

# blueplanet 3.0 – 10.0 TL3

Transformerless, three-phase string inverters.



## The inverters for the private energy revolution.

Rapid amortization of residential and small commercial PV arrays

High flexibility for unconventional system designs

Simple installation and commissioning, also outdoors

Data logger with web server for continuous system monitoring

Optimised for the targeted self-consumption of solar power

## Technical Data

| DC input data                            | 3.0 TL3   | 4.0 TL3                                  | 5.0 TL3                                  |
|--|---|--|--|
| Max. recommended PV generator power      | 3 600 W   | 4 800 W                                  | 6 000 W                                  |
| MPP range                                | 200 – 800 V   | 200 – 800 V                              | 240 – 800 V                              |
| Operating range                          | 200 – 950 V   | 200 – 950 V                              | 200 – 950 V                              |
| Rated DC voltage / start voltage         | 653 V / 250 V   | 653 V / 250 V                            | 653 V / 250 V                            |
| Max. no-load voltage                     | 1 000 V   | 1 000 V                                  | 1 000 V                                  |
| Max. input current                       | 2 x 11 A  | 2 x 11 A                                 | 2 x 11 A                                 |
| Max. short circuit current $I_{sc\ max}$ | 2 x 16 A  | 2 x 16 A                                 | 2 x 16 A                                 |
| Number of MPP tracker                    | 2   | 2  | 2  |
| Connection per tracker                   | 1   | 1  | 1  |
| Max. input power per tracker             | 3 200 W   | 4 200 W                                  | 5 200 W                                  |
| AC output data                           |   |  |  |
| Rated output                             | 3 000 VA  | 4 000 VA                                 | 5 000 VA                                 |
| Max. power                               | 3 000 VA  | 4 000 VA                                 | 5 000 VA                                 |
| Line voltage                             | 240 V / 415 V (3 / N / PE)                            | 240 V / 415 V (3 / N / PE)               | 240 V / 415 V (3 / N / PE)               |
|  | 230 V / 400 V (3 / N / PE)                            | 230 V / 400 V (3 / N / PE)               | 230 V / 400 V (3 / N / PE)               |
|  | 220 V / 380 V (3 / N / PE)                            | 220 V / 380 V (3 / N / PE)               | 220 V / 380 V (3 / N / PE)               |
| Voltage range (Ph-Ph)                    | 305 – 480 V   | 305 – 480 V                              | 305 – 480 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                            | 3 x 4.20 A @ 415 V                                    | 3 x 5.60 A @ 415 V                       | 3 x 7.00 A @ 415 V                       |
|  | 3 x 4.35 A @ 400 V                                    | 3 x 5.80 A @ 400 V                       | 3 x 7.25 A @ 400 V                       |
|  | 3 x 4.60 A @ 380 V                                    | 3 x 6.10 A @ 380 V                       | 3 x 7.60 A @ 380 V                       |
| Max. current                             | 3 x 4.8 A   | 3 x 6.4 A                                | 3 x 8.0 A                                |
| Reactive power /<br>cos phi              | 0 – 95 % Snom /<br>0.30 ind. – 0.30 cap.              | 0 – 95 % Snom /<br>0.30 ind. – 0.30 cap. | 0 – 95 % Snom /<br>0.30 ind. – 0.30 cap. |
| Max. total harmonic distortion (THD)     | 0.36 %  | 0.32 %                                   | 0.31 %                                   |
| Number of grid phases                    | 3   | 3  | 3  |
| General data                             |   |  |  |
| Max. efficiency                          | 98.1 %  | 98.2 %                                   | 98.3 %                                   |
| Europ. efficiency                        | 96.6 %  | 97.1 %                                   | 97.4 %                                   |
| 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 +<br>2 buttons                       | 4-way navigation +<br>2 buttons          | 4-way navigation +<br>2 buttons          |
| Interfaces                               | Ethernet, USB, RS485,<br>optional: 4-DI               | Ethernet, USB, RS485,<br>optional: 4-DI  | Ethernet, USB, RS485,<br>optional: 4-DI  |
| Fault signalling relay                   | potential-free NOC<br>max. 30 V / 1 A                 | potential-free NOC<br>max. 30 V / 1 A    | potential-free NOC<br>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 <sup>1)</sup>                         | -25 °C – +60 °C <sup>1)</sup>            | -25 °C – +60 °C <sup>1)</sup>            |
| Humidity                                 | 0 – 100 %   | 0 – 100 %                                | 0 – 100 %                                |
| Max. installation elevation (above MSL)  | 2 000 m   | 2 000 m                                  | 2 000 m                                  |
| Min. distance from coast                 | 2 000 m   | 2 000 m                                  | 2 000 m                                  |
| Cooling                                  | temperature controlled fan                            | temperature controlled fan               | temperature controlled fan               |
| Protection class                         | IP65  | IP65                                     | IP65                                     |
| Noise emission                           | < 53 db (A)   | < 53 db (A)                              | < 53 db (A)                              |
| H x W x D                                | 522 x 363 x 246 mm                                    | 522 x 363 x 246 mm                       | 522 x 363 x 246 mm                       |
| Weight                                   | 30 kg   | 30 kg                                    | 30 kg                                    |
| Certifications                           |   |  |  |
| Safety                                   | EN 62109-1 / -2, EN 61000-6-2 / -3, EN 61000-3-2 / -3 |  |  |
| Grid connection rule                     | overview see homepage / download area                 |  |  |

