Residential Hybrid Single Phase Inverter

FLEXIBLE APPLICATION
- Convenient for new installation and retrofit
- Compatible with both lithium-ion and lead-acid batteries
- Energy trading ready with 3rd-party EMS to maximise ROI

SAFE AND RELIEABLE
- Built-in surge arresters and residual current protection
- Durable finish with high anti-corrosion enclosure

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
- Cleaner and simpler install with EPS built-in to Inverter
- Custom-fit mounting plate with built-in level
- Fast and easy commissioning via front panel LCD or App

CIRCUIT DIAGRAM

EFFICIENCY CURVE (SH10RT)

Type designation | SH5K-30
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DC Input Data | |
Max. PV input power | 6500 W
Max. PV input voltage | 125 V
Nominal input voltage | 380 V
MPP voltage range | 145 V ~ 500 V
MPP voltage range for nominal power | 270 V ~ 500 V
No. of MPPTs | 2
Max. number of PV strings per MPPT | 1 / 1
Max. PV input current | 22 A (11 A / 11 A)
Max. current for input connector | 12 A
Short-circuit current of PV input | 24 A (12 A / 12 A)

AC Input and Output Data | |
Nominal AC output power | 5000 W*
Nominal AC output current | 22.7 A*
Nominal AC output apparent power | 5000 VA
Max. AC output current | 22.7 A*
Max. AC input power | 8000 W
Max. AC input current | 36.4 A*
Nominal AC voltage | 220 Vac / 250 Vac / 240 Vac
AC voltage range | 176 Vac / 216 Vac
Nominal grid frequency | 50 Hz / 60 Hz
Grid frequency range | 45 ~ 55 Hz / 55 ~ 65 Hz (this may vary with grid standards)
THD (Total Harmonic Distortion) | < 5.0 % (at nominal power)
DC current injection | < 0.5 % (at nominal current)
Power factor | > 0.99 (at de-rated load) / leading to 0.8 overexcited / lagging

Protection | |
Anti-islanding protection | Yes
AC short circuit protection | Yes
Leakage current protection | Yes
DC switch (solar) | Optional
DC fuse (battery) | Optional
Overvoltage Category | III [MAIN], II [PV] [BATTERY]

Battery Data | |
Battery type | Li-ion battery / Lead-acid battery
Battery voltage | 24 V Vac / 230 Vac / 240 Vac
Max. charge / discharge current | 65 A / 65 A

System Data | |
Max. efficiency | > 97.7 %
Max. European efficiency | > 97.1 %
Max. charge / discharge efficiency | > 94.0 %
Isolation method (solar) | Transformerless
Isolation method (battery) | Transformerless
Ingress protection rating | IP20
Operating ambient temperature range | -25 ℃ ~ +60 ℃ (4~140 ℃ derating)
Relative humidity range | 0% ~ 100%
Cooling method | Natural convection
Max. operating altitude | 2000m
Display | Graphic LCD
Communication | 2 × RS485, Wi-Fi, CAN, Ethernet
Power management | 1 × Digital Output
Earth alarm | Email, buzzer inside
PV connection type | MC4
AC connection type | Clamp terminal connector

Mechanical Data | |
Dimensions (W * H * D) | 457 mm * 515 mm * 170 mm
Mounting method | Wall-mounting bracket
Weight | 22 kg

Backup Data | |
Nominal voltage | 220 Vac / 230 Vac / 340 Vac (± 2 %)
Total harmonic factor output voltage | < 5 % (full resistive load)
Frequency range | 50 Hz / 60 Hz (± 0.2 %)
Switch time to emergency mode | < 20 ms
Power factor | 0.8 overexcited / leading to 0.8 underexcited / lagging
Backup nominal AC output power | 3000 W / 3000 VA
Max. output power | 5000 W / 5000 VA
Max. output power (battery) | 3000 W / 3000 VA
Peak output power:Duration | 6000 VA, 10S

AC Inrush Power | 22 kg

Notes:
*1: AS4777 : 4990 W, 4990 VA
*2: AS4777 : 217 A
*3: AS4777 : 34.8 A