

Single phase hybrid inverters

3 to 6kW

PV INPUT	SPH3000H	SPH3680H-S	SPH4000H-S	SPH5000H-S	SPH6000H-S
Max. PV array power	5500 Wp STC	6180 Wp STC	6500 Wp STC	7500 Wp STC	9000 Wp STC
Max. input voltage	550 V				
MPP voltage range/ rated input voltage	40 V to 530 V / 380 V				
Min. input voltage/ start voltage	40 V/ 50 V				
No. of independent MPPT trackers/ strings per MPPT input	2 / 1				
Max. input current per MPP tracker	16 A				
Max. short-circuit current per MPP tracker	20 A				

BATTERY INPUT	
Nominal battery voltage	48 V/51.2V
Battery voltage range	40 V to 60 V
Max. charge / discharging power	5000 W / 5000 W
Max. charging current / Max. discharging current	100 A / 100A
Battery type	LiFePO4

AC OUTPUT					
AC voltage range / Nominal AC voltage	180 V to 280 V / 230 V				
Rated AC grid frequency	50 Hz / 60 Hz				
AC grid frequency range	50 Hz± 5Hz / 60 Hz± 5Hz				
Rated active power	3000 W	3680 W	4000 W	5000 W	6000 W
Rated apparent power	3000 VA	3680 VA	4000 VA	5000 VA	6000 VA
Max. apparent power	3000 VA	3680 VA	4000 VA	5000 VA	6000 VA
Rated grid output current (@230V)	13.1 A	16 A	17.4 A	21.7 A	26.1 A
Max. grid output current	13.6 A	16 A	18.2 A	22.7 A	27.3 A
Harmonics THDI (@ Nominal power)	< 3%				

AC INPUT	
Rated grid voltage	a.c. 230V
Rated grid frequency	50Hz / 60Hz
Rated apparent power	6000 VA
Max. input apparent power from grid	6000 VA
Rated input current from grid	a.c. 26.1A
Max. input current from grid	a.c. 27.3A

EPS OUTPUT	
Nominal output voltage	230 V
Nominal output frequency	50 Hz / 60 Hz
Rated apparent power	5000 VA
Max. output apparent power	5000 VA
Peak output apparent power	7500 VA, 10s
Rated current (@230V)	21.7 A
Max. output current	21.7 A
Max. switch time	≤ 10ms
Output THDi (@ Linear load)	< 3%

EFFICIENCY	
MPPT efficiency	99.9%
Euro efficiency / Max. efficiency	97% / 97.6%
Max. battery to load efficiency	94.7%

GENERAL DATA	
Power factor at rated power / adjustable displacement	≥ 0.99 / 0.8 leading to 0.8 lagging
Dimension (W / H / D)	494 / 420 /195 mm
Device weight	21.5 kg
Operating temperature range	125 °C...+60 °C
Noise emissions (typical)	30 dB(A)
Standby consumption	< 10 W
Cooling concept	Natural convection
Degree of protection (as per IEC 60529)	IP 66
Climatic category (according to IEC 60721-3-4)	4K4H
Max. permissible value for relative humidity (non-condensing)	100%
Max. operating altitude	4000m (> 3000m power derating)

FEATURES	
User interface	LED & App
Communication with BMS	RS485 / CAN
Communication with meter	RS485
Communication with portal	WIFI stick
Other Communication	DRM