TECHNICAL DATASHEET #TDAX130761

CAN to 1 Signal Output Controller, CANopen®

P/N: AX130761

Features

- Operational 9 to 36 VDC (12 or 24 VDC)
- Integrated TE Deutsch equivalent 6-pin connector
- Compact, fully sealed enclosure, IP67
- Designed for EMC compliance
- EDS file provided

Applications

Distributed controls in

- Commercial vehicles
- Off-highway equipment
- Oil and gas equipment
- Industrial equipment
- Agricultural equipment

Ordering Part Number

CAN to 1 Signal Output Controller, CANopen® - P/N: **AX130761**

SAE J1939 model – P/N: **AX130760**

Accessories:
EDS File
Mating Plug KIT - P/N: **AX070119**

Description

CAN to 1 Signal Output Controller accepts power supply voltages from 9 to 36 VDC.

Versatile control algorithms/ function blocks allow the user to configure the controller for a wide range of applications without the need for custom firmware. All logical function blocks on the unit are inherently independent from one another but can be configured to interact with each other.

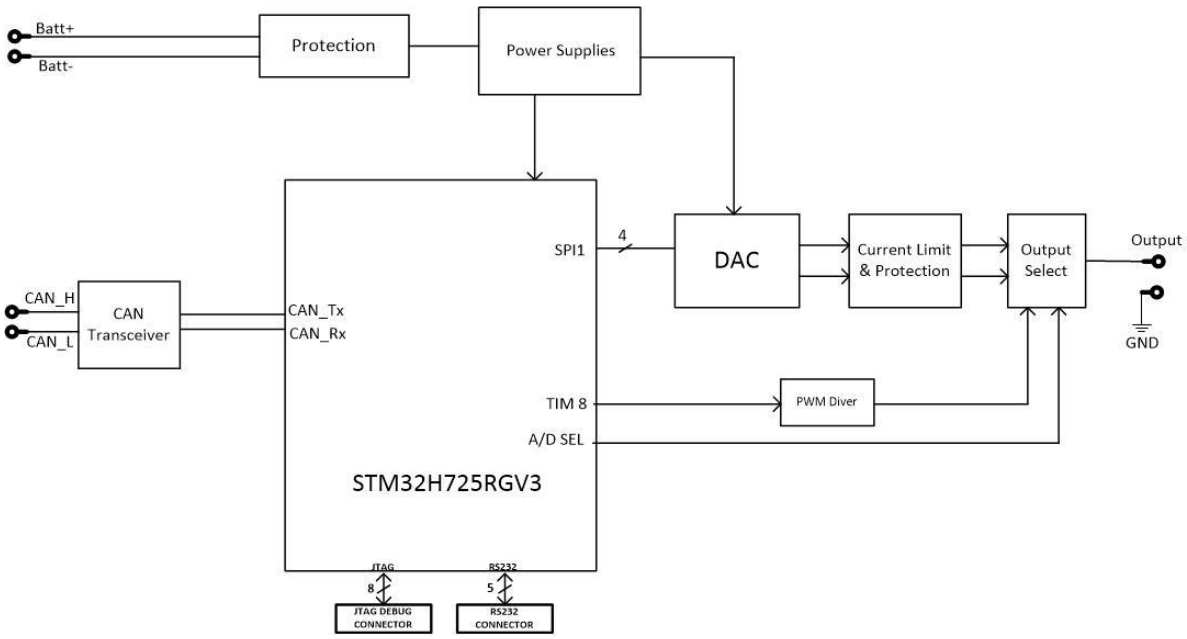
The hardware design allows for the controller to have a wide range of output types: Current, Voltage, and PWM.

It can operate at baud-rates of 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.

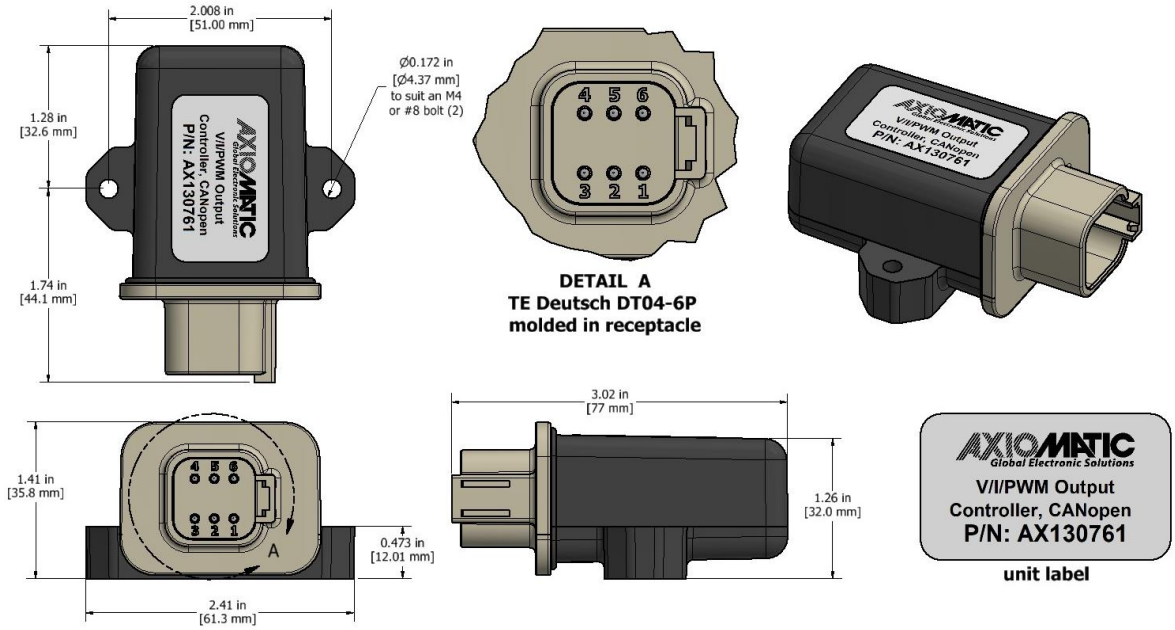
Axiomatic Technologies Oy
Höytämöntie 6
33880 LEMPÄÄLÄ, Finland
Tel. +358 103 375 750
salesfinland@axiomatic.com
www.axiomatic.fi

