

MG5RL/MG6RL

Preliminary



ROBUST GENERATION

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



ROBUST USE

- 100% full backup power output, stable at 40°C+ temperatures



ROBUST BACKUP

- Seamless switching $\leq 4\text{ms}$



ROBUST CONTROL

- 4.3-inch large LCD touch screen



ROBUST ENDURANCE

- 314Ah long-life battery cells with intelligent optimization



ROBUST SAFETY

- Dual-system pressure relief structure for PCS & battery
- 3D battery safety matrix for comprehensive protection



Type designation	MG5RL		MG6RL	
Input (DC)				
Recommended max. 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		6000 W	
Input / Output (AC)				
Max. AC power from grid	8800 VA		8800 VA	
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)				
Rated output power for backup load	5000 W		6000 W	
Rated output current for backup load	22.7 A		27.3 A	
Max. output power for backup load	5500 W		6600 W	
Max. output current for backup load	25 A		30 A	
Max. continuous current passthrough (grid to load)	40 A		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 / 5000 VA		6000 W / 6000 VA	
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			
Micro-inverter compatibility ***	Optional			
General data				
Topology (Inverter)	Non-isolated			
Topology (Battery)	Isolated			
Degree of protection	IP65			



Type designation	MG5RL	MG6RL
General data		
Dimensions (W * H * D)	532 mm * 386 mm * 210 mm	
Weight	19kg	
Mounting method	Wall-mounting bracket	
Operating ambient temperature range	-25 °C - 60 °C	
Allowable relative humidity range	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 (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 63027, IEC 62116, IEC 61727, EN 50549, VDE-AR-N 4105, G99, CEI 0-21, NRS 097-2-1, MEA, PEA, DEWA, Inmetro 140	

* Input voltage exceeding the MPPT operating voltage range triggers inverter protection

** Please refer to the user manual for the full load MPPT voltage range

*** For micro-inverter compatibility, please consult Sungrow before placing an order

