

blueplanet 3.0 – 5.0 TL1

Transformerless, single-phase string inverters.



Small system? Big convenience. Highest yields!

2 MPP trackers, wide MPP range

Convenient AC and DC cabling
thanks to plug-in connectors

Data logger with web server

Graphical display, intuitive menu
navigation

Lightweight

Straightforward monitoring

Technical Data

| DC input data | 3.0 TL1 M1 | 3.0 TL1 | 3.5 TL1 |
|------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------|
| Max. recommended PV generator | 3 600 W | 3 600 W | 4 150 W |
| MPP range | 280 – 510 V | 140 – 510 V | 165 – 510 V |
| Operating range | 125 – 550 V | 125 – 550 V | 125 – 550 V |
| Rated DC voltage / start voltage | 379 V / 150 V | 379 V / 150 V | 379 V / 150 V |
| Max. no-load voltage | 600 V | 600 V | 600 V |
| Max. input current | 11 A | 2 x 11 A | 2 x 11 A |
| Max. short circuit current $I_{sc\ max}$ | 13.2 A | 2 x 13.2 A | 2 x 13.2 A |
| Number of MPP tracker | 1 | 2 | 2 |
| Connection per tracker | 1 | 1 | 1 |
| Max. input power per tracker | 3100 W | 3100 W | 3600 W |
| AC output data | | | |
| Rated output | 3 000 VA | 3 000 VA | 3 450 VA |
| Max. power | 3 000 VA | 3 000 VA | 3 450 VA |
| Line voltage | 230 V (1 / N / PE) | 230 V (1 / N / PE) | 230 V (1 / N / PE) |
| Voltage range (Ph-N) | 166 – 276 V | 166 – 276 V | 166 – 276 V |
| Rated frequency (range) | 50 Hz / 60 Hz (45 – 65 Hz) | 50 Hz / 60 Hz (45 – 65 Hz) | 50 Hz / 60 Hz (45 – 65 Hz) |
| Rated current | 13.0 A | 13.0 A | 15.0 A |
| Max. current | 14.5 A | 14.5 A | 16.6 A |
| Reactive power / cos phi | 0 – 95 % S_{nom} / 0.30 ind. – 0.30 cap. | 0 – 95 % S_{nom} / 0.30 ind. – 0.30 cap. | 0 – 95 % S_{nom} / 0.30 ind. – 0.30 cap. |
| Max. total harmonic distortion | 1.42 % | 1.42 % | 0.79 % |
| Number of grid phases | 1 | 1 | 1 |
| General data | | | |
| Max. efficiency | 97.2 % | 97.2 % | 97.2 % |
| Europ. efficiency | 96.2 % | 96.5 % | 96.5 % |
| Standby consumption | 3 W | 3 W | 3 W |
| Circuitry topology | transformerless | transformerless | transformerless |
| Mechanical data | | | |
| Display | graphical display + LEDs | graphical display + LEDs | graphical display + LEDs |
| Control units | 4-way navigation + 2 buttons | 4-way navigation + 2 buttons | 4-way navigation + 2 buttons |
| Interfaces | Ethernet, USB, RS485, optional: 4-DI | Ethernet, USB, RS485, optional: 4-DI | Ethernet, USB, RS485, optional: 4-DI |
| Fault signalling relay | potential-free NOC max. 30 V / 1 A | potential-free NOC max. 30 V / 1 A | potential-free NOC max. 30 V / 1 A |
| DC connection | DC plugs (SUNCLIX) | DC plugs (SUNCLIX) | DC plugs (SUNCLIX) |
| AC connection | AC plug | AC plug | AC plug |
| Ambient temperature | -25 °C – +60 °C ¹⁾ | -25 °C – +60 °C ¹⁾ | -25 °C – +60 °C ¹⁾ |
| Humidity | 0 – 95 % | 0 – 95 % | 0 – 95 % |
| Max. installation elevation (above) | 2 000 m | 2 000 m | 2 000 m |
| Min. distance from coast | 2 000 m | 2 000 m | 2 000 m |
| Cooling | convection cooling | convection cooling | convection cooling |
| Protection class | IP54 / NEMA 3R | IP54 / NEMA 3R | IP54 / NEMA 3R |
| Noise emission | < 35 db (A) | < 35 db (A) | < 35 db (A) |
| H x W x D | 560 x 367 x 227 mm | 560 x 367 x 227 mm | 560 x 367 x 227 mm |
| Weight | 15 kg | 15 kg | 16.5 kg |
| Certifications | | | |
| Safety | IEC 62109-1 / -2, EN 61000-6-1 / -2 / -3, EN 61000-3-2 / -3 / -11 / -12 | | |
| Grid connection rule | overview see homepage / download area | | |

