

Features:

- Data exchange between a LIN network and a CAN network (SAE J1939)
- PWM output to interface to an LED, Sound Annunciator or other devices
- 1 CAN port (SAE J1939) (CANopen® model is available.)
- 1 LIN single pin port (LIN 2.2)
- Operational from 9 to 32 Vdc (12 Vdc or 24 Vdc nominal)
- Integrated 8-pin connector (equivalent to a TE Deutsch P/N)
- Fully sealed enclosure with a rugged IP67 protection rating
- Designed for EMC compliance
- Compact size
- User configurable using the Axiomatic Electronic Assistant



Applications:

- Mobile (Off-Highway) Equipment; Agricultural Equipment; Trucks (Commercial Vehicles)

Ordering Part Numbers:

Protocol Converter, 1 LIN, 1 SAE J1939 with auto-baud-rate detect - P/N: **AX140610**

Protocol Converter, 1 LIN, 1 CANopen® – P/N: **AX140611**

Axiomatic Electronic Assistant Configuration Tool KIT, P/Ns: **AX070502** or **AX070506K**

Accessories:

Mating Plug KIT: **AX070112**

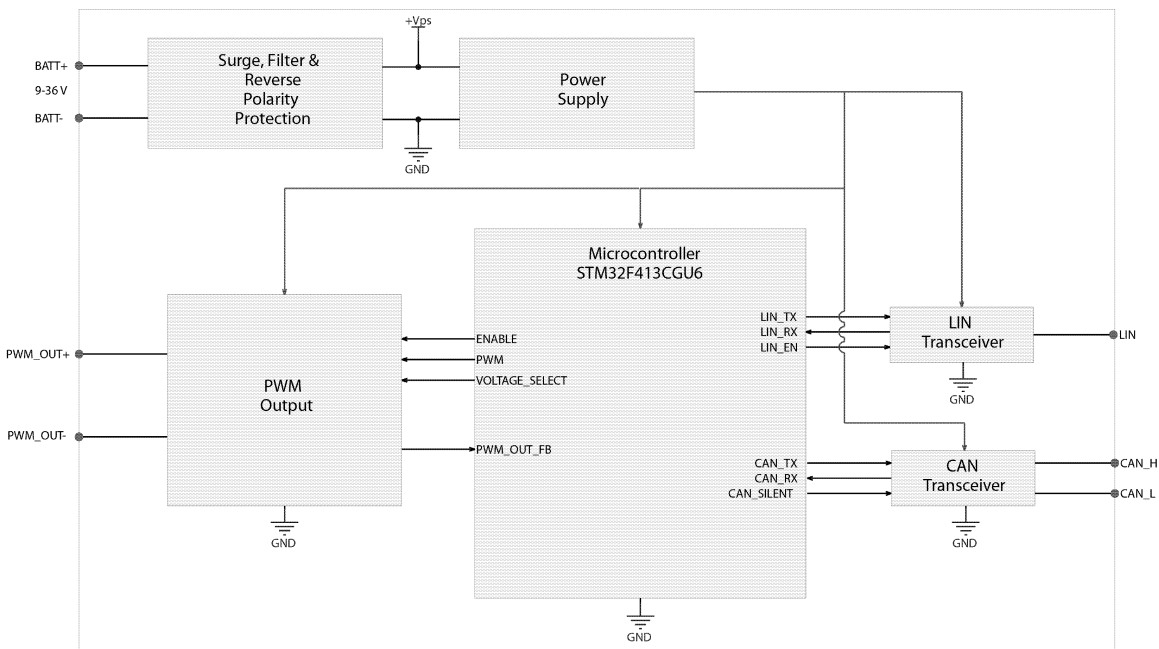


Figure 1.0 – Block Diagram

Technical Specifications:

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

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/>.

Power

Power Supply Input - Nominal	12 V or 24 Vdc nominal; 9...32 Vdc
Surge Protection	Provided up to -100V
Reverse Polarity Protection	Provided up to -80 V
Undervoltage Protection	Undervoltage hardware shutdown at 6 V
Overvoltage Protection	Overvoltage hardware shutdown at 45 V

Output

PWM Output	<p>One Output configurable as PWM/Frequency or Digital</p> <p>PWM Signal, Frequency Signal, or Mixed Output:</p> <ul style="list-style-type: none"> - 1 Hz to 20 kHz - 0-100% Duty Cycle (User configurable) - 5V or 12V amplitude - Push pull output - Maximum load is 50 mA (at 5V) or 30 mA (at 12V). - Over-current protection (50 mA) <p>Digital Level:</p> <ul style="list-style-type: none"> - Digital On/Off - 5V or 12V Amplitude - Maximum load is 50 mA (at 5V) or 30 mA (at 12V)
Output Accuracy	<p>PWM Signal: +/- 0.5%</p> <p>Frequency Signal: +/- 0.1%</p>
Output Feedback Accuracy	<p>PWM Signal: +/- 0.5%</p> <p>Frequency Signal: +/- 0.5%</p>

Control Software

Control Logic	Configurable with the Axiomatic Electronic Assistant, P/Ns: AX070502 or AX070506K Refer to the User Manual.
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General Specifications

