

Features:

- Interfaces with a 5Vdc Sensor
- Operates as a 24Vdc/5Vdc, 1A (5 Watts) Converter
- Non-isolated
- Operates from 8Vdc-36Vdc
- Typical efficiency of 88%@12Vdc or 82%@24Vdc
- Optional 1 CAN port (SAE J1939) - Battery charge status is communicated over CAN
- Thermal protection for over temperature
- Reverse battery, over and under-voltage protection
- Short circuit and overcurrent protection
- -40 to 70 °C (-40 to 158 °F) operating temperature
- Compact, ultrasonic welded enclosure
- 8-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
- ❖ Military Vehicles

Ordering Part Numbers:

24V/5V, 1A Converter, SAE J1939 P/N: **AX082900**

Accessories:

AX070112 Mating Plug Kit :1 DT06-08SA, 1 W8S, 8 0462-201-16141, 3 114017

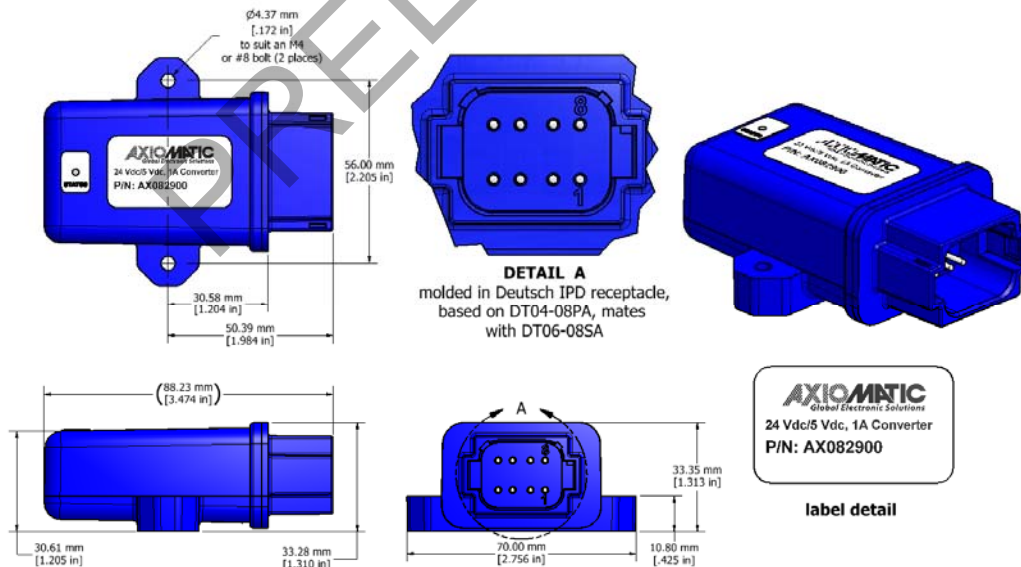


Figure 1.0 – Dimensional Drawing

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)	5 VA nominal
Operating Voltage Range	8 to 36 Vdc provides output 5V regulated to 2% @ 1A load	Output Current (DC)	1 A continuous
Maximum Input Current	0.7ADC @ 9Vdc	Output Voltage	5 Vdc \pm 2%
Engine Load Dump	Designed to meet load dump conditions up to 120Vdc	Output Voltage Ripple	$V_{O(RIPPLE)} \leq 50$ mVpp
Reverse Voltage Protection	Provided	Turn-on time (at full load)	500 ms typical
Under-voltage Shutdown	8 Vdc typical	Stability	Stable at all loads (no minimum load requirement)
		Transient Response	700 mV/1 ms (25%-75% Load)
		Short Circuit Current	Protection provided Self-recovery 1.5A current limit

General Specifications

Microprocessor	STM32F103CBT7 (option)																		
Communications	1 CAN port (SAE J1939, 250 kbps) (option)																		
LED Indicator	(option)																		
Operating Temperature	-40 to 70 °C (-40 to 158 °F)																		
Efficiency	82% @ 24Vdc input, typical; 82% @ 24Vdc input, typical																		
Weight	0.15 lb. (0.06 kg)																		
Approvals (Pending)	CE marking																		
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, Ultrasonically welded 3.47 x 2.75 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 TE Deutsch 8 pin receptacle (P/N: DT04-08PA) 18 AWG wire is recommended for use with contacts 0462-201-16141. A mating plug kit is available. Ordering P/N: AX070112 is comprised of 1 DT06-08SA, 1 W8S, 8 0462-201-16141, and 3 114017. <table border="1"> <thead> <tr> <th>PIN #</th> <th>FUNCTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CAN_H (option)</td> </tr> <tr> <td>2</td> <td>CAN_L (option)</td> </tr> <tr> <td>3</td> <td>NOT USED</td> </tr> <tr> <td>4</td> <td>NOT USED</td> </tr> <tr> <td>5</td> <td>V In +</td> </tr> <tr> <td>6</td> <td>V In -</td> </tr> <tr> <td>7</td> <td>V Output -</td> </tr> <tr> <td>8</td> <td>V Output +</td> </tr> </tbody> </table>	PIN #	FUNCTION	1	CAN_H (option)	2	CAN_L (option)	3	NOT USED	4	NOT USED	5	V In +	6	V In -	7	V Output -	8	V Output +
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8	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 0.425 inches (10.8 mm) 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 www.axiomatic.com/service.html.

Form: TDAX082900-05/17/17