| 6.5 TL3                                  | 7.5 TL3                                  | 8.6 TL3                                  | 9.0 TL3                                  | 10.0 TL3                                 |
|--|--|--|--|--|
| 7 800 W                                  | 9 000 W                                  | 10 300 W                                 | 10 800 W                                 | 12 000 W                                 |
| 310 – 800 V                              | 350 – 800 V                              | 403 – 800 V                              | 420 – 800 V                              | 470 – 800 V                              |
| 200 – 950 V                              | 200 – 950 V                              | 200 – 950 V                              | 200 – 950 V                              | 200 – 950 V                              |
| 653 V / 250 V                            | 653 V / 250 V                            | 653 V / 250 V                            | 653 V / 250 V                            | 653 V / 250 V                            |
| 1 000 V                                  | 1 000 V                                  | 1 000 V                                  | 1 000 V                                  | 1 000 V                                  |
| 2 x 11 A                                 | 2 x 11 A                                 | 2 x 11 A                                 | 2 x 11 A                                 | 2 x 11 A                                 |
| 2 x 16 A                                 | 2 x 16 A                                 | 2 x 16 A                                 | 2 x 16 A                                 | 2 x 16 A                                 |
| 2  | 2  | 2  | 2  | 2  |
| 1  | 1  | 1  | 1  | 1  |
| 6 700 W                                  | 7 700 W                                  | 8 800 W                                  | 8 800 W                                  | 8 800 W                                  |
| 6 500 VA                                 | 7 500 VA                                 | 8 600 VA                                 | 9 000 VA                                 | 10 000 VA                                |
| 6 500 VA                                 | 7 500 VA                                 | 8 600 VA                                 | 9 000 VA                                 | 10 000 VA                                |
| 240 V / 415 V (3 / N / PE)               | 240 V / 415 V (3 / N / PE)               | 240 V / 415 V (3 / N / PE)               | 240 V / 415 V (3 / N / PE)               | 240 V / 415 V (3 / N / PE)               |
| 230 V / 400 V (3 / N / PE)               | 230 V / 400 V (3 / N / PE)               | 230 V / 400 V (3 / N / PE)               | 230 V / 400 V (3 / N / PE)               | 230 V / 400 V (3 / N / PE)               |
| 220 V / 380 V (3 / N / PE)               | 220 V / 380 V (3 / N / PE)               | 220 V / 380 V (3 / N / PE)               | 220 V / 380 V (3 / N / PE)               | 220 V / 380 V (3 / N / PE)               |
| 305 – 480 V                              | 305 – 480 V                              | 305 – 480 V                              | 305 – 480 V                              | 305 – 480 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)               | 50 Hz / 60 Hz (45 – 65 Hz)               |
| 3 x 9.10 A @ 415 V                       | 3 x 10.50 A @ 415 V                      | 3 x 12.00 A @ 415 V                      | 3 x 12.60 A @ 415 V                      | 3 x 14.95 A @ 415 V                      |
| 3 x 9.50 A @ 400 V                       | 3 x 10.90 A @ 400 V                      | 3 x 12.50 A @ 400 V                      | 3 x 13.00 A @ 400 V                      | 3 x 14.50 A @ 400 V                      |
| 3 x 9.90 A @ 380 V                       | 3 x 11.40 A @ 380 V                      | 3 x 13.10 A @ 380 V                      | 3 x 13.70 A @ 380 V                      | 3 x 15.20 A @ 380 V                      |
| 3 x 10.5 A                               | 3 x 12.0 A                               | 3 x 13.2 A                               | 3 x 14.0 A                               | 3 x 15.5 A                               |
| 0 – 95 % Snom /<br>0.30 ind. – 0.30 cap. | 0 – 95 % Snom /<br>0.30 ind. – 0.30 cap. | 0 – 95 % Snom /<br>0.30 ind. – 0.30 cap. | 0 – 95 % Snom /<br>0.30 ind. – 0.30 cap. | 0 – 95 % Snom /<br>0.30 ind. – 0.30 cap. |
