

**Distribute your control functions directly onto the valve.**

**Features:**

- 1 Signal Input (0.5-4.5VDC, 0-5VDC, 4-20 mA, PWM)
- Drives 1 hydraulic valve (proportional 0-2.5A)
- +5V, 50 mA reference voltage to power sensors
- Variable superimposed dither
- 12V or 24Vdc nominal input power
- Rugged IP67 packaging
- Integrated connector to minimize wiring and reduce installation time
- Compact, plug-in style for valve coil with a molded Deutsch IPD DT04-2P connector
- Flexible user programming for application-specific parameters via Single EWRITE Service Tool for a PC



**Ordering Part Number:**

Single Valve Controller, Plug-In, Model  
AXLCS: **AX023100**

Service Tool: **Axiomatic Single EWRITE GUI** and User Manual are available on [www.axiomatic.com](http://www.axiomatic.com). Go to the Log-In tab.

Configuration Cable for GUI:  
**AX070120**

Mating Connector Kits: **AX070119**

## Technical Specifications:

### Power Supply Input

Power Supply Input - Nominal	12, 24VDC nominal (9...32 VDC power supply range)
Protection	Reverse polarity protection is provided. Overvoltage protection to 32VDC is provided.

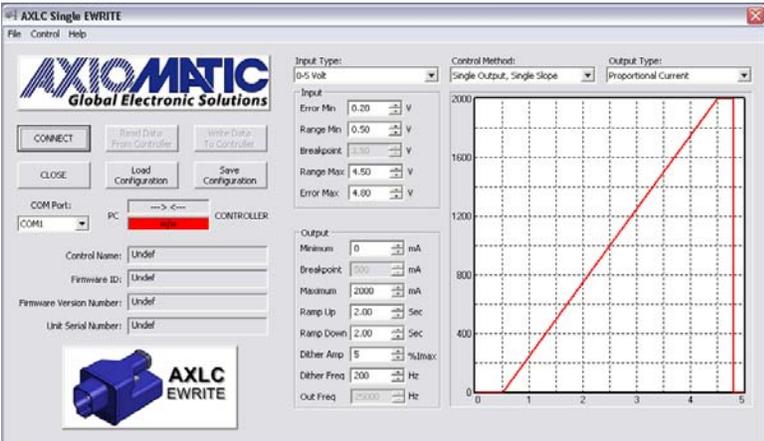
### Inputs

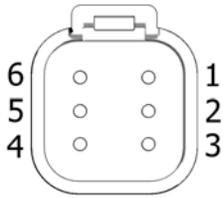
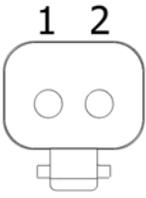
Signal Input	1 signal input is provided for interface with a joystick or other command input User configurable operating range and error range 0-5VDC; 4-20 mA; or PWM (Default: 0.5 - 4.5VDC) Output is off when the input signal goes out of range.
Resolution/Accuracy	0-5VDC Input: 10 mV resolution / +/- 1% accuracy 4-20 mA Input: 0.1 mA resolution / +/- 1% accuracy PWM Input (> 100 Hz, < 10 kHz): 0.1% resolution / +/- 1% accuracy

