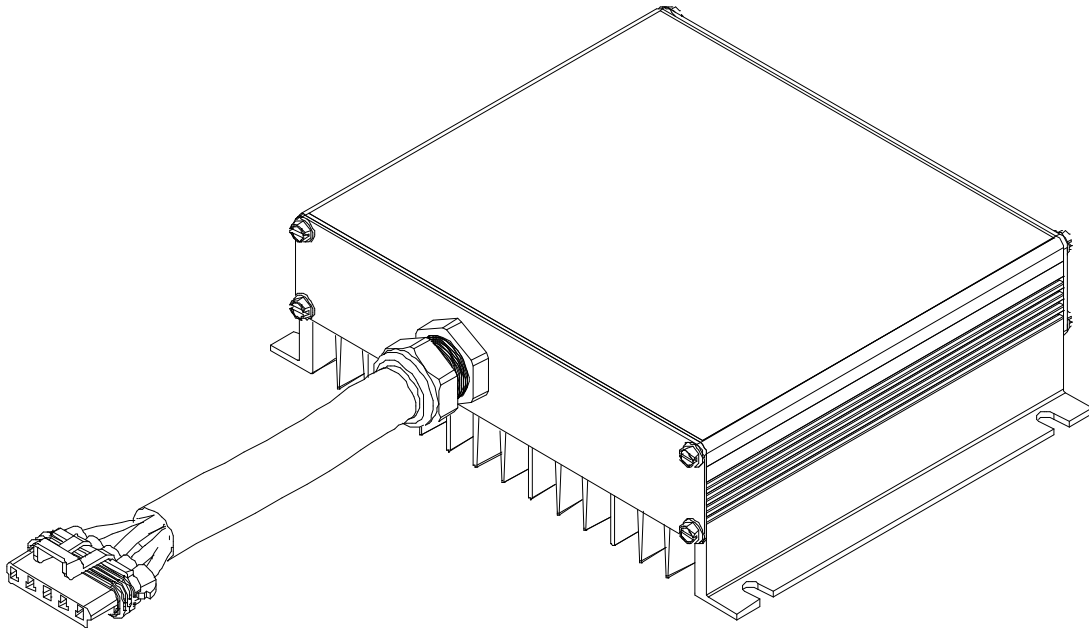


# Model VC-30



## 24 volt to 12 volt DC to DC Converter

### Table of Contents

Introduction.....	2
Specifications.....	2
Operation.....	2
Installation Recommendations .....	2
Dimensions.....	3

## Introduction

Thank you for purchasing a Vanner DC to DC Converter. We are confident that you will be very pleased with its performance. With minimum maintenance and care, you can be assured of many years of trouble free service. The Vanner 24v to 12v DC to DC Converter is an efficient and highly reliable method of obtaining 12 volt DC power from a 24 volt DC electrical system.

## Specifications

Model	VC-30	VC-30-NLC
<b>24 Volt Input</b>		
Input Voltage Range (for full output)	18 to 32 Vdc	
Minimum start voltage	14 Vdc	
Input Amps (max)	24 amps	
<b>12 Volt Output</b>		
Output Voltage	13.5 Vdc	
Output Capacity	30amps	
<b>Ignition Trigger</b>		
Turn ON	8-36Vdc	8-36Vdc
Turn OFF	IGN <1.5Vdc AND Load <0.5A	IGN <1.5Vdc
<b>Temperature</b>		
Operating Range	-40°C to +75°C (-40°F to 167°F)	
Operation at full load	-40°C to +50°C (-40°F to 122°F)	
Storage	-54°C to +95°C (-65°F to 203°F)	
Mounting Location	Mount on a flat surface. Location should be protected from battery acid and gases.	
Environmental Considerations	Anodized aluminum enclosure provides protection against salt, fungus, dust, water, fuel vapors and all fluids associated with commercial and off-highway vehicle operations. Continuous exposure to splashes and spills should be avoided.	
Serviceable	No	
Weight	3.8 lbs.	

## Operation

**Normal Operation:** Model VC-30 DC to DC Converter will provide up to 30 amps continuous output and maintain 13.5 volts output voltage across the full range of DC input voltage.

**No output condition:** DC input voltage must be above 18 volts for the unit to “turn ON” and must remain above 14 volts during operation.

**Overload Condition:** An overload condition exists when the 12 volt load exceeds the VC-30 output rating of 30 amps. The symptoms that indicate an overload condition exists are output voltage below 18VDC combined with 30 amps output current. The overload condition will not damage the DC to DC Converter. During the overload, internal protection circuits reduce output voltage as needed to limit the output current to 30 amps.

