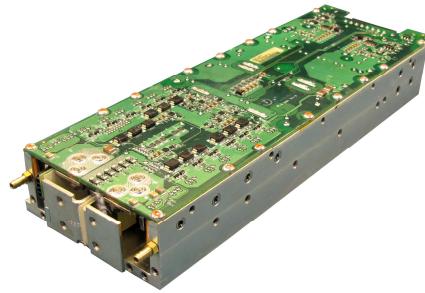
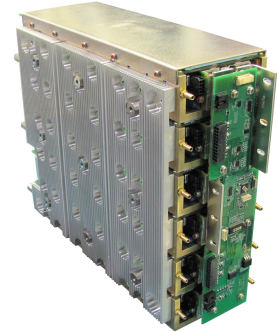


## Features

- **Ideal for harsh vehicle applications**
- **36w/in<sup>3</sup> (2.2kw/liter)**
- **4,100 Watts**
- **93% Efficient**
- **Stackable & Parallelable for higher power needs**
- **RoHS Compliant**
- **MTBF over 100,000 hrs at 40° C, MIL-HDBK-217 Ground Mobile**



TDI PN T100100321



## Specifications

### INPUT

**Voltage:** 330—400VDC Operational, 370VDC Nominal, Over-voltage tested to 440VDC

**Peak Inrush Current:** <45A

**Efficiency:** 93% with 370VDC source, 50 to 100% load

### OUTPUT

**Voltage:** 28V

**Power:** 4,100W at Minimum specified coolant flow rate

**Ripple & Noise:** 1% V P-P Measured with 20Mhz Bandwidth

**Line Regulation:** Less than ±0.25%

**Load Regulation:** ±2.0% from no load to full load (droop load share)

**Parallel Use:** May be paralleled with other like units or battery for increased system output, redundant diode included

**Current Sharing:** Slope program current share, (droop)

**Temperature Coefficient:** < ±0.02% per°C

**Dimensions:** H4.9 x W11.2 x D33.8 cm (H1.94 x W4.41 x D13.3")

**Weight:** 2.8kg (6.2 lb)

### PROTECTION

**Output Over-Voltage:** Output hiccup on over-voltage

**Output Over Current/Short Circuit Protection:** The converter becomes a current source in overload conditions. After 5 sec in short circuit output will hiccup @T= 60 sec, 10%D.

**Output Over Power Protection:** Electronic, set to 4,100W

**Over-Temperature:** Over temperature shutdown with auto recovery

**Input Over-Current:** 20A fused for failure modes only.

### COMMUNICATION

**Communication Protocol:** J1939 CAN BUS. (Optional)

### CAN BUS SIGNALS:

**DC IN OK**

**Output OK**

**Output Current Monitor**

**Output Voltage**

### ELECTRONIC CONTROL INPUTS

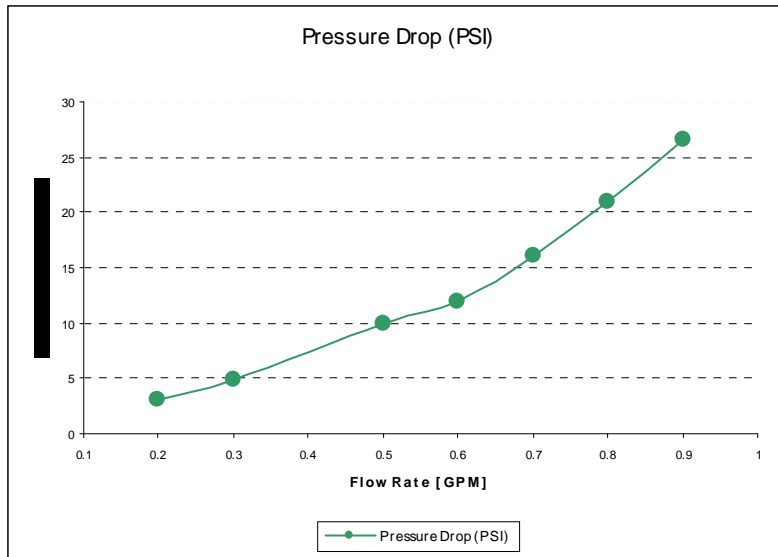
**Remote Inhibit:** Application of a 3.3V input signal will cause the supply to shut down and an output OK fault alarm will be issued. (3.3V = Inhibit)

