Sierra 25
Modular Power Converter
Grid-interactive

www.cet-power.com

Executive summary

As grids become more dynamic and customers seek greater energy independence, critical power systems must go beyond simple backup. The Sierra 25 multiport converter, combined with Inview integrating Power Management System (PMS), enables both resilience and grid support, offering a unique blend of cost savings, revenue generation, and critical load protection. Certified for grid-codes and designed for dynamic environments, Sierra 25 modular power converter grid-interactive transforms static UPS into active energy assets.

Customer pain points

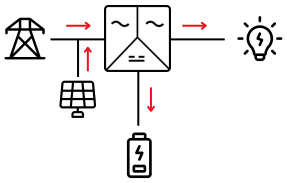
- Risk of grid instability and outages jeopardizing critical operations
- Underused UPS/storage systems that sit idle most of the time
- Inability to monetize energy storage assets or participate in flexibility markets
- High energy costs due to peak demand and time-of-use tariffs
- Regulatory pressure for CO_2 reduction and renewable integration

How Sierra 25 grid-interactive solves these issues

Grid-code certified multiport power conversion

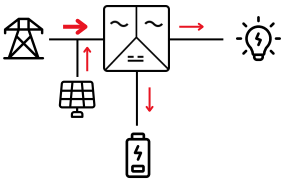
Sierra 25 supports multiple bidirectional ports (AC1, AC2, DC) to blend and balance energy sources such as grid, solar, battery, or gensets. All within one compact, scalable solution.

Examples of scenarios with a Sierra 25 modular power converter grid-interactive:



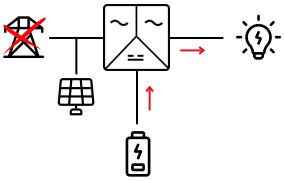
Grid-following

Power flows from the grid and PV to supply the loads and charge the batteries.



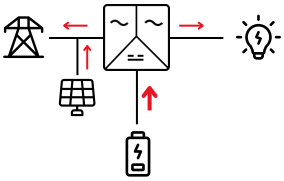
Grid support - PV overproduction

When the PV produce excess energy, Sierra absorbs it to charge the batteries and supply the loads.



Grid-forming

When the grid is unavailable, Sierra switches to grid-forming mode in 0ms.
Power is supplied from the batteries (discharge) to maintain the loads without interruption.



Grid support - underproduction

When the grid cannot provide enough energy, Sierra supports it by discharging the batteries and using solar energy.
Power flows from the batteries and PV to the grid and the loads.

Smart control with Inview

Sierra 25 modular power converters should be combined with the smart controller Inview for advanced power management. Inview integrates PMS functions such as peak shaving, off-grid or self-consumption modes, and forced import/export. It also manages the battery by communicating directly with the BMS, and can interface with an EMS for broader site coordination. Through standard communication protocols, Inview connects easily with third-party equipment. This flexibility ensures seamless operation in both AC and DC coupling configurations.

Guaranteed critical load backup

With CE+T Power's intelligent energy management, you never have to choose between grid support and backup security. A dedicated portion of the battery is always reserved for your critical loads, thanks to smart prioritisation algorithms. This means your essential systems stay protected, no matter what the grid demands.

Why choose CE+T over traditional UPS providers

- The Sierra 25 is natively bidirectional and fully compliant with international grid codes, ready for grid support, energy management, and backup in one system.
- Inview provides complete local autonomy with embedded PMS logic, operating efficiently even without an EMS.
- Modular and scalable, CE+T systems are field-proven across critical and remote sites worldwide.
- Designed for the energy transition, Sierra 25 optimises renewable integration, peak shaving, and self-consumption, turning backup power into an active energy asset.

Some typical applications

- Data centers seeking revenue from frequency services without compromising uptime
- Commercial & Industrial sites optimizing energy bills and resilience
- Remote/off-grid operations ensuring 24/7 power with solar + battery + genset
- Sites with time-of-use energy pricing or curtailment risks

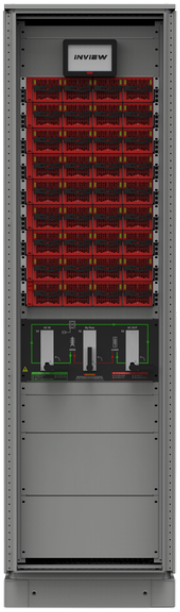
Available configurations

The power converters are certified grid-interactive. They can be offered as a Power Conversion Kit (PCK) which includes converters for power conversion and Inview for monitoring & control. This kit is designed for integration into a system by integrators. Custom designs and specific integrations can be developed by CE+T Power on request to match your exact requirements.

