**Residential Hybrid Single Phase Inverter**

**SH3.6/4.6/5.0/6.0RS**

**Clean power for all**

**FLEXIBLE APPLICATION**
- 80～550V wide battery voltage range
- Supports parallel connection with full communication between inverters

**ENERGY INDEPENDENCE**
- Seamless transition to backup mode for protection against power outages
- Fast charging/discharging to meet demand of higher consumption and fast charging/discharging

**SMART MANAGEMENT**
- High self-consumption with optimised built-in EMS
- Free online monitoring to enhance energy management for end user, installer and retailer
- Remote firmware update and customisable settings

**EASY INSTALLATION**
- Touch free commissioning with smartphone
- Lightweight and compact

**CIRCUIT DIAGRAM**

**EFFICIENCY CURVE (SH10RT)**

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**Type designation** | SH3.6RS | SH4.6RS | SH5.0RS | SH6.0RS
---|---|---|---|---
**PV input Side Data**
Max. PV input power | 5500 W | 6600 W | 6600 W | 8000 W
Max. PV input voltage | 600 V | 600 V | 600 V | 600 V
Startup voltage | 120 V | 120 V | 120 V | 120 V
Nominal input voltage | 350 V | 350 V | 350 V | 350 V
MPPT-voltage range | 90 V～560 V | 90 V～560 V | 90 V～560 V | 90 V～560 V
MPPT-voltage range for nominal power | 155 V～320 V | 155 V～320 V | 155 V～320 V | 155 V～320 V
No. of MPPTs | 1 | 1 | 1 | 1
Max. number of PV strings per MPPT | 1 | 1 | 1 | 1
Max. PV input current | 25 A (12.5 A / 12.5 A) | 25 A (12.5 A / 12.5 A) | 25 A (12.5 A / 12.5 A) | 25 A (12.5 A / 12.5 A)
Max. current for input connector | 16 A | 16 A | 16 A | 16 A
Short-circuit current of PV input | 32 A (16 A / 16 A) | 32 A (16 A / 16 A) | 32 A (16 A / 16 A) | 32 A (16 A / 16 A)
**AC input and Output Data**
Nominal AC output power | 3880W | 4600W | 5000W | 6000W
Nominal AC output current | 16A | 20A | 21.5A | 28.5A
Max. AC output apparent power | 5000W | 6000W | 6000W | 6000W
Max. AC output current | 16A | 21A | 21.5A | 27.3A
AC voltage range | 176～276Vac (this may vary with grid standards) | 176～276Vac (this may vary with grid standards) | 176～276Vac (this may vary with grid standards) | 176～276Vac (this may vary with grid standards)
Nominal grid frequency | 50HZ/60HZ | 50HZ/60HZ | 50HZ/60HZ | 50HZ/60HZ
Grid Frequency range | 45～55Hz/55～65Hz (this may vary with grid standards) | 45～55Hz/55～65Hz (this may vary with grid standards) | 45～55Hz/55～65Hz (this may vary with grid standards) | 45～55Hz/55～65Hz (this may vary with grid standards)
THD | <3 % (of nominal power) | <3 % (of nominal power) | <3 % (of nominal power) | <3 % (of nominal power)
Power factor | >0.99 at default value at nominal power (adj. 0.8 overexcited/leading to 0.8 underexcited/lagging) | >0.99 at default value at nominal power (adj. 0.8 overexcited/leading to 0.8 underexcited/lagging) | >0.99 at default value at nominal power (adj. 0.8 overexcited/leading to 0.8 underexcited/lagging) | >0.99 at default value at nominal power (adj. 0.8 overexcited/leading to 0.8 underexcited/lagging)

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**Battery Data**
Battery voltage | 800V-550V | 800V-550V | 800V-550V | 800V-550V
Max. charge / discharge power | 6600W | 6600W | 6600W | 6600W
**System Data**
Max. European efficiency | > 97.3 % | > 97.3 % | > 97.3 % | > 97.3 %
Max. charge / discharge efficiency | > 98.5 % | > 98.5 % | > 98.5 % | > 98.5 %
Isolation method (solar/battery) | Transformerless/Transformerless | Transformerless/Transformerless | Transformerless/Transformerless | Transformerless/Transformerless
Ingress protection rating | IP65 | IP65 | IP65 | IP65
Operating ambient temperature range | -25℃～60℃ (154℃ derating) | -25℃～60℃ (154℃ derating) | -25℃～60℃ (154℃ derating) | -25℃～60℃ (154℃ derating)
Allowable relative humidity range | 20%～90% | 20%～90% | 20%～90% | 20%～90%
Cooling method | Natural convection | Natural convection | Natural convection | Natural convection
Max. operating altitude | 4000m (2000m derating) | 4000m (2000m derating) | 4000m (2000m derating) | 4000m (2000m derating)
Noise | <30dB | <30dB | <30dB | <30dB
Display | LED, Graphic LCD | LED, Graphic LCD | LED, Graphic LCD | LED, Graphic LCD
Communication | RS485, Wi-Fi, Ethernet / 1 × Digital Output | RS485, Wi-Fi, Ethernet / 1 × Digital Output | RS485, Wi-Fi, Ethernet / 1 × Digital Output | RS485, Wi-Fi, Ethernet / 1 × Digital Output
DC connection type | MC4 (PV) / Sunclix (Battery) | MC4 (PV) / Sunclix (Battery) | MC4 (PV) / Sunclix (Battery) | MC4 (PV) / Sunclix (Battery)
AC connection type | Spring-cage terminal | Spring-cage terminal | Spring-cage terminal | Spring-cage terminal
**Mechanical Data**
Dimensions (W * H * D) | 460 mm * 543 mm * 163 mm | 460 mm * 543 mm * 163 mm | 460 mm * 543 mm * 163 mm | 460 mm * 543 mm * 163 mm
Mounting method | Wall-mounting bracket | Wall-mounting bracket | Wall-mounting bracket | Wall-mounting bracket
Weight | 20 kg | 20 kg | 20 kg | 20 kg
**Backup Data**
Nominal voltage | 220Vac/230Vac/240Vac (±2%) | 220Vac/230Vac/240Vac (±2%) | 220Vac/230Vac/240Vac (±2%) | 220Vac/230Vac/240Vac (±2%)
Frequency range | 50Hz/60Hz (±0.2%) | 50Hz/60Hz (±0.2%) | 50Hz/60Hz (±0.2%) | 50Hz/60Hz (±0.2%)
Total harmonic factor output voltage | 2% (full resistive load) | 2% (full resistive load) | 2% (full resistive load) | 2% (full resistive load)
Switch time to emergency mode | <20ms | <20ms | <20ms | <20ms
Nominal output power | 3880W/4600W/5000W | 4600W/4600W/6000W | 5000W/6000W/6000W | 6000W/6000W/6000W
Nominal output current | 16.5A | 21A | 21.5A | 27.3A
Peak output current | 32A | 46A | 46A | 46A
Max. parallel connection units | Yes | Yes | Yes | Yes
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