tild VP, approach the smartphone until it is in contact with the appliance, or press button (**B**) on it **when the application prompts you to do so** and indicator (**A**) flashes blue quickly.



Pairing is only possible *via* the Vigipool app. Do not attempt pairing from the smartphone's Bluetooth settings.

4. Installation and connection

For safety reasons and in compliance with the NF C15-100 standards, the tild VP control box must be installed

- **either at over 3.50 m from the pool edge. This distance takes into account the distance around obstacles. If the tild VP control box is installed behind a wall, the distance will include the length of the path taken to move around the wall to reach the box.**
- **or in an in-ground space in the immediate vicinity of the swimming pool. In this case the space must be accessible via a hatch which requires a tool to open it.**

The control box is shipped without a power supply cable. It must be powered using a 230V output protected by a 30mA ground fault circuit breaker in compliance with the NF C15-100 standard.

The **tild VP** control box is installed in several steps.

- Fix the **tild VP** control box to a wall (4 fixing screws)
- connect the different accessories controlled by the control box inside, as well as the power supply (see wiring diagram)

4.1. Pump protection

The pump is protected by a 16A magnetic-thermal circuit breaker. On your installation, the pump must be protected from short-circuits and overheating risks (jammed motor shaft, wear, running empty, high surrounding temperature).

To prevent short-circuits, the magnetic-thermal circuit breaker delivered in the control box is perfectly suitable.

To prevent overheating risks, start by checking that the pump is self-protected using a built-in thermal safety device.

If that is not the case, or when in doubt, adapt the magnetic-thermal circuit breaker to the pump power consumption. In that case you can use:

- A classic motor circuit breaker (with built-in thermal value) calibrated to the pump power
- Or a magnetic-thermal circuit breaker (C or D curve depending on the start-up current value) also calibrated to the rated pump power.

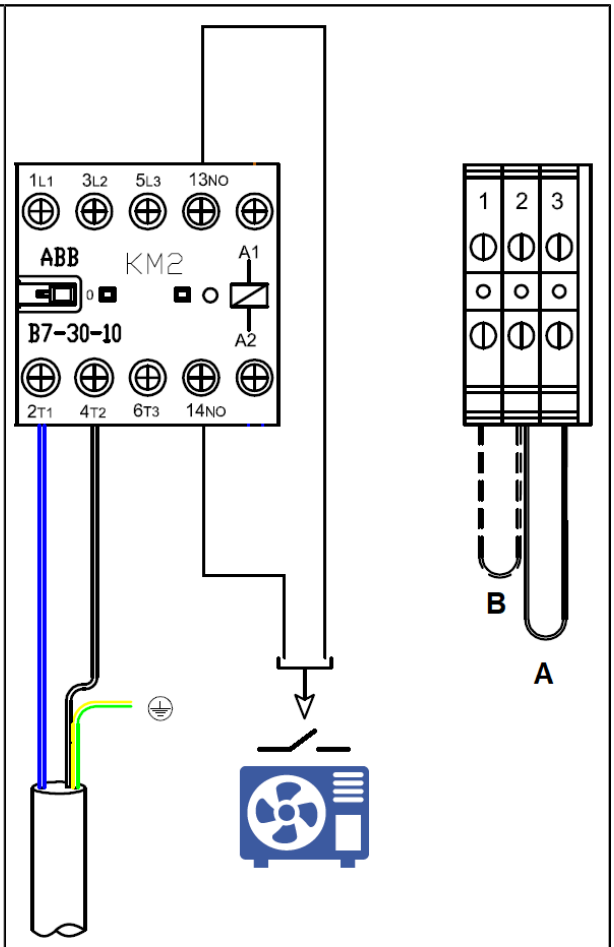
As an example, for a 0.75 HP pump that consumes 4.5 A **WITHOUT BUILT-IN THERMAL SAFETY**, a 6 A thermal protection should be provided.

4.2. Coupled / uncoupled auxiliary output

The auxiliary output can be coupled to the filtering or not.

In Treatment, Heating or Booster mode, the output is coupled and users have no operations to carry out: neither in the application, nor electrically in the control box.

In Auxiliary mode (connection of exterior lighting or an appliance not directly linked to the pool for example), users can configure the auxiliary as UNCOUPLED. In that case the application parameters need to be changed as does the control box (terminals on the right of the contacts, on the lower rail). For the electric configuration, just switch the coupled bridge **(terminals 2 and 3 - position A on the diagram opposite)** to the uncoupled position **(terminals 1 and 2 - position B on the diagram opposite)**.

