SMA Data Manager M release notes

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Related version: EDMM-10 Version1.08.9.R

Differences between the former Version 1.07.08.R and the actual 1.08.9.R

New or changed functions

1. Modbus Enhancements
   - Client: predefined Modbus-Profile for Energy meter Siemens PAC2200 (MID approved meter)
   - Client: Export and Import of self-defined Modbus Profiles
   - Client: In Master/Slave Systems „FastStop" will be forwarded to Slave devices
   - Server: Enhancement of the Modbus Server Data items (Battery values at system level, System status)

2. Grid management services (GMS)
   - Q(P) curve with 10 instead of 8 points
   - Setpoint for active power is applicable using digital inputs of an external I/O-device
   - Setpoint for reactive power is applicable using digital inputs of EDMM
   - System total power and the sending interval can be defined within commissioning assistant

3. Threshold based switching of external digital outputs
   Since FW Version 1.8.8.R there are more data sources:
   - System-wide State of Charge of Battery systems
   - Signalling if a direct marketing control is active

4. Parameter for setting of an analogue output value is discarded. Instead of this, analogue output values used by the EDMM-10 were shown within the instantaneous values.
5. Enhanced device widgets at the WebUI
6. Closing of data gaps (up to 7 days), if the communication between EDMM-10 and connected SMA Speedwire inverters was interrupted
7. FTP-Push Events only if errors occur
8. Support of communication profiles configurable in Sunny Portal in order to reduce transmitted and received data volume

General hints

1. **Grid management services**
   a. If GMS-Control values were set over the Modbus-Server interface, there is a time cap necessary of 1s between the command telegrams.

   b. During the meter configuration it is currently not prevented to assign identical channels for feed-in and consumption.

   c. Though there may be no GMS configure, it may happen that GMS widget is shown in Sunny Portal. If this happens, the widget can be hidden in using the widget configuration.

   d. Configuration of analogue inputs is only possible, if the measured current of the appropriate channel is within the allowed range of 4...20mA (<4mA / no signal connected or > 20mA can cause problems during configuration).

e.   Since Version 1.6 the Grid control module was changed to the newly developed Grid Management Services (GMS) Module. Within this context configuration of fallbacks has been reduced.

f.   Since Version 1.6 the Grid control module was changed to the newly developed Grid Management Services (GMS) Module. Within this context the information in the GMS Widget have to be interpreted different:
The Widget always shows that source and setpoint which is used by the control module. Not in all cases the setpoints given by the operator can be used in the technical context. Therefore, the control module uses setpoints, which are the best way to fulfil the operator's definition. This source then is displayed in the GMS widget. For example, at very low PV power there is no possibility to generate reactive power. In this case the widget shows "source: off" and "reactive setpoint 0%". Another common reason for a setpoint adaption is the limit of apparent power in the inverters.

2.   Network

a.   If WiFi Access point is activated, mDNS does not work. The user has to address the device directly using IP-address 192.168.12.3.

b.   If the user changes the IP-Address, the WebUI is not redirected to the new address directly. The browser window has to be closed and a new one with the new IP-address can be used.

c.   Since Version 1.6. the time /date information can be taken from the user's browser. If there is a difference of more than 1 minute to the internal date/time, the Data Manager will carry out a self-reset for synchronizing all internal tasks to the new date/time information.

3.   Parameterizing of Inverters

a.   Partially, array parameters of Inverters cannot be changed by EDMM-xx-10. In this case, the parameter change has to be done within the own Web-UI of the inverter.

b.   Some Sunny Island device parameters cannot be changed by EDMM, the Sunny Island prevents using this function. In case of such an error the user can check this within the event log ("Setting of parameter failed. Installation assistant has to be started"). These parameters must be set directly at the Sunny Island device.

c.   Setting of device parameters via Sunny Portal is not possible for all SMA inverters. Currently this behavior is known for SI8.0H-12 and SI6.0H-12. The setting of these parameters locally via EDMM-xx-10 is possible.

d.   Parameters for time setting in inverters works only, if the value is converted to UTC (seconds since 1970, can be converted with an online service, e.g. https://www.epochconverter.com).

e.   After a change of the country settings of an inverter it may happen, that the inverter parameters cannot be shown anymore, because the inverter doesn't deliver them anymore.

4.   SunSpec Modbus devices

Since Version 1.6 an EDMM-xx-10 can basically communicate with SunSpec Modbus conformant devices (Inverters and meters). Only mandatory data will be transferred, no device-individual data. If devices do not support the SunSpec specifications incomprehensive, not all data can be read. This may result in missing data, which are necessary for EDMM-xx-10 and Sunny Portal. This is not an error of the ennexOS system.
The following mismatches are known up to now:

- Fronius: no Events/messages are delivered
- ABB: there is no data item for Energy. Caused by this, no Month-, Yearly and total graphics can be shown
- ABB: the setting of parameters doesn't work for all of them

5. **Speedwire Encrypted Communication (SEC)**

   a. Since Version 1.6. the function Speedwire Encrypted Communication can be activated for SMA Speedwire devices.

   b. The function is only available, if all SMA devices (except SMA Energy Meter) do support this SEC feature.

   c. There can be only one system with only one Data Manager using SEC (Master/Slave Systems are not supported yet). If the function is activated at more than one Data Manager in the according subnet, it can happen, that no more devices can be added to the plant or the communication is disturbed.

   d. If SEC was activated and the Data Manager was reset to factory settings, there is no other way than to deactivate the encryption at all inverters in the plant by using Sunny Explorer (Version >4.1). Before being able to add the inverters (independent of encrypted or not) to the plant again, an installer PUK is necessary for each inverter for disabling SEC.

