

SOLAR INVERTER



Sunways Solar Inverters

NT 2500, NT 3000, NT 3700, NT 4200 and NT 5000

AC output: 2.5 to 5.0 kW

The tried and tested NT series has been completely re-engineered and impresses with further improved performance specifications and a greater functional range. Due to the HERIC® topology the NT series – with a maximum efficiency of 97,8% – occupies the top position for 5 kW string converters.

Top technologies combined in one device:

precise MPP control and patented HERIC® circuitry.

The new MPP tracking ensures an even faster and more precise control. There are also further benefits from the exclusive HERIC® circuitry which ensures top efficiency in each output range of the Solar Inverter.

New features

With peak efficiencies of 97,8% and an input voltage range from 340 to 900 V, the new NT series offers the optimum yield for many interconnection options.

All inverters comply with the new German medium-voltage guideline and, due to Power Control, they are applicable in installations with an output of more than 100 kW.

The new NT series can be used throughout Europe: the country of installation can be set on site at the touch of a button.

„All-in-One“ – comprehensive functional range

Sunways has already set new standards for the AT series with „All-in-One“:

CAN bus networking, active E-Mail alert, network connection and graphic display also come as a matter of course with the new NT series.

Information and Sales

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Technical Data Sunways Solar Inverters NT

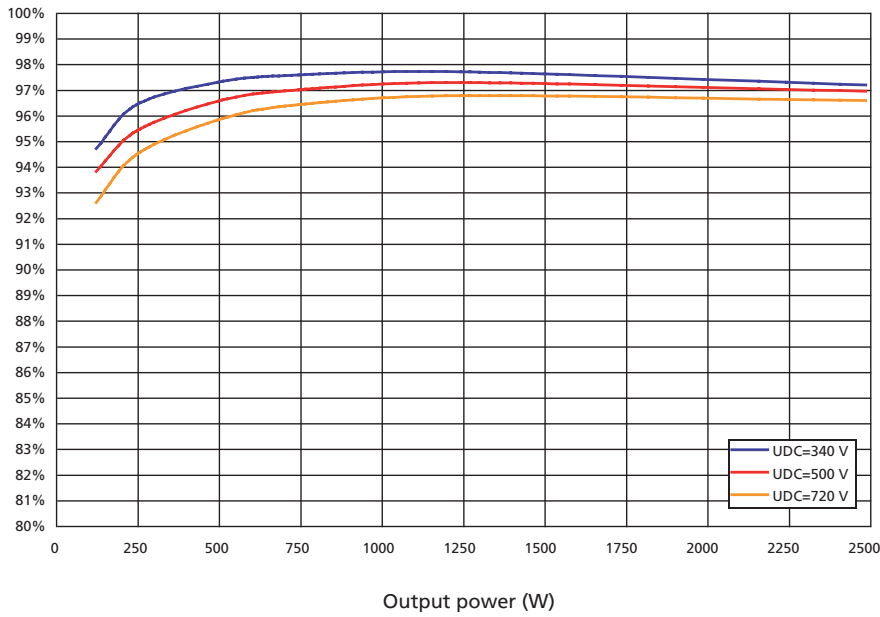
| | NT 2500 | NT 3000 | NT 3700 | NT 4200 | NT 5000 |
|---|--|--------------|--------------|--------------|----------------|
| Order number | SI225NT0C | SI230NT0C | SI237NT0C | SI242NT0C | SI250NT0C |
| DC Input | | | | | |
| Rated DC power | 2625 W | 3150 W | 3885 W | 4410 W | 5250 W |
| Maximum DC current | 7.8 A | 9.3 A | 11.5 A | 12.9 A | 15.4 A |
| Nominal DC voltage | 340 V | | | | |
| MPP voltage range | 340 V ... 750 V | | | | |
| Maximum voltage DC | 900 V | | | | |
| Number of inputs per MPP tracker | 2 x Tyco Solarlok | | | | |
| Number of MPP trackers | 1 | | | | |
| AC output | | | | | |
| Rated AC output power | 2500 W | 3000 W | 3680 W | 4200 W | 5000 W |
| Maximum AC power | 2500 W | 3000 W | 3700 W | 4200 W | 5000 W |
| Nominal AC current | 10.9 A | 13.0 A | 16.0 A | 18.3 A | 21.7 A |
| Maximum AC current | 12.0 A | 14.4 A | 17.8 A | 20.2 A | 24.0 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 | < 2% | | | | |
| Reactive power factor (cos phi) | 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 | 4.0 W | | | | |
| Night-time consumption | < 0.1 W | | | | |
| Maximum efficiency | 97.8% | 97.8% | 97.8% | 97.8% | 97.8% |
| European efficiency | 97.4% | 97.4% | 97.4% | 97.3% | 97.2% |
| MPP efficiency (static) | > 99% | | | | |
| Switching concept | HERIC® topology, transformerless | | | | |
| Other | | | | | |
| DC switch (according to IEC 60947-1/3) | integrated | | | | |
| 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 (at full load) | -25°C...60°C | -25°C...55°C | -25°C...55°C | -25°C...50°C | -25°C ... 45°C |
| Overload behaviour | working point adjustment | | | | |
| Dimensions (height x width x depth) | 59 x 35 x 21 cm | | | | |
| Weight | 26 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, VDE-AR-N 4105:2011-08, G59-2, G83-1 Further certificates under www.sunways.eu | | | | |

