

SOLAR INVERTER



Sunways German Made & Designed Grid Connect Solar Inverters AT 2700, AT 4500 and AT 5000

Thanks to the unique HERIC® topology with innovative FP switching, Sunways AT Solar Inverters achieve a constant yield at changing irradiation levels and temperatures – even with many types of thin film panels.

Flexible system planning – thin-film and silicon technology

Thanks to an expanded input voltage range from 150 to 680 V, solar inverters of the AT series offer the greatest possible flexibility for planning solar systems under the new AS5033 voltage caps. Due to their innovative technology, AT Solar Inverters achieve a constant, consistently high efficiency even with fluctuating DC voltages and importantly at low input power levels. Negative voltages on the DC side, which are particularly undesirable with thin-film modules, are eliminated by the HERIC® topology with FP switching.

99% Tracking efficiency of the rapid response MPPT algorithm means you always get the best from your array at any given time.

All-in-one – standard equipment for better value

- Built in earth fault alarm terminals to satisfy new AS5033 requirements – from the word go!
- Comprehensive graphic display and keypad, with historical data and alert log
- Extensive internal 128 MB data logger
- Inverter networking via CAN bus (for large commercial systems)
- Ethernet interface for integration into existing business and school LAN networks (plug straight in)
- Active email alerting in case of system faults (helping to minimise your downtime)
- 50 pulse output for controlling the optional external Sunways display
- Integrated web server for display and configuration via an easy-to-use web browser
- Matching DC connection cables included (to satisfy AS3000/AS5033)

Installers can offer end users 'more for less', whilst users have convenient access to more information than ever before.

Exceptional design & manufacturing heritage

Sunways AG has been involved in the solar market for decades. All Sunways inverters are designed and made in Konstanz, within the German province of Baden-Württemberg. Home to Mercedes Benz and the German electronic industry, Baden-Württemberg contributes an unrivalled depth of engineering talent to Sunways, allowing Sunways inverters to lead the world in efficiency and reliability.



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



Solar Energy Australia

sunways
Photovoltaic Technology

Technical Data of Sunways Solar Inverter AT

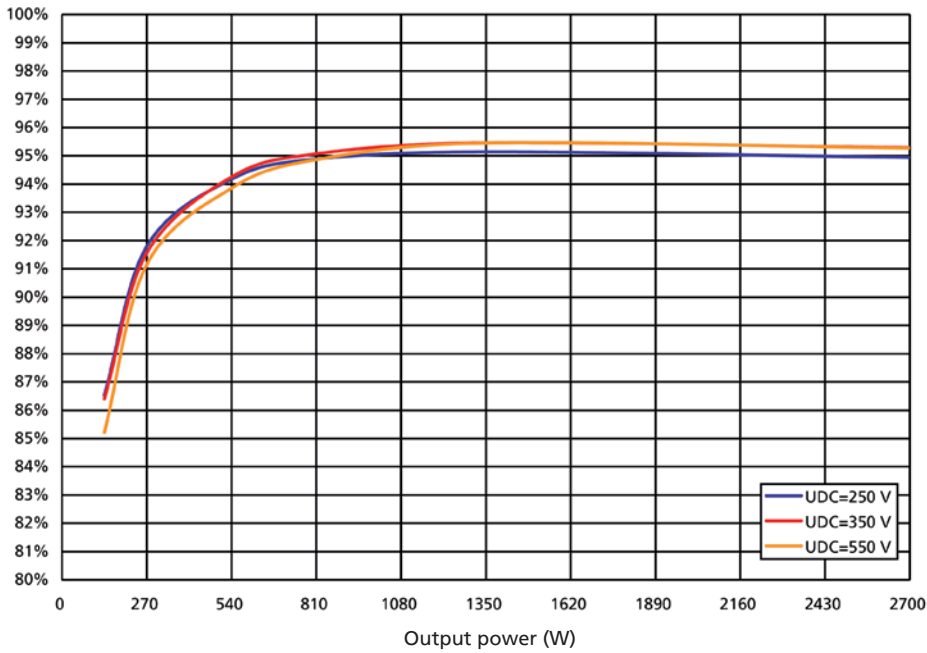
	AT 2700	AT 3000	AT 3600	AT 4500	AT 5000
DC Input					
Rated DC power	2850 W	3150 W	3800 W	4750 W	5250 W
Maximum DC current	15.5 A	15.5 A	15.5 A	22.0 A	22.0 A
Nominal DC voltage	350 V				
MPP voltage range	181 V...600 V	203 V...600 V	242 V...600 V	214 V...600 V	236 V...600 V
Maximum voltage DC	680 V				
Number of inputs per MPP tracker	2 x Tyco Solarlok				
Number of MPP trackers	1				
AC output					
Rated AC output power	2700 W	3000 W	3600 W	4500 W	4600 W
Maximum AC power	2700 W	3000 W	3600 W	4500 W	5000 W
Nominal AC current	11.7 A	13.0 A	15.7 A	19.6 A	20.0 A
Maximum AC current	12.5 A	14.0 A	17.0 A	21.0 A	23.0 A
Nominal frequency	50 Hz				
Frequency tolerance range	47.5 Hz ... 51.5 Hz (according to VDE-AR-N 4105:2011-08)				
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 or adjustable from -0.9 to +0.9				
Grid voltage monitoring	single-phase (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	1 (L, 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%	95,5%
European efficiency	94,7%	94,8%	94,9%	95,0%	95,0%
MPP efficiency (static)	> 99%	> 99%	> 99%	> 99%	> 99%
Switching concept	HERIC® / FP topology, transformerless				
Other					
DC switch	internal, mechanical				
Grid-connection fuse layout	16 A	16 A	25 A	25 A	25 A
Data interfaces	Ethernet, CAN, RS485, 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				
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)				
Warranty					
Standard warranty	5 years				
Extension of warranty to 10 years (article no.)	SV101000A	SV101000A	SV101000A	SV101010A	SV101010A
Extension of warranty to 15 years (article no.)	SV101030A	SV101030A	SV101030A	SV101040A	SV101040A
Extension of warranty to 20 years (article no.)	SV101060A	SV101060A	SV101060A	SV101070A	SV101070A
Extension of warranty to 25 years (article no.)	SV101090A	SV101090A	SV101090A	SV101100A	SV101100A
Certificates	CE, DIN VDE 0126-1-1, VDE-AR-N 4105:2011-08, G59-2, G83-1 AS4777.2, AS4777.3, AS/NZS3100 Further certificates under www.sunways.eu				

