

# SOLAR INVERTER

## Three-phase Sunways Solar Inverters NT 10000, NT 11000 and NT 12000

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The successful NT 10000 inverter from Sunways has been completely re-engineered and will be complemented by two additional output classes, NT 11000 and NT 12000. The new three-phase NT series with HERIC® topology, three-phase feed technology and a maximum efficiency of 97.6% sets new standards.

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### Top technology

The device combines high-precision MPP multitracking with three separate DC inputs and the patented HERIC® circuitry. The fast and precise MPP control already integrated in the AT series is now also available in the Solar Inverters from the NT series. A key feature of the exclusive HERIC® circuitry is the maximum efficiency of up to 97.6%.

### New features

- With an input voltage range between 340 and 900 V and three configurable inputs the new device series offers even more interconnection options.
- The new NT series can be used throughout Europe: the country of installation can be set directly on site at the touch of a button.

### «All-in-One»

The Sunways NT series offers the following features as standard:

- Integrated DC load break switch
- Illuminated graphic display and keypad
- Comprehensive internal 128 MB data logger
- Inverter networking via CAN bus
- Ethernet interface for integration in networks
- Interface for direct modem connection
- Active e-mail alert in case of system faults
- Potential-free alarm relay for connecting external alarm devices
- S0 pulse output for controlling the Sunways display
- Integrated Sunways Browser for evaluation and configuration via a web browser

### Information and Sales

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***sunways***  
Photovoltaic Technology

## Technical Data Sunways Solar Inverters NT 10000, NT 11000 and NT 12000

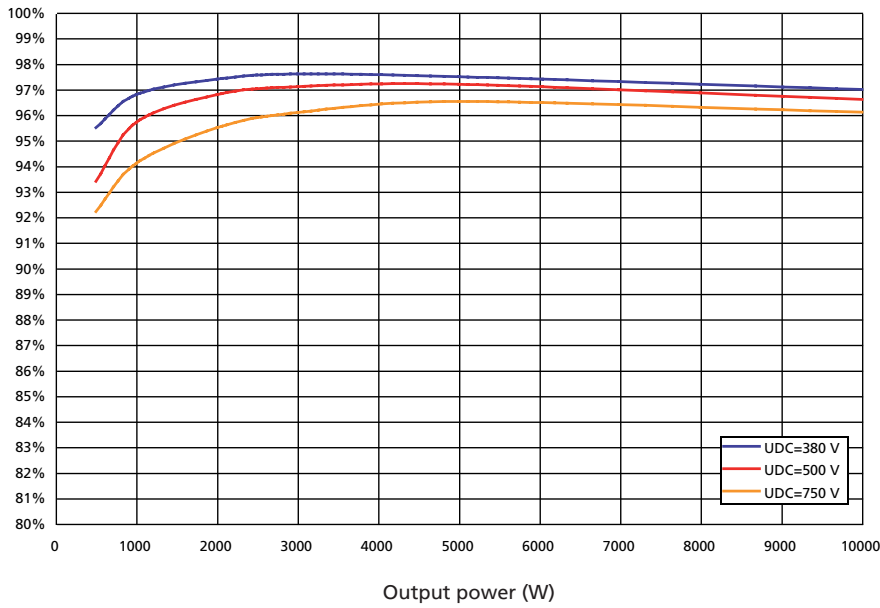
	NT 10000	NT 11000	NT 12000
<b>DC Input</b>			
Rated DC power	10500 W	11550 W	12600 W
Maximum DC current	11.0 A per MPP input	11.5 A per MPP input	12.8 A per MPP input
MPP voltage range	340 V		
MPP voltage range	340 V...750 V		
Maximum voltage DC	900 V		
Number of inputs per MPP tracker	1 x Tyco Solarlok		
Number of MPP trackers	3		
<b>AC output</b>			
Rated AC output power	10000 W	11000 W	12000 W
Maximum AC power	10000 W	11000 W	12000 W
Nominal AC current	14.5 A per phase	16.0 A per phase	17.4 A per phase
Maximum AC current	16.0 A per phase	17.5 A per phase	19.0 A per phase
Nominal frequency	50 Hz		
Frequency range	47.5 Hz...50.2 Hz (according to DIN VDE 0126-1-1)		
Grid voltage	400 V		
AC voltage range	-20%...+15% (according to DIN VDE 0126-1-1)		
Distortion factor at Pn	< 1%		
Reactive power factor (cos phi)	1 or adjustable from -0.9 to +0.9		
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)	3		
<b>Performance</b>			
Stand-by consumption	9,0 W		
Night-time consumption	~0 W		
Maximum efficiency	97.6%	97.6%	97.6%
European efficiency	97.3%	97.2%	97.2%
MPP efficiency (static)	> 99%		
Switching concept	HERIC® topology, transformerless		
<b>Other</b>			
DC switch	integrated		
Grid-connection fuse layout	3 x 25 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, Sunways Browser, Sunways Portal		
IP degree of protection according to IEC 60529	IP 54		
Max. relative humidity	95%		
Cooling	active cooling, temperature controlled		
Ambient temperature	-25°C...50°C (at full load)	-25°C...45°C (at full load)	-25°C...40°C (at full load)
Overload behaviour	working point adjustment		
Dimensions (height x width x depth)	84 x 53 x 21 cm		
Weight	31 kg		
Type of installation	wall installation		
Noise development	< 60 dB (A)		
<b>Warranty</b>			
Standard warranty	5 years		
Extension of warranty to 10 years (article no.)	SV101020A		
Extension of warranty to 15 years (article no.)	SV101050A		
Extension of warranty to 20 years (article no.)	SV101080A		
Extension of warranty to 25 years (article no.)	SV101110A		
Certificates	CE, DIN VDE 0126-1-1		

