

# Conext™ Core XC-NA ES

Central inverters for grid-tie Energy Storage systems (ESS). Flexibility and high availability from a provider you can trust.



## Product at a glance

The Conext Core XC-NA ES central inverter series is designed for advanced battery-based Energy Storage applications. The Conext Core XC-NA ES Series has peak efficiencies of 98.6% and its flexibility allows the inverter to be configured with voltage and power outputs up to 680 kVA. The series has been designed for integration into a battery-based Energy Storage solution. The Conext Core XC-NA ES has a type 3R rated enclosure for outdoor applications and can be provided as part of a skid-mounted (ES Skid) solution.

### 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 with 98.6% peak, 98% CEC
- Increased uptime due to high reliability and comprehensive global service network
- Wide range of full power operation from -20°C to 50°C, with -35°C option

### Designed for reliability

- Robust design through rigorous Custom Reliability Testing

### Flexible

- Primary reserve functions: inertia emulation, P(f) drooping, Q(V) drooping
- Secondary and tertiary reserve functions: PQ/PV dispatch mode, fast and accurate response to utility dispatch commands
- Grid support functions: (e.g. frequency regulation) renewable power smoothing, dP/dt slew rate control, energy shifting
- Active support in clearing grid fault conditions: LVRT, HVRT, FRT
- Compatible operation with most types of battery chemistries

### Easy to service

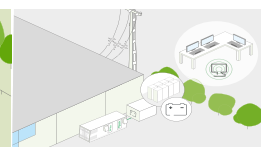
- Integrated switchgear using Masterpact NW air circuit breakers
- Full suite of alarms and troubleshooting tools allow for remote diagnostics

## Product applications



Ancillary Services

Renewable Energy Shifting and/or Smoothing



End User Energy Optimization and MicroGrids



Diesel Offset

Device short name	XC 540-NA ES	XC 630-NA ES	XC 680-NA ES
<b>Electrical specifications</b>			
Number of output phases	3	3	3
Nominal phase-to-phase AC voltage (VAC)	300 Vrms	350 Vrms	380 Vrms
Max. AC output current	1040 Arms	1040 Arms	1040 Arms
Nominal AC frequency (f)	60 Hz	60 Hz	60 Hz
Reactive power range (Q)	+/- 540 kVAr	+/- 630 kVAr	+/- 680 kVAr
Power factor range (PQ dispatch)	0 to 1 (leading and lagging)	0 to 1 (leading and lagging)	0 to 1 (leading and lagging)
AC output current distortion @ rated power	<3% THD (total harmonic distortion)	<3% THD (total harmonic distortion)	<3% THD (total harmonic distortion)
Output power (S)	540 kVA	630 kVA	680 kVA
Max. DC operating current	1280 A	1280 A	1280 A
DC operating voltage range	440 <sup>1</sup> to 850 V	510 <sup>1</sup> to 850 V	550 <sup>1</sup> to 850 V
Max. battery prospective short circuit element	65 kA	65 kA	65 kA
Battery current ripple factor	<1%	<1%	<1%
Transient time for mode reversal (sinking/sourcing)	<5 ms	<5 ms	<5 ms
<b>Efficiency</b>			
Maximum	98.2%	98.5%	98.6%
CEC method	97.5%	98.0%	98.0%
Rectifying (full load)	>97.5%	>97.5%	>97.5%
<b>General specifications</b>			
Standby loss	< 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 <sup>2</sup> , IB certification ICC-ES AC156-2012 <sup>3</sup>		
Product weight	1940 kg (4277 lbs)		
Product dimensions (H x W x D)	2407 mm W x 2273 mm H x 854 mm D (94¾ in. W x 89½ in. H x 33¾ in. D)		
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	1000 m, derating for higher altitudes		
Relative humidity	0 to 100% condensing		
<b>Features and options</b>			
Type of cooling	Forced convection cooling		
Display type	LCD multifunction removable display standard		
Communication interface	RS485/Modbus standard		
AC/DC disconnect	Load break rated DC disconnect and AC circuit breaker standard		
Ground fault detection/interruption	Optional isolation monitoring relay		
Battery combiner	Optional external combiners with various fuse quantities and trip ratings		
<b>Regulatory approvals</b>			
	UL1741 (including IEEE 1547) and CSA-C22.2 no. 107.1		
<p>Specifications are subject to change without notice. Other input voltage windows and power outputs available.</p> <p><sup>1</sup>Valid for power factor = 1 (Q = 0). Low limit of DC range is dynamically adjustable based on nominal phase-to-phase AC voltage based on: <math>V_{dc\ min} = 15 V + \sqrt{2} \times (VAC [V]) \times 2 + 3 \times f [Hz] \times Q [kVAR]</math> if <math>Q &gt; 0</math> and <math>V_{dc\ min} = 15 V + \sqrt{2} \times (VAC [V]) \times 2 + 1 \times f [Hz] \times Q [kVAR]</math> if <math>Q &lt; 0</math>.</p> <p><sup>2</sup>ZPA= 0.5g 2% damping.</p> <p><sup>3</sup>Seismic demand spectrum (SDS) of 1.78g 5% damping <math>z/h=0</math> <math>I_p=1.5</math>.</p>			

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Life Is On

