

4 Universal Signal Outputs CAN Controller, Compact CANopen®

EDS File for Configuration

P/N: AX030561

Features

- 12/24/48 VDC nominal input power (9 to 60 VDC power supply range)
- 4 signal outputs user selectable as analog current, analog voltage, PWM, and digital ON/OFF
- 1 CAN port (CANopen®)
- Protection against input surge/transient, input undervoltage, input overvoltage, and output short circuit.
- Rugged enclosure and connector
- Compact
- IP67
- EDS file is provided for configuration



Applications

- Distributed controls
- Power generation, co-generation, stationary power
- Commercial vehicles, off-highway equipment, industrial equipment

Ordering Part Number

4 Universal Signal Outputs CAN Controller, CANopen®, Compact – P/N: **AX030561**

SAE J1939 model – P/N: **AX030560**

Accessories:

Mating Plug KIT - P/N: **PL-DTM06-12SA**

EDS File

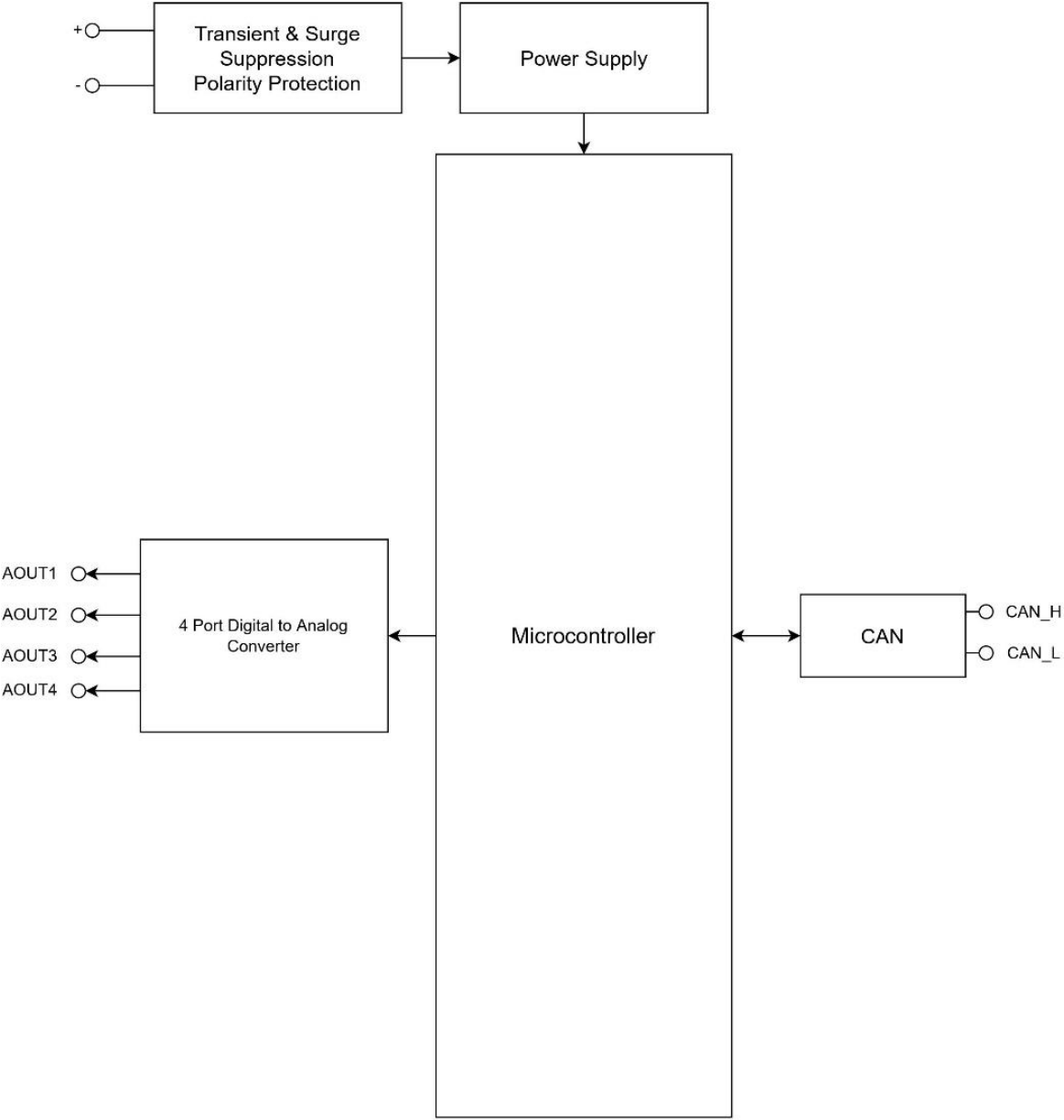
Description

This is a versatile and compact CANopen® controller with 4 universal outputs. Its hardware design allows for a wide range of output types: analog current, analog voltage, PWM, and digital On/Off.

