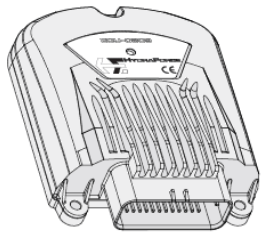## Overview

Description

The **ECU-0809** controller is a compact and robust multi-function programmable controller designed to withstand the real-world environmental demands of the off-highway mobile market. The ECU-0809 can be used in both centralized and distributed intelligence systems. It has a light, leak proof, chemical-resistant zinc/plastic enclosure, indicator LED, Gore-Tex "breather" and 35-pin AMPSEAL connector. The ECU-0809 has inputs and outputs that can be configured in multiple ways. Input configuration can be set for up to 17 inputs consisting of Digital, Pulse, and Analog inputs. Output configuration can be set for up to 8 PWM outputs with 4 current feedbacks. All outputs are capable of driving up to 2 amps (closed loop) or 3 amps (open loop.) .

NOTE: Refer to Input/Output table below for pin configuration capability. Refer to ECU-0809 Technical Reference Manual for specific data and ratings of individual inputs and outputs.

Features

- CE Certified, complies with WEEE, European Community Directive 2002/96/EC/for waste electrical and electronic equipment, RoHS, European Community Directive 2011/65/EU restricting hazardous substances, and certified to normal automotive E17 (EMC) standards for electromagnetic compatibility.
- Reliable operation in real-world temperature conditions
- Robust, light, leak proof, chemical- resistant zinc/plastic enclosure.
- Three-point anchorage mounts firmly even on irregular surfaces.
- Inputs and outputs are protected against short circuits.
- Internal diagnostic capability to detect overvoltage and overheating.
- Signal LED for quick status check and fault detection.

Ratings

Electrical Parameters

Operating voltage	8.5 to 33 Vdc	
Idle power consumption	1.3 W	
Operating current	10 A	**- Note:** Maximum continuous current with full external load
Overvoltage	40 Vdc	**- Note:** maximum (logic/load circuit shutdown at 35 Vdc)
Reference voltages	+5 Vdc	**- Note:** Limit 270 mA all pins (total 2)

Processor and Memory

Processor	16/32 bit CPU, 100 MHz	
Flash memory	1600 kB	
RAM	138 kB	**- Note:** 112 kB for PLCopen application variables
Non-volatile memory	2 kB	
PLCopen application size	768 kB	**- Note:** max

Temperature Ratings

Operating temperature range	-40 to 85 °C (-40 to 185°F)

Properties

Unit weight	0.44 kg (0.97 lb)

Environmental Ratings

Ingress protection class	IP67	
Humidity tolerance	>90% RH	**- Note:** 25 to 55 °C (77 to 131 °F) per IEC 60068-2-30
Radiated immunity	20 to 2000 MHz	**- Note:** at 30 V/m per ISO 11452-2 (test DB)
Vibration	3.5 G	**- Note:** (rms) per IEC 60068-2-64 (test FH)
Mechanical shock	100 m/s² peak	**- Note:** per IEC 60068-2-27 (test EA, EB)
Corrosion protection	24 h	**- Note:** 5% salt spray at 35 °C (95 °F) per ISO 9227

Communication

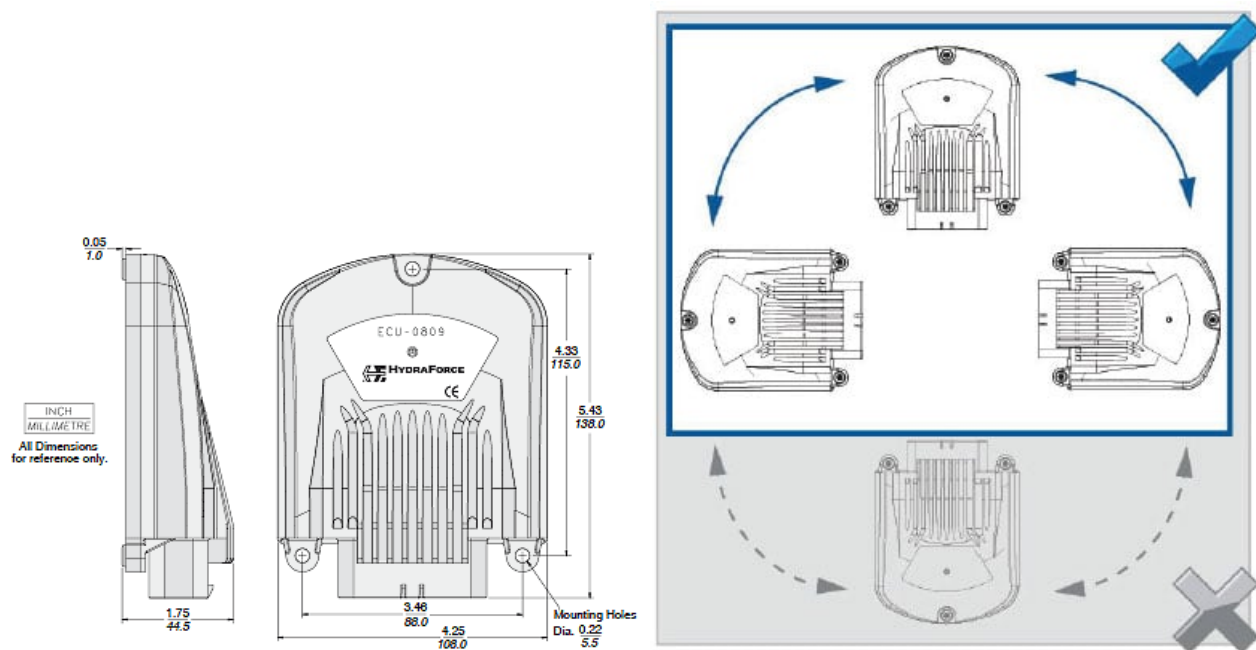|	
CAN interface	ISO CAN 2.0B CAN Open SAE J1939

I/O

Inputs/Outputs 21 Total

MAX I/O	Digital In (SWG)	Digital In (SWB)	Pulse	Analog In	Current feedback	PWM (source)	Digital Out (source)
8	X					X	X
5		X	X				
4		X		X			
4					X		
21	8	9	5	4	4	8	8

Note: The ECU-0809 has flexible I/O that can be configured in multiple ways. For more information, consult the ECU-0809 Technical Reference Manual.

Dimensions

Note: When mounting the ECU-0809, be sure to mount with the plug facing down or to the side. Do not mount the unit in a position where the connector side is facing up.

To Order

ECU-0809 controller: Part No. 4000350

Configuration/Test Harness: Part No. 4000306

AmpSeal Connector: 35 pin, Part No. 4000381

AmpSeal Socket/Plug:

Sockets Gold (100 pc.): Part No. 4000369

Sealing Plugs (100 pc.): Part No. 4000370

AmpSeal Test Leads:(10 each, 24" length) Part No. 4000287

CoDeSys Programming Software: available from HydraForce Electronics Portal as free download.

USB-CAN Programming Adapter: Part No. 4000371