

# Equinox 500kW & 630kW UL

PV Inverters

EQX0500UV320XN/P  
EQX0630UV360XN/P

**Peak Efficiency of 98.7%**  
**Next Generation Modular Design**  
**Wide Thermal Operating Range**

## Streamline Design

With all components encased in a single enclosure. Equinox PV inverters are easy to install, operate and maintain.

## Advanced Utility-Ready Features

- Remote control of real and reactive power
- Low-voltage ride through
- Power factor control
- Simplified grid interconnection
- Fast communication
- Easily integrated into SCADA systems through standardized communication interfaces

## Rugged Design

- Wide thermal operating range: -22°F to +122°F (-30°C to +50°C)
- Support for external temperatures as low as -40°F with optional Winter climate package
- Designed for optimal performance in Desert, Topical and Winter climates

## Industrial-Grade Engineering

- Fully outdoor rated solution (no concrete station required)
- IP54 enclosure for maximum protection and longevity
- Double wall enclosure eliminates external air circulation from inside inverter
- Solar shields attached to exterior of enclosure dissipate solar radiation, reduce heat buildup



## Profitable PV Power

The Satcon® Equinox™ inverter has a significant impact on the profitability dynamic of large-scale solar power systems. With its system intelligence, next-generation MPPT technology, and industrial-grade engineering, the Equinox inverter maximizes system uptime and power production, even in the harshest environments.

## Rugged Design

Equinox features a IP54 enclosure, ensuring protection and longevity. It features a wide thermal operating range from -22° F to +122° F. With the optional Winter climate package, it supports temperatures as low as -40° F with an optional heater.

## Industrial-Grade Engineering

As a fully outdoor rated solution, Equinox does not require an external climate controlled enclosure or concrete station, reducing both cost and space requirements. Equinox's double wall enclosure cooling system eliminates the need for external air circulation inside the inverter, reducing contaminants and improving cooling performance.

## Increased PV Plant Yield

Equinox, Satcon's next-generation inverter design, features best-in-class peak efficiency of 98.7% to provide you with the highest levels of system performance and uptime.

## Advanced Utility-Ready Features

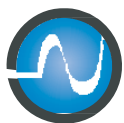
Equinox's advanced utility-ready features enable remote control of real and reactive power, low-voltage ride through and power factor control. Equinox provides for simplified grid interconnection and supports fast communications, allowing it to be easily integrated into SCADA systems through standardized communication interfaces.

## Commercial and Utility-Scale

Many of the world's largest solar power installations depend on Satcon Equinox PV inverters to provide efficient and stable power—even in the harshest climates.

## Proven Performance

The proven leader in solar inverter solutions for commercial installations, Satcon sets the standards for efficient large-scale power conversion



**Satcon**<sup>®</sup>  
Utility-Ready Solar Inverters

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## Streamlined Design

With all components encased in a single enclosure, Equinox is easy to install, operate and maintain.

## Outdoor Construction

- Rugged cabinet for all environments
- Dual cooling fans

## Easy Maintenance

- Modular components make service efficient
- Convenient access to all components
- Customizable large in-floor cable gland plates make installation of DC and AC cables easy
- Integrated DC disconnect switch isolates the inverter, with the exception of the GFDI (Ground Fault Detection and Interruption) circuit, from the photovoltaic power system to allow inspection and maintenance

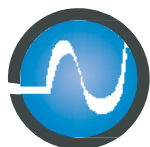
## Proven Reliability

Rugged and reliable, Equinox PV inverters are engineered from the ground up to meet the demands of large-scale installations.

## Safety

- Built-in DC disconnect & AC breaker

Specifications	500 kW	630 kW
<b>Input Parameters</b>		
Input Voltage Range	500-850 VDC	585-850 VDC
Maximum Array Input Voltage	1000 VDC	1000 VDC
Maximum Operating Input Current <sup>1</sup>	1100 ADC	1185 ADC
PV Array Configuration	Negative/ Positive	Negative/ Positive
<b>DC Input Combiner</b>		
Combiner Bus Bar Input	10	10
Number of Inputs and Fuses	10 x 200A	10 x 200A
<b>Transformer</b>		
Integrated Transformer	No	No
<b>Efficiency</b>		
Maximum	98.7%	98.7%
CEC Efficiency	98.5%	98.5%
<b>Output Parameters</b>		
Nominal Power	500 kW	630 kW
Nominal Output Voltage	320 VAC	360 VAC
Output Voltage Range, [-12%/10%]	281-352 VAC	316-396 VAC
Maximum Continuous Output Current / Phase	902 A	1010 A
Standby Consumption (tare losses including control power and aux. )	<100 W	<100 W
Nominal Output Frequency, 3-Phase	60 Hz	60 Hz
Maximum Harmonic Distortion	< 3% THD	< 3% THD
Power Factor, Full Load	> 99%	> 99%
Dynamic Power Factor Control	+/- 0.8	+/- 0.8
Power Curtailment	0-100%, 1% step	0-100%, 1% step
<b>Environment</b>		
Operating Temp Range (Nominal Power)	-30°C ~ +50°C	-30°C ~ +50°C
Storage Temperature Range	-30°C ~ +70°C	-30°C ~ +70°C
Cooling	Forced Air	Forced Air
Noise Level (Distance of 3m)	< 65 dB(A)	< 65 dB(A)
Relative Humidity (Non-Condensing)	Up to 95%	Up to 95%
Elevation (Maximum) <sup>2</sup>	4,000 m	4,000 m



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Specifications	500 kW	630 kW
<b>Enclosure</b>		
Dimensions (H x W x D)	2103mm x 2778mm x 945mm	2103mm x 2778mm x 945mm
Weight <sup>3</sup>	1870 kg	1870 kg
Finish	RAL 7035	RAL 7035
Hood and Base Trim Finish	RAL 5001	RAL 5001
Protection Rating	NEMA 3R / IP54 (Outdoor Rating)	NEMA 3R / IP54 (Outdoor Rating)
<b>Warranty and Services</b>		
Five Year Warranty	Standard	
Extended Warranty (1 and 5 year warranty)	Optional	
Preventive Maintenance Agreement	Optional	
<b>Communication Interface</b>		
Modbus RS485	Standard	
Modbus TCP/IP	Optional	
<b>Monitoring</b>		
PV Zone	Optional	
Third Party Compatibility	Standard	
<b>Regulations and Standards Conformity</b>		
UL1741, CSA C22.2 No 107.1-01, IEEE1547, IEEE1547.1	Standard	
IEEE C62.41.2, IEEE C62.45	Standard	
IEEE C37.90.1, IEEE C37.90.2	Standard	
FCC Part 15 Class A	Standard	

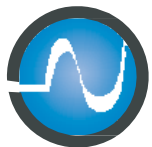
1. Calculated at nominal power and minimum DC voltage
2. Operation above 3,281ft.(1,000m) results in a decrease in the maximum ambient temperature for full power operation. For each additional 3,281ft (1,000m) in elevation, there is approximately a +4.5°F (+2.5°C) decrease in the maximum ambient temperature for full power operation.
3. Dependent on the options selected.

Note: All specifications are subject to change.

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