

Datasheet **MPPGUARD**[®]



The intelligent generator junction box for a central inverter

The **MPPGUARD**[®] is an intelligent generator junction box, which connects the solar panels and solar inverters. The **MPPGUARD**[®] combines the advantages of the central inverter concept for large systems with a decentralized MPP tracking. This novel technology allows thus a flexible plant design with optimized efficiency.




Minimized system losses, optimal working range

At large photovoltaic systems of conventional design constantly losses are caused by mismatches at the operating point of the system. Mismatching occurs through the production scattering of the modules as well as through the various temperatures and orientations in large systems. Through the completely new concept of the **MPPGUARD**[®] MPP-tracking on string level, the system always operates at the operating point. Mismatching losses are reliably minimized.

Flexible System design

Through the integrated MPP-Tracking in the **MPPGUARD**[®] is it first time possible, to flexible design large photovoltaic systems with the central inverter concept.

Your advantages at the design - operating on a Central Inverter:

-  various modules, different types and manufactures
-  various lengths of strings
-  different orientated system parts (inclination angle and southern exposure)

Integrated monitoring

Through the integrated string current monitoring system failures are reliably detected and reported via email. The data is transferred via RS-485 databus and is adapted to the web portal Control.

Easy Installation

The **MPPGUARD**[®] surrounded by a weatherproof housing of the protection class IP 65 and is prepared for a wall mounting. The simple installation is ensured by the extensive pre-wiring, so that only the strings of the modules and the data line have to be connected.

MPPGUARD[®] – product details

- MPP-Tracking on string level
- high efficiency (> 99 %)
- weatherproof housing, protection class IP 65
- one MPP-Tracking in one housing*
- Connection of strings up to max. 20A (Impp)
- can work with 2 polycrystalline strings per unit, maximum 1 MPPGUARD per 2 strings.
- In the MPPGUARD a string surveillance is already integrated, all parameters will be measured such as Umpp, Uout, Adc, Temperature, ID etc.

MPPGUARD[®] – technical data

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| max. input voltage in idle state: | 950 Voc DC |
| Working area MPP-Voltage: | 300 V – 800 V DC |
| max. input current / string: | 2 x 10 A DC |
| Input power: | 15 kWp |
| max. output voltage (Intermediate circuit): | 800 V DC |
| min. output voltage (Intermediate circuit): | 590 V DC (20 V DC over input voltage) |
| junction modules: | plug connector/ plug socket (MC4 or compatible) |
| junction DC-output: | plug connector/ plug socket (MC4 or compatible) |
| junction communication / monitoring: | RS-485 |
| cooling: | passive (free convection) web portal Control |
| performance monitoring: | determination of the optimal operating point of the modules allows a yield optimization of the whole system |
| task of the MPP-Tracking: | |