PVCHECKs-PRO
SOLAR03 Curve
Tracer

HT INSTRUMENTS PVCHECKs-PRO SOLAR03 Curve Tracer User Manual

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HT INSTRUMENTS PVCHECKs-PRO SOLAR03 Curve Tracer

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  The SOLAR03 model includes various sensors for measuring irradiance and temperature, with Bluetooth connectivity and a USB-C port.

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- **Storage**
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- **Instrument Description**
  The instrument features an LCD display, USB-C input, control buttons, and various ports for connectivity.

PRECAUTIONS AND SAFETY MEASURES

The instrument has been designed in compliance with the essential prescriptions of safety directives relevant to electronic measuring instruments. For your own safety and to avoid damaging the instrument we suggest you follow the procedures hereby described

and to read carefully all the notes preceded by the symbol  . Before and after carrying out measurements, carefully observe the following instructions

CAUTION

- Do not take measurements in wet places as well as in the presence of explosive gas and combustibles or in dusty places
- Avoid any contact with the circuit being measured if no measurements are being carried out.
- Avoid any contact with exposed metal parts, with unused measuring probes, circuits, etc.
- Do not carry out any measurement in case you find anomalies in the instrument such as deformation, breaks, substance leaks, absence of display on the screen, etc.
- Only use original accessories
- This instrument has been designed for use in the environmental conditions specified in section § 7.2.
- We recommend following the normal safety rules devised to protect the user against dangerous voltages and currents, and the instrument against incorrect use.
- Do not apply any voltage to the instrument's inputs.
- Only the accessories provided together with the instrument will guarantee safety standards. They must be in good conditions and be replaced with identical models, when necessary.
- Do not subject the instrument's input connectors to strong mechanical shocks.
- Make sure that batteries are correctly installed

The following symbol is used in this manual and on the instrument:

-  **CAUTION:** keep to what described by the manual. An incorrect use could damage the instrument or its components
-  This symbol indicates that equipment and its accessories shall be subject to a separate collection and correct disposal

GENERAL DESCRIPTION

- The remote unit SOLAR03 has been designed to measure irradiance [W/m2] and temperature [°C] both on Monofacial and Bifacial photovoltaic modules by means of the relevant probes connected to it.
- The unit has been designed for use in combination with a Master instrument, to carry out measurements and recordings during maintenance operations on photovoltaic installations.

The unit can be connected to the following Master instruments and accessories:
Table 1: List of master instruments and accessories

HT MODEL	DESCRIPTION
PVCHECKs-PRO	Master instrument – Bluetooth BLE connection
I-V600, PV-PRO	
HT305	Irradiance sensor
PT305	Temperature sensor

The remote unit SOLAR03 has the following characteristics:

- Measurement of tilt angle of PV panels
- Connection to irradiance and temperature probes
- Real-time display of irradiance and temperature values of PV modules
- Connection to a Master unit via Bluetooth connection
- Synchronization with a Master unit to start recordings
- Power supply through alkaline or rechargeable batteries with USB-C connection

PREPARATION FOR USE

INITIAL CHECKS

Before shipping, the instrument has been checked from an electric as well as a mechanical point of view. All possible precautions have been taken so that the instrument is delivered undamaged. However, we recommend generally checking the instrument in order to detect possible damage suffered during transport. In case anomalies are found, immediately contact the forwarding agent. We also recommend checking that the packaging contains all components indicated in § 7.3.1. In case of discrepancy, please contact the Dealer. In case the instrument should be returned, please follow the instructions given in § 8

DURING USE

Please carefully read the following recommendations and instructions:

CAUTION

- Failure to comply with the caution notes and/or instructions may damage the instrument and/or its components or be a source of danger for the operator.
- The symbol  indicates that the batteries are low. Stop testing and replace or recharge the batteries according to the indications given in § 6.1.
- When the instrument is connected to the circuit being tested, never touch any terminal, even if unused.

AFTER USE

When measurements are completed, turn off the instrument by pressing and holding the ON/OFF key for a few seconds. If the instrument is not to be used for a long time, remove the batteries.

POWER SUPPLY

The instrument is powered by 2×1.5V batteries type AA IEC LR06 or 2×1.2V NiMH type AA rechargeable batteries. The condition of low batteries corresponds to the appearance of “low battery ” on the display. To replace or recharge the batteries, see § 6.1

STORAGE

To guarantee precise measurement, after a long storage time under extreme environmental conditions, wait for the instrument to come back to normal operating conditions (see § 7.2).

