ENG

Translation of original user guide

SOLAR CHARGER
SOLERION

Operating instructions

73_150957-A
04/2021

READ THE USER GUIDE CAREFULLY BEFORE USE

#♡ELECTRIC

PELLENC

TABLE OF CONTENTS

1. INTRODUCTION

Dear Customer,

Thank you for purchasing your Solar charger SOLERION. Correctly used and maintained, this tool will give a satisfactory performance for many years.

Warning

Your device contains numerous recoverable or recyclable materials. Return it to your dealer or, failing this, to an approved servicing centre to be treated.

Comply with the regulations in force in your country as concerns environmental protection associated with your activity.

Warning

It is imperative that you read through the ENTIRE user's manual before using or servicing the tool. Always comply with the instructions and illustrations in the manual.

All through this user guide you will find advisory notes and information entitled: NOTE, IMPORTANT, ATTENTION and WARNING.

The points marked "NOTE" indicate additional information.

The points marked "IMPORTANT" warn the user of a potential risk to the equipment.

The points marked "ATTENTION" warn the user of a potentially hazardous situation which if not avoided leads to minor injuries.

The points marked "WARNING" warn the user of a potentially hazardous situation which if not avoided leads to serious injury or death.

The warning indicates that damage resulting from failure to comply with the procedures and instructions is not covered by the warranty and the owner will be liable for any repair costs.

Safety indications are also given on the tool; they remind you of the safety precautions to be taken. Identify and read these indications before using the tool. Immediately replace any indications that may become partially illegible or deteriorated.

Refer to ??? for the location diagram of the safety stickers affixed to the tool.

2. SAFETY

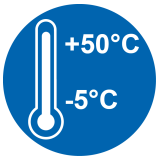
2.1. GENERAL SAFETY WARNINGS

1. Before using the Solar charger SOLERION, the input and output voltages must be checked to ensure correct use.
2. Do not use the Solar charger SOLERION if the output polarity does not correspond to the load polarity.
3. During operation, the internal temperature of the Solar charger SOLERION must not reach 70°C. No flammable material must be within 1.5 metres of the device.
4. The Solar charger SOLERION must be used indoors, in a dry place, away from any source of heat (>-5°C < 50°C) and direct sunlight, on a non-combustible support.
5. During operation, the temperature of Solar charger SOLERION may reach 60° C. There can be no flammable material within 1.5 metres of the device and battery.
6. Do not introduce any metal objects into the Solar charger SOLERION such as paper clips, coins, keys, nails, screws or other small metal objects that could create a short circuit between its components.
7. When not in use, keep the Solar charger SOLERION away from other metal objects such as paper clips, coins, keys, nails, screws, or other small metal objects that could create a connection from one terminal to another. Creating a short circuit between the battery terminals can result in burns or even a fire.
8. Keep the Solar charger SOLERION out of the reach of children and on a non-flammable surface.
9. Do not interfere with its cooling cycle.
10. Do not leave the Solar charger SOLERION close to a heat source.
11. Do not expose the Solar charger SOLERION to microwaves or high pressures.
12. Do not immerse the Solar charger SOLERION in water.
13. Do not attempt to recharge batteries other than PELLENC batteries with the equipment.
14. Make sure that in wet weather the charger and the battery are protected by the photovoltaic panel.
15. Do not leave a PELLENC battery permanently connected to the Solar charger SOLERION. It is strongly recommended to disconnect the battery once its charge is complete.
16. The Solar charger SOLERION operating site must be equipped with an electrical fire extinguisher in working order.
17. The Solar charger SOLERION must be protected from any impacts. It must be positioned and secured during transport phases.
18. Direct charging of a battery other than a PELLENC battery is dangerous (risk of serious injury). In this case, PELLENC SAS declines any responsibility.
19. The Solar charger SOLERION must be protected from any impacts and must be secured during storage and transport.
20. In case of smoke, place the Solar charger SOLERION and all the connected electrical equipment outside the charging facility or the transport vehicle, as far as possible away from any flammable material.
21. Use Solar charger SOLERION only with material recommended by PELLENC. The use of incompatible equipment may present a risk of injury and fire.
22. If the output cord is torn or damaged, bring the entire device back to the authorised distributor it was purchased from.
23. The cover should not be opened under any circumstances. If the cover is damaged, the adapter should no longer be used.
24. Do not use the equipment for any other use than that initially intended by PELLENC.
25. At the end of its life, the Solar charger SOLERION must be returned to the authorised dealer from whom it was purchased for recycling in accordance with waste regulations.
26. Fragile case, contains electronic devices.

