NIVEL'EAU

NIVELEUR D'EAU AUTOMATIQUE / AUTOMATIC WATER LEVELER

NECOM MODEL

QC: 450-647-5269 - ON: 647-313-4369 - BC: 778-382-7958
Web: www.watertecinc.com - Email: info@watertecinc.com

WATERTEC

WTNECOM | Table of Contents

IMPORTANT SAFETY INSTRUCTIONS TO REDUCE

THE RISK OF MATERIAL DAMAGES AND PERSONAL INJURY

READ AND FOLLOW ALL THE INSTRUCTIONS.

WARNING

Before installing this product, read and comply with all included warnings and instructions. Non-adherence to these safety instructions may result in material damage and/or serious injury.

WARNING

Install the control interface a minimum of 10 ft. (3 metres) from the water of the pool/spa. Do not use metal plumbing parts to install the NIVEL'EAU®.

WARNING

Comply with the diameter of the wiring used to avoid causing damage to the device.

WARNING

It is recommended to install an overflow line in the basin to serve as a backup in case the NIVEL'EAU® malfunctions for any reason.

WARNING

Before installation, ensure that the basin is correctly grounded and that the equipment is equipotentially bonded.

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WARNING

To prevent possible injury, do not allow children to use this product.

WARNING

For the water level controller to function properly, ensure that the sensor and the sensor's screws installed in the skimmer are kept clean.

WARNING

For the water level controller to function properly, never cut, crush, or add an extension to the electrical cord provided with the sensor. When purchasing your NECOM water level controller, make sure to select an adequate cord length.

NOTE FOR THE INSTALLER

This guide contains important information on the product's installation, operation, and safety instructions.

It is very important that you check that the water level controller is operating properly as soon as it is installed.

It is very important to check the quality of the basin's grounding and bonding.

This information must be read by the owner and the installer of the NIVEL'EAU® before the device is installed.

WARNING

Non-adherence to these instructions will exclude any liability of the manufacturer and void all warranties.

PRINT AND KEEP THESE INSTRUCTIONS

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WTNECOM | System Description

The NIVEL'EAU® NECOM model is a device equipped with an electronic sensor that detects the water level in your pool and automatically triggers filling when the level is too low until the water reaches the level chosen by the user. It can be used in any pool, spa, or basin where a stable water level is required.
The NIVEL'EAU® NECOM model comes with a control interface, a sensor, a solenoid valve, a power supply, and a mounting and connection kit.

Electronic sensor with integrated cord / (ref.: NECOMSON) The electronic sensor is a fixed-type, pre-set model that does not require any calibration. It comes with an integrated extension cord of a predetermined length of 100 or 200 ft., according to the customer's needs.	
Control interface / (ref.: NECOMINT) The control interface for the NECOM model has an LED light to indicate that the power supply, sensor, and solenoid filling valve are active.	
1" solenoid valve / (ref.: NECOMVAL10) The NIVEL'EAU® NECOMxxx model comes with a 1-inch solenoid valve that withstands a pressure of 100 psi (pounds per square inch).	
2" solenoid valve / (ref.: NECOMVAL20) The NIVEL'EAU® NECOMxxx model comes with a 2-inch solenoid valve that withstands a pressure of 50 psi (pounds per square inch).	
Power supply / (ref.: ALCOM24AC) The NIVEL'EAU® NECOMxxx model comes with a low-voltage power supply to power the entire system.	
Mounting screw kit / (ref.: NECOMKIT) The NIVEL'EAU® NECOMxxx model comes with an accessory kit that includes two sets of mounting screws, one to mount the sensor and the other to mount the interface; two block connectors; a screwdriver for the connectors; and three ferrules for the sensor wires.	

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NIVEL'EAU® NECOMxxx model

Input: 24 VAC @ 1A
Output: 24 VAC @ 630 mA

NIVEL'EAU® NECOMxxxC model

Input: 24 VAC @ 2A
Output: 24 VAC @ 1.6 A

1. APPLICABLE SAFETY STANDARD :

☐PSE ■UL 1310 ☐UL 1950 ■C-CUL ☐GS ☐CE ☐衛檢

2. GENERAL APPEARANCE :

2.1 THE GENERAL APPEARANCE OF THE AC/DC ADAPTOR SHALL BE WITHOUT DEFORMATION, CRACKS OR CORROSION.

2.2 THE SHAPE, DIMENSIONS AND MARKINGS OF THE AC/DC ADAPTOR SHALL BE AS SPECIFIED IN THE CONSTRUCTION DRAWING AND NAME PLATE.

3. CHARACTERISTICS :

3.1 PRIMARY RATED VOLTAGE & LINE FREQUENCY : 120 VAC 60 Hz

3.2 PRIMARY EXCITING CURRENT (Io) 90 mA MAX. AT INPUT 120 VAC 60 Hz.
LOADING CURRENT (Ip) X mA MAX. AT INPUT X VAC X Hz, LOAD X A.

3.3 NO – LOAD LOSS : X W MAX. AT INPUT X VAC X Hz.

3.4 SECONDARY RATED VOLTAGE AND CURRENT :

PRIMARY VOLTAGE	RATE VOLTAGE	TOLERANCE	RATED CURRENT	NO-LOAD VOLTAGE	REGULATION
120VAC 60Hz	24VAC	±5%	1000mA-AC		

3.5 RIPPLE VOLTAGE : X mV(r.m.s) MAX. AT INPUT X VAC X Hz, LOAD X A.

3.6 DC RESISTANCE : PRIMARY: X Ω± X % MEASURED AT 25 ℃ .

3.7 HI-POT TEST : AC 1240 V 50/60Hz FOR 1 MINUTES BETWEEN INPUT TO OUTPUT PLUG AND CASE NEED NORMAL PERFORMANCE , LEAKAGE CURRENT 1 mA.

3.8 INSULATION RESISTANCE : 500 VDC 100 MΩ MIN. BETWEEN INPUT TO OUTPUT PLUG AND CASE.

3.9 TEMPERATURE RISE :INPUT 120 VAC 60 Hz, OUTPUT LOAD 1.0 A FOR INPUT COIL 75 ℃ MAX (BY USE RESISTANCE METHOD) ON CASE SURFACE X ℃ MAX (BY USE THERMOMETER METHOD) AT 25℃ AMBIENT.

3.10 HUMIDITY TEST : TEMP. 40±2 ℃, 90-95 % R.H FOR 4 HOURS , AFTER AT MINUTES TAKEN OUT FROM OVEN . AND WIPED DRY. TEST 3.4 ~ 3.7 AND INSULATION TEST 10 MΩ MIN.

