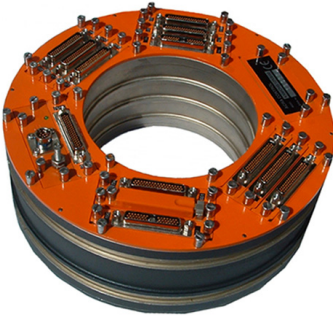


KAM/CHS/12R

Acra KAM-500 circular form chassis with 12 user-slots



Overview

The KAM/CHS/12R is a twelve user-slot Acra KAM-500 chassis, which along with the housing and backplane, includes a power supply module, which regulates power supplies for the backplane (isolated 28V nominal in).

The backplane has twelve connectors for user-modules, which are polarized to prevent the insertion of the backplane controller module. The backplane distributes power and connects address, data and control lines to the user-modules.

The only ICs on the backplane are demultiplexers for user-module select signal. Any user-module can be placed in any user-slot in any combination.

2.0A is available for bridge excitation.

Key Features

- Power supply unit and twelve user-slots
- 18 to 40VDC isolated power supply
- Rugged aluminum housing
- 8MHz x 16-bit digital backplane
- Operates as master or slave in distributed system
- LED power-on indicator
- Circular form factor

Applications

- Helicopter data acquisition systems

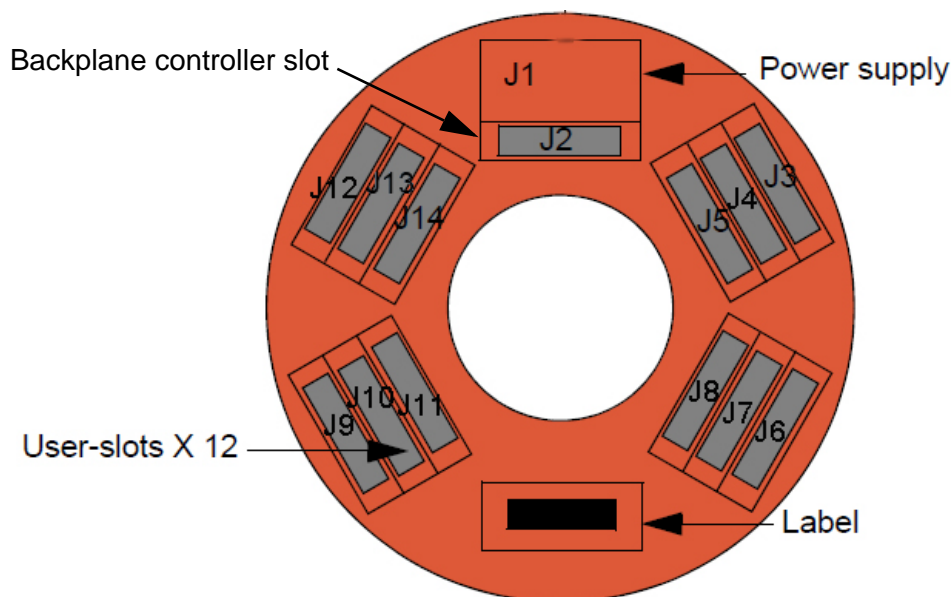


Figure 1: KAM/CHS/12R with PSU and twelve user-slots (PSU split in two for balancing)

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		Mechanical specifications				
PARAMETER	MIN.	TYP.	MAX.	UNITS	CONDITION/DETAILS	
User slots	–	–	12	–		
Dimensions					Design metric is millimeters.	
height	–	98.5	–	mm	Includes module retention screws and ground bolt.	
height	–	3.88	–	in.	Includes module retention screws and ground bolt.	
diameter	–	250	–	mm		
diameter	–	9.84	–	in.		
Mass					Design metric is kilograms.	
no modules	2.78	2.79	2.80	kg	Including power supply.	
no modules	6.13	6.15	6.17	lb	Including power supply.	
fully populated	3.74	3.75	3.76	kg	Typical module weight of 75g.	
fully populated	8.18	8.28	8.38	lb	Typical module weight of 2.65oz.	
Environmental ratings					See Environmental Qualifications Handbook.	
operating temperature	-40	–	85	°C	Chassis base/side plate temperature.	
storage temperature	-55	–	125	°C		
Finish					Electroless nickel plated.	
top parts	–	–	–	–	Painted REINORANGE RAL2004.	
base, side and end plates	–	–	–	–	Painted black GRIGIO SCURO OPACO C604.	
10-32 UNF Helicoil					Inserted into base, 1.5D, stainless steel	

