Power Meter

Power Meter for Solarnative PV Systems

The Solarnative PowerMeter measures the power of up to three phases and sends its data to the Solarnative IntelliGate using wireless LoRa connection. It can be used at the grid connection point, or to measure the energy consumption of third-party devices.

Key Features

Miniaturized design
Fits into every electrical cabinet

Wireless communication
Robust and low-damping wireless LoRa communication with Solarnative IntelliGate

Easy installation
No data cables
Plug & Play over-the-air commissioning
Current direction configurable
Phase configurable

Dynamic active power control
Complies with German VDE AR 4105 regulation

Applications

A Solarnative Smart Energy Home system can include multiple Solarnative PowerMeters for the following possible applications:

Grid-connection point: The Solarnative PowerMeter measures the energy consumed from and fed into the public grid. It is used to calculate household electricity consumption, battery charging, surplus electric vehicle charging, and to control real power according to German VDE AR 4105 regulation.

Large consumers and third-party devices: The Solarnative PowerMeter can be used to measure the consumption of large consumers, like heat pumps, and third-party devices, such as older PV plants or battery storage systems from other fabricators. Thus, the power consumption or supply of these elements can be integrated into the Solarnative monitoring.
The Solarnative PowerMeter monitors up to three one-phase objects, or one three-phase object.

Technical Data

Connections	PowerMeter
Power supply	1-phase 16 A, 3 x 1.5 mm^2
Inductive current sensors	For cables with outer diameter < 6.1 mm (typically up to 16 mm^2)
Max. current	63 A per phase
Power supply and voltage measurement	1-phase: L1 and N 3-phase: L1, L2, L3, and N for highest precision of 3-phase power measurement
Nominal voltage	230 V @ 50 Hz / 240 V @ 60 Hz
Nominal frequency	50-60 Hz
Overcurrent protection	Requires max. 16 A
Mounting	Tool-free in electrical cabinet behind front cover

Measurement accuracy	PowerMeter
Current	+/- 1 %
Voltage	+/- 1 %

Communication	PowerMeter
Communication with SGW 1 gateway	LoRa WAN wireless

General Data	PowerMeter
Dimensions (length x width x height)	145 mm x 24 mm x 13 mm (5.7 in x 0.9 in x 0.5 in)
Weight	50 g (1.7 oz)
Ingress protection	IP2x (indoor use only)

Compliance	PowerMeter
Certifications (pending)	