

## 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 RELIABLE

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

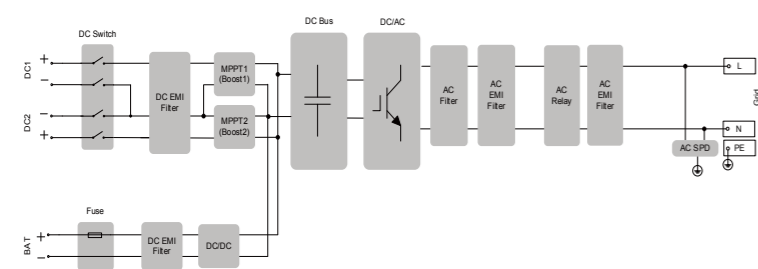
### SMART MANAGEMENT

- 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

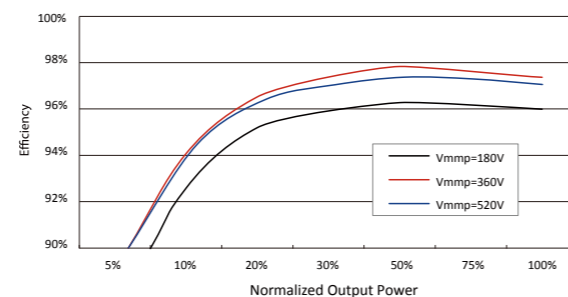
### EASY INSTALLATION

- Custom-fit mounting plate with built-in level
- Fast and easy commissioning via front panel LCD or App
- Lightweight and compact

### CIRCUIT DIAGRAM



### EFFICIENCY CURVE (SH10RT)



Type designation	SH3K6	SH4K6
<b>PV Input Side Data</b>		
Max. PV input power	6500 W	
Max. PV input voltage	600 V	
Startup voltage	125 V	
Nominal input voltage	360 V	
MPP voltage range	125 V – 560 V	
MPP voltage range for nominal power	180 V – 520 V	220 V – 520 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)	
<b>AC Input and Output Data</b>		
Nominal AC output power to grid	3680 W	4600 W
Max. AC output apparent power to grid	3680 VA	4600 VA
Max. AC input power from grid	3000 W	3000 W
Nominal AC output current	16 A	20 A
Max. AC output current	16 A	20 A
Nominal AC voltage	230 Vac	
AC voltage range	180 Vac – 276 Vac (this may vary with grid standards)	
Nominal grid frequency	50 Hz	
Grid frequency range	45 Hz – 55 Hz (this may vary with grid standards)	
THD (Total Harmonic Distortion)	< 3 % (of nominal power)	
DC current injection	< 0.5 % (of nominal current)	
Power factor	> 0.99 at default value at nominal power (adj. 0.8 overexcited / leading-0.8 underexcited / lagging)	
<b>Protection</b>		
Anti-islanding protection	Yes	
AC short circuit protection	Yes	
Leakage current protection	Yes	
DC switch (solar)	Yes	
DC fuse (solar)	No	
DC fuse (battery)	Yes	
Overvoltage Category	III [MAINS], II [PV] [BATTERY]	
<b>Battery Data</b>		
Battery type	Li-ion battery / Lead-acid battery	
Battery voltage	48 V (32 V-70 V)	
Max. charge / discharge current	65 A / 65 A	
<b>System Data</b>		
Max. efficiency	> 97.7 %	
European efficiency	> 97.0 %	> 97.2 %
Max. charge / discharge efficiency	> 94.0 %	
Isolation method (solar)	Transformerless	
Isolation method (battery)	HF	
Ingress protection rating	IP65	
Night power consumption	< 1 W	
Operating ambient temperature range	-25 °C to 60 °C (> 45 °C derating)	
Allowable relative humidity range	0 %-100 %	
Cooling method	Natural convection	
Max. operating altitude	2000 m	
Display	Graphic LCD	
Communication	2 × RS485, Wi-Fi (optional), CAN, Ethernet	
Analogue inputs	PT1000	
Power management	1 × Digital Output	
Earth alarm	1 × Digital Output, email, buzzer inside	
PV connection type	MC4	
AC connection type	Plug and play connector	
Certification	VDE-AR-N-4105, DIN VDE0126-1-1, G83/2, G59/3, CEI 0-21, IEC 62109-1, IEC62109-2, EN 62477-1, EN 61000-6-1/-3	
<b>Mechanical Data</b>		
Dimensions (W * H * D)	457 mm * 515 mm * 170 mm	
Mounting method	Wall-mounting bracket	
Weight	22 kg	

