

4x Magnetic Pick-Up Inputs to CANopen® Converter

EDS File Provided for Configuration

P/N: AX031511

Converts 4 magnetic speed sensors signals into CANopen® messages to communicate with the machine

Features

- 4x magnetic pick-up type inputs for interface with 4 sensors
- Inputs are configurable as frequency, RPM, or counter types
- 1x CAN port (CANopen®)
- Operational 6 to 60 VDC (12, 24, or 48 VDC)
- Integrated 12-pin connector
- Compact, fully sealed enclosure, IP67
- Designed for EMC compliance
- EDS file provided for configuration

Applications

- Off-highway equipment
- On-highway trucks

Ordering Part Numbers

4x Magnetic Pick-Up Inputs to CANopen® Converter - P/N: **AX031511**

SAE J1939 version - P/N: **AX031510**

Accessories:

EDS File

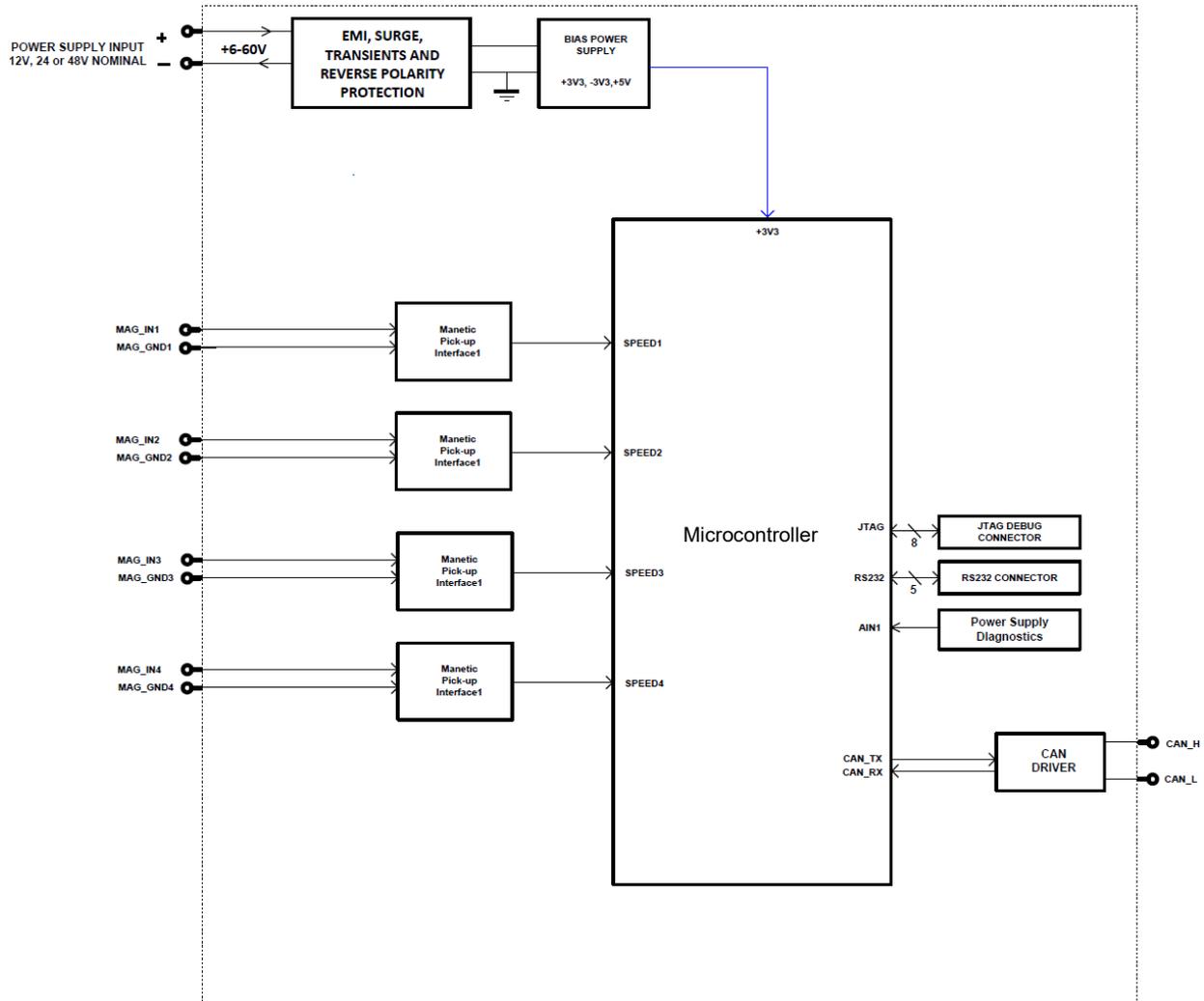
Mating Plug KIT: **PL-DTM06-12SA**

Description

The 4 Magnetic Pick-Up Inputs CAN Converter is designed for measuring four frequency inputs and providing the measurement result to a CANopen® network. Inputs are configurable as frequency, RPM, or counter types. With its powerful control algorithms, input measurement can be adjusted to serve wide variety of custom applications.

The magnetic inputs pick up frequencies from 1 Hz to 10 kHz. All parameters are independent from one another but can be programmed to interact in numerous ways.

Block Diagram



Technical Specifications

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 Limitations & Return Materials Process as described on <https://www.axiomatic.com/service/>.

Power

| | |
|-----------------------------|---|
| Power Supply Input | 12, 24, or 48 VDC nominal (6 to 60 VDC range) |
| Quiescent Current Draw | TBD mA @ 24 VDC; TBD mA @ 12 VDC Typical |
| Surge Protection | Provided up to 200 V |
| Reverse Polarity Protection | Provided up to 200 V |
| Undervoltage Protection | Provided. (Hardware shutdown at 4 V) |
| Overvoltage Protection | Provided. (Hardware shutdown at 63 V) |

Inputs

| | |
|-------|---|
| Input | <p>4x magnetic pick-up inputs can be configured as frequency, RPM, or counter types.</p> <p><u>Frequency Range:</u> 1 Hz to 10 kHz</p> <p><u>Accuracy:</u> ±1 % error</p> <p><u>Amplitude:</u> 0.1 VAC to 100 VAC (RMS)</p> |
|-------|---|

General Specifications

| Microcontroller | STM32G0B1CUB3, 32-bit, 256 Kbytes flash program memory | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|-----|-------------|---|-----------|---|--------------------------|---|--------------------------|---|--------------------------|---|--------------------------|---|----------|---|---------|---|---------------------------------|---|---------------------------------|----|---------------------------------|----|---------------------------------|----|-----------|
