

MGV600T11K7

Overview

DC-DC Power Supply, Water Resistant (Sealed Enclosure), 600VDC INPUT, 270VDC Output, 11.7KWATTS Max

Market(s)

Defense, Industrial

Typical Application(s)

Electric Vehicle, Onboard equipment power



Product Highlights

This ruggedized military Commercial Off the Shelf (COTS) power supply operates from a 600VDC input. The single 11700W output capability is the power supply solution for military COTS applications. It is designed to meet the environmental requirements of MIL-STD-810F and EMI requirements of MIL-STD-461F. In comparison to other power supplies using conventional technology, this package provides users with higher efficiency (89% typical), less weight, and higher power output. This power supply is designed to power Military Ground Vehicle 270V equipment and converters. Contact Aegis Power Systems, Inc. for specific details on what applicable portions of a military standard is offered for this power converter power supply.

Features

- MIL-PRF-GCS600A 600VDC Input Power
- MIL-STD-704F 270V Output Power
- MIL-STD-810F Environmental *
- MIL-STD-461F EMI *
- Sealed enclosure power supply

* Designed to meet applicable portions of this standard. Contact Aegis Power Systems, Inc. for specific details.

Table 1: Maximum Continuous Operating Ratings

Parameter	Rating	Unit	Notes
Vin range	565 to 635	Vdc	Per MIL-PRF-GCS600A
Temperature	-40 to +50	°C	-40 to +100 Non-operating
Output Power	11700	W	(+50°C Ambient)
Input power	13140	W	(+50°C Ambient)
Output Voltage	+270	Vdc	Refer to Table 2 (Output)

About Us

Aegis Power Systems, Inc. specializes in the design, development, and manufacture of AC-DC and DC-DC power supplies for high-performance, rugged, critical, and specialty applications. Markets served include defense, industrial, communications, aircraft, shipboard, rack mount, embedded computing, and electric vehicle applications. Contact us to find out if this item can be configured or redesigned to meet your specific technology need.

SPECIFICATIONS

(Typical at 25°C, nominal line and 100% load, unless otherwise specified.)

Input Voltage	600Vdc, (565Vdc – 635Vdc) Per MIL-PRF-GCS600A
Input Current	22Amps (11700W Output)
Input Power	13140W (11700W Output)
Output Power	11700W Maximum
Output Voltages	+270Vdc - See table 2 for details
Efficiency	89% Nominal, 87% Minimum.
Output Ripple	See table 2.
Current Limit	Short circuit protected with automatic recovery
Start-Up Time	1 to 2 seconds
Voltage Set Point	270Vdc (@25C ambient)
Regulation	250Vdc to 280Vdc
Output Voltage Temperature Coefficient	+/- 100 mV / °C.
Temperature	-40°C to +50°C Operating / -40°C to +100°C Non-operating
Cooling	Liquid Cooled ½" Threaded Inlet/Outlet Fittings with ½" Hose Barb
Package	Enclosed case chassis mounted.
Dimensions	15.75" L x 17.75" W x 4.69" H
Weight	45 lbs. maximum
Connectors	+600Vdc Input Connector TBD +270Vdc Output Connector TBD Status Output Connector P/N: MS3474W12-8S
Environmental	Designed to meet applicable portions of MIL-STD-810F, Ground Mobile
Humidity	0 – 95% non-condensing
EMI	Designed to meet applicable portions of MIL-STD-461F CE102, CS101, CS114, and RE102. (Ground Range)

Specifications subject to change without notice.

Table 2: Voltage Output (Nominal)

MGV600T11K7		V1		
Voltage	+270Vdc			
Current	43.34A			
Power	11700W			
Ripple	2.7Vpk-pk*			

* 20MHz Bandwidth Limited.

Table 3: Connector Specifications

DC Input Connector TBD

Contact Designation	Conductor Circuit

Status Connector P/N: MS3474W12-8S.

Contact Designation	Conductor Circuit
A	DC Input OK Collector *
B	DC Output OK Collector*
C	Over Temp * **
D	Enable Anode
E	Enable Cathode
F	
G	+5V Standby
H	Standby Return

*Common emitter internally tied to +5V Standby Return.