2.2. STICKERS

Do not expose to rain.

Read the user guide.



This equipment may only be used at temperatures of between -5° and +50°C.

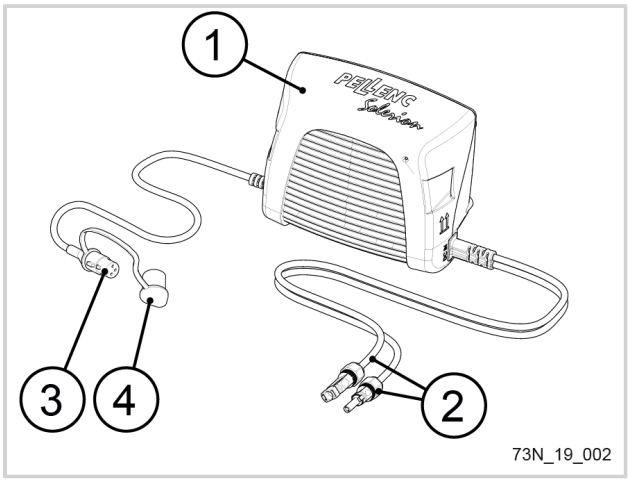
At the end of its life, the charger must be returned to the authorised distributor where it was purchased to be recycled in compliance with waste regulations.

Tool compliant with EC standards.

3. DESCRIPTION AND TECHNICAL FEATURES

3.1. DESCRIPTION OF THE SOLERION SOLAR CHARGER

1. Solar charger SOLERION
2. Photovoltaic panel connectors
3. Battery connector
4. Battery connector protective cap



3.2. TECHNICAL CHARACTERISTICS OF THE SOLAR CHARGER SOLERION

Maximum power	300 W
Charging voltage	50.2 V
Maximum charging current	7.6 A
Stop charge current	200 mA
Dimensions (mm)	90x200x170
Poids	965g
Operating temperature	-5°C à 50°C

100% charging time for a 300 Wc photovoltaic panel at 25°C with optimal orientation, per battery type, depending on the sunlight:

Type of battery	Charging time at 1,000 W/m²	Charging time at 600 W/m²
Lixion battery	4hrs. 55min.	4hrs. 55min.
200 battery	2hrs. 40min.	2hrs. 40min.
400 battery	5hrs. 20min.	5hrs. 20min.
700 battery (fab date < 08/2010)	9hrs. 20min.	9hrs. 20min.
700 battery (fab date > 08/2010)	3 hrs	5hrs. 20min.
800 battery (fab date < 08/2010)	10hrs. 35min.	10hrs. 35min.
800 battery (fab date > 08/2010)	3hrs. 30 min	6hrs. 05min.
1100 battery	4hrs. 50min.	8hrs. 25min.
Poly5 battery	2hrs. 10min.	3hrs. 50min.
150 battery	3hrs. 40 min.	3hrs. 40 min.
150P battery	3hrs. 40 min.	3hrs. 40 min.
250 battery	3hrs. 20min.	3hrs. 20min.
Alpha 260	1hr. 05min.	2hrs.
Alpha 520	2hrs. 20min.	4hrs.
750 battery	3hrs. 20min.	5hrs. 40min.
1200 battery	5hrs. 10min.	9hrs. 10min.
1500 battery	6hrs. 30min.	11hr. 30min.

3.3. CHOOSING THE PHOTOVOLTAIC PANEL

Important

It is imperative to choose the photovoltaic panel according to the following technical characteristics:

Criteria for choosing the photovoltaic panel	
Peak power (at 1,000 W/m²)	300Wc
Connectors	MC4 solar socket
V_{oc} (open circuit)	42V ±2V
V_{mp} (standard)	36V ±2V

4. COMMISSIONING

4.1. INSTALLATION OF THE PHOTOVOLTAIC PANEL

Install the photovoltaic panel on a location enjoying maximum sunlight and clear of any obstacle that may cause shade.

The photovoltaic panel has a large number of cells in series and in parallel. As a result, if a shadow (tree, cloud, wall, etc.) obscures a small part of the surface of the panel, the remainder being still in the sun, **the efficiency of the entire panel decreases sharply, resulting in a significant increase in charging time of the battery.**

Important

There must be no obstacles (vegetation, buildings, relief, etc.) between the sun's rays and the receiving surface of the photovoltaic panel.

