



DISPLAY



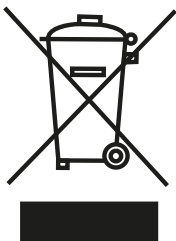
User Manual



Valid for the following model:

DT002

INSTRUCTIONS FOR THE PROPER DISPOSAL



THIS ELECTRONIC DEVICE IS SUBJECT TO THE EUROPEAN DIRECTIVE 2012/19/EU. ACCORDING TO THE LOCAL WASTE DISPOSAL RULES, DO NOT DISPOSE OF OLD PRODUCTS WITH NORMAL HOUSEHOLD WASTE. THE PROPER DISPOSAL OF PRODUCTS THAT CAN NO LONGER BE USED PREVENTS POTENTIAL NEGATIVE CONSEQUENCES FOR THE ENVIRONMENT AND FOR THE POPULATION.



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1. INTRODUCTION

DT002 is the optional display for solar regulators SC320M e SC350M.

Thanks to this touch screen optional display, the device shows the service battery charging data and the start-up battery showing the status of the solar panels connected to the solar regulator.

SAFETY INSTRUCTIONS

- Child Safety: Keep the device Out of Reach.
- carefully check the integrity of the device and connectors.
- To avoid overheating and possible fires do not install the device in a sealed environment, Always choose a well ventilated area.
- Do not place the device on highly flammable surfaces or environments (eg: paper, cloth, etc.).
- do not cover the cooling slits on the side and the fan on the top.
- do not install the device near flooded batteries: they produce flammable, corrosive and explosive gas while working, and it can damage the product.
- protect the device from sunlight or direct sources of heat.
- To avoid malfunctions, DO NOT install and use the device in very humid environments, in contact with water splashes, various liquids, or exposed to rain.
- To avoid risk of electric shock and/or fire, the vehicle's fuel system must be in good condition.
- in case of damaged connecting cables or inadequate section, immediately replace them with

suitable cables as specified by this manual or by a qualified electrician.

- in case of anomalies in the conformity of the product do not use it! it is strictly forbidden to open the device. Repairs may only be carried out by qualified technical personnel using original spare parts.
- Keep the instruction manual near the device for easy access to the essential safety, use and maintenance information.
- The information contained in this manual may be changed without notice. NDS Energy s.r.l. reserves the right to make changes and improvements to the product at any time without notice and without obligation to apply these changes to the devices previously distributed.
- The images of the products are purely indicative and may therefore not be fully representative of the characteristics of the product, differing in color, size or accessories.

CAUTION

If the imanager and the SC320M or SC350M Solar regulator are installed on the same wiring system, use the imanager starter battery connection instead of the SC320M or SC350M one. Leave the SC320M or SC350M starter battery connection free.

2. CONTENTS OF THE PACK

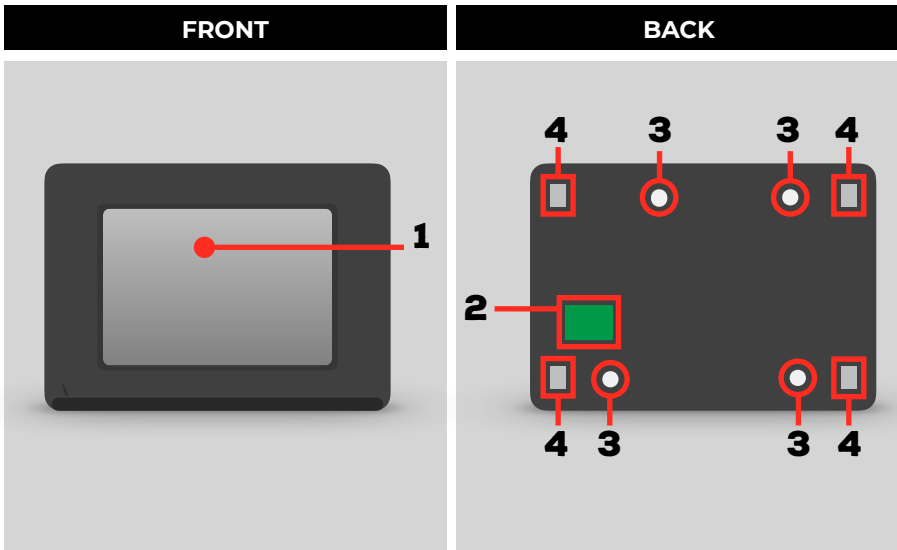
Check the package contents:

- N°1 **DT002** Display
- N°1 Power Cable
- N°1 display wall bracket
- N°4 mounting screws

3. MAIN FEATURES

- Charging curve selection or battery technology selection.
- Solar panel power selection for every connection on the SC320M or SC350M solar regulator.
- Battery State of Charge status (SoC).
- Charging voltage and amperage, date and time display

3.1 DEVICE ARCHITECTURE



N°	FUNCTION
1	Touch screen Display
2	Communication cable hole
3	Four wall mounting holes
4	Display-wall mount attachment system

NOTE

The provided equipment are exclusively projected for this device and they are not compatible with other devices.

