Reliable

- Meets the requirements of international directives for grid safety management
- PLC-based modular system with proven industrial grade components
- Data & plant safety with uninterruptible power supply buffering

Highly functional

- Sophisticated closed loop control for automatic voltage regulation and active/re-active power
- Power curtailment and ramp rate control
- Power frequency droop control
- Data logging with seamless communication to Utility Operators

Flexible

- Remote operation and update via VPN
- Customer specific versions with modular extension of any digital or analog I/O
- Future proofed through expansion of new protocol stacks

Easy to use

- Robust, factory tested assembly mitigates project risks
- Plug and play for connected devices
- Web-Interface for configuration and diag-nostics. No additional software required
- Local HMI (option)

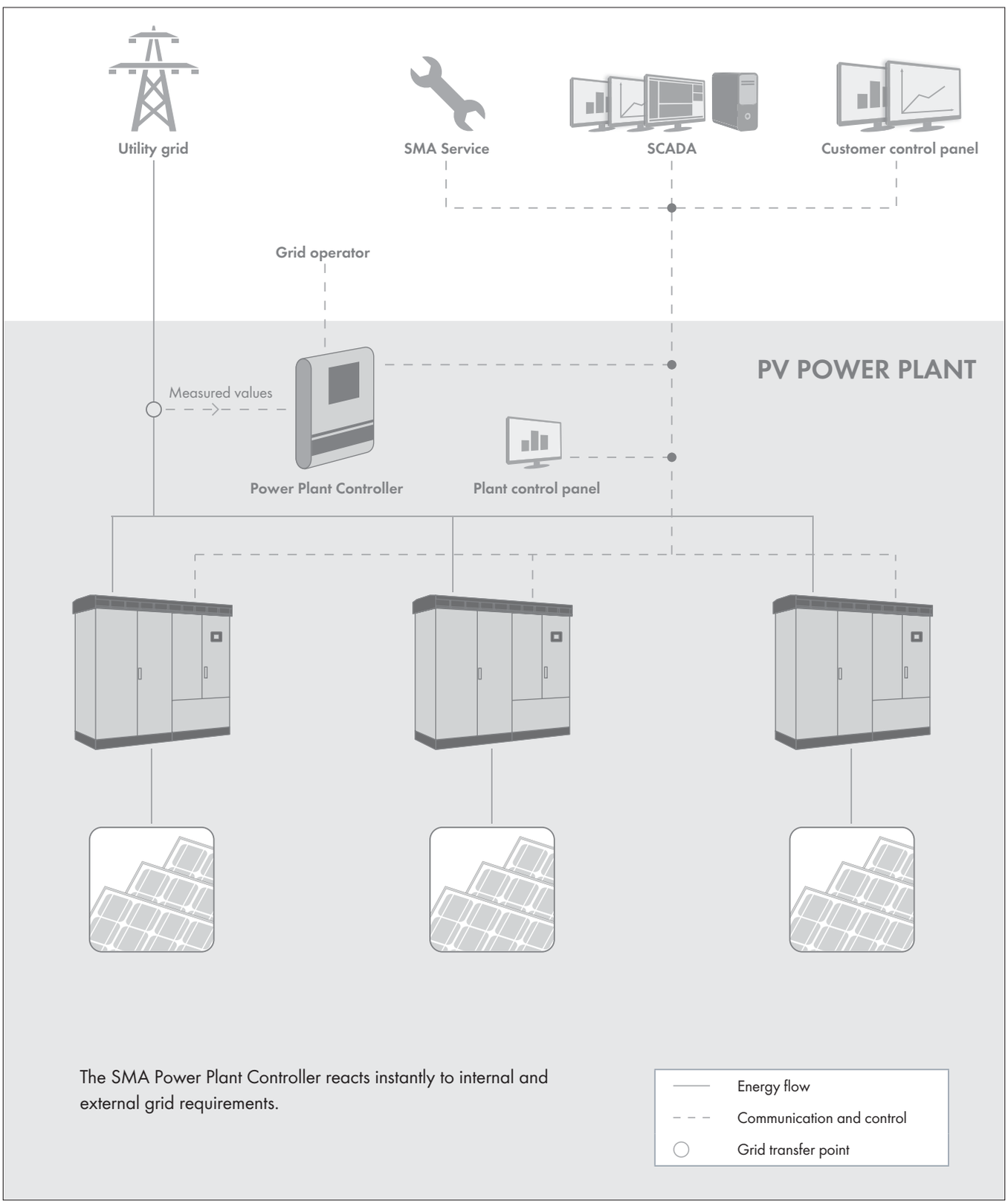
POWER PLANT CONTROLLER

Flexible park control for all PV power plants

The SMA Power Plant Controller offers intelligent and flexible solutions for the park control of all PV power plants in the megawatt range. It is suitable for PV power plants with central inverters as well as for those with decentralized string inverters. With simulation tools valuable predictions on the behavior of the Power Plant Controller and the design of the plant are already possible before the commissioning of a PV power plant. The parameterization and configuration of the Power Plant Controller can be performed with ease via remote access. With easy expandability for new communication protocols, standards for individual connections and a modular design, the Power Plant Controller is well suited to meet the future requirements of PV power plants.

Feed-in management made easy

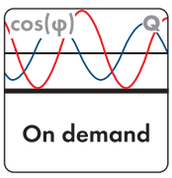
With its fast and direct control, the SMA Power Plant Controller guarantees the maintenance of setpoints for responding to requirements from the PV power plant and the utility grid to both plant- and grid operators. It controls PV power plants in accordance with the requirements of the grid operator and, through the adaptation of active- and reactive power, contributes to the stabilization of the utility grid. Thanks to the fast implementation of control commands, it ensures the highest possible system availability at all times.



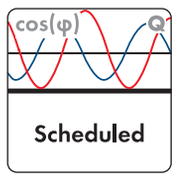
The SMA Power Plant Controller reacts instantly to internal and external grid requirements.

Grid management

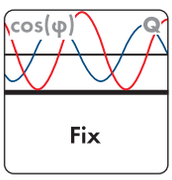
Together with SMA inverters the Power Plant Controller manages all parameters responsible for constant and future-proof stability of the utility grids.



