



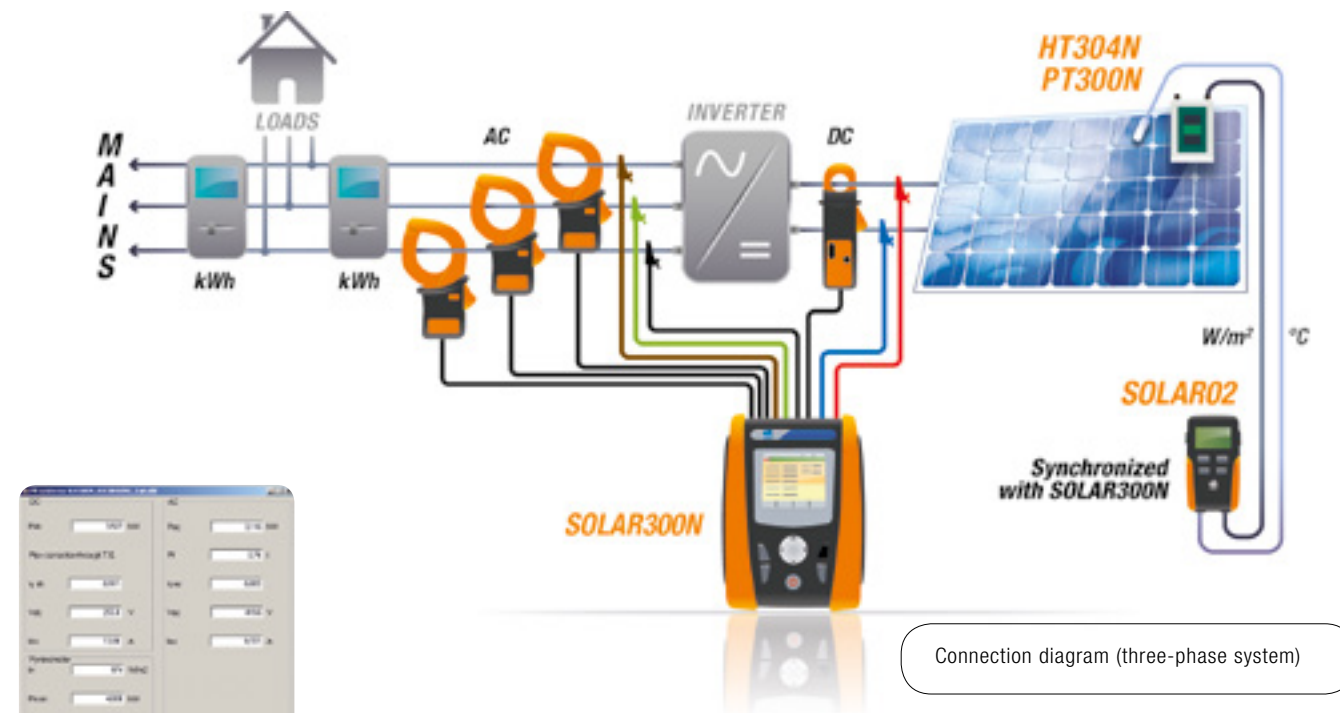
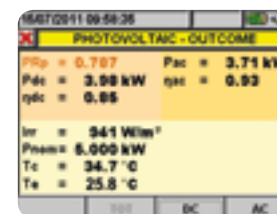
MULTIFUNCTION DEVICE FOR VERIFICATION  
OF SINGLE-PHASE AND THREE-PHASE  
PV SYSTEM EFFICIENCY AND POWER QUALITY ANALYSIS  
IN COMPLIANCE WITH STANDARD EN50160

- › New **touchscreen interface**
- › Verification of the **efficiency** of the photovoltaic system
- › **Analysis of power quality** and **energy consumption**

SOLAR300N tests **single-phase and three-phase photovoltaic systems**. For this kind of tests, it is necessary to guarantee **simultaneity** between power measurements carried out at the inverter and irradiation and temperature measurements carried out on the photovoltaic panels.

HT Instruments has introduced a **remote measuring device SOLAR02** which **acquires the values of solar Irradiation [W/m²], panel Temperature [°C] and environmental Temperature [°C] and transfers them onto SOLAR300N**, which inserts them onto the same string of power measurements and then elaborates them with the simultaneity required by the law in force.

SOLAR300N is not only a device for testing PV systems, but **also a powerful device for a complete analysis of power quality** according to standard EN50160 (harmonic analysis, voltage anomalies, flickers, unbalance, etc.).

Photovoltaic testing result  
on PC application TOPVIEW.

