



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, PLENTICORE BI

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

- 24-hour home consumption measurement
- Dynamic active power control
- Pre-configured Modbus RTU interfaces (RS485)
- Multiple-inverter connection with KOSTAL solar inverter¹
- Provision of measurement data when using battery functionality in combination with PLENTICORE
- Battery on the PLENTICORE is recharged from additional local generators

PIKO MP plus

- 24-hour home consumption measurement
- Dynamic active power control
- Pre-configured Modbus RTU interfaces (RS485)
- Battery management with optional battery functionality for the PIKO MP plus²

PIKO 4.2-20 / PIKO EPC

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

¹ PLENTICORE plus without battery

² Battery activation code for the KOSTAL Smart Energy Meter can be purchased at shop.kostal-solar-electric.com

Technical data KOSTAL Smart Energy Meter

			KOSTAL Smart Energy Meter ¹
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 ³
	Starting current	mA	< 25
	Product standards		EN 61010, EN 50428, EN 60950
Measurement accuracy ²	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 ²	10-25 (1.5-25)
Torque for screw terminals	Nm	2	
Conditions	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. Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

¹ 2-year warranty

² 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.

³ Limiting current I_N / phase 63 A. Higher currents possible via converter.

KOSTAL

KOSTAL Solar Electric GmbH
Hanferstr. 6
79108 Freiburg i. Br.
Germany
Telefon: +49 761 47744-100100
Fax: +49 761 47744 - 111

KOSTAL Solar Electric Ibérica S.L.
Edificio abm
Ronda Narciso Monturiol y Estarriol, 3 Torre
B, despachos 2 y 3
Parque Tecnológico de Valencia
46980 Valencia
España
Teléfono: +34 961 824- 934
Fax: +34 961 824 - 931

KOSTAL Solar Electric France SARL
11, rue Jacques Cartier
78280 Guyancourt
France
Téléphone: +33 1 61 38 - 4117
Fax: +33 1 61 38 - 3940

KOSTAL Solar Electric Hellas E.Π.Ε.
47 Steliou Kazantzidi st., P.O. Box: 60080 1st
building – 2nd entrance
55535, Pilea, Thessaloniki
Ελλάδα
Τηλέφωνο: +30 2310 4777 - 5511
Fax: +30 2310 4777 - 5511

KOSTAL Solar Electric Italia Srl
Via Genova, 57
10098 Rivoli (TO)
Italia
Telefon: +39 011 97 82- 420- 420
Fax: +39 011 97 82 - 432

KOSTAL Solar Elektrik Turkey
Mahmutbey Mah. Taşocağı Yolu Cad.
No:3 (B Blok), Ağaoğlu My Office 212
Kat:16, Ofis No:269
Bağcılar - İstanbul / Türkiye
Telefon: +90 212 803 06 24
Faks: +90 212 803 06 25

www.kostal-solar-electric.com