NOMENCLATURE

DESCRIPTION OF THE INSTRUMENT

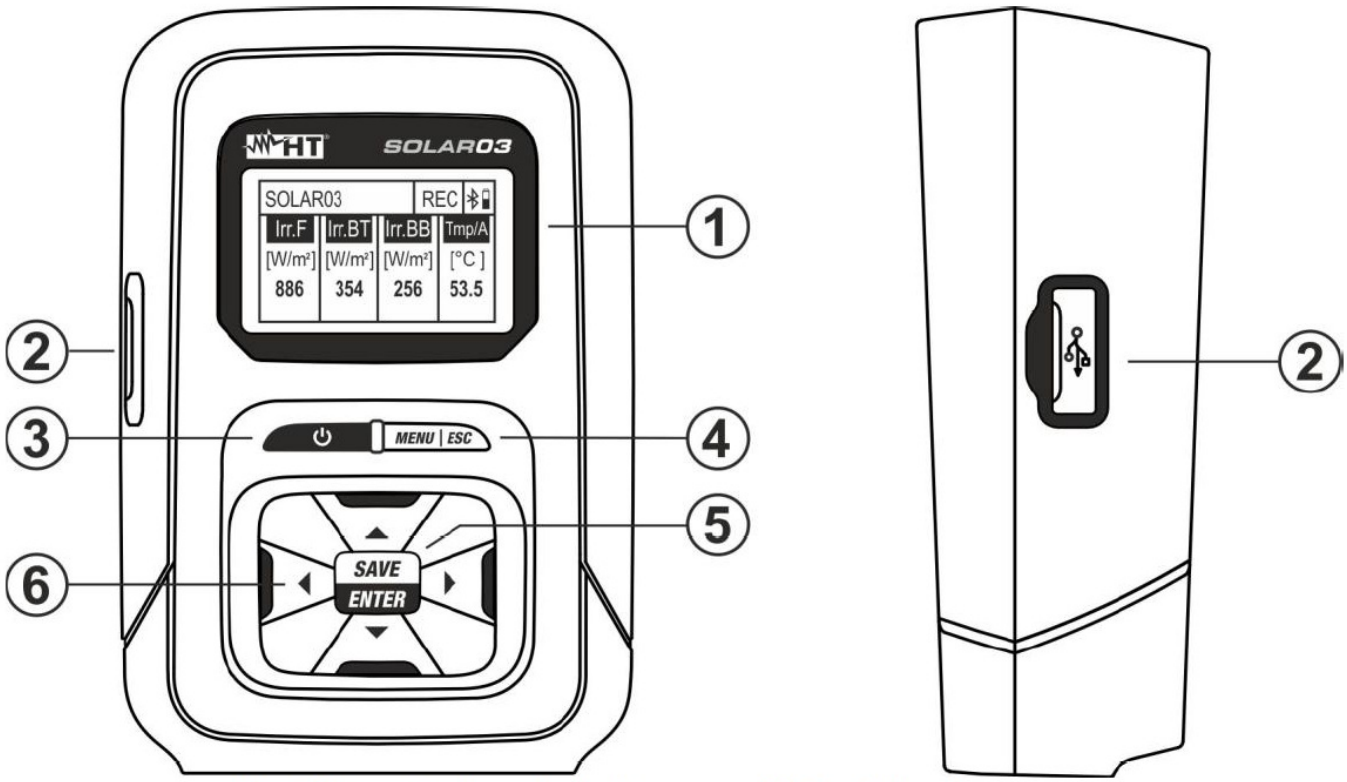


Fig. 1 Description of the front and side of the instrument

1. LCD display
2. USB-C input
3. Key ⏻ (ON/OFF)
4. Key MENU/ESC
5. Key SAVE/ENTER
6. Arrow keys ▶ ◀ ▼ ▲

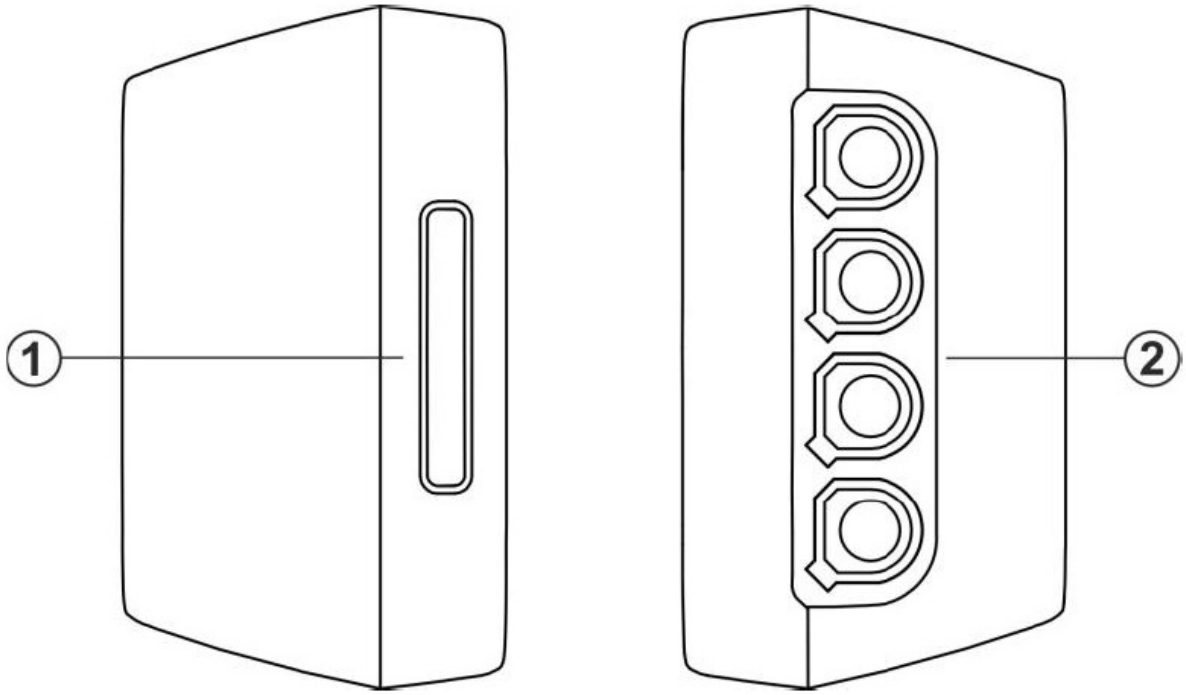


Fig. 2 Description of the upper and bottom side of the instrument

1. Slot for insertion of strap belt with magnetic terminal
2. Inputs INP1… INP4