We recommend that the photovoltaic panel is orientated due south for optimum efficiency during the day.

Tip

Nevertheless, the algorithm for optimizing the positioning of the photovoltaic panel makes it possible to orient the photovoltaic panel for maximum power at the time of positioning.

See Section 4.2, “Aid for optimum positioning of the photovoltaic panel”

4.2. AID FOR OPTIMUM POSITIONING OF THE PHOTOVOLTAIC PANEL

To obtain the maximum solar irradiation on the photovoltaic panel (and therefore the maximum input power of the charger) at a given moment, it is possible to use the optimal positioning aid algorithm of the photovoltaic panel.

This is active only during the first minute of powering the charger. To enter this mode again: disconnect the photovoltaic panel from the charger for about 10 seconds, then reconnect it.

In this mode, the charger does not deliver any output voltage. A connected battery will not then be charged during this first minute.

1. A first manual rotating sweep by the user of the panel makes it possible to measure the solar irradiation as a function of the orientation.
   a. Initially, orient the photovoltaic panel to the east
   b. then rotate it westward through the south

   This sweep makes it possible to propose an optimal orientation of the panel and to measure the maximum solar irradiation.
2. If the solar irradiation is lower than the maximum solar irradiation measured, the multi-colored LED of the charger flashes quickly and alternately green and orange.
3. As soon as the maximum solar irradiation is reached, the multicolored LED rapidly flashes green.

Important

The positioning aid is to be used only if the panel benefits from a good reception of the solar irradiation.

To obtain a satisfactory result, there must be no obstacles (vegetation, relief or buildings) in the panel reception field.

The sky must be clear.

4.3. CONNECTING THE SOLAR CHARGER SOLERION TO THE PHOTOVOLTAIC PANEL

Connect the Solar charger SOLERION to the photovoltaic panel via the 2 DC IN connectors.

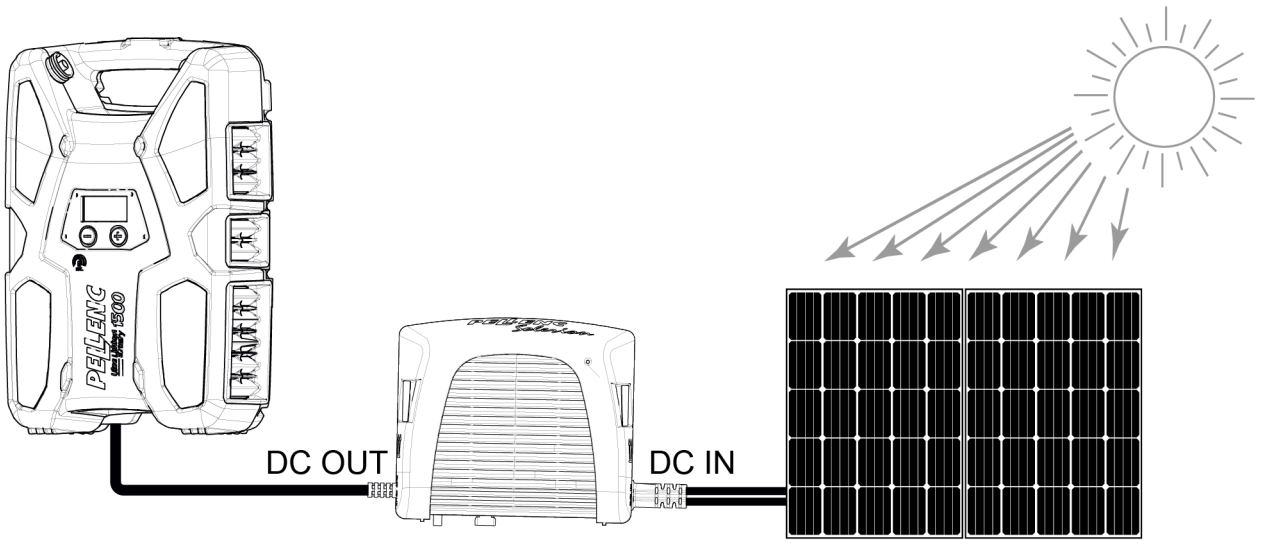
Possibility of using a 10m extension (ref: 100077)

5. USING THE TOOL

5.1. CHARGE A BATTERY USING THE SOLAR CHARGER SOLERION

To charge a battery using the Solar charger SOLERION

1. remove the protective cap from the 3-pin DC OUT connector of the Solar charger SOLERION.
2. connect the 3-pin connector to the battery.



