48VDC PSU
(Managed & Unmanaged)

Installation Guide

Fourthtrack Systems
Unit 11 Lowfield Green
Caversham Park
Reading – RG4 6NZ
England

Telephone: 0118-946-3061
Fax: 0118-946-3091
Web: www.fourthtrack.co.uk
Email: info@fourthtrack.co.uk

Communications answers for the World Market

Please Read SAFETY WARNINGs in section 3

1 Power Supplies

The FourthRack System Chassis is designed to accommodate up to two PSU modules.

The chassis can be powered from a single module or on a load sharing basis using two modules. The two module configuration provides resilience to a single PSU failure and, if supplied from separate power sources, provides protection against the failure of a supply.

There are 4 variants of PSU designed for the MicroConverter Rack System Chassis.

- AC Unmanaged FTR-PSUAC
- AC Managed FTR-PSUACM
- DC Unmanaged FTR-PSUDC
- DC Manages FTR-PSUDCM

This Installation Guide details the DC Power Modules that can be used with the chassis.

2 Specification

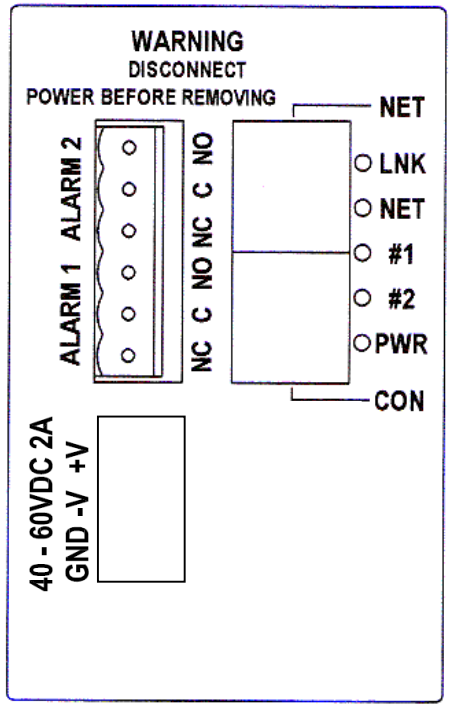
2.1 Common:

Input voltage range	40 to 60Volts DC
Input Connector	Plug in terminal block (supplied)
Output:	5V at 20A max Load sharing
Input Current	2 Amps DC Max
Cooling	Convection
MTBF	In excess of 1M hours
Indicator:	PWR (PoWeR) Green

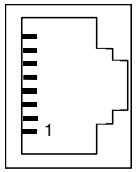
2.2 Managed version only

Connectors	Alarm 1	3 Way screw terminal
	Alarm 2	3 Way screw terminal`
	NET (NETwork)	RJ45
	CON (CONsole)	RJ45
Indicators	LNK (LiNK)	Amber
	NET (NETwork)	Amber
	#1	Amber
	#2	Amber

2.2.1 Panel layout



2.2.2 RJ45 Pinout



Net (10baseT)

1	RXa	5	
2	RXb	6	TXb
3	TXa	7	
4		8	

CON (RS232)

1		5	TX
2		6	RX
3		7	
4	Common	8	

3 Installation

3.1 Important information

STATIC DISCHARGE PRECAUTIONS

When handling Power Supply modules it is important to take precautions to avoid damage due to static discharge. The use of wrist straps is recommended.

If wrist straps are not available, the modules should only be handled by their front panels. Out of service PSU modules should either be stored in the rack or in their original anti-static packaging.

SAFETY WARNINGs

Do not connect to the supply until the PSU module is installed correctly in the chassis.

Always disconnect the supply before removing a PSU module from the chassis. The module must never be connected to the supply outside of the rack as Dangerous Voltages are exposed.

There are no User Servicable Parts. Replacement of the fuse should only be undertaken by suitably qualified technical staff.

3.2 Installing Power supplies in the FourthRack Chassis

The power supply packaging contains the power module and a user guide. The DC supplies include a DC connector and serial management cable if management is supported by the supply module.

The power supply can be installed in slot one (left hand) or slot 16 of the FourthRack Chassis.

Remove the power supply from the packaging and orientate so that the silk screen can be read. Insert the power supply into the slot, locating the fibreglass of the circuit board into the card guides. Ensure that the power supply is squarely located and push the card home into the slot. Fix firmly in position using the two captive screws.

When the module is correctly installed the DC supply can be connected.

The green "PWR" LED should illuminate to indicate that the PSU is providing power to the rack.

4 Dual supply mode

The chassis can be configured with two Power Supply modules. This provides resilience in the case of a single module failure or supply failure. The power supply modules are designed for "hot swapping". Ie it is possible to power down a single supply and remove it from the rack without compromising the operation of the rack. A replacement module should be inserted before it is connected to the mains supply.

5 Management Cable Spec

The managed PSU is supplied with a serial console port cable. The details are given below:

Cable part number: CAB-MAN-1
Description: FourthRack management card serial cable
Cable type: Category 5 cable
Jacket type: PVC
Length: 2 metres

Connections

FourthRack end RJ45	**Terminal end DB9**
1	
2	
3	
4	5
5	2
6	3
7	
8	

N.B. RJ45 end is fully loaded when terminating for greater strain relief.

6 Replacing the fuses

The unit must be disconnected from the supply before attempting to change the fuses.

Disconnect the supply and withdraw the PSU from the rack. The fuses are located under 2 rectangular plastic covers marked “Fuse 5x20” (F4 and F5 on the PCB).

Remove the plastic fuse covers, replace the fuses in the covers with fuses of the correct rating and type (5x20mm 2Amp Anti-Surge 20x5mm). Reassemble the fuse covers and reinserert the PSU into the rack before applying the DC supply.

NB If the fuse immediately blows again the unit should be treated as faulty. Under no circumstances should the fuses be replaced by ones of a higher rating.