| Control Logic | Pre-programmed with standard logic. Refer to the user manual. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAN Port | 1x CAN port (CANopen®) Supported baud rate: 10 kbit/s, 20 kbit/s, 50 kbit/s, 125 kbit/s (default), 250 kbit/s, 500 kbit/s, 800 kbit/s, and 1 Mbit/s | | | | | | | | | | | | | | | | | | | | | | | | | | |
| User Interface | EDS file is provided to interface with the device using standard CANopen® tools. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Compliance | Designed for EMC compliance RoHS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operating Temperature | -40 to 85 °C (-40 to 185 °F) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Storage Temperature | -50 to 125 °C (-58 to 257 °F) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Protection Rating | IP67 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Enclosure | Molded plastic enclosure Nylon 6/6 with 30% glass fill Integral connector Refer to Figure 1.0. Flammability rating: UL 94V-0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weight | 0.15 lb. (0.068 kg) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electrical Connections | <p>12-pin connector (equivalent to TE Deutsch P/N: DTM04-12PA)</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Battery +</td> </tr> <tr> <td>2</td> <td>Magnetic Pick-Up Input 1</td> </tr> <tr> <td>3</td> <td>Magnetic Pick-Up Input 2</td> </tr> <tr> <td>4</td> <td>Magnetic Pick-Up Input 3</td> </tr> <tr> <td>5</td> <td>Magnetic Pick-Up Input 4</td> </tr> <tr> <td>6</td> <td>CAN High</td> </tr> <tr> <td>7</td> <td>CAN Low</td> </tr> <tr> <td>8</td> <td>Magnetic Pick-Up Input 4 Ground</td> </tr> <tr> <td>9</td> <td>Magnetic Pick-Up Input 3 Ground</td> </tr> <tr> <td>10</td> <td>Magnetic Pick-Up Input 2 Ground</td> </tr> <tr> <td>11</td> <td>Magnetic Pick-Up Input 1 Ground</td> </tr> <tr> <td>12</td> <td>Battery -</td> </tr> </tbody> </table> | Pin | Description | 1 | Battery + | 2 | Magnetic Pick-Up Input 1 | 3 | Magnetic Pick-Up Input 2 | 4 | Magnetic Pick-Up Input 3 | 5 | Magnetic Pick-Up Input 4 | 6 | CAN High | 7 | CAN Low | 8 | Magnetic Pick-Up Input 4 Ground | 9 | Magnetic Pick-Up Input 3 Ground | 10 | Magnetic Pick-Up Input 2 Ground | 11 | Magnetic Pick-Up Input 1 Ground | 12 | Battery - |
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| 4 | Magnetic Pick-Up Input 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Magnetic Pick-Up Input 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 12 | Battery - | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mating Plug Kit | A mating plug kit is available under Axiomatic P/N: PL-DTM06-12SA (includes 1x plug DTM06-12SA, 1x wedgelock WM-12S, 6x sealing plugs 0413-204-2005, and 12x contacts 0462-201-16141) | | | | | | | | | | | | | | | | | | | | | | | | | | |