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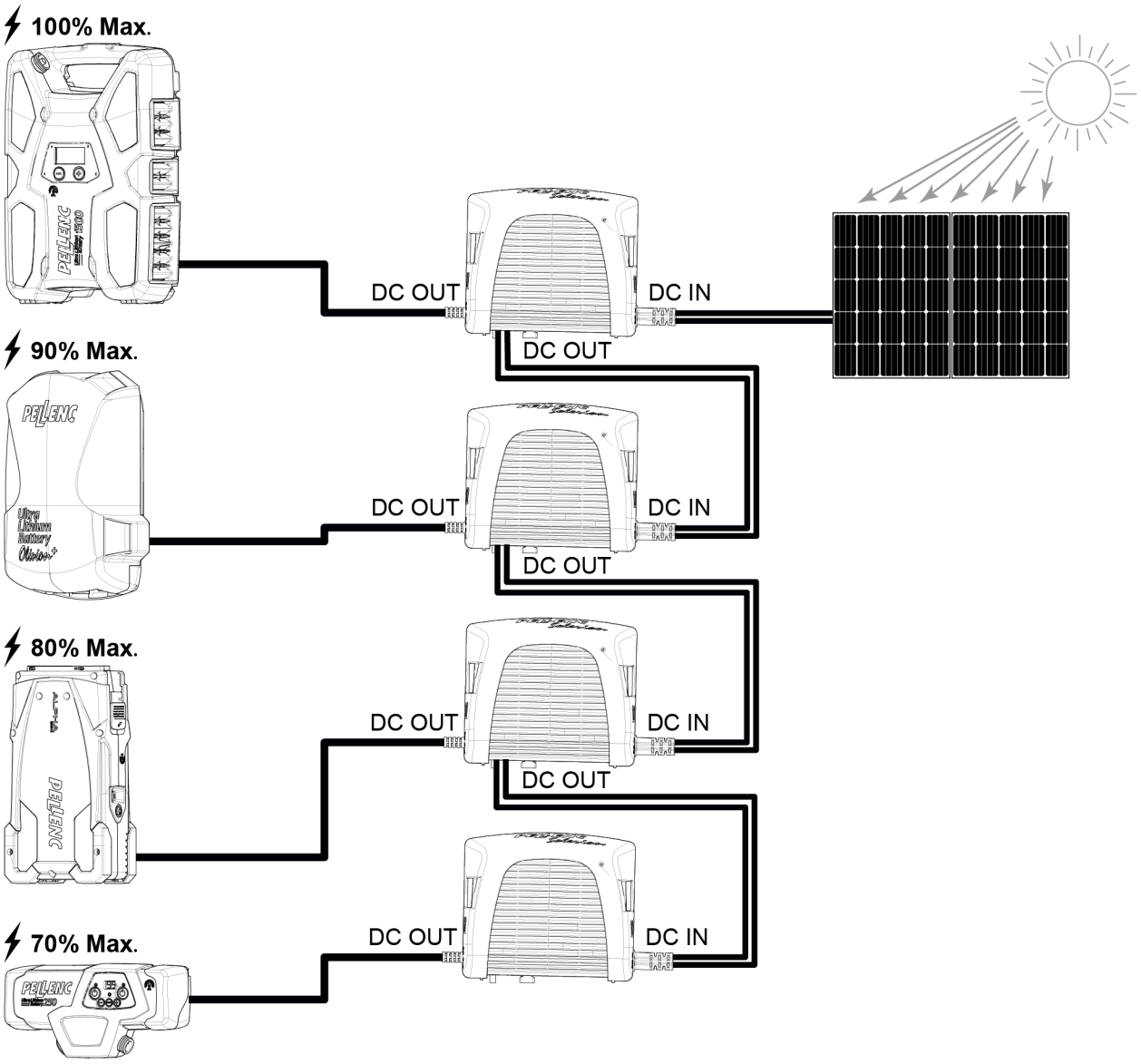
5.2. CHARGE MULTIPLE BATTERIES IN A NETWORK

4 batteries in parallel can be connected by connecting 4 Solar charger SOLERIONin series. See the diagram below.

