TECHNICAL DATASHEET #TDAX031701

1 Signal Input (V/I/PWM) to CAN Converter

CANopen®

P/N: AX031701

Features:

- 1 Voltage, Current, PWM, Frequency, RPM or Counter Signal input
  (user selectable input range from: 0-5V; 0-10V; 0-20mA; 4-20mA; 0-100% PWM; 0.5Hz – 20 kHz; Pulse Counter)
- 1 CAN port (CANopen®)
- Operational 9…36 Vdc (12 Vdc or 24 Vdc)
- Integrated 6-pin connector (TE Deutsch equivalent)
- Compact, fully sealed enclosure, IP67
- CE/UKCA marking
- EDS File

Applications:

- Machine Control Systems

Ordering Part Numbers:

1 Signal Input, CAN Converter, 1 CANopen® P/N: **AX031701**

Accessories: Mating Plugs Kit P/N: **AX070119**

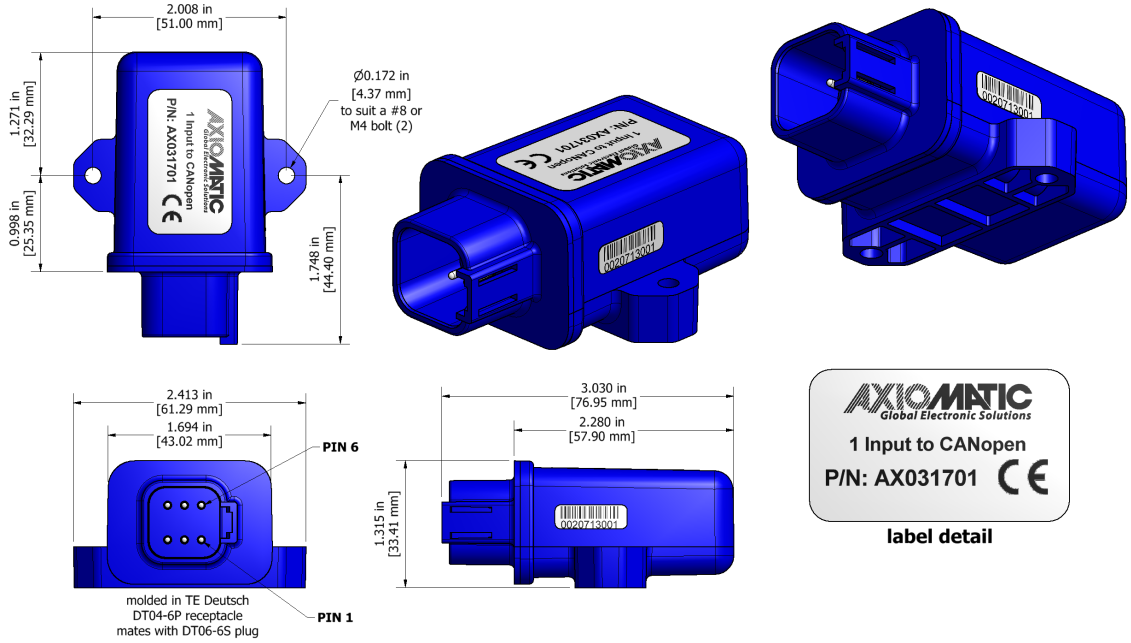

Figure 1.0 – Dimensional Drawing

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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 - Nominal	12 V or 24 Vdc nominal; 9…36 Vdc The minimum allowable supply voltage for the power pin is 7 Vdc.
Surge Protection	Surge Protection is provided. Overvoltage protection up to 38V is provided. Undervoltage protection is provided.
Reverse Polarity Protection	Provided

Input

Input Signal	One Voltage, Current, PWM [%], Frequency [Hz], RPM or Counter Signal Input Refer to Table 1.0.

Table 1.0 – **Input – User Selectable Options**

Analog Input Functions	Voltage Input
Voltage Input	0-5V (Impedance 204 KOhm); 0-10V (Impedance 136 KOhm)
Current Input	0-20 mA (Impedance 124 Ohm); 4-20 mA (Impedance 124 Ohm)
Digital Input Functions	PWM[%], Frequency [Hz], RPM or Counter Signal Input
Digital Input Level	+Vps
PWM Input	0 to 100% at 0.5Hz to 20kHz Selectable 10kΩ pullup to +5V or pulldown to GND resistor
Frequency Input	0.5Hz to 20kHz Selectable 10kΩ pullup to +5V or pulldown to GND resistor
Counter Input	Pulse Count, Measuring Window, Pulses in Window
Digital Input Function	5V CMOS, Active High or Active Low Selectable 10kΩ pullup to +5V or pulldown to GND resistor Normal, Inverse or Latched (push-button) response
Input Accuracy	≤ 1% full scale error (all types)
Analog Input Resolution	12-bit ADC
Digital Input Resolution	16-bit timer

Analog Ground	One provided
Error Detection/Reaction	Out of Range High and Low detection EMCY code generation (object 1003h) and fault reaction possible (1029h).

Control Logic

Software Platform	User programmable functionality using SDO object access, per CiA DS-301
User Interface	EDS provided to interface to standard CANopen® tools

General Specifications

Microcontroller	STM32F103CBT7, 32-bit, 128 Kbytes Flash Program Memory
CAN Port	1 CAN (CANopen®) SAE J1939 model is ordering part number AX031700.
Quiescent Current Draw	14 mA @ 24Vdc Typical; 30 mA @ 12Vdc Typical
Response Time	10 mSec. Typical
Operating Conditions	-40 to 85°C (-40 to 185°F)
Storage Temperature	-50 to 125°C (-58 to 257°F)
Weight	0.10 lb. (0.045 kg)
Protection Rating	IP67
EMC Compliance	CE/UKCA marking
Vibration	MIL-STD-202G, Test 204D and 214A (Sine and Random) 10 g peak (Sine); 7.86 Grms peak (Random)
Shock	MIL-STD-202G, Test 213B, 50 g
Enclosure and Dimensions	Plastic Enclosure, Nylon 6-6 with 30% glass fill Flammability Rating: UL 94V-0 Integral connector (TE Deutsch equivalent), Refer to Figure 1.0 dimensional drawing.

<table>
<tr><td>Electrical Connections</td><td>6-pin connector (equivalent TE Deutsch P/N: DT04-6P)
A mating plug kit is available as Axiomatic P/N: AX070119.
<table><tr><th>Pin #</th><th>Description</th></tr><tr><td>1</td><td>BATT+</td></tr><tr><td>2</td><td>Input +</td></tr><tr><td>3</td><td>CAN_H</td></tr><tr><td>4</td><td>CAN_L</td></tr><tr><td>5</td><td>Input -</td></tr><tr><td>6</td><td>BATT-</td></tr></table></td></tr>
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Specifications are typical at nominal input voltage and 25 degrees C unless otherwise specified.

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Form: TDAX031701-05/31/23