

Equinox 50kW Hybrid



The World Leader in Large Scale Solar Solutions

Built on the industry's most tested and proven commercial and utility scale inverter technology platform, Satcon's Equinox hybrid inverter is a bi-directional, 50kW, solar/battery-integrated solution.

Offering a wide input voltage range, the Equinox innovative design can be configured for a variety of on or off-grid and energy storage applications including:

- Micro-grids for dedicated loads
- Grid stabilization
- Reduction of diesel gen-set run time
- Back-up power system

Advanced Utility-Ready Features

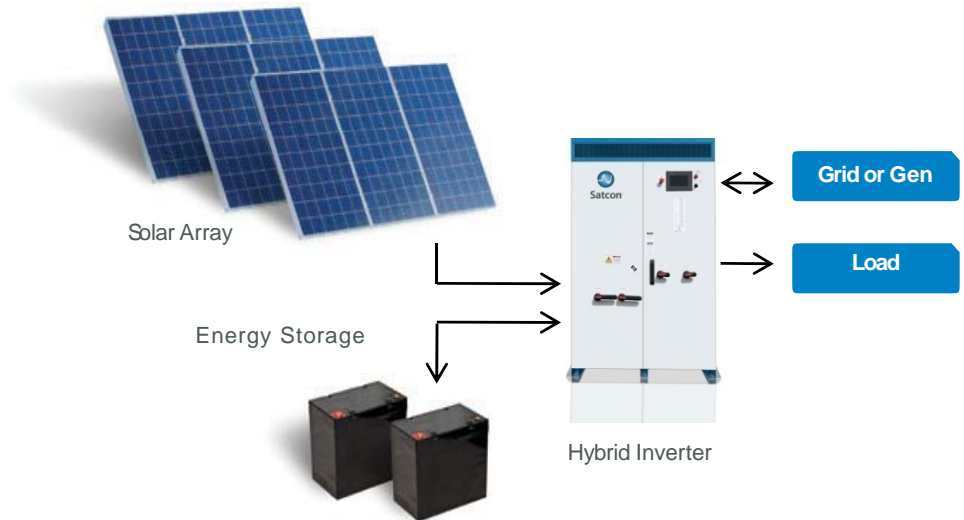
- Remote control of real and reactive power
- Simplified grid interconnection
- Auto switching between on/off-grid modes.
- Provides complete grid management features, including LVRT, HVRT, LFRT, HFRT, etc.
- Supports various energy management modes and customization of specific functions.
- Equipped with intelligent loading regulation function.

Edge MPPT

- Provides rapid and accurate control that boosts PV plant kilowatt yield.
- Provides a wide range of operation across all photovoltaic cell technologies.

Rugged Design

- Wide thermal operating range: -22°F to +140°F (-30°C to +60°C)
- PCBA conformal coated to withstand extreme humidity and air-pollution levels



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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

Output Transformer

- Provides galvanic isolation
- Matches the output voltage of the PV inverter to the grid

Safety

- Built-in DC disconnect and AC breaker
- Built-in isolation transformer

Proven Reliability

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

Equinox 50kW Hybrid Specifications	50kW
PV Input Parameters	
Nominal Power	58 kW
MPPT Voltage Range	330 – 850 VDC
Maximum Array Input Voltage	1000 VDC
Maximum Operating Input Current	175 ADC
Number of independent MPP inputs	1
BAT Input Parameters	
Nominal Power	58 kW
Nominal Battery Voltage	300 VDC
Battery Voltage Range	96 – 750 VDC
Maximum Operating Input Current	200 ADC
Battery Type	Lead-acid Batteries, Lithium Batteries, Flow Batteries, Gel Batteries, etc
Transformer	
Integrated Transformer	Yes
Grid-Tied AC Parameters	
Nominal Power	50 kW
Nominal Grid Voltage	480 V
Grid Voltage Range	422 – 528 V
Nominal Output Current / Phase	60 A
Maximum Output Current / Phase	66 A
Nominal Grid Frequency, 3-Phase	60 Hz
Total Harmonic Distortion (THDi)	< 3%
Power Factor , Full Load	> 99%
Dynamic Power Factor Control	+/- 0.8
Overload	110%
Off-Grid AC Parameters	
Nominal Apparent Power	50 kVA
Nominal Output Voltage	480 V
Nominal Output Current / Phase	60 A
Maximum Output Current / Phase	66 A
Nominal Output Frequency, 3-Phase	60 Hz
Voltage Accuracy	+/- 3%
Frequency Accuracy	+/- 0.5 Hz
Total Harmonic Distortion (THDv)	Linear Load < 3%; Non-linear load < 5%



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Equinox 50kW Hybrid Specifications	50kW
Crest Factor	3:1
Power Factor	+/- 0.7
Overload	120%, 60S 150%, 30S
Wiring	3P4W
Standby Consumptions	< 100W
Efficiency	
PV Maximum Efficiency	95.5%
BAT Maximum Efficiency	94.5%
Environment	
Operating Temperature Range	-30°C to +60°C
Storage Temperature Range	-30°C to +70°C
Cooling	Forced Air
Noise Level (Distance of 3m)	<65 dB(A)
Relative Humidity (Non-condensing)	Up to 95%
Maximum Altitude without Derating	4000m
Enclosure	
Dimensions (WxHxD)	1370mm x 2140mm x 675mm
Weight	650 kg
Finish (Hood & Base)	RAL 5001
Finish (Body)	RAL 7035
Protective Rating	NEMA 3R / IP54
Warranty & Services	
Five Years Warranty	Standard
Communication Interface	
Modbus RS485	Standard
Modbus TCP/IP	Option

Note: All specifications are subject to change.

Warranty & Services

- Training programs
- Support services
- Extended warranty
- Preventive maintenance plans

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