

## Solis Three Phase Inverters

### » S5-GR3P(3-20)K



360 degree

#### Efficient

- ▶ Max. efficiency 98.7%
- ▶ String current up to **16A**
- ▶ Wide voltage range and low startup voltage

#### Smart

- ▶ Supports export power control
- ▶ Supports RS485, WiFi, GPRS
- ▶ Scan to register on SolisCloud, supports remote upgrade and control

#### Safe

- ▶ IP66
- ▶ AFCI protection, proactively reduces fire risk
- ▶ Automatic voltage stabilization technology in weak grid conditions

#### Economic

- ▶ Compact design, simple installation and maintenance
- ▶ > 150% DC/AC ratio
- ▶ Supports high power modules for lower installation costs

#### Model:

S5-GR3P3K   S5-GR3P4K   S5-GR3P5K   S5-GR3P6K   S5-GR3P8K   S5-GR3P9K   S5-GR3P10K  
S5-GR3P12K   S5-GR3P13K   S5-GR3P15K   S5-GR3P17K   S5-GR3P20K

## Datasheet

| Model Name | S5-GR3P3K | S5-GR3P4K | S5-GR3P5K | S5-GR3P6K | S5-GR3P8K | S5-GR3P9K | S5-GR3P10K | S5-GR3P12K | S5-GR3P13K | S5-GR3P15K | S5-GR3P17K | S5-GR3P20K |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|
|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|

### Input DC

|                                       |             |      |        |      |       |         |             |       |         |         |         |       |
|---------------------------------------|-------------|------|--------|------|-------|---------|-------------|-------|---------|---------|---------|-------|
| Recommended max. PV power             | 4.5 kW      | 6 kW | 7.5 kW | 9 kW | 12 kW | 13.5 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         | 3 kW                                 | 4 kW          | 5 kW          | 6 kW          | 8 kW            | 9 kW            | 10 kW           | 12 kW           | 13 kW           | 15 kW           | 17 kW           | 20 kW           |
| Max. apparent output power | 3.3 kVA                              | 4.4 kVA       | 5.5 kVA       | 6.6 kVA       | 8.8 kVA         | 9.9 kVA         | 11 kVA          | 13.2 kVA        | 14.3 kVA        | 16.5 kVA        | 18.7 kVA        | 22 kVA          |
| Max. output power          | 3.3 kW                               | 4.4 kW        | 5.5 kW        | 6.6 kW        | 8.8 kW          | 9.9 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  | 4.6 A / 4.3 A                        | 6.1 A / 5.8 A | 7.6 A / 7.2 A | 9.1 A / 8.7 A | 12.2 A / 11.5 A | 13.7 A / 13.0 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        | 4.7 A                                | 6.4 A         | 7.9 A         | 9.5 A         | 12.7 A          | 14.3 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%                                  |               |               |               |                 |                 |                 |                 |                 |                 |                 |                 |

### 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                |  |  |  |  |  |  |  |  |  |  |  |
| Surge protection                                  | Yes                |  |  |  |  |  |  |  |  |  |  |  |
| Grid monitoring                                   | Yes                |  |  |  |  |  |  |  |  |  |  |  |
| Anti-islanding protection                         | Yes                |  |  |  |  |  |  |  |  |  |  |  |
| Temperature protection                            | Yes                |  |  |  |  |  |  |  |  |  |  |  |
| Integrated AFCI (DC arc-fault circuit protection) | Yes <sup>(1)</sup> |  |  |  |  |  |  |  |  |  |  |  |
| Integrated DC switch                              | Optional           |  |  |  |  |  |  |  |  |  |  |  |

### General Data

|                                     |   |  |  |  |  |  |                                   |  |  |       |  |  |
|-------------------------------------|---|--|--|--|--|--|-----------------------------------|--|--|-------|--|--|
| Dimensions (W*H*D)                  | 310*563*219 mm  |  |  |  |  |  |                                   |  |  |       |  |  |
| Weight                              | 17.8 kg   |  |  |  |  |  | 18.8 kg                           |  |  | 20 kg |  |  |
| Topology                            | Transformerless   |  |  |  |  |  |                                   |  |  |       |  |  |
| Self consumption (night)            | <1 W  |  |  |  |  |  |                                   |  |  |       |  |  |
| Operating ambient temperature range | -25 ~ +60°C   |  |  |  |  |  |                                   |  |  |       |  |  |
| Relative humidity                   | 0-100%  |  |  |  |  |  |                                   |  |  |       |  |  |
| Ingress protection                  | IP66  |  |  |  |  |  |                                   |  |  |       |  |  |
| Cooling concept                     | Natural convection  |  |  |  |  |  | Intelligent redundant fan-cooling |  |  |       |  |  |
| Max. operation altitude             | 4000 m  |  |  |  |  |  |                                   |  |  |       |  |  |
| Grid connection standard            | G98 or G99, VDE-AR-N 4105 / VDE V 0124, EN 50549-1, VDE 0126 / UTE C 15 / VFR:2019, RD 1699 / RD 244 / UNE 206006 / UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530 |  |  |  |  |  |                                   |  |  |       |  |  |
| Safety/EMC standard                 | IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-2/-3/-4  |  |  |  |  |  |                                   |  |  |       |  |  |

### Features

|               |                              |  |  |  |  |  |  |  |  |  |  |  |
|---------------|------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| DC connection | MC4 connector                |  |  |  |  |  |  |  |  |  |  |  |
| AC connection | Quick connection plug        |  |  |  |  |  |  |  |  |  |  |  |
| Display       | LCD                          |  |  |  |  |  |  |  |  |  |  |  |
| Communication | RS485, Optional: Wi-Fi, GPRS |  |  |  |  |  |  |  |  |  |  |  |

(1) Activation required.