

Inverter

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











Monitor

Residential Area

Solar Power Energy Storage

EV Charger



Specifications

Model Name	GM Energy Inverter e1.11
EVSE PORT	
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
BATTERY PORT	
Compatible battery pack size	5 kWh to 35.4 kWh
Maximum I/O power	12000 W ¹⁾
Acceptable input voltage range	350 V to 480 V (max 450 V with Powerbank installed) ²⁾
Maximum continuous I/O current	32 A ¹⁾
Round trip efficiency (PCS Only), peak	>97.5%
Fuse rating	50 A
Battery terminal	Screw type
PV INPUT	
Absolute maximum input voltage	480 V (450 V with Powerbank Installed) ²⁾
Start-up voltage	120 V
Operating MPPT voltage range	50 V to 480 V (50 V to 450 V with Powerbank installed) ²⁾
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
AC PORT (ON-GRID MODE)	
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 THD @ nominal power	0.8i to 0.8c <3%
Grid support compliance	
AC terminal ³⁾	UL 1741 SB, CA Rule 21 phase 1, 2, 3, HECO Spring type
AC PORT (OFF-GRID MODE)	
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
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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.

EEC 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) Jumidity 0% to 95% daximum operating altitude 9,843 ft (3,000 m) Vudible noise ≤ 45 dB(A) @ 3 ft (1 m) standby power < 18 W FCEANICAL DESIGN 20.9 x 30.7 x 7.5 in (530 x 780 x 190 mm) Weight 94.8 ibs (43 kg) Cooling Forced air inclosure material Die-casting aluminum NTERACE Display Onomunication interface R5-485, CAN Portocol Modusu - RTU Standby server UL 1973 cinclosure protecting rating UL 50 Type 4 stafety UL 1973 cinclosure protecting rating UL 1074, CSA - C22.2 No. 107.1-16 Stafety UL 1741 CSC ACD, NEC 705.13 Yundig fault protection UL 1741 CRD CSC UL 1741 PCS CRD, NEC 705.13 Vandig fault protection EEE 1547-2018, IEEE 1547.1-2020 CSC UL 1699B (Type 1), NEC 2020 690.11 Rapid shutdown protection NEC 2020 690.12 ⁴⁾ April 150 SUB Superating Rule 21 phase 18 & 2 & 3, HECO Compliant VC Charger system certification UL 2020, UL 910, Sc California Rule 21 phase 18 & 2 & 3,	GENERAL SPECIFICATION	
Operating temperature range -22 °F to 149 °F (-30 °C to 65 °C), with derating above 113 °F (45 °C) Humidity 0% to 95% Aximum operating altitude 9,843 ft (3,000 m) Audible noise ≤ 45 dB(A) @ 3 ft (1 m) Standby power < 18 W	Peak efficiency (PV inverter)	98.0%
Jumidity0% to 95%Maximum operating altitude9,843 ft (3,000 m)Vudible noise5 45 dB(A) @ 3 ft (1 m)Standby power< 18 W	CEC efficiency (PV inverter)	97.5 % @ 240 Vac
Axinum operating altitude 9,843 ft (3,000 m) Audible noise ≤ 45 dB(A) @ 3 ft (1 m) Audible noise ≤ 45 dB(A) @ 3 ft (1 m) Audible noise < 18 W	Operating temperature range	-22 °F to 149 °F (-30 °C to 65 °C), with derating above 113 °F (45°C)
Audible noise≤ 45 dB(A) @ 3 ft (1 m)Standby power< 18 W	Humidity	0% to 95%
ConstructConstructStandby power< 18 W	Maximum operating altitude	9,843 ft (3,000 m)
ACCHANCAL 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) Sooling Forced air Dimensions (W x H x D) Die-casting aluminum MEGNAM Die-casting aluminum NTERFACE Die-casting aluminum Display APP, LED indicators Communication interface RS-485, CAN Protocol Modbus - RTU STANDARDS Stattery safety UL 1973 UL 1973 Enclosure protecting rating UL 50E Type 4 Software approval UL 1978 Grounding fault protection UL 1741, CRA - C22.2 No. 107.1-16 Software approval UL 1998 Grounding fault protection UL 1741 CRD PCC 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 4 ¹ Rapid shutdown transmitter AP Smart Transmitter, Model Type: Transmitter-PL-1P Stid Suport regulation UL 1741 SB, IEEE 2030.5, California	Audible noise	\leq 45 dB(A) @ 3 ft (1 m)
Dimensions (W x H x D)20.9 x 30.7 x 7.5 in (530 x 780 x 190 mm)Veight94.8 lbs (43 kg)CoolingForced airEnclosure materialDie-casting aluminumNTERFACEDisclasting aluminumOtisplayAPP, LED indicatorsCommunication interfaceRS-485, CANProtocolMobus - RTUSafetyUL 1973Enclosure approvalUL 50E Type 4Software approvalUL 1741, CSA - C22.2 No. 107.1-16Software approvalUL 1741 CRDVCSUL 1741 PCS CRD, NEC 705.13Anti-islanding protectionIEEE 1547.1-2020SAFCUL 1699B (Type 1), NEC 2020 690.11Rapid shutdown protectionNEC 2020 690.12 4/Rapid shutdown transmitterAP Smart Transmitter, Model Type: Transmitter-PL-1PGrid support regulationUL 1741 SB, IEEE 2030.5, California Rule 21 phase 1 & 2 & 3, HECO CompliantVC Charger system certificationUL 2020, UL 9741	Standby power	< 18 W
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Rapid shutdown protection NEC 2020 690.12 4) Rapid shutdown transmitter AP Smart Transmitter, Model Type: Transmitter-PL-1P Grid support regulation UL 1741 SB, IEEE 2030.5, California Rule 21 phase 1 & 2 & 3, HECO Compliant EV Charger system certification UL 2202, UL 9741	EMC	FCC part 15 Class B
Rapid shutdown transmitter AP Smart Transmitter, Model Type: Transmitter-PL-1P Grid support regulation UL 1741 SB, IEEE 2030.5, California Rule 21 phase 1 & 2 & 3, HECO Compliant EV Charger system certification UL 2202, UL 9741 WARRANTY VARRANTY	AFCI	UL 1699B (Type 1), NEC 2020 690.11
Grid support regulation UL 1741 SB, IEEE 2030.5, California Rule 21 phase 1 & 2 & 3, HECO Compliant EV Charger system certification UL 2202, UL 9741 WARRANTY VARPANTY	Rapid shutdown protection	NEC 2020 690.12 ⁴⁾
EV Charger system certification UL 2202, UL 9741 WARRANTY	Rapid shutdown transmitter	AP Smart Transmitter, Model Type: Transmitter-PL-1P
VARRANTY	Grid support regulation	UL 1741 SB, IEEE 2030.5, California Rule 21 phase 1 & 2 & 3, HECO Compliant
	EV Charger system certification	UL 2202, UL 9741
Standard warranty 10 years	WARRANTY	
	Standard warranty	10 years

4) Compliant with APS rapid shutdown system.

Block Diagram

