







Smart and Integrated

- Integrated optimised energy management system, battery usage strategies and smart home load control
- Energy trading ready with external EMS to maximise
 payback on your investment
- Monitoring via smartphone or laptop, providing email reports and alerts.



Safe and Durable

- Backup for essential loads in the event of a grid interruption or blackout
- Integrated high-frquency isolated battery charge/ discharge circuit
- · Protection rating at IP65 (dust-proof and water-proof)



Flexible Application

- For both new installation and retrofitting solar systems
- Compatible with both lithium-ion and leadacid batteries



Simple and User Friendly

- Easy commissioning and customisable settings via LCD
- · Auto-identification of lithium-ion batteries
- One-click firmware update via Wi-Fi or Ethernet, easy for maintenance and management



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DC Input		Mechanical Data	
Max. PV input power Max. PV input voltage Startup voltage Nominal input voltage MPP voltage range MPP voltage range for nominal power No. of MPP Max. number of PV strings per MPPT Max. PV input current Max. current for input connector Short-circuit current of PV input	6500 W 600 V 125 V 350 V 125 V–560 V 240 V–520 V 2 1/1 22 A (11 A / 11 A) 24 A (12 A / 12 A) 24 A (12 A / 12 A)	Dimensions (W × H × D) Mounting method Weight Backup Data	457 mm × 515 mm × 170 mm Wall-mounting bracket 22 kg
		Nominal voltage Total hamonic factor output voltage Frequency range Switch time to emergency mode Power factor Max. output power	230 Vac (±2%) 2% (full resistive load) 50 Hz (±0.2%) 3 s 0.8 overexcited/leading to 0.8 underexcited/lagging 5000 W / 5000 VA 3000 W / 3000 VA
AC Input and Output Data		Max. output power (battery)	3000 W / 3000 VA
Max. AC input power Nominal AC output power Nominal AC output current Max. AC output apparent power Max. AC output current Nominal AC voltage AC voltage range Nominal grid frequency Grid frequency range THD (Total Harmonic Distortion) DC current injection Power factor Protection		3000 W 4990 W 21.6 A 5000 VA 21.7 A 230 Vac 180 Vac-276 Vac (this may vary with grid standards) 50 Hz 45 Hz-55 Hz (this may vary with grid standards) < 3 % (of nominal power) < 0.5 % (of nominal current) > 0.99 at default value at nominal power (adj. 0.8 overexcited/leading to 0.8 underexcited/lagging)	
Anti-islanding protection		Yes	
AC short-circuit protection Leakage current protection DC fuse (battery) DC switch (solar) Overvoltage category		Yes Yes Optional III [Main], II [PV] [Battery]	
Battery Data		Li ion battony / Lood gold battony	
Battery type Battery voltage Max. charge / discharge current		Li-ion battery / Lead-acid battery 48 V (32 V–70 V) 65 A / 65 A	
System Data			
Max. efficiency Max. European efficiency Max. charge / discharge efficiency Isolation method (solar) Isolation method (battery) Ingress protection rating Operating ambient temperature range Relative humidity range Cooling method Max. operating altitude Display Communication Analogue input Power management Earth alarm PV connection type AC connection type Certification		> 97.7 % > 97.2 % > 94.0 % Transformerless HF IP65 -25°C to 60°C (> 45°C derating) 0-100 % Natural convection 2000 m Graphic LCD 2 × RS485, Wi-Fi (optional), CAN, Etherne PT1000 1 × Digital Output 1 × Digital Output 1 × Digital Output, email, buzzer inside MC4 Clamping yoke connector AS4777, IEC 62109-1, IEC 62109-2, IEC 62477-1, IEC 62040-1, EN 61000-6-1/	
Type designation		SH5K-20	

