SMA

SMA
Data Manager M

One system.
Many options.
For your individual needs.

GOLD AWARD 2020 · iF

reddot design award

In combination with the Sunny Portal powered by ennexOS, the Data Manager M enables monitoring, management and grid-compliant power control in decentralized PV systems.

Thanks to flexible expansion options, the Data Manager M is already well-equipped for business models in the energy market of the future. For systems with up to 50 devices and an installed inverter power of 2.5 MVA in closed-loop control mode or 7.5 MVA in open-loop control mode or monitoring mode only – the Data Manager M is the ideal professional system interface for electric utility companies, direct sellers, service technicians and PV system operators.

Coordinated user interfaces and intuitive assistance functions simplify operation, parameterization and commissioning. The Data Manager M modularly expandable with many additional functions and interfaces.

Fast and easy to use
- Easy integration of devices
- Centralized commissioning of all integrated components

Future-proof and flexible
- Flexibly expandable anytime
- Access to the energy market of the future based on ennexOS

Functional
- Complies with international grid-integration requirements
- Combine storage systems, energy generators and e-mobility

Reliable and convenient
- Remote monitoring and parameterization possible
- Detailed analytics, error messages and reporting through Sunny Portal
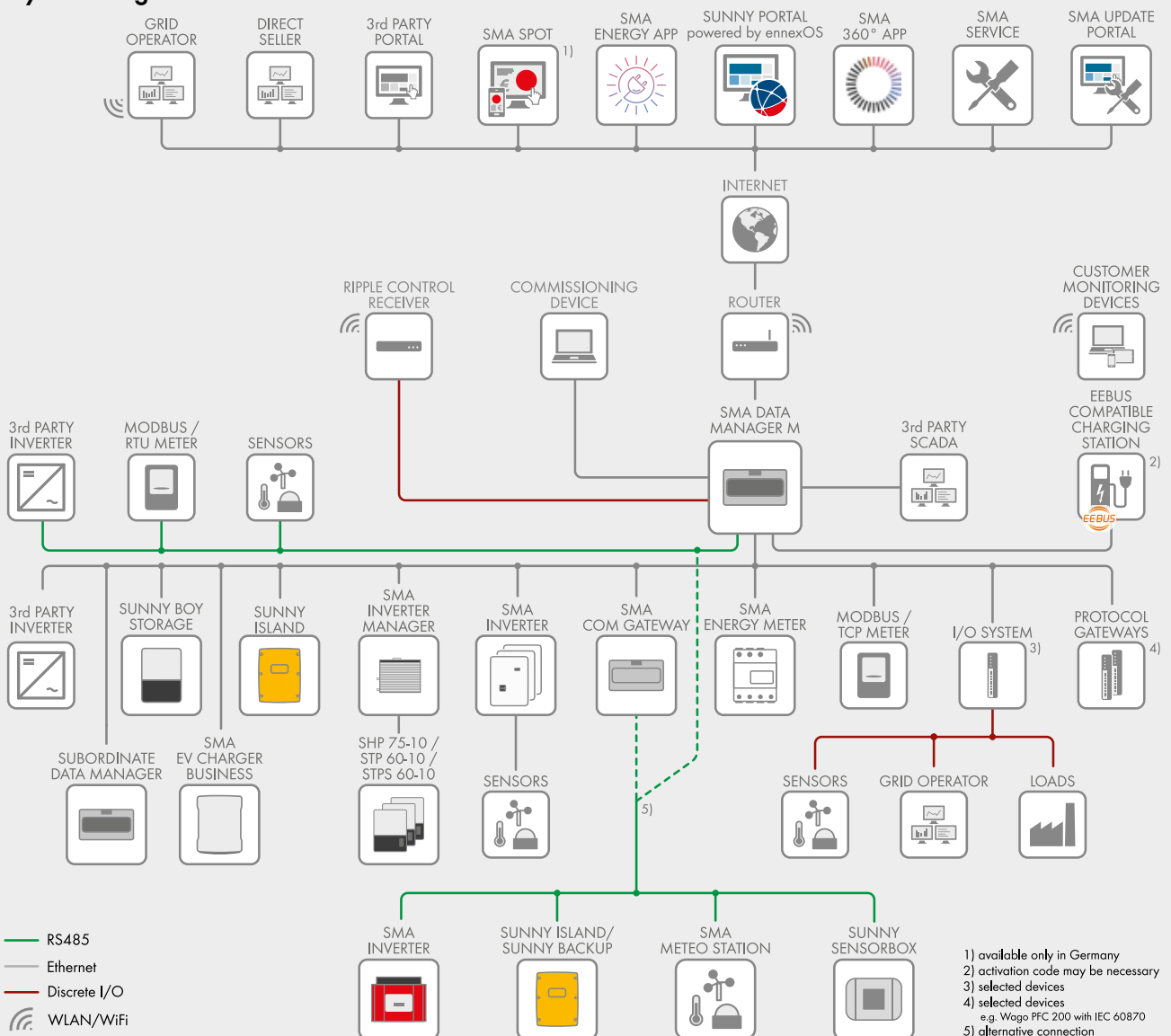
SMA DATA MANAGER M

