

SOLAR INVERTER



IP 42 / IP 54



IP 55 / Outdoor

Sunways Solar Inverters PT 30k and PT 33k AC output: 30.0 kW and 33.3 kW

The central inverters in the PT series, with an efficiency of more than 98.0% and a maximum DC input voltage of up to 1000 V, set a standard for compact three-phase free-standing devices – also available as an EU device from April 2011.

HERIC® topology for maximum performance

Due to the tried and tested HERIC® topology in a three-phase version, the PT series is a winner with the highest efficiencies in this output class. Peak efficiencies of over 98% ensure above-average yields.

- available from April 2011 certified with new medium voltage directive
- Directly supports German Renewable Energy Act feed-in management using retrofittable Power Control Module
- Comprehensive string monitoring using „String Box CAN 08“ and the Sunways Portal
- Coated PCBs for protection from environmental influences
- Apparent power 33.333 VA (PT 30k), 37.000 VA (PT 33k)

„All-in-One“ – complete functionality

Sunways has set a new standard with 'All-in-One' in string inverters: CAN bus networking, active E-mail alerts, integrated Sunways Browser, network connection and a graphic display are naturally also included in the PT series.

Services

In addition to the standard 5-year guarantee you can have up to 20 years operational reliability with a warranty extension – on-site repair service included during the guarantee period! And if you want to be sure that the system monitoring and maintenance are in safe hands, you can also take out a maintenance and service contract – your personal „all-round no-worries package“ direct from the manufacturer.

Information and Sales

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Technical Data Sunways PT Solar Inverter

	PT 30k	PT 33k
DC Input		
Rated DC power	31000 W	34500 W
Maximum DC current	75.0 A	
Nominal DC voltage	700 V	
MPP voltage range	420 V ... 800 V	460 V ... 800 V
Maximum voltage DC	1000 V	
DC connection	2 terminal blocks 16 ... 35 mm ² (Outdoor 16 ... 70 mm ²)	
DC cable entry IP55/Outdoor	2 x M 25 (max. 15 mm cable diameter)	
Number of MPP trackers	1	
Overvoltage category	II (according to DIN VDE 0110 Part1)	
Lightning protection level	SPD Typ 2 (class 2, VDE 0185-305-4) in variant with DC-OVP	
AC output		
Rated AC output power	30000 W	33333 W
Maximum AC power	30000 W	33333 W
Apparent power	33.333 VA	37.000 VA
Nominal AC current	43.5 A per phase	48.3 A per phase
Maximum AC current	50.0 A per phase	53.0 A per phase
Current capacity at the feed-in point	at least 100 A per phase	
Nominal frequency	50 Hz	
Frequency tolerance range	47.5 Hz ... 51.5 Hz (according to DIN VDE-AR-N 4105:2011-08)	
Grid voltage	400 V	
AC voltage range	-20% ... +15% (acc. to DIN VDE 0126-1-1)	
Distortion factor at Pn	< 3%	
Reactive power factor (cos phi)	0.9 inductive...0.9 capacitive	
Grid voltage monitoring	acc. to DIN VDE 0126-1-1	
Earth fault protection	RCD (acc. to DIN VDE 0126-1-1)	
Insulation, frequency and DC current monitoring	integrated (acc. to DIN VDE 0126-1-1)	
Required phases, number of grid connections	3 (L1, L2, L3, N, PE)	
AC connection	5 terminal blocks 16 ... 25 mm ² (Outdoor: 16 ... 70 mm ²)	
AC cable entry IP55/Outdoor	1 x M 40 (max. 27 mm cable diameter)	
AC overvoltage category	III (according to DIN VDE 0110 Part1)	
Lightning protection level	SPD Typ 2+3 (class 2+3, VDE 0185-305-4)	
Performance		
Stand-by consumption	< 4 W	
Night-time consumption	ca. 0 W	
Maximum efficiency	98.0%	
European efficiency	97.6%	
MPP efficiency (static)	99.90%	
Switching concept	HERIC® topology, three-phase, transformerless	