| 0.29 %                                   | 0.3 %                                    | 0.3 %                                    | 0.3 %                                    | 0.27 %                                   |
| 3  | 3  | 3  | 3  | 3  |
| 98.3 %                                   | 98.3 %                                   | 98.3 %                                   | 98.3 %                                   | 98.5 %                                   |
| 97.6 %                                   | 97.7 %                                   | 97.9 %                                   | 97.9 %                                   | 98.3 %                                   |
| 3 W                                      | 3 W                                      | 3 W                                      | 3 W                                      | 3 W                                      |
| transformerless                          | transformerless                          | transformerless                          | transformerless                          | transformerless                          |
| graphical display + LEDs                 | graphical display + LEDs                 | graphical display + LEDs                 | graphical display + LEDs                 | graphical display + LEDs                 |
| 4-way navigation +<br>2 buttons          | 4-way navigation +<br>2 buttons          | 4-way navigation +<br>2 buttons          | 4-way navigation +<br>2 buttons          | 4-way navigation +<br>2 buttons          |
| Ethernet, USB, RS485,<br>optional: 4-DI  | Ethernet, USB, RS485,<br>optional: 4-DI  | Ethernet, USB, RS485,<br>optional: 4-DI  | Ethernet, USB, RS485,<br>optional: 4-DI  | Ethernet, USB, RS485,<br>optional: 4-DI  |
| potential-free NOC<br>max. 30 V / 1 A    | potential-free NOC<br>max. 30 V / 1 A    | potential-free NOC<br>max. 30 V / 1 A    | potential-free NOC<br>max. 30 V / 1 A    | potential-free NOC<br>max. 30 V / 1 A    |
| DC plugs (SUNCLIX)                       | DC plugs (SUNCLIX)                       | DC plugs (SUNCLIX)                       | DC plugs (SUNCLIX)                       | DC plugs (SUNCLIX)                       |
| AC plug                                  | AC plug                                  | AC plug                                  | AC plug                                  | AC plug                                  |
| -25 °C – +60 °C <sup>1)</sup>            | -25 °C – +60 °C <sup>1)</sup>            | -25 °C – +60 °C <sup>1)</sup>            | -25 °C – +60 °C <sup>1)</sup>            | -25 °C – +60 °C <sup>1)</sup>            |
| 0 – 100 %                                | 0 – 100 %                                | 0 – 100 %                                | 0 – 100 %                                | 0 – 100 %                                |
| 2 000 m                                  | 2 000 m                                  | 2 000 m                                  | 2 000 m                                  | 2 000 m                                  |
| 2 000 m                                  | 2 000 m                                  | 2 000 m                                  | 2 000 m                                  | 2 000 m                                  |
| temperature controlled fan               | temperature controlled fan               | temperature controlled fan               | temperature controlled fan               | temperature controlled fan               |
| IP65                                     | IP65                                     | IP65                                     | IP65                                     | IP65                                     |
| < 53 db (A)                              | < 53 db (A)                              | < 53 db (A)                              | < 53 db (A)                              | < 53 db (A)                              |
| 522 x 363 x 246 mm                       | 522 x 363 x 246 mm                       | 522 x 363 x 246 mm                       | 522 x 363 x 246 mm                       | 522 x 363 x 246 mm                       |
| 30 kg                                    | 30 kg                                    | 30 kg                                    | 30 kg                                    | 30 kg                                    |

EN 62109-1 / -2, EN 61000-6-2 / -3, EN 61000-3-2 / -3

overview see homepage / download

<sup>1)</sup> Power derating at high ambient temperatures

