

# On-grid Three Phase Inverter

## Suntrio Plus 12K/15K/17K/20K



### BENEFITS

#### Flexible and Efficient

- Optimized global MPPT algorithm, MPPT efficiency higher than 99.5%
- Dual MPPT which are compatible to all kinds of solar roofs
- Max. efficiency of 98.5%, European efficiency of 98.2%
- Super wide input voltage range(180V-1000V), supporting various solar panels and string design

#### Convenient Installation

- Aluminum case design, smaller and lighter
- Integrate DC combiner box, reduce system cost
- Separate area for maintenance, easy and quick for repair

#### Smart and Easy to Use

- One-button safety setting, easy configuration of all parameters
- Built-in independent RTC chip, supporting data storage of 25 years
- Integrated LCD graphical display, showing daily/monthly/yearly generation
- Integrated with the function of reactive adjusting & ZVRT, responds to power grid dispatching, energy management of grid
- Integrate string current monitoring ,monitor string working status

#### Safe and Reliable

- IP65 protection for indoor and outdoor installation
- Optional DC&AC surge protection, guarantee system safety
- Optional Anti-PID module, protect panels from PID damage
- Aluminum case design to enhance heat dissipation and resist rust corrosion, prolong life time



**ANTARES**  
TECHNOLOGY

# Technical Data

## Suntrio Plus 12K/15K/17K/20K

| Type                                  | Suntrio Plus 12K  | Suntrio Plus 15K | Suntrio Plus 17K | Suntrio Plus 20K |
|---------------------------------------|---|------------------|------------------|------------------|
| <b>Input (DC)</b>                     |   |                  |                  |                  |
| Max. DC Power [W]                     | 14520   | 18150            | 20570            | 24200            |
| Max. DC Voltage [V]                   |   |                  | 1000             |                  |
| MPPT Voltage Range [V]                |   |                  | 180-900          |                  |
| Nominal DC Voltage [V]                |   |                  | 600              |                  |
| Start Voltage [V]                     |   |                  | 200              |                  |
| Min. DC Voltage [V]                   |   |                  | 180              |                  |
| Max. DC Input Current PV1 / PV2 [A]   | 22/11   | 22/22            | 22/22            | 22/22            |
| Number of MPPT                        |   |                  | 2                |                  |
| Number of DC Connection Sets per MPPT | 2/1   | 2/2              | 2/2              | 2/2              |
| DC Switch                             |   |                  | Integrated       |                  |
| <b>Output (AC)</b>                    |   |                  |                  |                  |
| Rated AC Power [W](@230V,50Hz)        | 12000   | 15000            | 17000            | 20000            |
| Max. AC Apparent Power [VA]           | 13200   | 16500            | 18700            | 22000            |
| Rated AC Current [A]                  | 18.2  | 22.7             | 25.8             | 30.3             |
| Max. AC Current [A]                   | 20.0  | 25.0             | 28.3             | 33.0             |
| Nominal AC voltage/ range             | 3/N/PE, 220/380V, 230/400V, 240/415V; 180V-280V/312V-485V   |                  |                  |                  |
| Grid frequency / range                | 50Hz, 60Hz / 44Hz-55Hz, 54-65Hz   |                  |                  |                  |
| Power factor,adjustable[cos φ]        | 0.8 leading~0.8 lagging   |                  |                  |                  |
| Total Harmonic Distortion (THDi)      | < 3% ( at nominal power )   |                  |                  |                  |
| Feed-in Phase / Connection Phase      | 3   |                  |                  |                  |
| <b>Efficiency</b>                     |   |                  |                  |                  |
| Max. Efficiency                       | 98.3%   | 98.4%            | 98.5%            | 98.5%            |
| Euro Efficiency (@ 600Vdc)            | 98.0%   | 98.1%            | 98.2%            | 98.2%            |
| MPPT Accuracy                         | >99.5%  |                  |                  |                  |
| <b>Protection</b>                     |   |                  |                  |                  |
| Internal Over-voltage Protection      | Integrated  |                  |                  |                  |
| DC Insulation Monitoring              | Integrated  |                  |                  |                  |
| DCI Monitoring                        | Integrated  |                  |                  |                  |
| GFCI Monitoring                       | Integrated  |                  |                  |                  |
| Grid Monitoring                       | Integrated  |                  |                  |                  |
| AC Short Circuit Current Protection   | Integrated  |                  |                  |                  |
| LVRT                                  | Integrated  |                  |                  |                  |
| Thermal Protection                    | Integrated  |                  |                  |                  |
| AC Surge Protection                   | III (Integrated) , II ( Optional )  |                  |                  |                  |
| String Current Monitoring             | Integrated  |                  |                  |                  |
| Anti-PID Module                       | Optional  |                  |                  |                  |
| DC Surge Protection                   | II ( Optional )   |                  |                  |                  |
| DC Fuse                               | Optional  |                  |                  |                  |
| Anti-island protection monitoring     | AFD   |                  |                  |                  |
| <b>Interface</b>                      |   |                  |                  |                  |
| DC Connection                         | MC4/H4  |                  |                  |                  |
| AC Connection                         | Terminal Block  |                  |                  |                  |
| LCD & LED Display                     | 3.5 inch Graphic LCD Display, Backlight   |                  |                  |                  |
| Display Language                      | English   |                  |                  |                  |
| Communication port                    | 2*RS485+1*RS232   |                  |                  |                  |
| Communication                         | Wi-Fi/GPRS/Ethernet ( Optional )  |                  |                  |                  |
| <b>General Data</b>                   |   |                  |                  |                  |
| Topology                              | Transformerless   |                  |                  |                  |
| Consumption at Night [W]              | <0.6  |                  |                  |                  |
| Consumption at Standby [W]            | <10   |                  |                  |                  |
| Operating Temperature Range           | -25°C to +60°C ( 45°C to 60°C with derating )   |                  |                  |                  |
| Cooling Method                        | Intelligent fan   |                  |                  |                  |
| Ambient Humidity                      | 0% to 100% Non-condensing   |                  |                  |                  |
| Altitude                              | 4000m ( > 3000m power derating )  |                  |                  |                  |
| Noise [dBA]                           | <35   |                  |                  |                  |
| Ingress Protection                    | IP65 ( Indoor & Outdoor Installation )  |                  |                  |                  |
| Mounting                              | Rear Panel  |                  |                  |                  |
| Dimensions (H*W*D) [mm]               | 640*450*232   |                  |                  |                  |
| Weight [kg]                           | 29  |                  |                  | 33               |
| Standard Warranty [Year]              | 5 ( Standard ) / 10 / 15 / 20 / 25 ( Optional )   |                  |                  |                  |
| Certificates                          | IEC62109-1/2, IEC61000-6-2/3, IEC61683, IEC60068-2, IEC62116, IEC61717, PEA/MEA, NRS 097-2-1, UTE-C-15-712-1, VDE0126-1-1/A1, VDE-AR-N 4105, AS4777.2, AS4777.3, C-TICK, CQC NB/T 32004, G83-2, G59-3, NBR 16149, NBR 16150, TF 3.2.1 |                  |                  |                  |