

## MPP300

### ACCESSORY FOR MEASURING AND RECORDING THE EFFICIENCY OF SINGLE-PHASE AND THREE-PHASE MULTI-STRING SYSTEMS

The innovative accessory MPP 300, used together with SOLAR 300N or SOLAR I-V, allows measuring and recording the main parameters which characterise single-phase and three-phase, single-string and multi-string (up to three strings) photovoltaic systems. MPP 300 is perfect for use in systems with three-MPPT three-phase inverter and in three-phase systems provided with three single-phase inverters.

MPP 300 is provided with a practical anti-shock "field" case, lightweight and small in size. The front panel carries the LEDs for operating information and the DC and AC inputs for upstream and downstream connection of the inverter(s). MPP 300 interfaces with SOLAR 300N via USB connection and SOLAR I-V via wireless connection. SOLAR 300N and SOLAR I-V are used for MPP 300 settings, to start/stop recording electrical and environmental parameters and to enable the download of the recorded values. The distance between the photovoltaic modules and the inverter is often considerable, and this forces the operator to carry out measurements in different places at the same time. Therefore, it would be necessary to lay long connection cables between the environmental probes and the instrument. These cables could hamper the operator's movements, be a hindrance, etc. This kind of connection is therefore not acceptable. In case of photovoltaic installations on buildings, the so-called photovoltaic roofs, in addition to the problem of the distance between modules and inverter, the presence of floors, of reinforced concrete or metal structures, etc. must be taken into consideration. These structures would make a possible (wireless) radio connection between the environmental probes and the instrument impossible, because of signal attenuation. In order to avoid the above-mentioned problems and to carry out measurements with the necessary contemporaneity, MPP 300 is synchronised with the remote unit SOLAR-02 (provided as standard accessory of master instrument SOLAR 300N or SOLAR I-V). The remote unit SOLAR-02 is positioned next to the photovoltaic modules and it is connected to the probes for measuring environmental parameters (irradiation and temperature). MPP 300 is connected upstream and downstream of the inverter in order to acquire the electric parameters (continuous power and alternating power). The synchronisation between the two units guarantees the necessary contemporaneity of measurements, the two separate and independent units make measurements comfortable and safe.

The master instrument SOLAR 300N or SOLAR I-V is only used in the initial and final phase of recording, and it does not play any active role while recording electrical and environmental parameters. Therefore, while MPP300 and SOLAR-02 respectively record the electrical and environmental parameters of the system being measured, it is possible to use the master instrument SOLAR300N or SOLAR I-V for carrying out other measurements. For example, with SOLAR I-V it is possible to measure the I-V characteristics of strings and modules.

#### FUNCTIONS

- DC/AC TRMS voltage meas. (single-phase and three-phase)
- DC/AC TRMS current meas. (single-phase and three-phase)
- DC/AC power measurement (single-phase and three-phase)
- Power factor measurement (single-phase and three-phase)
- Simultaneous measurements up to 3 strings (max 3 MPPT)
- Connection with master unit SOLAR 300N and SOLAR I-V
- Power supply with rechargeable Li-ION battery
- LED operating indications
- USB port for connection to unit SOLAR 300N
- RF connection for connection to SOLAR-02 and SOLAR I-V
- Internal memory for saving recordings

#### MODEL SPECIFICATIONS

Inputs:	3 DC voltage channels (CH1, CH2, CH3), 3 DC current inputs (CH1, CH2, CH3), 4 AC voltage inputs (L1, L2, L3, N), 3 AC current inputs (L1, L2, L3)
Front panel:	4 two-colour LEDs (green, red)
Power supply:	Rechargeable Li-Ion battery. Duration > 3 hours
Internal memory:	2 MBytes
External interface:	USB + RF
Safety:	IEC/EN61010-1
Insulation:	double insulation
Pollution degree:	2
Mechanical protection:	IP40 (open), IP65 (closed)
Measurement category:	CAT IV 300 V AC (to earth), 600 V AC (between inputs) CAT III 1000 V DC (to earth), 1000 V DC (between inputs)
Dimensions:	300 x 265 x 140 mm
Weight (batteries included):	2.3 kg