4. MECHANICAL PERFORMANCE :

4.1 STRAIN-RELIEF TEST : 10 LB FOR 60 SEC. IN ANY DIRECTION .

4.2 DROP TEST : UNIT IS TO BE DROPPED FROM 3 FEET HIGH ONTO A CONCRETE FLOOR COVERED WITH 1/8 INCH VINYL TILE 3 TIMES, THE UNIT SHOULD MEET THE ITEM 3.7 ~ 3.8.

4.3 BENDING RELIEF TEST : THE CORD AND S/R SHALL WITHSTAND WEIGHT OFF 200 g, IT SWINGS FROM LEFT TO RIGHT AT AN ANGLE OF 120 deg , 300 CYCLE TIMES NIN.

4.4 VIBRATION RESISTANCE : PRODUCT PACKAGED IN A INTENDED MANNER SHALL DEVELOP NO MECHANICAL OR ELECTRICAL FAILURE WHEN SUBJECTED TO A 1.5 mm PEAK TO PEAK AMPLITUDE , 10-50-10 Hz , VIBRATION IN EACH OF X , Y AND Z DIRECTIONS FOR 30 MINUTES .

5. TEMPERATURE RANGE:

5.1 USE TEMPERATURE EXTENT : 0 ℃ ~ +40 ℃

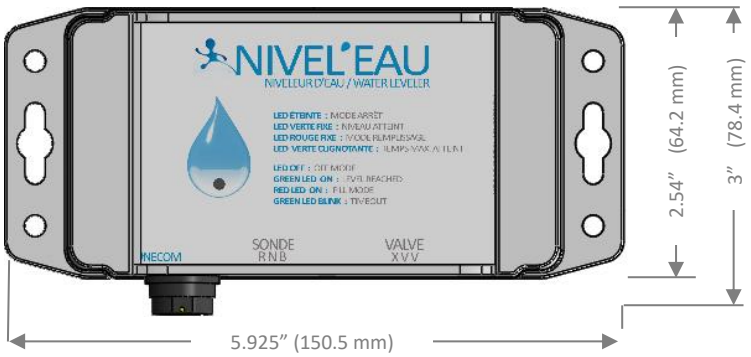
5.2 STORAGE TEMPERATURE EXTENT : -25 ℃ ~ +55 ℃

APPROVED BY _____ CHECKED BY _____ TESTED BY F. D

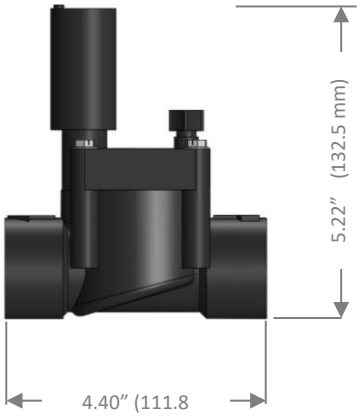
NECOM2020-05

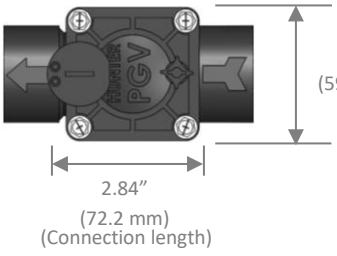
NIVEL'EAU® NECOMxxx model

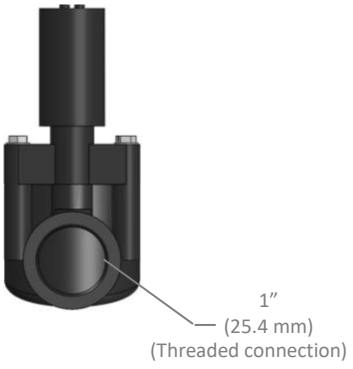
The control interface / (ref.: NECOMINT)



1" solenoid valve / (ref.: NECOMVAL10)







The electronic sensor with integrated cord / (ref.: NECOMSON)

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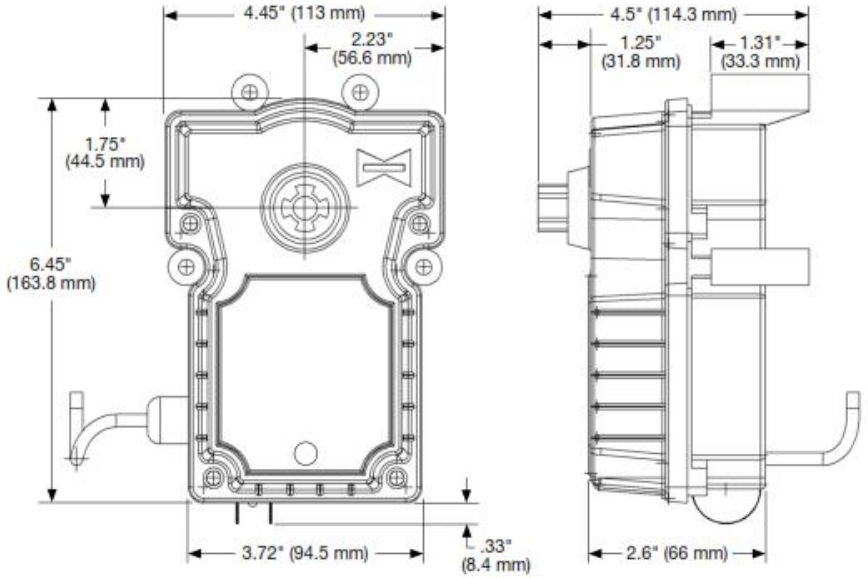
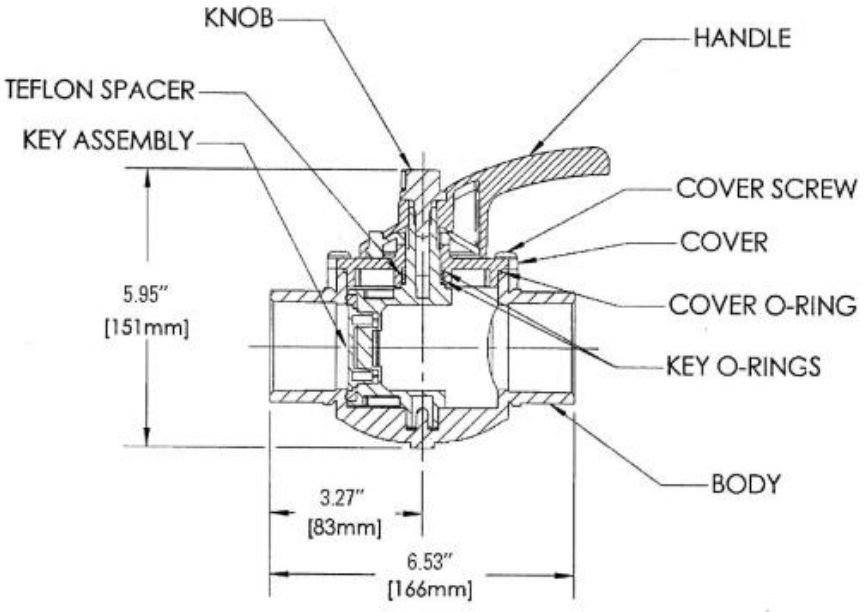
NIVEL'EAU® NECOMxxxC model

