



### Robust and Reliable

- Top-quality, robust industrial components ensure the highest reliability
- Complete system is comprehensively tested in the unique SMA hybrid test center

- Second generation of the globally successful SMA Fuel Save Controller
- High degree of protection with IP 65

### Scalable

- Modular system design for customized configuration and system expansion
- Up to 75% PV penetration (based on diesel generator nominal power)

### Flexible

- The right product version and system configuration for every system size
- Energy storage systems can be integrated at any time

## SMA FUEL SAVE CONTROLLER

Use photovoltaics and save fuel

The SMA Fuel Save Controller (FSC) is a key component of the SMA solution for photovoltaic/diesel hybrid systems. It allows the use of cost-efficient solar energy to generate power in order to lower fuel consumption from diesel generators.

As the interface connecting the diesel generator, the PV system and the load, it manages need-based PV feed-in according to load and generation profiles of the system as a whole. The FSC performs comprehensive grid management functions, ensures maximum operational safety, and minimizes operating expenditure and CO<sub>2</sub> emissions.

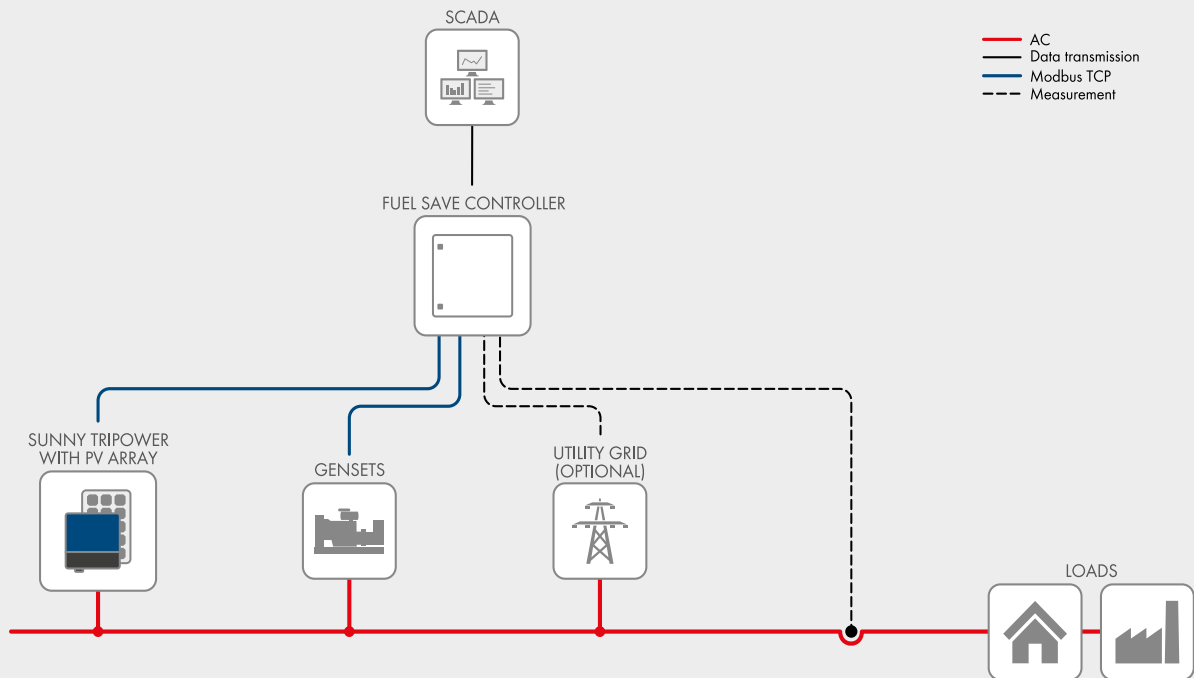
The second generation of the FSC is available for system sizes of 100 kW to 50 MW. Hybrid systems with SMA technologies offer modular expansion at any time and optimum system control through remote monitoring.



