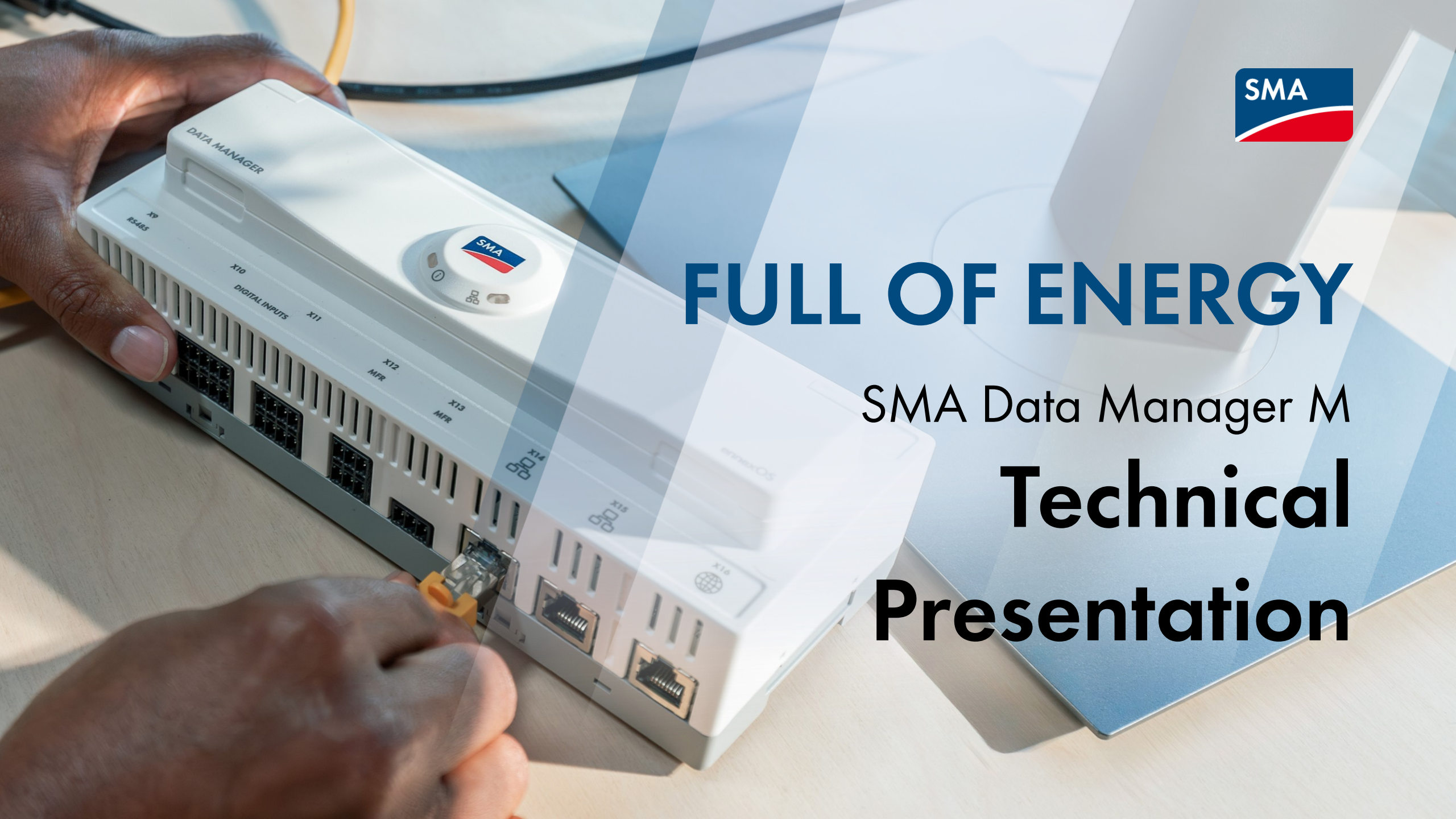


FULL OF ENERGY

SMA Data Manager M

Technical Presentation

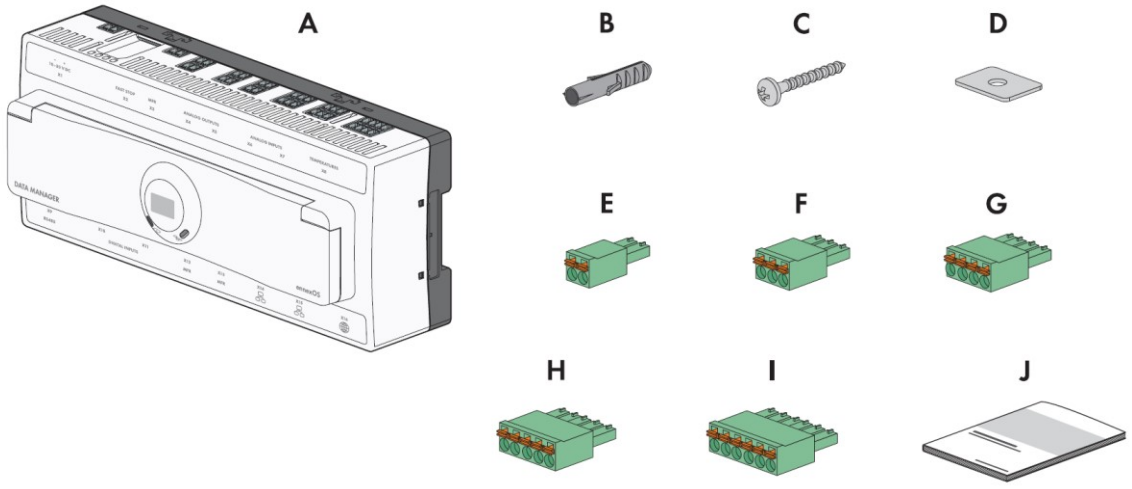
Discover the new SMA Data Manager M

Technical data

Technical data (extract)	
Max. supported devices	50
Max. PV plant size	2.5 MVA (close-loop-control) 7.5 MVA (open-loop-control or monitoring)
Power input	10 to 30 V
Power consumption	Typically 8 W
Dimension (w/h/d)	216 mm / 90 mm / 68 mm
Weight	372 g
Protection class	IP20 (NEMA 1)
Features	
Digital inputs / outputs	10 / 5 (Multi-Function-Relays)
Analog inputs / outputs	4 / 4
Fast stop	1
Temperature inputs	2 (PT100)
Network	Ethernet (2 ports switched, 1 port Internet), WLAN (soft access point)
Data protocol interfaces	SMA Modbus (RTU, TCP), SunSpec Modbus (TCP), Speedwire, SMA Data
Reset button	1