Here are examples of possible systems configurations:

36kVA

72kVA

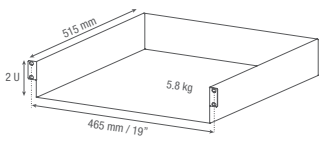


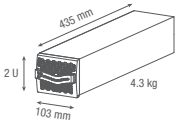
90kVA

Illustrations are non-binding and may include customized fittings.

Sierra 25 - 48/230-277

General	
Part Number: Module / Shelf	T721D30201 / T724730000
Cooling / Audible noise	Fan forced cooling / <65db @1meter
MTBF	240 000 hrs (MIL-217-F) at 30°C ambient and 80% load
Dielectric strength DC/AC	4300 Vdc
RoHS / Material (casing)	Compliant / Aluzinc steel
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
Public transport T°/Relative Humidity (RH) non-condensing	Tested according ETS300-019-2-2 Class 3.1 -40°C to 70°C / Max RH 95% for 96 hours per year
Vibration	GR63 office vibration 0 to 100 hz-0.1 g / transport vibration 5-100 Hz 0.5 g 100 to 500 hz-1.5 g / Drop test
Altitude above sea without de-rating of power	< 1500 m / derating > 1500 m – 0.8 % per 100 m / max 4000 m
AC Input Data	
Nominal voltage (current)	230 Vac / 11.8 A, 240 Vac / 11.0 A and 277 Vac / 9.5 A
Voltage range	150 - 293 Vac (derating from 195 to 150 Vac)
Brownout	1600 W @150 Vac / 2400 W @195 Vac linear decreasing
Power factor / THD	> 0.99 / < 3%
Frequency (Synchronization range)	50 Hz (47 - 53 Hz) or 60 Hz (57 - 63 Hz)
DC Input Data	
Nominal voltage (range)	48 Vdc (32 - 63 Vdc)[1], derating starts @44 Vdc
Nominal current	54.4 A
Maximum input current (for 15 seconds) / voltage ripple	66.8 A / < 10 mV RMS
Reverse polarity protection	Yes
AC Output Data	
Efficiency AC to AC (EPC) / DC to AC / AC to DC	> 96% / > 93.7% / > 93.7%
Nominal voltage[2] / Current (User selectable)	230 Vac / 13 A, 240 Vac / 12.5 A and 277 Vac / 10.8 A (200 - 277 Vac)
Frequency / frequency accuracy	50 or 60 Hz / 0.03%
Nominal Output power[3]	3 kVA / 2.4 kW @ 230 Vac (at AC full load, still 300 W available for DC Load)
Short time overload capacity	125% (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	13 A @ 230 Vac
Crest factor at nominal power	3 : 1 for load P.F. ≤ 0.7
Short circuit clear up capacity < 20 ms at AC input / On battery	104 Arms for 20 ms / 30.2 Arms for 20 ms
Short circuit current after > 20 ms	**18.6 Arms for 15 seconds**
AC output voltage stability	±1% from 10% to 100% load
Static / Dynamic voltage regulation	±1% between 10% and 100% load / <5% from 0 to 100% to 0 load impact (100 ms)
DC Output Data	
Nominal voltage (range)	53.5 Vdc (44 - 60 Vdc)
Maximum power	2.4 kW (at DC full load, still 300 W available for AC Load)
Maximum current at 48 Vdc	50 A
Efficiency AC to DC	> 93.7%
Max. Voltage interruption / total transient voltage duration (max)	0 sec / 0 sec
Signaling & Supervision	
Display	Synoptic LEDs on module and touchscreen with Inview S and Inview X
Supervision / Part number	Inview ranges: Inview X - T602004200 and Inview S - T602004100
Remote ON / OFF	At rear terminal of the shelf
Battery Monitoring / Part number	MBB (Measure Box Battery) - 6 dry contacts and 8 digital Inputs / T602006000
Safety & EMC	
Safety	EN 62040-1, UL 1778, IEC 62477-1:2012+A1, IEC 62109-1/2
Grid-interactive	EN 50549-1:2019, VDE-AR-N 4105:2018-11, AS/NZS 4777.2:2015
EMC	EN 300386V1.6.1, EN 61000-1-2-3-4, IEC 62040-2
Environment	GR3108 class 2 for outdoor

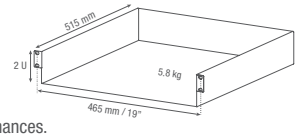


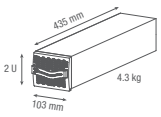


1 Permanent 2400 W / de-rating apply based on internal heatsink T°
2 Operation within lower voltage networks leads to de-rating of power performances
3 AC output load is the highest priority. Even if AC output is fully loaded (2.4 kW), still 300 W is available for DC output.