All logical function blocks on the unit are inherently independent from one another but can be configured to interact with each other. The user can configure the controller for a wide range of applications without the need for custom firmware through standard CANopen® tools using an EDS file (provided).

The controller accepts power supply voltages from 9 to 60 VDC.

Functional 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/>.

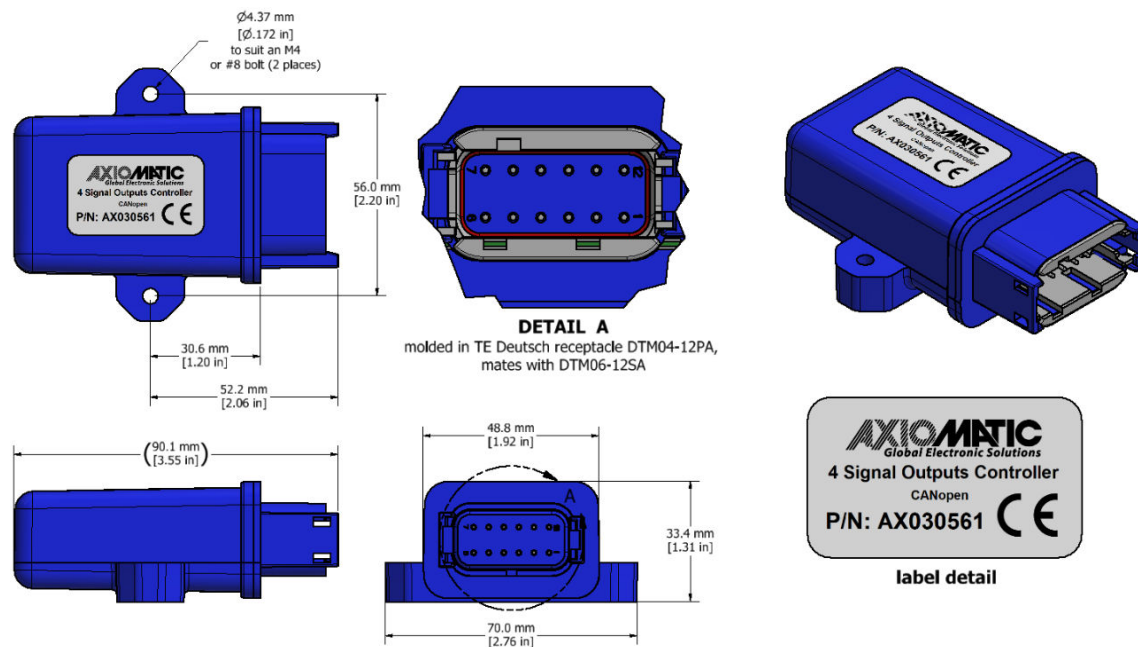
Input

Power Supply Input	12/24/48 VDC nominal (9 to 60 VDC power supply range)
Quiescent Current	89.5 mA @ 12 VDC; 47.5 mA @ 24 VDC
Protection	Surge protection Reverse polarity protection from 9 to 36 V Undervoltage protection (Hardware shutdown at 4.6 V) Overvoltage protection (Hardware shutdown at 63 V)
Signal Input	CAN Messages, CANopen® CAN signal can be filtered to accept messages from a single address on the network permitting a link to a specific ECU.