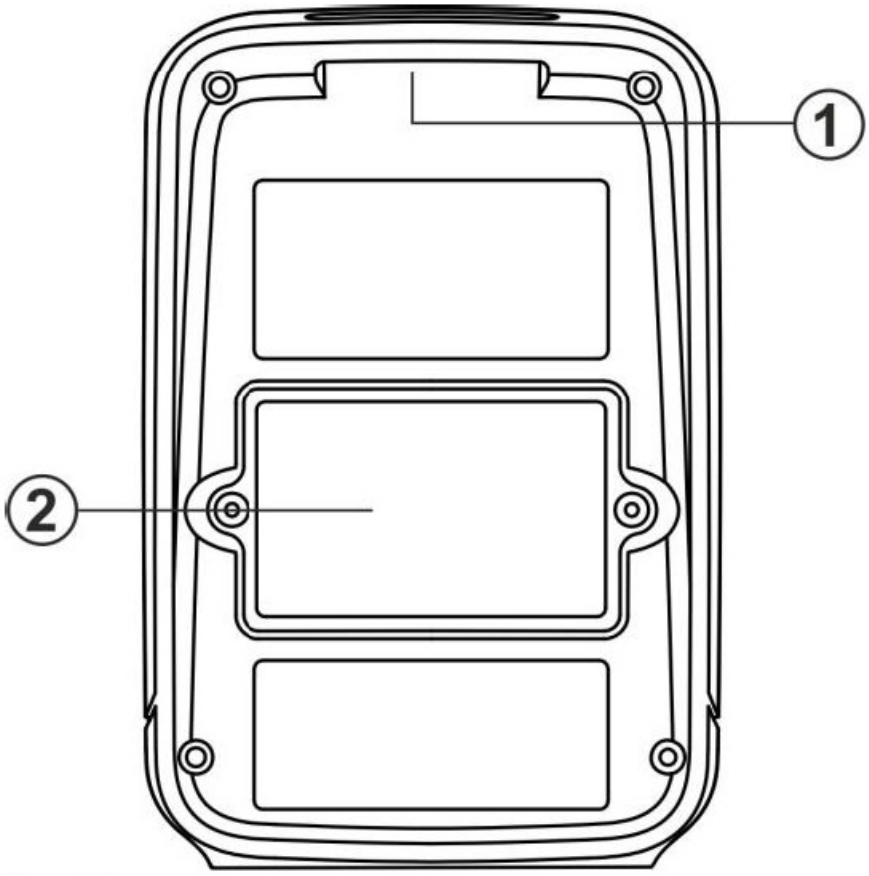


Fig. 3 Description of the instrument's back

1. Slot for insertion of strap belt with magnetic terminal
2. Battery compartment cover

DESCRIPTION OF FUNCTION KEYS

-  **Key ON/OFF**

  Press and hold the key for at least 3s to switch on or off the instrument

-  **Key MENU/ESC**

  Press key MENU to access the instrument's general menu. Press key ESC to exit and go back to the initial screen

