57S81 SERIES

- DC/DC and AC/DC Power Supply
- VXI and VME
- 500 Watts, Eight Outputs
- Ruggedized

Features

- High Power Density, Low Profile Packaging
- Switching Power Supply – Low Noise
- ESS Screening (Burn-In) and Temperature Cycling
- Designed and Manufactured Per NAVMAT Guidelines
- EMI Filtering Designed to MIL-STD-461D
- Remote Error Sensing
- Remote Digital (TTL) Turn On/Off
- Transient Protection per MIL-STD-704D
- Supports VME and VXI with ANSI/VITA Signaling
- Holdup Time, 10 milliseconds from Power Fail

Contents

Description

Logitek's 57S81 is a high power density, low profile VME/VXI power supply which accepts both a 270Vdc input and a 115/230Vac, single phase input. The 57S81 is ideally suited for airborne, ship-board, ground mobile applications. All Logitek AC/DC power supplies and DC/DC converters are designed and qualified to the most stringent performance and environmental requirements. Full-Mil units receive ESS Screening, including burn-in and temperature cycling.

Electrical Specifications

Input Characteristics:

Input	115/230 Vac or 270 Vdc
EMI/RFI Characteristics	Designed to meet the requirements of MIL-STD-461D
Input Transient Protection	Per MIL-STD-704D; For nominal 115 VAC input: 180 VAC for 0.1 second For nominal 230 VAC input: 292 VAC for 0.1 second

DC Output Characteristics:

Output Power	See Table 1
Output Voltage	See Table 1
Efficiency	75% typical
Line Regulation	Within 0.1% or 10mv (whichever is greater) for low to high line changes at constant load
Load Regulation	0.1% or 10mv (whichever is greater) for 0 to 100% of rated load at nominal input line
PARD (Noise and Ripple)	50mV p-p max for 2-12Vdc outputs, 150mV p-p max for ± 24 & 28Vdc outputs, 20 MHz bandwidth

	DC Output Characteristics (Continued):
Load Transient Recovery	Output voltage returns to regulation limits within 0.5 msec, half to full load
Load Transient Under/Overshoot	5% of nominal output voltage set point (1.4v max)
Short Circuit Protection	Protected for continuous short circuit with automatic recovery
Current Limiting	All outputs 105% to 130%
OverVoltage Protection	Automatic electronic shutdown if 2V output exceeds 150%, or other outputs exceed 125% ±10%
Remote Error Sensing	Sensing pins compensate for up to 0.5-volt drop on 5Vdc and –5.2Vdc output leads
Remote Turn On/Off (TTL Inhibit)	Provides for remote on/off control. A TTL (logic 0) signal will enable the non-continuous outputs
Isolation Voltage	1000 VDC input to output and input to case; 100 VDC output to case.
Insulation Resistance	50 Megohm at 50 VDC

Signal Types:

AC Fail (as per ANSI/VITA Requirements)
System Reset (as per ANSI/VITA Requirements)
DC Good
Enable

Physical/Environmental Specifications

Temperature Range	Operating: -55°C to +85°C at 100% load (Temperature measured at baseplate; conduction via baseplate only); Storage: -55°C to +125°C
Temperature Coefficient	0.01% per °C
Shock	30 G's each axis, per MIL-STD-810C, Method 516.2, Procedure 1
Acceleration	6 G's per MIL-STD-810C, Method 513.2, Procedure 11, and 14 G's per Procedure 1
Vibration	Per MIL-STD-810C, Method 514.2, Procedure 1A
Reliability	(MTBF) 200,000 hours, ground benign, at 40°C Baseplate
Humidity	95% at 71°C per MIL-STD-810C, Method 507.1 (non-condensing)
Altitude	40,000 feet per MIL-STD-810C, Method 504.1, Category 6 Equipment
Dimensions	See Sheet 3
Salt Fog	Per MIL-STD-810C, Method 509.1
Sand/Dust/Fungus	Per MIL-STD-810C
Enclosure	Aluminum housing to aluminum Baseplate
Finish	Chemfilm
Interface	**Connector per Table 2 of this Data Sheet**
Weight	7 pounds max