Values based on 230 V mains voltage

Subject to technical changes, as at

Efficiency curve for Sunways Solar Inverter AT

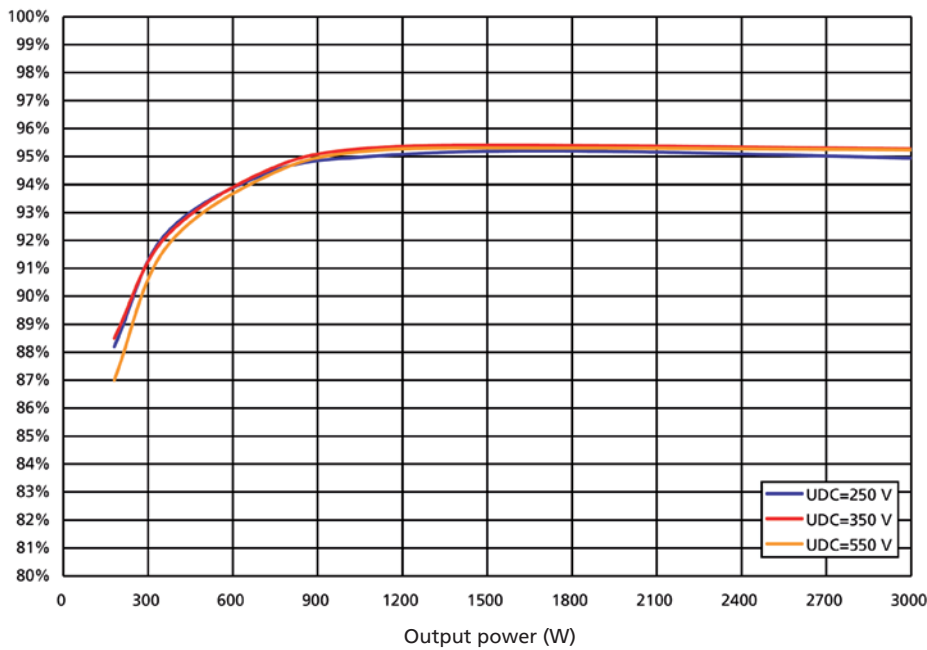
Efficiency curve AT 2700



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

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

Efficiency curve AT 3000



Ausgangsleistung (%)		5,0	10,0	20,0	30,0	50,0	100,0	Max	Euro
Wirkungsgrad	250 V	88.2	92.2	94.4	95.0	95.2	94.8	95.3	94.6
	350 V	88.5	92.1	94.5	95.3	95.4	95.2	95.5	94.8
	550 V	85.2	91.2	93.9	94.9	95.5	95.3	95.5	94.6

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