-  **Key SAVE/ENTER**

  Press key SAVE to save a setting within the instrument. Press key ENTER to confirm the selection of the parameters within the programming menu

- ▶ ◀ ▼ ▲**Arrow keys**

  Keys used within the programming menu to select the values of the parameters

SWITCHING ON/OFF THE INSTRUMENT

1. Press and hold the key ⏻ for approx. 3s to switch on/off the instrument.
2. The screen to the side indicating the model, manufacturer, serial number, internal firmware (FW) and hardware (HW) version,and the date of the last calibration is shown by the unit for a few seconds
3. The screen to the side, which indicates that no probe is connected (indication "Off") to inputs INP1… INP4 is shown on the display. The meaning of the symbols is the following:
   - Irr. F → Irradiance of the module's front (monofacial)
   - Irr. BT → Irradiance of the top part of the (Bifacial) module's back
   - Irr. BB → Irradiance of the bottom part of the (Bifacial) module's back
   - Tmp/A → Cell temperature/tilt angle of the module with regard to the horizontal plane (tilt angle)
   - ᛒ → Symbol of active Bluetooth connection (steady on the display) or searching for a connection (flashing on the display)

     CAUTION

     The "Irr. BT" and "Irr. BB" inputs can be in the "Off" state even with reference cells correctly connected if, during the communication of the SOLAR03 with the Master instrument, a Monofacial module type should be set on the latter. Check that a Bifacial module should be set on the Master instrument
4. Press and hold the key ⏻ for a few seconds to switch off the unit

SOLAR03 HT ITALIA

- **S/N:** 23123458
- **HW: 1.01 – FW:** 1.02
- **Calibration Date:** 22/03/2023

SOLAR03			
Irr. F	Irr. BT	Irr. BB	Tmp/A
[Off]	[Off]	[Off]	[Off]

OPERATING INSTRUCTIONS

FOREWORD

The remote unit SOLAR03 carries out the following measurements:

- Inputs INP1…INP3 → measurement of Irradiance (expressed in W/m2) on Monofacial (INP1) and Bifacial (INP1 front and INP2 + INP3 back) modules through sensor(s) HT305
- Input INP4 → measurement of Temperature of PV modules (expressed in °C) through sensor PT305 (only in connection with the Master unit – see Table 1)

The remote unit SOLAR03 operates in the following modes:

- Independent operation with no connection to a Master instrument for measurement in real time of irradiance values
- Operation in Bluetooth BLE connection with a Master instrument for the transmission of irradiance and temperature values of PV modules
- Recording synchronized with a Master instrument, to record the PV modules' irradiance and temperature values to be sent to the Master instrument at the end of the test sequence

GENERAL MENU

1. Press key MENU. The screen on the side appears on the display. Use the arrow keys and press key ENTER to enter the internal menus.
2. **The following menus are available:**
    - SETTINGS → allows showing the probes' data and setting, the system language and the Auto Power Off
    - MEMORY → allows showing the list of saved recordings (REC), see the residual space and deleting the memory's content
    - PAIRING → allows pairing with the Master unit via Bluetooth connection
    - HELP → activates the help on line on the display and shows the connection diagrams
    - INFO → allows displaying the data of the remote unit: serial number, internal version of FW and HW
    - STOP RECORDING → (displayed only after a recording has been started). It allows stopping a recording of the irradiance/temperature parameters in progress on the remote unit, previously started by a Master instrument paired with it (see § 5.4)

SOLAR03		
SETTINGS		
MEMORY		
PAIRING		
HELP		
INFO		
STOP RECORDING		

CAUTION
If a recording is stopped, the values of irradiance and temperature will be missing for all measurements carried out by the Master instrument afterwards

Settings Menu

1. Use the arrow keys ▲or ▼select the menu “Inputs” as shown to the side and press ENTER. The following screen appears on the display

SOLAR03	SET	
Inputs		
Country & Language		
Auto Power Off		

2. Connect the reference cell HT305 to the input INP1 (monofacial module) or the three reference cells to the inputs INP1, INP2 and INP3 (Bifacial module). The instrument automatically detects the serial number of the cells and shows it on the display as indicated in the screen to the side. In case detection fails, the serial number is not valid or a cell is damaged, the message “Fault” appears on the display.