2" solenoid valve / (ref.: NECOMVAL20)





NECOM2020-05

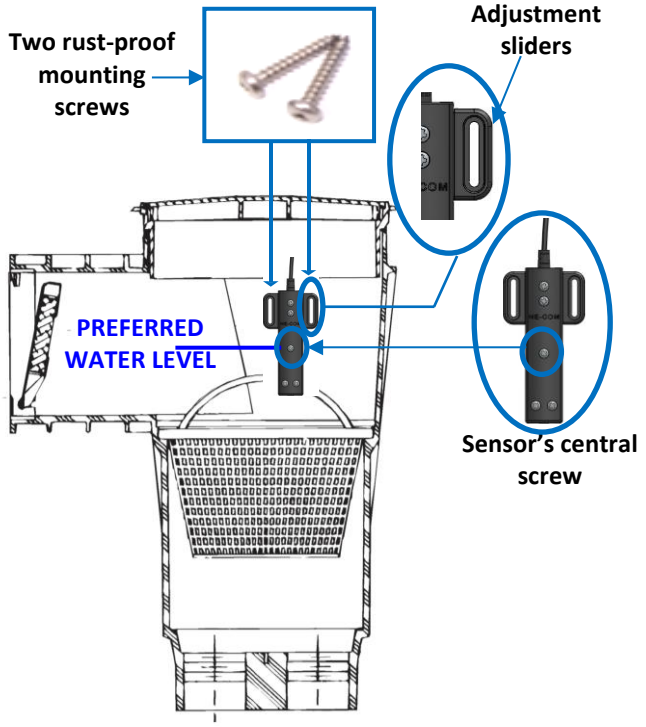
A - INSTALLATION AND ADJUSTMENT OF THE SENSOR IN A NEW POOL

IMPORTANT INSTRUCTIONS:
ENSURE THAT THE SENSOR IS MOUNTED WITH THE PROVIDED RUST-PROOF SCREWS SO AS TO NOT VOID THE WARRANTY IN THE EVENT OF BREAKAGE OR CORROSION.

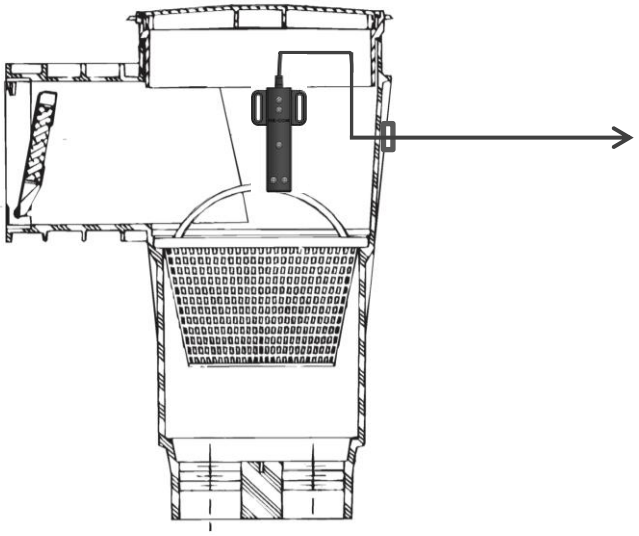
Be sure to purchase a sensor with the right cord length to avoid adding an extension (contact the retailer for more information).

1 - Use the two rust-proof screws provided to mount the sensor in the skimmer with the sensor's central screw at the desired water level.
Adjust the height of the sensor by sliding the adjustment sliders ("ears") from top to bottom and then tightening the screws.
Ensure that the sensor does not obstruct the skimmer basket.

2 - Once the sensor is mounted, run the sensor cord through a **½-inch pipe** connected to the back of the skimmer.
Run the cord to the mechanical room where the interface will be installed.



THE SENSOR CORD MUST BE CONTINUOUS AND NOT SPLICED.



Cord running through the **½-inch pipe** connected to the back of the skimmer toward the location where the interface will be installed.

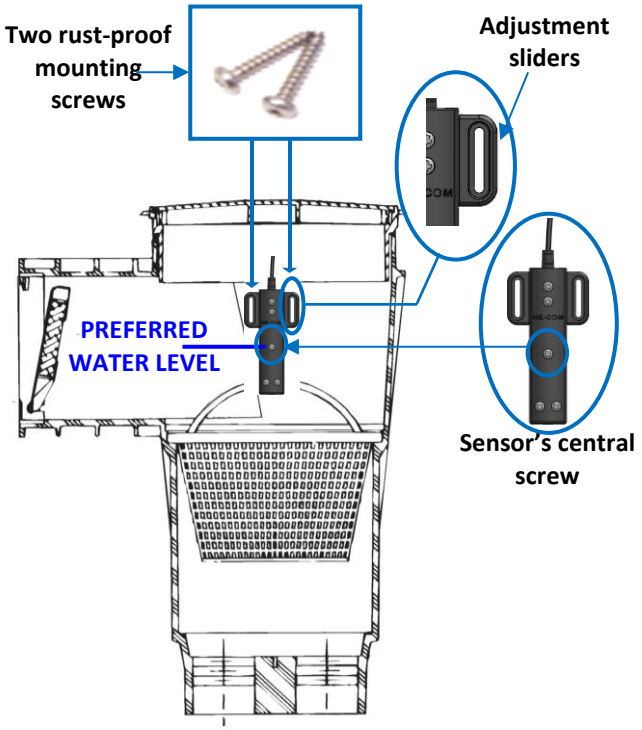
NECOM2020-05

A - SENSOR INSTALLATION AND ADJUSTMENT IN AN EXISTING POOL

IMPORTANT INSTRUCTIONS:
ENSURE THAT THE SENSOR IS MOUNTED WITH THE PROVIDED RUST-PROOF SCREWS SO AS TO NOT VOID THE WARRANTY IN THE EVENT OF BREAKAGE OR CORROSION.

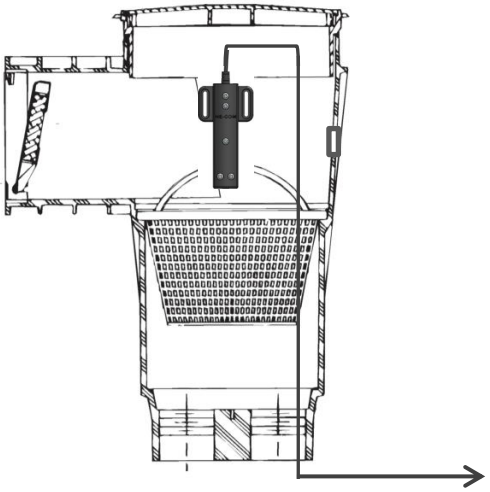
Be sure to purchase a sensor with the right cord length to avoid adding an extension (contact the retailer for more information).

