



ALPHA
OUTBACK
ENERGY



TSI BRAVO ST 3000 - 24/230



TELECOM



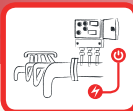
DATA COM



MASS TRANSIT



OIL & GAS



POWER UTILITIES



STANDALONE INVERTER SYSTEM

POWER 3000 VA
INPUT 24 Vdc and 230 Vac
OUTPUT 230 Vac

DESCRIPTION

The TSI Bravo ST solution secures **AC loads** at **230 Vac** from a **24 Vdc** infrastructure.

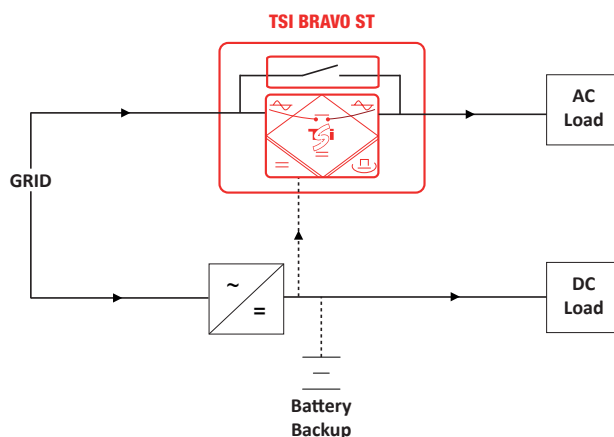
Additional **AC input** is used under normal conditions to achieve an overall **conversion efficiency** of 95.5%. In the event of a grid failure, it **automatically switches** to the DC to secure the loads.

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**.

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 1.5 to 3 kVA)

Illustrations are non-binding and may include customized fittings.

Leading AC Backup Technology

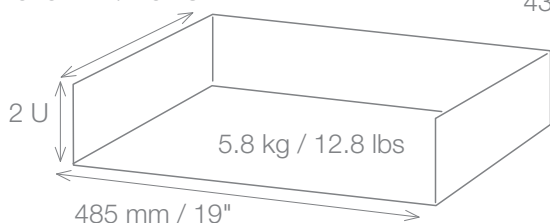



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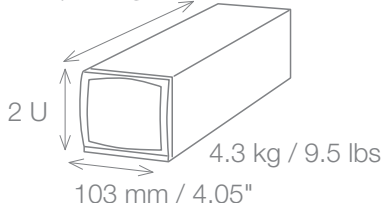
GENERAL	
Part number	S32P72E0202S
EMC (immunity)	EN 61000-4-2 / EN 61000-4-3 / EN61000-4-4 / EN 61000-4-5 / EN 61000-4-6 / EN 61000-4-8
EMC (emission) (class)	EN 55022 (A)
Safety	IEC 60950 / EN62040-1 / EN62040-2
Cooling / Isolation	Forced / Doubled
MTBF	240 000 hrs (MIL-217-F)
Efficiency (Typical): Enhanced power conversion / on line	> 95.5% / > 89.5%
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. 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)	3000
Nominal Output power (W)	2400
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 ambient T° derating up to 65°C. Automatic restart with hysteresis +/- 5°C
DC INPUT SPECIFICATIONS	
Nominal voltage (DC)	24 V
Voltage range (DC)	19 – 35 V
Nominal current at nominal DC voltage and max power W	56 A (at 1200 W/1500 VA), 112 A (at 2400 W/3000 VA)
Maximum input current (for 15 second) / voltage ripple	84 A / < 100 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 model
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	
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
Nominal current. Protected against reverse current	6.6 A
Crest factor at nominal power	2.8 : 1
With short circuit management and protection	
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 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
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

TSI BRAVO ST 3000 - 24/230 - Datasheet v1.0 Specifications can change without notice. New data will be updated on our Web site: www.cet-power.com or www.alpha-outback-energy.com. The present equipment is protected by several international patents, trademarks and copyrights.

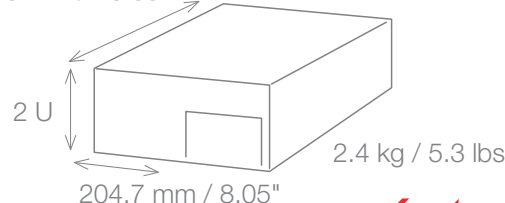
515 mm / 20.28"



435 mm / 17.13"



421.3 mm / 16.65"



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Leading AC Backup Technology



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TSI BRAVO ST



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