

# Inverter

- Smart inverter with RS485 and CAN communication
- AFCI controller
- Complies with UL, FCC, CEC, HECO guidelines



Residential  
Area



Solar Power



Energy  
Storage



EV Charger



Monitor

# Specifications

Model Name	GM Energy Inverter e1.11
<b>EVSE PORT</b>	
Maximum I/O power	10 kW
Acceptable input voltage range	200 V to 500 V
Maximum continuous I/O current	36.7 A
AC maximum short circuit current	10 kA
Charging/discharging efficiency(to AC), peak	>95.5%
EVSE terminal	Spring type
<b>BATTERY PORT</b>	
Compatible battery pack size	5 kWh to 35.4 kWh
Maximum I/O power	12000 W <sup>1)</sup>
Acceptable input voltage range	350 V to 480 V (max 450 V with Powerbank installed) <sup>2)</sup>
Maximum continuous I/O current	32 A <sup>1)</sup>
Round trip efficiency (PCS Only), peak	>97.5%
Fuse rating	50 A
Battery terminal	Screw type
<b>PV INPUT</b>	
Absolute maximum input voltage	480 V (450 V with Powerbank Installed) <sup>2)</sup>
Start-up voltage	120 V
Operating MPPT voltage range	50 V to 480 V (50 V to 450 V with Powerbank installed) <sup>2)</sup>
Maximum input short circuit current	20 A
Maximum input current per MPPT	15 A
MPP tracker	4
Maximum DC/AC ratio	1.3
Maximum allowable MPPT in parallel	2 (strings)
MPPT scan (Shading option)	~ 15min (high) /~ 30min (default) /~ 60min (low)
DC disconnect	Integrated
<b>AC PORT (ON-GRID MODE)</b>	
Maximum output power @ 240Vac	11520 W
AC operating voltage range	211 Vac to 264 Vac @ 240 Vac
Maximum continuous current	48 A
Operating frequency range	59.3 Hz to 60.5 Hz
Adjustable frequency range	50 Hz to 66 Hz
Adjustable power factor range	0.8i to 0.8c
THD @ nominal power	<3%
Grid support compliance	UL 1741 SB, CA Rule 21 phase 1, 2, 3, HECO
AC terminal <sup>3)</sup>	Spring type
<b>AC PORT (OFF-GRID MODE)</b>	
Output	Pure sin-wave voltage
Maximum output power	9600W @ 45°C, 4800W @ 55°C, 0W @ 65°C
AC output voltage	120 / 240 Vac (split)
Maximum continuous current	40 A
Maximum LRA allowed	62 A
Operating frequency range	57 Hz to 63 Hz
THD @ nominal power	<5%
Maximum allowed crest factor	2.0
AC terminal	Spring type

1) Adjustable value, limited by the output power capability of battery pack (ESS).

2) Adjustable value, limited by the maximum voltage of the battery pack (ESS). The GM Energy PowerBank is limited to 450V.  
If integrating DC solar with GM Energy PowerBank, ensure the DC solar voltage does not exceed 450V.