SOLAR03	SET	
Irr Front (F):	23050012	
Irr Back (BT):	23050013	
Irr Back (BB):	23050014	
Input 4	ƒ1 x °C „	

3. **In case of connection of the input INP4, the following options are available:**
    - Off → no temperature probe connected
    - 1 x °C → temperature probe PT305 connection (recommended)
    - 2 x °C → coefficient for the connection of a double temperature probe (currently not available)
    - Tilt A → setting of the measurement of the modules’ tilt angle with respect to the horizontal plane

(indication “Tilt” on the display)

CAUTION: The values of sensitivity of the connected cells are automatically detected by the remote unit with no need for the user to set them

4. Use the arrow keys ▲or ▼select the menu “Country & language” as shown to the side and press SAVE/ ENTER. The following screen appears on the display

SOLAR03	SET	
Inputs		
Country & Language		
Auto Power Off		

5. Use the arrow keys ◀ or ▶to set the desired language
6. Press key SAVE/ENTER to save the set values or ESC to go back to the main menu

SOLAR03	SET	
Language	English	

7. Use the arrow keys ▲or▼select the menu “Auto Power Off” as shown to the side and press SAVE/ ENTER. The following screen appears on the display

SOLAR03	SET	
Inputs		
Country & Language		
Auto Power Off		

8. Use the arrow keys ◀ or ▶to set the desired auto power off time in the values: OFF (disabled), 1Min, 5Min, 10Min
9. Press key SAVE/ENTER to save the set values or ESC to go back to the main menu

SOLAR03	SET	
AutoPowerOff	OFF	

Menu Memory

1. The menu “Memory” allows displaying the list of the recordings saved in the instrument’s memory, the residual space (bottom part of the display) and deleting the saved recordings.
2. Use the arrow keys ▲or ▼select the menu “DATA” as shown to the side and press SAVE/ ENTER. The following screen appears on the display

SOLAR03	MEM	
DATA		
Clear last recording		
Clear all data?		
18 Rec, Res: 28g, 23h		

3. The instrument shows on the display the list of recordings in a sequence (max 99), saved in the internal memory. For recordings, the initial and final dates are indicated
4. Press the ESC key to exit the function and go back to the previous menu

SOLAR03		MEM	
REC1:	15/03	16/03	
REC2:	16/03	16/03	
REC3:	17/03	18/03	
REC4:	18/03	19/03	
REC5:	20/03	20/03	
REC6:	21/03	22/03	

5. Use the arrow keys ▲or ▼select the menu “Clear last recording” to delete the last recording saved in the internal memory as shown to the side and press key SAVE/ENTER. The following message is shown on the display

SOLAR03	MEM	
DATA		
Clear last recording		
Clear all data		
6 Rec, Res: 28g, 23h		

6. Press the SAVE/ ENTER key to confirm or the ESC key to exit and go back to the previous menu

SOLAR03	MEM	
Clear last recording? (ENTER/ESC)		

7. Use the arrow keys ▲or ▼select the menu “Clear all data” to delete ALL recordings saved in the internal memory as shown to the side and press key SAVE/ENTER. The following message is shown on the display

SOLAR03	MEM	
DATA		
Clear last recording?		
Clear all data?		
18 Rec, Res: 28g, 23h		

8. Press the SAVE/ ENTER key to confirm or the ESC key to exit and go back to the previous menu

SOLAR03	MEM	
Clear all data? (ENTER/ESC)		

Menu Pairing

The remote unit SOLAR03 needs to be paired (Pairing) via Bluetooth connection to the Master unit upon first use. Proceed as follows:

1. Activate, on the Master instrument, re pairing request (see the relevant instruction manual)
2. Use the arrow keys ▲or▼ select the menu “PARING” as shown to the side and press key SAVE/ENTER. The following screen appears on the display

SOLAR03		
SETTINGS		
MEMORY		
PAIRING		
HELP		
INFO		

3. Upon the request for pairing, confirm with SAVE/ENTER to complete the pairing procedure between the remote unit and the Master instrument.
4. Once completed, the symbol “  ” appears steady on the display

