

1 Resistive Output CAN Controller

SAE J1939
Configurable with Axiomatic Electronic Assistant
P/N: AX030570

Features

- 1 resistive output
- 1 CAN (SAE J1939) with auto-baud-rate detection
- 12 or 24 Vdc nominal input power (9 to 36 Vdc range)
- Input power surge, transient, and overvoltage protection
- Operates from -40 to 85°C (-40 to 185°F)
- Compact enclosure with integral TE Deutsch equivalent 8-pin connector
- Rugged, IP67-rated
- Configurable via the Axiomatic Electronic Assistant



Applications

- Systems interfacing module for CAN-based engine control or machine control units
- Emulating an analog joystick or potentiometer

Ordering Part Numbers

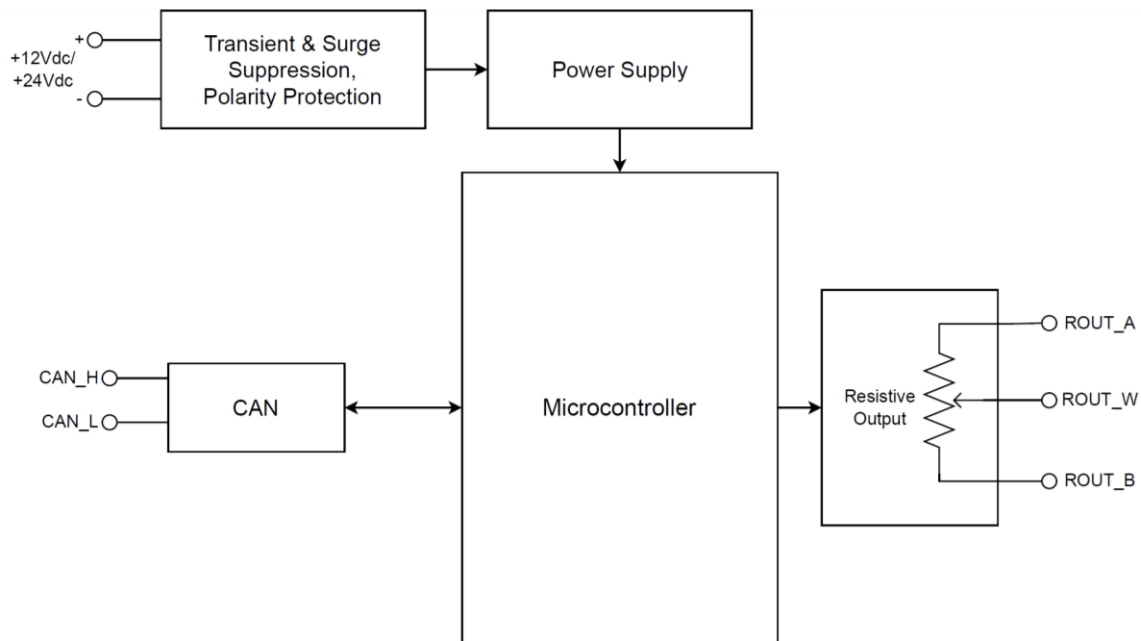
1 Resistive Output CAN Controller, SAE J1939 with Auto-Baud-Rate Detection -
P/N: **AX030570**

Accessories:

Mating Plug KIT - P/N: **AX070112**

Axiomatic Electronic Assistant KIT - P/N: **AX070502** or **AX070506K**

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/>.