1 - Use the two rust-proof screws provided to mount the sensor in the skimmer with the sensor's central screw at the desired water level. Adjust the height of the sensor by sliding the adjustment sliders ("ears") from top to bottom and then tightening the screws.
Ensure that the sensor does not obstruct the skimmer basket.



2 - Once the sensor is mounted, run the sensor cord through the **1-½-inch pipe** connected to the bottom of the skimmer.
Run the cord to the mechanical room where the interface will be installed.

THE SENSOR CORD MUST BE CONTINUOUS AND NOT SPLICED.



Passage of the cord through the **1-½-inch water pipe** connected to the bottom of the skimmer toward the location where the interface will be installed.

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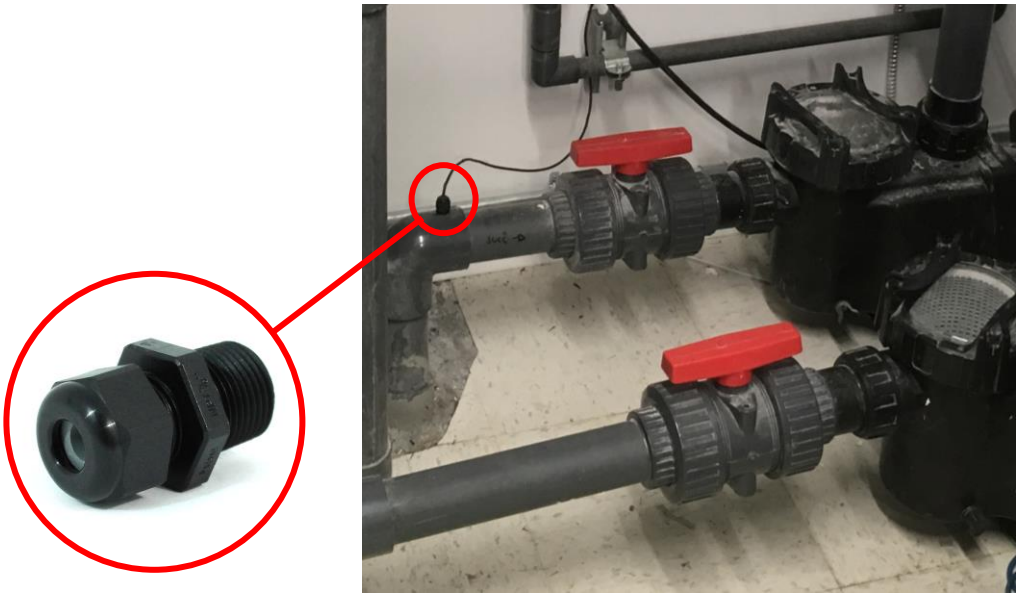
3 - Drill a hole in the piping before the filtration pump.
Install a PG6 compression cord grip (not included) in the drilled hole.
Run the end of the sensor's extension cord from the skimmer into the cord grip.
Then run the sensor's extension cord to the command interface.

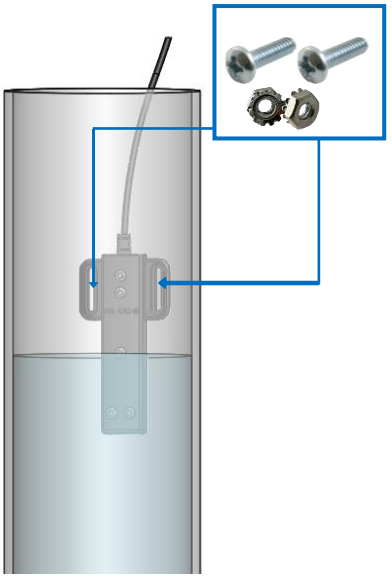


A - SENSOR INSTALLATION AND ADJUSTMENT IN A POOL WITH A COMMUNICATING VESSEL

1 - Install the sensor in the communicating vessel.
Adjust the sensor to establish the right water level and drill mounting holes in the pipe of the communicating vessel.

2 - Mount the sensor with two screws (not included) and two 6-32 jam nuts (not included).

3 - Adjust the height of the sensor by sliding the adjustment sliders ("ears") from top to bottom and finish by tightening the screws to prevent the sensor from moving.



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D - SOLENOID VALVE INSTALLATION

The solenoid valve will supply water from a water line of which the **pressure must not surpass 30 psi**.

1 - Install the 1-inch solenoid value on the drainage or skimmer line, **BEFORE** the pump.

2 - Ensure that no valves will prevent the filling so as to avoid damage caused by excess pressure.

This method of installing the solenoid valve allows for easy priming of the filtration pump after the winter.

IMPORTANT: MAKE SURE TO USE PIPING DESIGNED TO HANDLE PRESSURE TO PREVENT LEAKAGE.

TO AVOID VALVE BREAKAGE, DO NOT OVERTIGHTEN THE THREADED CONNECTION OF THE SOLENOID VALVE.

3 - It is important to have installed a 1-inch isolation ball valve (not included), a pressure regulator, and a backflow prevention device (not included) before the solenoid valve to regulate water flow and maintain a **pressure below 30 psi** (Fig. 4).

4 - It is also important to have installed a non-return valve (not included) after the solenoid valve to prevent accidental water backflow (Fig. 4).

