

# SOLAR INVERTER

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

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.



### 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.
- Certified according to BDEW medium-voltage directive

### «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
- 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

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](mailto:info@sunways.de)  
[www.sunways.de](http://www.sunways.de)

***sunways***  
Photovoltaic Technology

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

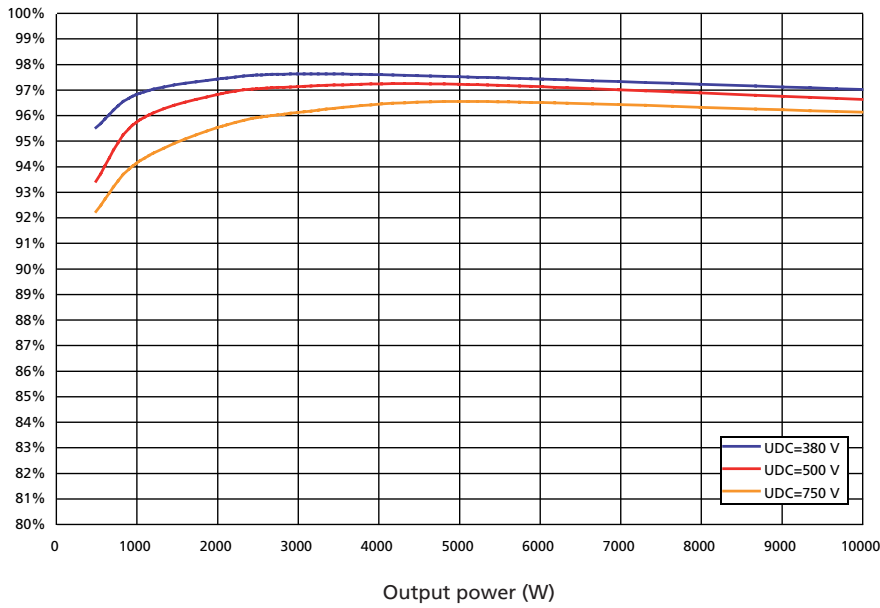
	NT 10000	NT 11000	NT 12000
<b>DC Input</b>			
Rated DC power	10500 W	11550 W	12600 W
Maximum DC current	11.0 A per MPP input	11.5 A per MPP input	12.8 A per MPP input
MPP voltage range	340 V		
MPP voltage range	340 V...750 V		
Maximum voltage DC	900 V		
Number of inputs per MPP tracker	1 x Tyco Solarlok		
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 bis 51,5 Hz (according to DIN VDE-AR-N 4105:2011-08)		
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		
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)		
Certificates	CE, DIN VDE 0126-1-1, VDE-AR-N 4105:2011-08, G59-2 Further certificates under <a href="http://www.sunways.eu">www.sunways.eu</a>		

Values based on 230 V mains voltage

Subject to technical changes, as at 03/2012

## Efficiency curve for Sunways Solar Inverters NT

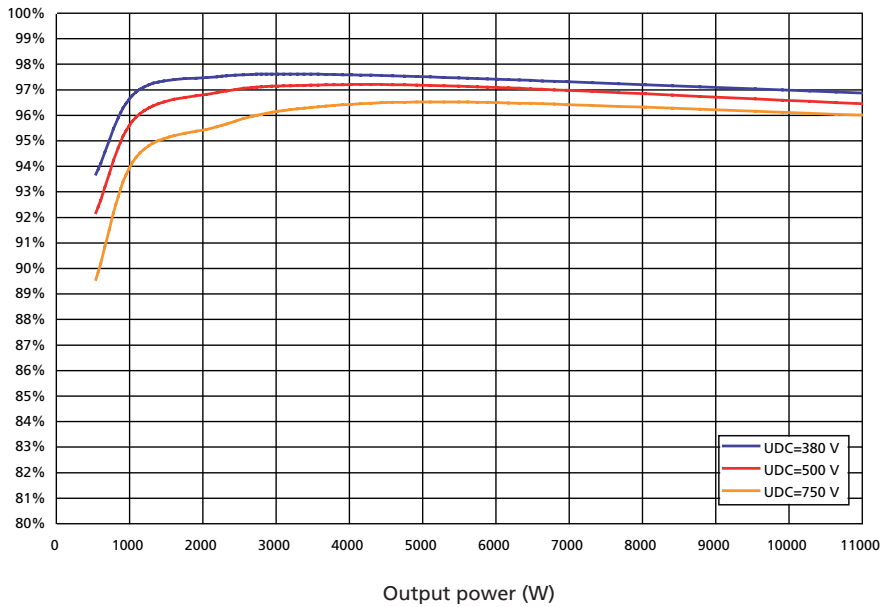
### Efficiency curve NT 10000



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

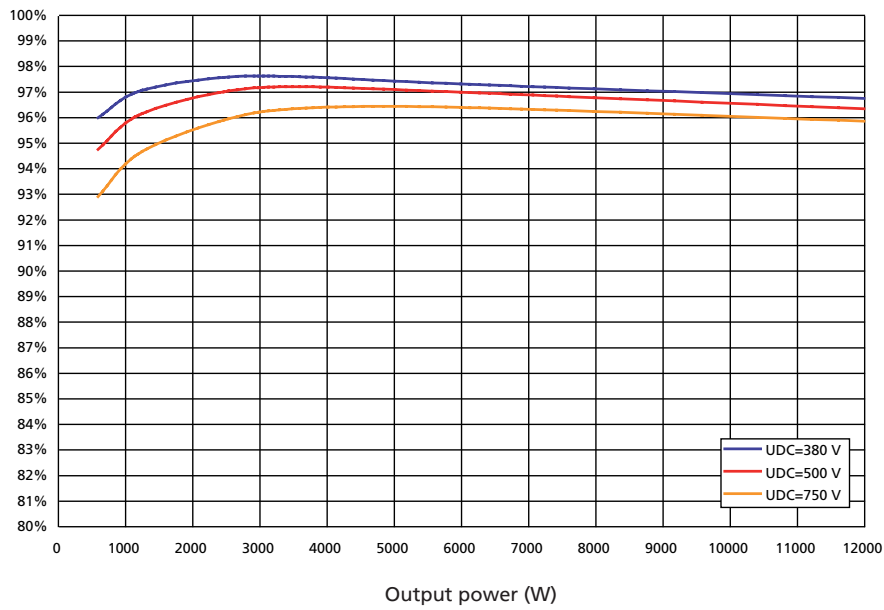


Output power (%)		5,0	10,0	20,0	30,0	50,0	100,0	Max	Euro
Efficiency	380 V	93,7	96,9	97,5	97,6	97,4	96,8	97,6	97,2
	500 V	92,2	95,9	96,9	97,1	97,1	96,4	97,2	96,7
	750 V	89,5	94,3	95,5	96,2	96,5	96,0	96,5	95,9

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.