Sierra 25 - 380/230-277Vdc

General	
Part Number: Module / Shelf / Shelf without Isolation	T721D70201 / T724D70010 / T724D70000
Cooling / Audible noise	Fan forced cooling / <65db @1meter
MTBF	240 000 hrs (MIL-217-F) at 30°C ambient and 80% load
Dielectric strength DC/AC	2100 Vdc
RoHS / Material (casing)	Compliant / Aluzinc steel
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
Public transport T°/Relative Humidity (RH) non-condensing	Tested according ETS300-019-2-2 Class 3.1 -40°C to 70°C / Max RH 95% for 96 hours per year
Vibration	GR63 office vibration 0 to 100 hz-0.1 g / transport vibration 5-100 Hz 0.5 g 100 to 500 hz-1.5 g / Drop test
Altitude above sea without de-rating of power	< 1500 m / derating > 1500 m – 0.8 % per 100 m / max 4000 m
Power	
AC Input Data	
Nominal voltage / Current	230 Vac / 11.8 A, 240 Vac / 11.0 A and 277 Vac / 9.5 A
Voltage range	150 - 293 Vac (De-rating from 195 to 150 Vac)
Brownout	1600 W @150 Vac / 2500 W @195 Vac linear decreasing
Power factor / THD	> 0.99 / < 3%
Frequency (Synchronization range)	50 Hz (47 - 53 Hz) or 60 Hz (57 - 63 Hz)
DC Input Data	
Nominal voltage (range)	336 Vdc (200 - 430 Vdc)[1] derating starts @259 Vdc
Nominal current at 336 Vdc	8 A
Maximum input current (for 15 seconds) / voltage ripple	9.9 A / < 250 mV RMS
Reverse polarity protection	Yes
AC Output Data	
Efficiency AC to AC (EPC) / DC to AC / AC to DC	> 96% / > 94.5% / > 94.5%
Nominal voltage[2] / Current (User selectable)	230 Vac / 13 A, 240 Vac / 12.5 A and 277 Vac / 10.8 A (200 - 277 Vac)
Frequency / frequency accuracy	50 or 60 Hz / 0.03%
Nominal Output power	3 kVA / 2.5 kW at 230 Vac (at AC full load, still 200 W available for DC load)
Short time overload capacity	125% (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	13 A @ 230 Vac
Crest factor at nominal power	3 : 1 for load P.F. ≤ 0.7
Short circuit clear up capacity < 20 ms at AC input / On battery	104 Arms for 20 ms / 30.2 Arms for 20 ms
Short circuit current after > 20 ms	18.6 Arms for 15 seconds
AC output voltage stability	±1% from 10% to 100% load
Static / Dynamic voltage regulation	±1% between 10% and 100% load / <5% from 0 to 100% to 0 load impact (100 ms)
DC Output Data	
Nominal voltage (range)	336 Vdc (200 - 430 Vdc)[1]
Nominal power	2.5 kW[3] (at DC full load, still 200 W available for AC output)
Nominal current at 336 Vdc	8 A
Efficiency AC to DC	> 94.5%
Max. Voltage interruption / total transient voltage duration (max)	0 sec / 0 sec
Signaling & Supervision	
Display	Synoptic LEDs on module and touchscreen with Inview S and Inview X
Supervision / Part number	Inview ranges: Inview X - T602004200 and Inview S - T602004100
Remote ON / OFF	At rear terminal of the shelf
Battery Monitoring / Part number	MBB - HV (Measure Box Battery) - 6 dry contacts and 8 digital Inputs / T602006380
Safety & EMC	
Electrical Safety	EN60950-EN62040-1-UL1778-IEC62109/1-IEC62109/2
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 / FCCpart 15 class A





1 Permanent 2500 W / de-rating apply based on internal heatsink T°
2 Operation within lower voltage networks leads to de-rating of power performances.
3 AC output load is the highest priority. Even if AC output is fully loaded (2.5 kW), still 200 W is available for DC output.

Sierra 25 - 380/230-277 - Datasheet - v1.9 Specifications can change without notice. New data will be updated on our website: www.cet-power.com.