Model RPS-77-2
Dual Airborne Power Supply

Features

- **A Bendix PT02E-8-4P Mil-Type 4 Pin Receptacle.**
- **Dual 28 to 12 VDC Mil-Type DC/DC Converters and Regulators are contained inside the unit to permit 18 to 36 VDC operation of the camera system.**

General Description:

The RPS-77-2 is a junction box and power supply that facilitates the use of SEKAI ruggedized camera systems and accessories in an aircraft or other vehicle rugged environment. The RPS-77-2 contains DC/DC power converters to permit the use of 28VDC power input from the vehicle to power two (2) RSC Series cameras.

Basic SEKAI RPS-77 Airborne Power Supply:

The RPS-77-2 Airborne Power Supply provides power and signal access to the camera via standard CCXC-XX type cables. The following inputs/outputs are provided:

A. DC input, MIL-TYPE 4 pin locking connector
B. HD input via BNC
C. VD input via BNC
D. Video/Luminance OUT via BNC
E. Clock/Chrominance OUT via BNC

Electrical and Mechanical Characteristics

DC/DC Converter: Conversion Devices Model 512S28 or equivalent

A. Power input: 28VDC

B. Power output: 12VDC, 5 watts per camera

C. Conversion efficiency: up to 80%

D. Output Specifications

Voltage Accuracy:	±1.0%, max
Line Regulation (LL-HL):	± 0.05%, max.
Load Regulation (NL-FL):	±0.02%, max.
Ripple and Noise, 20MHz BW:	25mV, P-P
Temperature Coefficient @ FL:	±0.02%/^{0} of Vout, max.
Warm-Up Drift @ FL:	±1.0%, max. (Incl. TC)
Transient Recovery Time to:	1% of Final Value
NL-FL or FL-NL:	50µ sec, max.
Short Circuit Current Limit:	I out+75%
Short Circuit Protection:	Indefinite
Short Circuit Restart:	Automatic

E. Environmental Specifications

Operating Temperature Range:	-30^{0}C to + 75^{0}C
Storage Temperature Range:	-50^{0}C to + 125^{0}C
Derating of Output:	None
Humidity:	Up to 95% RH (Non-Condensing)
Cooling:	Free Air Convection or Bottom Conduction
EMI/RFI	Six-Sided Continuous

RPS-77 Mechanical Considerations

Two brackets are provided with each RPS-77-2 to facilitate attachment to a flat surface. Lock-Tight is applied to all screws to prevent back-out during vibration.

Metal Case

Size:	3.15"W x 1.57"H x 1.97"D (80mm) x (40mm) x (50mm)
Weight:	10.3 Oz., max. (320.3 gr.)
Case Material:	Metal

Power Connector Pins:

A: +28VDC
B: 28VDC Return (Ground)
C: Chassis
D: Not used

Specifications subject to change without notice. SE-074 10/02

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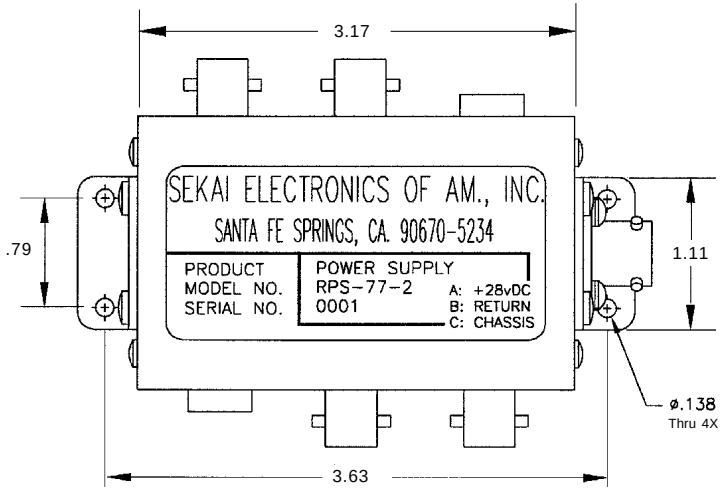