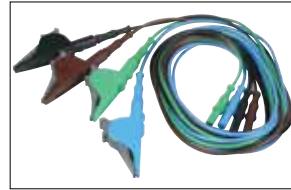
Useful carrying case for transport

## MPP300

## ACCESSORIES

Set of 2 cables, 2m, for DC voltage measurement, 3pcs  
 Set of 2 alligator clips for DC voltage measurement, 3pcs  
 Set of 4 cables, 2m, for AC voltage measurement  
 Set of 4 alligator clips for AC voltage measurement  
 Rechargeable Li-Ion battery  
 AC/DC battery charger power supply  
 USB cable  
 Carrying bag for accessories  
 Calibration certificate ISO9000

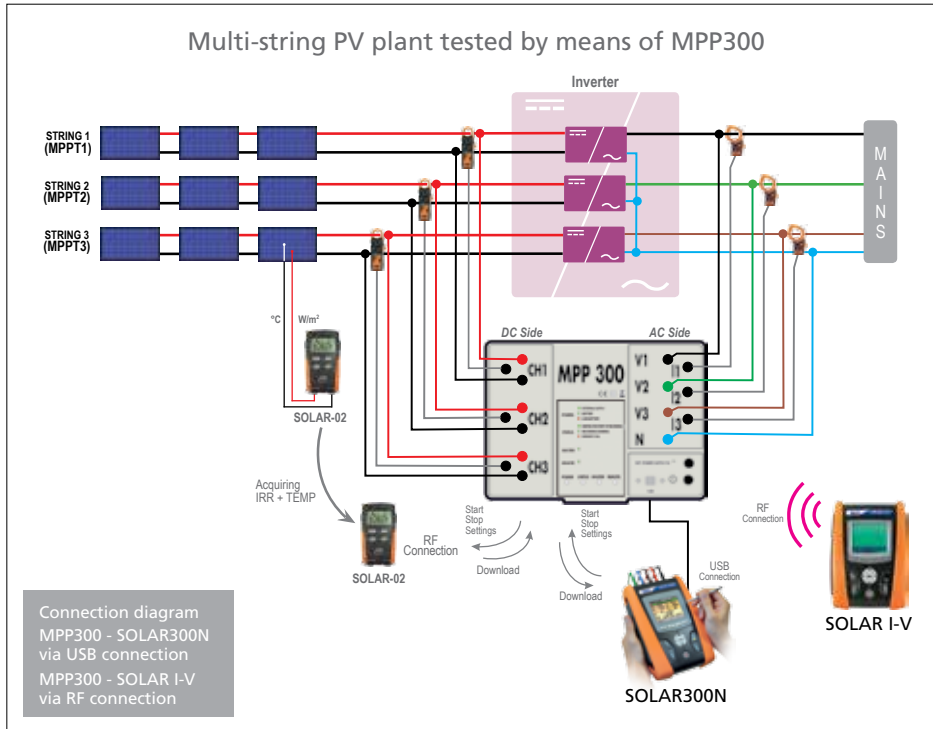
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KITMPPACW



KITMPPDCW (3 PCS)



## ACCESSORIES FOR SOLAR TESTERS

## HT4004P DC unbattered standard clamp

Ranges: 0 ÷ 10A; 0 ÷ 100A  
 Basic accuracy:  
 $\pm(1.0\%rdg+3mA)$  – Range 10A  
 $\pm(1.0\%rdg+30mA)$  – Range 100A  
 Output signal: 1V DC  
 Measurement category: CAT III 300V  
 Max clamping cable diameter: 32mm  
 Output connector: Hypertac 4 poles



## SP0400

Hands-free  
 kit



## HT4005K AC standard clamp



## HP30C2 AC standard clamps

Ranges: 0 ÷ 200A; 0 ÷ 2000A (HP30C2)  
 Range: 0 ÷ 3000A (HP30C3)  
 Basic accuracy:  $\pm 0.5\%rdg$   
 Output signal: 1V AC  
 Measurement category: CAT III 600V  
 Max clamping cable diameter: 70mm  
 Output connector: Hypertac



## HP30D1 DC standard clamp

Ranges: 10 ÷ 1000A  
 Basic accuracy:  $\pm 1.5\% \div 2mV$   
 Output signal: 1V AC  
 Measurement category: CAT III 600V  
 Max clamping cable diameter: 83mm  
 Output connector: Hypertac.

