Magneto-Resistive Speed Sensor Input CAN Controller

CANopen®
12 / 24 / 48 VDC
P/N: AX030901

Features:

- Converts a magneto-resistive speed sensor signal into CANopen® messages for communication with control systems
- 1 magneto-resistive speed sensor signal input
- 1 CAN port (CANopen®)
- 12 / 24 / 48 Vdc input power (8 to 60 Vdc range)
- Integrated TE Deutsch equivalent 6-pin connector
- Compact
- Fully sealed IP67 rated enclosure

Applications:

- Underground mining equipment
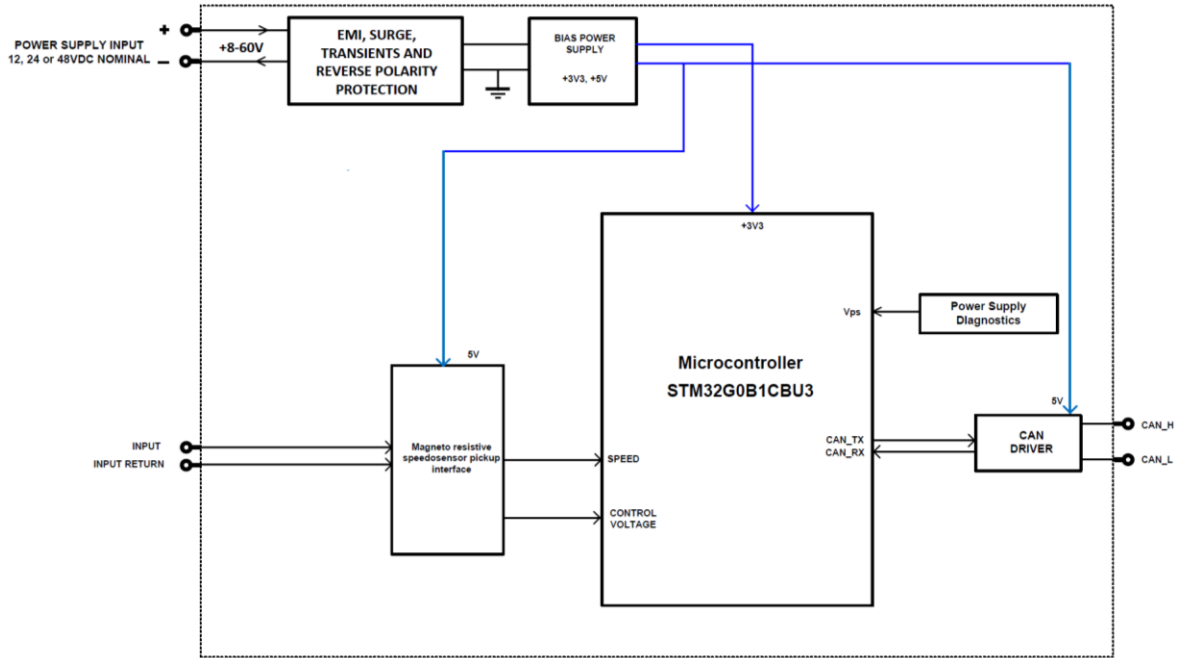- Construction equipment

Ordering Part Numbers:

Magneto-Resistive Speed Sensor Input CAN Controller, CANopen® - P/N: **AX030901**

Magneto-Resistive Speed Sensor Input CAN Controller, SAE J1939 - P/N: **AX030900**

Accessories:
Mating Plug KIT: **AX070119**

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 Approvals/Limitations and Return Materials Process as described on https://www.axiomatic.com/service/.

Power

Power Supply Input	12V, 24V, or 48 Vdc nominal (8 to 60 Vdc)
Quiescent Current Draw	10.5 mA @ 12Vdc; 6.4 mA @ 24Vdc; 5 mA @ 48Vdc (typical)
Surge and Transient Protection	Provided
Reverse Polarity Protection	Provided
Under-Voltage Protection	Provided (hardware shutdown) at 7V
Over-Voltage Protection	Provided (hardware shutdown) at 63V