Note

- The battery connected to the first charger in the series will be 100% fully charged.
- The battery connected to the second charger in the series will be charged to a maximum of 90%.
- The battery connected to the third charger in the series will be charged to a maximum of 80%.
- The battery connected to the fourth charger in the series will be charged to a maximum of 70%.



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In this configuration, the chargers will distribute the power available at the output of the photovoltaic panel in order to charge several batteries at the same time.

6. MAINTENANCE

The Solar charger SOLERION does not require any specific maintenance.

7. INCIDENTS AND TROUBLESHOOTING

the multicolour charger LED indicates the current status of the SOLERION.

LED status	Meaning
In help mode there is instant optimal positioning of the photovoltaic panel (during the first minute after powering up the charger)	
Rapid, alternating orange/green flash	Radiant exposure below the maximum measured
Rapid green flash	Maximum solar radiation reached
Charge indicator	
Short green flash	On standby (no battery detected)
Short, intermittent red/green flash	Charging attempt
Long green flash	Charge in progress
Continuous green light	Charging completed
Warnings (the charge is interrupted)	
Rapid, alternating red/green flash	Charge interrupted by the battery (the charger resumes charging automatically as soon as possible)
Long red flash	Temperature > +70°C internal
Continuous red light	Malfunction requiring disconnection of the charger

If your device no longer works:

1. Check that the cables of the photovoltaic panel are connected to the DC IN cables of the charger.
2. Check that the DC OUT charging cable of the charger is connected securely.
3. If the device does not work, return the complete equipment in its original packaging to a certified repair service.

Warning

Never attempt to open the Solar charger SOLERION (risk of damage, injury and loss of warranty).

8. STORAGE AND TRANSPORT

8.1. STORAGE

When the SOLERION is not being used:

- put the cap on the charging connector of the charger
- leave the photovoltaic panel connected to the charger.

During storage, the photovoltaic panel must be protected from possible impacts.

The receptor surface must be kept in the dark.

9. ACCESSORIES

• Extension (10m)	Ref.: 100077

10. WARRANTIES

10.1. GENERAL WARRANTIES

10.1.1. STATUTORY WARRANTY

- 10.1.1.1. LATENT DEFECTS WARRANTY

Apart from the commercial warranty provided for under Article II, Article 1641 of the Civil Code provides that "the seller is bound to a warranty on account of latent defects of the object sold which render it unfit for the use for which it was intended, or which would impair said use to the extent that the buyer would not have acquired it, or would only have given a lesser price for it, had he known of them".

Article 1648 of the Civil Code "The action resulting from latent defects must be brought by the purchaser within two years after the discovery of the defect. "

- 10.1.1.2. LEGAL WARRANTY OF CONFORMITY

Article L.217-4 of the French Consumer Code "The seller delivers goods in conformity with the contract and is liable for defects of conformity existing upon delivery".

The seller is also liable for any lack of compliance resulting from the packaging, assembly or installation instructions whenever its contractual liability is engaged in this regard or the latter are carried out under its responsibility

Article L.217-5 of the French Consumer Code "Goods are compliant with the contract":

1. Where they are fit for the purpose normally expected of similar goods and, where applicable:
   - If it matches the description given by the seller and possesses the qualities that were presented to the purchaser in the form of a sample or model;
   - If it possesses the qualities that a purchaser can reasonably expect given the public statements made by the seller, the producer or its representative, especially in advertising or labelling;
2. Or, if it has the characteristics defined by mutual agreement of the parties or is fit for any particular purpose that the buyer made known to the seller and that the latter accepted.

Article L.217-12 of the Consumer Code "legal action resulting from lack of conformity lapses two years after delivery of the goods".

10.1.2. COMMERCIAL WARRANTYPELLENC

- 10.1.2.1. CONTENT

10.1.2.1.1. GENERAL INFORMATION

In addition to legal warranties, client users benefit from the commercial warranty on products PELLENCcovering the exchange and replacement of parts recognised as being out of order, due to machining defects, assembly defects or material defects, whatever the cause.

The warranty is fully integral to the product sold by PELLENC.

10.1.2.1.2. SPARE PARTS

The commercial warranty also covers original PELLENCspare parts, excluding labour and to the exclusion of certain parts of each product provided at delivery.