Professional monitoring and control for decentralized energy systems up to the megawatt range.

The Data Manager M is the perfect monitoring and control solution for decentralized large-scale PV power plants with up to 50 devices and an installed inverter power of 2.5 MVA in closed-loop control mode or 7.5 MVA in open-loop control mode or monitoring mode only. Thanks to the RS485 and Ethernet interfaces as well as analog and digital input and output systems, users benefit from particularly versatile connection options. The Data Manager M is the professional system interface for electric utility companies, direct sellers, service technicians and PV system operators.

Benefits at a glance:

- Centralized management for decentralized large-scale PV power plants thanks
  to satellite-based data and cluster solutions with several data managers.
- Remote parameterization saves time and money

- Flexible integration options for battery-storage systems
- Direct selling with SMA SPOT
- Automatic monitoring of PV components thanks to SMA Smart Connected

System diagram

Legend	
——	RS485
——	Ethernet
——	Discrete I/O
📶	WLAN/WiFi

1) available only in Germany
2) activation code may be necessary
3) selected devices
4) selected devices
   e.g. Wago PFC 200 with IEC 60870
5) alternative connection

Technical data	SMA DATA MANAGER M
Master data	
Total number of supported devices - of which:	50
Maximum number of supported PV inverters	50
Maximum number of supported PV inverters via Modbus Sunspec (e.g., Sunny Tripower CORE2)	20
Maximum number of supported battery inverters	1
Maximum number of supported energy meters (electric current and gas), generators from energy meters, I/O systems, sensors	50
Maximum nominal system power of PV inverters (nominal AC power)	2.5 MVA (closed-loop control)
Maximum system power battery inverters (nominal AC power)	7.5 MVA (open-loop control or only monitoring)
Automatic data recording for virtual generators from energy meters (PV inverter, combined heat and power plant, gas meter, diesel generator, hydroelectric power plant)	●
Connections	
Voltage supply	2-pin connection, MINI COMBICON
RS485	6-pin connection, MINI COMBICON
Network (LAN)	2 x RJ45, switched, 10 BaseT/100 BaseT
USB (for product updates)	1 x USB 2.0, type A
Wi-Fi access point for commissioning and access to the user interface	▲
Voltage supply	
Voltage supply	External power supply unit (available as an accessory)
Input voltage	10 V to 30 V DC
Power consumption	Typically 4 W
Ambient conditions during operation	
Environment	Restricted class 3K7 reg. IEC60721-3-3
Ambient temperature	–20 °C to +60 °C
Permissible range for relative humidity (non-condensing)	5% to 95%
Maximum operating altitude above MSL	0 m to 3,000 m (≥70 kPa)
Degree of protection according to IEC 60529	IP20 (NEMA 1)
General data	
Dimensions (W/H/D)	161.1 mm/89.7 mm/67.2 mm
Weight	220 g
Mounting location	Indoors
Mounting type	Top-hat rail mounting / wall mounting
Status display	LEDs for system and communication status
Equipment	
Warranty	2 years
Certificates and approvals (more available upon request)	www.SMA-Solar.com
Accessories (optional)	
Top-hat rail power supply unit	Input: 100 V to 240 V AC / 45 Hz to 65 Hz / Output: 24 V
Plug-in power supply	●
I/O system by Moxa Europe GmbH	ioLogik E1214 (6DI/6 relay outputs), SMA order number: 124179-00.01
	ioLogik E1242 (4AI/4DI/4DIO), SMA order number: eIO-E1242
	ioLogik E1260 (6 PT-100), SMA order number: eIO-E1260
I/O system by WAGO Kontakttechnik GmbH & Co. KG	WAGO-I/O-SYSTEM 750 (8DI, 8DO, 4AI, 4AO, 2 PT-100), SMA order number: 115214-00.01
Communication / protocols	
FTP push (daily / hourly)	● / ●
Wi-Fi access to the customer network	–
SMA Data2+ / SMA Data	● / ●
EtherLynx for Danfoss for TLX & FLX	●
Client: Modbus/RTU, Modbus/TCP (also Sunspec)	●
Server: Modbus/TCP	●
Commissioning	
Assistant for local commissioning of connected devices	●
Assistant for parameterization of SMA products connected via Speedwire	●
Remote parameterization of SMA devices locally and with Sunny Portal	●
Updates	
Self-update and connected Speedwire devices via the EDMM USB interface	●
Self-update and connected Speedwire devices via SMA Update Portal	●
Grid management services	
Closed-loop control and open-loop control of other SMA Data Managers (master/slave)	●
Free configuration of a grid-connection meter (measurement at the point of interconnection)	●
Direct selling via SMA SPOT (Germany)	●
Direct selling via Modbus/TCP	
Various options for open-loop and closed-loop control of active and reactive power	●
Manual inputs or inputs transferred via Modbus	●
Specifications via analog and digital inputs	via external I/O systems
Open-loop and closed-loop active power control (digital inputs)	via 5 digital inputs on the device or via external I/O systems
Closed-loop active power control (P(f))	in the SMA inverter
Open-loop and closed-loop reactive power control (Q(U), Q(P))	●
Fast shutdown via the digital input	●

