MG5RL / MG6RL

NEW



Robust Power Performance

- 100% full power backup output, delivering stable performance even at temperatures above 45 °C
- Whole-home backup with 40 A bypass switch

Robust Backup Power

- 4 ms Seamless Switch*
- 10 seconds of 200 % backup peak power capability

Robust Solar Generation

- Industry-leading Max. 20 A PV input per string
- Wider MPPT voltage range

Robust Safety Features

- Dual-system pressure relief structure

Robust Control Interface

- 4.3-inch large LCD touchscreen
- Multi-functional interface for Generator, Smart load control or Sungrow string inverter

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Type designation	MG5RL	MG6RL
Input (DC)		
Recommended max. PV input power	10000 Wp	12000 Wp
Max. usable PV input power	8000 Wp	9600 Wp
Max. PV input voltage	500 V	
Min. PV input voltage / Startup input voltage	40 V / 50 V	
Rated PV input voltage	360 V	
MPPT operating voltage range**	40 V – 425 V	
No. of independent MPP trackers	2	
No. of PV strings per MPPT	1 / 1	
Max. PV input current	40 A (20 A / 20 A)	
Max. DC short-circuit current	50 A (25 A / 25 A)	
Max. current for DC connector	25 A	
Battery data		
Battery type	Li-ion battery	
Battery voltage range	40 V – 60 V	
Max. charge / discharge current***	120 A / 120 A	135 A / 135 A
Max. charge / discharge power	5000 W / 5000 W	6000 W / 6000 W
Input / Output (AC)		
Max. AC power from grid	8800 W	
Rated AC output power	5000 W	6000 W
Max. AC output apparent power	5000 VA	6000 VA
Max. AC output current	22.7 A	27.3 A
Rated AC voltage	220 V / 230 V / 240 V	
AC voltage range	154 V – 276 V	
Rated grid frequency	50 Hz / 60 Hz	
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz	
Harmonic (THD)	< 3% (of rated power)	
Power factor at rated power / Adjustable power factor	> 0.99 at default value at rated power / 0.8 leading to 0.8 lagging	
Feed-in phases / Connection phases	1 / 1	
Backup Data (on grid mode)		
Max. output power for backup load ****	8800 W	
Max. output current for backup load	40 A	
Backup Data (off-grid mode)		
Rated voltage	220 V / 230 V / 240 V	
Rated frequency	50 Hz / 60 Hz	
THDV (@ Linear load)	< 2%	
Backup switch time	≤ 4 ms	
Rated output power	5000 W	6000 W
Max. output power for backup load	5500 W	6600 W
Peak output power	2 times of rated power, 10 s	
Efficiency		
Max. efficiency / European efficiency	97.6% / 96.7%	
Protection & Function		
Grid monitoring	Yes	
DC reverse polarity protection	Yes	
AC short-circuit protection	Yes	
Leakage current protection	Yes	
DC switch (solar)	Yes	
Surge protection	DC Type II / AC Type II	
PID Zero	Yes	
Micro-inverter compatibility *****	Optional	
General Data		
Topology (Inverter)	Non-isolated	
Topology (Battery BDC)	Isolated	
Degree of protection	IP65	
Dimensions (W * H * D)	532 mm * 386 mm * 210 mm	
Weight	≤ 18 kg	
Mounting method	Wall-mounting bracket	
Operating ambient temperature range	-25 ℃ to 60 ℃	
Allowable relative humidity range	0% – 95%	
Cooling method	Natural convection	
Max. operating altitude	2000 m	
Noise (typical)	≤ 35 dB (A)	
Display	LCD digital touchable display & LED indicator	
Communication	CAN, RS485, Ethernet (optional), WLAN (optional)	
DI / DO	DI * 1 / DO * 1	
DC connection type	MC4 compatible (Max. 6 mm^2)	
Battery connection type	OT terminal (35 mm^2 – 50 mm^2)	
AC connection type	Plug and Play (Max. 8 AWG)	
Scalability******	8 in parallel	
Grid compliance	IEC 62109-1/-2, IEC/EN 61000-6-1/-3, IEC 62116, IEC 61727, NRS 097-2-1, MEA, PEA, DEWA	

* Available in typical conditions
** Please refer to the user manual for the full load MPPT voltage range
*** The system's charging and discharging capability is also limited by the battery's charging and discharging performance
**** Please refer to the user manual and modify the settings based on actual load power
*****For micro-inverter compatibility, it is only available for the grid-connection port of the inverter
******If the number of inverters in parallel exceeds 4, please consult SUNGROW