Technical Notice

VigiFlow

Multi-sensors on pipelines

PF10J130/ PF10J131

Table des matières

Read this manual carefully before installing, commissioning, or using this product.

1. Technical specifications

Installation	Connection Ø 50mm (63 mm on pipe) optional (Ref. CCEI MPPV0220) Vertical or horizontal **No installation sense**
Power Supply	12V~ AC 50Hz (230V/12V transformer included)
Power consumption	1A
Protection rating	IP-54
RedOx Measurement Measuring range Calibration	BNC+ probe port input 30 to 990mV 650mV (Adjustable via the Vigipool app from 450 to 750 mV)
Temperature Measurement	Measurement by CTN probe mounted in the device
Flow detection	**Installation with a maximum flow rate of 20m3, otherwise on a bypass** Ferrite axial turbine
Filter pressure measurement	External transducer NPT 1/4 (4 - 20mA) Cable : 5m
Bluetooth®	Low Energy (v4.x) Compliant with R&TTE Directive 1999/5/EC
Wifi	802.11 b/g/n et "dual band" **(2.4 Ghz Only)** **5GHz network not compatible**

2. Contenu de l'emballage

1 VigiFlow	1 ORP 650mV calibration solution
1 Gold (replaceable) or Platinum ORP probe	1 Simplified instructions (with QR code)
1 probe plug for winter storage	2 Ø50 mm union fittings
1 probe cover	1 power cord with integrated 230V/12V transformer
	WNK80MA pressure sensor (5 bar max): 5 meters
	Support collar 50 - 1/2
	Brass Reducer 1/2M x 1/4F

3. Description

The Vigipool is a multi-sensor device that

- **Measures ORP with BNC+ probe port input**
- **Measures flow rate with a ferrite axial turbine in m^3/h**
- **measures the filter pressure**
- **measure the temperature**

3.1. Bluetooth® et Wifi control

The Vigiflow connected multi-sensor features a Bluetooth® and Wi-Fi transmitter, allowing you to control your device via smartphone or tablet. To access the information measured by Vigiflow, you need an iOS (Apple®) or Android smartphone or tablet equipped with Bluetooth® Low Energy (v4.x) or Wi-Fi 802.11 b/n/g. Other operating systems (Windows Phone®, etc.) or **devices that do not meet the above hardware requirements are not supported.**

If you already have a Vigipool master device (e.g., TILD), you can press the Vigipool button on it and the Vigiflow will connect to it automatically.

When connecting to Wi-Fi for the first time, you will need to enter the local Wi-Fi details (network name and password directly on the app) and create a Vigipool account in order to connect your Vigiflow to Wi-Fi and access all data via the Internet.

3.2. IOS / Android Application

Downlaod App Store / Android

You can also search for Vigipool in the App Store and Play Store search engine.

With Bluetooth, only one phone/tablet can be connected to the box at a time. To connect with another device, you must first disconnect from the previous one.

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

3.3. Bluetooth® pairing

When connecting for the first time (via Bluetooth), after selecting your device from the list, in order to pair your smartphone with the Vigiflow analyzer, you must bring your smartphone close to the device until it makes contact, or press the button on the device once when prompted by the app.

Pairing can only be done via the Vigipool app. Do not attempt to pair via your smartphone's Bluetooth settings.

4. Installation of Vigiflow

4.1. Hydraulic system

The Vigiflow connected analyzer is installed on a 50 mm or 63 mm diameter pipe (CCEI Ref: MPPV0220) using the union fittings provided. It is installed downstream of the filtration system (after the filter) and on a section of the pipe that is always under pressure in relation to the pool water level.

