

## 9-36Vdc to 12Vdc, 18W, Isolated Power Converter

P/N: AX082300

### Features:

- 12Vdc or 24Vdc (9...36Vdc) to 12Vdc, 18W Converter
- Isolated
- Operates from 9Vdc-36Vdc
- Typical efficiency of 87%@12Vdc input or 88%@24Vdc input
- Thermal protection for over temperature
- Reverse battery, over and under-voltage protection
- Short circuit and overcurrent protection
- Protected against 205Vdc load dump
- -40 to 70°C (-40 to 158°F) operating temperature
- Compact, laser welded enclosure
- 4-pin TE Deutsch type connector
- IP67
- EMI/EMC compliant



**Applications:** The Power Supply is suitable for application on vehicles.

- ❖ Off-highway Equipment
- ❖ Fire trucks and municipal vehicles

### Ordering Part Numbers:

9-36Vdc/12Vdc, 18W, Isolated Power Converter P/N: **AX082300**

Accessories:

**AX070106** Mating Plug Kit : 1 DT06-4S, 1W4S, 4 0462-201-16141

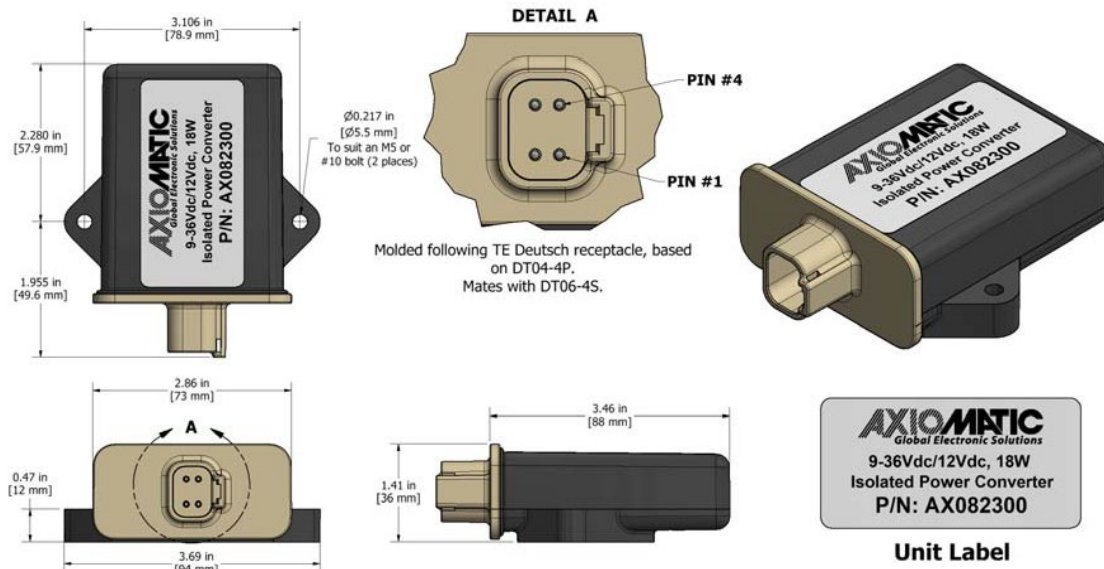


Figure 1.0 – Dimensional Drawing

## Technical Specifications:

All specifications are typical at nominal input voltage and 25 degrees C unless otherwise specified.

Input Specifications		Output Specifications	
Power Source	12/24 Vdc nominal	Nameplate Rating (Output Power)	18 VA nominal
Operating Voltage Range	Minimum 12V to start 9 to 36Vdc provides output 12V regulated to 2% @ 1.5A load	Output Current (DC)	1.5 A continuous
Maximum Input Current	1.5 ADC @ 12Vdc	Output Voltage	12 Vdc $\pm$ 0.24V
Engine Load Dump	Designed to meet load dump conditions up to 205Vdc	Output Voltage Ripple	$V_{O(RIPPLE)} \leq 80$ mVpp
Reverse Voltage Protection	Provided	Turn-on time (at full load)	100 ms typical
Under-voltage Shutdown	7 Vdc typical	Stability	Stable at all loads (no minimum load requirement)
Over-voltage Shutdown	40 Vdc typical	Transient Response	700 mV/1 ms (25%-75% Load)
		Short Circuit Current	Protection provided Self-recovery 1.8A current limit

## General Specifications

Operating Temperature	-40 to 70 °C (-40 to 158 °F)										
Efficiency	87% @ 12Vdc input, typical; 88% @24Vdc input, typical										
Weight	0.28 lb. (0.125kg)										
Vibration (Pending)	MIL-STD-202G, Method 204D test condition C (Sine) and Method 214A, test condition B (Random) 10 g peak (Sine) 7.68 Grms peak (Random)										
Shock (Pending)	MIL- STD-202G, Method 213B, test condition A 50g (half sine pulse, 9ms long, 8 per axis)										
Enclosure	Molded Enclosure, integral connector Nylon 6/6, 30% glass, Laser Welded 3.47 x 2.76 x 1.31 inches (88.2 x 70.0 x 33.3 mm) L x W x H including integral connector Refer to the dimensional drawing.										
Electrical Connections	Integral 4 pin receptacle based on TE Deutsch P/N: DT04-04P 18 AWG wire is recommended for use with contacts 0462-201-16141.  A mating plug kit is available. Ordering P/N: <b>AX070106</b> Mating Plug Kit : 1 DT06-4S, 1W4S, 4 0462-201-16141  <table border="1" data-bbox="548 1375 1222 1522"> <thead> <tr> <th>PIN #</th> <th>FUNCTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>V Output +</td> </tr> <tr> <td>2</td> <td>V In +</td> </tr> <tr> <td>3</td> <td>V In -</td> </tr> <tr> <td>4</td> <td>V Output -</td> </tr> </tbody> </table>	PIN #	FUNCTION	1	V Output +	2	V In +	3	V In -	4	V Output -
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1	V Output +										
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3	V In -										
4	V Output -										
Mounting	Mounting holes are sized for #8 or M4 bolts. The bolt length will be determined by the end-user's mounting plate thickness. The mounting flange of the controller is 0.43 inches (11mm) thick. It should be mounted with connectors facing left or right to reduce likelihood of moisture entry. All field wiring should be suitable for the operating temperature range. Install the unit with appropriate space available for servicing and for adequate wire harness access (6 inches or 15 cm) and strain relief (12 inches or 30 cm).										

Specifications are indicative and subject to change. Actual performance will vary depending on the application and operating conditions. Users should satisfy themselves that the product is suitable for use in the intended application. All our products carry a limited warranty against defects in material and workmanship. Please refer to our Warranty, Application Approvals/Limitations and Return Materials Process as described on <https://www.axiomatic.com/service/>.

Form: TDAX082300-07/14/22