

Energy effective DC/AC inverter

The TSI 'Twin Sine Inverter' Bravo is the very latest generation of hot-swap next generation of hot-swap inverter modules that brings Scalability, Availability, reduced Footprint and high Efficiency, to provide SAFE operation of all AC powered equipment.



The EPC mode stabilizes AC output while providing unity power factor, mains filtering, reduced conversion losses, and zero transfer time between sources, with the ability to use both AC and DC sources at the same time.

TSI Bravo 220V/2.5kVA Inverter

220 Vdc 230 Vac 2500 VA/2000 W inverter module

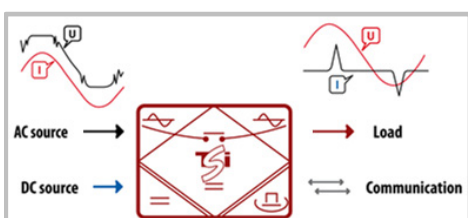
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DESCRIPTION

INVERTER MODULE

The TSI Bravo is a compact and scalable modular inverter with high power density and low weight, able to be configured in highly flexible system solutions. Up to four inverters can be installed in each 2U 19"-subrack.

Large modular UPS with record breaking availability figures can be realized, allowing for the building of datacenters meeting future Tier 'X' requirements. Long downtime and expensive repairs are replaced by a technician swapping faulty boxes on a live system.



Enhanced Power Conversion

APPLICATIONS

DATA CENTER

- Modular UPS
- AC option for 220 V DC power systems

TELECOM

- UPS Replacement

RAIL AND METRO

- Frequency conversion



Inverter power shelf

KEY FEATURES

- PARALLEL OPERATION OF INPUT SOURCES
- HIGH EFFICIENCY IN ALL CONVERSION MODES
- ZERO TRANSFER TIME
- 150% AC OUTPUT OVERLOAD FOR 15 s
- 10x In SHORT CIRCUIT CURRENT FOR 20 ms*
- HOT PLUGGABLE
- SHORT MTTR
- AC MAINS FILTERING
- 1-PHASE OR 3-PHASE CONFIGURABLE SYSTEMS
- PATENTED TECHNOLOGY

* - WITH AC INPUT AVAILABLE

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MODEL	2500 VA/2000 W 220 VDC/230 VAC
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Part number	241560.601
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DC INPUT DATA

Voltage (nominal / range)	220 V _{DC} (170 – 300 V _{DC})
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Current (at 220 V and 2000 W output) / (maximum)	9.8 A / 14.9 A
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AC INPUT DATA

Voltage (nominal)	208 / 220 / 230 / 240 V _{AC} (line to neutral)
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Voltage (range)	150 – 265 V _{AC} (derating between 150 – 185 V _{AC})
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Voltage brownout	2000 VA/1600 W @ 150V _{AC} ; 150 – 185 V _{AC} derating: 120 watts per 10 V _{AC}
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Power factor	>0.99
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Frequency synchronization range	47 – 53 / 57 – 63 Hz
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OUTPUT DATA

Voltage (nominal)	208 / 220 / 230 / 240 V _{AC} (line to neutral)
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Frequency	50 Hz or 60 Hz based on input frequency (+/-0.03 %)
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Power (maximum continuous)	2500 W / 3000 VA
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Power (overload capacity)	150 % for 15 seconds
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Current	10.87 A (at 230 V _{AC})
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THD (resistive load)	<1.5 %
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Load impact recovery time (10 – 90 %)	0.4 ms
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Crest factor at nominal power	3:1
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Short circuit current clear capacity	10 x I _n EPC mode for 20 ms / 2.1 x I _n for 15 s
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OTHER SPECIFICATIONS

Efficiency	Up to 96.5 % EPC mode / 92.5 % DC input only mode
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Signaling and supervision	LED; Dry contact alarm output on shelf; remote on/off via shelf Via T2S / CanDis
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Cooling	Forced air convection
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MTBF	240,000 hrs
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Operating temperature	-20 to +70 °C / -4 to +158 °F (derating 50 to 70 °C / 122 to 158 °F)
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Storage temperature	-40 to +70 °C / -40 to +158 °F
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Relative humidity	8-95 %, non-condensing
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Altitude	-60 m to +4000 m (>1500 m: -0.8 % power per 100 m)
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Dimensions [WxHxD] : Weight	103 x 89 x 435 mm : < 5 kg / 4.05" x 3.50" x 17.13" : < 11.02 lbs
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DESIGN STANDARDS

Electrical safety	EN 62040-1; EN 62040-2; IEC/EN 60950-1 (only valid for DC only input mode)
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EMC	FCC 47 CFR Part 15 1998, Class A; EN 62040-2:2006; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-8; EN 55022 (B)
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Environment	ETSI EN 300 132-3-2; 2011/65/EU (RoHS) & 2008/98/EC (WEEE) Tested in accordance with: ETSI EN 300 019-2-1 v2.2.1:2014 (Class 1.2); ETSI EN 300 019-2-2 v2.3.1:2013 (Class 2.3); ETSI EN 300 019-2-3 v2.4.1:2015 (Class 3.2); Normal operating conditions as per IEC 62040-3:2011 clause 4.2 Other conditions per IEC 62040-3:2011 clause 4.3, must be advised
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