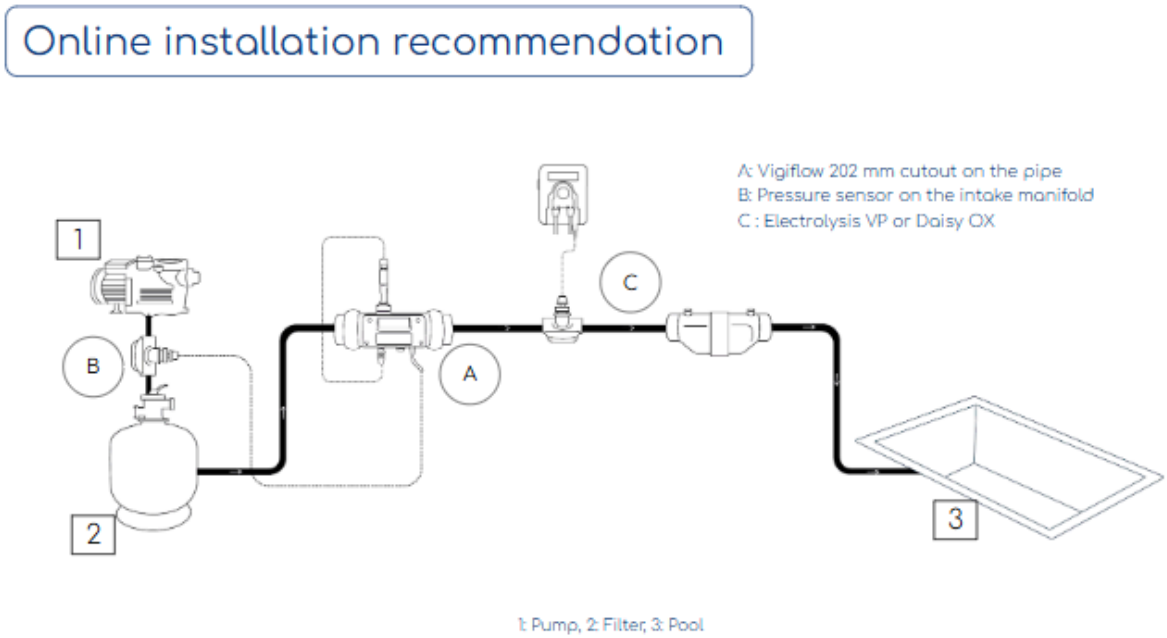
Prefer a bypass installation (essential for flow rates above 20m3/h) in order to control the flow rate and dismantle it without interrupting filtration.

During installation and use, ensure that the Vigiflow is submerged in relation to the pool water level so that it is constantly filled with water and free of air. Otherwise, if air is present in the measuring chamber, the sensor readings may be inaccurate.