Outputs

Universal Outputs	4 outputs selectable as follows.	
	Analog Current Signal	0 to 20 mA; 4 mA to 20 mA; and ± 20 mA with maximum 400 Ω load Accuracy: 0.1% preliminary Resolution: 0.015% (>16 bit)
	Analog Voltage Signal	0 to 10 V; ± 10 V with maximum 25 mA load Accuracy: 0.5% preliminary Resolution: 0.015% (>16 bit)
	PWM Output	0 to 100% duty cycle Frequency Range: 0.5 kHz to 30 kHz Accuracy: 0.1% preliminary Amplitude: 5 V maximum Load: 10 mA maximum
	Digital ON/OFF	0 V / 5 V Maximum load: 10 mA
Ground Connection	4 analog Ground connections are provided. They are connected together internally.	
Protection	Protected against short circuit to ground and short circuit to power supply rail. Self-recovery when short is removed.	

Dimensional Drawing



General Specifications

Microcontroller	STM32F405, 32-bit, 1 MB flash program memory																										
Communication	1 CANopen® port Supported baud rates: 10 kbit/s, 20 kbit/s, 50 kbit/s, 125 kbit/s, 250 kbit/s, 500 kbit/s, 800 kbit/s, and 1 Mbit/s																										
Control Logic	Standard embedded control logic is provided.																										
User Interface	EDS file is provided for use with standard CANopen® configuration tools.																										
Compliance	CE / UKCA marking RoHS																										
Vibration	MIL-STD-202H, method 204, test condition C 10g peak (Sine) MIL-STD-202H, method 214A, test condition I/B 7.68 Grms (Random)																										
Shock	MIL-STD-202H, method 213B, test condition A 50 g (Shock)																										
Operating Conditions	-40°C to 85°C (-40°F to 185°F)																										
Storage Temperature	-50°C to 125°C (-58°F to 257°F)																										
Weight	0.15 lb. (0.068 kg)																										
Protection	IP67, PCB is conformal coated and protected by the enclosure.																										
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. (90.1 mm x 70 mm x 33.4 mm) Note: L x W x H excluding mating plugs Refer to the dimensional drawing.																										
Electrical Connections	Integral 12-pin receptacle (equivalent to TE Deutsch P/N: DTM04-12PA) <table border="1"> <thead> <tr> <th>Pin</th><th>Description</th></tr> </thead> <tbody> <tr><td>1</td><td>Ground</td></tr> <tr><td>2</td><td>Ground</td></tr> <tr><td>3</td><td>Ground</td></tr> <tr><td>4</td><td>Ground</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>Battery +</td></tr> <tr><td>8</td><td>Battery -</td></tr> <tr><td>9</td><td>Output 1</td></tr> <tr><td>10</td><td>Output 2</td></tr> <tr><td>11</td><td>Output 3</td></tr> <tr><td>12</td><td>Output 4</td></tr> </tbody> </table>	Pin	Description	1	Ground	2	Ground	3	Ground	4	Ground	5	CAN H	6	CAN L	7	Battery +	8	Battery -	9	Output 1	10	Output 2	11	Output 3	12	Output 4
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Mating Connectors	Mating Plug KIT P/N: PL-DTM06-12SA (includes 1 DTM06-12SA plug, 1 WM-12S wedgelock, 12 0462-201-20141 solid contacts, and 6 0413-204-2005 sealing plugs)																										
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 0.425 in. (10.8 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 in. or 15 cm) and strain relief (12 in. or 30 cm).																										
Network Termination	It is necessary to terminate the network with external termination resistors. The resistors are 120 Ω, 0.25 W minimum, metal film or similar type. They should be placed between CAN H and CAN L terminals at both ends of the network.																										

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

Form: TDAX030561-05/27/2025