

SYSTEM

POWER 2500 VA INPUT 220 Vdc and 230 Vac OUTPUT 230 Vac

TSI BRAVO ST GRID Load Batterv Backup

DESCRIPTION

The TSI Bravo ST solution secures AC loads at 230 Vac from a 220 Vdc infrastructure.

Additional AC input is used under normal conditions to achieve an overall conversion efficiency of 96.5%. In the event of a grid failure, it automatically switches to the DC to secure the loads.

In addition to this, this solution includes a bypass that feeds AC loads directly from the grid if there is a problem in the system.

The modules included are hot swappable for ease of maintenance and extensibility (from 2.5 to 5kVA).

APPLICATIONS

All business critical applications and all types of AC loads. The solution is design for highest AC output availability. Both inverter modules and by-pass are hot-swappable which ensures low Mean Time to Repair (MTTR), reduction in service costs.

MAIN FEATURES

- >>> Extra AC input for increased efficiency
- >> Integrated bypass
- >>> Compact solution (2U high)
- >> Modularity (from 2.5 to 5 kVA)



POWER

>> TSI BRAVO ST

	TSI Bravo ST 2500 - 220 / 230
GENERAL	
Part number	S32P76E0102S
EMC (immunity)	EN 61000-4-2 / EN 61000-4-3 / EN61000-4-4 / EN 61000-4-5 / EN 61000-4-6 / EN 61000-4-8
EMC (emission) (class)	EN 55022 (B)
Safety	IEC 60950 / EN62040-1 / EN62040-2
Cooling / Isolation	Forced / Doubled
MTBF	240 000 hrs (MIL-217-F)
Efficiency (Typical): Enhanced power conversion / on line	96.5% / 92.5%
Dielectric strength DC/AC	4300 Vdc
RoHS 6	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.
Operating conditions	When installed in a dusty or corrosive 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)	2500
Nominal Output power (W)	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	Above 50°C ambiant T° derating up to 65°C. Automatic restart with hyteresis +/- 5°C
DC INPUT SPECIFICATIONS	
Nominal voltage (DC)	220 V
Voltage range (DC)	170 - 300 V
Nominal current at nominal DC voltage and max power W	10.1 A (at 220 Vdc and 2000 W output), 20.5 A (at 220 Vdc and 4000 W output)
Maximum input current (for 15 second) / voltage ripple	14.9 A / < 200 mV rms
Input voltage boundaries	User selectable with T2S interface min and max value
AC INPUT SPECIFICATIONS	
Nominal voltage (AC)	220 Vac / 230 Vac / 240 Vac
Voltage range (AC)	150-265 V
Brownout	150 to 185 V linear derating 150 VA/120 W per 10 Vac for 2500 VA model and 300 VA/240 W for 5000 VA mode
AC input range min and max value	Adjustable between 150 Vac and 265 Vac (fixed hysteresis 10 Vac)
AC input power factor (EPC operation mode)	> 99%
Frequency range (selectable) / synchronization range	50 – 60 Hz / range 47 – 53 Hz / 57 – 63 Hz
AC OUTPUT SPECIFICATIONS	OG OG HET HANGS IT GOTHET OF THE
Nominal voltage (AC)	230 V / 220V / 240 Vac adjustable (default 230 Vac - 50 Hz)
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
	10.9 A
Nominal current. Protected against reverse current Crest factor at nominal power	10.9 A
With short circuit management and protection	3:1
	10 x I _n for 20 msec - Available while Mains is available at AC input port
Short circuit clear up capacity	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 AC to DC module - Module to bypass	0 ms between DC to AC and AC to DC / <10 ms between BRAVO mode and automatic bypass
SIGNALING & SUPERVISION	
Display	Synoptic LED

BRAVO ST 2500 - 220/230 - Datasheet v1.0 Specifications can change without notice. New data will be updated on our Web site: www.cel-power.com. The present equipment is protected by several international patents, trademarks and copyrights.



Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional: Candis Display / Candis TCP-IP

on rear terminal of the shelf via T2S

llustrations are non-binding and may include customized fittings.

Alarms output / supervision

Remote on / off