



Smart  
connections.

## Technical information

KOSTAL Smart Energy Meter

# KOSTAL Smart Energy Meter: suited to numerous purposes.

## Flexible in use

Integrated 3-phase energy measurement of up to 63 A

Higher measurement currents possible using converter

2 LAN interfaces

2 RS485 interfaces (Modbus RTU)

## Smart connected

Can be combined with PIKO 4.2-20, PIKO EPC, PIKO MP plus, PIKO IQ, PLENTICORE plus

Data display

Functions can be extended via software updates



## Smart performance

High measurement accuracy

Current sensor and energy manager for connecting AC batteries

Smart control for multiple-inverter connection

## Easy to install

Installation in control cabinet on top-hat rail

Simple device configuration using online interface and preset values

Software is updated via online interface

## KOSTAL Smart Energy Meter: in combination with KOSTAL solar inverters



### PIKO IQ / PLENTICORE plus

- 24-hour home consumption measurement
- Dynamic active power control
- Pre-configured Modbus RTU interfaces (RS485)
- Multiple-inverter connection with KOSTAL solar inverter<sup>1</sup>
- Provision of measurement data when using battery functionality in combination with PLENTICORE plus
- Battery on the PLENTICORE plus is recharged from additional local generators



### PIKO MP plus

- 24-hour home consumption measurement
- Dynamic active power control
- Pre-configured Modbus RTU interfaces (RS485)



### PIKO 4.2-20 / PIKO EPC

- 24-hour home consumption measurement
- Dynamic active power control
- Multiple-inverter connection with KOSTAL solar inverter

<sup>1</sup> PLENTICORE plus without battery

# Technical data KOSTAL Smart Energy Meter

			KOSTAL Smart Energy Meter <sup>1</sup>
System data	Process data		ARM9 processor with 450 MHz, DDR2 RAM with 128 Mbyte eMMC Flash 4 GByte
	Operating system		Embedded Linux with integrated TCP/IP stack
	LAN interfaces for Modbus TCP		2 x (10/100 Mbit)
	RS485 interfaces for Modbus RTU		2 x (half-duplex, max. 115 200 baud)
	Rated voltage	V	max. 230/400 V~
	Operating voltage	V	110/230 V~ ± 10%
	Frequency range	Hz	50/60 ± 5 %
	Self-consumption - voltage path per phase	VA	< 0.01
	Self-consumption - current path per phase	VA	< 2
	Self-consumption - entire device	W	< 5
	Current (rated current/limiting current)	A	5 / 63 <sup>3</sup>
	Starting current	mA	< 25
	Product standards		EN 61010, EN 50428, EN 60950
Measurement accuracy <sup>2</sup>	Voltage	%	± 0.5
	Current	%	± 0.5
	Active power	%	± 1.0
	Apparent power	%	± 1.0
	Reactive power	%	± 1.0
	Power factor	%	± 1.0
	Active energy / reactive energy according to IEC 62053-22 / -23 (typical)		Class 1
Mechanical data	Housing material		Fibreglass-reinforced polyamide
	Incandescent wire test according to IEC 695-2-1		Yes
	Protective class		II
	Protection class		IP2X
	Weight	kg	0.3
	Dimensions (H/W/D)	mm	88 x 70 x 65
	Connection cross-section (mechanical, e.g. for connecting external transformers)	mm <sup>2</sup>	10-25 (1.5-25)
Conditions	Torque for screw terminals	Nm	2
	Ambient temperature	°C	-25 ... 45
	Storage temperature	°C	-25 ... 70
	Relative humidity (non-condensing)	%	Up to 75% as an annual average Up to 95% on up to 30 days/year
Max. height above sea level for operation	m	2000	

Subject to technical changes. Errors excepted. You can find current information at [www.kostal-solar-electric.com](http://www.kostal-solar-electric.com). Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

<sup>1</sup> 2-year warranty

<sup>2</sup> Accuracy class according to IEC 61557-12 With reference to measuring value, Energy Manager.

If using external converters, the particular measurement accuracy must be taken into account. If using current sensors via the sensor bar, subject to the power factor the accuracy of the active power is class 2.

<sup>3</sup> Limiting current I<sub>N</sub> / phase 63 A. Higher currents possible via converter.

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