

## **Source Control Document.**

Model: CSI 500R-5E-FXWT-T1850

COSD: XXXX

**Summary Description:** 500VA Railway Quality Sine Wave Inverter

110Vdc to 230Vac/50Hz

**Customer Name:** 

Customer Part Number: Same as above

## **Product description:**

This rugged DC/AC inverter uses field proven, microprocessor controlled high frequency PWM technology to generate the required output power with pure sign wave output voltage. It is a mature design with a track record in numerous applications. The DC/DC input stage boosts the input voltage to a higher DC voltage, which feeds the DC/AC inverter to generate the required AC output. The use of high frequency conversion enables a compact construction, low weight and high efficiency. The unit has full electronic protection. The input and output are filtered for low noise. Cooling is via baseplate to a heatsinking surface and by natural convection. The use of components with established reliability results in high MTBF. The unit is manufactured at our plant under strict quality control.

Special Features: Ruggedizing, conformal coating.

### **SPECIFICATIONS**

Input Voltage

110Vdc nominal 80-150Vdc operating range Input current 7.5A max

## **Input Protection**

Inrush current limiting Varistors Reverse polarity protection Internal safety fuse Lower voltage than the specified minimum will not damage the unit

### Isolation

1000Vdc input to chassis 3000Vdc input to output 2250Vdc output to chassis

### Standards

Designed to meet C22.2 No. 107.1 – 01. UL 458 and EN 60950-1 and EN 50155

## **EMI**

EN 50121-3-2

## **Immunity**

Meets criteria of EN 50155 and EN 50121-3-2 including:

EN 61000-4-2 (ESD)

EN 61000-4-3 (RF Immunity)

EN 61000-4-4 (Fast Transients)

(Surge) EN 50155

EN 61000-4-6 (Conducted Imm.)

EN 50155 (Voltage Variations)

# **Total Harmonic Distortion**

Less than 5% at full load

### Line/Load Regulation

+/-5% from 10% load to full load

## **Load Crest Factor**

2 at 90% load

## **Output Ripple Noise**

Better than 500mVrms (20MHz BW)

## **Output Overload Protection**

Current limiting with short circuit protection. Thermal shutdown with automatic recovery in case of continuous overload or insufficient airflow

### **Output Overvoltage Protection**

By internal supply voltage limiting at 270Vac

## **Efficiency**

80% at full load

# **Operating Temperature Range**

-25°C to +55°C for full specification

# **Temperature Drift**

0.05% per °C over operating temperature range

By high quality built-in fans

## **Environmental Protection**

Ruggedizing Conformal coating

Originated by TS/sa	Date February 23, 2018
Updated by TS	Drawing No./ Rev. SCD T1850A
Approved by TS	

## **Output Voltage** 230Vac/50Hz/2.1Arms continuous

Output neutral is floating

### **Output Wave Form**

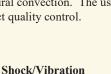
Sinusoidal

AC OUTPUT							. 48VDC INPUT				
55	L2 ~		NOT USED					ı	ı	+	+
1	2	3	4	5	6	7	8	9	10	11	12

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**Terminal Block Pin Out** 





IEC 61373 Cat 1 A &B

# Humidity

5 – 95% non-condensing

### MTRF

130,000 hours at 45°C

Green OUTPUT ON LED visible through the cooling slots

### **Control Input**

None

# **Alarm Output**

Not installed

## Package/Dimensions (WxHxL)

FXW: 185 x 66 x 358mm (7.3" x 2.6" x 14.1") Mounting holes are clear

## Weight

2.9 kg (6.4 lbs)

### Connections

12-pole barrier-type terminal block, 3/8" spacing.

## **RoHS** compliance

Compliant

### Warranty

Two years subject to application within good engineering practice Contamination related failures and shipping cost excluded