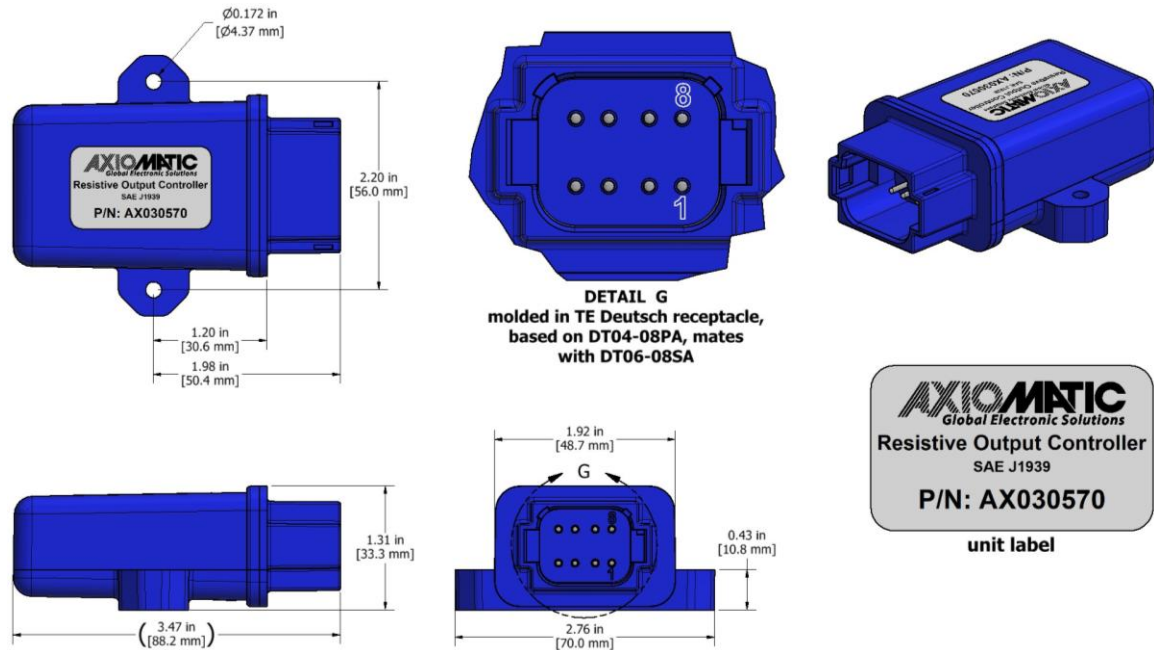
Power Supply

Power Supply Input	12 or 24 Vdc (nominal) 9 to 36 Vdc power supply range
Quiescent Current	30.8 mA @ 12 Vdc; 17.5 mA @ 24 Vdc (typical)
Protection	Surge protection provided Reverse polarity protection provided Overvoltage protection provided

Output

Signal Output	1 resistive output
Terminals	3 terminals (A, B, and W) as follows. A: Lead 1 of resistor B: Lead 2 of resistor W: Wiper
Resistance	5 k Ω nominal \pm 20%
Zero Offset	Max. 180 Ω
Output Resolution	8 bit
Ground	Provided

Dimensional Drawing



General Specifications

Microcontroller	STM32F413CGU6, 1 MB Flash, 320 KB RAM																		
Control Logic	Standard embedded software is provided. Refer to the User Manual. <i>(Application-specific control logic or factory programmed setpoints are available on request.)</i>																		
CAN	1 CAN port (SAE J1939) 250 kbit/s, 500 kbit/s, 667 kbit/s, and 1Mbit/s with auto-baud-rate detection																		
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.																		
User Interface	Axiomatic Electronic Assistant KIT - P/N: AX070502 or AX070506K																		
Compliance	RoHS																		
Operating Conditions	-40 to 85 °C (-40 to 185 °F)																		
Storage Temperature	-55 to 125 °C (-67 to 257°F)																		
Enclosure and Dimensions	Molded Enclosure, integral connector Nylon 6/6, 30% glass, ultrasonically welded 3.47 in x 2.76 in x 1.31 in (88.2 mm x 70.0 mm x 33.3 mm) L x W x H including integral connector Refer to the dimensional drawing.																		
Weight	0.15 lb. (0.065 kg)																		
Protection	IP67																		
Electrical Connections	Integral 8-pin receptacle (equivalent to TE Deutsch P/N: DT04-08PA) <table border="1" data-bbox="496 768 1008 1003"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Power Input +</td> </tr> <tr> <td>2</td> <td>Power Input -</td> </tr> <tr> <td>3</td> <td>CAN L</td> </tr> <tr> <td>4</td> <td>CAN H</td> </tr> <tr> <td>5</td> <td>Resistive Output A</td> </tr> <tr> <td>6</td> <td>Resistive Output W</td> </tr> <tr> <td>7</td> <td>Resistive Output B</td> </tr> <tr> <td>8</td> <td>Ground</td> </tr> </tbody> </table>	Pin	Description	1	Power Input +	2	Power Input -	3	CAN L	4	CAN H	5	Resistive Output A	6	Resistive Output W	7	Resistive Output B	8	Ground
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Mating Plug Kit	Available from Axiomatic under P/N: AX070112 . It comprises the following TE Deutsch parts: 1x plug DT06-08SA, 1x wedgelock W8S, 8x contacts 0462-201-16141, and 3x sealing plugs 114017. 18 AWG wire is recommended for use with contacts 0462-201-16141.																		
Installation	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 0.43 in (10.8 mm) thick. It should be mounted with connectors facing left or right to reduce 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).																		

Form: TDAX030570-02/25/2025