Overview

Tri-M’s TPSi1085 is an isolated PC/104-Plus power solution, designed for embedded applications requiring isolation and clean power in rugged environments.

With wide-range input voltages, transient suppression, galvanic isolation, and quick-disconnect terminal mating plugs, this rugged design is ideal for any industrial application.

Designed for harsh environments, including military standards, shock, vibration and extended temperature, the TPSi1085 is well suited for transportation, defence, and aerospace industries. For reliable protection and high performance, the TPSi1085 is the perfect solution for isolated DC power.

Key Specifications

- **Enhanced Protection**
  - 2250V Input/Output Isolation
  - 6000W Transient Suppression
  - Active Input Voltage Clamping
  - Reverse Polarity, Short Circuit

- **Wide Input Voltages**
  - Ranges from +9V to +33V DC

- **Standard Outputs**
  - +3.3V@8A Max. & +5V@17A Max.
  - 85W Combined Total

- **High Performance**
  - Up to 88% Efficiency

- **Extended Temperature**
  - -40°C to +85°C / -40°F to +185°F

Applications

- Military & Civil Vehicles
- Aerospace & Defence
- Industrial Automation
- Telecommunications
- Undersea & Marine

Advantages

- **Rugged Design**
  - Designed to Meet MIL Standards

- **Galvanic Isolation**
  - Reliable System Protection

- **Simple Installation**
  - Terminal Socket Mating Plugs

- **Space-Efficient Solution**
  - High Density PC/104-Plus Module

Tri-M specializes in embedded computing for rugged environments. For over 28 years, we have supplied industry proven solutions for the Aerospace, Defence, Transportation, Undersea, Industrial and Mining industries. To learn more about our products and services, please visit us at [www.tri-m.com](http://www.tri-m.com).
Specifications

Electrical
- Input Voltage Range: +9V to +33V DC
- +3.3V Output: 8A Max.
- +5V Output: 17A Max.
- Maximum Combined Power: 85W Total*
- Efficiency: Up to 88%*
- Isolation Voltage: 2250V Max.
- Transient Suppression: 6000W Total
- Output Ripple/Noise**: Typ 20mV, max 75mV
- Line Regulation**: ±0.05% Max.
- Load Regulation**: ±0.06% Max.
- Switching Frequency: 267kHz (5V), 1.01mHz (3.3V)
- Current Limiting Fuse: Onboard 15A (on input source)
- Quiescent current: 22mA (LEDs & Outputs Off)

Mechanical
- Dimensions: PC/104 compliant, 90mm x 96mm x 15mm (3.55” x 3.775” x 0.6”)
- Weight: 110g (3.9oz) no plugs
- Weight: 117g (4.1oz) with plugs

Environment
- Operating Temperature*: -40°C to +85°C (-40°F to 185°F)
- Thermal Protection/Shutdown: +120°C (248°F)

Certifications
- RoHS compliant

* Maximum power may be derated due to temperature which effects the efficiency. Please see the Technical Notes section of the User Guide for more on efficiency and temperature derating.

** 5V Output

MODELS
- TPSi1085: +3.3V, +5V, Combined Total 85W

OPTIONS
- Conformal Coating
- Non-Stackthrough

Note
For detailed dimension, connector, and pin spacing information, please see the User Guide

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