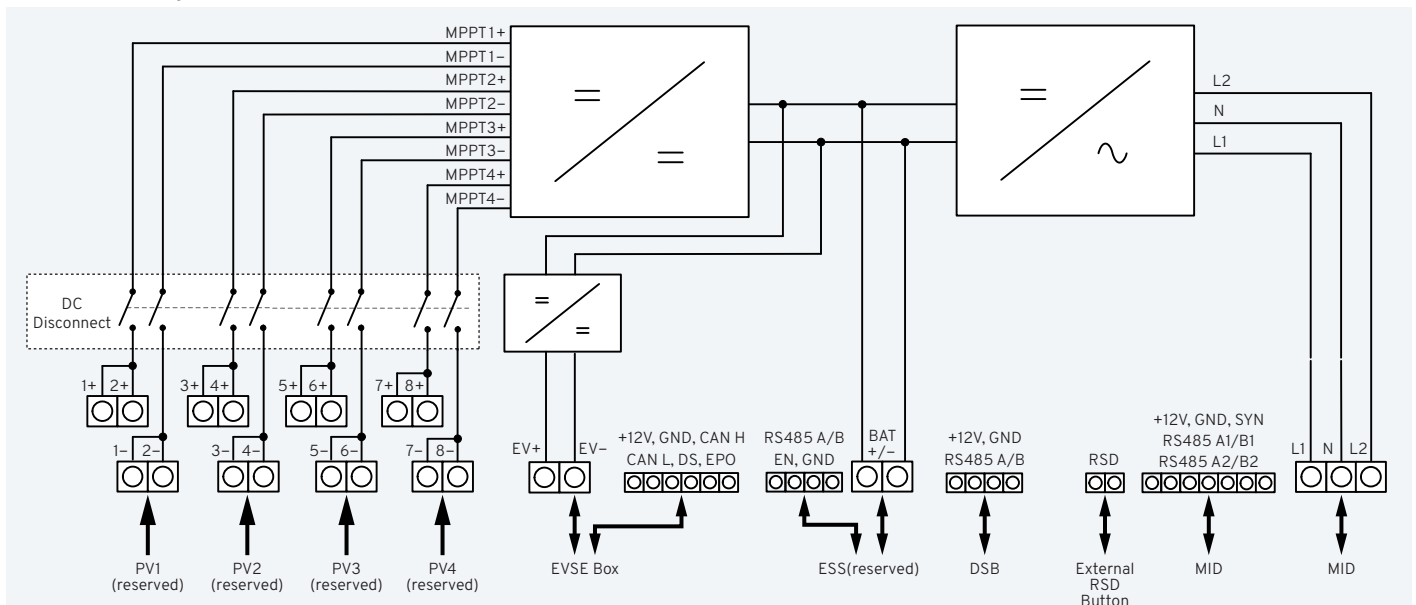
3) On-grid mode and off-grid mode are using the same AC port terminal.

GENERAL SPECIFICATION	
Peak efficiency (PV inverter)	98.0%
CEC efficiency (PV inverter)	97.5 % @ 240 Vac
Operating temperature range	-22 °F to 149 °F (-30 °C to 65 °C), with derating above 113 °F (45°C)
Humidity	0% to 95%
Maximum operating altitude	9,843 ft (3,000 m)
Audible noise	≤ 45 dB(A) @ 3 ft (1 m)
Standby power	< 18 W
MECHANICAL DESIGN	
Dimensions (W x H x D)	20.9 x 30.7 x 7.5 in (530 x 780 x 190 mm)
Weight	94.8 lbs (43 kg)
Cooling	Forced air
Enclosure material	Die-casting aluminum
INTERFACE	
Display	APP, LED indicators
Communication interface	RS-485, CAN
Protocol	Modbus - RTU
STANDARDS	
Battery safety	UL 1973
Enclosure protecting rating	UL 50E Type 4
Safety	UL 1741, CSA - C22.2 No. 107.1-16
Software approval	UL 1998
Grounding fault protection	UL 1741 CRD
PCS	UL 1741 PCS CRD, NEC 705.13
Anti-islanding protection	IEEE 1547-2018, IEEE 1547.1-2020
EMC	FCC part 15 Class B
AFCI	UL 1699B (Type 1), NEC 2020 690.11
Rapid shutdown protection	NEC 2020 690.12 <sup>4)</sup>
Rapid shutdown transmitter	AP Smart Transmitter, Model Type: Transmitter-PL-1P
Grid support regulation	UL 1741 SB, California Rule 21 phase 1 & 2 & 3, HECO Compliant
EV Charger system certification	UL 2202, UL 9741
WARRANTY	
Standard warranty	10 years

4) Compliant with APS rapid shutdown system.



## Block Diagram



The GM Energy PowerBank and DC Solar panel integration into the Inverter is not available at the time of this specification sheet publishing date. Further documentation will be made available at <https://gmenergy.gm.com/home/resources-and-support> when the features become available.