

## S5-GR3P(5-20)K

# Solis Three Phase Grid-Tied Inverters

### Features:

- Max. efficiency 98.7%
- > 150% DC/AC ratio
- Supports export power control
- AFCI protection, proactively reduces fire risk
- 24-hour load consumption monitoring
- Adaptive weak grid
- IP66

### Models:

S5-GR3P5K / S5-GR3P6K

S5-GR3P8K / S5-GR3P10K

S5-GR3P12K / S5-GR3P13K

S5-GR3P15K / S5-GR3P17K

S5-GR3P20K



360° View



## S5-GR3P(5-20)K

| Models                                  | 5K                                                                           | 6K            | 8K              | 10K             | 12K                     | 13K             | 15K             | 17K             | 20K             |
|-----------------------------------------|------------------------------------------------------------------------------|---------------|-----------------|-----------------|-------------------------|-----------------|-----------------|-----------------|-----------------|
| Input DC                                |                                                                              |               |                 |                 |                         |                 |                 |                 |                 |
| Recommended max. PV power               | 7.5 kW                                                                       | 9 kW          | 12 kW           | 15 kW           | 18 kW                   | 19.5 kW         | 22.5 kW         | 25.5 kW         | 30 kW           |
| Max. input voltage                      |                                                                              |               |                 |                 | 1100 V                  |                 |                 |                 |                 |
| Rated voltage                           |                                                                              |               |                 |                 | 600 V                   |                 |                 |                 |                 |
| Start-up voltage                        |                                                                              |               |                 |                 | 180 V                   |                 |                 |                 |                 |
| MPPT voltage range                      |                                                                              |               |                 |                 | 160 - 1000 V            |                 |                 |                 |                 |
| Max. input current                      | 16 A / 16 A                                                                  |               |                 |                 | 32 A / 32 A             |                 |                 |                 |                 |
| Max. short circuit current              | 20 A / 20 A                                                                  |               |                 |                 | 40 A / 40 A             |                 |                 |                 |                 |
| MPPT number / Max. input strings number | 2 / 2                                                                        |               |                 |                 | 2 / 4                   |                 |                 |                 |                 |
| Output AC                               |                                                                              |               |                 |                 |                         |                 |                 |                 |                 |
| Rated output power                      | 5 kW                                                                         | 6 kW          | 8 kW            | 10 kW           | 12 kW                   | 13 kW           | 15 kW           | 17 kW           | 20 kW           |
| Max. apparent output power              | 5.5 kVA                                                                      | 6.6 kVA       | 8.8 kVA         | 11 kVA          | 13.2 kVA                | 14.3 kVA        | 16.5 kVA        | 18.7 kVA        | 22 kVA          |
| Max. output power                       | 5.5 kW                                                                       | 6.6 kW        | 8.8 kW          | 11 kW           | 13.2 kW                 | 14.3 kW         | 16.5 kW         | 18.7 kW         | 22 kW           |
| Rated grid voltage                      | 3/N/PE, 220 V / 380 V, 230 V / 400 V                                         |               |                 |                 |                         |                 |                 |                 |                 |
| Rated grid frequency                    | 50 Hz / 60 Hz                                                                |               |                 |                 |                         |                 |                 |                 |                 |
| Rated grid output current               | 7.6 A / 7.2 A                                                                | 9.1 A / 8.7 A | 12.2 A / 11.5 A | 15.2 A / 14.4 A | 18.2 A / 17.3 A         | 19.8 A / 18.8 A | 22.8 A / 21.7 A | 25.8 A / 24.6 A | 30.4 A / 28.9 A |
| Max. output current                     | 7.9 A                                                                        | 9.5 A         | 12.7 A          | 15.9 A          | 19.1 A                  | 20.7 A          | 23.8 A          | 27 A            | 31.8 A          |
| Power factor                            | > 0.99 (0.8 leading - 0.8 lagging)                                           |               |                 |                 |                         |                 |                 |                 |                 |
| THDi                                    | < 2%                                                                         |               |                 |                 |                         |                 |                 |                 |                 |
| DC injection current                    | < 0.5% I <sub>n</sub>                                                        |               |                 |                 |                         |                 |                 |                 |                 |
| Efficiency                              |                                                                              |               |                 |                 |                         |                 |                 |                 |                 |
| Max. efficiency                         | 98.3%                                                                        |               | 98.5%           |                 | 98.6%                   |                 |                 | 98.7%           |                 |
| EU efficiency                           | 97.7%                                                                        |               | 97.9%           |                 | 98.0%                   |                 |                 | 98.1%           |                 |
| Protection                              |                                                                              |               |                 |                 |                         |                 |                 |                 |                 |
| DC reverse-polarity protection          |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| Short circuit protection                |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| Output over current protection          |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| Insulation resistance monitoring        |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| Residual current detection              |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| Surge protection                        |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| Grid monitoring                         |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| Anti-islanding protection               |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| Temperature protection                  |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| Multi peak scan                         |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| Integrated AFCI 2.0                     |                                                                              |               |                 |                 | Optional                |                 |                 |                 |                 |
| Integrated DC switch                    |                                                                              |               |                 |                 | Yes                     |                 |                 |                 |                 |
| General Data                            |                                                                              |               |                 |                 |                         |                 |                 |                 |                 |
| Dimensions (W × H × D)                  | 310 × 563 × 219 mm                                                           |               |                 |                 |                         |                 |                 |                 |                 |
| Weight                                  | 16.9 kg                                                                      |               | 17.9 kg         |                 | 19.6 kg                 |                 |                 | 20.8 kg         |                 |
| Topology                                | Transformerless                                                              |               |                 |                 |                         |                 |                 |                 |                 |
| Self-consumption (night)                | < 1 W                                                                        |               |                 |                 |                         |                 |                 |                 |                 |
| Operating ambient temperature range     | - 25 ~ +60°C                                                                 |               |                 |                 |                         |                 |                 |                 |                 |
| Relative humidity                       | 0 - 100%                                                                     |               |                 |                 |                         |                 |                 |                 |                 |
| Ingress protection                      | IP66                                                                         |               |                 |                 |                         |                 |                 |                 |                 |
| Noise emission (typical)                | < 30 dB(A)                                                                   |               |                 |                 | < 60 dB(A)              |                 |                 |                 |                 |
| Cooling concept                         | Natural cooling                                                              |               |                 |                 | Intelligent fan-cooling |                 |                 |                 |                 |
| Max. operation altitude                 | 4000 m                                                                       |               |                 |                 |                         |                 |                 |                 |                 |
| Grid connection standard                | IEC 61683, IEC 60068, IEC 61727, IEC 62116, EN 50530, IS 16169/IS 16221(BIS) |               |                 |                 |                         |                 |                 |                 |                 |
| Safety / EMC standard                   | IEC 62109-1/-2, IEC 61000-6-1/-2/-3/-4                                       |               |                 |                 |                         |                 |                 |                 |                 |
| Features                                |                                                                              |               |                 |                 |                         |                 |                 |                 |                 |
| DC connection                           | MC4 connector                                                                |               |                 |                 |                         |                 |                 |                 |                 |
| AC connection                           | Quick connection plug                                                        |               |                 |                 |                         |                 |                 |                 |                 |
| Display                                 | LCD                                                                          |               |                 |                 |                         |                 |                 |                 |                 |
| Communication                           | RS485, Optional: S3-WiFi-ST, S3-GRPS-ST                                      |               |                 |                 |                         |                 |                 |                 |                 |