PD250/AC-480

250 kW Energy Storage Inverter

Reliable service in the most demanding applications

DG

Engineered to provide years of reliable service in the most demanding applications.

EPC's advanced smart inverters for energy storage will enable you to deploy scalable power conversion systems with less effort and in less time. Integrating 1,000 V class battery energy storage systems has never been easier or more compact. With world-class power density and an easy to install design, your energy storage system will be up and running in no time.

This inverter is designed from the ground up with simplicity, reliability, and scalability in mind. The liquid-cooled inverter includes an integrated AC contactor, AC breaker, DC contactor, and precharge circuit, enabling simple installation.

The PD250/AC-480 provides reliable, abundant power in a small footprint for years of reliable service.

Bidirectional Inverter

- THD <2%
- 1000 VDC
- Peak efficiency 98.4%
- 50 & 60 Hz operation
- Grid-tie and off-grid
- Parallel UPS backup
- Real and reactive power control
- Fully bidirectional
- Single-phase capable

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Bidirectional Energy Storage & Microgrid PCS

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AC	AC port configuration	IP2W or 2P2W I 3P3W
	AC voltage range	480 VRMS +10% / -12%
	AC export power @ 60°C inlet	250 kVA I 301 ARMS
	AC import power @ 55°C inlet	250 kVA I 301 ARMS
	Overload capacity	110%, 10 minutes I 125%, 10 seconds
	AC high voltage ridethrough	1.2 pu
	Maximum grid impedance	8%, 500 kVA base
	Nominal frequency range	50 - 60 Hz (field settable)
	Harmonic distortion	UL1741/IEEE 1547, <3% TDDi per IEEE 519
	Power factor / reactive power	0 leading … 0 lagging (full 4-quadrant operation)
	Maximum aux. power consumption	700 W (includes ext. cooling pump + fan)
	CEC efficiency	98.0%
	Peak DC to AC efficiency	98.4%
DC	DC voltage range	710 - 1000 VDC
	Maximum DC current	750 ADC
	Battery technology	all battery types, fuel cells, other DC sources, etc.
	Number of DC inputs	1
Environmental	Ambient temperature (operation)	-20°C to 50°C
	Ambient temperature (storage)	-20°C to 50°C
	Protection degree	IP00 (requires enclosure)
	Relative humidity	5% - 95% non-condensing
	Max elevation	2,000 m [6,500 ft.]
	Airborne noise	<75 dBA @ 1m
	Temperature de-rating	automatic; see charts
Cabinet	Maximum dimensions (H x W x D)	mm: [670 x 530 x 1045] I in.: [26.4" x 20.9" x 41.1"]
	Weight	300 kg [662 lb.]
	Mounting	rack mount
	Cooling	liquid
	Cooling fluid	30% - 50% EWG or PWG
Certifications	Safety	UL 1741 I C22.2 No. 107.1-16
	Utility interconnect Source SRD	UL 1741:2010 R2.18 (SA) I IEEE 1547.1-2003 & 1547.1-2015 I CA Rule 21 No. 16-06-052
Protections	AC protection	Breaker; 35, 50, 65, 100 kA Isc options
	DC protection	DC contactor & precharge; ext. fusing required
	Humidity	by customer
	Safety features	overvoltage, overcurrent, overtemperature
	Ground fault detection	not included
Control	Control interface	CAN, Modbus RS485, or Modbus TCP
	Command latency	1 ms
	Response time; e.g. step from full charge to discharge	20 ms; adjustable longer via parameters
	Black-start capable	Yes; requires external control power
	Grid-tied control modes	Voltage mode I PQ (power) I DQ (current) I cos phi (pf) I STATCOM
	Grid-support functions	Volt/VAR I Hz/Watt I Volt/Watt I Fixed PF
	Islanded control modes	V&f
	Control power options	208 - 240 VAC I DC: 24 VDC

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