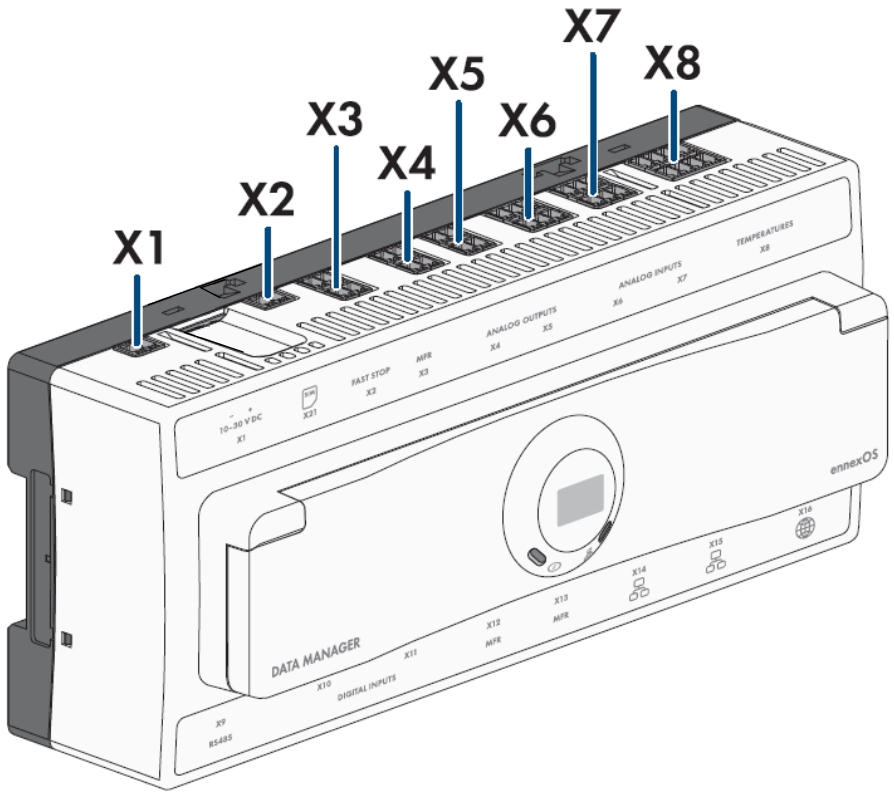
Unboxing

Scope of delivery



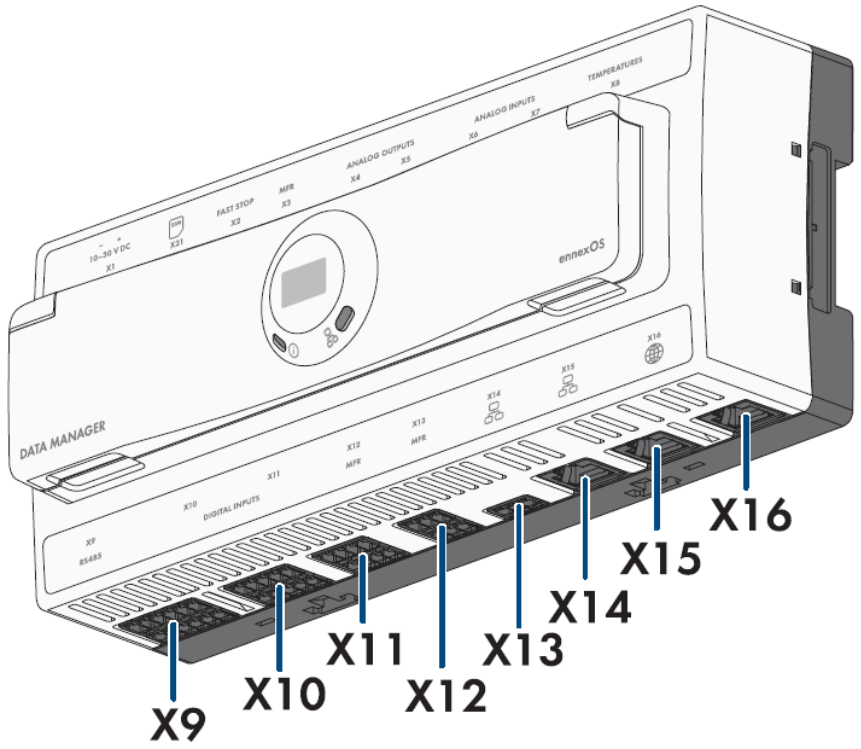
Position	Amount	Description
A	1	SMA Data Manager M (EDMM-20)
B	4	Dowel
C	4	Screw
D	4	Wascher
E	8	2-pin plug
F	7	3- pin plug
G	4	4-pin plug
H	2	5-pin plug
I	2	6-pin plug
J	1	Quick Reference Guide

Overview connection area SMA Data Manager M
(EDMM-20)



Position	Description
X1	Power supply socket
X2	Fast-Stop socket
X3	Multi-Function-Relay socket
X4	Analog outputs socket
X5	Analog outputs socket
X6	Analog inputs socket
X7	Analog inputs socket
X8	Temperature sensor input socket

Overview connection area SMA Data Manager M
(EDMM-20)



Position	Description
X9	RS485 socket (2x)
X10	Digital inputs socket
X11	Digital inputs socket
X12	Digital outputs socket (Multi-Function-Relay)
