



SMART IoT PLATFORM

USE
YOUR
ENERGY

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OMNILED

Smart IoT Platform with Wind/Solar and Energy storage

Owner's Manual
installation | operation | maintenance
Version: 2019.07 (US)



The OMNILED® smart energy platform for IoT is based on the award winning wind & solar hybrid electrical power generation OMNIFLOW® concept. It is a multifunctional a device designed for street lighting while being a power and location platform for urban monitoring, internet access and mobile telecommunications 1.

Please read this Owner's Manual prior to Installation and Operation of the Product.

1 Characteristics and functionalities dependent on markets and models.

Introduction

Welcome to the OMNILED® smart IoT platform!

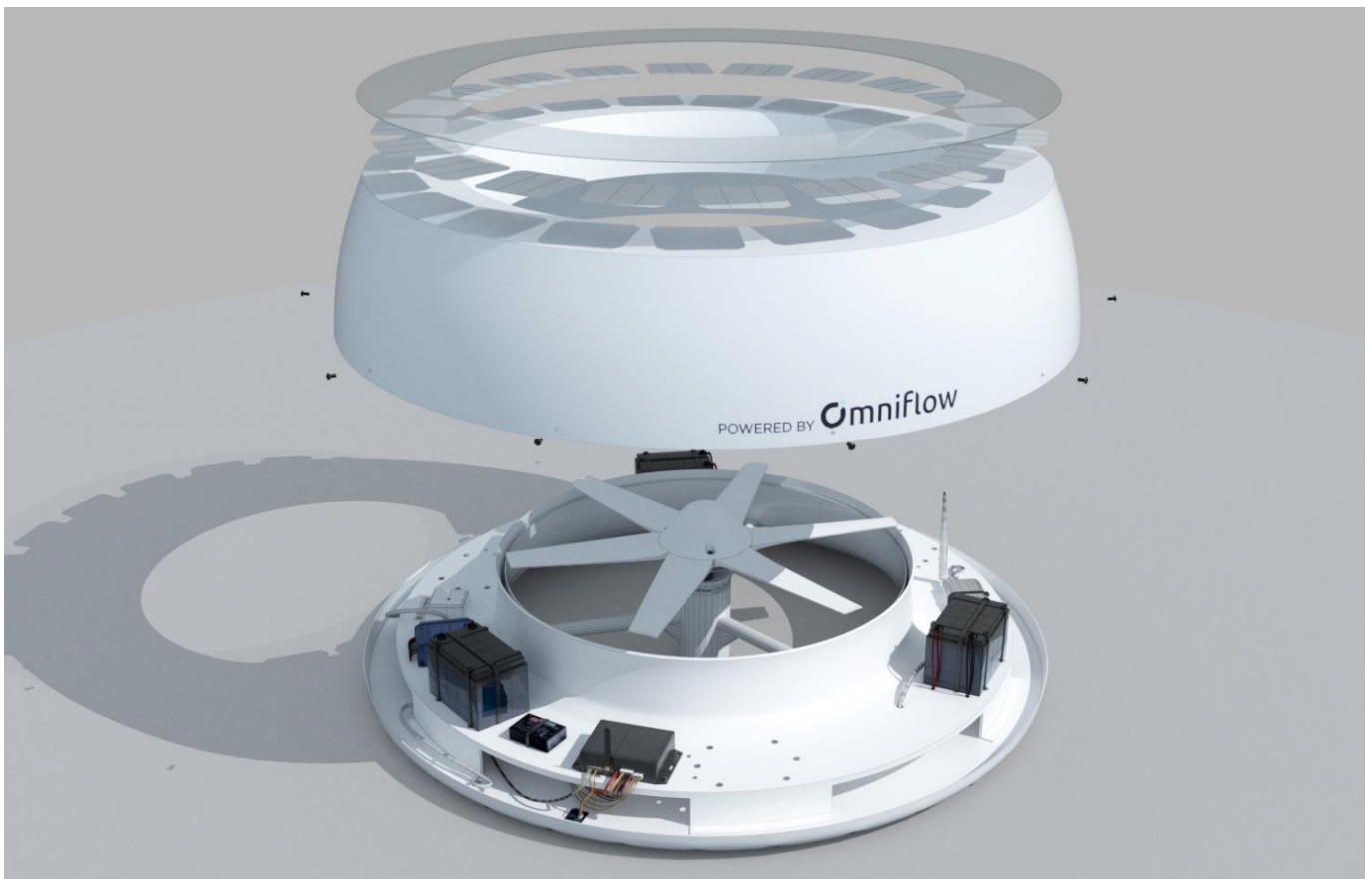
This owner manual includes notes on the installation, operation and regular maintenance instructions for safe and regular care of the OMNILED® hybrid wind & solar smart system.