| 3.7 TL1 | 4.0 TL1 | 4.6 TL1 | 5.0 TL1 |
|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 4 400 W | 4 800 W | 5 500 W | 6 000 W |
| 170 – 510 V | 185 – 510 V | 215 – 510 V | 235 – 510 V |
| 125 – 550 V | 125 – 550 V | 125 – 550 V | 125 – 550 V |
| 379 V / 150 V | 379 V / 150 V | 379 V / 150 V | 379 V / 150 V |
| 600 V | 600 V | 600 V | 600 V |
| 2 x 11 A | 2 x 11 A | 2 x 11 A | 2 x 11 A |
| 2 x 13.2 A | 2 x 13.2 A | 2 x 13.2 A | 2 x 13.2 A |
| 2 | 2 | 2 | 2 |
| 1 | 1 | 1 | 1 |
| 3800 W | 4100 W | 4700 W | 5140 W |
| 3 680 VA | 4 000 VA | 4 600 VA | 5 000 VA |
| 3 680 VA | 4 000 VA | 4 600 VA | 5 000 VA |
| 230 V (1 / N / PE) | 230 V (1 / N / PE) | 230 V (1 / N / PE) | 230 V (1 / N / PE) |
| 166 – 276 V | 166 – 276 V | 166 – 276 V | 166 – 276 V |
| 50 Hz / 60 Hz (45 – 65 Hz) | 50 Hz / 60 Hz (45 – 65 Hz) | 50 Hz / 60 Hz (45 – 65 Hz) | 50 Hz / 60 Hz (45 – 65 Hz) |
| 16.0 A | 17.4 A | 20.0 A | 21.7 A |
| 17.7 A | 19.5 A | 22.0 A | 22.0 A |
| 0 – 95 % Smax / 0.30 ind. – 0.30 cap. | 0 – 95 % Snom / 0.30 ind. – 0.30 cap. | 0 – 95 % Snom / 0.30 ind. – 0.30 cap. | 0 – 95 % Snom / 0.30 ind. – 0.30 cap. |
| 0.79 % | 0.79 % | 0.79 % | 0.79 % |
| 1 | 1 | 1 | 1 |
| 97.2 % | 97.2 % | 97.2 % | 97.2 % |
| 96.5 % | 96.6 % | 96.6 % | 96.6 % |
| 3 W | 3 W | 3 W | 3 W |
| transformerless | transformerless | transformerless | transformerless |
| graphical display + LEDs | graphical display + LEDs | graphical display + LEDs | graphical display + LEDs |
| 4-way navigation + 2 buttons | 4-way navigation + 2 buttons | 4-way navigation + 2 buttons | 4-way navigation + 2 buttons |
| Ethernet, USB, RS485, optional: 4-DI | Ethernet, USB, RS485, optional: 4-DI | Ethernet, USB, RS485, optional: 4-DI | Ethernet, USB, RS485, optional: 4-DI |
| potential-free NOC max. 30 V / 1 A | potential-free NOC max. 30 V / 1 A | potential-free NOC max. 30 V / 1 A | potential-free NOC max. 30 V / 1 A |
| DC plugs (SUNCLIX) | DC plugs (SUNCLIX) | DC plugs (SUNCLIX) | DC plugs (SUNCLIX) |
| AC plug | AC plug | AC plug | AC plug |
| -25 °C – +60 °C ¹⁾ | -25 °C – +60 °C ¹⁾ | -25 °C – +60 °C ¹⁾ | -25 °C – +60 °C ¹⁾ |
| 0 – 95 % | 0 – 95 % | 0 – 95 % | 0 – 95 % |
| 2 000 m | 2 000 m | 2 000 m | 2 000 m |
| 2 000 m | 2 000 m | 2 000 m | 2 000 m |
| convection cooling | convection cooling | convection cooling | convection cooling |
| IP54 / NEMA 3R | IP54 / NEMA 3R | IP54 / NEMA 3R | IP54 / NEMA 3R |
| < 35 db (A) | < 35 db (A) | < 35 db (A) | < 35 db (A) |
| 560 x 367 x 227 mm | 560 x 367 x 227 mm | 560 x 367 x 227 mm | 560 x 367 x 227 mm |
| 18 kg | 18 kg | 18 kg | 18 kg |

IEC 62109-1 / -2, EN 61000-6-1 / -2 / -3, EN 61000-3-2 / -3 / -11 / -12

overview see homepage / download area

Feed in starts at less than 550 V DC

¹⁾ Power derating at high ambient temperatures