Values based on 230 V mains voltage.

Subject to technical changes, as at 02/2012

Efficiency curve for Sunways Solar Inverters NT

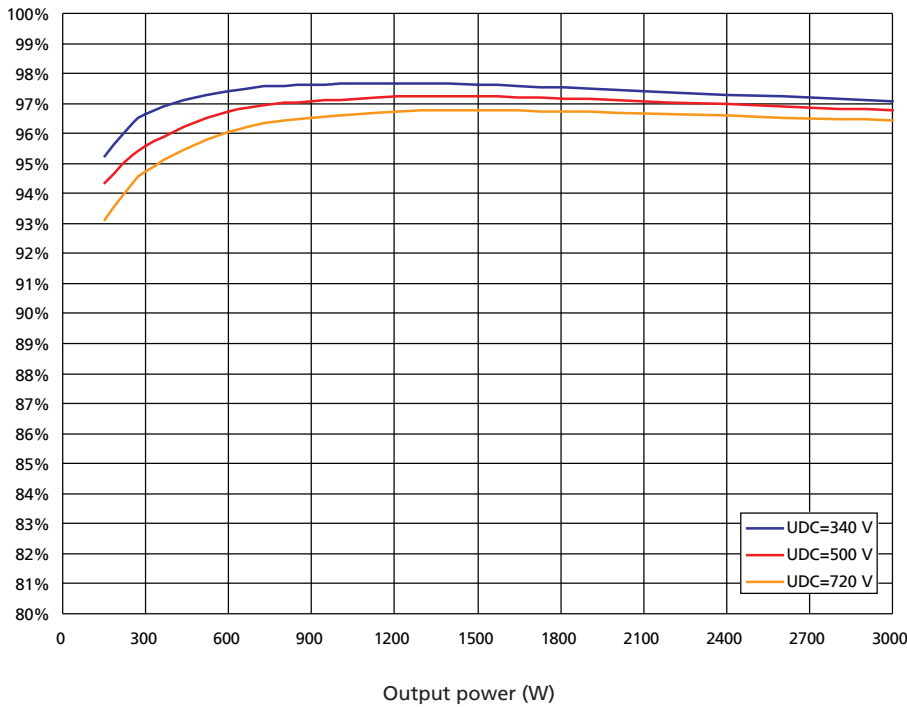
Efficiency curve NT 2500



| Output power (%) | 5,0 | 10,0 | 20,0 | 30,0 | 50,0 | 100,0 | Max | Euro |
|------------------|-------|------|------|------|------|-------|------|------|
| Efficiency | 340 V | 94,7 | 96,4 | 97,3 | 97,6 | 97,7 | 97,8 | 97,4 |
| | 500 V | 93,8 | 95,4 | 96,6 | 97,0 | 97,3 | 97,3 | 96,9 |
| | 720 V | 92,6 | 94,5 | 95,8 | 96,4 | 96,8 | 96,9 | 96,3 |