SOLAR03		
Pairing… Press ENTER		

CAUTION
This operation is only necessary upon the first connection between the Master instrument and the remote unit SOLAR3. For subsequent connections, it is sufficient to position the two devices next to each other and to switch them on

Menu Help

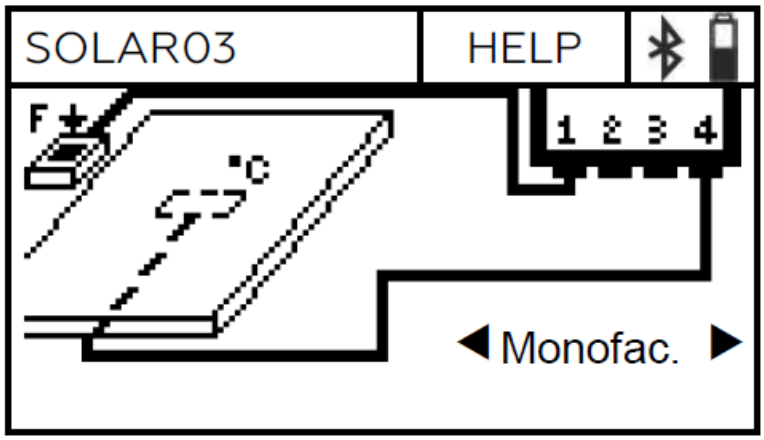
1. Use the arrow keys ▲or▼, select the menu “HELP” as shown to the side and press key SAVE/ENTER. The following screen appears on the display

SOLAR03		
SETTINGS		
MEMORY		
PAIRING		
HELP		
INFO		

2. Use the arrow keys ◀or ▶to cyclically display the help screens for the connection of the instrument to the optional irradiance/temperature probes in case of Monofacial or Bifacial modules. The screen to the side

appears on the display

3. Press the ESC key to exit the function and go back to the previous menu



Menu Info

1. Use the arrow keys ▲or ▼select the menu “INFO” as shown to the side and press key SAVE/ENTER. The following screen appears on the display

SOLAR03		
SETTINGS		
MEMORY		
PAIRING		
HELP		
INFO		

2. **The following information about the instrument are shown on the display:**
   - Model
   - Serial Number
   - Internal version of the Firmware (FW)
   - Internal version of the Hardware (HW)

SOLAR03	INFO	
Model:	SOLAR03	
Serial number:	23050125	
FW:	1.00	
HW:	1.02	

3. Press the ESC key to exit the function and go back to the previous menu

DISPLAY ENVIRONMENTAL PARAMETERS VALUES

The instrument allows the real-time display of the modules’ irradiance and temperature values. The temperature

measurement of the modules is ONLY possible if it is coupled to a Master unit. The measurements are performed using probes connected to it. It is also possible to measure the angle of inclination of the modules (tilt angle).

1. Switch on the instrument by pressing a key .
2. Connect one reference cell HT305 to input INP1 in case of Monofacial modules. The instrument automatically detects the presence of the cell, providing the value of irradiance expressed in W/m2. The screen to the side appears on the display

SOLAR03			
Irr. F	Irr. BT	Irr. BB	Tmp/A
[W/m2]	[Off]	[Off]	[Off]
754			

3. In case of Bifacial modules, connect the three reference cells HT305 to the inputs INP1…INP3: (INP1 for Front Irr., and INP2 and INP3 for Back Irr.). The instrument automatically detects the presence of the cells, providing the corresponding values of irradiance expressed in W/m2. The screen to the side appears on the display

SOLAR03			
Irr. F	Irr. BT	Irr. BB	Tmp/A
[W/m2]	[W/m2]	[W/m2]	[Off]
754	325	237	

4. Connect the PT305 temperature probe to the INP4 input. The instrument recognizes the presence of the probe ONLY after being coupled to a Master instrument (see § 5.2.3) providing the module temperature value expressed in °C. The screen to the side is shown on the display

SOLAR03			
Irr. F	Irr. BT	Irr. BB	Tmp/A
[W/m2]	[W/m2]	[W/m2]	[°C]
754			43

5. Rest the remote unit onto the module's surface. The instrument automatically provides the value of the module's tilt angle with respect to the horizontal plane, expressed in [°]. The screen to the side appears on the display

SOLAR03			
Irr. F	Irr. BT	Irr. BB	Tmp/A
[W/m2]	[W/m2]	[W/m2]	[Tilt]
754			25

CAUTION
The values read in real time are NOT saved in the internal memory

RECORDING VALUES OF PARAMETERS
The remote unit SOLAR03 allows saving in the instrument's internal memory the references of the recordings over time of irradiance/temperature values during a measuring campaign carried out by the Master instrument to which it was associated.