X13	Digital outputs socket (Multi-Function-Relay)
X14	Ethernet socket for plant network (e.g. SMA Speedwire)
X15	Ethernet socket for plant network (e.g. SMA Speedwire)
X16	Ethernet socket for Internet connection

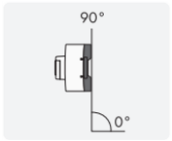
Installation

Ease of installation

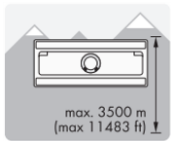
Environmental conditions for installation

Only indoor usage
(IP 20)

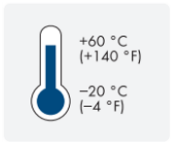
Not in flammable or
explosive areas



Vertical mounting

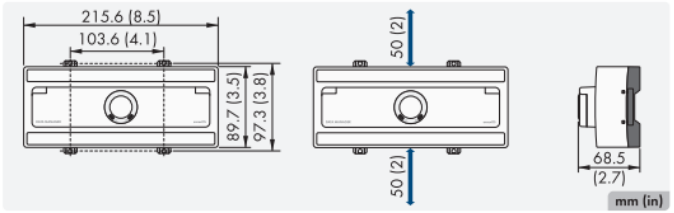


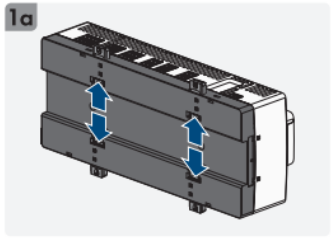
Max. mounting height
above MSL 3,500m

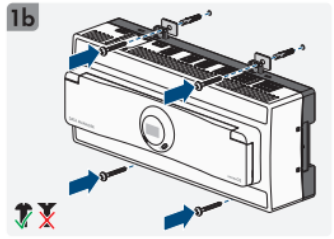


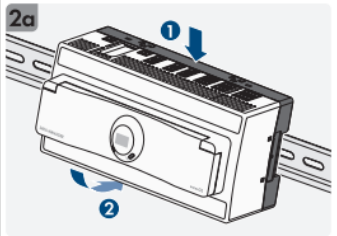
Permissible temperature range
-20° (-4°F) to +60°C (+140°F)