4. INSTALLATION

1. Disassemble the wall bracket from the DT002 display



- a. Slide downward the wall Mount and upward the display.



- B. Rise the bottom part of the display



- C. Slide downward the display and disassemble the wall bracket from the display

2. Place the wall bracket on the selected wall and take the hole sign to make a proper hole for the mounting screws (diameter 3mm) and the communication cable pass (minimum diameter 7,2mm).
3. Make holes and screw the wall bracket to the wall using the provided screws. Be sure to have a flat surface, without any screw projections.
4. Let the Communication cable (connettore bianco) pass through the hole previously realized and gently connect the joint to the board.

CAUTION

Don't force the connector in the housing: the connection side is unique.

5. Fix the display on the wall bracket.



a. Insert the display mounting flaps in the wall mount press and slide upward



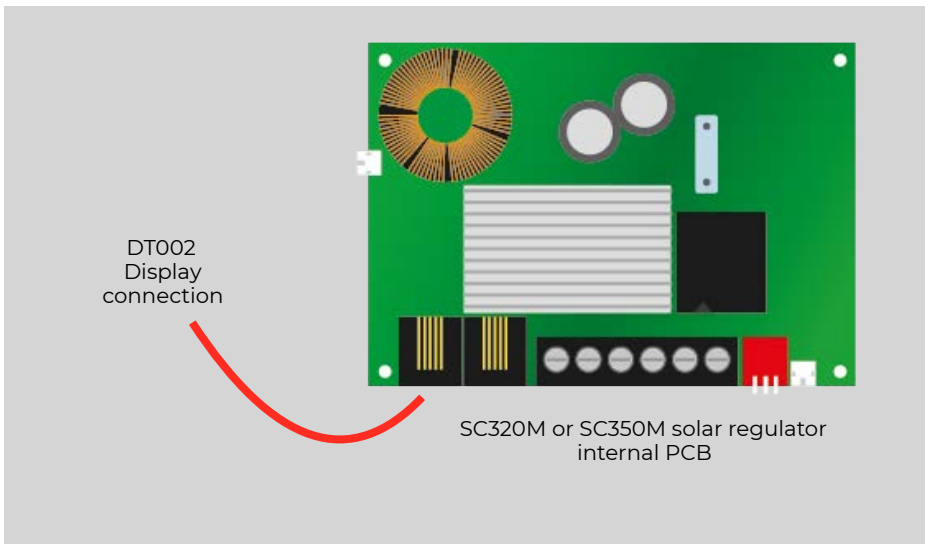
B. Down the bottom part of the display and join the wall mount



C. Slide downward the display to tighten the bottom flaps

6. Connect the display DT002 to the SC320M or SC350M

Connect the other side of the communication cable (RJ connector), to the SC320M or SC350M PCB, as showed in picture.



5. SETUP

Follow the instruction for a proper touch screen usage:

- Touch de display with fingers or soft surfaces, avoid sharp objects
- Avoid excessive pressure on the display surface
- Avoid any Contact with other electronic devices: static discharge can damage the device.
- Avoid any contact with liquids, water, humidity: the touch screen could not work properly

Connect the DT002 display to SunControl2.

Once the start screen is finished, set the required data by moving within the various screens tapping the green button at the bottom right to continue, and at the bottom left to go back.

NOTE

The DT002 optional display allows to modify parameters and charge curves. If connected, the display will receive the parameters set on the SunControl2 Dip Switch, further changes must be made only on the DT002 display.

STEP 1

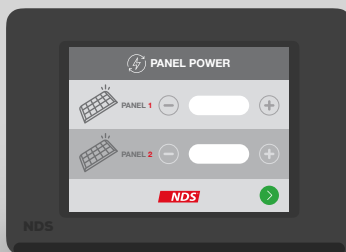
Connecting the DT002 power cable, the display turns on and the start screen appears.



Start up and first setup

STEP 2

Set the power of the solar panel connected to the SC320M or SC350M solar regulator inputs, tapping the icons “+” and “-” on the sides. If only one solar panel is connected, set the solar panel power related to that specific connection, and set the other (missing) to zero, by tapping the “-” icon (minus) several times.

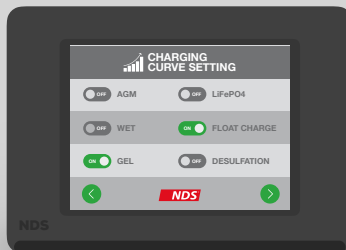


Solar panel power selection

STEP 3

Set the leisure battery technology: AGM, Gel, Wet, Lithium - LiFePO₄.
From this screen you can enable or disable the Desulphation phase.

