

# Tellabs® 1000 Multi-Service Access Series Remote Subscriber Terminal Power Supply Unit (R-PSU)

## Overview

The Tellabs 1000 Multi-Service Access (MSA) Series Remote Subscriber Terminal (RST) Power Supply Unit (R-PSU) plug-in card converts standard -48 V DC from batteries or a UPA into the voltages required by the common control equipment and plug-in cards located at the Tellabs 1000 MSA series Integrated MSA Platform (IMAP) RST. The R-PSU card also generates sine wave ringing voltage for use by the subscriber interfaces. The card employs a DC-to-DC switching converter for high efficiency and low thermal dissipation.

Only one R-PSU is required to power an RST shelf; however, a card slot is provided for an additional redundant R-PSU.

The R-PSU features input fusing for redundant source coordination.

LEDs located on the R-PSU faceplate indicate ACTV (green), FUSE (red) and FAIL (red). The unit also provides alarm and status indications to the CPU. Test jacks on the front panel enable system voltage monitoring.

## Features and Benefits

- High-efficiency switching DC-DC converter
- Reverse input polarity protection
- Output over-voltage shutdown
- Low output voltage alarm
- Output over-current protection
- Thermal overload protection
- Low thermal dissipation
- Programmable ringing generator

## Specifications

### DC-DC Converter

- Input: -42.0 to -60.0 V DC
- Output: +5.15 V  $\pm$  1.5%; -5.15 V  $\pm$  0.0%, -52.0 V +9/-3% (long line talk battery), 32.0 V  $\pm$  10% (short line talk battery)
- Low voltage disconnect: -38 V DC
- Low voltage alarm: -44 V DC

### Regulation

- +5.15V < 1.5% load; < 1.5% line; < 0.2% per specified temperature range

### Ripple and Noise

- (DC – 20 MHz)  $\pm$ 5 V 1.0% pk-pk; -52 V, -32V < 100 mV pk-pk

### Output Current

- +5 V @ 15 Amp; -5 V @ 2 Amp; -52 V @ 2 Amp; -32 V @ 3 Amp
- Total power: 150 W (any loading combination)

### Isolation

- Internal converter: 500 V input to output
- Output ground: Referenced to input battery ground

### Ringing Generator

- Pedestal voltage: -48.0 V
- Output voltage range: 60 V AC, 65 V AC, 85 V AC, 95 V AC
- Voltage tolerance:  $\pm$  5%
- Output frequencies in Hz (provisionable): 6.7, 17.7, 18.7, 20.0, 21.0, 22.3, 23.5, 25.0, 26.4, 28.0, 29.8, 31.6, 33.3, 35.4, 37.6, 40.0, 42.2, 44.4, 47.4, 50.0 Hz
- Frequency tolerance:  $\pm$  2.5%
- Power (continuous): 20 W, 10 W @ 95 Vrms



*Environmental*

- Operating temperature: -40° to +149° F (-40° to +65° C)
- Humidity: 5–95% noncondensing

*Dimensions*

- Height: 5.125 in (13.018 cm)
- Width: 1.0 in (2.54 cm)
- Depth: 10.5 in (26.67 cm)

*Weight*

- 1.0 lb (0.45 kg)

*Compliance*

- Conducted noise: GR-1089-CORE

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