### Photovoltaic testing result.

## SOLAR300N IS ALSO AN ANALYZER FOR POWER QUALITY AND ENERGY CONSUMPTION

- Harmonics
- Analysis of recordings
- Measurement of energy consumption
- Flicker
- Voltage anomalies and spikes
- Inrush currents
- Vectors and waveforms

### Efficiency measurements of the photovoltaic system

- DC/AC TRMS voltage (single-phase and three-phase)
- DC/AC TRMS current (single-phase and three-phase)
- DC/AC active power (single-phase and three-phase)
- Power factor  $\cos \varphi$  (single-phase and three-phase)
- Solar irradiation
- Panel and environmental temperature
- Display of testing result (OK/NOT OK)
- Remote unit SOLAR02 for measuring irradiation and temperature
- Periodic recording of power parameters with programmable PI

### Analysis of power and energy consumption

- Recording of voltage and current harmonics (up to the 49th)
- Recording of voltage anomalies (dips, peaks) with resolution 10ms
- Flicker analysis according to EN50160
- Recording of Inrush Currents with resolution 10ms
- Recording of voltage spikes with resolution 5µs
- Complete analysis of power quality according to EN50160
- Touchscreen colour display
- Internal memory and USB output for PC connection
- Power supply with rechargeable Li-ION battery
- Rechargeable internal battery
- Help on line on the display
- Management of USB Pen Drive and compact flash card

Display:

<b>Display:</b>	Colour touchscreen with adjustable brightness
<b>Power supply:</b>	Rechargeable Li-ION, 3.7V battery
<b>Internal memory:</b>	15MB (duration 1 month @ IP=15min, 251 parameters)
<b>External memory:</b>	Compact Flash (CF) card
<b>PC interface:</b>	USB 2.0
<b>Safety:</b>	IEC/EN61010-1
<b>Insulation:</b>	double insulation
<b>Pollution level:</b>	2
<b>Measurement category:</b>	CAT IV 600V (to earth) CAT III 1000V (between inputs)
<b>Unbalance:</b>	IEC/EN61000-4-7
<b>Power quality:</b>	IEC/EN50160
<b>Flicker:</b>	IEC/EN61000-4-15
<b>Reference standard and class:</b>	IEC/EN61000-4-30 Class B
<b>Size:</b>	235x165x75mm
<b>Weight (batteries included):</b>	1kg

<b>SOLAR02</b>	Remote unit for Irradiation and Temperature
<b>KIT800</b>	Set of 5 cables + 5 alligator clips
<b>HT4005K</b>	Standard 200A AC clamp, diameter 40mm (3pcs)
<b>HT4004N</b>	Standard 10-100A DC clamp, diameter 32mm
<b>HT304N</b>	Sensor for irradiation measurement
<b>PT300N</b>	PT1000 probe for PV modules temperature
<b>A0055</b>	External AC/DC battery charger power supply 230V 50/60Hz*
<b>YABAT0003HT1</b>	Rechargeable Li-ION battery
<b>PT400</b>	Touch-screen pen
<b>TOPVIEW2007</b>	Windows software + USB C2007 cable
<b>VA500</b>	Rigid carrying case
	User Manual
	Quick guide
	ISO9000 calibration certificate

(\*) Please check accessory line to find the correct power adapter for your country

<b>MPP300</b>	Accessory for (AC) three-phase efficiency verification up to (3MPPT)
<b>HT4005N</b>	Standard AC 0÷5A, 0÷100A clamp, diameter 20mm
<b>HT96U</b>	Standard 1-100-1000A AC clamp, diameter 54mm
<b>HT97U</b>	Standard 10-100-1000A AC clamp, diameter 54mm
<b>HP30C2</b>	Standard 200-2000A AC clamp, diameter 70mm
<b>HP30C3</b>	Standard 3000A AC clamp, diameter 70mm
<b>HT98U</b>	Standard 1000A DC clamp, diameter 50mm
<b>HP30D1</b>	Standard clamp, diameter 83mm 1000A DC
<b>HTFLEX33E*</b>	Flex 3000A clamp, for power analysis, diameter 174mm
<b>HTFLEX35*</b>	Flex 3000A clamp, for power analysis, diameter 274mm
<b>HT903</b>	3x1-5A/1V box for TA connection
<b>SP-0400</b>	Shoulder strap to use the device with free hands
<b>606-IECN</b>	Magnetic connectors for voltage measurement
<b>A0056</b>	115V/50-60Hz power supply with American plug
<b>CF800</b>	1Gb Compact flash card
<b>MCR800</b>	Compact flash card reader

(\*) can be used only for power analysis