Input

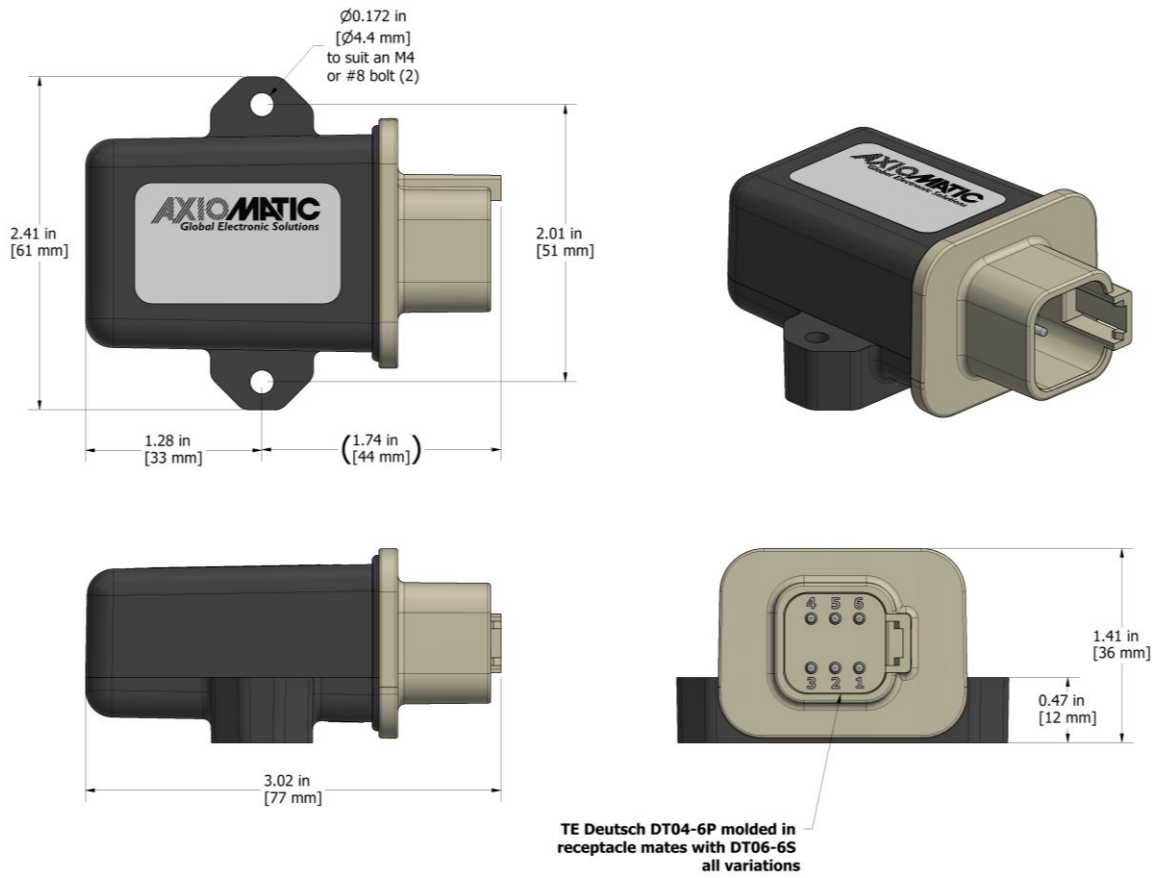|	
Input	1 magneto-resistive speed sensor input Frequency Range: 0.5 Hz to 10 kHz Input Impedance: 116 Ω Triger Point (input going high): 11 mA Hysteresis (input going low): 0.25 mA Maximum Input Current: 30 mA Maximum Input Voltage: 5 V Control input to detect broken wire (open sensor error) Protected from shorts to Supply Voltage

General Specifications

Microcontroller	STM32G0B1CBU3
CAN Port	1 CAN port (CANopen®) Supported baud-rates: 125 kbit/s, 250 kbit/s, 500 kbit/s, 667 kbit/s, and 1 Mbit/s CAN SAE J1939 Model: **AX030900**
Control Logic	EDS File is provided The ECU can be configured via CAN bus using the CANOpen Object dictionary.
Sampling Rate	1 kHz
Operating Temperature	-40 to 125°C (-40 to 257°F)
Storage Temperature	-50 to 150°C (-58 to 302°F)
Weight	0.01 lb. (0.045 kg)
Protection Rating	IP67
<mark>Compliance</mark>	<mark>Pending</mark>
<mark>Vibration</mark>	<mark>Pending</mark>
<mark>Shock</mark>	<mark>Pending</mark>
Enclosure and Dimensions	Plastic Enclosure, Nylon 6-6 with 30% glass fill, laser welded Integral TE Deutsch equivalent connector 3.02 in x 2.41 in x 1.41 in (77 mm x 61 mm x 36 mm) Note: L x W x H includes the integral connector. Refer to dimensional drawing. Flammability rating: UL 94 HB
Electrical Connections	6-pin connector (equivalent TE Deutsch P/N: **DT04-6P**) <table><tr><th>Pin #</th><th>Description</th></tr><tr><td>1</td><td>Battery +</td></tr><tr><td>2</td><td>CAN_L</td></tr><tr><td>3</td><td>CAN_H</td></tr><tr><td>4</td><td>Input Return</td></tr><tr><td>5</td><td>Input</td></tr><tr><td>6</td><td>Battery -</td></tr></table>
Mating Plug Kit	A mating plug KIT is available as Axiomatic P/N: **AX070119** (includes 1 plug DT06-6S, 1 wedgelock W8S, and 6 contacts 0462-201-16141)
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 0.47 inches (12 mm) thick. It should be mounted with connectors facing left or right to reduce the 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).

Dimensional Drawing

Ø0.172 in [Ø4.4 mm] to suit an M4 or #8 bolt (2)

2.41 in [61 mm]

2.01 in [51 mm]

1.28 in [33 mm]

(1.74 in [44 mm])

3.02 in [77 mm]

1.41 in [36 mm]

0.47 in [12 mm]

TE Deutsch DT04-6P molded in receptacle mates with DT06-6S all variations

CANopen® is a registered trademark of CAN in Automation e.V.

Form: TDAX030901-06/021/2024