

Mechanical Notes for Rantec ATR / VME 6U Power Supplies

General Description

Rantec ATR / VME 6U power supplies are proven COTS based products for the most demanding military applications and environments. The single-slot conduction cooled and double-slot convection cooled models are VME format 6U x 160mm, per IEEE Std 1101.2-1999 / IEEE Std 1101.1-1998 (modified), power supplies. Refer to Rantec drawings OM32698 and OM30661 for outline and mounting dimensions and further information.

Connectors

The Rantec VME power supply (the module) is designed with 3 connectors as shown in Figure 1. The center input connector, PØ, is a 9 pin D-subminiature. The P1 and P2 output connectors are DIN 41612/IEC 606032 Type M. Part numbers for module connectors are shown in Table I.

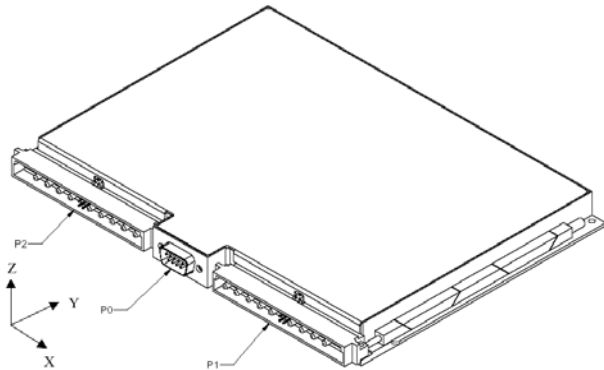


Figure 1. Connector Designations

Location	P/N	Mfr.	Desc.
PØ	M24308/4-1	Various	D-sub
P1 & P2	024201 594231	ERNI	DIN 41612 Connector Housing Power Contact

Table I Module Connectors

The module connectors are positioned in the y direction such that all the backplane connectors sit flush on the backplane (Figure 2). The backplane P1 & P2 connectors can be wired or PCB mounted. The backplane PØ connector must be wired. Mating connector and contact recommendations are shown in Tables II and III.

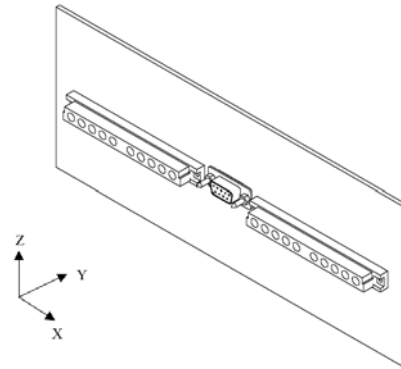


Figure 2. Backplane Connector Drawing

Location	P/N	Mfr.	Desc.
PØ	M24308/2-1	Various	D-sub
P1 & P2	023632	ERNI	DIN 41612 Connector Housing (For contacts, see Table III.)

Table II Recommended Backplane Connectors

P/N	Mfr.	Rating	Desc.
594176	ERNI	40amp	Solder Cup, 8-12AWG
594182	ERNI	40amp	Crimp, 8-12AWG
913637	ERNI	40amp	Straight PCB
55-1S-207-1	ECS	20amp	Straight PCB
55-1S-217-1	ECS	40amp	Straight PCB

Table III Backplane P1& P2 Contacts

Connector Mating Requirements

Figure 3 shows the recommended P1 and P2 connector engagement.

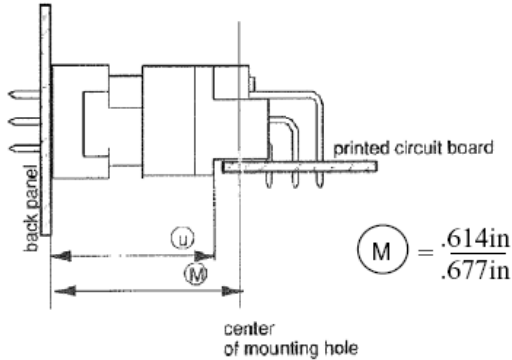


Figure 3. P1 & P2 Connector Engagement

Figure 4 shows the recommended PØ connector engagement.

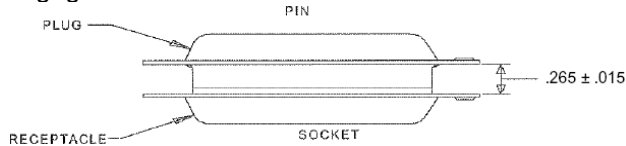


Figure 4. PØ Connector Engagement

PØ Guide Pins

Figure 5 shows the recommended design for the stainless steel guide pins for use with the PØ connector. See Rantec drawing #31131 for details.

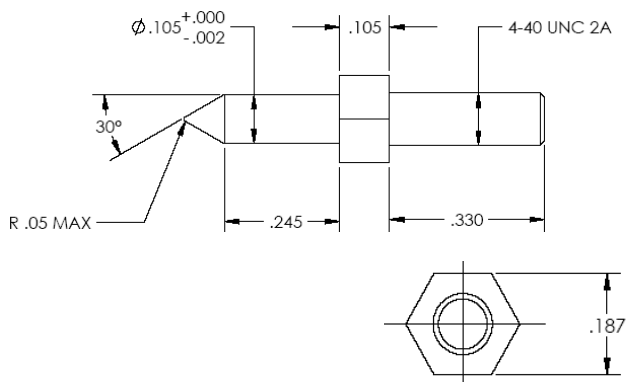


Figure 5. Recommended PØ Guide Pins

Alignment

The module PØ connector floats in the Z direction $\pm .015$ inches and the X direction from 0 to .010 inches as shown in Figure 6.

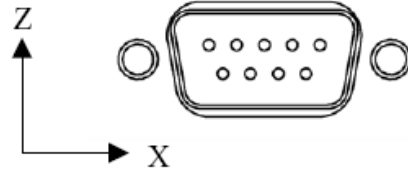


Figure 6. PØ Connector Float

Retainers and Extraction

The conduction cooled module uses card clamps, EG & G (cage code 18915) part number 42-5VI-10-B3D-LFLN. Recommended dimensions for card guide slot width are shown on drawing OM32698. It is designed to be extracted using the Protolab (cage code 31447) extractor, part number 4780 (or equivalent).

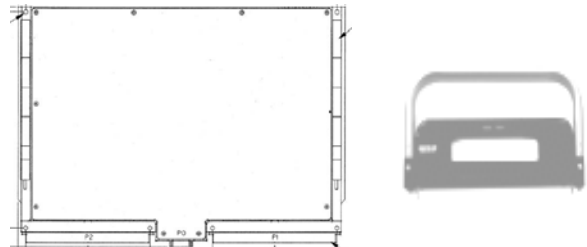


Figure 7. Conduction Module Wedglock & Extractor

The convection cooled module has ejector handles on the front panel for extraction and is secured with four captive screws on the front panel. See drawing OM30661 for more information.



Figure 8. Convection Module Ejector & Screws