- 10.1.2.2. DURATION OF THE WARRANTY

10.1.2.2.1. GENERAL INFORMATION

PELLENC Products are guaranteed under the commercial warranty as from delivery to the customer for a period of two (2) years for products connected to a PELLENC battery, and for a period of one (1) year for other PELLENC products.

10.1.2.2.2. SPARE PARTS

PELLENC Replacement parts replaced under the product warranty are guaranteed under the commercial warranty as from delivery of the PELLENCproduct to the customer user for a period of two (2) years for products connected to a PELLENCbattery, and for a period of one (1) year for other PELLENCproducts.

In the case of products connected to a PELLENC battery, parts that are replaced under the product warranty after the 12th month of use, are covered for a period of one (1) year.

10.1.2.2.3. WARRANTY EXCLUSIONS

Excluded from the commercial warranty are products that have been subject to abnormal use, or were used under conditions and for purposes other than those for which they were manufactured, especially in the case of non-compliance with conditions stipulated in this user manual.

It does not apply in case of shock, fall, neglect, lack of supervision or maintenance or in case of transformation of the product. Also excluded from the warranty are products that have been subject to tampering, alteration or modification by the client user.

Wear parts and/or consumables cannot be covered by the warranty.

- 10.1.2.3. IMPLEMENTATION OF THE COMMERCIAL WARRANTY

10.1.2.3.1. PRODUCT COMMISSIONING AND COMMISSIONING DECLARATION

The DISTRIBUTOR undertakes to complete the computer commissioning declaration form, no later than eight days after the delivery of the property to the user customer, in order to activate the latter on the www.pellenc.com website under "warranties and training" in the "extranet" menu, using the identifier previously provided to them by PELLENC.

Failing that, commissioning declaration will not be effective and implementation of the commercial warranty PELLENC will not occur. As a consequence thereof, the DISTRIBUTOR must ensure the financial burden of its intervention under the warranty without being able to pass on the cost to the client user.

The DISTRIBUTOR shall also undertake to complete the warranty card or the certificate of warranty and commissioning for self-propelled equipment provided with the product after having the client user sign and date it.

10.1.3. PAID AFTER-SALES SERVICE

- 10.1.3.1. GENERAL INFORMATION

Malfunctions, breakdowns, breakages resulting from misuse, neglect or improper maintenance by the client user as well as malfunctions resulting from normal wear of the product are subject to the payment of after-sales service, even during the period of the legal and commercial warranty. After-sales service repairs that fall outside of the legal and commercial warranty also include maintenance, adjustments, diagnostics of all types, and cleaning without the present list being exhaustive.

- 10.1.3.2. WEAR PARTS AND CONSUMABLES

Wear parts and consumables also fall within the after-sales service.

- 10.1.3.3. SPARE PARTS

Paid after-sales service also covers original PELLENC spare parts, excluding labour and outside the legal and commercial warranty period.

In case of replacement of original PELLENC spare parts in the context of after-sales service, said latter are covered by a warranty of one year as from the installation date.

11. STATEMENT OF COMPLIANCE

11.1. "EC" DECLARATION OF CONFORMITY: SOLERION SOLAR CHARGER

MANUFACTURER	PELLENC
ADDRESS	Quartier Notre-Dame - 84120 Pertuis (France)

ENTITY AUTHORIZED TO COMPILE THE TECHNICAL FILE	PELLENC
ADDRESS	Quartier Notre-Dame - 84120 Pertuis (France)

We hereby declare that the product designated below as:

GENERIC DENOMINATION	Solar charger
FUNCTION	PELLENC battery solar charger
COMMERCIAL NAME	SOLERION.
TYPE	CH SOLERION 280W
MODEL	CH SOLERION 280 W
SERIAL No.	73U00001 - 73U49999 73V00001 - 73V49999 73W00001 - 73W49999

Complies with all the relevant provisions of the EMC Directive 2014/30/EU

- 2011/65/EU ROHS Directive
- 1907/2006 REACH Regulation
- 2012/19/EU WEEE DIRECTIVE

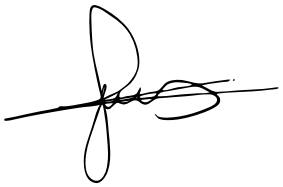
The following harmonised European standards have been used in whole or in part:

- EN 55014-1 :2006 + A1: 2009 + A2: 2011
- EN 55014-2 :1997 + A1: 2001 + A2: 2008

SIGNED IN PERTUIS, DATED 02/03/2020

JEAN-MARC GIALIS

CEO



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