

MG5RL/MG6RL

NEW



ROBUST POWER PERFORMANCE

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



ROBUST SOLAR GENERATION

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



ROBUST CONTROL INTERFACE

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



ROBUST BACKUP POWER

- Seamless switching <4ms
- 10 seconds of 200% backup peak power capability



ROBUST SAFETY FEATURES

- Dual-system pressure relief structure for PCS
- AFCI protection



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	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	
Feed-in phases / AC connection	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, 10s	
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	
Arc fault circuit interrupter (AFCI)	Optional	
Micro-inverter compatibility ****	Optional	
General data		
Topology (Inverter)	Non-isolated	
Topology (Battery BDC)	Isolated	
Degree of protection	IP65	
Dimensions (W * H * D)	536 mm * 386 mm * 210 mm	
Weight	≤ 18 kg	
Mounting method	Wall-mounting bracket	
Operating ambient temperature range	-25 °C – 60 °C	
Allowable relative humidity range(Non-condensing)	0% – 100%	
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 mm²)	
Battery connection type	OT terminal (35 mm² – 50 mm²)	
AC connection type	Plug and Play (Max.8 mm²)	
Grid compliance	IEC 62109-1/-2, IEC/EN 61000-6-1/-3, IEC 62116, IEC 61727, NRS 097-2-1, MEA, PEA, DEWA	

* Input voltage exceeding the MPPT operating voltage range triggers inverter protection ** Please refer to the user manual for the full load MPPT voltage range *** Please refer to the user manual and modify the settings based on actual load power **** For micro-inverter compatibility, please consult Sungrow before placing an order