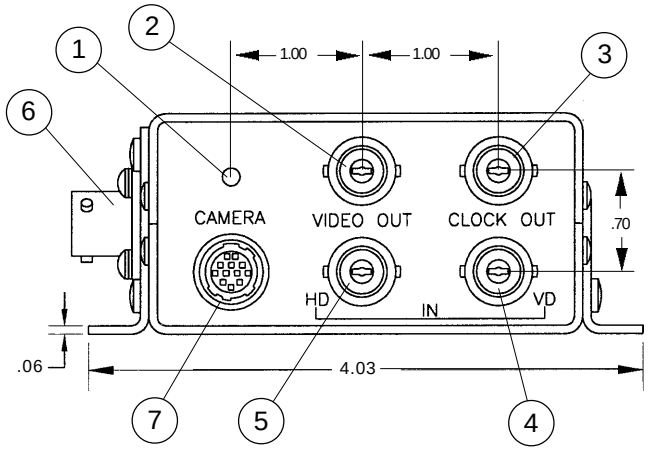

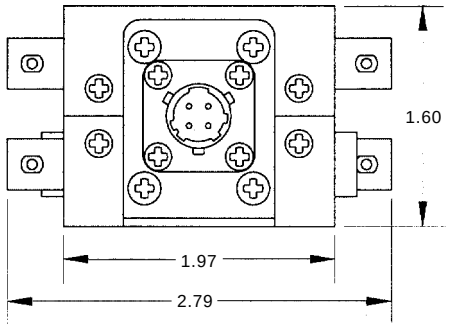

(1) PILOT LAMP

(2) VIDEO OUT (Video Output Signal) connector (BNC)(Also"Y"out)

(3) CLOCK OUT CONNECTOR (Also "C" out)

(4) VD IN CONNECTOR (BNC)
VD or VBS signals are in put to the camera from from the exernal signal generator

(5) HD IN CONNECTOR
HD signal is input to the camera from the external signal generator

(6) INPUT POWER (28VDC ± 4VDC)
Pin Connections:
A: +28VDC C: Chassis Ground
B: Return D: N/C

(7) Output Power; Video and Signals from camera (2 places)

Items (1) through (5) apply both sides

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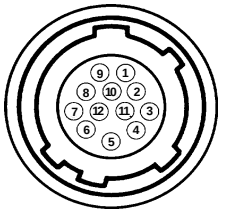

(7)
Front view of receptacle on RPS-77

Signal / Pin No.	Pin Assignment of DC Out Video Connector		
	External sync Signal		Internal Sync Signal
	HD, VD	VS	
1	Ground	Ground	Ground
2	+12V	+12V	+12V
3	VBS/Y Output (ground)	VBS/Y Output (ground)	VBS/Y Output (ground)
4	VBS/Y Output (signal)	VBS/Y Output (signal)	VBS/Y Output (signal)
5	HD input (ground)	-	-
6	HD input (signal)	-	-
7	VD input (signal)	VS input (signal)	-
8	-/C output (ground)	-/C output (ground)	-/C output (ground)
9	-/C output (signal)	-/C output (signal)	-/C output (signal)
10	Ground	Ground	Ground
11	+12V	+12V	+12V
12	VD input (ground)	VD input (ground)	-

Dimensions are in inches	RPS-77-2 ASSEMBLY		
Tolerances are:	Scale: Date: 7-23-98	Approved By: LK	Drawn By: R Y Revised: 12-07-00
XX = ± .01 XXX = ± .005 Angles = ± 1 Deg.	AIRCRAFT POWER SUPPLY		
	SEKAI Electronics of America, Inc. 13570 Larwin Cir., Santa Fe Springs, CA 90670-5031		Drawing Number R77-2-001