Values based on 230 V mains voltage

Subject to technical changes, as at 05/2010

## Efficiency curve for Sunways Solar Inverters NT

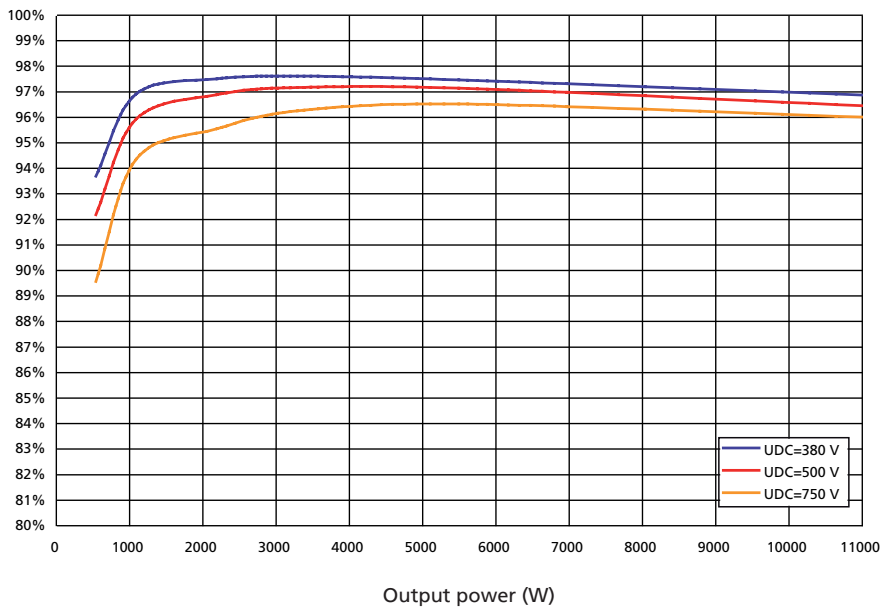
### Efficiency curve NT 10000



Output power (%)	5,0	10,0	20,0	30,0	50,0	100,0	Max	Euro	
Efficiency	380 V	95,5	96,8	97,4	97,6	97,5	97,0	97,6	97,3
	500 V	93,4	95,7	96,8	97,1	97,2	96,6	97,2	96,8
	750 V	92,2	94,1	95,5	96,1	96,5	96,1	96,5	96,0

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

### Efficiency curve NT 11000

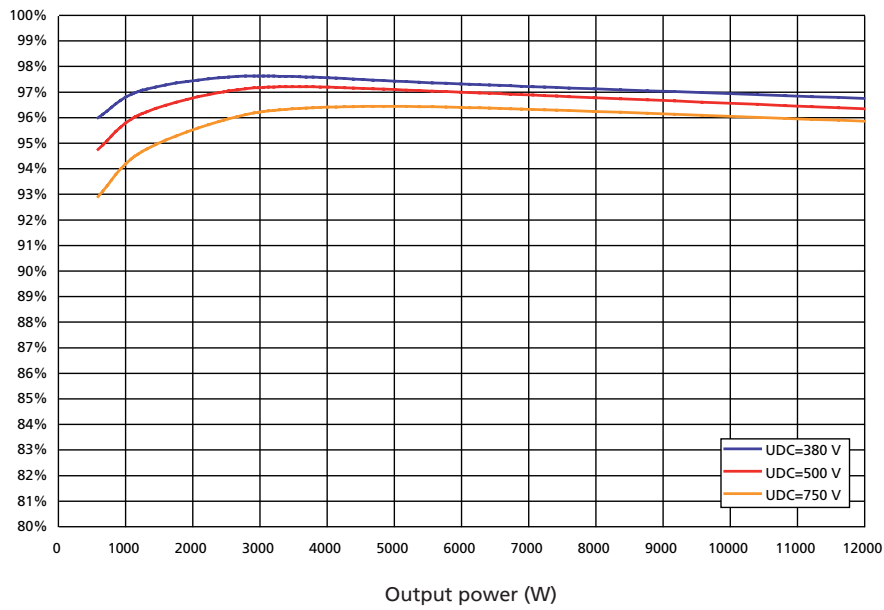


Output power (%)	5,0	10,0	20,0	30,0	50,0	100,0	Max	Euro	
Efficiency	380 V	93,7	96,9	97,5	97,6	97,4	96,8	97,6	97,2
	500 V	92,2	95,9	96,9	97,1	97,1	96,4	97,2	96,7
	750 V	89,5	94,3	95,5	96,2	96,5	96,0	96,5	95,9

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

## Efficiency curve for Sunways Solar Inverters NT

### Efficiency curve NT 12000



Output power (%)		5,0	10,0	20,0	30,0	50,0	100,0	Max	Euro
Efficiency	380 V	96,0	97,0	97,5	97,6	97,3	96,7	97,6	97,2
	500 V	94,7	96,1	97,0	97,2	97,0	96,3	97,2	96,7
	750 V	92,9	94,6	95,8	96,3	96,4	95,8	96,5	96,0

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