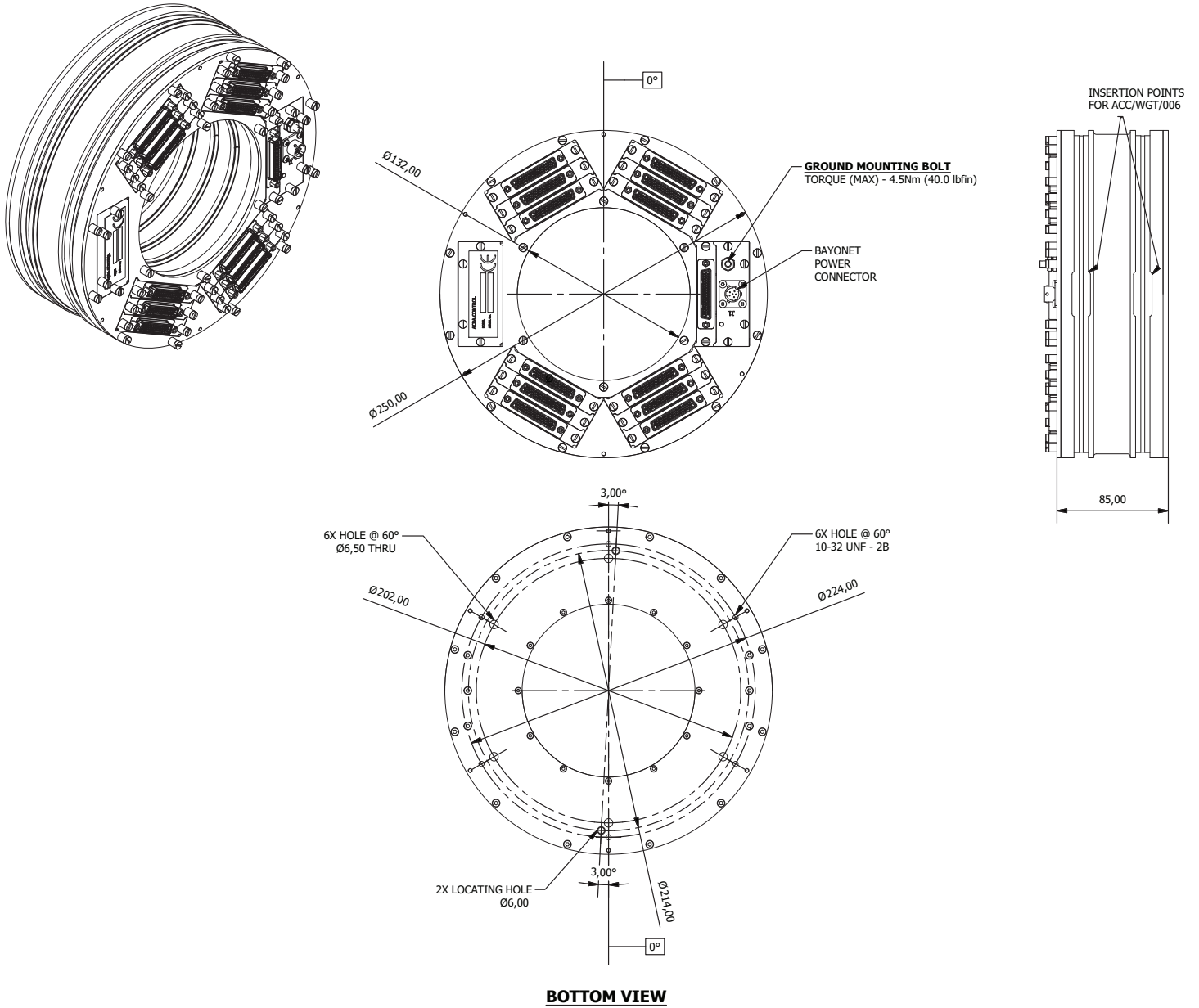


Figure 2: KAM/CHS/12R/E mechanical drawing

Getting the most from the KAM/CHS/12R

Curtiss-Wright recommends that balancing weights (ACC/WGT/006) be used (see the following figure).