Device dimensions and mounting possibilities





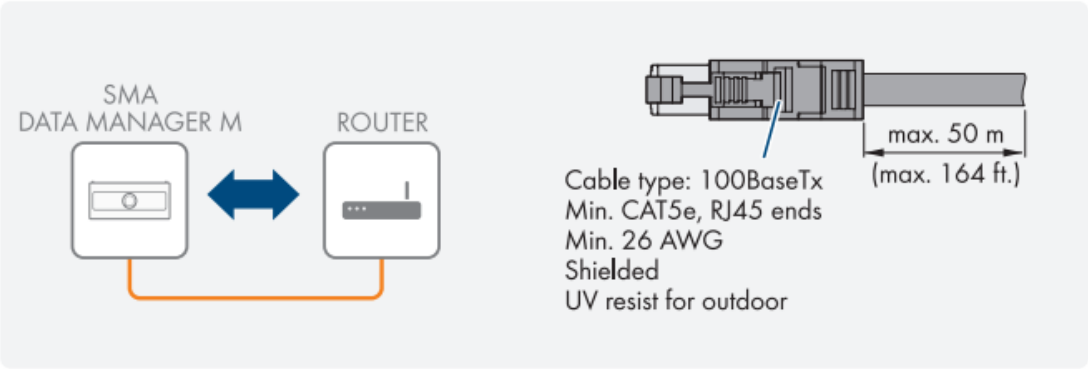


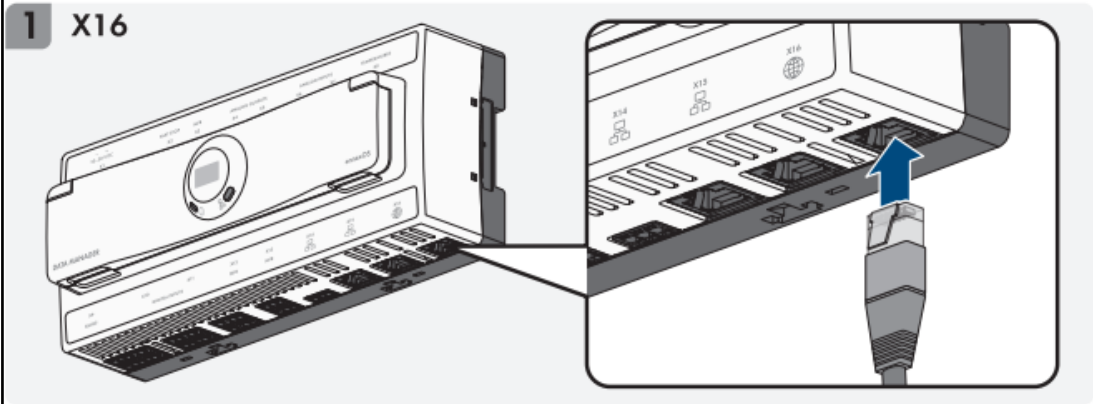


Commissioning

Commissioning

Connection SMA Data Manager M (EDMM-20) to the internet/router





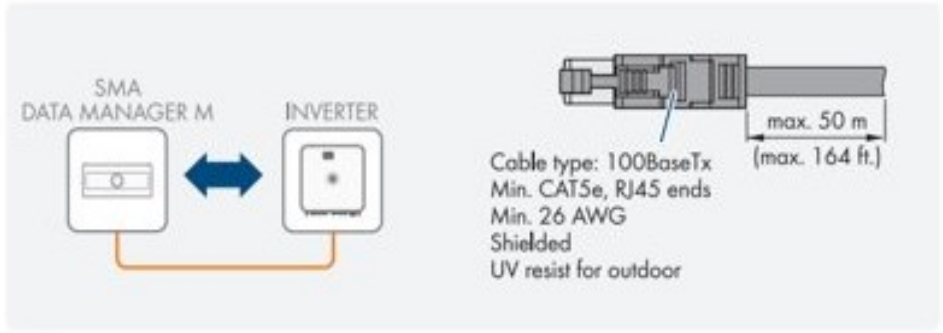
DHCP Server is recommended

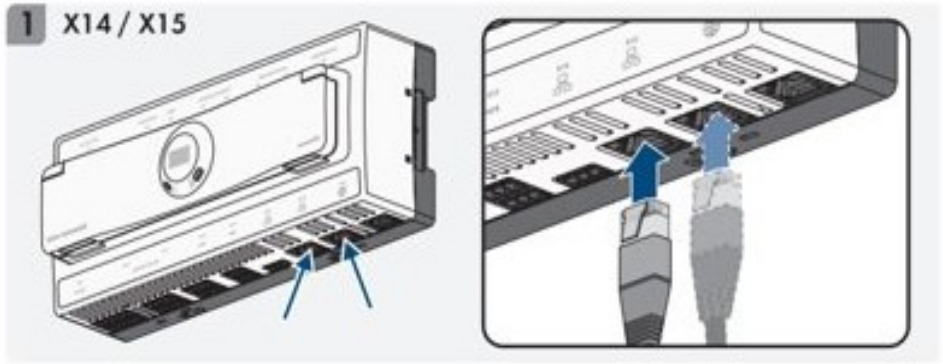
The DCHP server automatically assigns the appropriate network settings to your nodes in the local network. A manual network configuration is therefore not necessary. In a local network, the Internet router is usually the DHCP server. If the IP addresses in the local network are to be assigned dynamically, DHCP must be activated in the Internet router (see the Internet router manual). In order to receive the same IP address by the internet router after a restart, set the MAC address binding.

In networks where no DHCP server is active, proper IP addresses must be assigned from the free address pool of the network segment to all network participants to be integrated during commissioning.

Commissioning

Connection SMA Data Manager M (EDMM-20) to plant network





IP addresses of Modbus devices

In systems with Modbus devices, static IP addresses must be assigned to all Modbus devices. Suitable IP addresses can be assigned to the Modbus devices from the free address supply of the network segment either manually or dynamically via DHCP.