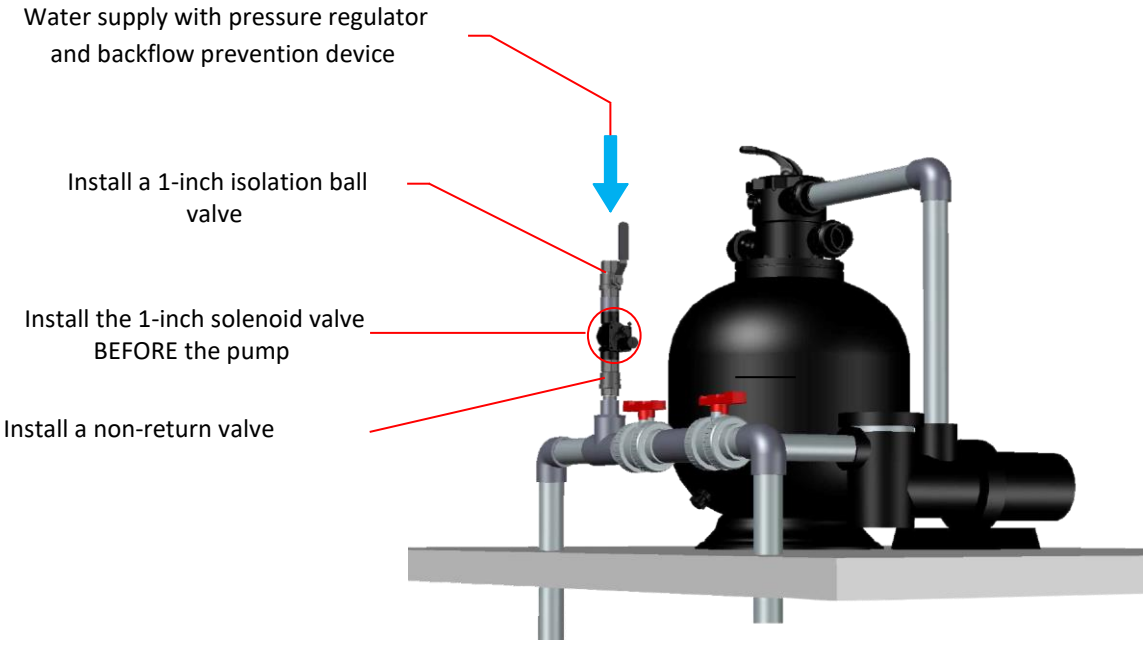

Fig. 4

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IMPORTANT: INSTALL THE SOLENOID VALVE WITH THE ARROW INDICATING THE DIRECTION OF WATER FLOW POINTING IN THE APPROPRIATE DIRECTION AS INDICATED IN THE FIGURE BELOW (FIG. 5).

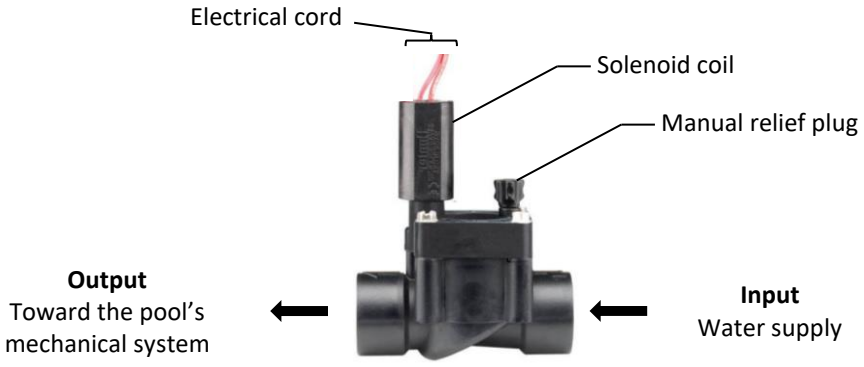
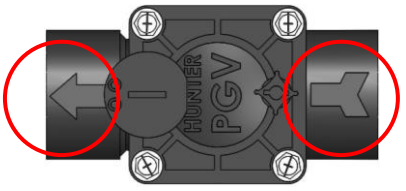
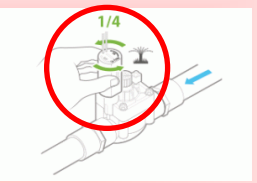


Fig. 5



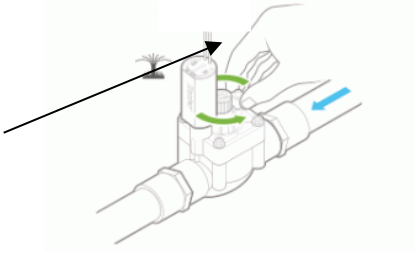
Solenoid valve viewed from below

IMPORTANT: VERIFY THAT THE SOLENOID VALVE'S MANUAL OPENING STEM IS FIRMLY CLOSED DURING INSTALLATION.



NOTE: Installing the NIVEL'EAU® NECOM model in a pool with an area smaller than 300 square feet requires that the regulator ball valve be adjusted to reduce the filling rate.

The solenoid valve is equipped with a manual air release plug to be used if needed.



Connect the two red wires of the solenoid valve to an electrical cord made up of two #20 to #24 AWG wires.
Ensure that the wires are a sufficient length to reach the command interface.

E - COMMAND INTERFACE INSTALLATION

Install the interface within 5 ft. of a 120 VAC electrical outlet.
Mount the command interface on the wall with the two corresponding screws provided in the mounting kit.
Choose a **location protected** from splashing, rain, and snow.

IMPORTANT: WALL MOUNTING IS MANDATORY TO PREVENT THE INTERFACE FROM HANGING BY THE WIRES AND CONNECTIONS FROM BEING PULLED OUT.

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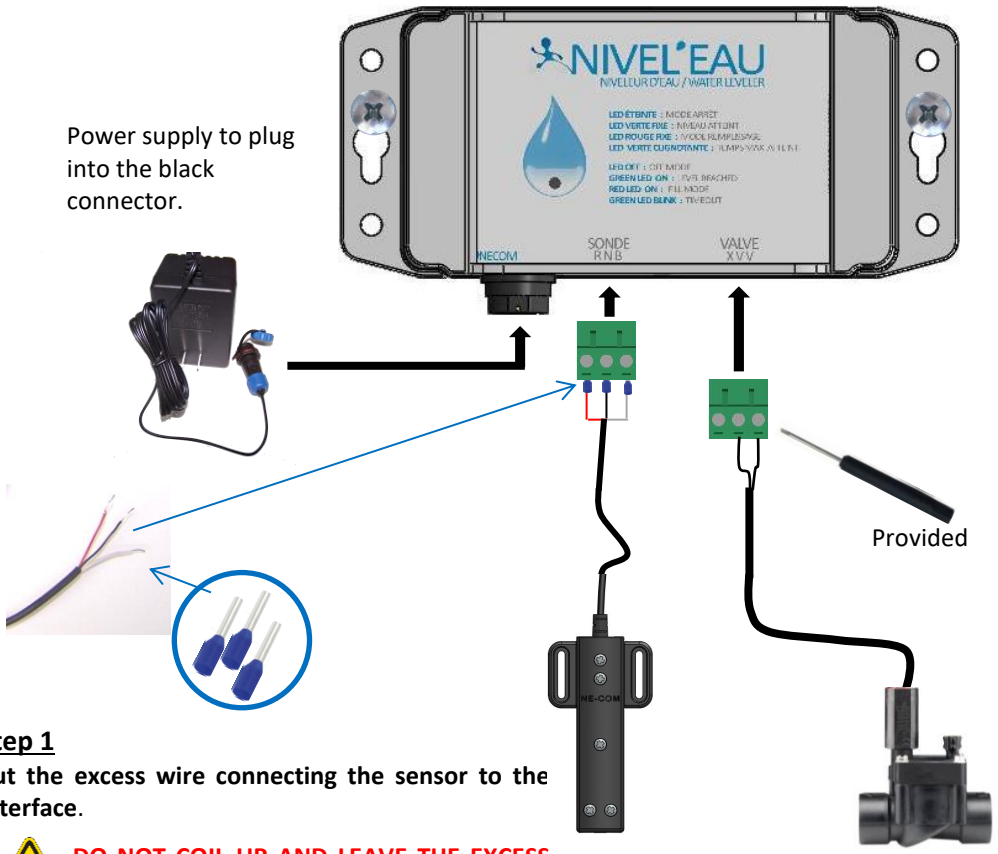
F - CONNECTION OF THE NECOMxxx INTERFACE



Step 1

Cut the excess wire connecting the sensor to the interface.

