

SOL.Connect® mpp meter

Universal measuring system to determine the location-specific power of pv modules

The SOL.Connect® mpp meter is a universal measurement system to determine the performance of modules at real operating conditions.

The SOL.Connect® measurement system integrates the ISET®-mpp meter measuring board into a complete solution for module manufacturers, PV-system providers and research facilities. The system allows reliable long-term measurements at various locations, even during rough weather conditions.

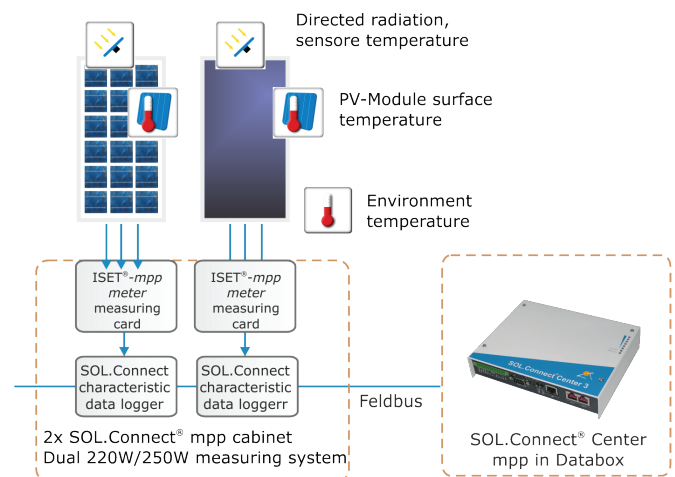
Within a measurement system an arbitrary number of test benches are each equipped with one ISET®-mpp meter measuring board. The PV modules are operated in MPP and are measured simultaneously under identical conditions logging the IU characteristic curves. Reference values such as irradiance and module temperature are recorded as well for evaluation purposes. This results in a timely synchronized data record of all test objects and sensors in a one minute pattern. The system is modular and ready for expansion within certain technical constraints.

The measurement data are collected by the SOL.Connect® data logger, buffered locally and uploaded as XML-files to the customer's centralized server. The database application SOL.Connect® PV Analyzer provides the user with all information necessary for effortless data analysis.

Apart from the components Papendorf Software Engineering provides as well an all-embracing portfolio of services from planning to turnkey supply and operation.



Measurements on field test sites at the customer side!



Features

- Performance assessment of PV-modules at any location
- Cyclical determination of IU-characteristics, U_{oc} , I_{sc} , U_{mpp} , I_{mpp} , irradiance, module temperature and of further data from optional sensors
- Operating modes for the PV-module: MPP, short circuit, idle state
- Recording interval 10 sec., 1 min., 5 min
- Synchronicity of all data channels
- Data logging by SOL.Connect® Center meter mpp data logger
- Compatible with SOL.Connect® PV.Analyzer database application

Technology

- Measurement equipment built in a sturdy stainless steel casing, IP54 in two variants:
 - Dual cabinet with a maximal performance of 2 modules of 300 Watt each ($I_{max} = 12.5 A$)
 - Booster cabinet with a maximal performance of 1 module of 400 Watt ($I_{max} = 20 A$)
- Integrated high performance cooling element
- Power supply: 24Vdc, 6W
- Operating temperature $-10^{\circ}C \dots +50^{\circ}C$
- ISET®-mpp meter measuring board, calibrated by Fraunhofer IWES
- Data transmission via RS485
- CE, Made in Germany