Technical Data Sunways PT Solar Inverter

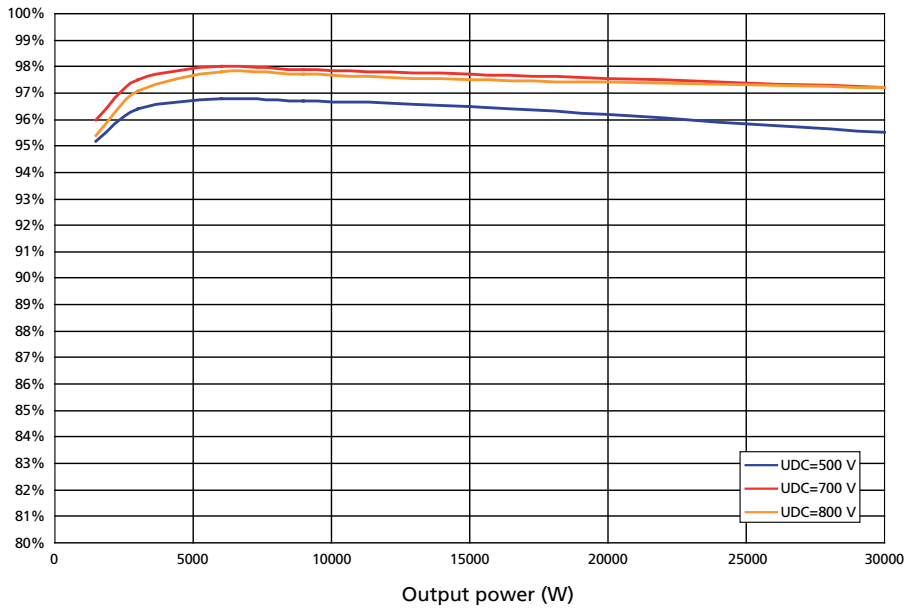
Other

DC switch	integrated
Grid-connection fuse layout	3 x 63 A (16 mm ²)
Data interfaces	Ethernet, CAN, voltageless alarm relay, 50 pulse output
Sensor interfaces	irradiation, temperature
Display	LCD, backlit, 128 x 64 pixels
Plant supervision	active alarm via e-mail, Sunways Browser, Sunways Portal
Power supply unit protected on PCB	T2A/250 V
IP degree of protection according to IEC 60529	IP 42 / IP 54 (Outdoor: IP 55)
Relative air humidity	max. 95 %, non-condensing
Air quality according to EN 60721-3-4:	for mechanical active substances : 3S1 – IP 42 3S2 – IP 54, IP 55 / Outdoor for chemical active substances: 4C1
Climatic class	4K4H (according to EN 60721-3-4)
Maximum height above sea level	1000 m
Cooling	active cooling with fan (Fresh air supplied: 350 m ³ / hour)
Ambient temperature	-20°C ... 40°C (to 50°C with derating)
Stiffening plates on the sides	for installations in direct sunlight (optionally available, Art.Nr.SE104M10A)
Overload behaviour	working point adjustment
Dimensions (height x width x depth)	100 x 60 x 48 cm (Outdoor: 136 x 67 x 54 cm)
Weight	ca. 155 kg (Outdoor: ca. 170 kg)
Type of installation	standing installation
Noise development	ca. 70 dBa (Outdoor: ca. 78 dBa)
Standard warranty (option)	5 years (with maintenance contract: up to 20 years)
Certificates	CE, DIN VDE 0126-1-1, RD 1663/2000, RD 661/2007, CEI 11-20 v.1, Sezione F Guida Enel, BDEW medium voltage directive 2011, VDE-AR-N 4105 Further certificates under www.sunways.eu

Values based on 230 V mains voltage.
Subject to technical changes, as at 05/2012

Efficiency curve for Sunways Solar Inverter PT

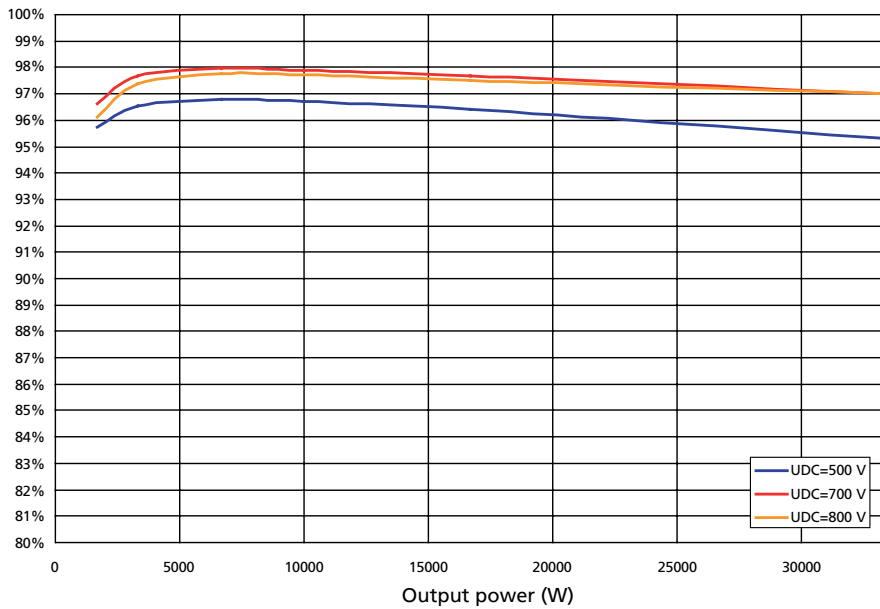
Efficiency curve PT 30k



Output power (%)	5.0	10.0	20.0	30.0	50.0	100.0	Max	Euro	
Efficiency	500 V	95.2	96.4	96.8	96.7	96.5	95.5	96.8	96.3
	700 V	96.0	97.5	98.0	97.9	97.7	97.2	98.0	97.6
	800 V	95.4	97.1	97.8	97.7	97.5	97.2	97.8	97.4

Values based on 230 V mains voltage, $\cos \phi = 1$ and an ambient temperature of 25°C.

Efficiency curve PT 33k



Output power (%)	5.0	10.0	20.0	30.0	50.0	100.0	Max	Euro	
Efficiency	500 V	95.7	96.5	96.8	96.7	96.4	95.3	96.8	96.3
	700 V	96.6	97.7	98.0	97.9	97.7	97.0	98.0	97.6
	800 V	96.1	97.4	97.8	97.7	97.5	97.0	97.8	97.4

Values based on 230 V mains voltage, $\cos \phi = 1$ and an ambient temperature of 25°C.