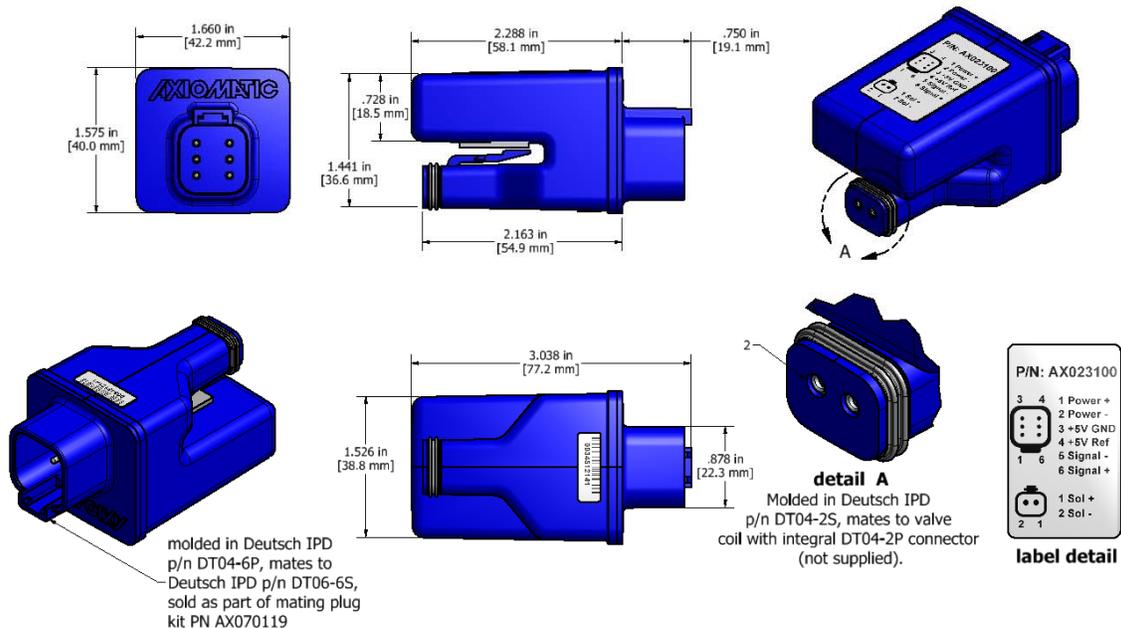
### Outputs

Output	User configurable Output type for Proportional: <ul style="list-style-type: none"> <li>Output current (Single high side switch 0 – 2.5A) - <b>Default</b></li> <li>Voltage (0-Vps)</li> <li>PWM Duty Cycle (0-100%)</li> </ul> <p>Current sensing for close-loop control (current output type)</p> <p>User configurable output ranges</p> <ul style="list-style-type: none"> <li>Default Output range min: 0 mA</li> <li>Default Output range max: 2000 mA</li> </ul>
Dither	Variable Frequency Range: 50 to 400 Hz Default: 200 Hz Amplitude Range: 0 to 10% of Imax Default: 0 % (Disabled)
Ramps	User configurable ramp up and ramp down Range: 0 to 10 seconds Default: 0 seconds (Disabled)
Resolution/Accuracy	1 mA resolution +/- 1% accuracy
Protection for Output +	The output plugs directly into the valve and is protected against a short to GND.
Output GND Reference	One is provided
Reference Voltage	+5V, 50 mA

### General Specifications

Microprocessor	STM32, 32-bit, 128 Kbyte program memory
Response Time	126 mSec. @ 3 Ohm load for 2A current
Control Logic	Single or Dual Slope Control Directly or inversely proportional output response to changes at the input.
Programming	A service tool is available for user configuration, the Axiomatic Local Controller Single EWRITE. The Axiomatic Local Controller Single EWRITE service tool comes with a configuration cable P/N: AX070120.  

Packaging	Molded Enclosure, integral connectors Polyester, 30% glass Silicone seal 3.04 x 1.44 x 1.526 inches 77.1 x 36.6 x 38.8 mm L x W x H including integral connectors																								
Protection	IP67 rating for the product assembly																								
Weight	0.15 lbs. (0.068 kg)																								
Temperature Rating	Operating: -40 to 85°C (-40 to 185°F) Storage: -50 to 105°C (-58 to 221°F)																								
Electrical Connections	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;">  </div> <div> <p>6-pin Integral Connector, Deutsch IPD p/n DT04-6P mates to Deutsch IPD p/n DT06-6S (not supplied) <b>Contact your local Deutsch IPD representative for mating connectors.</b></p> <p>Wires should be of the appropriate gauge to meet requirements of applicable electrical codes and suit the specifications of the connector(s).</p> <table border="1"> <thead> <tr> <th colspan="2">6-pin Connector</th> </tr> <tr> <th>Pin #</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Power +</td> </tr> <tr> <td>2</td> <td>Power -</td> </tr> <tr> <td>3</td> <td>+5V ref. GND</td> </tr> <tr> <td>4</td> <td>+5V ref.</td> </tr> <tr> <td>5</td> <td>Signal -</td> </tr> <tr> <td>6</td> <td>Signal +</td> </tr> </tbody> </table> </div> </div> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;">  </div> <div> <p>2-pin Integral Connector, Deutsch IPD p/n DT06-2S mates to valve coil with integral connector P/N DT04-2P (not supplied)</p> <table border="1"> <thead> <tr> <th colspan="2">2-pin Connector</th> </tr> <tr> <th>Pin #</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Solenoid +</td> </tr> <tr> <td>2</td> <td>Solenoid -</td> </tr> </tbody> </table> </div> </div>	6-pin Connector		Pin #	Description	1	Power +	2	Power -	3	+5V ref. GND	4	+5V ref.	5	Signal -	6	Signal +	2-pin Connector		Pin #	Description	1	Solenoid +	2	Solenoid -
6-pin Connector																									
Pin #	Description																								
1	Power +																								
2	Power -																								
3	+5V ref. GND																								
4	+5V ref.																								
5	Signal -																								
6	Signal +																								
2-pin Connector																									
Pin #	Description																								
1	Solenoid +																								
2	Solenoid -																								



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 Approvals/Limitations and Return Materials Process as described on [www.axiomatic.com/service.html](http://www.axiomatic.com/service.html). Form: TDAX023100-11/02/17