



## Overview



### Description

the ESDR-0201A is a compact plug-in style, microprocessor based, closed-loop PID valve driver designed for use in hydraulic proportional valve applications. The controller receives a command via CAN bus and drives the two outputs through a pid loop receiving feedback signal from the 0-5 V input. a 5 Vdc reference output (250 mA) is provided for powering an external sensor. The ESDR-0201A is designed to work with hydraforce proportional valves with integrated LVDT position sensor, however it can function as a stand-alone PID control. PID tuning parameters are configurable using HF-Impulse software: an easy-to-use, web-accessible configuration tool available as a free download at [www.hydraforce.com/electronics](http://www.hydraforce.com/electronics).

### Diagnostic Features

- Any supply voltage below 8.5 Vdc causes the controller to default to the valve-off mode.
- The driver output drops and holds at the inactive stand-by condition. Any short or open circuit condition is automatically detected as an error.
- When the fault is corrected, the controller returns to standard operation.

## Ratings

### Electrical Parameters

Power supply	9 to 32 Vdc	- <b>Note:</b> Nominal 12 and 24 Vdc systems
Reference output voltage	5.5 Vdc	- <b>Note:</b> 200 mA

### Processor and Memory

Processor	ARM 32-bit Cortex <sup>®</sup> -M3 CPU, 72 MHz
Flash memory	64 kB
RAM memory	20 kB

### Properties

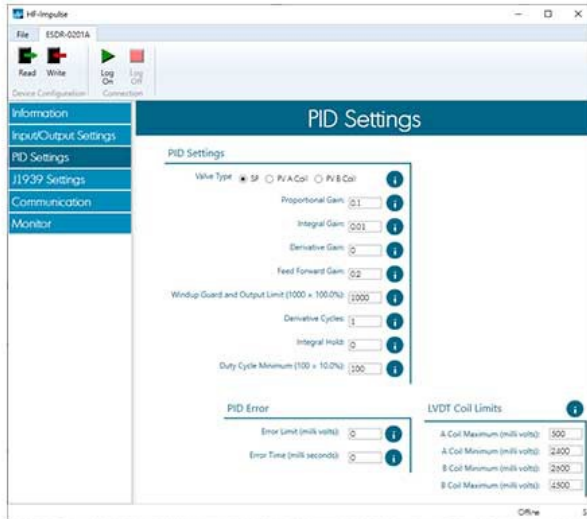
Indicators	2x Output LED (red)
Protection functions	Over-voltage protection, short-circuit protection for outputs
Interface software	HF-Impulse ver 1.15 or greater
Software installation	Download via CAN J1939
Protection class	IP69K
Unit weight	0.072 kg (0.159 lb) - <b>Note:</b> without connectors
Case material	Noryl plastic
Operating temperature	-40 to 85 °C (-40 to 185 °F)
Storage temperature	-40 to 85 °C (-40 to 185 °F)
Mating connectors	Deutsch DT06-8S DT04-2P
Communications	1 X CAN 250 kbps / 500 kbps

## I/O

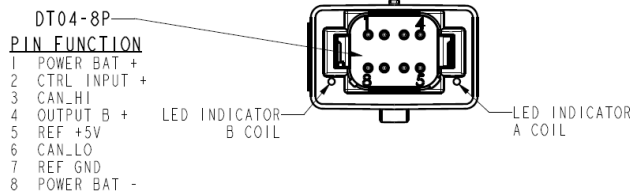
Inputs	1X voltage input 0 to 5 Vdc
Outputs	2X PWM sourcing - <b>Note:</b> 2 A continuous, 40 to 400 Hz



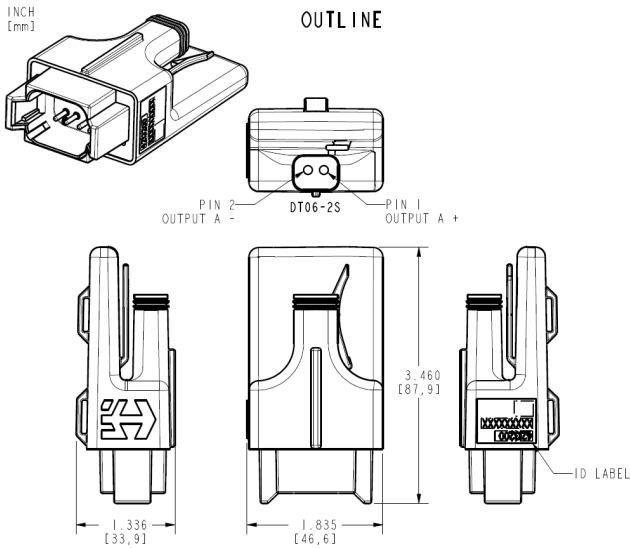
## Configuration Example



## Pinout



## Dimensions



ALL DIMENSION ARE FOR REFERENCE ONLY



## To Order

**ESDR-0201A controller:** Part No. 4213200

**Configuration Software:** HF-Impulse (Free download from [www.hydraforce.com/electronics](http://www.hydraforce.com/electronics)).

**DT06-08S Connector Kit:** Part No. 4001955

**LVDT Harness:** Part No. 4002916 (For use with LVDT position sensor)

**USB-CAN Programming Adapter:** Kvaser Leaf Lite HS " Part No. 4000371, also available from [www.kvaser.com](http://www.kvaser.com)

### Reference information

Available for from [www.hydraforce.com/electronics](http://www.hydraforce.com/electronics)

**Startup guide:** 7709132

**Technical reference:** 7709109