

SH5.0/6.0/8.0/10RT New

SUNGROW
Clean power for all

Residential Hybrid Three Phase Inverter



FLEXIBLE APPLICATION

- 150~600V wide battery voltage range
- Supports parallel connection with full communication between inverters
- Provides 100% unbalance loads in backup mode

ENERGY INDEPENDENCE

- Seamless transition to backup mode for protection against power outages
- Fast charging/discharging to meet the demand of higher consumption and energy trading

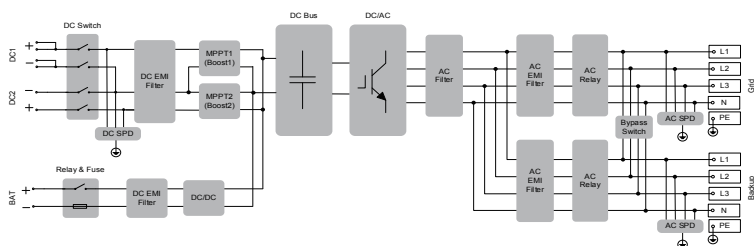
SMART MANAGEMENT

- 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

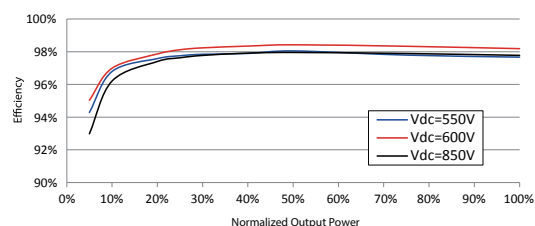
EASY INSTALLATION

- Unique push-in connectors for time-saving installation
- Touch free commissioning with smartphone
- Lightweight and compact

CIRCUIT DIAGRAM



EFFICIENCY CURVE (SH10RT)



Type designation	SH5.0RT	SH6.0RT	SH8.0RT	SH10RT
PV Input				
Max. PV input power	7500 W	9000 W	12000 W	15000 W
Max. PV input voltage			1000 V	
Startup voltage	180 V	250 V	250 V	250 V
Nominal input voltage			600 V	
MPP voltage range	150 V - 950 V	200 V - 950 V	200 V - 950 V	200 V - 950 V
MPP voltage range for nominal power	210 V - 850 V	250 V - 850 V	330 V - 850 V	280 V - 850 V
No. of MPPTs			2	
Max. number of PV strings per MPPT	1 / 1	1 / 1	1 / 1	1 / 2
Max. PV input current	25 A (12.5 A / 12.5 A)	25 A (12.5 A / 12.5 A)	25 A (12.5 A / 12.5 A)	37.5 A (12.5 A / 25 A)
Max. current for input connector			16 A	
Short-circuit current of PV input	32 A (16 A / 16 A)	32 A (16 A / 16 A)	32 A (16 A / 16 A)	48 A (16 A / 32 A)
AC Input and Output				
Nominal AC output power	5000 W	6000 W	8000 W	10000 W
Nominal AC ouput current	7.3 A	8.7 A	11.6 A	14.5 A
Max. AC output apparent power	5000 VA	6000 VA	8000 VA	10000 VA
Max. AC output current	7.6 A	9.1 A	12.1 A	15.2 A
Nominal AC voltage		3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V		
AC voltage range		270 - 480 V		
Nominal grid frequency / Grid frequency range		50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz		
THD		<3 % (of nominal power)		
DC current injection		<0.5 % In		
Power factor		>0.99 / 0.8 leading to 0.8 lagging		
Protection				
LVRT			Yes	
Anti-islanding protection			Yes	
AC short circuit protection			Yes	
Leakage current protection			Yes	
DC switch (solar)			Yes	
DC fuse (battery)			Yes	
Overvoltage category		III [MAINS], II [PV] [BATTERY]		
SPD		DC Type II / AC Type II		
Battery Data				
Battery type			Li-ion battery	
Battery voltage			150 V - 600 V	
Max charge / discharge current			30 A* / 30 A*	
Max charge / discharge power	7500 W / 6000 W	9000 W / 7200 W	10600 W / 10600 W	10600 W / 10600 W
System Data				
Max. efficiency	98.0%	98.2%	98.4%	98.4%
European efficiency	97.2%	97.5%	97.9%	97.9%
Isolation method (solar / battery)		Transformerless / Transformerless		
Ingress protection rating		IP65		
Operating ambient temperature range		-25 – 60		
Allowable relative humidity range (non-condensing)		0% – 100%		
Cooling method		Natural convection		
Max. operating altitude		4000 m (>3000 m derating)		
Noise (Typical)		30dB (A)		
Display		LED		
Communication		RS485, WLAN, Ethernet, CAN, 4×DI, 1×DO		
DC connection type		MC4 (PV) / Sunclix (Battery)		
AC connection type		Plug and play connector		
Compliance		IEC / EN 62109-1, IEC / EN 62109-2, IEC / EN 61000-6-1, IEC / EN 61000-6-3, IEC / EN 61000-3, EN 62477-1, VDE-AR-N-4105, AS / NZS 4777.2		
Mechanical Data				
Dimensions (W * H * D)		460 * 540 * 170 mm		
Mounting method		Wall-mounting bracket		
Weight		27 kg		
Backup Data				
Nominal voltage		3 / N / PE, 220 Vac / 230 Vac / 240 Vac		
Frequency range		50Hz / 60Hz		
Total hamonic factor output voltage		2%		
Switch time to emergency mode		< 20ms		
Nominal output power	5000 W / 5000 VA	6000 W / 6000 VA	8000 W / 8000 VA	10000 W / 10000 VA
Peak output power	6000 W / 6000 VA,5min 10000 W / 10000 VA,10s	7200 W / 7200 VA,5min 10000 W / 10000 VA,10s	12000 W / 12000 VA,5min	12000 W / 12000 VA,5min
Parallel operation		Yes / 2		