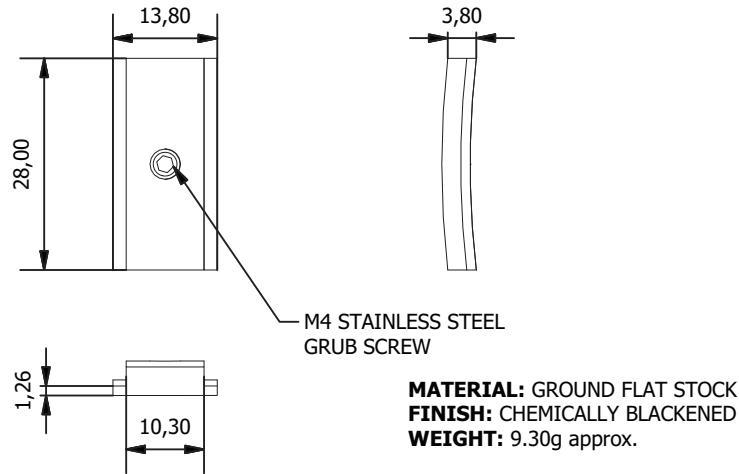


Figure 3: ACC/WGT/006 balancing weights

There are two dowel holes (6.00mm drilled H7 x 6mm deep), which are used as a guide for mounting the chassis. The dowel holes are labeled “Ref point A/B” in the following figure.