**Normally closed thermal switch (Open @ 90°C)

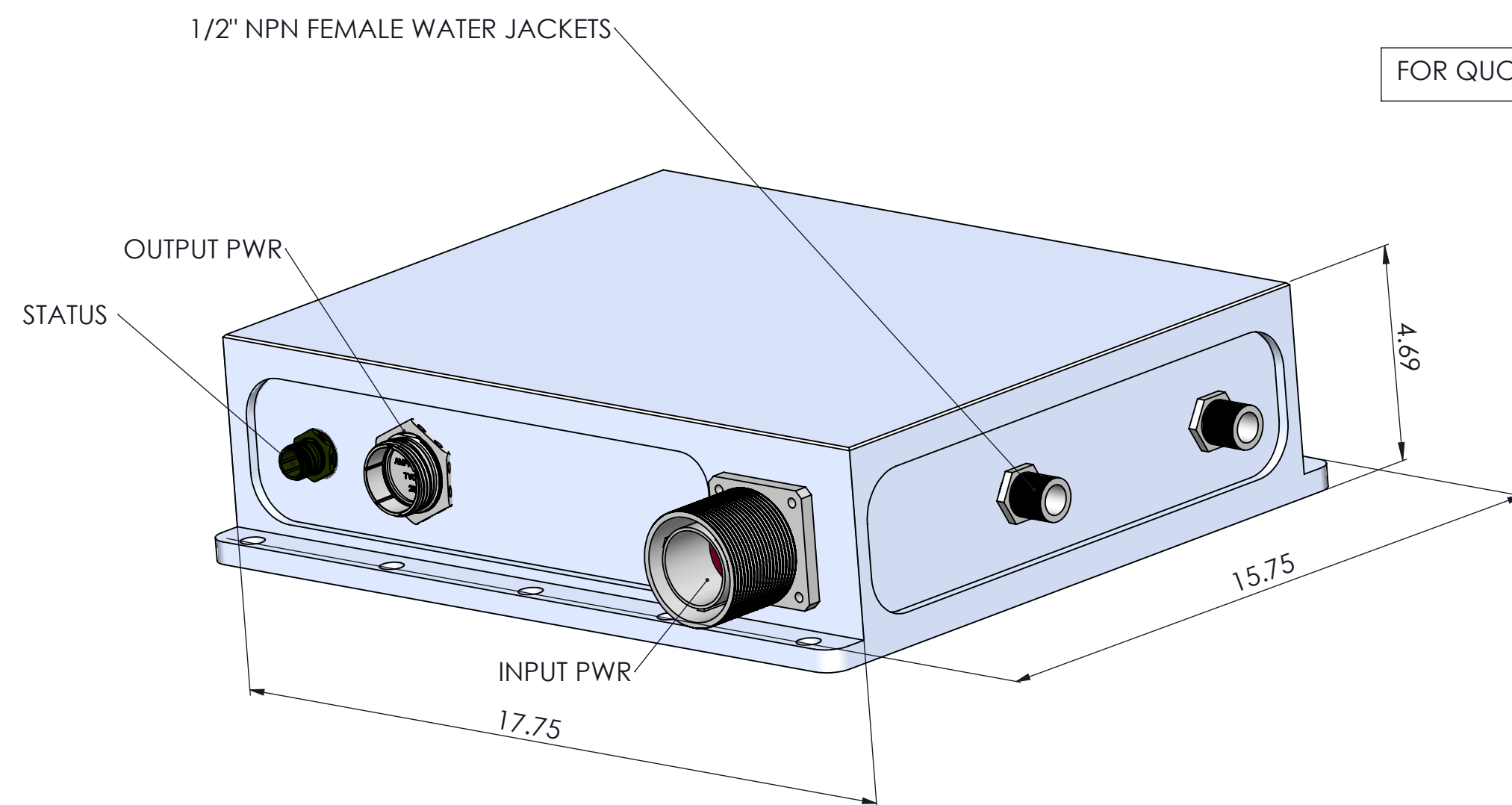
DC Output Connector TBD

Connection	Circuit

NOTES: UNLESS OTHERWISE SPECIFIED

- 1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.
- 2. FINISH: ROHS COMPLIANT CLEAR NON-CROMATE CHEMICAL FILM PER MIL-C-5541 CLASS 3, (IN ACCORDANCE WITH MIL-DLT-81706, TYPE II, CLASS 3).
- 3. MATERIAL: 6061-T6 ALUMINUM ALLOY

DWG NO.		2		1	
		SH	REV		
REVISIONS					
ZONE	REV	INITIAL RELEASE		DATE	APPROVED
	A01			10/29/18	TBL



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UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL ± N/A
 DEGREES: ± .5
 TWO PLACE DECIMAL ± .02
 THREE PLACE DECIMAL ± .005

REFER TO 3D PART :	
MATERIAL	SEE NOTE 2
FINISH	SEE NOTE 3
	DO NOT SCALE DRAWING

CONTRACT NO.		
APPROVALS	NAME	DATE
DRAWN	TL	10/29/18
CHECKED	MVM	
ENG APPR.	TL	
MFG APPR.	JM	
Q.A.	MH	

AEGIS POWER SYSTEMS MURPHY, NORTH CAROLINA			
TITLE: MGV600T11K7			
AEGIS P/N:			
SIZE	FSCM NO.	DWG. NO.	REV
B	06ES8		A01

SCALE: 1:3	SHEET 1 OF 1
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