### ENVIRONMENTAL SPECIFICATIONS

**Coolant Medium/Mixture:** 60/40 Propylene or Ethylene Glycol/Water

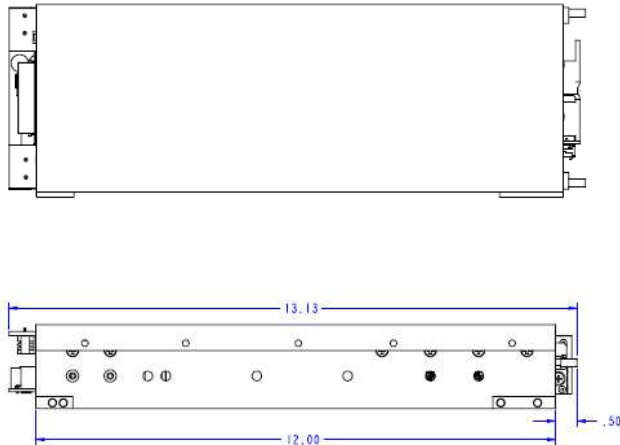
**Coolant Flow:** 0.0208 to 0.0505 l/s (0.33 to 0.8 GPM)

## Differential Pressure:



**Maximum Inlet Coolant Temperature:** +55°C  
**Working Ambient Temperature:** -40 to +85°C  
**Low Temperature Turn On:** -40°C Minimum  
**Warm up Time:** 1 min  
**Storage / Transportation:** -40°C to +85°C  
**Humidity Operating & Storage:** 0% to 100% RH non-condensing

## Outline:



**Vibration, Operating:** SAE J1455 (Revision Aug94), Figure 6, (identical to MIL-STD-810G, Figure 514.6C-1, Category); PSD levels scaled by 1.316 for Qualification so that 60min is equivalent to 4,828Km (3,000 miles) of road travel; PSD levels scaled by 3.162 for HALT so that 60min is equivalent to 161,000Km (100,000 miles) of road travel.

**Shock:** MIL-STD-810G, Method 516.6, Paragraph 2.2.2, Procedure I - Functional Shock, Table 516.6-1, Figure 516.6-10, 40g, 15 to 23ms wide, 3 pulses in both directions, each of 3 axes, total of 18 pulses.

**Vibration, Transportation:** Packaged units will withstand, without damage, two complete cycles from 5Hz to 100Hz to 5Hz: 0.5g at 0.1octaves/m. From 100Hz to 500Hz to 100Hz: 1.6 at 0.25 octaves/m.

**Shock, Transport:** Packaged, drops, 6 faces, 8 corners  
**Salt Fog:** MIL-STD 810C, Method 509.1

## AGENCY COMPLIANCE

**RoHS:** with lead exemption compliant. Full RoHS compliant modules available upon customer request.

## SAFETY and REGULATORY AGENCY SPECIFICATIONS

**Input Leakage Current to Safety Ground:** Less than 3.5mA at 400VDC

**Input to Ground Isolation:** 10M $\Omega$  at 500VDC

**Output to Ground Isolation:** 10M $\Omega$  at 100VDC

## UL1950 / EN60950 / CE pending

**Inlet/Outlet Coolant Connection:** 10-32 Barb-hose Fittings

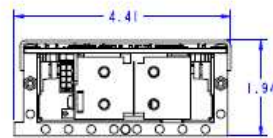


Figure 2 Module Outline

[www.tdipower.com](http://www.tdipower.com)

## ORDERING INFORMATION

**Part no. Description**

T100100321 CONVERTER, DC-DC, 28V, 4100W, LIQUID COOLED

This document is believed to be correct at time of publication and Transistor Devices, Inc. accepts no responsibility for consequences from printing errors or inaccuracies.

DEMANDING APPLICATIONS DEMAND TDI POWER