



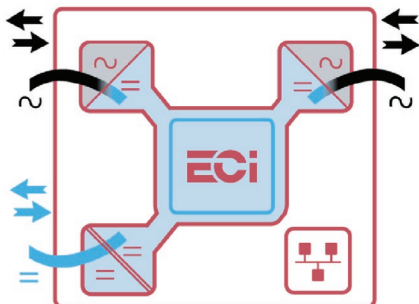
MULTIDIRECTIONAL POWER CONVERTER SIERRA 10 48/230

CNVCETSIERRA10

TECHNOLOGY

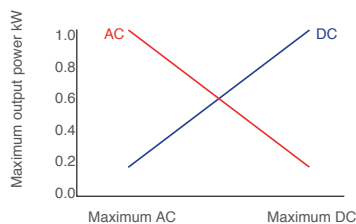
Sierra is the world's first fully bidirectional power converter. The three ports (two AC and one DC) built into each module can all function as input and output. This means that you can use it to secure AC & DC loads and charge batteries at the same time.

Sierra is also the right choice for energy management applications such as grid reinjection, peak shavings, phase balancing or innovative solutions based on energy sharing via a DC distribution.



HOW IT WORKS?

At the heart of each module, there is a DC energy buffer. It uses the energy that comes, whatever its source, to feed what needs it. The total output power is shared live between the loads and the batteries. It's that simple! No configuration is required, you are totally autonomous



The total output power per module is 1.2 kW, limited to 1 kW for each AC or DC port.



ECI
technology inside

VERSIONS

Sierra 10 - 48/230 is also available in a Subrack System to provide up to 6 kW in just 1U high or 4.8 kW with built-in monitoring.



For larger loads, use the Sierra 25 - 48/230.

KEY FEATURES

- Secure AC & DC loads
- Modular (1.2 kW to 38 kW)
- Highest power density
- Hot-swappable capacity
- Compact, easy to install and operate
- User-friendly monitoring

MULTIDIRECTIONAL POWER CONVERTER SIERRA 10 48/230



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SPECIFICATIONS	1,2 kVA/kW / 1kW
General	
Cooling / Audible noise	Fan forced cooling / <65db @1meter
MTBF	200 000 hrs (MIL-217IF)
Dielectric strength DC/AC	4300 Vdc
RoHS	Compliant
Operating T° / Relative Humidity (RH) non-condensing	Tested according ETS300-019-2-3 Class 3.1 -20°C to 65°C, power de-rating from 40°C to 65°C / Max RH 95% for 96 hours per year
Storage T° / Relative Humidity (RH) non-condensing	Tested according ETS300-019-2-1 Class 1.2 -40°C to 70°C / Max RH 95% for 96 hours per year
Power	
AC Input Data	
Nominal voltage (AC) / Current	230 Vac / 4.6 A
Voltage range (AC)	150 - 265 Vac
Brownout	800 W @ 150 Vac / 1200 W @ 190 Vac linear decreasing
Power factor / THD	> 99% / < 3%
Frequency range (selectable) / synchronization range	50 Hz (range 47 – 53 Hz) / 60 Hz (range 57 – 63 Hz)
DC Input Data	
DC voltage: Nominal / range	48 Vdc / (40-60V) ¹
Nominal current (at 48 Vdc and 1000 W output)	22.4 A
Maximum input current (for 15 second) / voltage ripple	34 A / < 10 mV RMS
AC Output Data	
Efficiency AC to AC (EPC) / DC to AC / AC to DC	96% / >93% / >93%
Nominal voltage AC ² (Adjustable)	230 V (200 - 240 Vac)
Frequency / frequency accuracy	50 or 60 Hz / 0.03%
Nominal Output power (VA) / (W)	1.25 kVA / 1 kW (at 1000 W AC load, still 200 W are available for 48V DC output)
Short time overload capacity	150% (15 seconds)
Admissible load power factor	Full power rating from 0 inductive to 0 capacitive
Total harmonic distortion (resistive load)	< 3%
Load impact recovery time (10% - 90%)	≤0.4 ms
Nominal current	5.4 A @ 230 Vac
Crest factor at nominal power	3 : 1 for load P.F. ≤0.7
Short circuit clear up capacity 0-20 ms	20.3 A
Short circuit current after 20 ms	9.9 A (20 ms to 15 s) , 7.4 A (15 s to 60 s) , > 60 s - manual reset is required
AC output voltage stability	±1% from 10% to 100% load
DC Output Data	
Nominal voltage (range)	53.5 Vdc (44 - 60 Vdc)
Maximum current at 48 Vdc	20.8 A
Reverse polarity protection	YES
Max. Voltage interruption / total transient voltage duration (max)	0 sec / 0 sec
Safety & EMC	
Safety	EN62040-1
EMC	EN 61000-4-2 / EN 61000-4-3 / EN 61000-4-4 / EN 61000-4-5 / EN 61000-4-6 / EN 61000-4-8 ETSI EN 300386 v1.9.1

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