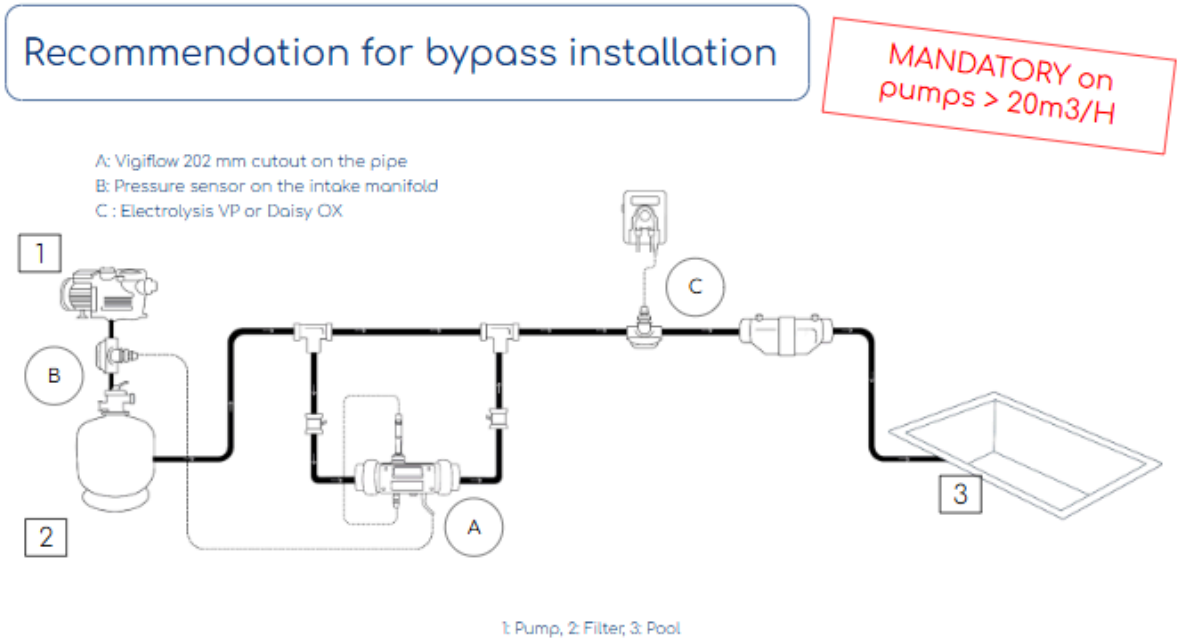
4.1.1. Installation diagram

The Vigiflow integrates the **Redox** probe, the temperature probe, the turbine for flow measurement, and a slot for connecting a pressure sensor.

4.2. Installation < 20m3/H



4.3. Installation > 20m3/H



4.4. Electrical connection

Installing this product may expose you to electric shock. It is strongly recommended that you have a qualified person perform the installation. Incorrect installation may put you at risk and cause irreversible damage to the product and any equipment connected to it.

For safety reasons and in accordance with standard NF C15-100, the Vigiflow power supply unit must be installed:

- **be more than 3.5 meters from the edge of the pool. This distance is measured taking into account any obstacles that need to be bypassed. If the Vigiflow power supply unit is installed behind a wall, this is the distance required to go around it and reach the box.**
- **either in an underground room in the immediate vicinity of the pool. In this case, the room must be accessible via a trapdoor that requires a tool to open.**

The Vigiflow connected analyzer

- must not be installed directly outdoors; it must be protected from rain, cleaning jets or sprinklers, and UV rays (sunlight).
- Resistant to water splashes but must not be placed in a location that could be flooded.

The product is supplied with a power cable that can be connected to a standard power outlet (230V / 50Hz) in the equipment room. This outlet must be protected by a 30mA residual current device in accordance with standard NF C15-100.

The device must not be connected to a filtered power supply. This may cause the device to malfunction.

5. Powering up

The VigiFlow is started up by connecting it to a permanent 230V AC power supply.

When starting up, the multicolored indicator light A on the front panel flashes while the device is starting up.

	A: Multicolor indicator light and selection button

6. Operation of the device

6.1. ORP / T°C Measurement

The Vigiflow measures RedOx every minute during normal operation.

The temperature is measured every second.

The Vigiflow does not take measurements.

- **during the first 2 minutes after power-up (to wait for the measurement to stabilize),**
- **when the flow rate is not detected by the device (to take measurements only when filtration is in progress, thus ensuring that the water measured is from the pool and not stagnant water in the pipe).**

6.1.1. Calibration of the RedOx probe

The probe can be calibrated either:

- Via the Vigipool app

- Without applying directly to the button (only with a 650 mV solution)

6.1.1.1. Calibration via the Vigipool application

1. Turn off the filtration system
2. Place the probe in the calibration solution.
3. Once you have opened your Vigipool app, click on the ORP measurement to be redirected to the “ORP measurement” screen.
4. Then click on the settings icon in the top right corner, then in the options in the calibration tab, click on the “Start” button.
5. Enter the value of your calibration solution (default 650 mV), then start calibration.
6. The measured value is displayed, then the probe is calibrated.

If you know the ORP level of your pool, you can use the manual adjustment (please note, however, that the ORP level may vary slightly between your pool and the Vigiflow's position).

6.1.1.2. Manual calibration on the probe

Use the ORP 650 mV solution.

Filtration must be turned off to calibrate the probe.

1. Immerse the RedOx probe in the 650 mV calibration solution.
2. Press and hold the button for 6 seconds to start an ORP calibration (the analyzer will light up red: release the button),
3. The integrated RGB LEDs will provide an indication of the calibration in progress.