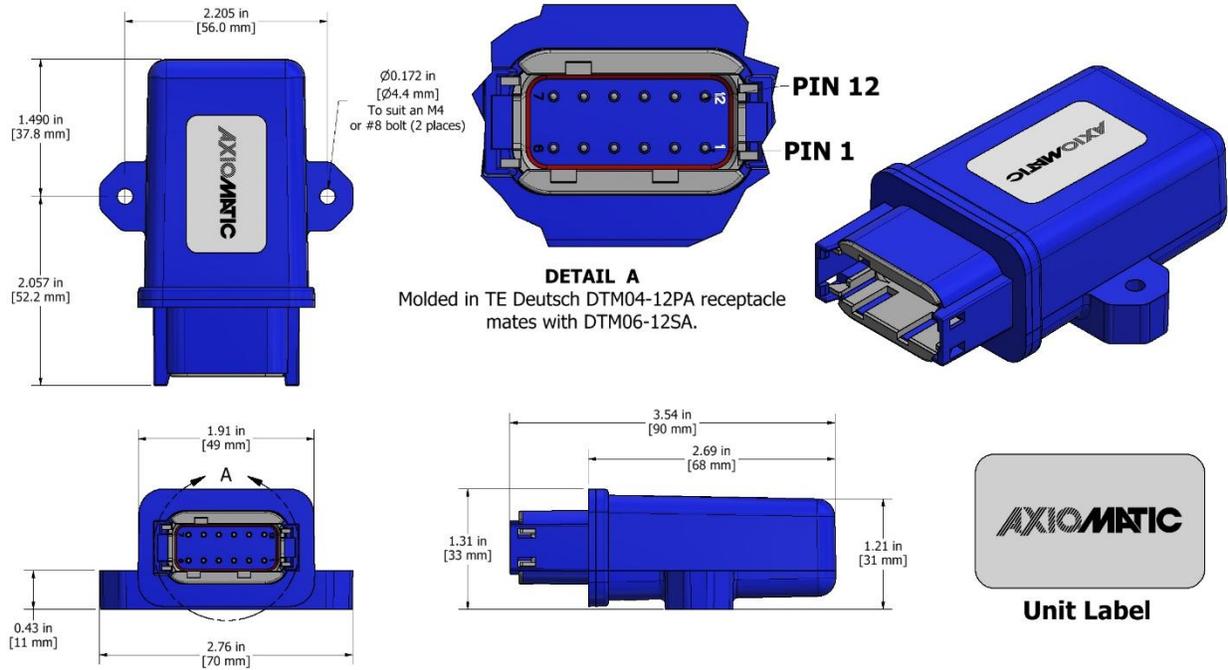


Figure 1.0 – Dimensional Drawing

Form: TDAX031511-01/26/2026