

REFU*sol* 04K...06K

Single phase string inverters
for use at home

- Precise dual MPPT tracking
- Natural convection cooling
- Intelligent grid management

With their low voltage ranges, the single-phase string inverters in the performance classes 4 to 6 kW are particularly suitable for small systems. They comply with all requirements for IP 65 protection – their housing provides reliable protection from dust and water and therefore allows installation in the open without any problem.

The string inverters are easy to handle and compact, the detachable rust-free aluminium covers as well as the Plug&Play connections allow an easy installation. Operation and monitoring are easy, further facilitated by the graphic display, the integrated RS485 interface and optional WiFi/GPRS connection.

The single-phase inverters achieve an efficiency of up to 98% even at low irradiation. The independent dual MPPT tracking is highly precise with an efficiency of more than 99.9%. It allows better adaptation to different roof designs.

The inverters allow and intelligent grid management through reactive power capability and the possibility to limit power output either as zero or adjustable power limit export.



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DC DATA

Max. input voltage DC (V)		600	
Nominal input voltage DC (V)		360	
MPPT voltage range (V)		90 ... 580	
DC voltage range at nominal power (V)	200 ... 520	250 ... 520	300 ... 520
DC start-up input voltage (V)		120	
Max. input power (kW)	4.4	5.5	6.6
Max. DC power per single MPPT (kW)	2.6	3.0	3.5
MPP trackers		2	
Max. input current per MPPT (A)		11	
No. DC inputs per MPPT		1	

AC DATA

AC nominal power (kVA)	4.0	5.0	6.0
AC grid connection		L/N/PE	
Nominal voltage AC (V)		220, 230, 240	
Voltage range AC (V)		180 ... 276 (acc. to local standards)	
Nominal Power Factor		1 (adjustable +/- 0.8)	
Nominal frequency (Hz)		50, 60	
Grid frequency range (Hz)		47 ... 55, 54 ... 66 (acc. to local standards)	
Active power adjustable range (%)		0 ... 100	
Max. AC current (A)	18.2	22.8	27.3
THD (%)		< 3	
Max. efficiency (%)	97.8	97.9	98.0
European efficiency (%)	97.5	97.5	97.5
MPPT efficiency (%)		> 99.9	
Feed-in from / Self consumption night (W)		50 / < 1	
Power limit export		zero export or adjustable power limit export	

AMBIENT CONDITIONS

Cooling		natural convection cooling
Ambient temperature (°C)		-25 ... +60
Rel. air humidity (%)		0 ... 100
Noise (dBA)		< 25
Max. elevation (m above sea level)		4,000
Type of protection (IEC 60529)		IP65

GENERAL DATA

Topology		transformerless
Status display		LCD display
Interfaces		RS485, WiFi/GPRS (optional), SD card
Dimensions H x W x D (mm)		405 x 315 x 135
Weight (kg)		11.5
Certification		INMETRO (ABNT NBR 16149:2013, ABNT NBR 16150:2013, ABNT NBR IEC 62116:2012), IEC 62116, IEC 61727, IEC 61683, IEC 60068 (1,2,14,30), IEC 62109-1/2, VDE 0126-1-1:2013

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