- **Green: measured value very close (difference less than 50mV)**
- **Yellow/orange: measured value close (difference between 50 and 150 mV)**
- **Red: distant measured value (deviation greater than 150mV)**

4. When the 5 RGB LEDs flash, this indicates that the measurement is stabilizing.
5. If the RGB LEDs stop flashing and remain lit in green, this indicates that the measurement has stabilized.
6. The analyzer validates the calibration on its own.

5 green flashes = calibration validated

5 red flashes = calibration not validated, not taken into account by the device: measurement insufficiently stabilized or measurement non-compliant

6.1.2. Displaying the measured value

The LEDs integrated into the device visually indicate whether the ORP measurement is within acceptable values for effective water treatment. Depending on the ORP measurements, the lighting varies according to the following table, allowing the color of the LEDs to be identified based on the measurements.

To indicate that an injection phase is in progress, the RGB LED will flash during this period, while retaining the color associated with the measurement (e.g., flashing yellow).

6.2. Probe maintenance

Please note that the average lifespan of a probe varies between 6 and 18 months depending on usage. TAC < 100 mg/l reduces the lifespan of the probe.

Probes are fragile consumables that should be checked by a professional.

6.2.1. Maintenance of the ORP probe

When a RedOx probe is immersed in water, a film forms around the glass bulb at its tip, which increases in thickness over time. This invisible film causes an increasingly longer response time, a deterioration in the slope, and a drift in the zero point. The zero point drift can be easily compensated for by regular calibration. Increasing temperature is also an important factor in aging.

Conservation des sondes (Ex : Hivernage) :

Remove the probe from the pipe and store it in its original bottle (the original box contains a cap to fill the space left by the probe).

Fill the original bottle with a 3 mol/liter KCl solution.

Place the probe head in the bottle.

Store at room temperature.

A poorly winterized probe may respond more slowly, making calibration more difficult.

Probe regeneration

At the end of winter storage, it is advisable to immerse the probe for 12 hours in a 50% KCl solution at 3 mol/l.

Calibration :

Each probe is characterized by its drift and slope. As these characteristics tend to drift with use, it is necessary to perform calibrations regularly. Calibration is mandatory in the following cases:

- upon installation
- after replacing the probe
- after each cleaning with a cleaning solution
- after long-term storage
- when the measurement results differ too much from the expected values.

6.3. Flow Measurement

The VigiFlow is equipped with a turbine whose rotation speed allows the water flow rate in the pipe and the filtration status to be calculated.

Minimum measured flow rate: 0.2 m³/h

Maximum measured flow rate: 20 m³/h

6.4. Pressure Measurement

The pressure sensor is optional. When launching the Vigipool application, the user must indicate whether or not the pressure sensor is installed. The pressure measurement is reported as soon as the pressure variation is >0.1 bar.

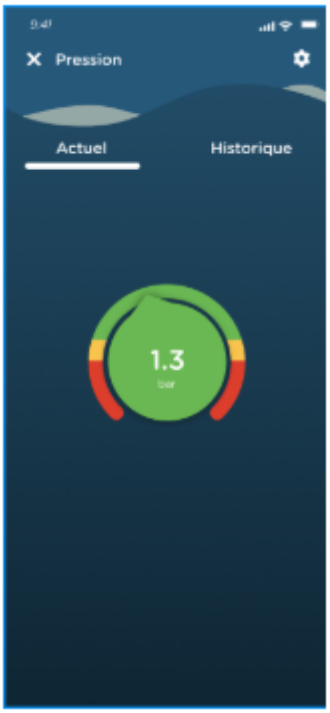
The pressure sensor measures the pressure in the filter and detects overpressure or underpressure to notify the user that an inspection or backwash is required.

6.4.1. Pressure thresholds

Pressure thresholds may vary from one installation to another. Check the thresholds on your filter.

From the application, you can specify the minimum and maximum pressure.

You can also activate the safety feature that deactivates the pump below 0.1 bar or above 2 bar.