Memory	STM32F413CGU6 32-bit, 1 Mbyte Flash Program Memory
LIN Port	1 LIN (LIN 2.2)
CAN Port	<p>AX140610: 1 CAN (SAE J1939) Auto-baud-rate-detection This SAE J1939 model has auto baud rate detection and supports the following baud rates. 250 kbit/s, 500 kbit/s, 667kbit/s, 1 Mbit/s</p> <p>AX140611: CANopen®</p>
Power Supply Current	19mA @ 24Vdc, 35mA @ 12Vdc
Operating Conditions	-40 to 85°C (-40 to 185°F)
Weight	0.143 lb. (0.065 kg)
Protection Rating	IP67
Vibration	<p>Random Vibration: 7.68 Grms peak</p> <p>Sinusoidal Component: 10 g peak</p> <p>Based on MIL-STD-202G, Methods 204G and 214A</p>
Shock	<p>50 g half sine pulse, 9ms per axis</p> <p>Based on MIL-STD-202G, Method 213B, Test Condition A</p>
Enclosure and Dimensions	<p>Plastic Enclosure, Nylon 6-6 with 30% glass fill</p> <p>Integral TE Deutsch type connector</p> <p>Refer to dimensional drawing (Figure 3.0).</p>

Electrical Connections	8-pin connector (equivalent TE Deutsch P/N: DT04-08PA) A mating plug kit is available as Axiomatic P/N: AX070112 .																				
	<table border="1"> <thead> <tr> <th colspan="2">CAN and I/O Connector</th> </tr> <tr> <th>Pin #</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CAN_L</td> </tr> <tr> <td>2</td> <td>LIN</td> </tr> <tr> <td>3</td> <td>Not Used</td> </tr> <tr> <td>4</td> <td>BATT-</td> </tr> <tr> <td>5</td> <td>BATT+</td> </tr> <tr> <td>6</td> <td>PWM Output +</td> </tr> <tr> <td>7</td> <td>PWM Output -</td> </tr> <tr> <td>8</td> <td>CAN_H</td> </tr> </tbody> </table>	CAN and I/O Connector		Pin #	Description	1	CAN_L	2	LIN	3	Not Used	4	BATT-	5	BATT+	6	PWM Output +	7	PWM Output -	8	CAN_H
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Software Reflashing	The Axiomatic Electronic Assistant KIT, P/Ns: AX070502 or AX070506K																				
User Interface	<p>For SAE J1939 models, parameters are configurable using the Axiomatic Electronic Assistant.</p> <p>Axiomatic Electronic Assistant KIT, P/Ns: AX070502 or AX070506K</p> <p>The Axiomatic Electronic Assistant for <i>Windows</i> operating systems comes with a royalty-free license for use on multiple computers. It requires an Axiomatic USB-CAN converter to link the device's CAN port to a <i>Windows</i>-based PC.</p>																				

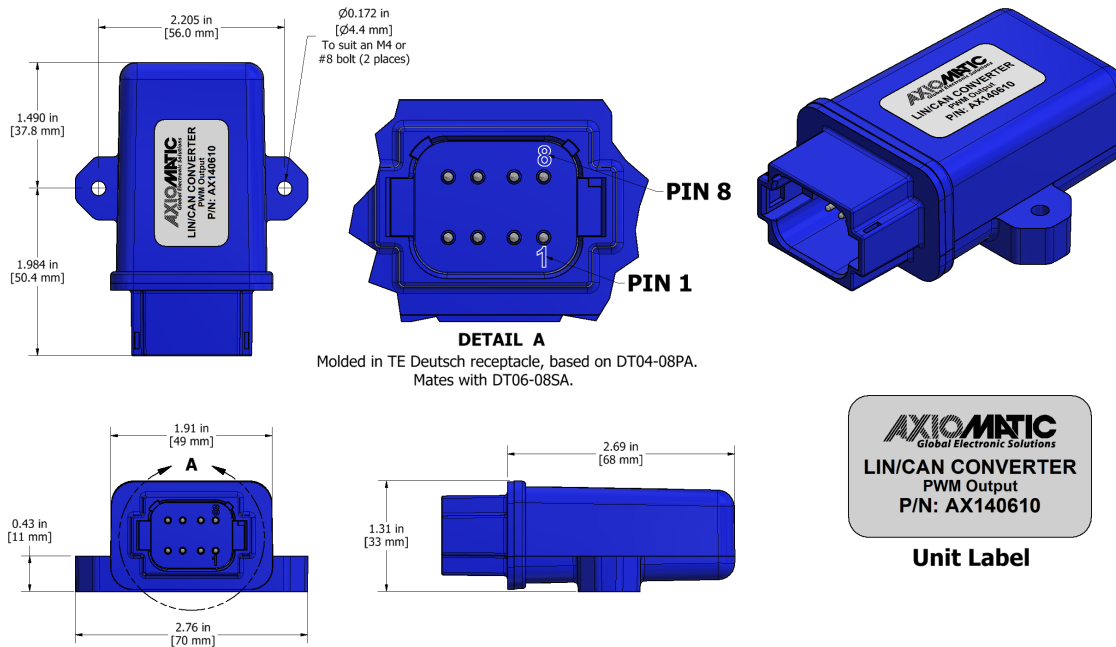


Figure 3.0 – Dimensional Drawing

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