DO NOT COIL UP AND LEAVE THE EXCESS WIRE. CUT OFF THE EXCESS.

Strip and prepare the 3 sensor wires.
Crimp the 3 included blue ferrules on the stripped wires.

Step 2

Using the **screwdriver provided** in the kit, connect **the sensor wires** to one of the included green connectors as marked on the interface:

Red = R
Black = N
White = B

Step 3

Connect the green connector to the command interface where marked SONDE RNB.

Step 4

Using the **screwdriver provided** in the kit, connect **the solenoid valve wires** to the other provided green connector as indicated on the interface:

The left-hand (X) terminal = remains empty
The central (V) terminal = one of the solenoid valve wires
The right-hand (V) terminal = the other solenoid valve wire

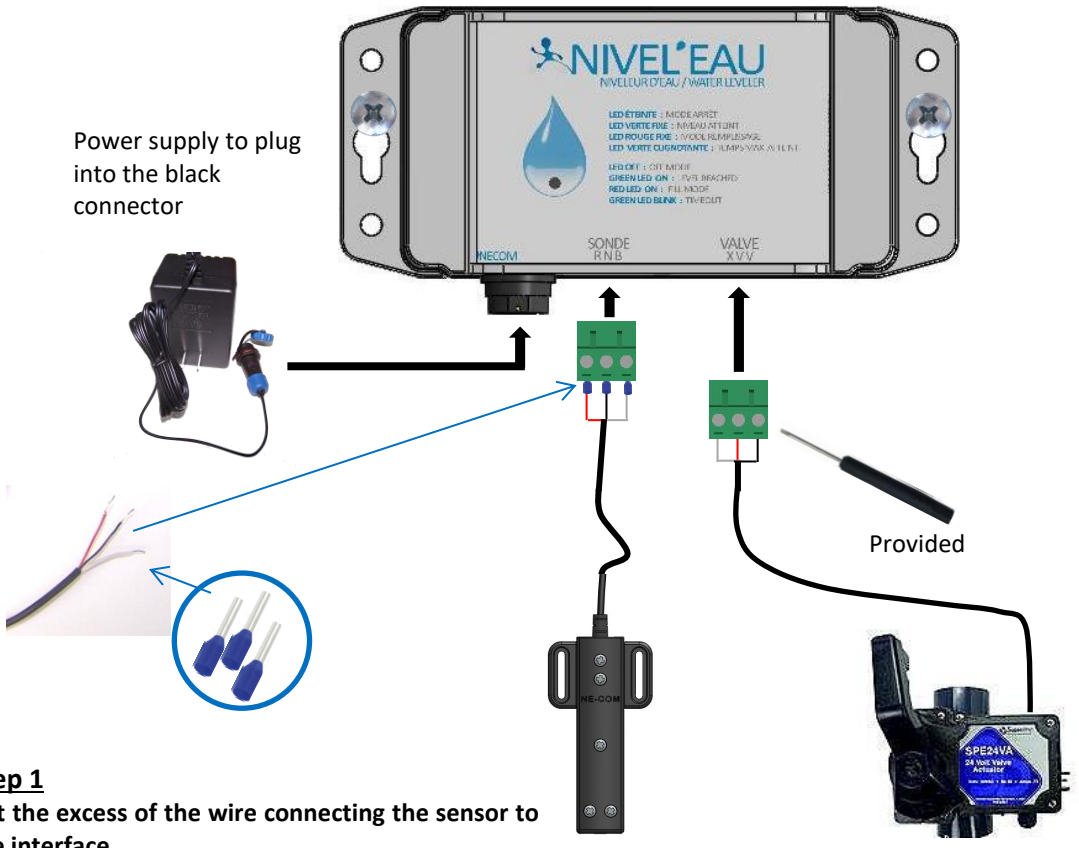
Step 5

Connect the green connector to the command interface where marked VALVE.

Step 6

Connect the power supply to the black connector.

G - CONNECTION OF THE NECOMxxxC (COMMERCIAL) INTERFACE



Step 1

Cut the excess of the wire connecting the sensor to the interface.

DO NOT COIL UP AND LEAVE THE EXCESS WIRE. CUT OFF THE EXCESS.

Strip and prepare the 3 sensor wires.
Crimp the 3 included blue ferrules on the stripped wires.

Step 2

Using the **screwdriver provided** in the kit, connect the sensor wires to one of the included green connectors as indicated below:

Red = R
Black = N
White = B

Step 3

Connect the green connector to the command interface where marked SONDE RNB.

Step 4

Using the screwdriver provided in the kit, connect the motorized valve wires to the other provided green connector as indicated below:

Red = Central (V) terminal
Black = Right-hand (V) terminal
White = Left-hand (X) terminal

Step 5

Connect this second green connector to the command interface where marked VALVE.

Step 6

Adjust the switch behind the valve's motor to properly configure the opening and closing of the valve.

Step 7

Connect the power supply to the black connector.

H - POWERING THE SYSTEM ON

Ensure that the water is at the right level and that the **sensor is immersed.**
Connect the power supply to a 120 VAC outlet.

Wait 30 seconds for the interface to calibrate.
The status indicator light on the front of the interface will light up green and stay green.

Congratulations! The system is operational.

If the water level drops below the screw for at least 12 seconds, filling will begin and continue for a MAXIMUM of 1 hour and 15 minutes unless the preferred water level is reached before this time elapses.

If the indicator light is not green, refer to the **INTERFACE DIAGNOSTICS section (page 20)** and carry out the specified tests.

I – REQUIRED MAINTENANCE
MONTHLY: WHILE IN USE

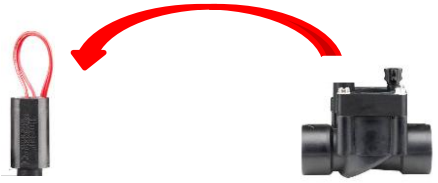
Ensure that the sensor's analysis screws are free from debris and limescale and carbonate buildup.