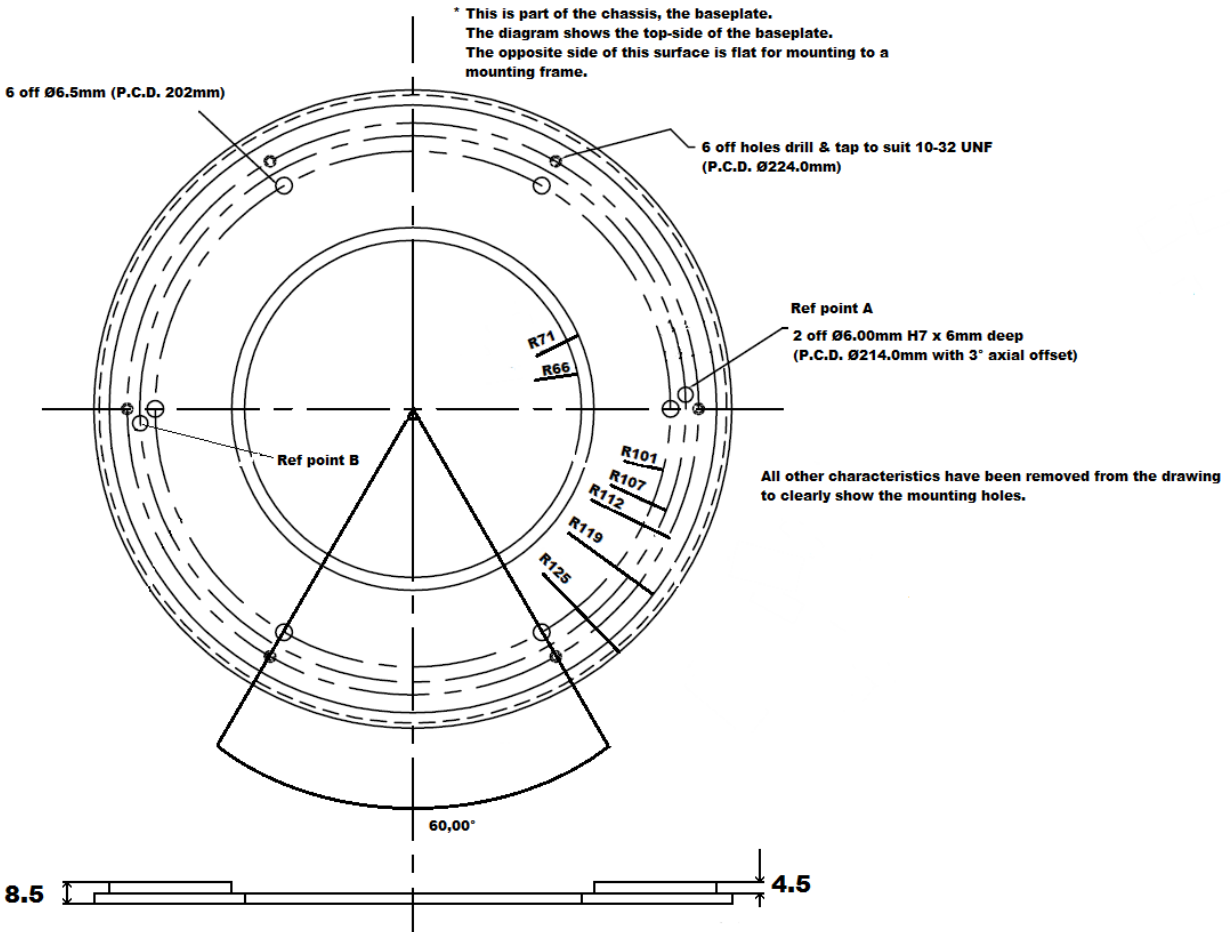


Figure 4: View of mounting holes for base plate

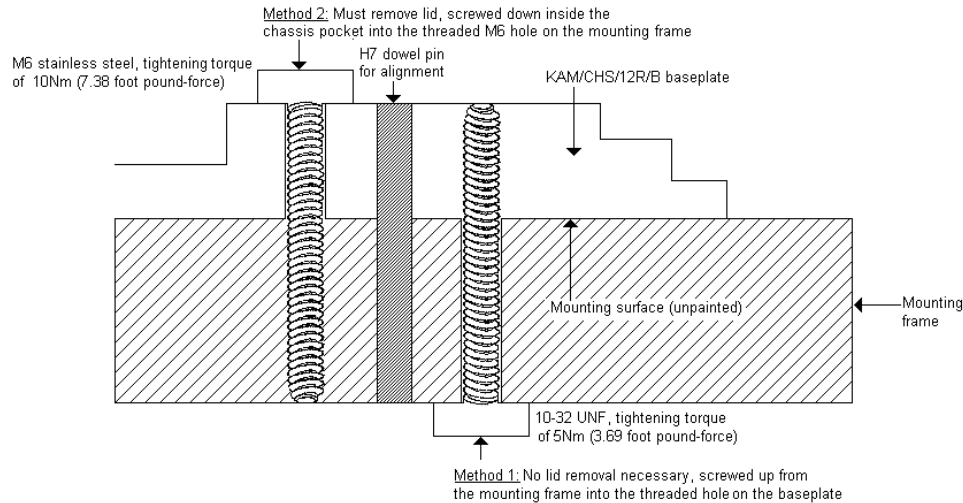


Figure 5: View of chassis mounting options

Chassis mounting

Method 1: A 10-32 UNF stainless steel bolt can be used to secure the chassis base plate from the mounting frame (recommended tightening torque of 5Nm [3.69 foot pound-force]).

Method 2: A 6mm stainless steel bolt can be used to secure the chassis base plate to the mounting frame after first removing the orange chassis lid and inserting the bolts through the pockets (recommended tightening torque of 10Nm [7.38 foot pound-force]).

Curtiss-Wright recommends the use of H7 dowel holes/pins for precision of assembly for both methods.

Connector pinout of the KAM/PSU/012

PIN	NAME	SEE SPECIFICATIONS TABLE	COMMENT
1	POWER+	Nominal KAM-500 28V supply	Isolated internally; aircraft power
2	POWER-	Return for nominal 28V	Isolated internally; aircraft power
3	CHASSIS	KAM-500 chassis	
4	GND	KAM-500 internal ground	
5	+12V	KAM-500 internal +12V	Current depends on internal loading
6	+5V	KAM-500 internal +5V	Current depends on internal loading

Ordering information

PART NUMBER	DESCRIPTION
KAM/CHS/12R/E	Acra KAM-500 circular form chassis with 12 user-slots

By default, the standard mating connector, CON/PSU/007/FL/100, is included with each chassis 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). Also included with each chassis in the shipment is ACC/WGT/006 - a bag of six weights which can be used for balancing.

Revision history

REVISION	DIFFERENCES	STATUS
KAM/CHS/12R/E	PSU upgraded to 5A on +5V power line	Recommended for new programs
KAM/CHS/12R/D	Includes KAM/PSU/012, 6-way bayonet connector, and supplies up to 4A on +5V power line	Not recommended for new programs
KAM/CHS/12R/D/MM	Includes KAM/PSU/011, 9-way micro-miniature connector, and supplies up to 4A on +5V power line	Not recommended for new programs
KAM/CHS/12R/C	Includes KAM/PSU/010 with diode for power-up, 6-way bayonet connector and LED	Not recommended for new programs
KAM/CHS/12R/C/MM	Includes KAM/PSU/009 with 9-way micro-miniature connector and diode for power-up	Not recommended for new programs
KAM/CHS/12R/B	Includes KAM/PSU/007 with 6-way bayonet connector and LED	Not recommended for new programs
KAM/CHS/12R	First release	Not recommended for new programs

Supporting software

SOFTWARE	DETAILS
DAS Studio 3	User interface for setup and management of data acquisition, network switches, recorders and ground stations in an integrated environment
KSM-500	This module is supported by the KSM-500 suite of software tools

Related products

MODULE	DETAILS
ACM/LID/001	Spare user-slot lids and spare screws for the Acra KAM-500 system
KAM/PSU/012/B	+5V, $\pm 7V$ and $\pm 12V$ power supply unit for Acra KAM-500 chassis with 6-way connector

Related documentation

DOCUMENT	DETAILS
DOC/DBK/001	Acra KAM-500 Databook
DOC/MAN/018	KSM-500 Databook
DOC/HBK/002	Environmental Qualification Handbook
DOC/MAN/030	DAS Studio 3 User Manual
TEC/NOT/016	Power dissipation