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

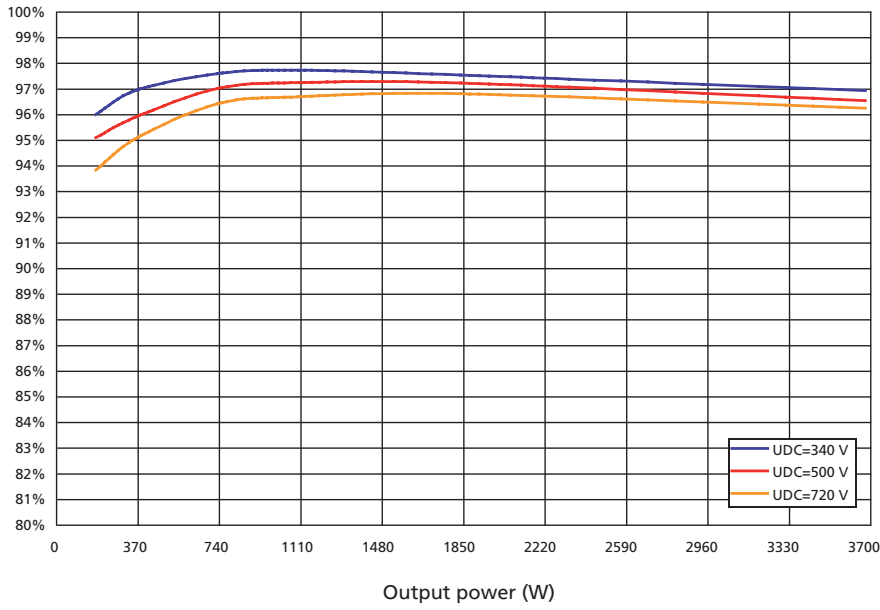
Efficiency curve NT 3000



| Output power (%) | 5,0 | 10,0 | 20,0 | 30,0 | 50,0 | 100,0 | Max | Euro |
|------------------|-------|------|------|------|------|-------|------|------|
| Efficiency | 340 V | 95,2 | 96,6 | 97,4 | 97,6 | 97,6 | 97,8 | 97,4 |
| | 500 V | 94,3 | 95,6 | 96,7 | 97,1 | 97,3 | 97,3 | 96,9 |
| | 720 V | 93,1 | 94,7 | 96,1 | 96,5 | 96,8 | 96,9 | 96,4 |