Axiomatic Technologies Corporation
1445 Courtneypark Dr. E.
Mississauga, ON Canada L5T 2E3
Tel. 1 905 602 9270
sales@axiomatic.com
www.axiomatic.com

Block Diagram



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

Power

Power Supply Input	12 or 24 VDC nominal (9 to 36 VDC)
Quiescent Current	50 mA @ 12 V and 27.5 mA @ 24 V typical
Surge and Transient Protection	Provided
Reverse Polarity Protection	Provided
Under-Voltage Protection	Provided (hardware shutdown at 4.3 V)
Over-Voltage Protection	Provided (hardware shutdown at 38.1 V)

Output

Output

1 signal output selectable as: Voltage, Current, or PWM

12-bit digital to analog
Protected against shorts to GND or +Vcc

Voltage Types:
Resolution: 12-bit
Maximum Load: 25 mA

Range (V)	Accuracy (%)
0-5	0.25
0-10	0.4
±5	0.25
±10	0.5

Current Types:
Resolution: 12-bit
Maximum Load: 500 Ω

Range (mA)	Accuracy (%)
0-20	0.5
4-20	0.2

PWM Type:
PWM Duty Cycle: 0-100%
Frequency Range: 1 Hz to 5 kHz
Amplitude: 5 V or 12 V
Maximum Load: 20 mA

Range (Hz)	Accuracy (%)
1-500	0.01
501-1000	0.08
1001-5000	0.4

General Specifications

<table>
<tr><td>Microcontroller</td><td>STM32H725RGV3; 32-bit, 1 Mbyte Flash Program Memory</td></tr>
<tr><td>Control Logic</td><td>Standard logic is provided</td></tr>
<tr><td>CAN Port</td><td>1 CAN (CANopen®)
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.</td></tr>
<tr><td>User Interface</td><td>EDS File</td></tr>
<tr><td>Compliance</td><td>RoHS, REACH</td></tr>
<tr><td>Vibration</td><td>MIL-STD-202H, method 204, test condition C
10 g peak (Sine)

MIL-STD-202H, method 214A, test condition I/B
7.56 Grms (Random)</td></tr>
<tr><td>Shock</td><td>MIL-STD-202H, method 213B, test condition A
50 g peak</td></tr>
<tr><td>Operating Conditions</td><td>-40 to 85 °C (-40 to 185 °F)</td></tr>
<tr><td>Storage Temperature</td><td>-50 to 125 °C (-58 to 257 °F)</td></tr>
<tr><td>Weight</td><td>0.1 lbs. (0.0454 kg)</td></tr>
<tr><td>Protection</td><td>IP67</td></tr>
<tr><td>Enclosure and Dimensions</td><td>Plastic Enclosure, Nylon 6-6 with 30% glass fill
Laser welded
Integral connector equivalent to 6-pin TE Deutsch connector
Refer to dimensional drawing.</td></tr>
<tr><td>Electrical Connections</td><td>6-pin equivalent TE Deutsch connector P/N: DT04-6P

A mating plug kit is available as Axiomatic P/N: AX070119 (includes 1 Plug DT06-6S, 6 Contacts 0462-201-16141, and 1 Wedgelock W6S)

<table>
<tr><th>Pin #</th><th>Description</th></tr>
<tr><td>1</td><td>BATT+</td></tr>
<tr><td>2</td><td>BATT-</td></tr>
<tr><td>3</td><td>GND</td></tr>
<tr><td>4</td><td>Signal Output</td></tr>
<tr><td>5</td><td>CAN_L</td></tr>
<tr><td>6</td><td>CAN_H</td></tr>
</table>
</td></tr>
<tr><td>Mounting</td><td>Mounting holes 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 0.17 inches (4.4 mm) thick.

If the module is mounted without an enclosure, it should be mounted to reduce the likelihood of moisture entry. 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).

CAN wiring is considered intrinsically safe. The power wires are not considered intrinsically safe and so in hazardous locations, they need to be located in conduit or conduit trays at all times. The module must be mounted in an enclosure in hazardous locations for this purpose.

All field wiring should be suitable for the operating temperature range of the module.</td></tr>
</table>

Form: TDAX130761-10/30/2024