

M System

Up to 1500 VDC

Utility Grade Solar & Storage Inverter

2993 kVA - 6625kVA



Return on Investment

- Modular design for high availability
- Low maintenance cost reduces operational costs



Modular Technology

- Our modular inverter enable scalable system design
- Provides optimal flexibility for site and project designs
- Dual Certified Inverter for PV and BESS



Simple O&M

- Low maintenance and O&M requirements
- Modular design with low component count
- Remove and replace serviceability



Advanced Technology

- Up to 10 independent 537kVA DC Inputs
- Industry leading >99% Efficiency
- Wide AC and DC operating Range
- No power derate up to 45C
- No common mode voltage output



One inverter for all uses

- >99% Efficiency
- Designed and optimized for PV and BESS
- Built in the USA
- Silicone Carbide Technology

M Overview

The M System modular platform has been developed to offer a straightforward and simple solution to developers of Utility-grade energy storage systems for both UL and IEC markets.

The M System offers a scalable inverter building block for systems of all sizes. With world-class power density and easy-to-install design, your energy storage system will be commissioned quickly and safely.

M10/M8 | Model 50-103421

Bidirectional Energy Storage & Microgrid PCS

	M System Solution (1) (2)	M8 System	M10 System
AC	AC Configuration	Throat / Busbar (3)	
	Nominal AC Voltage (+/- 10%) (4)	480 - 690 - 850 V (5) (6)	
	Nominal AC Current (export/import)	3600 ARMS	4500 ARMS
	AC export/import capacity @ +45°C [113°F] (7), (8)	2993-4302-5300kVA	3741-5378-6625 kVA
	Export power overload capacity +50°C, Starting from 66% full load	125% for 3 and 105% for 5 min	
	Max. AC Transformer Let-Through Current	200kA - 200kA - 100kA	
	Normal Frequency Range	50 / 60 Hz (configurable)	
	Harmonic Distortion	UL 1741/IEEE 1547 <2% TDDi at rated power per IEEE 519 <3% according to VDE-AR-N 4110/4120	
	Target Efficiency: Peak CEC Euro	99.2% [est.] 98.7% [est.] 98.8% [est.]	
	DC	Minimum DC Voltage (9)	784 - 1127 - 1388 VDC
Maximum DC Voltage		1500 VDC	
Maximum DC Current		540 ADC / Inverter	
DC Connection		2 x 750 kcmil Per M Inverter / pole	
Max. Fault Current Allowed From DC Source		BESS: 250 kA PV: 1.3 kA	
Number of DC Inputs (10)		BESS: 1 per M Inverter PV: max 3 per M Inverter	
Max. Deviation of DC Voltage between parallel units		Any	
Environmental	Ambient Temperature (Operation)	-40°C to +60°C (-40°F to +140°F)	
	Ambient Temperature (Storage)	-40°C to +70°C (-40°F to +158°F)	
	Relative Humidity	Any	
	Protection Degree	Outdoor: IP54 / NEMA 3R	
	Corrosion Rating (11)	C4 for 25 years (Base Model) C5 for 20 y (Corrosion resistant model)	
	Max Elevation	4,000 meters (with de-rating)	
	Airborn Noise	<75 dBA @ 1 m [est.]	
	Seismic	ICC-ES AC 156 Sds @ 1.35 G/ Seismic Zone 4	
	Altitude Derating (Reduction Of Nominal AC Current)	Reduction of 0.66% of AC and DC currents per 100 m above 1,000 m elevation	
	Altitude Derating (Reduction Of Nominal AC & Max. DC Voltages)	Reduction of 1.15% of DC voltage per 100 m above 2,000 m elevation	
Temperature De-rating (12)	2% per degree °C from +45°C to +55°C 6% per degree °C from +55°C to +60°C [est.]		
Mechanical (12)	Maximum Dimensions (HxWxD)	mm: [3543 X 2338 X 2735] in: [139.5 X 92 X 107.7]	
	Weight	3003 kg [6620 lbs] [est.]	3402 kg [7500 lbs] [est.]
	Mounting	System can be mounted on Piles, Pier, or Concrete (14)	
	Cooling	Forced Air	
Certificaions	M Inverter	UL 1741 C22.2 No. 107.1-16 BESS: IEC 62477-1, PV: IEC/EN 62109	
	M System	UL1741	
Protections	AC Fuses DC Fuses	700A, 200 kAIC BESS: 900 A, 250 kAIC, PV: selectable (15)	
	AC Surge Protection (SPD)	Heavy Duty IEC Class I, UL Type 2	
	DC Surge Protection (SPD)	BESS: Heavy Duty IEC Type 1, UL Type 2 PV: IEC/UL Type 1	
	F-Stop	Included	
	Ground Fault	Optional	
	AC Disconnect Switch	Optional	
	DC Disconnect Switch	Optional	
Control	Control Interface	Modbus TCP/IP	
	Control Enclosure	Aux Power (208VAC), Cat5E, F-Stop	
	Control Power Voltage	1) 208-240(+/-10%)VAC external connection 2) Optional Auxiliary Transformer	
	Inverter Self Consumption	5.2 KVA pk/ 3.2 KVA cont	6.5 KVA pk/ 4 KVA cont

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| <ul style="list-style-type: none"> (1) Refer to M Inverter (50-200100) Datasheet for specific inverter ratings. (2) M System may be populated with less than max number of inverters. (3) Cable option possible. Please contact EPC Power for more information. (4) Nominal voltage 480-850 VAC +/- 10%. Consult EPC Power for ratings of alternative AC voltages. (5) AC Output voltage is dependent on the min DC voltage source. Nominal AC voltages other than those shown here are available. (6) PV Variant only available up to 690VAC. (7) Power ratings at nominal AC voltage and at cos φ = 1. Available power reduced in proportion to any AC voltage reduction from nominal. (8) With nominal DC and nominal AC voltage. Reactive power capability will vary depending on DC and AC voltage range requirements at inverter terminals. | <ul style="list-style-type: none"> (9) DC voltage range at nominal AC voltage and at cos φ = 1 and 10% high-line (AC) condition. Minimum DC voltage increases with higher AC voltage and if reactive power is required. See manual for details. (10) DC Bus Configurations Configured on Project Basis. (11) Information preliminary. Not designed for aggressive industrial pollutants. (12) De-rating based on mission profile (13) Weights & dimensions are approximate; finalized dimensions will be determined on project specific basis. (14) Additional foundation types may be acceptable upon review by EPC Power. EPC Power does not provide the foundation. (15) Contact EPC For PV Fusing Options |
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