

SOLAR INVERTER

Sunways Solar Inverter AT 5000, AT 4500, AT 3600 and AT 2700

Thanks to HERIC® topology with innovative FP switching, the new AT Solar Inverters from Sunways achieve a constant yield at changing irradiation levels and temperatures. And that even across technological limits.



Flexible system planning – thin-film and silicon technology

Thanks to its expanded input voltage range from 150 to 680 V, solar inverters of the AT series offer the greatest possible flexibility for planning solar systems. Due to their innovative technology (without a transformer), AT Solar Inverters achieve a constant, consistently high efficiency even with fluctuating DC voltages and different power levels. Negative voltages, which are particularly undesirable with thin-film modules, are eliminated by the HERIC® topology with FP switching.

All-in-one – standard equipment

- Integrated DC load break cut-out
- Lighted graphic display and keypad
- Extensive internal 128 MB data logger
- Inverter networking via CAN bus
- Ethernet interface for integration in networks
- Interface for direct modem connection
- Active email alerting in case of system faults
- Voltageless alarm relay for the connection of external alarm devices
- 50 pulse output for controlling the Sunways display
- Integrated web server for display and configuration via a web browser



Simple, fast and safe installation with plug-in connectors and weatherproof connection box.

Information and Sales

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sunways
Photovoltaic Technology

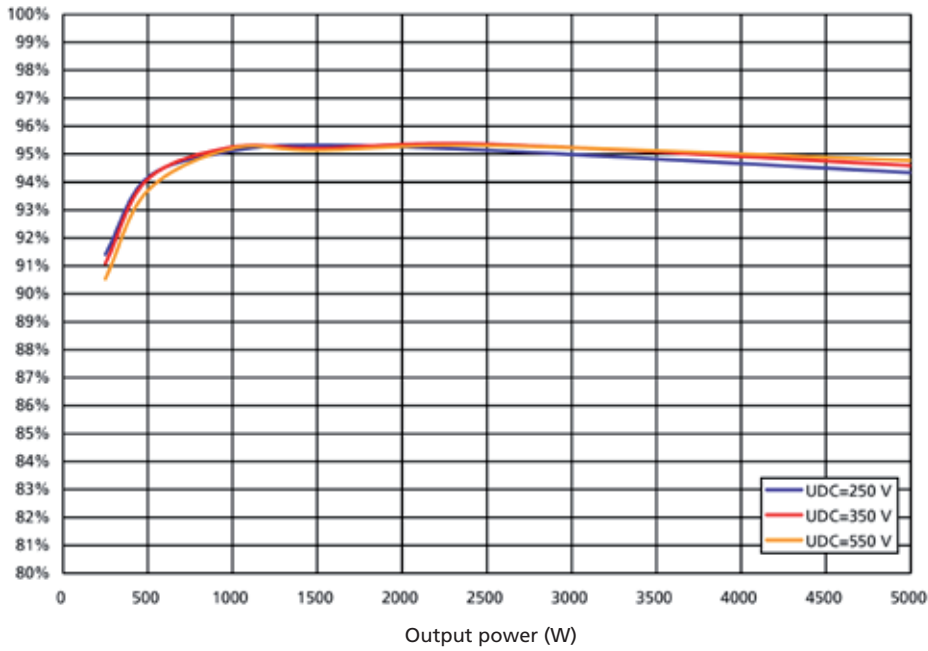
Technical Data of Sunways Solar Inverter AT