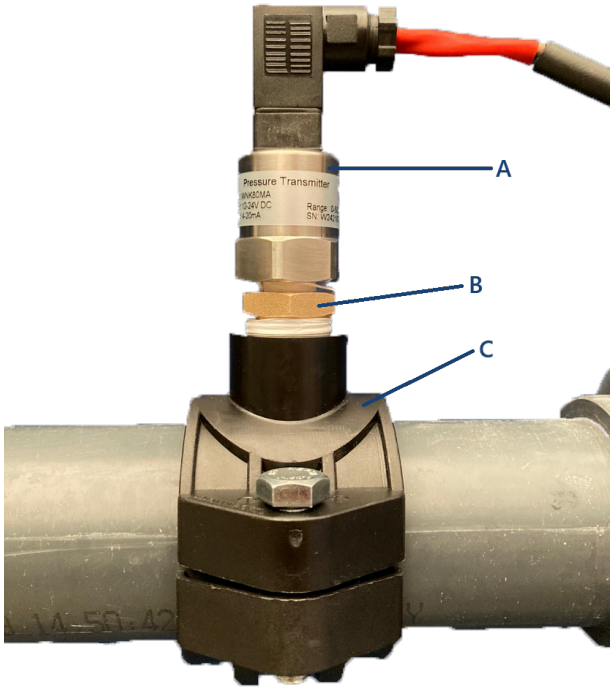


- **Safety Threshold:** Permet de fixer les seuils Mini et Maxi qui déclenchent **Allows you to set the minimum and maximum thresholds that trigger a filtration shutdown if there is a Vigipool control box connected to the system.**
- **Alert Threshold:**Allows you to set the minimum and maximum thresholds that trigger **an alert for the user to check the condition of the filter (backwash) or the water supply**

6.4.2. Pressure Switch Installation

It must be installed on a 50-1/2 support collar with the 1/2-1/4 brass reducer supplied in the package.

- **To be installed after the filter**
- **Recommend installation in bypass mode.**



A: Pressure sensor

B: Brass Reducer 1/2 x 1/4

C: Support collar 50 - 1/2

6.5. Operation

6.5.1. Multicolor indicator light

Depending on its status, the multicolored indicator light **A** may have different meanings.

Blue-White-Red Sequence	Device startup sequence: This sequence is performed when the device is powered on.
Flashing white	Waiting for selection of the Vigipool “Central” device. See section 6.2.
Fixed blue	A smartphone is connected to the Niva VP via Bluetooth.
Flashing blue (slow)	The Vigiflow is configured in Vigipool “Central” mode and WiFi is not configured: Waiting for a Bluetooth connection.
Flashing blue (fast)	Bluetooth pairing in progress. See section 4.1.1.
Fixed green	The Vigiflow is connected to WiFi or to its Vigipool “control center.”
Flashing green	The Vigiflow is configured in Vigipool “Central” mode and accepts the connection of new Vigipool equipment. This status is normal during the first 5 minutes of power supply or 5 minutes after pressing button A.
Flashing purple	Firmware update in progress.
Red/Green flashing alternately	If the Vigiflow is configured as a Vigipool “Central Unit”: Unable to connect to WiFi. Check the information entered and/or the WiFi network coverage. If not: Unable to connect to the Vigipool “Central.”

6.6. Product Factory Reset

If you install a new Vigipool-compatible product and wish to change the "Master" device, or for any other reason, a factory reset is available as follows:

- Turn off the unit (switch on the side of the enclosure) and wait approximately 10 seconds;
- Press and hold the selection button (**A**);
- Turn on the device while holding down the button;
- Wait for the green indicator lights (**B**) to flash;
- Release the button. All the parameters are reset to the factory settings.

Performing a product reset will erase all the parameters in memory (calibration, setpoint, WiFi configuration, tank volume, pairing of telephones and other devices in the Vigipool Universe, etc.). Therefore, it is necessary to redo the commissioning procedure after resetting the product.

A. Declaration of conformity

CCEI declares that the product meets the safety and electromagnetic com- patibility requirements of European directives electromagnetic compatibility requirements of European Directives 2014/35/EU and 2014/30/EU EU and the Radio Equipment Directive 2014/53/EU.
CE UKCA  Emmanuel Baret Marseille, on 23/05/2025
Distributor's stamp
Date of sale: . . . . . Batch N°: . . . . . .