CE+T POWER
Leading Conversion Technology for Power Resilience

Bravo 25-R 48/230-277

The modular inverter designed to modernize existing Bravo TSI installations.

Telecom | Datacom | Mass transport | Industry | Power Utilities

AC In 230, 240 & 277 Vac

DC In 48 Vdc

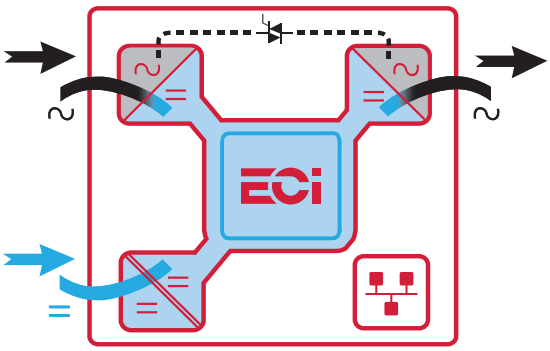
AC Out 230, 240 & 277 Vac

Power 2.5 kVA 2 kW

up to 80 kVA

Description

The **Bravo 25-R 48/230-277** is a modular inverter specifically designed to replace legacy **Bravo TSI 48/230** inverter modules. It provides an excellent **AC backup** solution in conjunction with a DC Power system. It uses cutting edge technology to provide the most **energy-efficient** in a **compact size**.



The ECI technology **eliminates all single points of failure** with full scalability; up to 32 modules in parallel and high efficiency of up to **96% in AC to AC conversion** and **93.7% in DC/AC conversion**, hence reducing operating costs. We can build the systems up to **80 kVA**.

Applications

Designed for **business-critical AC backup applications**, the Bravo 25-R 48/230-277 enables operators to **extend the service life** of existing Bravo TSI 48/230 installations while benefiting from **improved reliability**, **simplified maintenance** and **compatibility** with the latest CE+T monitoring platforms. The retrofit can be performed without a complete system upgrade, reducing operational costs and minimizing service disruption.

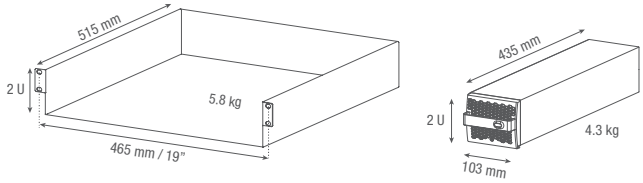
Main Features

- Extra AC input for increased efficiency on double conversion
- Wide AC input range up to 293 Vac L-N
- Up to 10 kVA in 2RU - 19 inches
- Up to 80 kVA by using extra syncrhonization device
- 1P or 3P infrastructure
- Compatible with Inview FIT and Inview X+

Illustrations are non-binding and may include customized fittings.

Bravo 25-R 48/230-277

General	
Part Number: Module	T621D30301 (P10023-F06C0_v01)
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
Power	
AC Input Data	
Nominal voltage (current)	230 Vac / 8.7 A, 240 Vac / 8.3 A and 277 Vac / 7.2 A
Voltage range	150 - 293 Vac (derating from 195 to 150 Vac)
Brownout	1600 W @150 Vac / 2000 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	45.4 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	96% / 93.7%
Nominal voltage[2] / Current (User selectable)	230 Vac / 10.9 A, 240 Vac / 10.4 A and 277 Vac / 9 A (200 - 277 Vac)
Frequency / frequency accuracy	50 or 60 Hz / 0.03%
Nominal Output power	2.5 kVA / 2 kW @ 230 Vac
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%)	≤ 0.5 s
Nominal current	10.9 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	97.28 Arms for 20 ms / 29.45 Arms for 20 ms
Short circuit current after > 20 ms	19.37 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)
In Transfer Performance	
Max. Voltage interruption / total transient voltage duration (max)	0 sec / 0 sec
Signaling & Supervision	
Display	Synoptic LEDs on module and Inview FIT, touchscreen with Inview X+
Supervision / Part number	Inview X+ / T602004220 (P20007-F02C0_v01) and Inview FIT / T602004160 (P200010-F00C0_v01)
Remote ON / OFF	At rear terminal of the shelf
Safety & EMC	
Safety	EN60950-EN62040-1-UL1778-IEC62109/1-IEC62109/2
EMC	EN300386V1.6.1 / EN61000-1-2-3-4
Environment	GR3108 class 2 for outdoor



1 Permanent 2000 W / de-rating apply based on internal heatsink T°
2 Operation within lower voltage networks leads to de-rating of power performances

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