SMA Data Manager M Release Notes

Release date: 01/10/2024

Affected versions: EDMM-20, from version 2.00.35.R

New and changed features in 2.00.35.R

For the new Data Manager M (EDMM-20), the user interface of the firmware has been completely revised compared to its predecessor (EDMM-10). For example, the EDMM-20 has a new commissioning assistant and a new menu for setting up grid management services. The firmware 2.00.35.R brings energy management for battery and hybrid inverters to a data manager for the first time. A new user interface has also been created for the new energy management system. The digital and analog inputs and outputs that have been added to the EDMM-20 can be configured via the user interface. The new and changed features of firmware 2.00.35.R are described in detail below:

Energy management for storage units

Battery and hybrid inverters can be used in three different operating modes:

1. Maximum increased self-consumption: The battery is charged when there is surplus PV energy and the battery is not fully charged. No power is charged from the grid. The battery is discharged when the total load is greater than the power of the PV system and the battery's state of charge is greater than zero.

2. Peak load shaving: The battery is discharged if a manually configurable threshold for power consumption from the grid is exceeded and the battery's state of charge is greater than zero. The battery is charged if this threshold is undercut and the battery is not fully charged. If necessary, the battery can be configured in such a way that it is not charged from the grid.

3. Energy management sleep mode: The battery remains inactive. Deep discharge is prevented.

   The central configuration of the energy management system in the Data Manager optimizes the interaction of several battery inverters in a system. The energy management of the EDMM-20 is compatible with the following SMA hybrid and battery inverters:

   - STP-X
   - STP-SE (from firmware version 03.06.09.R → expected to be available from May 2025)
   - SB-SE (from firmware version 03.12.15.R → expected to be available from May 2025)

Updates to Data Manager M and Subordinate Devices

1. Manual update for the EDMM: Update files can be uploaded via the user interface and the update can be started manually.

2. Automatic updates of subordinate devices: If update of subordinate devices is activated, the following products can be updated:
   - CORE1
   - PEAK3
   - SB1.5/2.5
   - SBS2.5
   - SBxx-1AV-40 and SBxx-1AV-41
   - STPxx-3AV-40

Sunny Portal powered by ennexOS

1. Remote configuration of grid system services in the portal. The settings can be made directly via the corresponding system parameters.

2. System parameters can be configured via the ennexOS portal. The parameters are updated and effective after >5 minutes in the local system.

3. Transfer of live data to the ennexOS portal. The information in the dashboard of the ennexOS portal is updated every 5 seconds.

EV Charging

1. Monitoring of the EV Charger Business is possible in the EDMM-20. The data is transmitted using Modbus TCP. Charging energy, charging power, as well as current and voltage are transmitted in all three phases. In addition, general information about the condition of the charger is available

2. Monitoring of the eCharger via Modbus. The power and energy meter information of the charging station are available.

Normative requirements

1. Zero feed-in for three-phase inverters. Three-phase inverters can achieve zero feed-in in all three phases within 2 seconds. This requires an energy meter with sampling intervals of 200 milliseconds. The configuration of the function is described in the operating manual.

2. Modbus connection for energy flow relays ERF4001IPfrom Ziehl. The relay can be used to monitor the requirements of VDE-ARN 4105 for Pav,e. The energy flow relay is required in systems with CORE2 inverters if the Pav,e regulation must be fullfilled.

3. Only country datasets are available, which are supported by all subordinate inverters.

4. Zero feed-in in case of communication failure. Requires energy meter with 200 milliseconds sampling interval. Minimum timeout for generation plants: 10 seconds.

5. Active power setpoints can be stored locally on the device for 18 months.

6. Active power setpoints from grid operator can be applied to the power at the grid connection point or used directly to control the inverters. Prioritization of different setpoints is possible.

7. Fast stop input invertible. The interpretation of the digital signal on the fast stop input can now be inverted in the user interface.

Improving the user experience

1. New commissioning assistant. The new commissioning assistant is more intuitive to use, clearer and shows the user how far he has progressed in commissioning the device.

2. New settings menu for grid system services. A clearer display of the individual values and direct control of individual settings. Configurability of three reactive power methods for three active power ranges.

3. Separate setting of country data set and network properties. The selection of the network properties is sent to all subdevices that have this data point.

4. Note for time setting for non-synchronized systems. If the time of the device is not synchronized with the time server of the Sunny Portal, the user is informed that the system time may not be correct. Furthermore, he is informed that a manual setting of the system time can be made.

5. Transfer of the local user account on the EDMM to subdevices possible.

6. Changes in the E-Meter subscription protocol. SMA energy meters reduce their communication in such a way that system communication is not impaired. Measured values from the grid connection point are still transmitted at 200 millisecond intervals. Other readings are sent at 1000 millisecond intervals.

7. Revision of the Modbus documentation.

8. Improved diagnostic and support capabilities.

9. Energymeters are listed under a separate category "Energymeters" and no longer under "Speedwire" devices.

10. The profile of the weather station PVMet200 now also contains the wind direction.

Known issues

1. The EDMM-20 with firmware >2.00.35.R and the EDMM-10 with firmware 1.15.16.R are not compatible with each other in cascaded systems.
2. When replacing EDMM-20, errors may occur in the display of the energy balance at the time of replacement in the portal. The display can be corrected by SMA Service employees.