

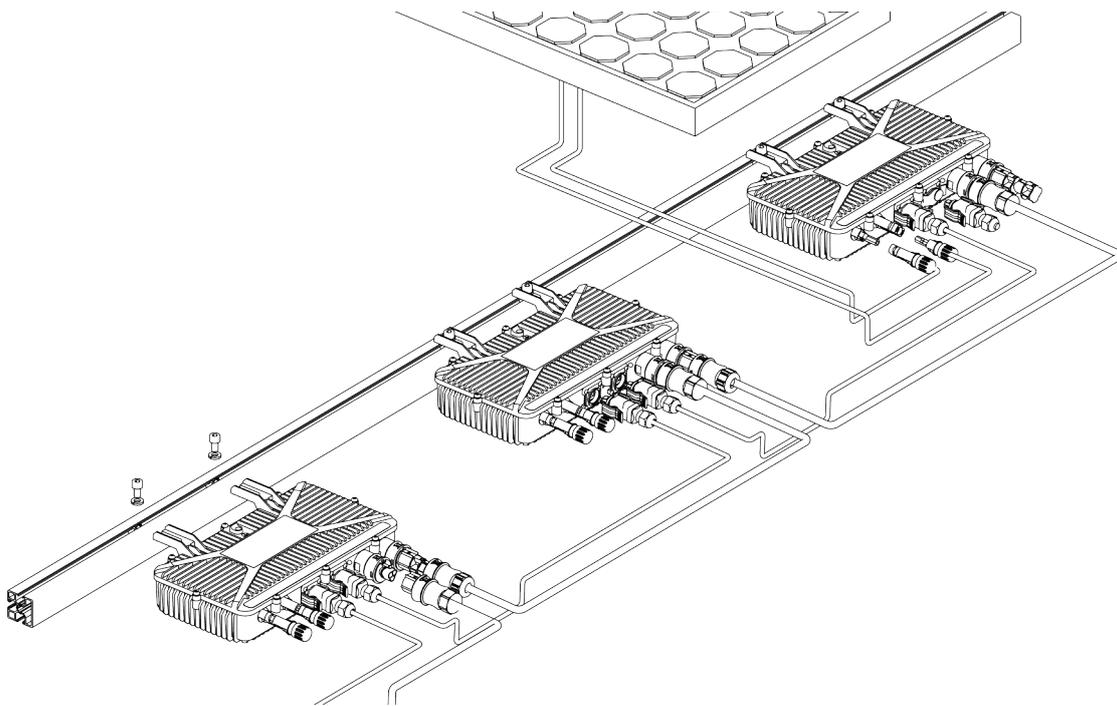
RS-485

Communication Technology



„RS-485 Communication“

The AE Micro-Inverter with communication capabilities provided by the RS-485 standard is a reliable way of monitoring a PV-system. Advantages of RS-485 communication include that it can be used efficiently over long distances and in electrically noisy environments.



Each micro-inverter is connected to a PV-module using the DC wiring. The DC power is individually converted into grid-compliant AC power. For the RS-485 version, the converted AC power is then directly fed into the utility grid via AC wiring.

The inverter is equipped with two AC terminals on the right side of the connection area. The inverter has two 3-pin AC connectors. The AC connectors are polarized differently, so that multiple inverters can be connected to form a continuous AC power circuit. On one strand, which is operated for example with a

50Hz 350W micro-inverter, there is a 16A circuit breaker and can therefore operate up to 9 micro-inverters. For a 20A circuit breaker and 60 Hz 350W Micro-Inverters, up to 12 Micro-Inverters are connected.

To enable communication and monitoring, the micro-inverters are additionally equipped with two RJ-45 connectors, with which the micro-inverters can be connected to either a RS485-USB Interface converter or to the data logger as well as to a building management system.

Monitoring Devices

Product Overview

„Datalogger“

The AConversion data logger can monitor up to 60 inverters and stores all operational data for at least one year in detail, as well as a cumulative monthly or annual value. The polling intervals can be adjusted in the range from 2 minutes to 30 minutes individually.

The collected and stored data are: current performance, current income, status. The display is on a 2x16-character LCD display with back light.

In addition to the direct reading of the data on the display, the stored data is copied to a USB memory stick in for graphical representation using APsolar software.

The data logger consists of a 20A gateway, with which 16 units can be operated using a 20A circuit breaker (12 units with a 16A circuit breaker) and can be accessed directly via powerline.

For larger installations, additional powerline gateways can be addressed via the external bus 485. AConversion inverter with RS-485 interface can also be connected to the RS-485 port at the datalogger, making the use of mixed inverters (in the RS-485 and powerline version) possible.



„RS-485-USB-Converter“

The RS-485-USB converter is used to connect the RS-485 bus to a PC. The software „Aesolar“ is included in the scope of delivery.

