



Manufacturer's declaration

Operation of a PV system with SMA PV inverters connected to a grid connection according to a power generation system controller certification (No. 21-0379_1 for VDE-AR-N 4110:2018-11)

With the SMA Data Manager M (EDMM-10 and EDMM-10.A) as a power generation system controller, it is possible to operate a generator on a medium-voltage grid in accordance with "VDE-AR-N 4110:2018-11" (certificate number 21-0379_1 for VDE-AR-N 4110).

The underlying measurements for the certificate test require a measurement at the point of interconnection for current, voltage, active power, reactive power, displacement power factor, frequency with or without voltage transformers and/or current transformers. Measuring devices are required that can transfer their measured values either via an SMA Speedwire interface or a Modbus/TCP interface (100 Mbit/s)

- SMA Energy Meter-20 (SMA Speedwire interface)
- Janitza UMG604Pro (Modbus/TCP)
- PQPlus UMD705 (Modbus/TCP)
- Elkor WattsOn Mark II (Modbus/TCP)

For the VDE-AR-N 4110:2018-11 timing requirements, a measured value polling rate of less than or equal to 1000 ms is required.

In principle, any Modbus/TCP compatible measuring device can be used for the point of interconnection. The Modbus query profile required for this must then be created manually if necessary. The devices listed above are directly supported by the SMA Data Manager M and provide the 200 ms resolution required for some other applications. The required measurement accuracy is:

Measurement accuracy, accuracy class according to IEC 61557-12, based on measured value

Voltage: +/- 0.5%

Current: +/- 0.5%

Active power: +/- 1.0%

Reactive power: +/- 1.0%

Power factor: +/- 1.0%

Based on IEC 62053-22 or -23 (typical):

Active energy class 1, reactive energy class 1

When using external voltage transformers and/or current transformers, the respective resulting measuring accuracy must be taken into account

Niestetal, 2021-09-04

SMA Solar Technology AG

A handwritten signature in blue ink, reading "i.V. Sven Bremicker".

i.V. Sven Bremicker

Head of Technology Development Center