



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.

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	- Note: Nominal 12 and 24 Vdc systems
Reference output voltage	5.5 Vdc	- Note: 200 mA

Processor and Memory

Processor	ARM 32-bit Cortex [®] , M3 CPU, 72 MHz
Flash memory	64 kB
RAM memory	20 kB

Properties

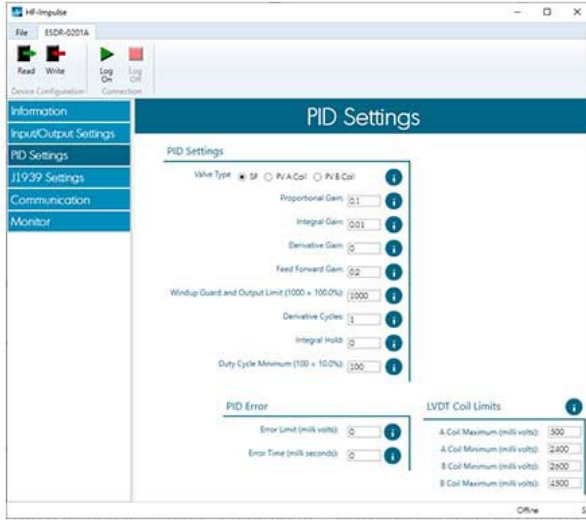
Indicators	2x Output LED (red)
Protection functions	Over-voltage protection, short-circuit protection for outputs
Interface software	HF-Impulse ver 1.15 or greater
Software installation	Download via CAN J1939
Protection class	IP69K
Unit weight	0.072 kg (0.159 lb) - Note: without connectors
Case material	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

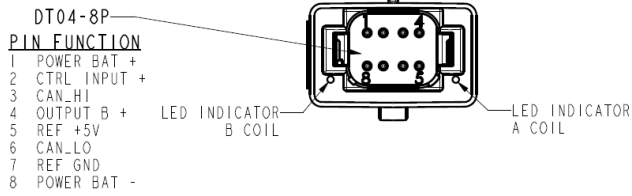
Inputs	1X voltage input 0 to 5 Vdc
Outputs	2X PWM sourcing - Note: 2 A continuous, 40 to 400 Hz



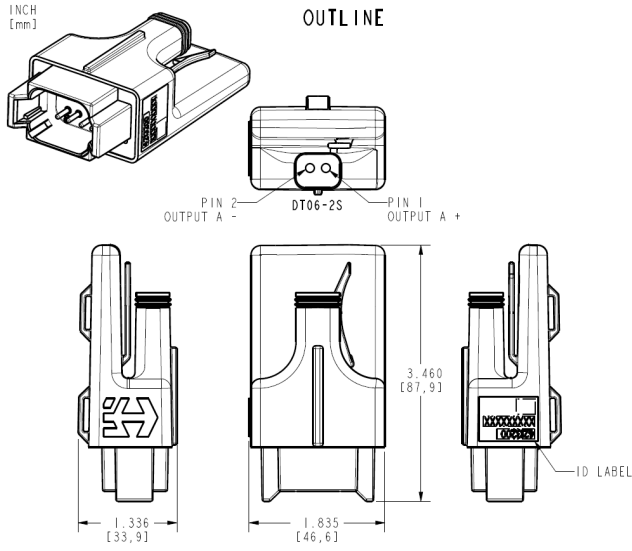
Configuration Example



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).

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

Reference information

Available for from www.hydraforce.com/electronics

Startup guide: 7709132

Technical reference: 7709109