## FUNCTIONS

- Management of reserve capacity
- Reactive power control via PV inverter
- Backfeed protection for diesel generators
- Fully automated system operation
- Remote monitoring and control via SCADA
- Compatible interfaces to all relevant diesel controls
- Intelligent grid feed-in management

## FSC M CIRCUITRY PRINCIPLE



### Easy Usability and Compact Design

- Faster planning process due to predesigned standard system setups
- Quick wall installation thanks to compact one box design and simple configuration
- Suitable for nearly all system configurations

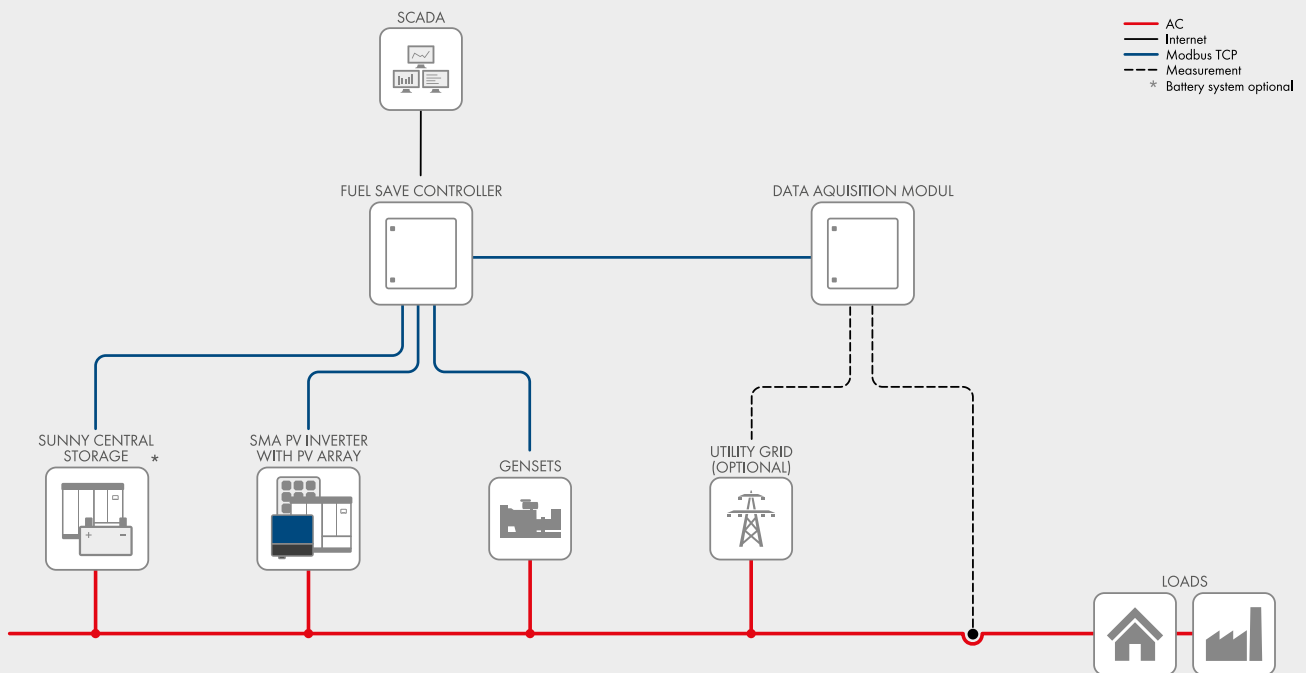
### Cost Effective

- Simple and fast installation due to clear layout
- Easy commissioning with standard PC
- Remote monitoring and adjustment of settings possible via SCADA

## FUNCTIONS

- Management of reserve capacity
- Reactive power control via PV inverter
- Backfeed protection for diesel generators
- Fully automated system operation
- Compatible interfaces to all relevant diesel controls
- Installation of large distributed systems possible
- Provision of peak load via battery
- Diesel reserve capacity reduced due to battery storage systems
- Integration of larger solar generator possible due to battery storage systems
- Remote monitoring and control via SCADA
- Intelligent grid feed-in management

## FSC L CIRCUITRY PRINCIPLE



### Tailor-Made

- The modular concept allows system setups where long distances between the PV system and the gensets must be covered.
- The PV system can be expanded at any time.
- An optional battery-storage system including the Sunny Central Storage battery inverter can be integrated as well.
- Both central and string inverters can be used.

### High Yields

- High PV penetration of up to 75% lowers total energy costs.
- An optional storage integration with the Sunny Central Storage battery inverter increases the PV penetration level and reduces the number of must run gensets.
- SMA's Technical Consultants support the customer by designing the system for maximum fuel savings.

### Customer-Specific

- The modular design of the FSC allows for individual adjustments according to project requirements. Please contact your SMA contact person for more information.