

Equinox 500 kW CE

EQX-500-CE

Peak Efficiency of 98,5%

Next-Generation Modular Design

Wide Thermal Operating Range

Streamlined 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 communications
- Easily integrated into SCADA systems through standardized communication interfaces

Rugged Design

- Wide thermal operating range: -20° C to +50° C
- Support for external temperatures as low as -40° C with optional Winter climate package
- Designed for optimal performance in Desert, Tropical and Winter climates

Industrial-Grade Engineering

- Fully outdoor rated solution (no E-House 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™ 500 kW PV inverter has a significant impact on the profitability dynamic of large-scale solar power systems. With its system intelligence, next-generation EDGE™ MPPT technology, and industrial-grade engineering, the Equinox 500 kW 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 -20° C to +50° C. With the optional Winter climate package, it supports temperatures as low as -40° C 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 98,5% to provide you with the highest levels of system performance and uptime.

Advanced Utility-Ready Features

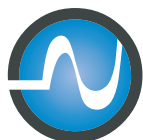
Equinox's advanced utility-ready features enable remote control of real and reactive power, low-voltage ride through and power factor control. Equinox provides for simplified grid interconnection and supports fast communications, allowing it to be easily integrated into SCADA systems through standardized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

Utility-Ready Solar Inverters

Equinox 500 kW CE

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
- Redundant 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 two-pole 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

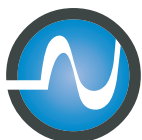
Proven Reliability

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

Safety

- Built in DC disconnect Switch and AC Breaker
- Protective covers over exposed power connections

Equinox 500 kW Specification		CE
Input Parameters		
Input Voltage Range		420-850 VDC
Maximum Array Input Voltage		900 VDC
Maximum Operating Input Current ¹		1288 ADC
PV Array Configuration	Floating	•
	Negative Ground	•
	Positive Ground	•
DC Input Combiner Options		
Combiner Bus Bar Inputs	•	24
Number of Inputs and Fuses	○	24 x 100A
	○	20 x 100A
	○	18 x 125A
	○	16 x 160A
	○	12 x 200A
	○	9 x 250A
	○	8 x 315A
	○	6 x 400A
Transformer		
Integrated Transformer		No
Efficiency		
Maximum ²		98,5%
European – Eta		97,5%
Output Parameters		
Nominal Power		500 kW
Nominal Output Voltage		265 VAC
Output Voltage Range, [-12%/10%]		233-292 VAC
Maximum Output Current/Phase		1090 A
Standby Consumptions (tare losses including control power and aux.)		160 W
Nominal Output Frequency, 3-Phase		50 Hz
Maximum Harmonic Distortion		<3% THD
Power Factor, Full Load		>99%
Dynamic Power Factor Control		+/- 0,8
Power Curtailment		0-100%, 1% steps
Environment		
Operating Temperature Range (Nominal Power)		-20° C to +50° C
Storage Temperature Range		-30° C to +70° C
Cooling		Forced Air
Elevation (Maximum) ³		4000 m
Noise Level (Distance of 3 m)		<65 dB(A)
Relative Humidity (Non-Condensing)		up to 95%
Maximum Altitude without Derating		4000 m



Satcon[®]

Utility-Ready Solar Inverters

Equinox 500 kW Specification	CE
Enclosure	
Dimensions (H x W x D)	211 x 452 ⁴ x 84 cm
Weight ⁵	3090 kg
Finish	RAL 7035
Hood and Base Trim Finish	RAL 5001
Protection Rating	IP54
Warranty and Services	
Five Year Warranty	•
Extended Warranty (1 and 5 year increments)	○
Preventative Maintenance Agreement	○
Uptime Guarantee ⁶	○
Design Services	○
APEX Project Management	○
Communication Interface	
Modbus RS485	•
Modbus TCP/IP	•
Monitoring	
PV View Plus	○
PV Zone	○
Third-Party Compatibility	•
Regulations and Standards Conformity	
CE mark, VDE mark, Low Voltage Directive 2006/95/EC, EMC Directive 2004/108/EC, EN 62116, EN 62093, IEC62109-1	• (EMC for Floating Only)
Advanced Grid Support (Incl. LVRT/BDEW) Option ⁷	○*
RD 1663/2000	•
ENEL Connection Guidelines	•*

- Standard / Standard Option
- Optional

* Preliminary data.

¹ Calculated at nominal power and minimum DC voltage.

² Calculated with auxiliary power.

³ Operation above 1000 m results in a decrease in the maximum ambient temperature for full power operation. For each additional 1000 m in elevation, there is approximately a 2.5° C decrease in the maximum ambient temperature for full power operation.

⁴ 507 cm when using some combiner fuse kits. Information available upon request.

⁵ Dependent on options selected.

⁶ Requires Preventative Maintenance Agreement.

⁷ LVRT Enabled Through EDGE ACA™

NOTE: All specifications are subject to change.

EDGE ACA™ Features:

- LVRT: More rugged PLL enables ride through to 0.0 VAC. Meets a multitude of LVRT profiles including BDEW 2008
- Power Factor Control
- Automatic power ramp rates
- Frequency response/regulation
- Automated voltage control/VAR injection
- Frequency Ride Through
- Automatic Voltage Regulation at POI with site controller
- Power Curtailment
- Communication flexibility via Fiber Optics, RS-485, RS-232, CAN BUS, and built in Ethernet hardware
- Scalability to meet growing grid support requirements via SD flash drive and abundant I/O ports
- Proprietary PWM building block allows advanced switching algorithms for power quality control

Energy Equity Protection (EEP)

Satcon provides a wide range of optional value-added services to protect your investment across the entire lifecycle of your project.

Design Services

Satcon's Design Services organization can guide you through all phases of project development using our broad experience and engineering skills.

Warranty and Services

- Help desk
- Training programs
- Support services
- Extended warranty
- Preventative maintenance plans
- 99% Uptime Guarantee

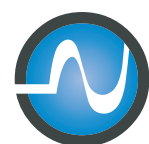
Equinox Options

- Satcon Smart Subcombiners: Intelligent string monitoring
- Fused input combiners
- Satcon communication card: CCM Gateway
- Weather station
- PV View Plus monitoring system
- PV Zone

www.Satcon.com

Please visit Satcon's Resource Library for additional tools and product information, including:

- Satcon's product configurator
- Satcon's string sizing calculator
- Training and support resources:
 - On-demand video training
 - Articles, white papers and case studies



Satcon[®]
Utility-Ready Solar Inverters