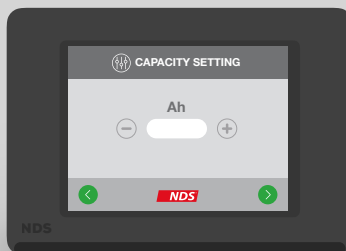
NOTE: you can disable the maintenance phase only for the LiFePO₄ charging curve.



Battery Technology Selection

STEP 4

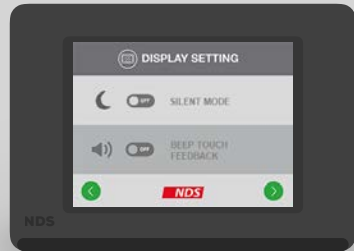
Set the leisure battery capacity tapping the icon "+" or "-" on the sides.



Leisure battery capacity setting

STEP 5

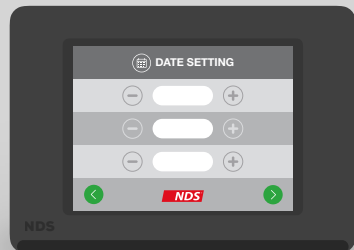
From this screen you can enable or disable the SunControl2 buzzer and cooling fan (if present).



SunControl2 settings

STEP 6

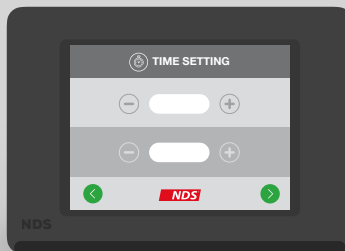
Setup the date by tapping the "+" or "-" icon stacked on either side of the reference box.



Date settings

STEP 7

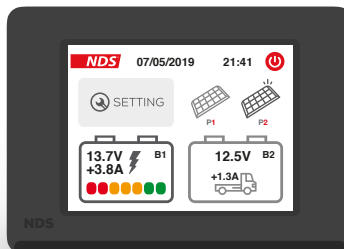
Setup the time by tapping the "+" or "-" icon stacked on either side of the reference box.



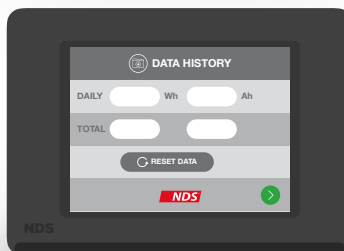
Time Setting

HOME SCREEN

Tapping the bottom left services battery icon for 2 seconds you can access to the Data History screen.



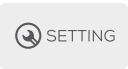








The Data History screen shows the energy production amount of the solar panels connected, both on the current day, and the total energy production since the product installation (or the last reset date).



6. OPERATION

The DT002 display home screen shows informations about:







- Leisure battery status
- Starting battery status
- Date and Time
- Solar Panels state of activity

ICON	MEANING AND FUNCTION
	Setting button: if shortly pressed you can access the beginning menü
	Power Off icon: if touched turns off the display. To reactivate the display tap on any point again.
	Solar Panel Active - This solar panel is working
	Solar Panel idle - This solar panel is not working or not connected
	Starting Battery not in charge Showed: Battery Voltage
	Starting Battery in charge Showed: Battery Voltage and Charging Current
	Leisure Battery in charge Showed: SoC, Battery Voltage and Charging Current
	Leisure Battery not in charge Showed: Battery Voltage
	Error message Only one solar panel is connected

7. STATE OF CHARGE (SOC)

Inside the service battery icon (bottom left corner of the DT002 Home Screen), there is a sequence of 7 notches representing the state of charge of the services battery, also called SoC. Each notch represents a percentage of SoC.

The table shows the meaning of the notches.

ICON	STATE OF CHARGE
	SoC = 0%
	SoC = 15%
	SoC = 30%
	SoC = 50%
	SoC = 80%
	SoC = 100%

NOTE

- To achieve a correct SoC value, it's important to setup correctly the parameters on the first device power up.
- If the batteries are not charged by solar panels, the SoC value is unreliable: it's only referred to the voltage, without charging and discharging current.

