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TSI BRAVO 48/230

2.5-80 kVA

TELECOM | DATACOM | MASS TRANSIT | OIL & GAS | POWER UTILITIES

MODULAR INVERTER MODULE

POWER 2.5 kVA
INPUT 48 Vdc and 230 Vac
OUTPUT 230 Vac

DESCRIPTION

TSI Bravo – 48/230 is a compact modular inverter that converts **48 Vdc** power source into **230 Vac** and provides a pure sine wave. By using at least three modules, we can offer solutions for **three-phase** infrastructures (3x400Vac + N).

The extra AC input ensures a **high overall efficiency** (up to 96%) which results in a reduction of energy loss and heat dissipation.

This module has a **modularity from 2.5 kVA to up to 80 kVA** in order to be able to evolve with your needs. The hot swap feature makes maintenance easier and reduces the risk of errors.

The low ripple voltage avoids any disturbances on DC loads and batteries.

APPLICATIONS

All business critical applications and all types of AC loads. The design is modular and scalable with hot- swappable inverter modules which ensures low Mean Time to Repair (MTTR), reduction in service costs and meets the changing needs for future expansion.

MAIN FEATURES

- Extra AC input for increased efficiency
- Compact design
- Up to 80 kVA
- No disturbances on DC loads & batteries

Illustrations are non-binding and may include customized fittings.

» TSI BRAVO

	TSI Bravo - 48 / 230
GENERAL	
Part number	T321730201
EMC (immunity)	EN 61000-4-2 / EN 61000-4-3 / EN 61000-4-4 / EN 61000-4-5 / EN 61000-4-6 / EN 61000-4-8
EMC (emission) (class)	EN 55022 (B)
Safety	EN62040-1
Cooling / Isolation	Forced / Doubled
MTBF	240 000 hrs (MIL-217-F)
Efficiency (Typical): Enhanced power conversion / on line	96% / 91%
Dielectric strength DC/AC	4300 Vdc
True Redundant Systems – compliant	3 disconnection levels on AC out and DC in power ports 4 disconnection levels on AC in port
RoHS	Compliant
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
Operating conditions	Designed for installation in an IP20 or IP21 environment. When installed in a dusty or humid environment, appropriate measures (air filtering, …) must be taken.
Altitude above sea without de-rating	< 1500 m / derating > 1500 m – 0.8 % per 100 m
Ambient / storage temperature / relative humidity	-20 to 50 ° C / -40 to 70 ° C / 95 %, non-condensing
Material (casing)	Coated steel-ALU ZINC
AC OUTPUT POWER	
Nominal Output power (VA) / (W)	2500 / 2000
Short time overload capacity	150 % (15 seconds) 110 % permanent within T° range
Admissible load power factor	Full power rating from 0 inductive to 0 capacitive
Internal temperature management and switch off	Yes
DC INPUT SPECIFICATIONS	
Nominal voltage (DC)	48 V
Voltage range (DC)	40 - 60 V
Nominal current	46 A (at 48 Vdc and 2000 W output)
Maximum input current (for 15 second) / voltage ripple	84 A / < 2 mV Psopho
Input voltage boundaries	User selectable with T2S interface
AC INPUT SPECIFICATIONS	
Nominal voltage (AC)	220/230/240 V 1P or 3P (Min 3 shelves for 3P)
Voltage range (AC)	150-265 V
Brownout	150 to 185 V linear derating 150 VA/120 Watts per 10 Vac 2000 VA/1600 W @ 150 Vac
Conformity range before transfer to DC	Adjustable
Power factor	> 99%
Frequency range (selectable) / synchronization range	50 – 60 Hz / range 47 – 53 Hz / 57 – 63 Hz
AC OUTPUT SPECIFICATIONS	
Nominal voltage (AC*)	220/230/240 V
Frequency / frequency accuracy	50 - 60 Hz / 0.03 %
Total harmonic distortion (resistive load)	< 1.5 %
Load impact recovery time	0.4 ms
Turn on delay	20 s to 40 s depending on the number of module installed
Nominal current. Protected against reverse current	10.9 A
Crest factor at nominal power With short circuit management and protection	3 : 1
Short circuit clear up capacity	10 x I_n for 20 msec - Available while Mains is available at AC input port With magnitude control and management
Short circuit current after clear up capacity	2.1 I_n during 15 s and 1.5 I_n after 15 s
IN TRANSFER PERFORMANCE	
Max. voltage interruption / total transient voltage duration (max)	0 s / 0 s
SIGNALING & SUPERVISION	
Display	Synoptic LED
Alarms output / supervision	Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP
Remote on / off	on rear terminal of the shelf via T2S

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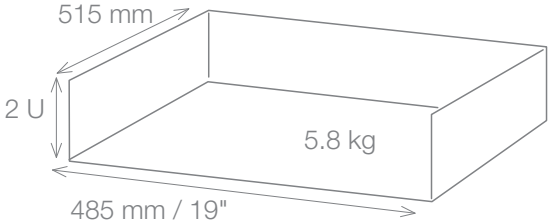

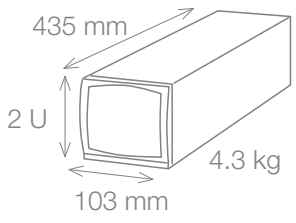

*Operation within lower voltage networks leads to de-rating of power performances.

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Leading AC Backup Technology

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