

CHILICON POWER CP-250E

Single Channel Microinverter



CP-250E™ Series Microinverters

The Chilicon CP-250E allows installers to maximize PV system production, while minimizing installation and operational costs. Microinverter based architectures offer the benefit of increased flexibility in panel deployment, while also providing per panel visibility to simplify system O&M. With its all-AC approach, integrated grounding, modular bus cabling, and ability to support up to 20 panels on a 30A branch circuit, the CP-250E simplifies both design and installation. Both freq-Watt and volt-Watt modes allow AC control by off-grid systems. Coupled with Chilicon's CP-100 gateway and cloud-based monitoring software, the CP-250E can form the energy management backbone of both residential and commercial PV systems.

Performance

- Supports panels up to 420W
- Maximizes energy production over life of system
- Minimizes losses due to shading and debris
- Eliminates single point of failure for system

Simplicity

- All AC design – No string calculations needed
- No GEC needed for microinverters
- Easy installation with standardized trunk cables

Versatility

- Compatible with most 60 or 72 cell panels
- Single SKU 240V or 208V
- Allows for variable module placement
- Robust PLC communication protocol (>500 ft range)
- Self supply mode (zero-export)
- Supports up to 30A branch circuits
- Up to 20 panels possible on one branch circuit

Reliability, Safety, & Compliance

- NEMA 6 rated construction
- 25 year warranty
- AC branch circuits will not support arc faults
- Quick disconnect circuit to mitigate grid instabilities
- NEC 690.12(B)(2) rapid shutdown compliant
- CA Rule 21 (UL 1741-SA) compliant





CP-250E-60-72-208/240-MC4 Microinverter Specifications

INPUT DATA (DC)

Recommended input power (STC)	190 - 420 W
Maximum DC input voltage	60 V
MPPT voltage range	26 – 41 V
Operating range	24 – 51 V
Min./Max. start voltage	26 – 51 V
Max. DC input short circuit current	16 A
Max. DC input current	13.5 A
Ground fault protection	Transformer isolated 2000 Vrms input/output/chassis

OUTPUT DATA (AC)

	@ 208 V	@ 240 V
Max. continuous output power	277 W	289 W
Max. continuous output current	1.33 A	1.20 A
Nominal output voltage / range	208 / 183 – 229 V	240 / 211 – 264 V
Extended output voltage range	133 / 150 / 166 – 250 V	153 / 173 / 192 – 288 V
Nominal frequency* / range	60.0 / 59.3 – 60.5 Hz	60.0 / 59.3 – 60.5 Hz
Extended frequency range	54.22 – 66.75 Hz ¹	54.22 – 66.75 Hz ¹
Power factor	-0.6 to 0.6 programmable	-0.6 to 0.6 programmable
Maximum units per branch circuit	18 (30A 10 AWG)	20 (30A 10AWG)
Maximum output overcurrent protection	6.3 A Fuse; 12A peak for 30 uSec	6.3 A Fuse; 12A peak for 30 uSec

EFFICIENCY

CEC weighted efficiency	96 %
Peak inverter efficiency	96.6 %
Static MPPT efficiency (EN 50530)	99.5 % - 99.8 %
Night time power consumption	40 mW @ 208V, 80 mW @ 240 V

MECHANICAL DATA

Ambient temperature range	-40° C to +65° C
Dimension (W x H x D) including connectors	12" x 8" x 1.8"
Weight	1.55 kg (3.4 lbs)
Enclosure rating	NEMA 6

FEATURES

Communication	Mesh Networked Power Line (130.2 kHz carrier)
Monitoring	Monitoring via CP-100 gateway and Online Cloud
Certifications	UL1741, IEEE std 1547, IEEE std C62.41.2, CSA C22.2 NO. 107.1 CISPR 22 Class B; HECO Rule14H (Advanced Inverter), HECO Rule 22 (Self-Supply) Rule 21 / UL1741SA; Complies with NEC 690.12(B)(2) Rapid Shutdown Product Warranty 25 Years
Compatibility (Single SKU)	60 or 72 Cell Mono or Poly PV modules ¹ Supports 50Hz operating in extended mode range (45.2-55.7 Hz)