CAUTION

- Recording of irradiance/temperature values can ONLY be started by the Master instrument associated with the remote unit.
- The recorded values of irradiance/temperature CANNOT be recalled on the remote unit's display, but can only be used by the Master instrument, to which they are sent once measurements are complete, to save STC values

1. Associate and connect the remote unit to the Master instrument via Bluetooth connection (see the Master instrument's user manual and § 5.2.3). The symbol "" must turn on steadily on the display.
2. Connect the irradiance and temperature probes to the remote unit, checking their values beforehand in real time (see § 5.3)
3. Activate the recording of SOLAR03 through the relevant control available on the associated Master instrument (see the Master instrument's user manual). The indication "REC" is shown on the display as indicated in the screen to the side. Recording interval is always 1s (cannot be changed). With this sampling interval it is possible to carry out recordings with the duration indicated in section "Memory"

SOLAR03		REC	
Irr. F	Irr. BT	Irr. BB	Tmp/A
[Off]	[Off]	[Off]	[Off]

4. Bring the remote unit near the modules and connect the irradiance/temperature probes. Since SOLAR03 will record all values with an interval of 1s, the Bluetooth connection with the MASTER unit is NO longer strictly necessary
5. Once measurements carried out by the Master unit are complete, bring the remote unit near again, wait for the

automatic connection and stop recording on the Master instrument (see the relevant user manual). The indication “REC” disappears from the display of the remote unit. Recording is automatically saved in the remote unit’s memory (see § 5.2.2)

6. At any time it is possible to manually stop the recording of parameters on the remote unit. Use the arrow keys ▲or▼, select control “STOP RECORDING” as shown to the side and press key SAVE/ENTER. The following screen appears on the display

SOLAR03		
HELP		
INFO		
STOP RECORDING		

7. Press key SAVE/ ENTER to confirm that recording should be stopped. The message “WAIT” shortly appears on the display and recording is automatically saved

SOLAR03		
Stop recording? (ENTER/ESC)		

CAUTION
In case recording is stopped from the remote unit, values of irradiance/temperature will be missing for the measurements subsequently carried out with the Master instrument, and therefore measurements @STC will not be saved

MAINTENANCE

CAUTION

- To prevent possible damage or danger while using or storing the instrument, carefully observe the recommendations listed in this manual.
- Do not use the instrument in environments with high humidity levels or high temperatures. Do not expose to direct sunlight.
- In case the instrument is not to be used for a long time, remove the alkaline batteries to avoid liquid leaks that could damage the internal circuits

REPLACING OR RECHARGING THE BATTERIES

The presence of symbol “  ” on the display indicates that the internal batteries are low and that it is necessary to replace them (if alkaline) or recharge them (if rechargeable). For this operation, proceed as follows:

Battery replacement

1. Switch off remote unit SOLAR03
2. Remove any probe from its inputs
3. Open the battery compartment cover on the back (see Fig.3 – part 2)

4. Remove the low batteries and replace them with the same number of batteries of the same type (see § 7.2), respecting the indicated polarity.
5. Restore the battery compartment cover to its position.
6. Do not scatter old batteries into the environment. Use the relevant containers for disposal. The instrument is capable of keeping data stored even without batteries.

Recharging the internal battery

1. Keep the remote unit SOLAR03 switched on
2. Remove any probe from its inputs
3. Connect the USB-C/USB-A cable to the instrument's input (see Fig.1 – part 2) and to a USB port of a PC. The symbol  is shown on the display, to indicate that recharging is in progress.
4. As an alternative, it is possible to use the optional external battery charger (see attached packing list) to recharge the rechargeable batteries
5. Periodically check battery charge status by associating the remote unit to the Master instrument and opening the information section (see the relevant user manual

CLEANING
Use a soft and dry cloth to clean the instrument. Never use wet cloths, solvents, water, etc.

