IDEAL POWER

idealpower.com

Ordering Part Number: 30B3-4xF

30 kW

Grid-Resilient 30 kW AC/DC Power Conversion System (PCS)

- *Transformerless Isolation*
- *Lightest Weight and Smallest Footprint on the Market*
- *Supports Global Standards*
  - *60 Hz*
  - *50 Hz*
  - *On-Grid/Grid Following*
  - *Off-Grid/Grid Forming*
- *Designed and Manufactured in the USA*

RECOVERY.GOV

TRANSFORMERLESS ISOLATION

The Ideal Power 30B3-4xF PCS utilizes our proprietary Power Packet Switching Architecture (PPSA) to efficiently transfer energy between its AC and DC power ports. PPSA provides port-to-port electrical isolation, eliminating the need for an external isolation transformer.

GRID-RESILIENT

Beyond the grid-tied functionality described above, the PCS is easily re-configured to support a wide variety of microgrid applications, making it ideal for free-standing off-grid power systems as well as grid-resilient applications in regions where grid quality or grid availability is often compromised.

LAUNCH PRODUCTS FASTER!

Our robust command/control interface is shared across our second generation PCS family, improving product flexibility while simplifying systems integration and code maintenance.

LIGHTEST WEIGHT AND SMALLEST FOOTPRINT ON THE MARKET

Our PCS wall-mounted enclosure weighs 125 pounds and is NEMA 3R rated.

WORKS GLOBALLY

The converter's nameplate rating of 30 kW supports 480 V_{AC}/60 Hz 3-phase North American grid standards, and both AC output voltage and AC output frequency are user programmable via the unit's Modbus interface.

For 400 V_{AC}/50 Hz 3-phase applications found outside of North America, the nominal nameplate rating is 25 kW.

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Specifications

30 kW

Bidirectional AC Power Port	
Maximum AC Power	30 kW at 480 V_{AC} 25 kW at 400 V_{AC}
Maximum AC Current	39 Amps
Voltage Range	Supports 480 V_{AC}, 400 V_{AC} and 380 V_{AC} grid standards
Frequency Range	Supports 60 Hz, 50 Hz, and 57.5 Hz (HECO) grid standards
Power Factor	> 0.97 at rated output power
Typical Efficiency	> 96%
Peak Efficiency	97%
Tare Losses	< 25 W
Current Harmonics	IEEE 1547 Compliant, < 4% THD at full power
Available Control Methods	Constant Power, Net Power
Off-Grid Mode	Voltage Forming / Load Following
Bidirectional DC Power Port	
Maximum DC Power	30 kW
Maximum DC Current	50 Amps
Absolute Max Voltage (V_{OC})	± 600 V_{DC} (1200 V_{DC})
Operating Voltage Range	±100 to ± 500 V_{DC} (200 to 1000 V_{DC})
Full Power Voltage Range	± 300 to ± 500 V_{DC} (600 to 1000 V_{DC})
Available Control Methods	Constant Power, Constant Current, MPPT (PV), Net Power
Wiring Configuration	4 Wire Bipolar with Integral GFDI Circuit
Maximum GFDI Current	1A: fused; trip point is programmable
Transient Overvoltage	Yes, MOV voltage clamps
Environmental	
Ambient Operating Temp	-25 to 40°C full power, reduced power > 40°C
Ambient Storage Temp	-40 to 70°C (non-operating)
Humidity	0 to 100% relative humidity
Cooling	Forced convection with redundant variable speed fans
Enclosure / Rating / Material	NEMA-3R / Powder-coated aluminum
Certifications	UL1741, IEEE1547
General	
Enclosure Size	23.5" W x 36.5" H x 10.75" D
Weight	125 lbs
Mounting	Wall Mount
Isolation Transformer	Not Required
Control Interface	RS-485 / Modbus RTU
Warranty	10 years

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