

SMA FUEL SAVE CONTROLLER

FSC-11-CONT / FSC-11-DAG / FSC-11-IFM



User-friendly

- Simple connection to the generator system
- Exchange realtime data via Modbus®

Stable

- Optimal control of solar energy feed-in
- Reverse power protection functionality
- Several optimization and communication functions available

Flexible

- Plant and system parameters are fully configurable
- Modular design allows for most system setups
- PLC-based modular system with high-quality industrial grade components

Scalable

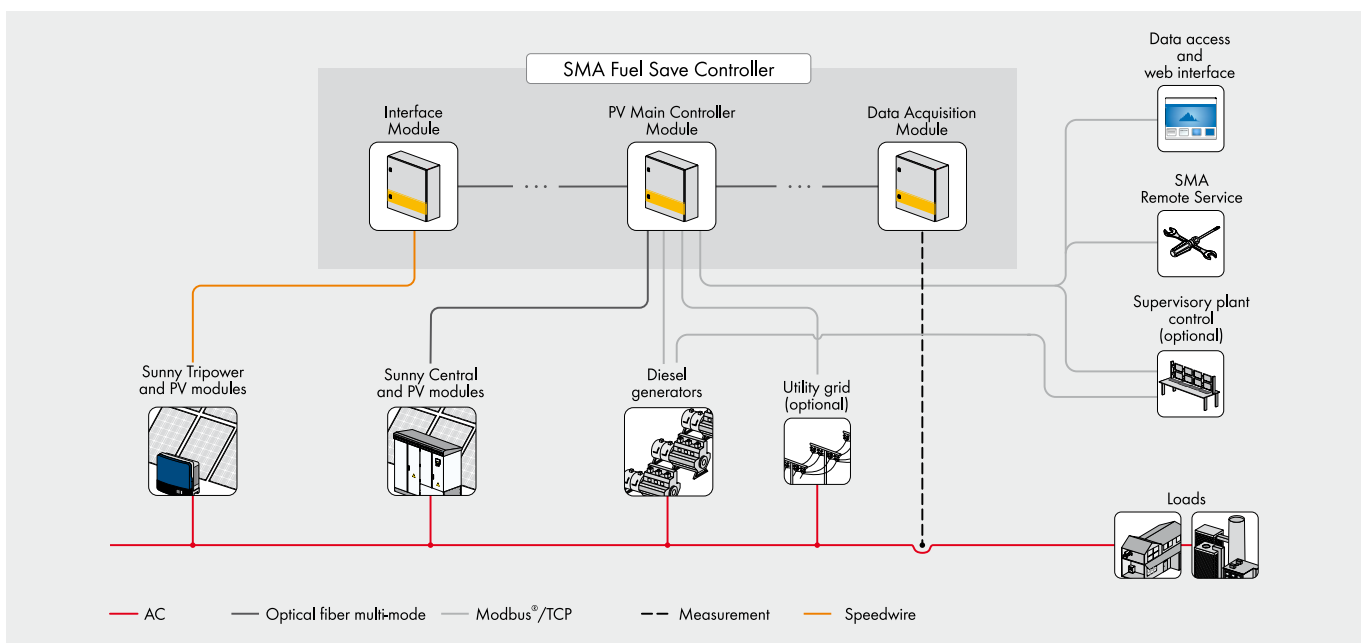
- Supports future system expansion
- Prepared for future integration of energy storage systems

SMA FUEL SAVE CONTROLLER

Integrating photovoltaics into fossil-fueled power generation systems

The SMA Fuel Save Controller is a key component in PV diesel hybrid system solutions. As the link between diesel generator, PV system and load, the SMA Fuel Save Controller takes on all need-based control of PV feed-in depending on the load and generation profiles. Thus not only is maximum reliability guaranteed but also fuel costs and CO₂ emissions are reduced. Together with Sunny Tripower and Sunny Central, the SMA Fuel Save Controller fulfils comprehensive grid management functions within the system. SMA hybrid systems can be expanded on a modular basis at any time and provide reliable system control through remote monitoring.

| Technical data | SMA FUEL SAVE CONTROLLER | | |
|---|---|---|------------------|
| | PV Main Controller Module | Data Acquisition Module | Interface Module |
| General Data | | | |
| Dimensions (W / H / D) in mm (approx.) | 600 x 600 x 210 | 600 x 600 x 210 | 600 x 600 x 210 |
| Weight (approx) | 30 kg | 30 kg | 30 kg |
| Protection rating per IEC 60529 | IP 65 | IP 65 | IP 65 |
| Ambient Conditions | | | |
| Operating temperature range | -10 °C ... +50 °C | | |
| Maximum operating altitude | 2000 m above mean sea level | | |
| Humidity | 5 % ... 95 % (non-condensing) | | |
| Power supply | | | |
| Voltage Supply (rated) | 110 ... 240 VAC (50 ... 60 Hz) | | |
| Power consumption | 200 W | 200 W | 200 W |
| Communication | | | |
| Plant communication to supervisory plant control, SCADA and remote monitoring | Modbus/TCP, http, FTP over Ethernet 10 BASE-T and 100 BASE-T(X) Remote monitoring over UMTS/GSM (optional) | | |
| Communication between modules / Maximum cable length | Ethernet over optical fiber through SC connector Ethernet copper based (optional) / 2000 m | | |
| Communication to inverters / Maximum cable length | STP: Speedwire, 10/100 Mbit/s SC: Ethernet 100 BASE-FX and 100 BASE-TX (optional) / STP: 100 m, SC: 2000 m | | |
| Communication protocol to genset controllers | MODBUS/TCP over Ethernet 10 BASE-T and 100 BASE-T(X) | | |
| Other Interfaces | | | |
| Multi-functional digital inputs (for potential-free contacts, maximum voltage drop @ 10mA: 5V) | 8 | 2 | - |
| Multi-functional digital outputs (potential-free contacts) | 4 | - | - |
| Voltage / Current measurement | - | VT (for grid voltages higher than 415 V) / CT (5 A) | - |
| Visualization & data logging | | | |
| Visualization and configuration interface | Web interface for local and remote monitoring | | |
| Data & Event logging | 5 second values for 2 days, 5 minute average values for 30 days | | |
| Compatible Inverters | | | |
| Inverters | Sunny Central CP-XT series, Sunny Tripower (STP 10000TL, STP 12000TL, STP 15000TL, STP 15000TLEE, STP 17000TL, STP 20000TLEE) | | |
| General system design characteristics | | | |
| System size (PV system size) | 300 kVA ... 6 MVA | | |
| Maximum PV power ratio | 60 % of the max. genset capacity (parallel operated) | | |
| Maximum number of handled gensets | 5 (no restriction if power limitation is available through supervisory control) | | |
| Type designation | FSC-11-CONT | FSC-11-DAQ | FSC-11-IFM |



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