

MG12RL  
MGL060

Preliminary



## ROBUST POWER PERFORMANCE

- 100% full power backup output, delivering stable performance even at temperatures above 45°C
- Whole-home backup with 63A bypass switch
- 314Ah Cells with battery optimizer for long service life



## ROBUST BACKUP POWER

- 4 ms Seamless Switch<sup>1)</sup>



## ROBUST SOLAR GENERATION

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



## ROBUST SAFETY FEATURES

- Dual-system pressure relief structure
- Real-Time Battery Monitoring with Active Protection Kit



## ROBUST CONTROL INTERFACE

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



Technical Data Sheet		MG12RL
<b>Input (DC)</b>		
Recommended max. PV input power		24000 Wp
Max. usable PV input power		19200 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 <sup>2)</sup>		40 V - 425 V
No. of independent MPP trackers		3
No. of PV strings per MPPT		1/1/1
Max. PV input current		60 A ( 20 A / 20 A / 20 A )
Max. DC short-circuit current		75 A ( 25 A / 25 A / 25 A )
Max. current for DC connector		25 A
<b>Battery data</b>		
Battery type		Li-ion battery
Battery voltage range		40 V – 60 V
Max. charge / discharge current <sup>3)</sup>		240 A / 240 A
Max. charge / discharge power		12000 W / 12000 W
<b>Input / Output (AC)</b>		
Max. AC power from grid		13860 W
Rated AC output power		12000 W
Max. AC output apparent power		12000 VA
Max. AC output current		54.5 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
<b>Backup Data (on grid mode)</b>		
Max. output power for backup load <sup>4)</sup>		13860 W
Max. output current for backup load		63 A
<b>Backup Data (off-grid mode)</b>		
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		12000 W
Max. output power for backup load		12000 W
Peak output power		1.7 times of rated power, 10s
<b>Efficiency</b>		
Max. efficiency / European efficiency		97.6 % / 96.7 %
<b>Protection &amp; Function</b>		
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 <sup>5)</sup>		Optional
<b>General Data</b>		
Topology ( Inverter )		Non-isolated
Topology ( Battery BDC )		Isolated
Degree of protection		IP65
Dimensions ( W * H * D )		552 mm * 448 mm * 250 mm
Weight		≤ 25 kg
Mounting method		Wall-mounting bracket
Operating ambient temperature range		-25 °C to 60 °C
Allowable relative humidity range		0 % – 95 %
Cooling method		Fan cooling
Max. operating altitude		2000 m
Noise ( typical )		≤ 45 dB ( A )
Display		LCD digital touchable display & LED indicator
Communication		CAN, RS485, Ethernet, WLAN
DI / DO		DI * 1 / DO * 1
DC connection type		MC4 compatible ( Max. 6 mm <sup>2</sup> )
Battery connection type		OT terminal ( 35 mm <sup>2</sup> – 95 mm <sup>2</sup> )
AC connection type		OT terminal ( Max. 16 mm <sup>2</sup> )
Grid compliance		IEC 62109-1/-2, IEC/EN 61000-6-1/-3, IEC 62116, IEC 61727, NRS 097-2-1, DEWA