TECHNICAL SPECIFICATIONS

TECHNICAL CHARACTERISTICS
Accuracy is indicated at reference conditions: 23°C, <80%RH

Irradiance – Inputs INP1, INP2, INP3		
Range [W/m^2]	**Resolution [W/m^2]**	**Accuracy (*)**
0 ¸ 1400	1	±(1.0%reading + 3dgt)

(*) Accuracy of the sole instrument, without probe HT305

Module temperature – Input INP4		
Range [°C]	**Resolution [°C]**	**Accuracy**
-40.0 ¸ 99.9	0.1	±(1.0%reading + 1°C)

Tilt angle (internal sensor)		
Range [°]	**Resolution [°]**	**Accuracy (*)**
1 ¸ 90	1	±(1.0%reading+1°)

(*) Accuracy referred to the range: 5° ÷ 85°

GENERAL CHARACTERISTICS

Reference guidelines	
Safety:	IEC/EN61010-1
EMC:	IEC/EN61326-1
Display and internal memory	
Characteristics:	LCD graphic, COG, 128x64pxl, with backlight
Updating frequency:	0.5s
Internal memory:	max 99 recordings (linear memory)
Duration:	ca. 60 hours (fixed sampling interval 1s)

Available connections	
Master unit:	Bluetooth BLE (up to 100m on open field)
Battery charger:	USB-C

Characteristics of Bluetooth module	
Frequency range:	2.400 ¸ 2.4835GHz
R&TTE category:	Class 1
Max transmission power:	<100mW (20dBm)

Power supply	
Internal power supply:	2×1.5V alkaline type AA IEC LR06 or
	2×1.2V rechargeable NiMH type AA
External power supply:	5VDC, >500mA DC
	PC connection through USB-C cable
Recharging time:	approx. 3 hours max
Battery duration:	approx 24h (alkaline and >2000mAh)
Auto Power OFF:	after 1,5,10 minutes' idling (disabled)

Input connectors	
Inputs INP1 … INP4):	custom HT 5-pole connector

Mechanical characteristics	
Dimensions (L x W x H):	155x 100 x 55mm (6 x 4 x 2in)
Weight (batteries included):	350g (12ou)
Mechanical protection:	IP67

Environmental conditions for use	
Reference temperature:	23°C ± 5°C (73°F ± 41°F)
Operating temperature:	-20°C ÷ 80°C (-4°F ÷ 176°F)
Relative operating humidity:	<80%RH
Storage temperature:	-10°C ÷ 60°C (14°F ÷ 140°F)
Storage humidity:	<80%RH
Max height of use:	2000m (6562ft)

- This instrument complies with Directives LVD 2014/35/EU, EMC 2014/30/EU and RED 2014/53/EU
- This instrument satisfies the requirements of European Directive 2011/65/EU (RoHS) and 2012/19/EU (WEEE)

ACCESSORIES: **Provided accessories**
See the attached packing list

SERVICE

WARRANTY CONDITIONS
This instrument is warranted against any material or manufacturing defect, in compliance with the general sales conditions. During the warranty period, defective parts may be replaced. However, the manufacturer reserves the right to repair or replace the product. Should the instrument be returned to the After-sales Service or to a Dealer, transport will be at the Customer's charge. However, shipment will be agreed in advance. A report will always be enclosed to a shipment, stating the reasons for the product's return. Only use original packaging for shipment; any damage due to the use of nonoriginal packaging material will be charged to the Customer. The manufacturer declines any responsibility for injury to people or damage to property.

The warranty shall not apply in the following cases:

- Repair and/or replacement of accessories and batteries (not covered by warranty).
- Repairs that may become necessary because of an incorrect use of the instrument or due to its use together with non-compatible appliances.
- Repairs that may become necessary because of improper packaging.
- Repairs which may become necessary because of interventions performed by unauthorized personnel.
- Modifications to the instrument performed without the manufacturer's explicit authorization.
- Use not provided for in the instrument's specifications or in the instruction manual.

SERVICE
If the instrument does not operate properly, before contacting the After-sales Service, please check the conditions of the battery and replace it, if necessary. Should the instrument still operate improperly, check that the product is operated according to the instructions given in this manual. Should the instrument be returned to the After-sales Service or to a Dealer, transport will be at the Customer's charge. However, shipment will be agreed in advance. A report will always be enclosed to a shipment, stating the reasons for the product's return. Only use original packaging for shipment; any damage due to the use of non-original packaging material will be charged to the Customer

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WHERE WE ARE

FAQ

Q: How do I replace or recharge the batteries?
A: Refer to section 6.1 in the user manual for instructions on replacing or recharging batteries.

Q: What are the general technical specifications of SOLAR03?
A: The technical specifications can be found in section 7 of the user manual.

Documents / Resources

	HT INSTRUMENTS PVCHECKs-PRO SOLAR03 Curve Tracer [pdf] User Manual I-V600, PV-PRO, HT305, PT305, PVCHECKs-PRO SOLAR03 Curve Tracer, SOLAR03 Curve Tracer, Curve Tracer, Tracer

References

- User Manual