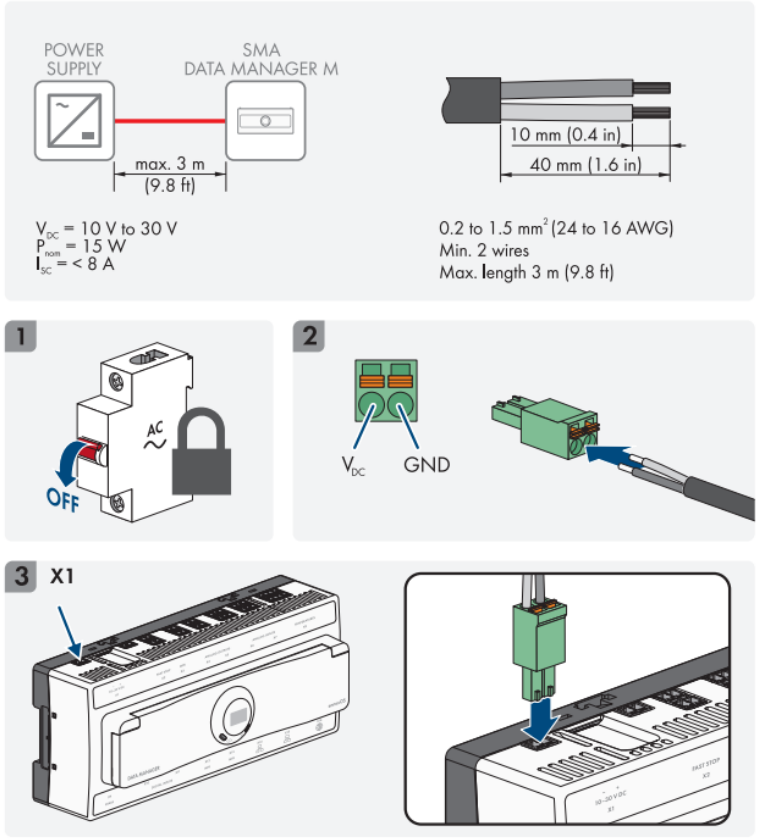
If the IP addresses are to be assigned dynamically, DHCP must be activated in the Internet router (see the Internet router manual). Make sure that the Modbus devices do not contain variable IP addresses but always the same IP addresses (static DHCP).

This also applies to Data Managers that are used as subordinate devices.

If IP addresses of Modbus devices have been changed, all devices must be restarted.

Commissioning

Power supply SMA Data Manager M (EDMM-20)



⚠ WARNING

Danger to life due to electric shock

Under fault conditions, when working on the power supply circuit there may be dangerous voltages present on the product. This can result in death or serious injury.

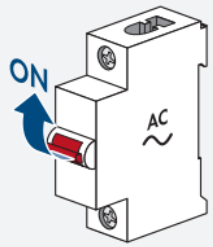
- For power supply units with a fixed connection, make sure that a disconnection unit (e.g. miniature circuit breaker) is present outside the power supply unit.
- For power supply units with a plug connection, make sure that the electrical outlet for the power supply unit is close to the power supply unit.
- The disconnection unit and the electrical outlet for the power supply unit must be freely accessible at all times.

