

TSI T1PS Inverter Systems

Leading Conversion Technology for Power Resilience



Benefits

- Network Equipment Building Space (NEBS) Level III compliant
- Seismic zone 4 compliant
- Energy Efficient : The TSI technology performance is unmatched in the industry, 95% in AC to AC double conversion (EPC mode).
- Maximum Reliability : The TSI technology eliminates the Static Transfer Switch (STS), the single point of failure in a traditional inverter design
- Scalable : TSI features a parallel design. Hence, modules are HOT-swappable and field upgradable.
- Power Density : The TSI inverter has the industry’s highest power per square area.
- Enhanced Power Conversion (EPC) : Processes all incoming AC mains supply to ensure clean, reliable power is delivered to the critical applications.



The Challenge

Meeting the diverse and changing power requirements of today’s mission critical loads

The Solution

The Tier One Power Supply (T1PS) with hot-swappable inverter modules connected to the AC & DC sources, producing an uninterrupted, reliable AC supply.

Why CE+T Power?

CE+T is the AC critical power solutions provider for the Telecom, Industrial Oil & Gas, and Data Centre markets. CE+T is an industry leader in the power conversion technology. TSI technology has revolutionized the inverter market with its new range of module, scalable products to support telecom (48V) or industrial (110V, 220V, 400V DC) applications.

The System

With the BRAVO-2500VA inverter modules as its building blocks, the TSI T1PS systems are modular and scalable to capacities up to 225kVA (75kVA per cabinet). They are easily configured to your current and future AC power requirements.



TSI T1PS Inverter Systems

General

- EMC (immunity) EN 61000-4
- EMB (emission) EN 55022 (Class A)
- Safety UL1778 Listed
- Cooling Forced
- Isolation Doubled
- MTBF 240,000 hrs
- Efficiency (Typical)
 - Enhanced Power Conversion 95%
 - On-Line Mode 90%
- Dielectric strength DC/AC 4300Vdc
- True Redundant Systems Compliant
 - 3 disconnection levels on ACout and DCin power ports
 - 4 disconnection levels on ACin port
- RoHS Compliant
- Connection I/O Terminal Block
 - Protected against inversion of polarity
- NEBS Compliance Level 3
- Seismic Rating Zone 4

AC OUTPUT POWER

- Nominal Output Power Up to 225kVA
- Nominal Voltage (L-N) 120V
- Output Power (Real Load) Up to 180kW
- Voltage Range (L-N) 90-130V
- Voltage Accuracy +/- 1%
- Frequency 50/60 Hz
- Frequency Accuracy +/- 0.1%
- Load Impact Recovery Time 0.4 ms
- Short time Overload Capacity (15s) 150%
- Permanent Overload Capacity 110%
- Turn On Delay 40s
- Nominal Current per Module 21A
- Crest Factor at nominal power 3.1 In
 - With short circuit management and protection
- Short circuit clear up capacity 10x In for 20ms
- Admissible Load power factor (pF)
 - Full power rating from 0 inductive to 0 capacitive
- Internal temperature management and switch off

TRANSFER PERFORMANCES

- Maximum Voltage Interruption 0s
- Total transient voltage duration (max) 0s

DC INPUT SPECIFICATIONS

Nominal Voltage	48V	110V	220V	380V
Voltage Range	40-60	80-160	150-300	280-400
Nominal Current at Low Voltage cutoff (per module)	63A	31A	17A	9A
Maximum Overload Input Current (per module)	95A	47A	25A	13A

- Voltage Ripple <2mV

AC INPUT SPECIFICATIONS

- Nominal Voltage (L-N) 120V
- Voltage Range 83-140V
- Conformity Range Adjustable
- Power Factor Unity (PFC)
- Frequency Range (selectable) 50/60 Hz
- Synchronization Range 47-53 Hz
57-63 Hz

ENVIRONMENT

- Altitude above sea level without derating <5000 ft
- Derating slope upper than 5000ft 0.8% / 300ft
- Ambient Temperature -20 to +40 C
- Storage Temperature -40 to +70 C
- Relative Humidity 95%, non condensing

SIGNALING & SUPERVISION

- Display LED + Touchscreen
- Alarms Output Dry Contacts
- Monitoring TCP-IP, Modbus, SNMP

WEIGHT & DIMENSIONS

- Width 24"
- Depth 30"
- Height 84"
- Weight (approx.) 840 lbs
- Material Coated Steel