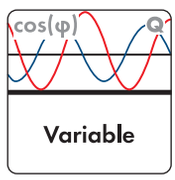
On demand
New target values for reactive power or the power factor are implemented in a matter of seconds.



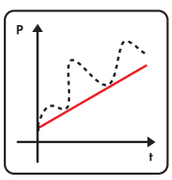
Scheduled
Predefined values for reactive power or the power factor are recieved and then implemented on time.



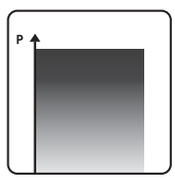
Fix
Constant reactive power or a power factor are made available on a permanent basis or by request.



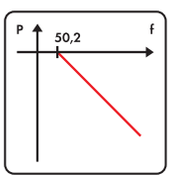
Variable
Dynamically specified values for reactive power or power factor are managed at the grid connection point.



Ramp Rate Control
The increase rate of active power is limited.

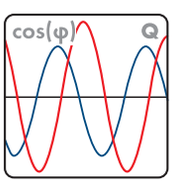


Continuous Curtailment
There is a seamless reduction of active power.

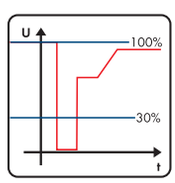


Active power control
Automatic reduction of active power at a defined grid frequency according to a definable characteristic curve.

SMA inverters like the new Sunny Central CP-XT accomplish the functions of the Power Plant Controller.



Q at Night
PV plants can also provide reactive power at night. Constant or dynamic values are preset.



Dynamic grid support
The inverter stays connected to the grid during voltage drops and supports the grid by feeding reactive power.

Top Yields – Stable Utility Grids

The Power Plant Controller guarantees plant operators maximum yields and contributes to the stability of grids. It fulfills the requirements of grid operators worldwide with its ability to regulate voltage, reactive and active power, and the power factor at the grid feed-in point quickly and precisely. The SMA Power Plant Controller allows large-scale PV power plants to meet all requirements of modern competitive PV power plants.

Higher yields for plant operators

Quick and precise regulation guarantees plant operators optimized yields. Downtime can be reduced and smooth plant operation can be guaranteed. Remote configuration and monitoring reduce maintenance costs in the module array.

Greater stability for grid operators

The Power Plant Controller makes your PV power plants' behavior a calculable variable in the utility grid. It fulfills all requirements for grid control, guaranteeing grid stability at all times. The advantage: reliable integration of large PV power plants into the grids.

Greater Security for Planners

Implement megawatt-scale power plant projects with SMA solutions. The Power Plant Controller is compliant with grid operators' requirements worldwide. Its compact design allows simple and flexible use in all plant topologies.

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