Trained and properly equipped personnel, using appropriate lifting/handling equipment and tools, should do the installation of the pole.

If maintenance or installation/setup of any custom purpose functionality is intended, the appropriate Electrical/Electronic Supplements are required to complement this manual.

In the manual, you might have checklists to guide you through the intervention on the OMNILED. Following these step-by-step instructions, you will insure your installation is completed correctly.

As soon as you finish the installation, do not forget to activate the warranty, by sending an email with the serial number(s) of the installed equipment's and its location(s) to info@omniflow.pt.



For any questions or comments, feel free to contact your OMNIFLOW reseller or directly our company through info@omniflow.pt.

Safety Instructions

Caution: Please read these instructions carefully before installation



OMNILED® smart system should be installed [and maintained] by qualified personnel using appropriate safety gear.

Never touch any stripped cable ends or un-insulated connections. The electrical installation must be done by a qualified professional in accordance with the rules in force in each country.

Never move body parts or objects through the turbine because even if this is not in operation is easily actionable with a slight breeze.

Dont loose the rotor until all instalation is complete.

Please only install this product in open spaces without solar shading in the device and with “clear” wind flow as suggested in page 6 diagram

Motion sensor is easy damaged if the device is not handled with care. Do not remove the protective foams until the installation is complete and do not touch the LED/optic lens with your bare hands.

Check communications in OmniConnect platform. This should be done 1-5min after connection the fuse with the lifting equipment still in place in case anything is not correct. Do the LED test if unit has LED's.

Specifications

Caution: Please read these instructions carefully before installation

| Technical Data | OMNILED 07 |
|------------------------------------|--|
| Dimensions (W/H/D) ft [m] | 3.94 [1.2] / 1.0[0.3] / 3.94 [1.2] |
| Generator | Direct drive, ironless stator permanent magnet generator |
| DC controller | Hybrid wind/solar regulator |
| Power | Wind - 100Wp / Solar - 60Wp + (optional Extra solar 60Wp PV) |
| Weight lb [kg] | 77.16 [35] – 132.28 [60] |
| Device type | Grid connected or Off-Grid (depending on the load) |
| Battery | 500Wh C10 Lead Crystal (optional extension to 1000Wh) |
| Pole height ft [m] | 20 [6] or 26 [8] or 40 [12] |
| Lighting power | 30 W or 45W (up to 120W on-grid) |
| Luminance lumen | 5100 lm or 6800 lm (18600 lm @120W) |
| Color temperature | 4000K |
| Optional equipment | Wi-Fi Router |
| (if detailed in the packing list): | IP Camera |
| | Extra Solar PV |
| | Extra Battery |
| | Grid-Tie. |

Unpacking

In the OMNILED box there should be the complete functional platform and a plastic bag with (1) a set of fixing screws, bolts and washers, (2) a fuse, and this manual with the serial number of the equipment.

Take the OMNILED out of the box, **while keeping the protecting foam spacers in place.**



Installation

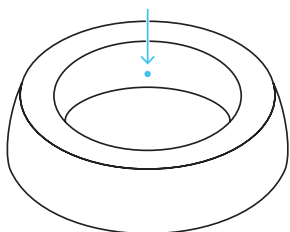


Use a safe lifting device to position the OMNILED in to the top of the mast previously fixed to the foundations.

Only use masts/foundations or projects provided or approved by Omniflow.