6. **Sensor-Configuration**

   a. For using the sensors as an input for performance ratio in Sunny Portal, they have to be assigned also in Sunny Portal in menu "Sensor assignment" for Performance Ratio.

7. **Common issues**

   a. If a device reset is carried out by using the push-button and the user is still logged in, it can happen that the UI is not actualized, and wrong data is displayed. In this case, the browser has to be restarted and the browser cache has to be deleted (F5 at Windows PCs).

   b. If the local admin account is reset via the Web UI, it can happen that after restart of the device the login page instead of the commissioning page is displayed. It lasts a certain time until the commissioning page will be shown. If the admin account is reset using the push-button (see manual), the commissioning page will be shown immediately.

   c. Currently, SB xxxx—SE-10 were not supported correctly. The shown graphics for Energy&Power and und Energy balance were displayed in a wrong way. We are working on a solution.
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   d. If the buffer capacitor is fully discharged due to long time storage without operation, it can happen that the device doesn't support a proceeding more than step 4 in the installation assistant. In this case, the device has to be power-cycled.

   e. If there is a system which has an STPS-60 Battery inverter (connected via Invertermanager), it can happen, that an update from an older version (less or equal to 1.6.14.R) can cause an energy peak in the visualization. This is caused by a wrong factor used for the STPS-60 energy datapoints. Due to this correction this said energy peak will be shown once. In this context it is essential to know, that already Version 1.4.19.R provided an additional Janitza UMG604 Modbus profile ("JanitzaUMG604STPS60") which corrects the inverse energy flow measurement necessary for the STPS-60 for the Data Manager.

Known problems

1. **Filling of data gaps**
   a. In real big systems the closing of data gaps can take several minutes. The time depends on the amount of Speedwire Inverters and the duration of the gap (up to 7 days). During this action the reaction speed within the Web-UI is reduced.

2. **GMS**
   a. In some seldomly occurring cases it can happen, that the GMS configuration is not stored correctly. The user has to correct the settings and store it again.

   b. After a system update it can happen, that the formerly stored setpoint given by Modbus is not taken for the control. Setpoint should be transmitted cyclically by the external control system.

   c. Setting of country settings (CS) during installation assistant (IA)
   Within the local commissioning using the IA of EDMM-xx-10, the desired CS for EDMM-xx-10 as well as the CS for the connected and registered inverters can be selected. With finalization of the IA, the selected CS will be transmitted to the connected inverters. If there were changes at single CS-relevant parameters before, they were reset by this action to the according CS default values. If there were changes after transmission of the selected CS, the inverter or EDMM-xx-10 country settings were indicated as "special setting".
   A subsequent change of the CS using the function "device parameter adjustment" is not possible. The only way to do this is, to set the CS subsequently for each inverter manually.
   If there were changes at single CS-relevant parameters before, they were reset by this action to the according CS default values.
   This manual setting can also be carried out using Sunny Portal powered by ennexOS, as long as the system is registered there. It is to be taken in account, that the data transmission between portal and EDMM-xx-10 is limited to a cyclical renewed connection each 5 minutes only. These delays have to be considered. Specially in larger systems it may be a useful method, to firstly change all single CS at the inverters and to check it at least 5 minutes after the last change in the same order.

   d. Web-UI language
   If the browser-language (at PC) and the configured user language differ, it can happen, that the language will switch unwanted. If this happens, the language can be adjusted again in the user settings.

   e. Active power limitation via digital inputs
   In rare cases it can happen that with configured active power limitation via digital inputs (ripple control receiver interface) and simultaneously activated fallback time, the fallback is taken although nothing has changed at the digital inputs. If this behavior appears, please delete and reconfigure the active power limitation without activating the fallback behavior. A solution of the problem is being worked on.

Solved Problems in Version 1.08.09.R

1. **GMS**

a. In connected inverters the parameters of communication timeouts were no longer over-written after saving the assignment in the GMS assistant.
b. In a configuration of a Volt-Var-curve with 8 curve points all configured curve points were considered.
c. After initial configuration within the commissioning assistant the setpoint is correctly shown in the GMS widget

3. **Device registration**
   a. After adding new devices the dialogue for adding is closed directly after acknowledging the device selection.

4. **Common**
   a. If there is an EDMM-xx-10 update via SMA update portal directly after device startup, this new version will be activated directly after finishing the update by carrying out a device restart immediately. Sole exception: if the user is actually logged in, the restart is delayed until the user is logged out