J - ANNUALLY: FOR WINTERIZATION

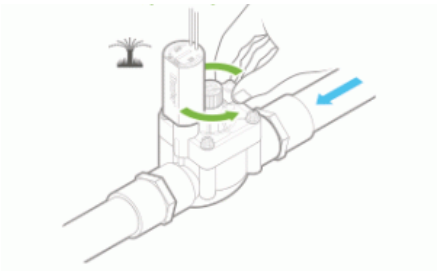
If the system is shut down for the winter:

- Close the 1-inch regulator ball valve.
- Unplug the power supply from the 120 VAC outlet.

- Remove the coil from the solenoid valve and store it away from the cold.



Ensure that the solenoid valve is drained and blown out.



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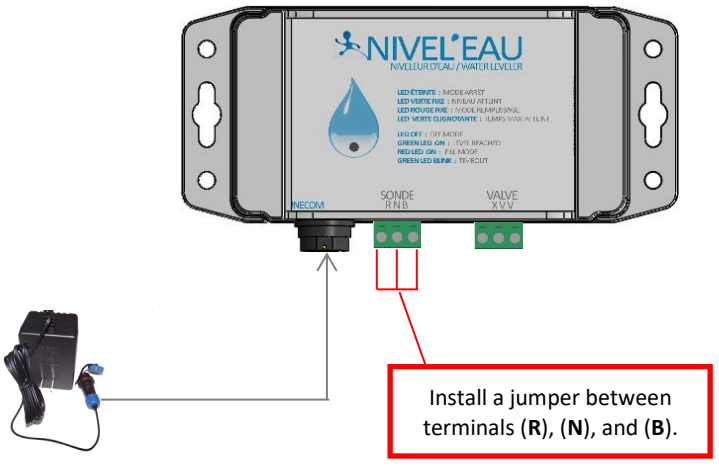
INTERFACE INDICATOR LIGHT IS OFF

If the light on the command interface is off, it means that it is not communicating with the sensor. This may be due to, for example, the sensor's extension cord being damaged or cut, or the sensor's two lower screws not being immersed in the water. Check the following points:

- The 120 VAC outlet has power.
- The power supply's blue connector is properly connected to the command interface.
- The power supply is properly plugged into the 120 VAC outlet.
- The sensor's red and white wires are properly connected.
- The sensor's two lower screws are fully immersed in the water and clean.
- The sensor's extension cord is neither damaged nor cut.

If the indicator light remains off after these tests, the interface should be tested.

Interface test procedure:



1. Connect the power supply to the command interface.
2. Plug the power supply into a 120 VAC outlet.
3. Wait around 25 seconds.
4. The indicator light should light up green.

If the light lights up green, this means that the interface is operating properly.
If the indicator light remains off, this means that the problem comes from the sensor's extension cord, the two screws at the bottom of the sensor not being immersed in the water, or the sensor's two screws needing cleaning.

INTERFACE INDICATOR LIGHT IS RED

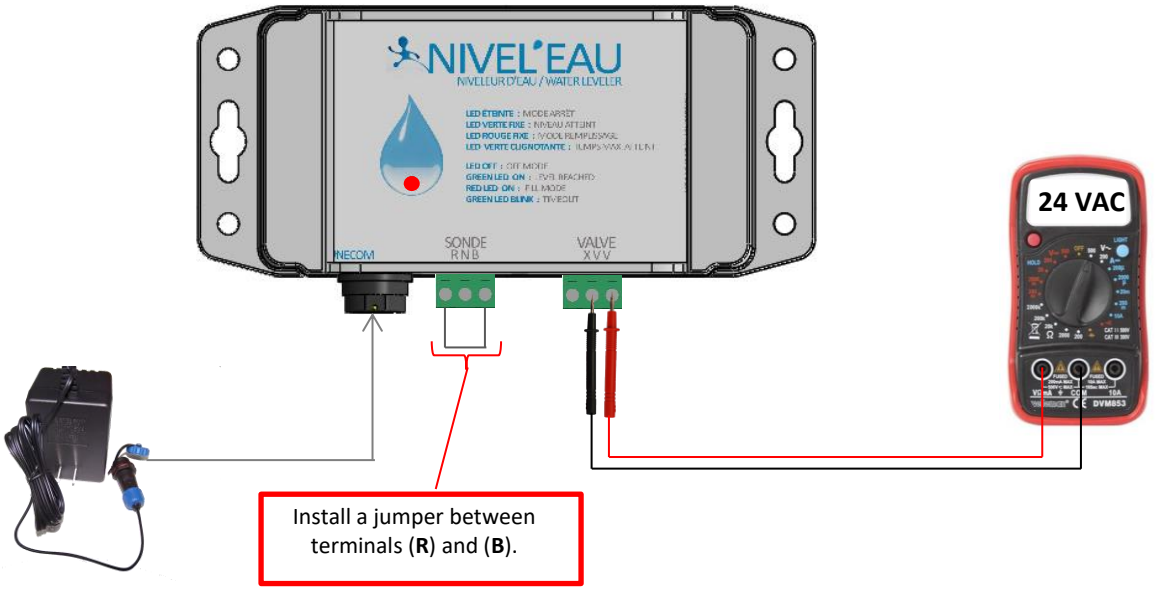
If the light on the command interface is red, this means that it is in filling mode.

If the indicator light is red and the water is at its desired level, the following points should be checked:

- The water level is higher than the central screw of the sensor.
- The black wire is properly connected to the command interface.
- The sensor's extension cord is neither damaged nor cut.

If the red indicator light remains on after these tests, the interface should be tested.

Interface test procedure:



1. Connect the power supply to the command interface.
2. Plug the power supply into a 120 VAC outlet.
3. Wait around 30 seconds.
4. The indicator light should light up green, then red.
5. Measure the voltage of the valve outputs (V) and (V). It should read 24 VAC.

This means that the interface is operating properly in filling mode.

