Harvest the power of the sun

The Eaton Power Xpert™ Solar 250 kW inverter is listed to UL® 1741 for three-phase utility interactive operation. Backed by a century of experience with electrical power systems and a global reputation for excellence.

The Eaton Power Xpert Solar 250 kW inverters convert sunlight into clean alternating current, with an emphasis on:

- Maximum energy harvest
- System reliability
- Enhanced operations and maintenance
- High safety standards

Maximum energy harvest

The Eaton Power Xpert Solar 250 kW inverters are based on Eaton's mature PowerChain® Management solutions, which incorporate Eaton programmable logic controllers (PLCs), advanced variable frequency drives and protective relays. Every critical component inside the Power Xpert inverter is proven to be reliable based on the known life cycles of high-volume industrial and electrical control equipment.

- Earliest startup–latest shutdown with DC excitation and zero load grid sync
- Minimized offline nuisance events with superior fault tolerance of a utility-grade electric protection relay

At the heart of the Eaton Power Xpert Solar 250 kW inverter is the Eaton active front end (AFE) technology, which is proven to reliably operate in harsh environments with 24-hours-a-day, 7-days-a-week operation cycles over decades.

Operations and maintenance

The Eaton Power Xpert Solar 250 kW inverter is designed to operate as consistently as the sun rises and sets. Insuring your PV system investment, the Power Xpert is supported by a global service infrastructure and backed by a company with more than 100 years of performance.

- AC/DC circuit terminations accessible by side and bottom gland plates with the largest working volume in the industry
- National support and service infrastructure
- Extended warranties and service contracts available for long-term maintenance

Inverter re-combiner box with DC circuit breaker

- Optional inverter re-combiner box with DC breakers to meet NEC® 2011 requirements for safe DC disconnect, eliminating the need for external DC disconnects
- DC breaker option eliminates the need to replace DC fuses, allowing cost and time savings (reducing operation and maintenance costs)
- Current sensing of each DC input is available for array zone monitoring; DC input current is reported to inverter controller, which makes it available via Modbus®
- DC breakers can be individually turned off, allowing isolation of a defective sub-array while allowing other sub-arrays to operate

Features and options

- UL 98 load break, service entrance rated 400A AC breaker
- 100 kA surge protection
- Optional infrared inspection ports for the AC and DC cabinet sections
- Optional visual inspection port in AC and DC cabinets for breaker and fuse status
- Optional CEC-approved system performance meter, 2% accurate revenue tested to ANSI C-12
- Factory configured inverter re-combiner box:
  - Fused input options: No fusing, 4 x 300A, 8 x 150A, 6 x 225A, 6 x 200A, 8 x 175A, 8 x 125A
  - DC breaker input options: 16 x 90A, 14 x 100A, 12 x 125A, 8 x 150A, 8 x 175A, 7 x 200A, 6 x 225A

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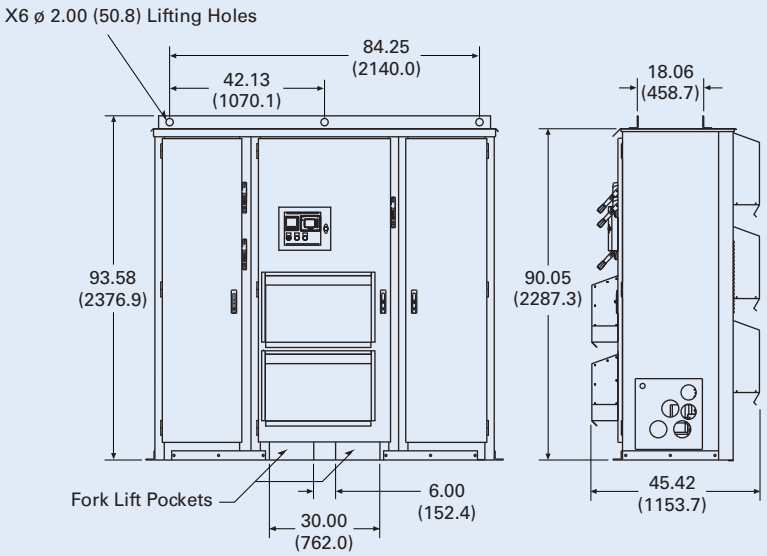
Approximate Dimensions in Inches



Specifications

Description		Specification
AC Output—Factory Default		
Maximum continuous output power		250 kW
Weighted efficiency (CEC)		96%
Maximum continuous output current		312A
Maximum branch over current protection		400A ❶
Nominal operating voltage		3ø 480 Vac
Operating voltage range		423–528 Vac
Nominal operating frequency		60 Hz
Operating frequency range		50.7–60.5 Hz
Tare loss		70W
Total harmonic distortion (THD)		<3%
Power factor		>0.99
Utility connection	Delta	Three-wire (A, B, C) ❷
	Wye	Four-wire (A, B, C, N)
DC Input		
DC maximum input voltage		600 Vdc
DC maximum power point tracking range (MPPT)		300–500 Vdc
DC operating range		300–600 Vdc
DC input start		400 Vdc ❸
DC operating current nominal		860A
Maximum DC ISC input		1340A
Factory configured PV array grounding		Pos / Neg

Description	Specification
Mechanical	
Operating temperature range (without power foldback)	–20° to 50°C
Storage temperature range	–30° to 70°C
Enclosure rating	UL Type 3R
Enclosure(s) construction	Polyester powder coated
Relative humidity, non-condensing	0 to 95%
Inverter weight	4000 lbs (1814 kg)
Transformer weight	2850 lbs (1293 kg)
Inverter envelope dimensions in inches	94.0H x 93.0W x 46.0D
Transformer dimensions in inches	64.0H x 50.0W x 40.0D
Inverter and transformer mounting	Pad mount (not freestanding)
Isolation transformer (external)	Delta/delta
Cooling	Forced convection
Maximum altitude	3300 ft (1000m)
Air flow/inverter	48 m^3 (1700 cfm^3)
Seismic rating successfully evaluated to	Seismic qualified to IBC/CBC
Certifications	
UL 1741 2nd Ed., Jan. 2010	
IEEE® 1547	

❶ 400A AC breaker.

❷ Factory default is delta three-wire; wye four-wire is field selectable.

❸ Factory default is 400 Vdc.

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