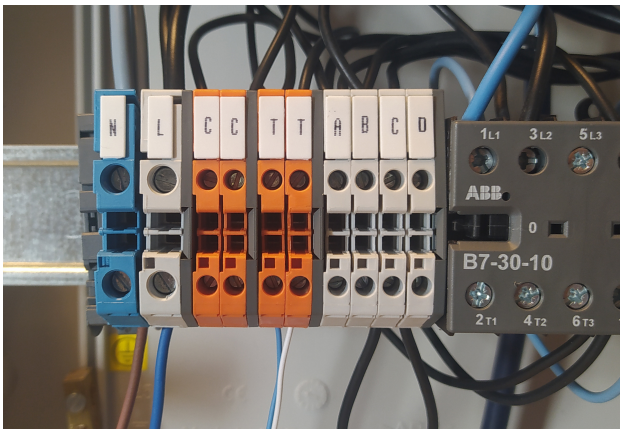


4.3. Pump prohibited / forced operation / T°C / Pool cover

When a level regulation is to be coupled to the **tild VP**, you can use the Forced operation (MF) and Pump prohibited (IP) inputs. The MF input will force filtering to start regardless of the scheduled times (for example: to empty a buffer tank when its level is too high).

The IP input will force filtering to stop during filling or when the level is too low for example. To connect to the 2 IP terminals, first remove the bridge.

- Forced operation **(terminals A and B)**
- Pump prohibited **(terminals C and D**
- Cover (dry contact) (**CC terminals**)
- Temperature sensor (**TT terminals**)



5. Choice of the Vigipool "central unit" appliance

Please refer to the attached "Vigipool World" page for more information

On delivery or after a reset (see "Reset" section),the multi-colour LED **(A)** flashes slowly white after the initialisation phase. This corresponds to the choice of the appliance that will perform the Vigipool "central unit" function (see attached specific "Vigipool World" page):

- If the installation only has this appliance, press the selection button (**A**). The appliance is then configured as a Vigipool "central unit" and other appliances can be added to the installation later.
- If the installation has several Vigipool World compatible appliances
  - If an appliance is already configured as a Vigipool "central unit", press the button on the Vigipool "central unit" if it has been powered on for more than one minute. (If it has been powered on for less than a minute, there is no need to press its button). Your tild VP then connects to the Vigipool "central unit": It stops flashing white and switches to normal operation.
  - If no other appliance is already configured as a Vigipool "central unit", turn on all the appliances and press the button on the appliance you want to use as a Vigipool "central unit". The other products will then connect to the appliance you have validated as the Vigipool "central unit", they stop flashing white and switch to normal operation mode.

When the tild VP is configured as a Vigipool "central unit", LED **(A)** lights in green and flashes green when it accepts the connection of new Vigipool compatible appliances. tild VP accepts new appliances for 5 minutes after it is powered on, or after its **(B)** button is pressed.

If you want to change the Vigipool "central unit" appliance, the system must be reset (see "Resetting to zero")

6. “Connection” indicator

The (**A**) indicator on the front of the module lights in different colours depending on the controller status and may also flash. Below is a table listing all the statuses:

Flashes slowly white	When the unit is delivered, or after a reset, it flashes white while waiting for the Vigipool "central unit" to be selected. See “Choice of the Vigipool "central” unit" section.
Flashes rapidly blue	Pairing request from a smartphone (first connection only). See "Bluetooth® pairing” section.
Steady blue	A smartphone is connected to the appliance using Bluetooth®.
Flashes slowly green	The tild VP is configured as a Vigipool "central unit" and accepts the connection of new Vigipool compatible appliances (This status is normal during the 5 minutes after powering up or after pressing the **(B**) button.
Steady green	The tild VP is properly connected: If it is configured as a Vigipool "central unit", it is connected to WiFi. If not, it is connected to the Vigipool "central unit". tild VP does not accept the connection of new Vigipool compatible appliances (Normal operating mode).
Flashes blue every two seconds	The tild VP is configured as a Vigipool "central unit", is not configured for WiFi, and is waiting for a connection from a smartphone via Bluetooth®. tild VP does not accept the connection of new Vigipool compatible appliances (Normal operating mode).
Flashes rapidly red/green	tild VP is not connected. If it is configured as a Vigipool "central unit", it is not connected to WiFi (incorrect password or network out of range). If it is configured to connect to another Vigipool "central unit" appliance, it cannot connect to that appliance.