**Ignition VC-30:** The ignition line must be between 8 volts and 36 volts for the converter to turn on. The converter will turn off if the ignition line is below 1.5 volts and the load current drops below 0.5 amps.

**Ignition VC-30-NLC:** The ignition line must be between 8 volts and 36 volts for the converter to turn on. The converter will turn off if the ignition line is below 1.5 volts, regardless of the load current.

## Installation Recommendations

**Caution:** This equipment employs components that tend to produce arcs and sparks. To prevent fire or explosion, do not install in compartments containing batteries or flammable materials. Safety goggles should always be worn when working near batteries

**Terminal Connections:** The VC-30 is supplied with a Delphi/Packard Metri-Pack 280 Series, 5-position connector. The mating connector is Delphi/Packard P/N: 12186400.

The terminations are as follows:

A: +12V Output

B: Ground

C: +24V Input

D: Over Temperature (output is a switch closure to ground capable of sinking 100 ma, MAX, useable for a dash light, etc.)

E: Ignition

**Fusing:** A fault protection device must be installed between the DC to DC Converter and the power source (battery). A fault protection device would be any fuse or circuit breaker properly rated for the maximum DC input current. This advisory is in accordance with SAE, NEC and UL, for mobile power applications.

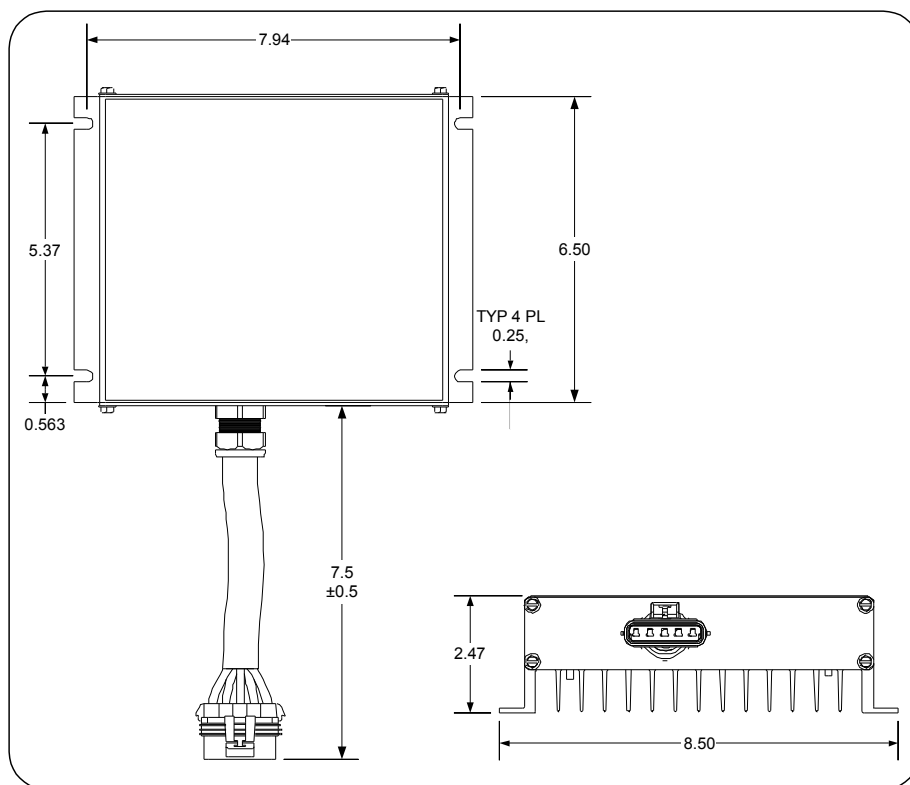
**Minimum Wire and Fuse Sizes:** Connect Model VC-30 to the 24vdc source using 10AWG cable, and protected by a 40-amp fuse or circuit breaker. Using the same size cable for all circuits is recommended. Install adequate fuse protection if smaller cables are used.

**Wire Temperature rating:** Wire ratings should be at least 105°C.

**Mounting Location:** The DC to DC Converter may be mounted in any orientation, however for optimum cooling, mount the converter with fins vertical.

**Environmental Protection:** Protect the unit from direct exposure to moisture such as high-pressure washing, rain, etc. The converter is water-resistant and therefore exposures to high-pressure washing less than 3 feet should be avoided.

**Model VC-30      Dimensions and Torque Specifications**



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