Overview

The C1 provides a compact high flexibility controller in combination with efficient PWM-based valve driver designed to maximize the performance of LS and Enfinity valves. This powerful combination yields the ideal solution delivering exceptional pressure, position, force, vacuum and flow controls.

Flexibility at the forefront of its design: the C1 features two independent control algorithms selected via an on-board jumper. Each selectable algorithm configures the functionality of the four potentiometers delivering maximum performance and flexibility.

Smaller than other controllers on the market, the C1’s compact size allows it to be engineered into the most challenging designs. Perfect for OEM applications the C1 comes with a DIN clip for rail mounting, or the clip can be removed for flat surface mounting from within the enclosure or from the bottom.

Features

- 4 Configurable Potentiometers
- Small Footprint and Light Weight
- Easy to Integrate and Use
- Pluggable Connector w/Test Points for Troubleshooting
- DIN Clip for Simplified Mounting (can also be removed for flat surface mounting)
- RoHS Compliant
- Fully Enclosed to Help Prevent Electro Static Discharge
- IP-40 Protection
- Selectable Inputs for both Command and Feedback
- Available in Custom Configurations and as Standalone Board for OEM Applications
- Broad Power Supply Range (12..24Vdc)
- Works with LS and Enfinity Series Valves
- Jumpers Allow for Multiple Control Configurations
- 2 Auxiliary Inputs for Further Customization
- Low Cost Solution
- Works with many Pneumatic Applications
- LEDs for Power and Status indications

Applications

- Fill & Regulate Flexible or Rigid Volume Pressure
- Material Removal
- Mixing Gasses
- Temperature Control
- Bi-Directional Air Motor
- Bottle & Bag Filling
- Glass Forming
- Quality Control Sorting
- Product Placement and Justification
- Pick and Place
- Product or Pallet Indexing
- Rotary Indexing
- Rotary Positioning
- Lane Divide & Divert
- Actuate & Pilot Process Valves
- Component Placing
- Material Processing
- Lifecycle Testing
- Compliance Control
- Pneumatic Press
- Material Processing
- Oxygen Concentrators
- In-Vitro Diagnostics
- Dome & Piston Valve Piloting
- Tensioning & Breaking
- Pump & Compressor Control

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Conforms to IEC 61000-6-4 EMC emission and IEC 61000-6-2 EMC immunity.

WARNING: Installation and operation of electronic and high pressure systems (fluids and compressed gas) involves risk including property damage and personal injury or death. Users should be properly trained or certified and take safety precautions.
**Mechanical & Operational Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Range</td>
<td>-40°C to 65°C (-40°F to 150°F)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>46 x 56 x 45 mm (1.81 x 2.20 x 1.76in)</td>
</tr>
<tr>
<td>Weight</td>
<td>1.6 oz</td>
</tr>
<tr>
<td>Materials</td>
<td>RoHS lead-free electronic circuitry, Alternate materials may be available on special request</td>
</tr>
<tr>
<td>Mounting</td>
<td>DIN clip allows for rail mounting</td>
</tr>
</tbody>
</table>

**Electrical Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Requirement</td>
<td>24 Vdc nominal @ 20W (+12...24 Vdc range)</td>
</tr>
<tr>
<td>Command Input Impedance</td>
<td>100kΩ</td>
</tr>
<tr>
<td>Feedback Input Impedance</td>
<td>100kΩ</td>
</tr>
<tr>
<td>Command Input</td>
<td>Configurable 0...10Vdc; 4...20mA</td>
</tr>
<tr>
<td>Feedback Input</td>
<td>Configurable 0...10Vdc; 4...20mA</td>
</tr>
<tr>
<td>Electronic Adjustments</td>
<td>Potentiometer (adjustment screw); Pin jumpers to set analog input signal types</td>
</tr>
<tr>
<td>Output</td>
<td>-1A...1A</td>
</tr>
<tr>
<td>Status Indications</td>
<td>2 LEDs indicating power and status</td>
</tr>
<tr>
<td>Electrical Connection</td>
<td>8 pin pluggable terminal block</td>
</tr>
</tbody>
</table>

**Connections**

![Connections Diagram]

**Control Algorithms**

Two control algorithms are available to the user. Please consult the User’s Manual for configuration:

Configuration 1: Proportional, Ramp Rate, Minimum Position & Maximum Position
Configuration 2: Proportional, Derivative, Integral, & Ramp Rate

**Dimensional Drawings**

(all dimension in mm)

![Dimensional Drawings]

---

© 2012 Enfield Technologies

As Enfield Technologies strives for continuous improvement and dedication to product development, specifications are subject to change.

v20120816a

WARNING: Installation and operation of electronic and high pressure systems (fluids and compressed gas) involves risk including property damage and personal injury or death. Users should be properly trained or certified and take safety precautions.