	AT 5000	AT 4500	AT 3600	AT 2700
DC Input				
Rated DC power	5200 W	4700 W	3750 W	2800 W
Maximum DC current	22.0 A	22.0 A	15.5 A	15.5 A
Nominal DC voltage	350 V			
MPP voltage range	236 V ... 600 V	214 V ... 600 V	242 V ... 600 V	181 V ... 600 V
Maximum voltage DC	680 V			
Number of inputs per MPP tracker	2 x Tyco Solarlok			
Number of MPP trackers	1			
AC output				
Rated AC output power	5000 W	4500 W	3600 W	2700 W
Maximum AC power	5000 W	4500 W	3600 W	2700 W
Nominal AC current	21.7 A	19.6 A	15.7 A	11.7 A
Maximum AC current	23.0 A	21.0 A	17.0 A	12.5 A
Nominal frequency	50 Hz			
Frequency tolerance range	47.5 Hz ... 50.2 Hz (according to DIN VDE 0126-1-1)			
Grid voltage	230 V			
AC voltage range	-20% ... +15% (according to DIN VDE 0126-1-1)			
Distortion factor at Pn	< 4%			
Reactive power factor (cos phi)	ca. 1			
Grid voltage monitoring	according to DIN VDE 0126-1-1			
Earth fault protection	RCD (according to DIN VDE 0126-1-1)			
Insulation, frequency and DC current monitoring	integrated according to DIN VDE 0126-1-1			
Required phases, number of grid connections	3 (L1, L2, L3, N, PE)			
Number of feed-in phases (230 V single-phase)	1			
Performance				
Stand-by consumption	6.5 W			
Night-time consumption	< 0.06 W			
Maximum efficiency	95.5%	95.5%	95.5%	95.5%
European efficiency	95.0%	95.0%	94.9%	94.7%
MPP efficiency (static)	99.99%	99.99%	99.99%	99.99%
Switching concept	HERIC® / FP topology, transformerless			
Other				
DC switch	internal, mechanical			
Grid-connection fuse layout	25 A	25 A	25 A	16 A
Data interfaces	Ethernet, CAN, RS485, voltageless alarm relay, 50 pulse output, modem			
Sensor interfaces	irradiation, temperature			
Display	LCD, backlit, 128 x 64 pixels			
Plant supervision	active alarm via e-mail, integrated web-server, Sunways Communicator, Sunways Portal			
IP degree of protection according to IEC 60529	IP 54			
Max. relative humidity	95%			
Cooling	free convection			
Ambient temperature	-25°C ... 40°C (at full load)			
Overload behaviour	working point adjustment			
Dimensions (height x width x depth)	59 x 35 x 21 cm			
Weight	29 kg			
Type of installation	wall installation			
Noise development	< 35 dB (A)			
Standard warranty (option)	5 years (10 / 15 / 20 / 25 years)			
Certificates	CE, DIN VDE 0126-1-1			

Subject to technical changes, as at 01/2010

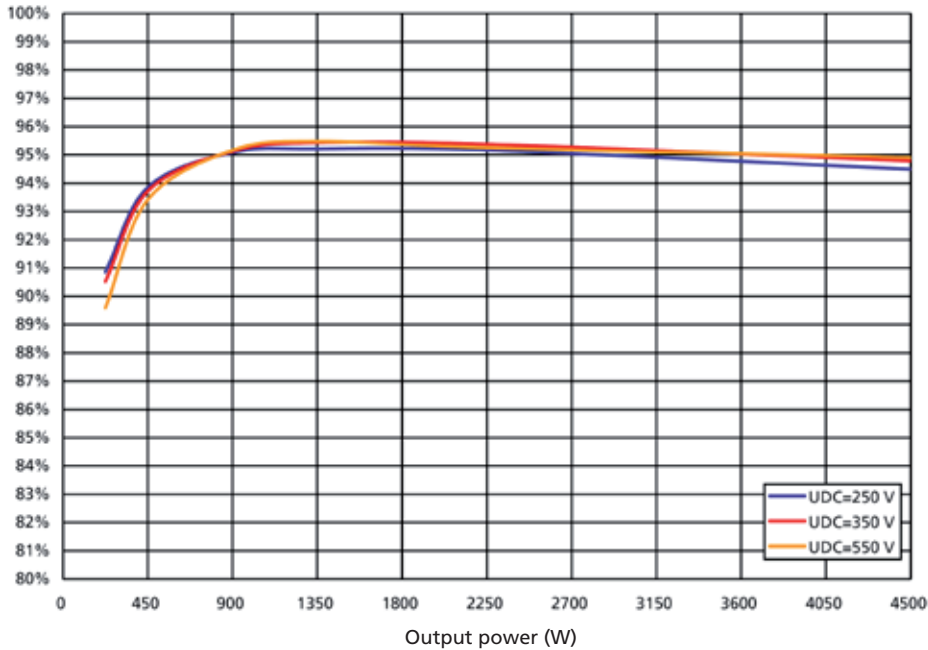
Efficiency curve for Sunways Solar Inverter AT

Efficiency curve AT 5000



Output power (%)		5.0	10.0	20.0	30.0	50.0	100.0	Max	Euro
Efficiency	250 V	91.4	94.2	95.1	95.3	95.1	94.3	95.4	94.8
	350 V	91.1	94.1	95.3	95.2	95.4	94.6	95.5	95.0
	550 V	90.5	93.7	95.2	95.1	95.3	94.8	95.5	94.9

