

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	MG6RL
Input (DC)	
Recommended max. PV input power	12000 Wp
Max. usable PV input power	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	135 A / 135 A
Max. charge / discharge power	6000 W / 6000 W
Input / Output (AC)	
Max. AC power from grid	8800 W
Rated AC output power	6000 W
Max. AC output apparent power	6000 VA
Max. AC output current	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	6000 W
Max. output power for backup load	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 mm ²)
Battery connection type	OT terminal (35 mm ² – 50 mm ²)
AC connection type	Plug and Play (Max.8 mm ²)
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