SOLAR INVERTER

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.

- 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
Sunways AG · Photovoltaic Technology · Macairestraße 3-5
D-78467 Konstanz · Telephone +49 (0)7531 996 77-0
Fax +49 (0)7531 996 77-444 · E-Mail info@sunways.de
www.sunways.de

sunways
Photovoltaic Technology

Technical Data Sunways PT Solar Inverter

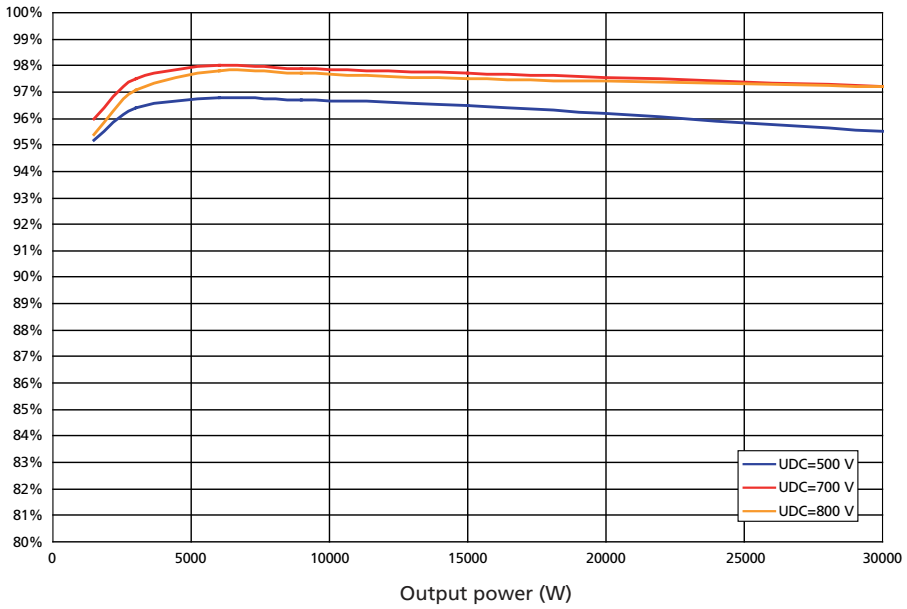
		PT 30k		PT 33k	
		without DC-OVP	with DC-OVP	without DC-OVP	with DC-OVP
IP54	(with grid support, EU-Unit)	**SI330P31B**	**SI330P41B**	**SI333P31B**	**SI333P41B**
IP54	(without grid support)	**SI330P39A**	**SI330P49A**	**SI333P39A**	**SI333P49A**
P55/Outdoor	(with grid support, EU-Unit)	**SI330P20B**	**SI330P40B**	**SI333P20B**	**SI333P40B**
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 VDE-AR-N 4105)			
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			

Other		
DC switch	integrated	
Grid-connection fuse layout	3 x 63 A (16 mm²)	
Data interfaces	Ethernet, CAN, voltageless alarm relay, S0 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 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 m³ / 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 1699/2011, 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 06/2012

Efficiency curve for Sunways Solar Inverter PT

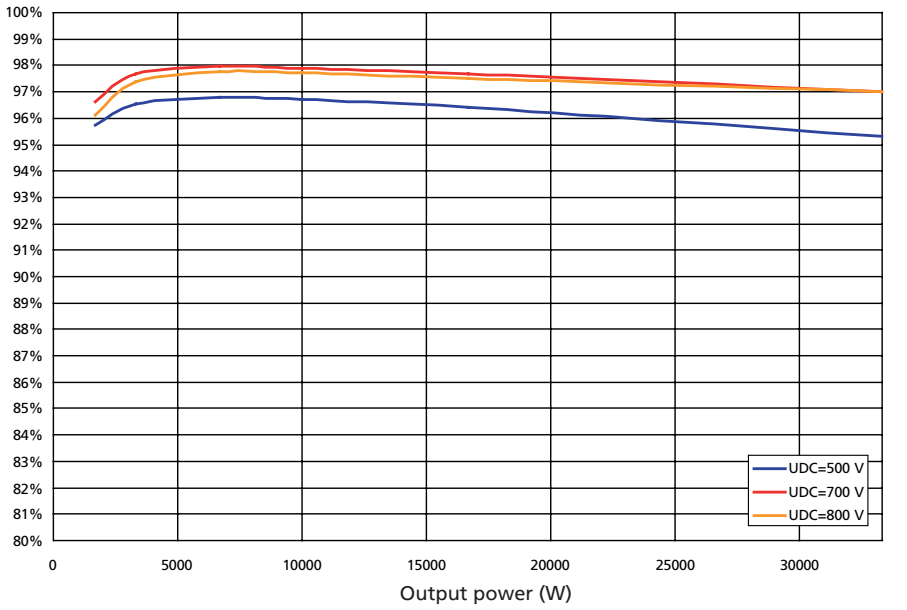
Efficiency curve PT 30k



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.