Install the Omniled after mast installation

1



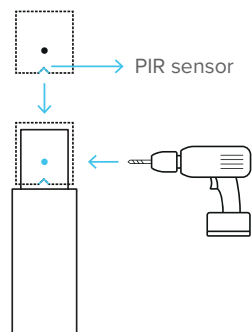
Insert the fuse

2



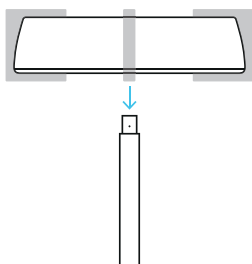
Verify communications

3



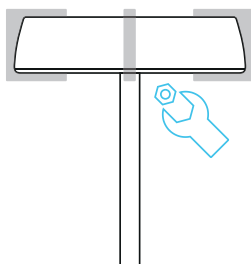
Drill the mast
Using the mold
(Recommended drill size M11 / Metal thickness 4mm)

4



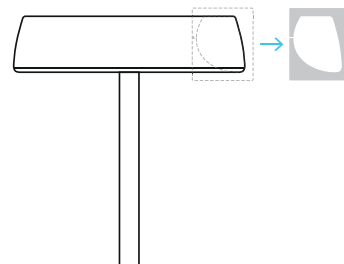
Install the Omniled.
Keeping the protections.

5



Insert the bolts into
the holes and tighten

6



Remove the protections
after installation

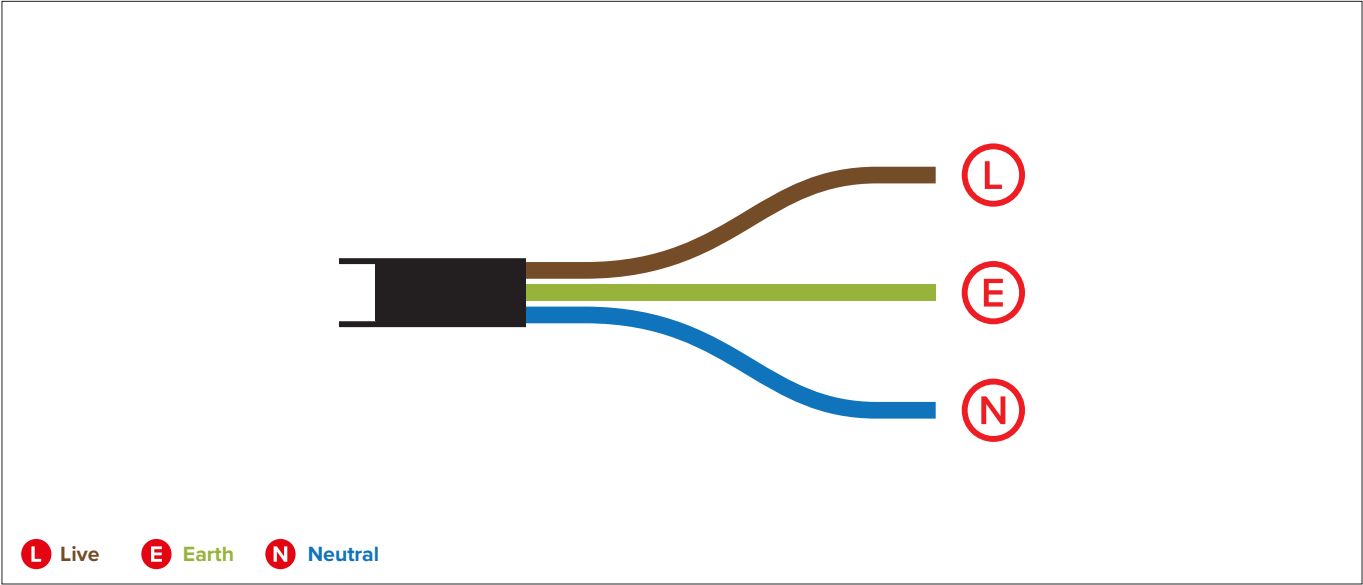
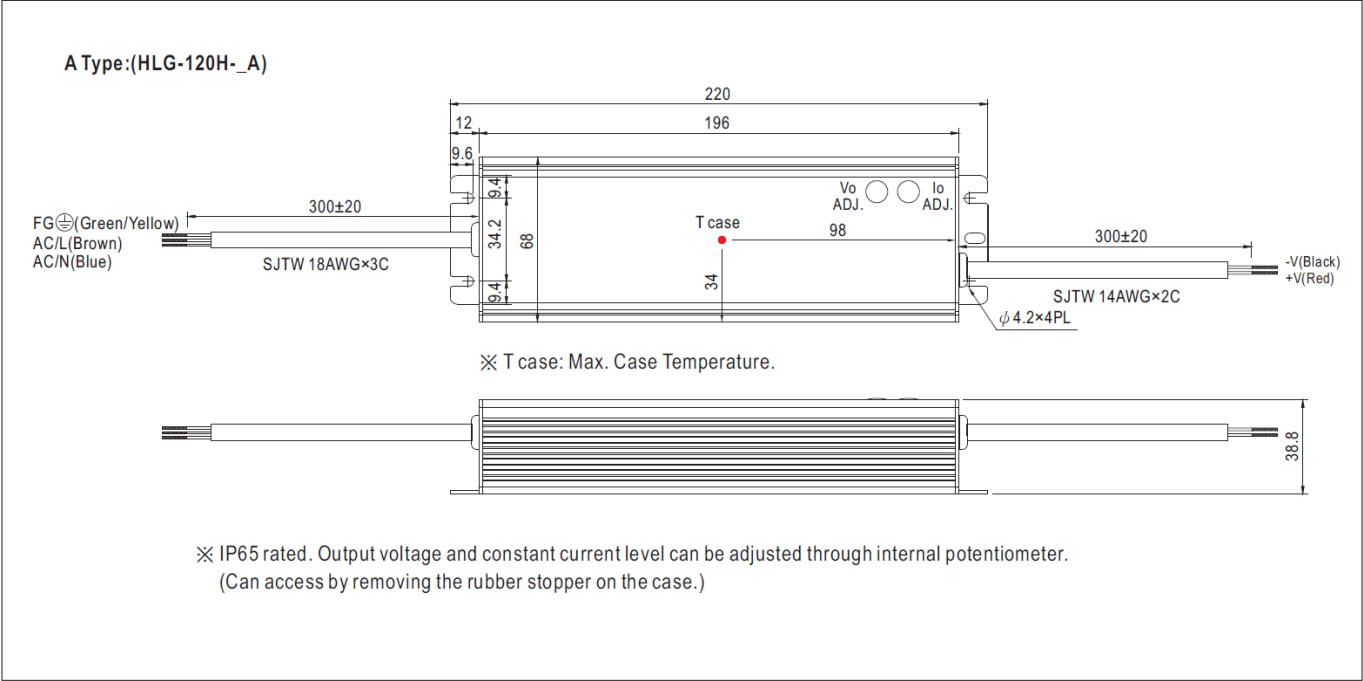


