## SH5K-30

Residential Hybrid Single Phase Inverter



## FLEXIBLE APPLICATION

- Suitable for new install and retrofit
- Supports parallel connection with full communication between inverters
- Energy trading ready with 3rd-party EMS to maximise ROI


## SMART MANAGEMENT

- Optimised energy management and battery usage strategies
- Feature-rich online monitoring to enhance energy management for end user, installer and retailer
- Remote firmware update and customisable settings


## SAFE AND RELIABLE

- Seamless transition to backup mode to protect against power outages
- Finish maintained for long term with high anti-corrosion enclosure
- Build-in Certified PV Isolator


## EASY INSTALLATION

- Cleaner and simpler install with EPS built-in to inverter
- Mounting plate with built-in level
- Fast and easy commissioning via front panel LCD or App

CIRCUIT DIAGRAM


## EFFICIENCY CURVE


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| Type designation | SH5K-30 |
| :---: | :---: |
| DC Input Data |  |
| Recommended max. PV input power | 6700 W |
| Max. PV input voltage | 600 V |
| Startup voltage | 125 V |
| Rated input voltage | 350 V |
| MPP voltage range | $125 \mathrm{~V}-560 \mathrm{~V}$ |
| MPP voltage range for rated power | 240 V-520 V |
| No. of MPPTs | 2 |
| Max. number of PV strings per MPPT | 1/1 |
| Max. PV input current | $22 \mathrm{~A}(11 \mathrm{~A} / 11 \mathrm{~A})$ |
| Max. current for input connector | 15A |
| Short-circuit current of PV input | $30 \mathrm{~A}(15 \mathrm{~A} / 15 \mathrm{~A})$ |
| AC Input and Output Data |  |
| Rated AC output power | $5000 \mathrm{~W}^{* 1}$ |
| Rated AC ouput current | 22.7 A *2 |
| Max. AC output apparent power | 5000 VA |
| Rated AC output apparent power | 5000VA |
| Max. AC output current | 22.7 A ${ }^{2}$ |
| Max. AC input power | 8000 W |
| Max. AC input current | $36.4 \mathrm{~A}^{* 3}$ |
| Rated AC voltage | $220 \mathrm{Vac} / 230 \mathrm{Vac} / 240 \mathrm{Vac}$ |
| AC voltage range | $176 \mathrm{Vac}-276 \mathrm{Vac}$ |
| Rated grid frequency | 50 Hz |
| Grid frequency range | $45-55 \mathrm{~Hz}$ (this may vary with grid standards) |
| THD (Total Harmonic Distortion) | $<3 \%$ (of rated power) |
| DC current injection | <0.5 \% (of rated current) |
| Power factor | > 0.99 / 0.8 leading - 0.8 lagging |
| Protection |  |
| Anti-islanding protection | Yes |
| AC short circuit protection | Yes |
| Leakage current protection | Yes |
| DC switch (solar) | Yes |
| DC fuse (battery) | Yes |
| Overvoltage Category | III [MAIN], II [PV] [BATTERY] |
| Battery Data |  |
| Battery type | Li-ion battery / Lead-acid battery |
| Battery voltage | 48 V (32 V-70 V) |
| Max. charge / discharge current | $65 \mathrm{~A} / 65 \mathrm{~A}$ |
| System Data |  |
| Max. efficiency | 97.7 \% |
| European efficiency | 97.1 \% |
| Max. charge / discharge efficiency | 94.0 \% |
| Isolation method (solar) | Transformerless |
| Isolation method (battery) | HF |
| Ingress protection rating | IP65 |
| Operating ambient temperature range | $-25^{\circ} \mathrm{C}$ to $60{ }^{\circ} \mathrm{C}\left(>45^{\circ} \mathrm{C}\right.$ derating) |
| Relative humidity range | 0\%-100\% |
| Cooling method | Natural convection |
| Max. operating altitude | 2000m |
| Display | Graphic LCD |
| Communication | $2 \times$ RS485, WiFi, CAN, Ethernet |
| Power management | $1 \times$ Digital Output |
| Earth alarm | email, buzzer inside |
| PV connection type | MC4 |
| AC connection type | Clamping yoke connector |
| Certification | AS/NZS 4777.2:2020,IEC 62109-1, IEC62109-2,IEC62477-1, IEC 62040-1, EN 61000-6-1/-3, ABNT NBR 16149: 2013,ABNT NBR 16150: 2013 |
| Country of manufacture | China |
| Mechanical Data |  |
| Dimensions (W * H * D) | 457 * 515 * 170 mm |
| Mounting method | Wall-mounting bracket |
| Weight | 22 kg |
| Backup Data |  |
| Rated voltage | $220 \mathrm{Vac} / 230 \mathrm{Vac} / 240 \mathrm{Vac}( \pm 2 \%)$ |
| Total hamonic factor output voltage | 2\% (full r esistive load) |
| Frequency range | 50 Hz ( $\pm 0.2$ \%) |
| Switch time to emergency mode | $<20 \mathrm{~ms}$ |
| Power factor | 0.8 overexcited/leading to 0.8 underexcited/lagging |
| Backup Rated AC output power | 3000 W / 3000 VA |
| Max. output power | $5000 \mathrm{~W} / 5000 \mathrm{VA}$ |
| Max. output power (battery) | 3000 W / 3000 VA |
| Peak output power,Duration | 6000 VA, 10 S |

*1: AS4777: 4990 W, 4990 VA
*2: AS4777: 21.7 A
*3: AS4777: 34.8 A

