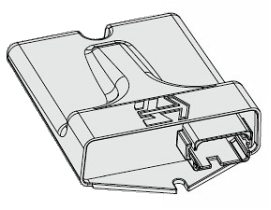
Overview



Description

The **ECDR-0203A** is a robust electronic driver for solenoid-operated proportional valves. Its 32-bit processor provides high calculating power. It has three inputs that are configurable to multiple settings ranging from digital to analog. Two PWM outputs with configurable frequency. A single CAN bus allows CANopen and SAE J1939 communication protocols. The red/green LED signal provides quick status check. The molded enclosure has a scratch-resistant finish.

ECDR-0203A is configured with HF-Impulse software: an easy to use, web-accessible configuration tool available as a free download at www.hydraforce.com/electronics.

The ECDR-0203A controller can be used in a wide range of applications, including transmission controls, vehicle traction controls, joystick controls, and harvesting function controls. It can be specified for applications previously using the HydraForce EVDR7.

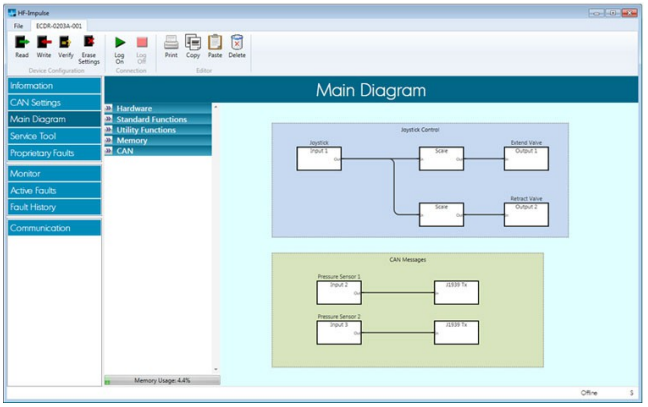
Operation

The controller accepts input from commonly available analog or SAE J1939 CAN/CANopen operator interface devices (joystick, potentiometer, sensors, etc.) The input signal drives the output current.

Diagnostic Features

- Internal diagnostics make it possible to detect over/under voltage conditions and coil failure.
- Outputs have short-circuit protection.
- Supply voltage below 9 Vdc or above 32 Vdc will cause the controller to go to the safe mode of valve OFF and automatically resets.
- The red/green bi-color LED provides quick status check.

Configuration Example



Ratings

Electrical Parameters

Power requirements	9 to 32 Vdc
Maximum current draw	4 A

Processor and Memory

Processor	ARM 32-bit Cortexâ„¢-M3 CPU, 72 MHz
Flash memory	128 kB
RAM	32 kB

Properties

Mating connectors	Deutsch DT06-12SA
Diagnostic LED	bi-color (red/green) LED
Environmental rating	IP67
Operating temperature	â€“40 to 85 °C (â€“40 to 185 °F)
Storage temperature	â€“40 to 85 °C (â€“40 to 185 °F)
Unit weight	0.336 kg (0.8 lb)
Interface software	HF-Impulse
Housing material	Norylâ„¢ glass-filled PPE/PPO

I/O

Number of inputs	3
Number of outputs	2

Communications

CAN Ports	1 CAN 2.0B **- Note:** SAE J1939

Control Inputs - Analog

Voltage	0 to 5 Vdc 0 to 10 Vdc
Current	0 to 20 mA 4 to 20 mA
Resistive	0 to 6000 Ohm
Temperature	ERT 120 (HydraForce temperature sensor)

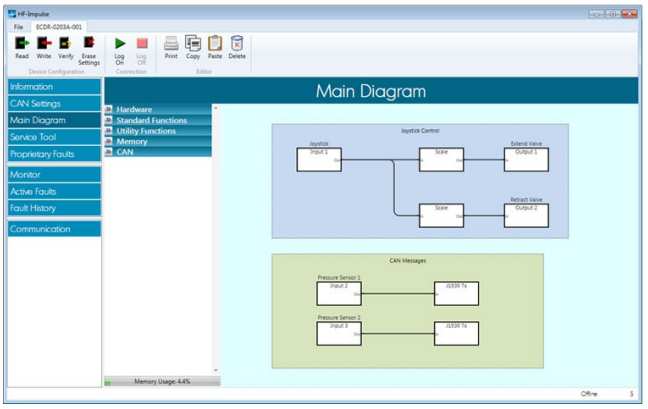
Control Inputs - Digital

Switch	Switch to battery Floating Switch to ground
PWM	0 to 100% **- Note:** 60 to 5000 Hz
Frequency	60 to 10 000 Hz 4 to 2000 Hz 4 to 10 000 Hz

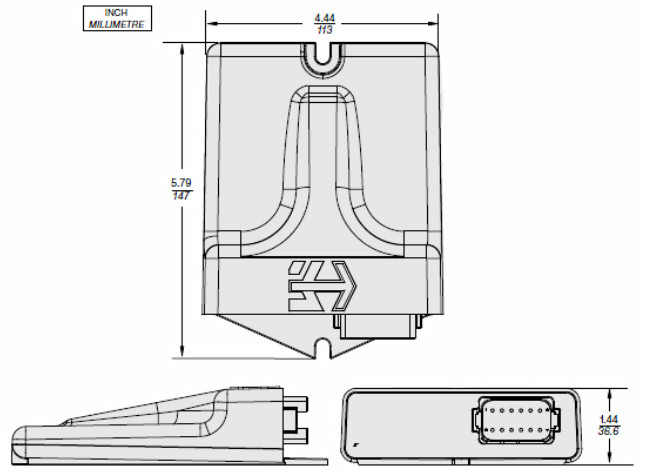
Outputs

Current control	0 to 2000 mA
PWM control	0 to 100% **- Note:** Duty cycle
PWM frequency range	40 to 400 Hz

Configuration Example



Dimensions



To Order

Valve Driver Model ECDR-0203A: Part No. 4208230
Configuration Software for ECDR-0203A â€" HF-Impulse: Free download from www.hydraforce.com/electronics.
Mating Connector Kit: Gray, Part No. 4001956
Test Harness: Part No. 4000307 (For testing and bench operation)
USB-CAN Programming Adapter: Kvaser Leaf Lite HS â€" Part No. 4000371, also available from www.kvaser.com
Temperature Sensor â€" ERT 120: Part No. 4206200
Mating Connector Kit for ERT 120 Temperature Sensor â€" Deutsch Model DTM06-2S: Part No. 4001970