Optional:
Power Supply
SMA Mat-No:
CLCON-PWRSUPPLY

Commissioning

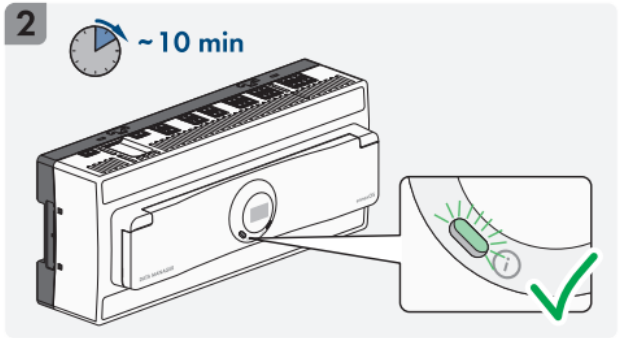
Start and boot sequence SMA Data Manager M (EDMM-20)

1



After installation and checking wiring
turn on the circuit breaker.

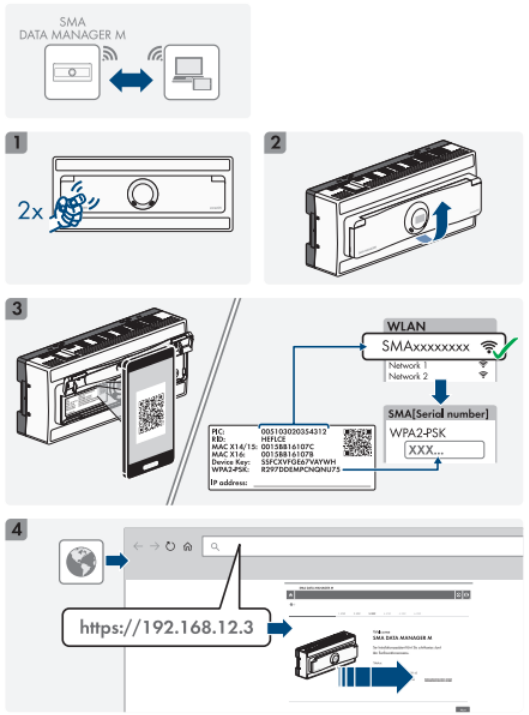
2



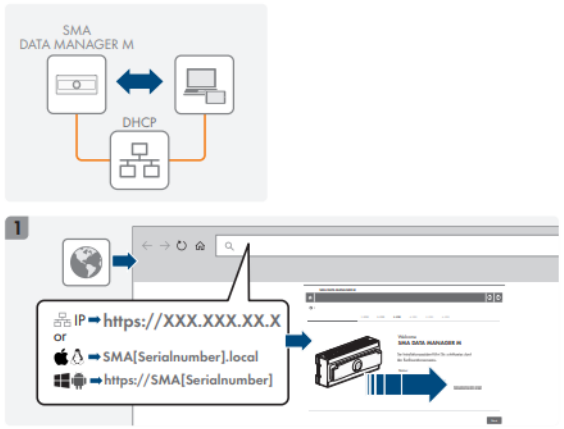
When power supply for the Data Manager M is available the device starts its boot sequence and searches for an initial update file.
NOTE: Internet connection is necessary for the update.
The whole procedure can take up to 10 minutes.

Commissioning

Connection to Data Manager M (EDMM-20) via WLAN (soft access point) or via Ethernet



