

13 Appendix IV: Technical Data

13.1 Inverter Technical Data

PV Input Data	
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	260 V–520 V
No. of MPPTs	2
Max. number of PV strings per MPPT (DC1/DC2)	1/1
Max. PV input current (DC1/DC2)	20 A (10 A / 10 A)
Max. current for input terminals	24 A (12 A / 12 A)
Short circuit current of PV input	24 A (12 A / 12 A)
Max. inverter backfeed current to array	0 A
Battery Data	
Battery type	Li-ion battery / Lead-acid battery
Battery voltage (rated voltage / range)	48 V (32 V–70 V)
Max. charging / discharging current	65 A / 65 A
AC Input and Output Data	
Max. AC input power	3000 W
Nominal AC output power	4990 W
Nominal AC output current	21.6 A
Max. AC output apparent power	5000 VA
Max. AC output current	21.7 A
Max. inrush current (peak/duration)	10 A / 12 ms
Max. output fault current (peak/duration)	100 A/3.2 ms
Max. output over-current protection	32 A
Nominal grid voltage	230 Vac
Grid 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)
Total Harmonic Distortion (THD)	< 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)
Protection	
Anti-islanding protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
DC switch (solar)	Optional
DC fuse	No
Over-voltage protection	III [Main], II [PV] [Battery]
System Data	
Max. efficiency	97.7 %
Max. European efficiency	97.2 %
Max. charge / discharge efficiency	94.0 %
Isolation method (solar)	Transformerless
Isolation method (battery)	HF
Ingress protection (IP) rating	IP65
Pollution degree outside the enclosure	3
Pollution degree inside the enclosure	2
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 x RS485, Ethernet, Wi-Fi (optional), CAN
Power management	1 x Digital output
Earth fault alarm	1 x Digital output, email, buzzer inside
Analogue input	PT1000
DC connection type	MC4
AC connection type	Clamping yoke connector
Certifications	AS4777, IEC 62109-1, IEC62109-2, IEC 62040, EN 61000-6-1/-3, NRS 097-2-1:2017
Mechanical Data	
Dimensions (W x H x D)	447 mm x 510 mm x 150 mm
Mounting method	Wall-mounting bracket
Weight	20 kg

Backup Data	
Nominal voltage	230 Vac ($\pm 2\%$)
Total harmonic factor output	4% (full load)
Frequency range	50 Hz ($\pm 0.2\%$)
Switch time to emergency mode	10 s
Power factor	0.8 overexcited/leading–0.8 underexcited/lagging
Max. output power	5000 W / 5000 VA
Max. output power (battery mode)	3000 W / 5000 VA

13.2 STB5K (backup box) Technical Data

Max. input/output current	25 A
Nominal AC voltage	230 Vac–240 Vac
AC voltage range	180 Vac–275 Vac
Operating ambient temperature range	-25°C to 60°C^*
Power consumption	$< 3\text{ VA} / 2\text{ W}$
Dimensions (W x H x D)	220 mm x 230 mm x 90 mm
Mounting method	Wall-mounting bracket
Weight	2.6 kg

* The AC voltage ranges from 180 Vac to 250 Vac when the operating ambient temperature is between 50°C and 60°C .

13.3 Meter Technical Data

Nominal voltage	240 Vac
Input voltage range	180 Vac–286 Vac
Power consumption	$< 2\text{ W} (10\text{ VA})$
Max. operating current	100 A
Grid frequency	50 Hz
Measurement accuracy	Class I
Interface and communication	RS485
Ingress protection rating	IP20
Operating temperature range	-25°C to 75°C
Allowable relative humidity range	0–95%
Dimensions (W x H x D)	18 mm x 117 mm x 65 mm
Mounting method	35 mm DIN-rail
Weight	0.2 kg