

# EM Series

## Single Phase Hybrid Inverter (LV Battery)



Technical Data		GW3048-EM	GW5048-EM
Battery Input Data	Battery Type	Li-Ion	
	Nominal Battery Voltage (V)	48	
	Max. Charging Voltage (V)	≤60 (Configurable)	
	Max. Charging Current (A)* <sup>1</sup>	50	
	Max. Discharging Current (A)* <sup>1</sup>	50	
	Battery Capacity (Ah)* <sup>2</sup>	50~2000	
	Charging Strategy for Li-Ion Battery	Self-adaption to BMS	
PV String Input Data	Max. DC Input Power (W)	4000	6650
	Max. DC Input Voltage (V)* <sup>3</sup>	550	
	MPPT Range (V)	100~500	
	Start-up Voltage (V)* <sup>4</sup>	150	
	Nominal DC Input Voltage (V)	360	
	Max. Input Current (A)	11	11/11
	Max. Short Current (A)	13.8	13.8/13.8
	No. of MPP Trackers	1	2
	No. of Strings per MPP Tracker	1	
AC Output Data (On-grid)	Nominal Power Output to Utility Grid (W)	3000	5000
	Max. Apparent Power Output to Utility Grid (VA)	3000	5000
	Max. Apparent Power from Utility Grid (VA)	5300	
	Nominal Output Voltage (V)	230	
	Nominal Output Frequency (Hz)	50/60	
	Max. AC Current Output to Utility Grid (A)	13.6	21.7
	Max. AC Current From Utility Grid (A)	23.6	
	Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	
	Output THDi (@Nominal Output)	<3%	
AC Output Data (Back-up)	Max. Output Apparent Power (VA)	2300	
	Peak Output Apparent Power (VA)* <sup>5</sup>	3500, 10sec	
	Automatic Switch Time (ms)	10	
	Max. Output Current (A)	10	
	Nominal Output Voltage (V)	230 (±2%)	
	Nominal Output Frequency (Hz)	50/60 (±0.2%)	
	Output THDv (@Linear Load)	<3%	
	Max. Efficiency	97.6%	
Efficiency	Max. Battery to Load Efficiency	94.5%	
	European Efficiency	97.0%	
Protection	Anti-Islanding Protection	Integrated	
	PV String Input Reverse Polarity Protection	Integrated	
	Insulation Resistor Detection	Integrated	
	Residual Current Monitoring Unit	Integrated	
	Output Over Current Protection	Integrated	
	Output Short Protection	Integrated	
	Output Over Voltage Protection	Integrated	
General Data	Operating Temperature Range (°C)	-25~60	
	Relative Humidity	0~95%	
	Operating Altitude (m)	4000	
	Cooling	Natural Convection	
	Noise (dB)	<25	
	User Interface	LED & APP	
	Communication with BMS* <sup>6</sup>	RS485; CAN	
	Communication with Meter	RS485	
	Communication with Portal	Wi-Fi* <sup>7</sup>	
	Weight (kg)	16	17
	Size (Width*Height*Depth mm)	347*432*175	
	Mounting	Wall Bracket	
	Protection Degree	IP65	
	Standby Self-Consumption (W)	<13	
	Topology	High Frequency Isolation	

\*<sup>1</sup>: The actual charge and discharge current also depends on the battery.

\*<sup>2</sup>: Under off-grid mode, then battery capacity should be more than 100Ah.

\*<sup>3</sup>: Maximum operating DC voltage is 530V.

\*<sup>4</sup>: When there is no battery connected, inverter starts feeding in only if string voltage is higher than 200V.

\*<sup>5</sup>: Can be reached only if PV and battery power are enough.

\*<sup>6</sup>: The standard configuration is CAN.

\*<sup>7</sup>: Only compatible with 2.4Ghz network.

\*: Please visit GoodWe website for the latest certificates.