

Cloud-connected solution for utility-scale renewable power

Conext SmartGen™ Power System

Global power conversion system for the next generation of PV and Energy Storage power plants connected to smart grids.



Solution at a glance

Introducing the Conext SmartGen™ Power System. A cloud-connected solution for utility scale renewable power with unmatched reliability, lower total cost of ownership and faster return on investment.

Key benefits:

- **Intelligent:** Advanced remote diagnostics to minimize downtime and lower service costs
- **Adaptable:** Ready for worldwide deployment; complies with local grid code requirements and your project needs
- **Longer service life:** Designed to withstand harsh environments with a 30 year service life, and created under the True Design for Service™ principles
- **Configurable:** Customized to order, delivered as an easy to assemble kit for simplified logistics or as a factory integrated skid to limit on-site labor
- **Proven and trusted worldwide:** Quality control and commissioning checks leveraging extensive experience in utility scale power conversion stations.

Solar power has entered a new era

As power and communication technologies evolved, we saw the potential for power equipment and control systems to communicate, and for intelligent systems enable remote diagnostics and data analytics.



The Conext SmartGen Power System is a medium voltage power conversion substation delivering up to 4.8 MVA of solar power. It features two Conext SmartGen inverters, medium voltage transformer(s) and protection equipment. Cloud-connection and data collection enable remote diagnostics and servicing, as well as predictive maintenance.

Product specifications

Conext SmartGen Power System

Device short name	North American Power System	IEC Power System
Electrical specifications		
AC Output		
Nominal output power	Up to 4400kVA	Up to 4400kVA
Rated voltage	Up to 38 kV (consult us for higher voltage)	Up to 36 kV (consult us for higher voltage)
Nominal frequency	60 Hz	50/60 Hz
DC Input		
Max. input voltage, open circuit	1500 V	1500 V
Number of inputs PV	Up to 2 x 14 x 400A	Up to 2 x 14 x 400A
General specifications		
Length	37 feet ⁽¹⁾	14 meters ⁽¹⁾
Width	10 feet 6 inches ⁽¹⁾	2.28 meters ⁽¹⁾
Height	7.5 feet above the slab ⁽¹⁾	2.66 meters above the slab ⁽¹⁾
Weight (metric tons)	< 17 (Kit), <33 (Skid)	< 18.5 (Kit)
External operating conditions		
Temperature		
Standard temperature range	-25°C to +60°C (consult us for lower temperature limits)	-25°C to +60°C (consult us for lower temperature limits)
Other conditions		
Max. relative humidity	5% to 100% condensing	5% to 100% condensing
Max. altitude above sea level	2000 meters without derating, up to 4000 meters with derating	2000 meters without derating, up to 4000 meters with derating
Max. wind speed	150mph	50m/s, 66m/s (optional)
Max. snow load	0.35 lb/in ²	250kg/m ²
Main electrical components		
Inverter		
Type	1 or 2 Conext SmartGen	1 or 2 Conext SmartGen
Type	CS1666, CS1800, CS2000, CS2200, CS2400	CS1800, CS2000, CS2200, CS2400
Transformer		
Type	1 LV/MV Schneider Electric transformer	1 or 2 LV/MV Schneider Electric transformer(s)
Type	Oil immersed, hermetically sealed, padmounted	Oil immersed, hermetically sealed
Main standards	IEEE C57.12 series	IEC 60076 series, EN 50588 in the European Union
Cooling	ONAN	ONAN
Vector group	Dy11 (consult us for other)	Dy11 (consult us for other)
Oil containment tank	Optional	Optional
MV protection		
Type	Fuses and disconnect switch integrated in the transformer	1 MV Switchgear
Type	--	Gas insulated switchgear
Main standards	--	IEC 62271 series
Possible configurations	--	2 functions (circuit breaker + incoming/outgoing connection)
Possible configurations	--	3 functions (switch - circuit breaker - switch)
Protection relay	--	Schneider Electric VIP410
Circuit Breaker Motorization & Automatic Progressive Reconnection	--	Optional
Main options		
	Lighting	Lighting
	Auxiliary power supply	Auxiliary power supply
	Auxiliary power supply for trackers	Auxiliary power supply for trackers
Regulatory approval		
Electrical standards	NEC 2014	--
Internal arc classification (acc. to IEC62271-202)	--	IAC-A (20kA 1s)
Seism	Up to UBC Seismic Zone 4 / IEEE 693-2005 (high level optional)	

¹Typical, may vary depending on configuration