



# TFR INFRASTRUCTURE

## **TELECOMMUNICATIONS SPECIFICATION POWER MANAGEMENT UNIT**

**BBF1027  
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## ***I. Document Authorisation***

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## ***II. Distribution***

To be registered in TFR's document management system – Projectwise

Emailed to all TFR Telecommunications specialists

Provided to relevant Project Managers, Tenderers and Contractors

## ***III. Change History***

Issue No.	Date	Issued by	Change Summary
1.00	2011-05-20	Transmission / Access	New specification

## ***IV. Changes since Last Revision***

Clause	Description

## ***V. Abbreviations and Acronyms***

<b>Acronym</b>	<b>Description</b>
DC	Direct Current
TFR	Transnet Freight Rail
PMU	Power Management Unit
LED	Light Emitting Diode
VGA	Video Graphics Array
DB	D Sub Connector
U	Rack Unit
A	Ampere

## ***VI. Definitions***

<b>Term</b>	<b>Definition</b>

## ***VII. Relevant Documentation***

<b>Document</b>	<b>Description and Relevance</b>

## **1. Scope**

1.1 Power management units are required for telecommunications equipment cabinets that provide a nominal 12 V DC supply from several 12 V DC sources. It must continue to distribute its 12 V supply even if one or more input supplies fail.

## **2. Design Parameters**

2.1 The PMU must be supplied in a 19 inch, 1U high rack mounting enclosure.

2.2 The PMU must take its DC supply from multiple Power Supplies / Chargers (a maximum of five inputs should be provided) and re-direct this supply via front panel mounted switches to five outputs.

2.3 Each input and each output must have an associated LED indicator for voltage presence.

2.4 The five inputs must be protected against polarity reversal by a series diode.

2.5 In keeping with international trends, input and output power connectors must be of the sub-miniature "DB 9" type, male and female respectively.

2.6 A front panel mounted indicator must be provided as an indication that the fuse has blown.

2.7 At least one Power Supply must be connected to the unit for this facility to function.

2.8 The PMU must have the following specifications:

- 2.8.1 Number of Power Supply inputs must be 5
- 2.8.2 Number of switched outputs must be 5
- 2.8.3 Nominal input Voltage must be **13.8 Volts DC**
- 2.8.4 Maximum current handling capability must be 5 A DC
- 2.8.5 Must have front mounted switched outputs with associated indicators.

## **3. Documentation**

Technical documentation, printed in English, to facilitate installation, operation and maintenance must be provided with each unit.

**END OF DOCUMENT**