***Important**: the blue LED is less visible in bright light.*

7. Operating principles

7.1. 3-position switches

On the side of the **tild VP** control box, there are 3-position switches. For each function (filtration, auxiliary, lighting), these are used to select automatic or manual operation:

- On the "tild" position: Automatic: The function is controlled by the tild module,
- In the middle position "Off / 0": the function in question is off,
- On the "Manu" position: Forced operation (permanent activation) of the function in question.

To be able to control the functions *using* the application and its programming, set the switches to the "tild" position.

7.2. Filtering and heat regulation management

The **tild VP** control box can be used to manage your pool filtering pump depending on the water temperature.

The filtration can be operated manually, programmed, or the appliance can be left to calculate the ideal filtration time every day. In heat-regulated mode, the appliance will use the entered programmed time slots and adapt each one proportionally to the temperature. The higher the temperature, the more the time increases and vice versa.

In other words, in “Programmed” mode, you define your filtering times as if the water were at 25°C. At that temperature, the filtering should usually run for 11 to 13h (possibly spread over several running periods). Next, when heat regulation mode is activated, the **tild VP** automatically adjusts the filtering to the water temperature.

If you find that the calculated filtration time is too low, increase the base programming. On the other hand, if you find that the calculated filtration time is too long, reduce the base programming.

Be careful when switching to heat regulated mode. Incorrect settings (too short base filtering time slots for example) could lead to insufficient filtering during the season. We recommend you ask a professional for advice.

7.3. Anti-freeze monitoring

The **tild VP** control box has a built-in anti-freeze system which needs to be enabled and configured. Its threshold can be set between 0 and +2°C.

- Below this threshold (If T° < Freezing T°), filtering will be regularly started (10 minutes every 30 minutes) to prevent the water from having time to freeze by making it flow.
- This freeze protection mode stops as soon as the pool temperature exceeds the set threshold (as soon as T° > freezing T° + 1).
- If the pool temperature drops below 0°C, the pump runs continuously.

The freezing protection monitoring is not active if the "Filtration" switch is in the "Off / 0" position or if the pump's circuit breaker is in the bottom position.

Below 12°C, the control box starts pro-active monitoring by running the filtering 30 minutes every 4 hours to renew the water in the piping.

7.4. Programming

For each of the functions controlled by the **tild VP**, the application can be used to create two different programmes and to choose on which day(s) they will be activated. For example, different programming times can be defined for weekends and weekdays.

7.5. Compatible lights

The **tild VP** control box can be used to control the lights installed in the pool. There are several operating modes available:

- **Micro-cut colours:** to control all commercially available multicolour lights. A micro-cut is used to switch from one colour to the next colour / sequence,
- **RC+ colour:** is used to control CCEI colour lights: direct colour and sequence selection, brightness and speed management,
- **Monochrome:** pool light ON/OFF mode,

There are several programming modes available:

- A clock mode: a start time + an end time (two programs available with configurable days),
- A dusk mode: the **tild VP** turns the lights on automatically at dusk for a defined period.

8. Application

To download the Vigipool application, scan the QR CODE below. You can also search for Vigipool using the App Store and Play Store search engines:

9. Reset to zero

It may be necessary to reset to initialise the tild VP to the factory settings.

There are two possibilities to do that:
With upstream power cut-off:

1. Switch off the power supply to the appliance and wait about a ten seconds,
2. Press and hold button (**B**) on the appliance,
3. Turn the power back on while keeping the button pressed,
4. Wait until indicator **(A**) flashes rapidly red,
5. Release the button. **All parameters are reset to factory settings**.

Without an upstream power cut-off:

1. Press and hold button (**B**) on the appliance for about 10 seconds,
2. Wait until indicator **(A**) flashes rapidly red,
3. Release the button. **All parameters are reset to factory settings**.

Carrying out a reset will erase all parameters in memory (WiFi configuration, pairing of phones and other Vigipool World appliances, etc.). The start up procedure must therefore be rerun after a reset.

A. Declaration of conformity

Bleu Electrique SAS (FR47403521693) declares that the tild VP product meets the safety and electromagnetic compatibility requirements of European directives 2014/35/EU and 2014/30/EU.
CE UKCA  Emmanuel Baret Marseille, on 16/01/2023
Distributor's stamp
Date of sale: . . . . . Batch N°: . . . . . .