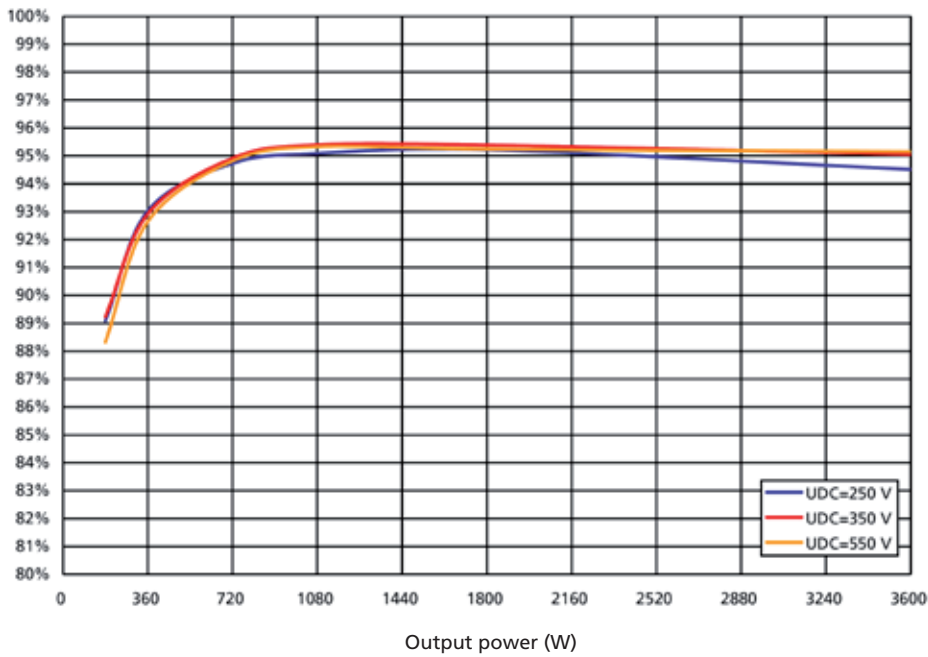
Efficiency curve AT 4500



Output power (%)		5.0	10.0	20.0	30.0	50.0	100.0	Max	Euro
Efficiency	250 V	90.9	93.9	95.1	95.2	95.2	94.5	95.4	94.8
	350 V	90.5	93.7	95.1	95.4	95.4	94.8	95.5	95.0
	550 V	89.6	93.4	95.2	95.5	95.3	94.9	95.5	94.9

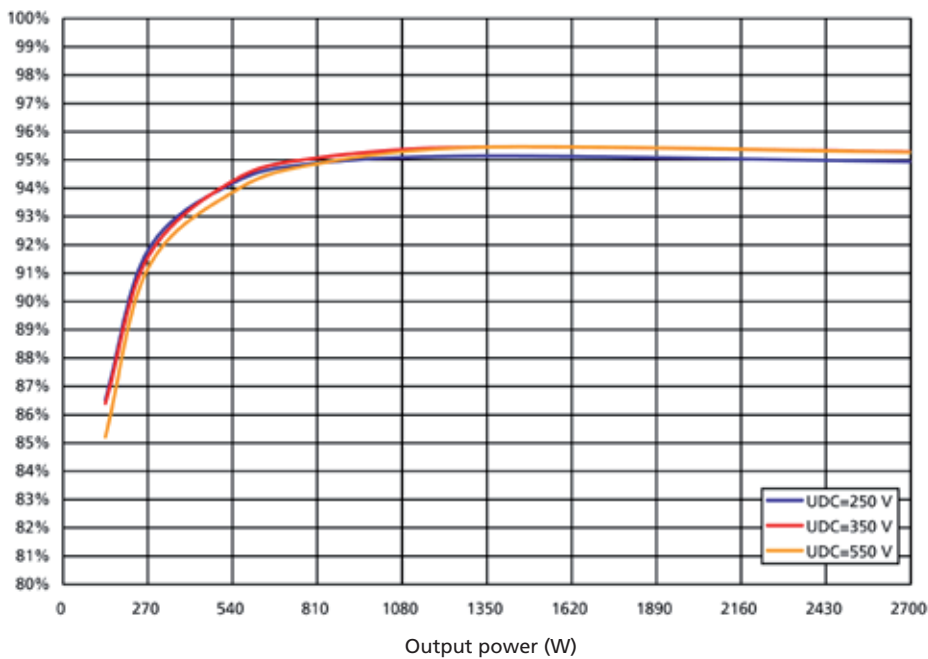
Efficiency curve for Sunways Solar Inverter AT

Efficiency curve AT 3600



Output power (%)	5.0	10.0	20.0	30.0	50.0	100.0	Max	Euro	
Efficiency	250 V	89.1	93.0	94.7	95.1	95.2	94.5	95.3	94.7
	350 V	89.2	92.9	94.9	95.4	95.4	95.1	95.5	94.9
	550 V	88.3	92.6	94.8	95.3	95.2	95.1	95.5	94.8

Efficiency curve AT 2700



Output power (%)	5.0	10.0	20.0	30.0	50.0	100.0	Max	Euro	
Efficiency	250 V	86.5	91.8	94.2	94.9	95.1	94.9	95.3	94.5
	350 V	86.4	91.6	94.3	95.1	95.5	95.3	95.5	94.7
	550 V	85.2	91.2	93.9	94.9	95.5	95.3	95.5	94.6