* Depending on the connected battery



SBR096/128/160/192/224/256

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High Voltage LFP Battery

New

10 Years Warranty



HIGH-PERFORMANCE

- 100% usable energy
- 30 A continuous charging and discharging current

SAFETY

- Lithium iron phosphate battery
- Multi-stages protection design and rigorous safety certification

FLEXIBILITY

- Extendable during lifetime¹
- Support 3–8 modules per unit, max. 4 units in parallel, 9–100 kWh capacity range

EASY INSTALLATION

- Compact and light, single person installation
- Plug and Play, wiring-less connection between modules
- Seamless integration with hybrid inverter



Type designation	SBR096	SBR128	SBR160	SBR192	SBR224	SBR256
Technical properties						
	3 modules	4 modules	5 modules	6 modules	7 modules	8modules
System Data						
Battery type	LiFePO4 (Lithium Iron Phosphate Battery / LFP) prismatic cell					
Battery module	3.2kWh, 33kg, 625*130*330 mm (W*H*D without handle)					
Energy (usable) ²	9.6 kWh	12.8 kWh	16 kWh	19.2 kWh	22.4 kWh	25.6 kWh
Nominal voltage	192 V	256 V	320 V	384 V	448 V	512 V
Operating voltage	168 – 219 V	224 – 292 V	280 – 365 V	336 – 438 V	392 – 511 V	448 – 584 V
Max. charging / discharging current: continuous	30 A					
Max. charging / discharging current: 10 s pulse	42 A					
Display	SOC indicator, status indicator					
Communication interface	CAN					
Protection						
Over / under voltage protection	Yes					
Over current protection	Yes					
Over / under temperature protection	Yes					
DC breaker	Yes					
General Data						
Dimensions (W*H*D)	625*545*330 mm	625*675*330 mm	625*805*330 mm	625*935*330 mm	625*1065*330 mm	625*1195*330 mm
Weight	114 kg	147 kg	180 kg	213 kg	246 kg	279 kg
Installation location	Indoor / Outdoor					
Mounting method	Floor stand (standard)					
Operating ambient temperature range	Charge: 0 to 50 Discharge: -30 to 50					
Degree of protection	IP55					
Allowable relative humidity range	0% to 95% (non-condensing)					
Max. operating altitude	2000 m					
Cooling method	Natural convection					
Certificates	CE, CEC, IEC 62619, IEC 62040, JIS C 8715-2, UN38.3					
Warranty ³	10 Years					
Expansion adaptation ⁴	Up to 4 units in parallel (need extra junction box)					

1: Available in Q3, 2021

2: Test conditions: 25 °C, 100% depth of discharge (DOD), 0.2C charge&discharge

3: Refer to battery warranty letter for conditional application

4: Available in Q3, 2021