

# MGV600T11K7

## Overview

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

## 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
<b>Vin range</b>	565 to 635	Vdc	Per MIL-PRF-GCS600A
<b>Temperature</b>	-40 to +50	°C	-40 to +100 Non-operating
<b>Output Power</b>	11700	W	(+50°C Ambient)
<b>Input power</b>	13140	W	(+50°C Ambient)
<b>Output Voltage</b>	+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.)

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

M GV600T11K7	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: M S3474W 12-8S.**

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)

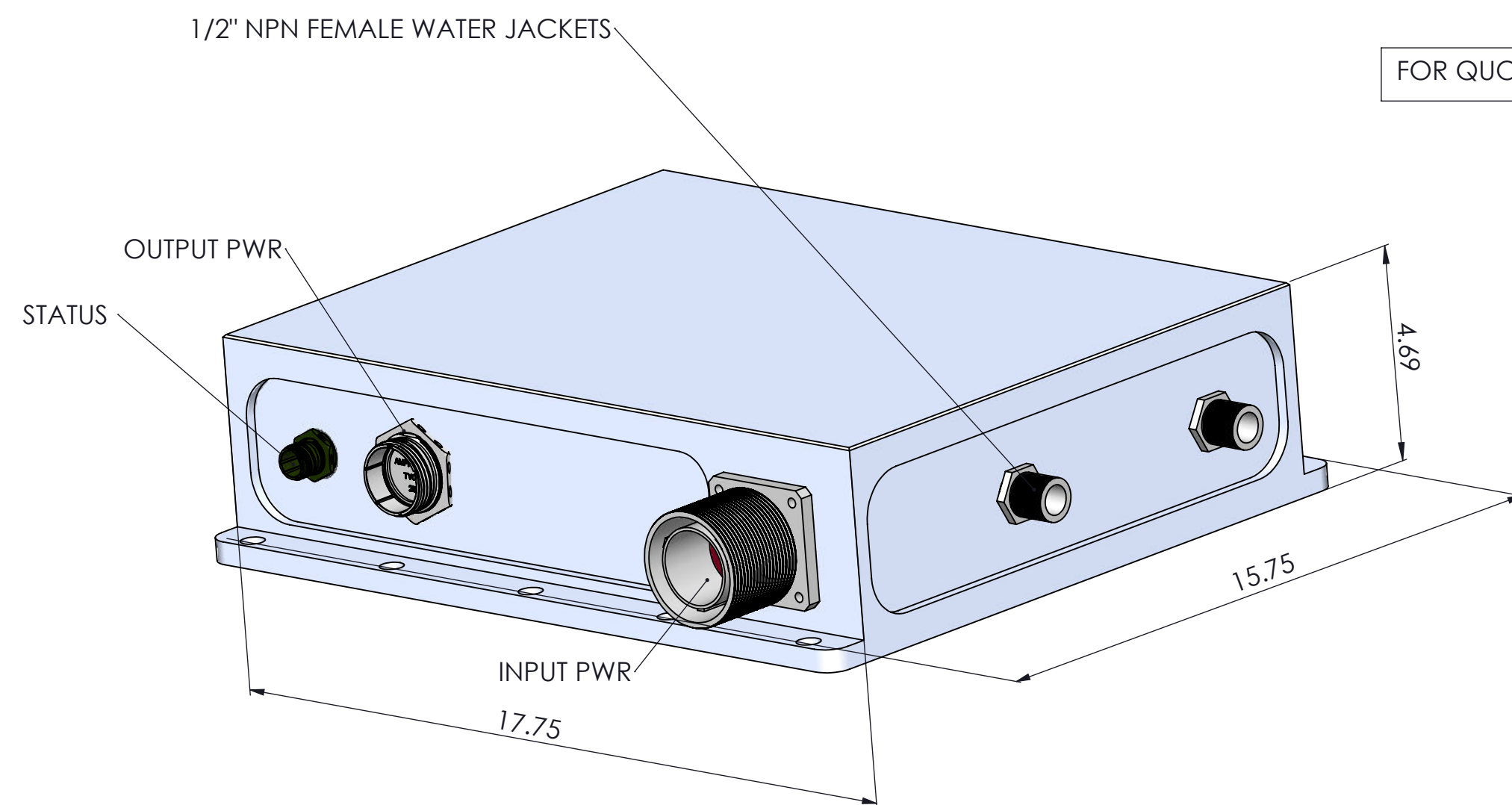
**DC Output Connector TBD**

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

2		1	
DWG NO.	SH	REV	REVISIONS
ZONE	REV	DATE	APPROVED
A01	INITIAL RELEASE	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.			AEGIS POWER SYSTEMS MURPHY, NORTH CAROLINA		
APPROVALS	NAME	DATE	TITLE:		
DRAWN	TL	10/29/18	<b>MGV600T11K7</b>		
CHECKED	MVM		AEGIS P/N:		
ENG APPR.	TL				
MFG APPR.	JM				
Q.A.	MH				
COMMENTS:			SIZE	FSCM NO.	DWG. NO.
			B	06ES8	
			SCALE: 1:3	SHEET 1 OF 1	

