

Features

- ⊕ A Bendix PT02E-8-4P Mil-Type 4 Pin Receptacle.
- ⊕ Conducted EMI Filter included.
- ⊕ A 28 to 12 VDC Mil-Type DC/DC Converter and Regulator is contained inside the unit to permit 24 to 36 VDC operation of the camera system.
- ⊕ A Two channel model RPS-77-2 is also available.

General Description:

The RPS-77 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 contains a DC/DC power converter to permit the use of 28VDC power input from the vehicle.

Basic SEKAI RPS-77 Airborne Power Supply:

The RPS-77 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 (2 outputs, 5 watts each for RPS-77-2)
- C. Conversion efficiency up to 75%
- D. Output Specifications

Voltage Accuracy:	±1.0%, max
Line Regulation (LL-HL):	± 0.03%, max.
Load Regulation (NL-FL):	±0.03%, max.
Ripple and Noise, 20MHz BW:	20mV, P-P
Temperature Coefficient @ FL:	±0.02%/° 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:	Iout+75%
Short Circuit Protection:	Indefinite
Short Circuit Restart:	Automatic



Note: In the case of the two-channel RPS-77-2, there are four BNC connectors and one 12 pin camera on the opposite side of unit identical to, and in juxtaposition to those shown on this side.

E. Environmental Specifications

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

RPS-77 Mechanical Considerations

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

Metal Case

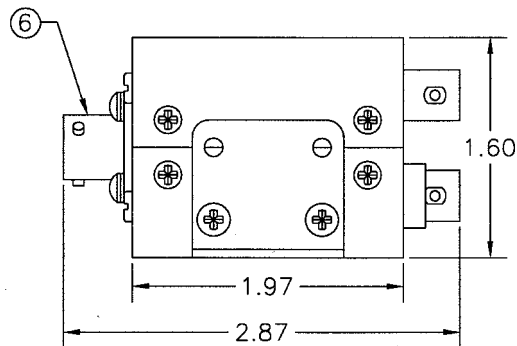
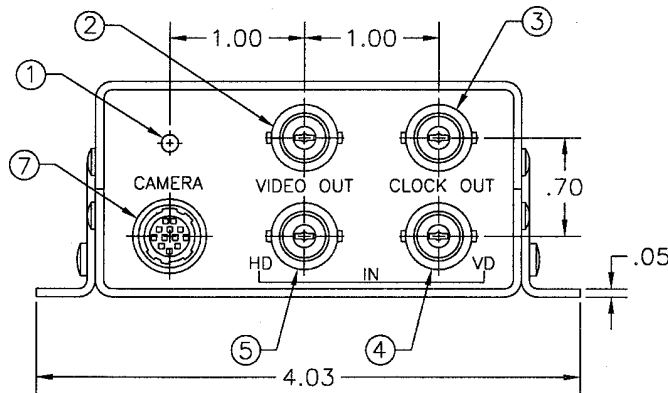
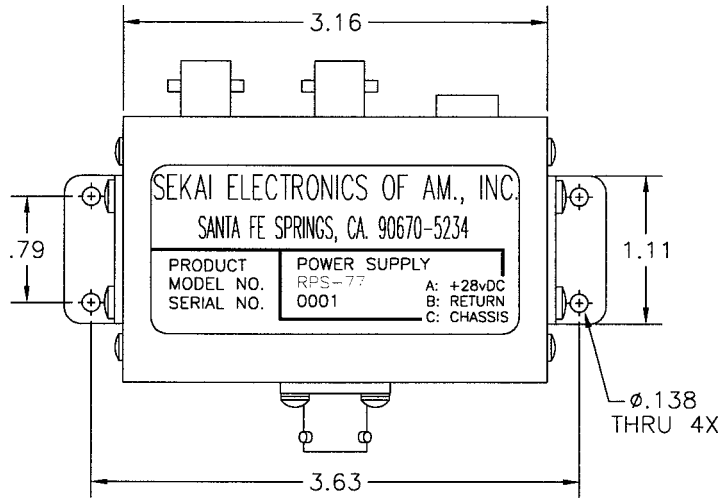
Size:	3.15"W x 1.57"H x 1.97"D (80mm) x (40mm) x (50mm)
Weight:	11.4 Oz., max. (320 gr.)
Case Material:	Metal
Power Connector Pins:	
A:	+28VDC
B:	28VDC Return (Ground)
C:	Chassis
D:	Not used

* MIL-STD-704E compliance is a design goal, but has not been verified by testing

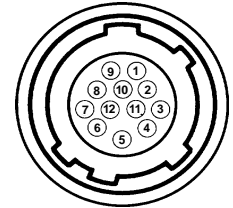
Specifications subject to change without notice.

SE-044e 04/04





- 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 external 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



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-77E ASSEMBLY		
	Scale: Date: 1-3-94	Approved By: LK	Drawn By: RY Revised: 12-06-00
Tolerances are: XX = ± .01 XXX = ± .005 Angles = ± 1 Deg.	AIRCRAFT POWER SUPPLY		
	1 s Electronics of America, Inc. 13570 Larwin Cir., Santa Fe Springs, CA 90670-5031		Drawing Number R77-001