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

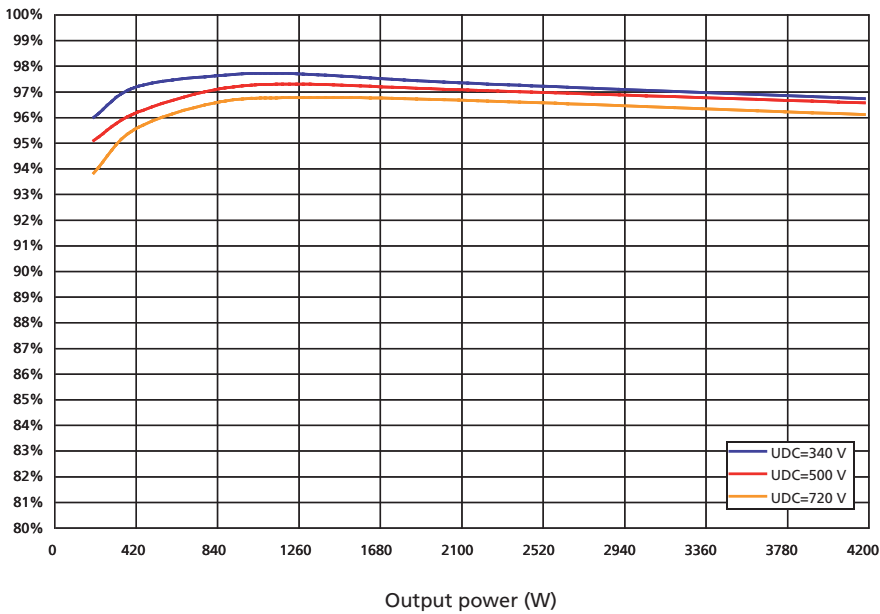
Efficiency curve NT 3700



| Output power (%) | | 5,0 | 10,0 | 20,0 | 30,0 | 50,0 | 100,0 | Max | Euro |
|------------------|-------|------|------|------|------|------|-------|------|------|
| Efficiency | 340 V | 96,0 | 97,2 | 97,6 | 97,7 | 97,3 | 96,7 | 97,8 | 97,3 |
| | 500 V | 95,1 | 96,1 | 97,1 | 97,3 | 97,1 | 96,6 | 97,3 | 96,9 |
| | 720 V | 93,8 | 95,5 | 96,6 | 96,8 | 96,7 | 96,1 | 96,9 | 96,4 |

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

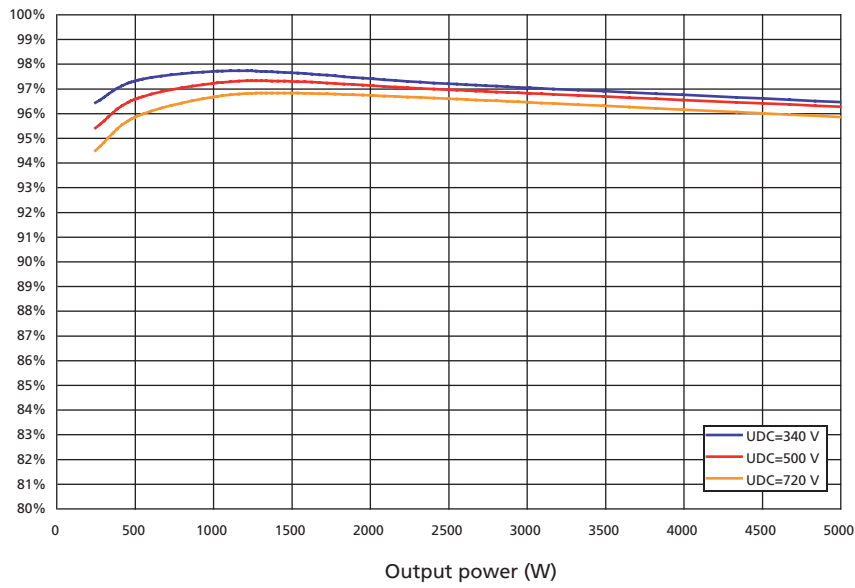
Efficiency curve NT 4200



| Output power (%) | | 5,0 | 10,0 | 20,0 | 30,0 | 50,0 | 100,0 | Max | Euro |
|------------------|-------|------|------|------|------|------|-------|------|------|
| Efficiency | 340 V | 96,4 | 97,3 | 97,7 | 97,6 | 97,2 | 96,4 | 97,8 | 97,2 |
| | 500 V | 95,4 | 96,6 | 97,2 | 97,3 | 96,9 | 96,3 | 97,3 | 96,8 |
| | 720 V | 94,5 | 95,8 | 96,7 | 96,8 | 96,6 | 95,8 | 96,9 | 96,4 |

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

Efficiency curve NT 5000



| Output power (%) | | 5,0 | 10,0 | 20,0 | 30,0 | 50,0 | 100,0 | Max | Euro |
|------------------|-------|------|------|------|------|------|-------|------|------|
| Efficiency | 340 V | 96,0 | 97,2 | 97,6 | 97,7 | 97,3 | 96,7 | 97,8 | 97,3 |
| | 500 V | 95,1 | 96,1 | 97,1 | 97,3 | 97,1 | 96,6 | 97,3 | 96,9 |
| | 720 V | 93,8 | 95,5 | 96,6 | 96,8 | 96,7 | 96,1 | 96,9 | 96,4 |

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