

TECHNICAL DATASHEET #TDAX130751
CAN to 2 Analog/Digital Signals and 1 Relay Output Converter
CANopen®
P/N: AX130751

Features:

- 2 Analog/Digital signal outputs configurable as: 0-5V; 0-10V; 4-20 mA; Frequency or PWM Signal.
- 1 Relay output
- 1 isolated CANopen® port (SAE J1939 model available)
- Operational 9...36 Vdc (12 Vdc or 24 Vdc)
- Integrated 12-pin TE Deutsch equivalent connector.
- Compact, fully sealed enclosure, IP67
- Meets the surge requirements of SAE J1445
- Designed for EMC compliance



Applications:

- Throttle controls for marine engine applications
- Servo applications

Ordering Part Numbers:

CAN to A/D and Relay Outputs Converter, CANopen® - P/N: **AX130751**
 EDS File

Accessories:

Mating Plug KIT: **PL-DTM06-12SA** (includes DTM06-12SA plug, 1 WM12S wedgelock, 12 0462-201-20141 contacts, and 6 0413-204-2005 sealing plugs)

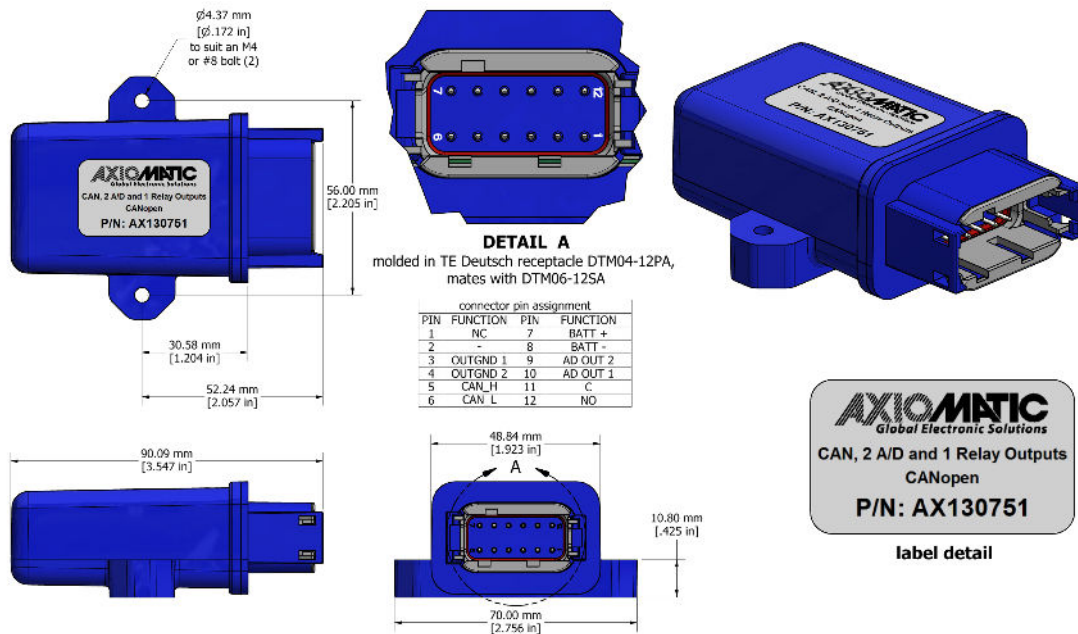


Figure 1.0 – Dimensional Drawing

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	Meets the surge requirements of SAE J1445
Reverse Polarity Protection	Provided
Under and Over-Voltage Protection	Under-voltage shutdown at 7 V Over-voltage shutdown at 39 V

Outputs

Analog/Digital Output	2 signal outputs configurable as: 0-5V, 0-10V, 4-20 mA or PWM/Frequency Voltage and current outputs: 12-bit DAC, output short circuit protected Analog Voltage or Current Outputs: Voltage Output: 0-5 Vdc, 0-10 Vdc Maximum load is 30 mA. Current Output: 0-20 mA or 4-20 mA Maximum load resistance is < 500 Ohms. Compliance Voltage is 14V. PWM or Frequency Outputs 0.1 Hz to 20 kHz 0-100% D.C. 5 V or 12 V Amplitude Push pull output Maximum load is 50 mA. Over-current protection (50 mA)
Output Accuracy	Voltage: 0.2% Current: 0.2% PWM Signal: 0.1% Frequency Signal: 0.1%
Relay Output	Sets 1 Form C relay output Resistive load: <ul style="list-style-type: none"> 5A (NO)/5 A (NC) at 220VDC/250VAC Dielectric strength: <ul style="list-style-type: none"> 3,000 VAC, 50/60 Hz for 1 min between coil and contacts 2,500 Vrms between open contacts There is no special overcurrent/overvoltage protection on the relay outputs. The user is advised to provide a fast acting 6A fuse or an adequate external protection if necessary.

Control Software

Software Platform	Pre-programmed with standard logic. Refer to the user manual.
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General Specifications

Microcontroller	STM32F405RGT7; 32-bit, 1024 KB Flash Program Memory
CAN Port	1 CANopen®
Isolation	300 Vrms isolation for CAN port
Quiescent Current Draw	Typical 63mA @12Vdc; 33mA @ 24Vdc
Response Time	<10 ms Typical
Operating Temperature	-40°C to 85°C (-40°F to 185°F)
Storage Temperature	-50°C to 125°C (-58°F to 257°F)
Weight	0.156 lb. (0.071 kg)

Protection Rating	IP67																												
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	Molded Enclosure, integral connector Nylon 6/6, 30% glass Ultrasonically welded Flammability rating: UL 94V-0 3.55 in x 2.76 in x 1.31 in (90.09 mm x 70 mm x 33.35 mm) L x W x H including integral connector Refer to dimensional drawing.																												
Electrical Connections	Integral 12 pin receptacle (Equivalent TE Deutsch P/N: DTM04-12PA) <table border="1" data-bbox="597 516 1024 890"> <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>Relay Output (NC)</td> </tr> <tr> <td>2</td> <td>Not Used</td> </tr> <tr> <td>3</td> <td>Output 1 GND</td> </tr> <tr> <td>4</td> <td>Output 2 GND</td> </tr> <tr> <td>5</td> <td>CAN H</td> </tr> <tr> <td>6</td> <td>CAN L</td> </tr> <tr> <td>7</td> <td>BATT +</td> </tr> <tr> <td>8</td> <td>BATT-</td> </tr> <tr> <td>9</td> <td>A/D Output 2</td> </tr> <tr> <td>10</td> <td>A/D Output 1</td> </tr> <tr> <td>11</td> <td>Relay Output (C)</td> </tr> <tr> <td>12</td> <td>Relay Output (NO)</td> </tr> </tbody> </table>	CAN and I/O Connector		Pin #	Description	1	Relay Output (NC)	2	Not Used	3	Output 1 GND	4	Output 2 GND	5	CAN H	6	CAN L	7	BATT +	8	BATT-	9	A/D Output 2	10	A/D Output 1	11	Relay Output (C)	12	Relay Output (NO)
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User Interface	EDS File, Standard CANopen® tools (not supplied)																												
Refashing	Axiomatic Electronic Assistant KIT, P/Ns: AX070502 , AX070505K , or AX070506K																												

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Form: TDAX130751-05/26/2023