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INTERFACE INDICATOR LIGHT IS BLINKING GREEN

If the indicator light on the command interface **blinks green** and the water level is below the desired level, this may mean one of the following:

The desired water level was not reached within the **safe filling time of approximately 1 hour and 15 minutes**:

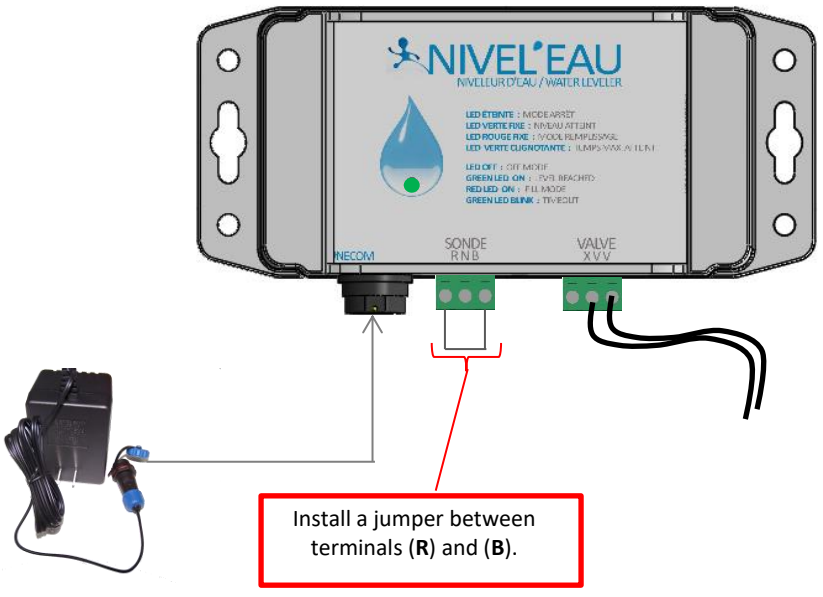
*Unplug the power supply and then plug it in again.
Filling should start and continue for a duration of around 1 hour and 15 minutes or until the desired water level is reached.

The filling valve's water supply is turned off:

*Check the valve's water inflow.
*Next, unplug the power supply and then plug it in again.

If the **green light continues to blink**, the interface should be tested.

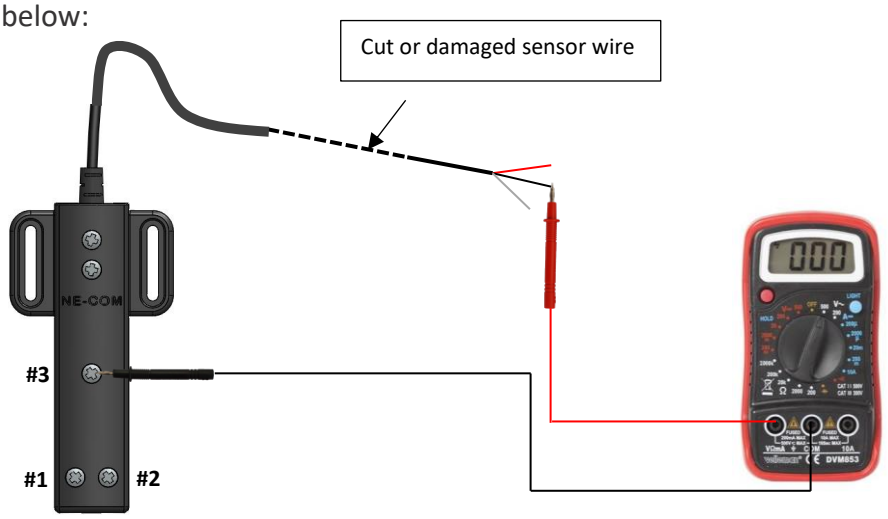
Interface test procedure:



1. Connect the power supply to the command interface.
2. Plug the power supply into a 120 VAC outlet.
3. **Wait around 30 seconds.**
4. The indicator light should light up green, then red.
5. The solenoid valve has been activated and has resumed filling to reach the desired water level.

SENSOR TESTING

To check whether the sensor's extension cord has been damaged or cut, follow the procedure below:



1. Put the multimeter in ohmmeter or alarm mode.
2. Measure the continuity between the sensor's screws and the end of the sensor's extension cord.
3. The continuity of each wire is to be tested.

Black wire = Central screw #3
Red wire = Bottom screw #1 or #2
White wire = Bottom screw #1 or #2

If one of the wires does not respond, it has been cut.
This will mean that the sensor is unusable as the sensor's extension cord cannot be repaired.
Replace the sensor with a new one.

If these steps have been successful, your water level controller is in perfect operating condition.

If not, please contact our technical support at 450-647-5269 or tech@watertecinc.com.

LIMITED WARRANTIES:

Thank you for purchasing the NIVEL'EAU® NECOM model. All parts are guaranteed for a period of one (1) year starting from the date of purchase, except for the exceptions set out below.

This warranty is limited to the original purchaser, is not transferable, and does not apply to products that have been moved from their initial installation site. Our responsibility is limited to the repair or replacement of defective parts and does not include the labour costs for removing and reinstalling the defective part, the shipping costs to and from the factory, or the cost of any additional materials required to carry out the repair. This warranty does not cover defects or malfunctions resulting from the following:

1. Incorrect installation and/or use, or inadequate maintenance of the products that do not comply with the instructions in our installation, use, and maintenance manuals provided with this product;
2. Poor workmanship by any installer of the product;
3. Non-maintenance of the proper chemical product dosage in your pool or your spa [pH level between 7.2 and 7.8, total alkalinity between 80 and 120 ppm, total dissolved solids less than 2,000 ppm excluding the salt ppm];
4. Non-maintenance of the sensor or the sensor screws in a clean condition;
5. Misuse, alteration, fire, flooding, lightning, rodents, insects, negligence, or natural disaster;
6. Short-circuit, power surge, lack of grounding or poor grounding, lack of bonding or poor bonding, or bad programming;
7. Scaling, freezing, or other conditions causing inadequate water circulation;
8. Operation of the product with water flow rates outside the minimum and maximum published specifications;
9. Use of components or accessories with the product that are not authorized by the factory;
10. Contamination by chemical products or misuse of products, such as the introduction of chemical disinfectants;
11. Overheating, improper wiring, improper electrical supply, or damage caused from operating the pump with insufficient quantities of water;
12. The sensor’s extension cord being cut, crushed, or connected to other wiring.

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LIMITATION OF LIABILITY:

This warranty is the only warranty provided. No one is authorized to provide any other warranty for the NIVEL'EAU® NECOM model. **THIS WARRANTY REPLACES ALL OTHER EXPRESS AND IMPLIED WARRANTIES. WE EXPRESSLY DISCLAIM ALL LIABILITY FOR ACCIDENTAL, INCINDENTAL, OR CONSEQUENTIAL DAMAGES IN THE EVENT OF A BREACH OF EXPRESS OR IMPLIED WARRANTY, OR WITH REGARD TO POTENTIAL MONETARY DAMAGES AS A SANCTION.**

The manufacturer and distributor assume no liability for damage caused by non-adherence to the instructions provided in this manual.

WARRANTY CLAIMS

To have your claim promptly reviewed, contact your supplier and provide them with the following information: proof of purchase, model number, serial number, and installation date. The installer will contact the factory for instructions to submit the claim and to determine the location of the closest designated service centre. All returned pieces must have a return material authorization number so that they can be assessed under the terms of this warranty.

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