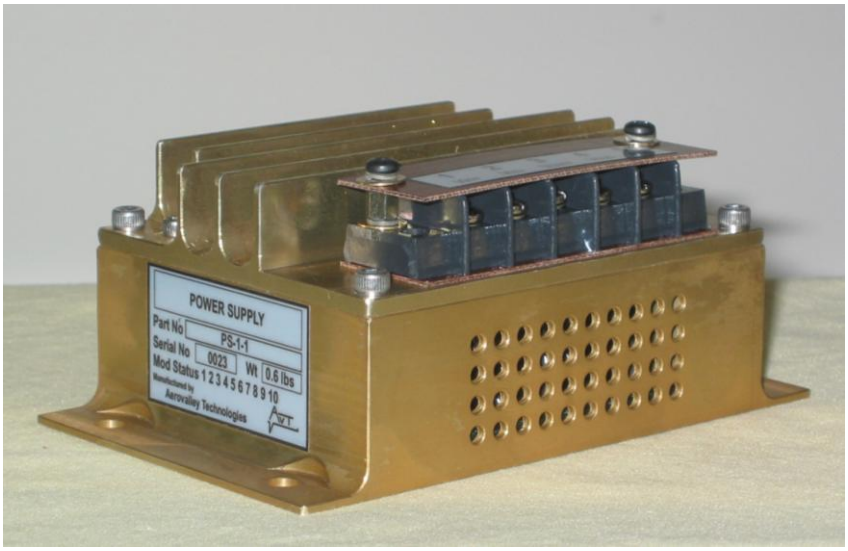
Aerovalley Technologies

PS-1-1

UNIVERSAL POWER SUPPLY

INSTALLATION MANUAL



Revision 02

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Section 1 - Description and Specifications

1.1 Purpose of Equipment

The PS-1-1 Power Supply is specifically designed to allow the installation of a wide range of commercial equipment into an aircraft. The PS-1-1 provides a single voltage output selectable via an external resistor.

1.2 Features

- Output voltage, selectable via external resistor.
- Max current limited 6.3 amps
- Thermal shutdown protection
- Soft start
- Low output ripple.
- Highly efficient, switching power supply
- Compact size and weight
- Loss of external setting resistor result in 0VDC output
- Surge protected

1.3 Physical Specifications

Height:	50.5 mm	(1.99 inches)
Depth:	71 mm	(2.79 inches)
Width:	115 mm	(4.53 inches)
Weight:	260 g	(0.57 lb)
Mounting:	Bulkhead attachment	

1.4 Environmental Specifications

Designed but not tested to:

Temperature:	-40 to +54 Degrees C (operating)
Altitude:	35,000 ft max.
Humidity:	95% non-condensing

1.5 Electrical Specifications

Input voltage:	28 VDC
Input current:	Max 2.2A
Voltage output:	3.3 – 24.0 VDC User to specify
Power output:	Max 50 Watts

1.6 Interface Specifications

Customer selectable. Refer to 3.2

Section 2 – Installation

2.1 Equipment Required:

The following equipment is required, but not supplied with the PS-1-1 Power Supply:

- 4BA Ring Tong Type terminals

2.2 Installation Considerations

2.2.1 Cooling
No direct cooling is required. As with any electronic equipment, overall reliability may be increased if the PS-1-1 is installed away from any high heat sources.

2.2.2 Equipment Location
The PS-1-1 must be mounted within the pressurised region of the aircraft. Consideration should be given to areas with lower ambient temperature.
The PS-1-1 should not be installed near devices, such as inverters, which produce strong AC magnetic fields.

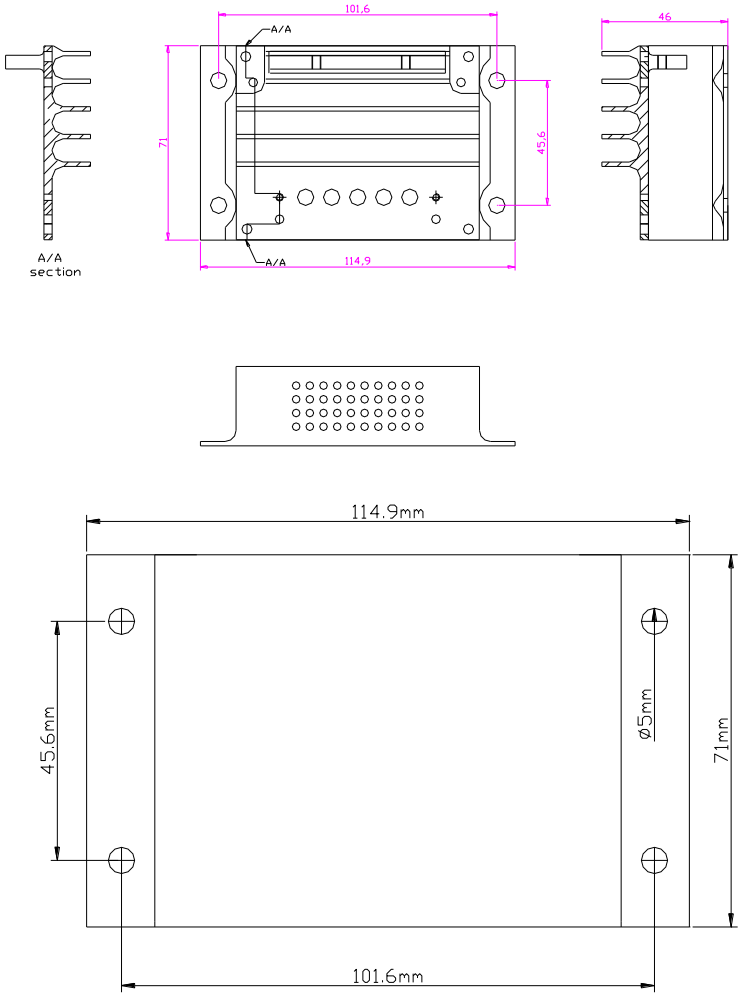
2.2.3 Routing of Cables
Care must be taken not to bundle the wiring from the PS-1-1 with any wires containing high-energy or sources of electrical noise such as transmitter coax lines, AC power wiring and electric motors. Care must be taken to tie wiring harness clear of aircraft controls and cables

2.2.4 Cable and Wiring
All wiring should be at least 22 AWG, power and ground wiring should be at least 20 AWG. Tefzel M22759/16 (for non-shielded wiring) is recommended, or as specified by OEM or design authority of the installation.

2.2.5 Interconnection
The PS-1-1 uses a five terminal ring and tong type termination.

Section 3 – Installation Procedures

3.1 PS-1-1 Mechanical Dimensions



3.2 R4 specifications for use as an external resistor

Nominal Output Voltage	R4 (ohms) external resistor	R4 Preferred value (ohms) (MRS25 1% range)
3.3	5789	5760
5	3193	3240
6	2526	2550
7	2090	2100
8	1782	1780
9	1553	1540
10	1377	1370
11	1236	1240
12	1121	1100
13	1026	1020
14	946	953
15	877	887
16	818	820
17	766	768
18	721	715
19	680	681
20	644	649
21	611	604
22	582	576

Terminal Configuration viewed from top: