

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 ⁽¹⁾ | | | | | | | | | | | |
| 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.