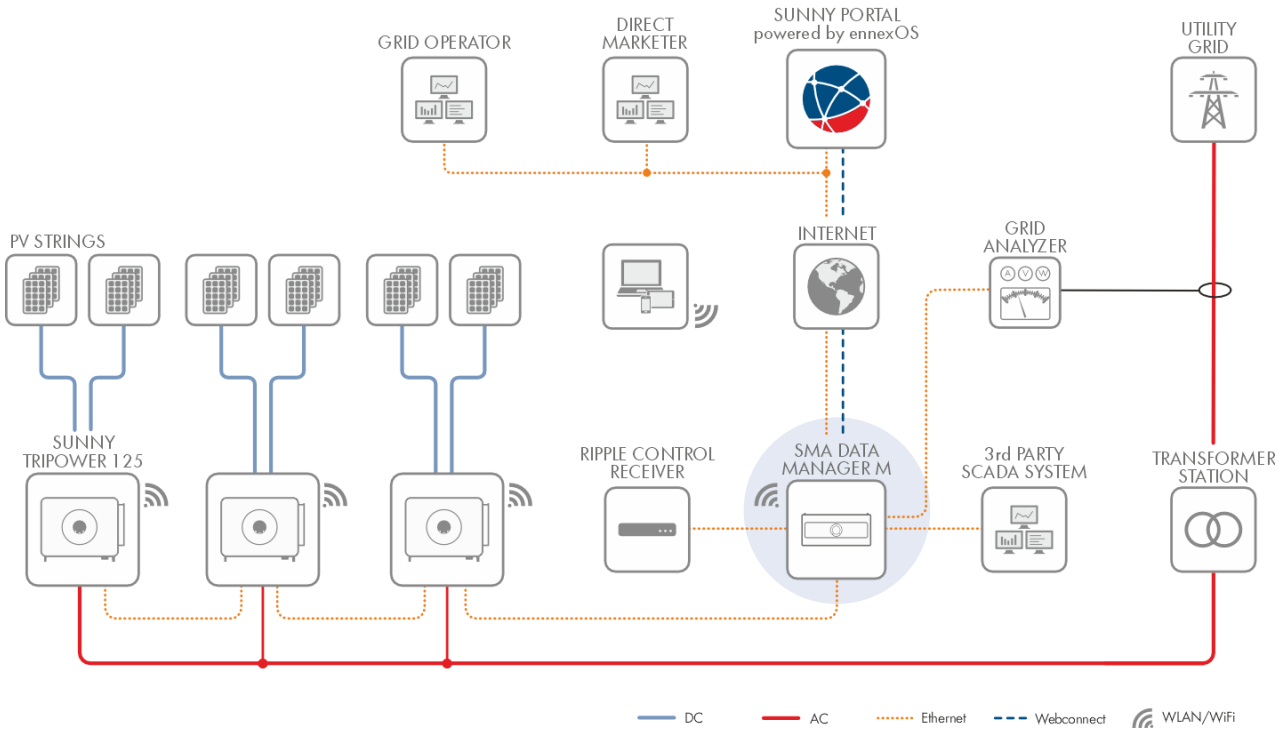
or



Use Cases

Direct Feed In System

with SMA Data Manager M as system manager



Use case

- "PV-Only"
- Direct feed in (no self consumption)
- EDMM operating as system manager

Grid requirements

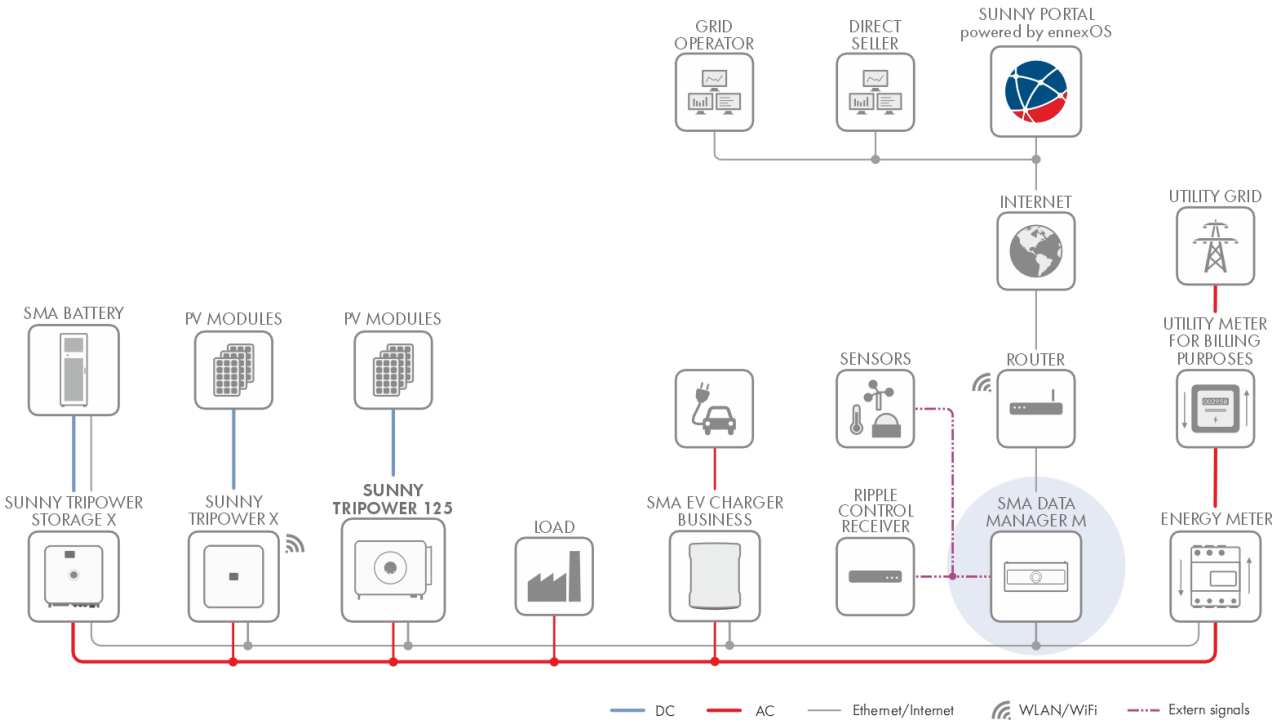
- Closed loop control e.g. Q(U)
- Setpoint of power reduction via ripple control receiver
- Plant protection ("NA-Schutz") via external switch connected to the digital Input of the STP 125-70