Technical data	SMA DATA MANAGER M
Parameterization	
Remote parameterization of connected SMA products locally and via Sunny Portal	●
Parameter adjustment between SMA devices connected via Speedwire (local and remote)	●
Energy management	
Self-consumption control using battery systems (combined with SBS2.5, SBS3.7-6.0, Sunny Island)	●
Self-consumption control using battery systems (combined with STPS60-10)	●
Peak load shaving (combined with SBS3.7-6.0)	●
Peak load shaving (combined with STPS60-10)	●
Optimization of battery systems with time-of-use electricity tariff (combined with SBS3.7-6.0)	●
Optimization of battery systems with time-of-use electricity tariff (combined with STPS60-10)	●
EEBUS - e-mobility support (for example, with Audi e-tron charging system connect)	○
Limiting value based switching of digital outputs (additional hardware required)	●
System and device monitoring	
Comprehensive visualization of power and energy values, status and events	●

Sunny Portal powered by ennexOS in conjunction with SMA Data Manager M

Parameterization	
Remote parameterization of Data Manager and suitable connected devices	●
System and device monitoring, analysis	
Comprehensive visualization of power and energy values, status and events	●
Energy monitoring of a large number of systems in one user account	●
Energy balance visualization (different generators, grid-supplied power and grid feed-in)	●
Manual data recording for virtual generators from energy meters (PV inverter, combined heat and power plant, gas meter, diesel generator, hydroelectric power plant)	●
Measured value evaluation of all data channels of devices and systems	●
Automatic inverter comparison with alerts	●
Satellite-based meteorological data for performance evaluation (for select countries)	●
Reporting	
Alerts in case of communication faults between portal and system	●
Preconfigured reports by e-mail via Sunny Portal powered by ennexOS	●
Service	
SMA Smart Connected	●
Remote support through SMA Service	●
Direct selling via SMA SPOT (Germany)	●
Use of SMA 360° app	●
Use of SMA Energy app	●
SMA monitoring API	○
Model type number	EDMM-10

● Standard features   ○ Optional features   – Not available   ▲ Depending on availability   Version: 4/2023   (Subject to changes)

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SMA Solar Technology AG