9. WARRANTY



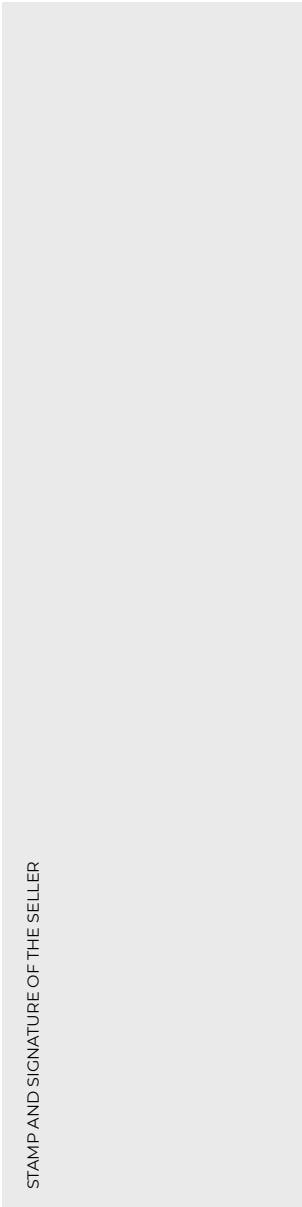
WARRANTY COUPON

MODEL CODE _____

SERIAL NUMBER (S/N) _____

PURCHASE DATE _____

STAMP AND SIGNATURE OF THE SELLER



NDS ENERGY S.R.L.

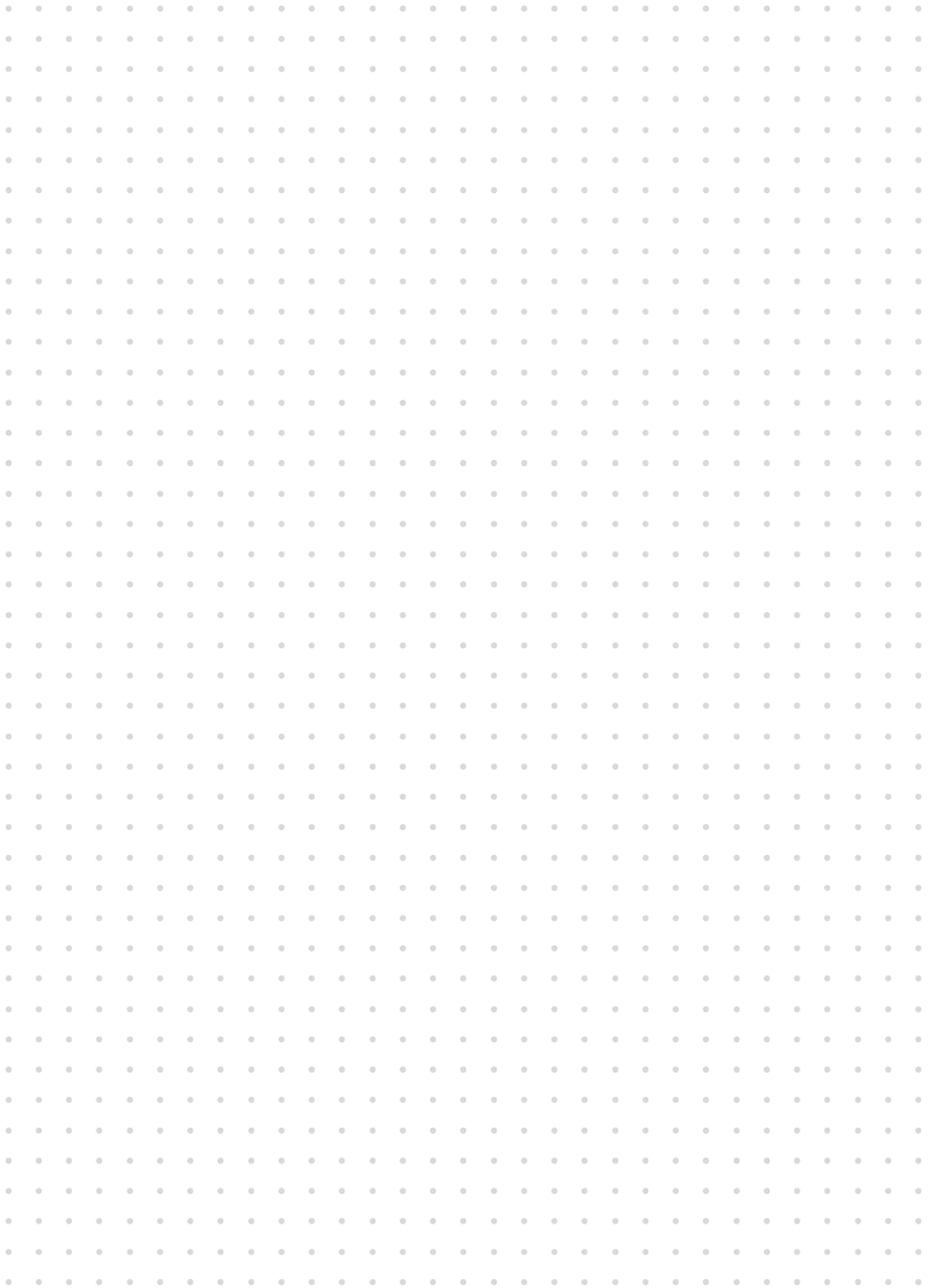
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NOTES





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