

KAM/PSU/014

Power supply unit for Acra KAM/CHS/02F (+5V and $\pm 12V$) - 6-way connector

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Overview

The KAM/PSU/014 converts the nominal 28V aircraft power into the voltages needed by the KAM/CHS/02F chassis backplane.

The KAM/PSU/014 is only supplied as part of the KAM/CHS/02F housing.

The +5V supply is primarily for digital circuitry, the $\pm 12V$ is primarily for analog circuitry.

The KAM/PSU/014 has one external bayonet power connector.

Key Features

- Supplies +5V and $\pm 12V$ for backplane
- Fully isolated
- No derating with temperature (-40°C to 85°C)
- Reverse polarity protection
- Indefinite short-circuit protection
- EMI filtering

Applications

- Power supply for data acquisition system

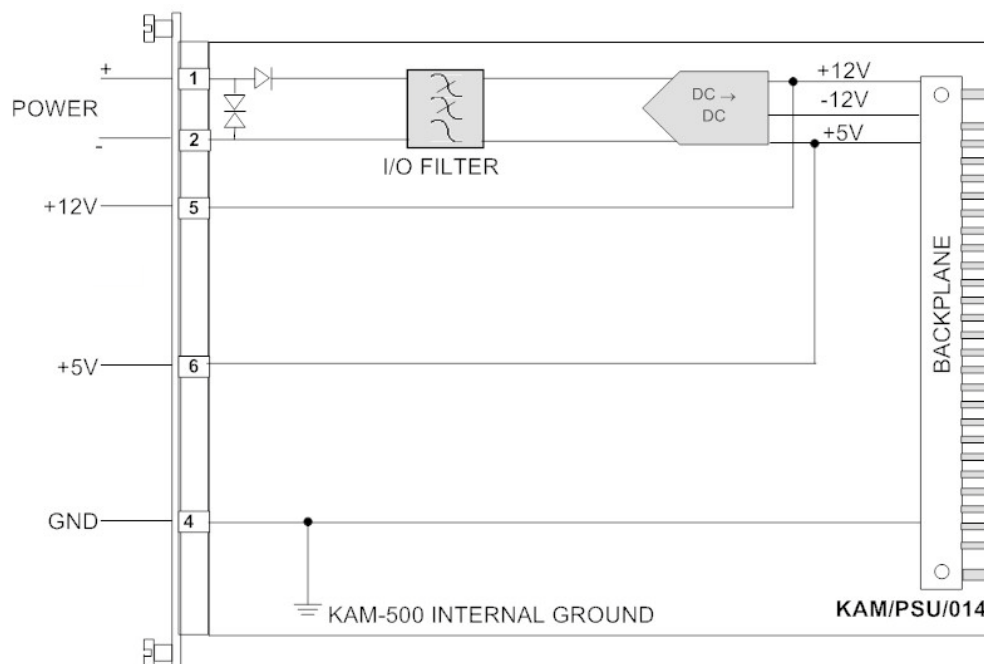


Figure 1: KAM/PSU/014 power supply

Specifications

All values provided in the following specification tables are valid within the operating temperature range specified under “Environmental ratings” in the “General specifications” table.

TABLE 1		General specifications				
PARAMETER	MIN.	TYP.	MAX.	UNITS	CONDITION/DETAILS	
Mass						
	-	204	-	g		
	-	7.19	-	oz		Design metric is grams.
Height above chassis						For recommended clearance requirements see the CON/PSU/007/FL/100 data sheet.
bare connector	-	-	9	mm		
bare connector	-	-	0.35	in.		Design metric is millimeters.
Environmental ratings						See <i>Environmental Qualification Handbook</i> .
operating temperature	-40	-	85	°C		Chassis base/side plate temperature.
storage temperature	-55	-	105	°C		

TABLE 2		Electrical specifications				
PARAMETER	MIN.	TYP.	MAX.	UNITS	CONDITION/DETAILS	
Input range	18	28	40	V		15W max. output.
Reverse polarity protection	-40	-	-	V		
Current available						Particular combinations of chassis and Acra KAM-500 modules may have power or current limitations. For details, see <i>TEC/NOT/016 - Power dissipation</i> , <i>TEC/NOT/049 - Power estimation</i> , and the relevant chassis data sheet.
+5V	-	-	1,500	mA		Short circuit protection; indefinite to GND.
±12V	-	-	310	mA		Short circuit protection; indefinite to GND.
Efficiency	-	75	-	%		At full load.
Physical						
connector	-	-	-	-		
placement	-	-	-	-		Not removable.

Getting the most from the KAM/PSU/014

When an Acra KAM-500 chassis with a KAM/PSU/014 is operated from a MIL-STD-704E compliant supply, the chassis is operational with a supply voltage in the range of 18 to 40VDC. This voltage range covers the normal (22 to 29VDC) and emergency (18 to 29VDC) modes of operation as defined in MIL-STD-704E. The Acra KAM-500 is in a non-operational but safe mode for supply voltages less than 18VDC. Operation with an input voltage greater than 40VDC is not permitted, except for very short transients as described in MIL-STD-704E.

Connector pinout of the KAM/PSU/014

PIN	NAME	DESCRIPTION	COMMENT
1	POWER+	Nominal 28V supply	Isolated internally; aircraft power
2	POWER-	Return for nominal 28V	Isolated internally; aircraft power
3	CHASSIS	Chassis	
4	GND	Internal ground	
5	+12V	Internal +12V out	Current depends on internal loading
6	+5V	Internal +5V out	Current depends on internal loading

Ordering information

PART NUMBER	DESCRIPTION
KAM/PSU/014	Power supply unit for Acra KAM/CHS/02F (+5V and $\pm 12V$) - 6-way connector

By default, the standard mating connector, CON/PSU/007/FL/100, is included with each module in the shipment. Its part number will be added to the Confirmation of Order unless an alternative option is specified (see the *Cables* data sheet).

Revision history

REVISION	DIFFERENCES	STATUS
KAM/PSU/014	First release	Recommended for new programs

Related documentation

DOCUMENT	DETAILS
DOC/DBK/001	Acra KAM-500 Databook
DOC/HBK/002	Environmental Qualification Handbook
DOC/MAN/018	KSM-500 Databook
TEC/NOT/016	Power dissipation
TEC/NOT/049	Power estimation