



Parallel Inverter Power System Specification

Introduction

This series of parallel inverter power systems consists of between 1 and 42 inverter modules, a controller module, static switch module and AC/DC PDU's to form an integrated power system.

The same inverter module is used in both 1 and 3 phase systems. The inverter module inverts the DC voltage input to high quality AC sine wave voltage output using high frequency technology. Up to 64 inverter modules may be connected in parallel to form an n+1,...n+m redundant system to deliver AC power to a load and provides the nominal output power rating based on configuration.

In case of overload or failure a static switch transfers the load to an AC bypass line without power interruption. The STS returns the load to the system output upon restoration of the system output or removal of overload.

Intelligent system operation is provided by a controller/monitor.

The system is ideally suited for applications in computer, telecommunications, finance, utilities, transportation, defence, universities, research institutes as well as many other applications.

Features

- DSP monitor and control
- Wide operating temperature range: -5 to +50C, derated above 50C
- Front cable connect, no rear access required.
- Battery undervoltage protection.
- Integrated maintenance bypass switch design.
- CAN-bus communication.
- Easily expandable for power upgrade.
- Integrated surge protection for AC, DC and communications.
- Hot swappable inverter, controller and static switch modules
- High quality low distortion sine wave output
- Uninterrupted load transfer.
- Local or remote monitor function: RS232/USB/SNMP
- Safety: EN60950-1
- EMC: EN55022 Class B

System data

Electrical specifications

- Maximum Capacity: Single phase: 90kVA (220/230/240Vac); 45kVA (115/120/127Vac)
Three phase: 126kVA (380/400/415Vac); 63kVA (200/208/220Vac)
- DC input voltage ranges 48Vdc: 40 to 60Vdc; 110Vdc: 90 to 140Vdc; 220Vdc: 180 to 280Vdc
- AC input voltage range:
Single phase system: 160 to 280Vac for nominal input 220/230/240Vac
90 to 150Vac for nominal input 115/120/127Vac
Three phase system: 275 to 485Vac for nominal input 380/400/415Vac
155 to 260Vac for nominal input 200/208/220Vac
- Nominal Output Voltage: Single phase: Line, Neutral, Ground. 220Vac/50Hz or 120Vac/60Hz
Three phase: R, S, T, Neutral, Ground. 380Vac/50Hz or 208 Vac/60Hz
- Frequency Range: 45 to 55Hz and/or 55 to 65Hz



Dimensions:

Typical Power Systems

Single phase:

- CVS15K-48/220-1M Cabinet: 600W 600D 1000H (mm)
- CVS30K-48/220-2M Cabinet: 600W 600D 2000H (mm)
- CVS60K-48/220-2M Cabinet: 600W 600D 2000H (mm)
- CVS90K-48/220-2M Cabinet: 1200W 600D 2000H (mm)
- CVS15K-48/120-1M Cabinet: 600W 600D 1000H (mm)
- CVS30K-48/120-2M Cabinet: 600W 600D 2000H (mm)
- CVS45K-48/120-2M Cabinet: 600W 600D 2000H (mm)

Three phase:

- CVT36K-48/220-2M Cabinet: 600W 600D 2000H (mm)
 - CVT63K-48/220-2M Cabinet: 600W 600D 2000H (mm)
 - CVT126K-48/220-2M Cabinet: 1200W 600D 2000H (mm)
 - CVT36K-48/120-2M Cabinet: 600W 600D 2000H (mm)
 - CVT63K-48/120-2M Cabinet: 600W 600D 2000H (mm)
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Controller - CVC

Features:

- Suits both single and three phase systems
- Touch screen interface
- Storage of up to 500 alarm logs
- Display languages: Chinese/English/Spanish/Portuguese
- Hot swappable.
- Sets and displays system parameters, displays individual inverter module parameters and status.
- RS232/SNMP/USB communication modes.
- 8 programmable voltage free contacts
- Visual and audible alarms



Dimensions/Weight:

- 482W 240D 88H (mm), weight <2.4kg
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Static Switch

Features:

- Parallel work design
- Uninterrupted transfer time.
- Hot swappable.
- DC and/or AC powered for high system reliability
- Operates without SCU01 controller.
- CAN-bus communication.
- FAN speed load controlled with fan fail alarm.
- Overload capability: 105 to 125% for 10 minutes.
126 to 150% for 10 seconds.



Dimensions/Weights:**Single phase**

- CSS100 and CSS200: 482W 375D 88H (mm), weight <10kg
- CSS300: 482W 375D 132H (mm), weight <13kg
- CSS500: 482W 425D 176H (mm), weight <18kg

Three Phase

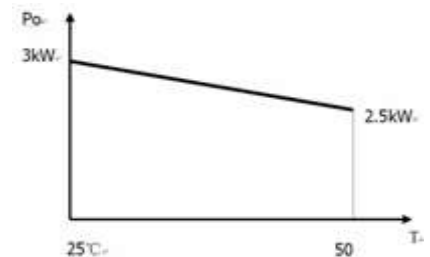
- CST75: 482W 460D 88H (mm), weight <13kg
 - CST100: 482W 460D 132H (mm), weight <16kg
 - CST200: 482W 425D 176H (mm), weight <21kg
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Inverter module - CVI-3K**Features:**

- The inverter module suits both single and three phase systems.
- Utilizes synchronous phase locking and automatic load equalization
- CAN bus communication mode
- Inverter address identification function
- High efficiency, typically >90%.
- Load adjusted fan speed.

**Electrical specifications**

- Capacity: 3kVA /3kW
- DC input voltage ranges
 - 48Vdc: 40 to 60Vdc
 - 110Vdc: 90 to 140Vdc
 - 220Vdc: 180 to 280Vdc
- Nominal Output voltage: 220Vac/120Vac
- Nominal Output frequency: 50Hz/60Hz
- Total Harmonic Distortion: <2% (resistance load)
- Crest Factor: 3:1
- Current Unbalance: $\leq 5\%$
- Safety: EN60950-1
- EMC: EN55022 Class B

**Dimensions/Weight:**

- 221W 320D 88H (mm), weight <4.5kg