Energy measurement

VARTA.energymeter

Precise. Reliable. Efficient.

Measurably more efficient.

With the VARTA.energymeter, you can record energy flows in real time – as the basis for intelligent system control and efficient energy management.

Precise energy flow measurement

Our energy meter offers high measurement accuracy, a high sampling rate and bidirectional measurement for precise analysis and efficient control of your energy flows.

Secure data transmission

Encrypted data communication (mTLS) with certificate-based authentication reliably protects measurement and system data from unauthorised access.

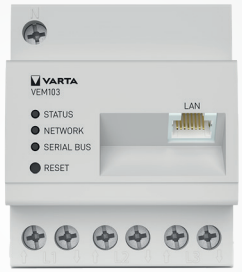
Easy installation

Thanks to space-saving DIN-rail mounting, commissioning via the VARTA.install app, and plug-and-play functionality through pre-configuration and automatic device detection, the meter is quickly ready for use.

Flexible use

The choice of two product variants equips you for all applications: whether for new installations or retrofitting, single- and three-phase measurement points or the monitoring of various energy generators.

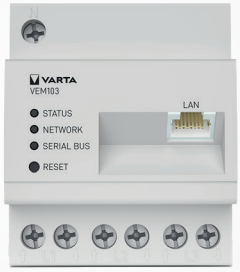
TECHNICAL DATA



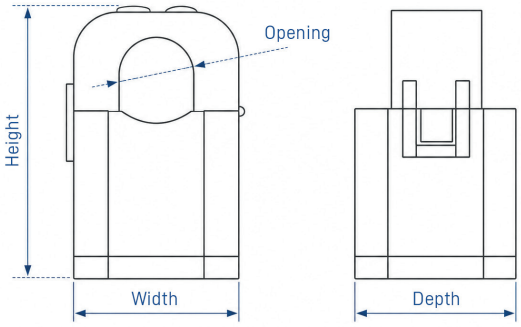
VARTA.energymeter	VEM103	VEM103-CT 63A
Measurement concept		
Measurement types	Direct measurement	Indirect measurement via a split-core current transformer (direct measurement not possible)
Folding current transformer included	No	Yes (3x 63 A split-core current transformers)
Voltage connections & power supply		
Number of voltage terminals	4 (L1, L2, L3, N)	4 (L1, L2, L3, N) [1]
Connection type	Screw terminal	Plug with push-in terminal
Conductor cross-section (to DIN EN 60204-1)	10 ... 16 mm^2	0,2 ... 2,5 mm^2
Rated voltage (AC)	230 / 400 V	85 ... 250 V
Frequency range	50 / 60 Hz ± 5 %	
Device power consumption	≤ 2 W	
Current measurement		
Max. measurement current per phase (limit current In)	63 A (direct measurement)	63 A (secondary via the supplied split-core current transformer)
Active power measurement accuracy (according to EN 61557-12)	≤ 1 %	≤ 2 %
Sampling time	100 ms	
Communication		
Communication interfaces	Ethernet (Modbus TCP) / RS485 [2] (Modbus RTU)	
Connection type	RJ45 (Ethernet), push-in cable connector (RS485)	
Max. length of communication cable	100 m	
Mechanical data		
Surge protection category	III	
Protection class (according to IEC 62103)	II	
IP protection rating (according to IEC 60529)	IP2X	
Installation location	DIN rail (indoor use)	
Sub-units DIN rail (to DIN 43880)	4	2
Dimensions (L x W x H)	88 x 70 x 65 mm	88 x 35 x 65 mm
Weight	0,2 kg	0,1 kg

[1] Note: For the VEM103-CT, connection of the phase voltages (L1, L2, L3, N) is required for power measurement. No load current flows through the device.
[2] The RS485 interface is present on the hardware side. At the time of market launch, the function is disabled on the software side. Subsequent activation via a software update is planned.
Technical changes and errors excepted. You can find the latest version of the data sheet here: https://www.varta-ag.com/de/konsument/service/downloads-energiespeicher

TECHNICAL DATA



VARTA.energymeter	VEM103	VEM103-CT 63A
Ambient conditions		
Operating ambient temperature	–25 °C to +45 °C[1]	–25 °C to +55 °C
Ambient temperature (storage/transport)	–25 °C to +70 °C	
Humidity	0–75 % (non-condensing)[2]	
Max. installation height	2.000 m above sea level	
Visualisation		
Status	LEDs on the device, local web interface, VARTA.energy portal	
Measurement values	Local web interface (LWI), VARTA.energy portal	
Data split-core current transformer (VEM103-CT 63A)		
Dimensions (D x W x H)		4.0 x 2.3 x 1.0 cm
Opening		Ø 1,0 cm
Cable length		1 m



Dimensions split-core current transformer VEM103-CT 63

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Warranty: 2 years (statutory warranty)

[1] Operation up to +55 °C is possible under the following conditions: no continuous operation, fuse rating ≤ 32 A, cable cross-section ≥ 10 mm², cable length ≥ 1 m
[2] Up to 95% for up to 30 days per year.
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