Conext Core XC-NA series central inverter

High availability and enhanced efficiency from a provider you can trust

The Conext™ Core XC-NA series line of central inverters are designed for high efficiency and superior performance in any environment. It is CSA Certified to UL1741 and CSA C22.2 no.107.1 to 1000VDC and comes with integral AC and DC switchgear which meets the requirements of NEC 690.17. In addition, the Conext Core XC-NA comes with an optional integrated NEC 2014 compliant DC combiner with disconnects for ease of servicing the equipment. A next generation ground fault detection system in the XC-NA helps reduce the hazards from PV array blind spots.

The configurable firmware is compliant with tough grid requirements such as HECO, PREPA and CEC rule 21 and comes with a full suite of grid support functions for changing utility requirements. The Conext Core XC-NA is NEMA type 3R rated for outdoor applications and can be provided as part of a skid-mounted (PV Skid) solution.

Why choose Conext Core XC-NA?

True bankability

- Warranty from a trusted partner with 180 years of experience
- World leader in industrial power drives, UPS and electrical distribution
- Strong service infrastructure worldwide to support your global needs

Higher return on investment

- Best in class efficiency: 98.8% peak and 97.5% CEC
- Wide range of full power operation from -20°C to 50°C, with -35°C option
- Static and dynamic MPPT efficiency over 99.9% (Tested to EN50530)
- Increased uptime due to high reliability and comprehensive service network

Designed for reliability

- Designed for 20+years of power production
- Undergone extensive safety, quality and reliability risk mitigation
- Robust design through rigorous custom reliability and environmental testing

Flexible

- UL1741 listed to 1000 VDC
- Compliant to tough grid codes such as HECO, PREPA, CEC rule 21
- Full grid management features including
  - Voltage/frequency high and low ride through
  - Reactive current support
  - VAR Control 0-1 lagging to leading
  - VARs at night
  - Frequency-based active power control
- Configurable firmware to allow for easy adjustments to changing utility requirements

Easy to service

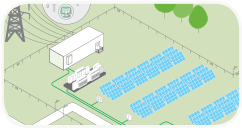
- Integrated AC and DC switchgear using Masterpact NW (AC circuit breaker, DC switch) which meet the requirements of NEC 690.17
- Optional disconnect switches in the recombiner to allow for easier service of fuses as per NEC 2014
- Pre-connection insulation detection with GFDI helps reduce hazards from PV array blind spots
- Suite of alarms and troubleshooting tools allow for remote diagnostics

Easy to install

- NEMA Type 3R rated for outdoor installations
- Integrated DC Recombiner with 200 A to 400 A fuse options, optional string monitoring, and optional NEC 690.16(b) compliant disconnects

PV Skid solution with XC-NA inverters

Product applications



PV power plants centralized

Device short name	XC 540-NA	XC 630-NA	XC 680-NA	XC 733-NA
Electrical specifications				
Input (DC)				
Input voltage range, MPPT	440 - 800 V (at PF=1)	510 - 800 V (at PF=1)	550 - 800 V (at PF=1)	591 - 800 V (at PF=1)
Input voltage range, operating	440 - 885 V	510 - 885 V	550 - 885 V	591 - 885 V
Static and dynamic MPPT accuracy	>99.9%; 5% to 100% of nominal power; Entire MPP (maximum power point) range; PV generator Fill Factor from 60-80%	>99.9%; 5% to 100% of nominal power; Entire MPP (maximum power point) range; PV generator Fill Factor from 60-80%	>99.9%; 5% to 100% of nominal power; Entire MPP (maximum power point) range; PV generator Fill Factor from 60-80%	>99.9%; 5% to 100% of nominal power Entire MPP (maximum power point) range; PV generator Fill Factor from 60-80%
Max. input voltage, open circuit	1000 V	1000 V	1000 V	1000 V
Max. input current	1280 A	1280 A	1280 A	1280 A
Max. input short circuit current at STC	1600 A	1600 A	1600 A	1600 A
Max. input short circuit current under any condition	2000 A	2000 A	2000 A	2000 A
Output (AC)				
Nominal output power	540 kVA	630 kVA	680kVA	733kVA
Power factor settable range (Ppf dispatch)	0.8 to 1 leading and lagging	0.8 to 1 leading and lagging	0.8 to 1 leading and lagging	0.8 to 1 leading and lagging
Power factor range (PQ dispatch):	0 to 1 leading and lagging	0 to 1 leading and lagging	0 to 1 leading and lagging	0 to 1 leading and lagging
Real power	540 kW (at PF=1)	630 kW (at PF=1)	680 kW (at PF=1)	733 kW (at PF=1)
Reactive power range	+/- 540kVAR	+/- 630kVAR	+/- 680kVAR	+/- 733kVAR
Output voltage	300 V	350 V	380 V	407 V
Frequency	60 Hz	60 Hz	60 Hz	60 Hz
Nominal output current	1040 A	1040 A	1040 A	1040 A
Harmonic distortion (THDi)	< 3% at rated power	< 3% at rated power	< 3% at rated power	< 3% at rated power
Efficiency				
Maximum	98.4%	98.5%	98.7%	98.8%
CEC	97.0%	97.5%	97.5%	97.5%
General specifications				
Power consumption, night time	< 210 W	< 210 W	< 210 W	< 210 W
Degree of protection	Enclosure type 3R, suitable for use in class 4S2 according to IEC 60721-3-4			
Enclosure material	Steel with 3 layer coating (zinc primer, epoxy powder coat, polyester powder coat)			
Seismic	IEEE-693-2005 Moderate performance level*, IBC certification ICC-ES AC156-2012**			
Product weight (includes DC recombiner)	2240.0 kg (4938.0 lb)			
Product Dimensions (Inverter)	227.3 X 240.7 X 85.4 cm			
Product Dimensions (Fuse recombiner)	227.3 X 80.8 X 67.9cm			
Product Dimensions (Fused disconnect recombiner)	227 X 170.4 X 67.9cm			
Ambient air temperature for operation	-20°C to 50°C (-4°F to 122°F) full power. Power derating to 55°C (low temperature option to -35°C)*			
Operating altitude	1000m, derating up to 2000m			
Relative humidity	0 to 100% condensing			
Features and options				
Type of cooling	Forced convection cooling			
Display type	LCD multifunction removable display standard			
Communication interface	RS485/Modbus standard, Modbus over TCP/IP optional			
AC/DC disconnect	Load break rated DC disconnect and AC circuit breaker standard - meets the requirements of NEC 690.17			
Ground fault detection/ interruption	Pre-connection isolation monitoring relay with GFDI (negative or positive grounding), or isolation monitor (floating configuration)			
Sub-array recombiner	Integrated sub-array recombiner - up to 10 strings with fuse sizes from 200 A to 400 A, optional string monitoring, optional disconnects			
Regulatory approvals				
Conext Core XC-NA Series is certified to the requirements of: UL1741 (including IEEE 1547) and CSA-C22.2 no.107.1 / PREPA ATR / HECO				

Specifications are subject to change without notice. Any other power levels or configurations need to be certified with CSA.
*Please refer to product manuals for additional details.
*ZPA=0.5g 2% damping.
**Seismic demand spectrum (SDS) of 1.78g 5% damping z/h=0 Ip=1.5.

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