



KPSU

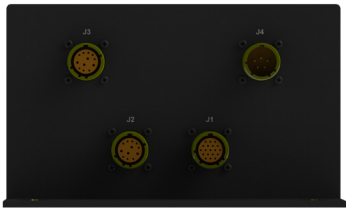
Ku/Ka Band Power Supply Unit

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A Sanmina Company

OAE power supply and Ethernet switching for commercial aircraft

The KPSU (KU/KA Power Supply Unit) designed and manufactured by SCI Technology is the only commercially available power supply compliant to the new ARINC-792 SATCOM standard. The KPSU provides two outputs, nominally 52-VDC, of up to 2,000W of power to the Outside Antenna Equipment (OAE), and provides Ethernet connectivity between the OAE and MODMAN. Additionally, the KPSU supports the Discrete control and status signals to and from the MODMAN as defined in ARINC-792.



Ku/Ka-band Power Supply Unit (KPSU)

- KPSU is ARINC-792 Compliant
- Mounts in aircraft "overhead"
 - Mounting compliant with ARINC-836
- KPSU-supported functions provide:
 - Power to Outside Antenna Equipment (OAE)
 - Ethernet connectivity between OAE/MODMAN
 - Configurable and actionable aircraft discrete inputs/outputs

Electrical Specifications

- Input Power per RTCA/DO-160G 3-Phase 115 VAC @ up to 2200 Watts
- Two Outputs of Nominal 52 VDC Conditioned Power to the OAE
 - Output 1 (Labeled as J2-RX):
 - 52VDC @ 20A minimum, Power: 1040W
 - Output 2 (Labeled as J3-TX):
 - 52 VDC @ 20A minimum, Power: 1040W
- Output Rise Time: 100ms nominal
- Combined Output Voltage Ripple/Noise: 0.4V Maximum p-p
- Line & Load Regulation: 0.4V Maximum, Efficiency: > 88% when driving > 1000W
- Output Current Limit: Short Circuit protected at > 44A
- Output over Voltage Protection: > 60VDC

- Start-up time: less than 1 second
- Output power hold-up for 200 msec
- Over temperature Protection: +90C with automatic recovery
- Integrated 3-port 10/100 Base-T Ethernet switch
 - 1 port to J1, 1 port to J2, 1 port to J3
- Discrete inputs are "Open/Gnd" receivers referenced from "DC28V"
- Discrete outputs are "Open/Gnd" drivers referenced to "Signal Gnd"
- AC & DC "Power Good" Output Status Discretes
- Power factor correction > 97%

Mechanical Specifications

- ARINC-836 Form-Factor (5.5 in height)
- Weight to be verified
- Electrical Interfaces over MIL-DTL-38999 Series 3 Connectors per ARINC-792
- Input Isolation: 2150V DC
- Output Isolation: 1000V DC to chassis
- Options for forced-air cooled or Internal fan

Environmental Specifications

- RTCA/DO-160G Environmental Testing for ARINC-792 Compliance
- RTCA/DO-160G EMI Testing for ARINC 792 Compliance