Table 1. Output Power

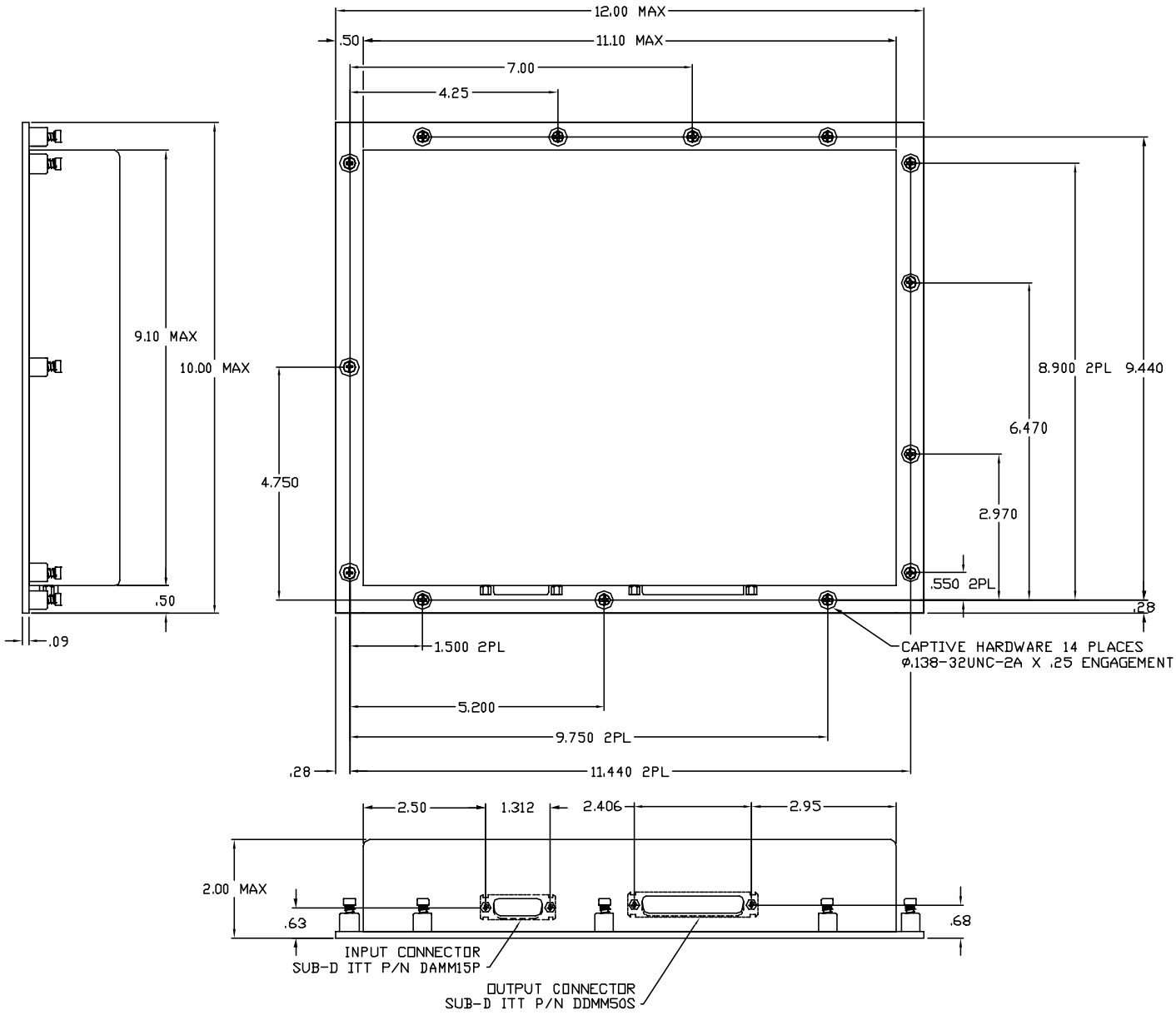
Option – 01, VXI Outputs		**Option – 02, VME Outputs**	
Volts	**Amps**	**Volts**	**Amps**
+5.0	30.0	+5.0	30
±12.0	4.0	±12.0	4.0
±24.0	3.0	+3.3	12
-5.2	5.0		
-2.0	5.0		
+5.0 standby	2.0	+5.0 standby	2.0

Table 2. Connectors and Mating Connectors

Connector	50 Pin Connector, Part # & Series	9 Pin Connector, Part # & Series
Unit Connector	**DDMC50SJA197**	**DEMM9PL**
Mating Connector	**DDMM50P**	**DEMAM9S**

Mechanical Layout

Mechanical Dimensions



Ordering Information for 57S81 Series (500 Watt VXI and VME Power Supply)

57 S 81- XX M 0 - XX

CODE (Used only for "Specials")

OPTIONS: 0 = Standard Testing (Includes ESS Temperature Cycling per NAVMAT)
1 = = Standard Testing plus ESS Vibration Testing (per NAVMAT)

OUTPUT VOLTAGE(s):
-01 = VXI Output Voltages
-02 = VME Output Voltages

WATTAGE: S = 500 W

Consult Factory for Additional Options and/or Special Units

Code Table for "Specials"