Bolt tightening torque

| Bolt Size (mm) | Strength Grade (N·m) |
|----------------|----------------------|
| 10 | 33 |

The OMNIFLOW® should be ready for operation

Optional Equipment (GRID-TIE):



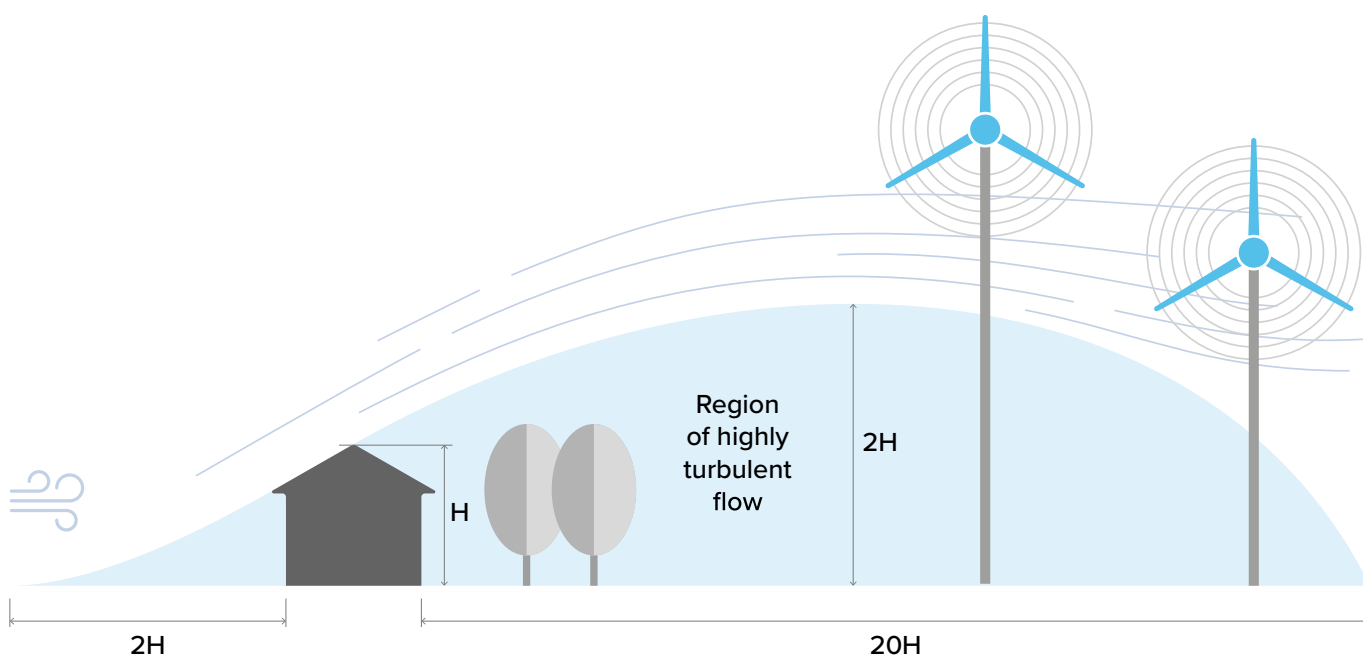
Grid-Tie cable will come out of the center metallic structure

Frequently asked questions

| Situation | Solution |
|-------------------------------|--|
| Lights don't turn on | Check if the fuse was installed or it is damaged Normal if it is the first time running and batteries are not charged |
| Rotor spins faster than usual | Normal if there is high wind |
| Rotor spins at low speed | Check if there is enough wind |
| Rotor spins at low speed | Check for tall buildings or trees in the direction of the prevailing wind *** (check diagram) |
| Rotor spins at low speed | Normal when the batteries are fully-charged |

Effect on the wind of an obstruction

(buildings or trees)



Warranty

The warranty is 24 months from the date that equipment becomes in Client responsibility. Client should also communicate by email the serial number(s) of the installed equipment's and its working location to info@omniflow.pt, with a subject line "Warranty OMNIFLOW".

Warranty may be void in the following situations:

- If the product is used with an accessory, equipment or part that does not meet product specifications.
- Manufacturer warranty if the products are not supplied by Omniflow S.A. representatives and/or its accredited reseller/installer.
- If the products are not used or maintained in accordance with the instructions provided by Omniflow with respect to placement, operation and maintenance.
- Any defect arising from intended damage, negligence, abnormal working conditions, failure to fulfill Omniflow instructions, misuse or alteration or repair of Products without Omniflow's approval.
- If the products are not used in normal operation conditions.
- If damages are from normal wear or tear.
- If the products are repaired, altered or modified not in accordance with Omniflow manufacturer's instructions.
- If the products are opened and altered with other electronics not supplied by Omniflow.

Equipment's being returned to distributor/manufacturer should be properly packaged to protect from damage during transportation. Shipping and insurance costs required to return to Omniflow, SA or its Distributor(s) are the solely responsibility of customer.

Before returning the product, we require the following information:

- Product Serial Number
- Description of the problem
- The location of the installation

Upon verification of failure due to defects in materials or workmanship, Omniflow will either repair or replace the product at our discretion.

Maintenance

Periodic visual inspection of the equipment should be taken, in particular to check whether:

- The rotor rotates freely,
- Dumping supports are dry or damaged by the sun. if so they need replacement,
- There is accumulated dirt in the Photovoltaic panel,
- Any sign of corrosion of the metallic components,
- Any visible damage especially after a storm.

Please check the maintenance manual for more information

In the event of any irregularities, please contact nearer Omniflow distributor