Direct selling

- Supported by SMA Data Manager M

System with self consumption, storage and EV charging

with SMA Data Manager M as system manager



Use case

- Self consumption, storage, EV charging
- Intelligent energy management
- EDMM operating as system manager
- > 10 devices

Grid requirements

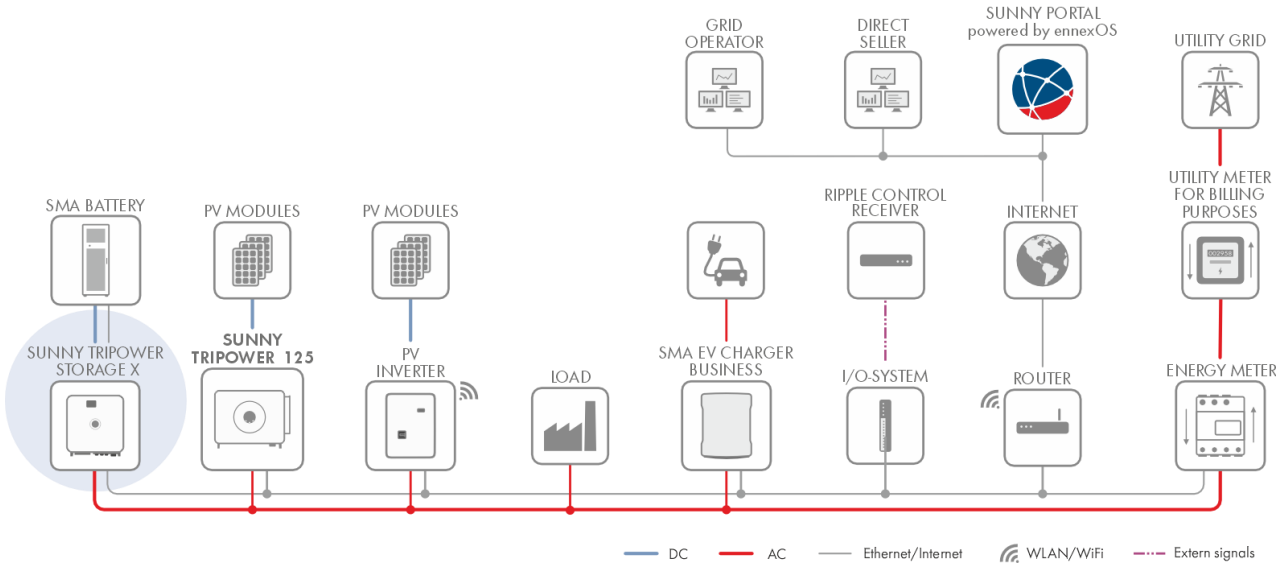
- Closed loop control e.g. Q(U)
- Setpoint of power reduction via ripple control receiver
- Power limitation e.g. Zero Feed In

Direct selling

- Supported by SMA Data Manager M

System with self consumption, storage and EV charging

with STPSX as system manager



Use case

- Self consumption, storage, EV charging
- Intelligent Energy Management
- Sunny Tripower Storage X operating as system manager
- < 10 devices

Grid requirements

- Closed loop control e.g. Q(U)
- Setpoint of power reduction via ripple control receiver
- Intelligent energy management
- Power limitation e.g. Zero Feed In

Direct selling

- Supported by Sunny Tripower Storage X

Monitoring & Control

Functional overview (extract)

Selection of features	Sunny Tripower X as system manager	Sunny Tripower Storage X as system manager	SMA Data Manager M as system manager	Sunny Tripower 125 via webconnect to Sunny Portal
Total number of supported devices - of which	6	10	50	4
Maximum number of supported inverters	5	9	49	4
Maximum number of supported energy meters (PCC)	1	1	1	–
Maximum system power PV inverters (nominal AC power)	135 kVA	–	7.5 MVA (monitoring or open-loop control) 2.5 MVA (closed loop control)	–
Central commissioning of all devices	✓	✓	✓	–
SMA Dynamic Power Control (e.g. Zero Feed-in, Q(U))	✓	✓	✓	–
Sunny Portal powered by ennexOS	✓	✓	✓	–
Analysis Pro detailed data analysis	✓	✓	✓	–
Remote parameterization of SMA devices with Sunny Portal powered by ennexOS	✓	✓	✓	–
Direct selling via SMA SPOT (Germany)	✓	✓	✓	–

Thank you!

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