# Installation and Setup Instructions

## PC100 Single Output Ramping Proportional Controller

## Specifications

**General:**
- **Power requirement:** 9-30Vdc, 250mA nominal + power to external loads
- **Fuse:** 15-Amp Fuse; total load must not exceed 15-amps

**Digital Outputs:**
- **Type:** Sourcing
- **Output:** Same as supply voltage, 5Amps max. each

**PWM Outputs:**
- **Frequency:** 1000Hz
- **Dither:** 250Hz, 0-10% of maximum current
- **Output:** Same as supply voltage, 0-5Amps max.
- **Adjustments:** Minimum/Maximum: 0-5A (Can be adjusted for min>max) Ramp Up/Dn: 0.1-5 Seconds

**Potentiometer Input:**
- **+5V OUT:** Joystick power; 50mA max (1k ohm pot recommended)
- **+2.5V OUT:** Tap reference; 50mA max (1k hom pot recommended)
- **SIGNAL IN:** 0-5Vdc or 0.5 to 4.5Vdc jumper selectable
- **Adjustments:** Threshold: 0 to +/-1Vdc

**Switch Input:**
- **FWD:** Dry contact
- **REV:** Dry contact
- **DISABLE:** Connect to system power to disable control*

**Mounting:**
- (4) #6 x 3/4" self-tapping screws

**Environmental:**
- **Storage:** -40degC to 85degC
- **Operating:** -10degC to 60degC

*DO NOT USE THIS INPUT FOR SAFETY CONTROL.*
**INPUT WIRING**

POWER INPUT IS REVERSE POLARITY PROTECTED AND FUSED TO 15-AMPS. FOR NORMAL OPERATION, LEAVE DISABLE TERMINAL OPEN. DISABLE TERMINAL NOT FOR SAFETY CONTROL APPLICATIONS.

**SINGLE COIL CONTROL - POTENTIOMETER:**
Full range of potentiometer rotation controls OUT 1.

**OUTPUT WIRING**

PROPORTIONAL and DIGITAL VALVE OUTPUTS:

**2-WIRE SOLENOIDS**

**1-WIRE GROUNDED SOLENOIDS**
#3: Proportional control using voltage input.

Convert 0-10vdc signal to 0-5vdc signal:

```
+ 0-10v output from device
To PC100 SIG Input

1k
1/2-watt

- Common
```

```
0-5vdc or 0.5-4.5vdc
```

```
Voltage Source
```

```
+ Out
```

```
Supply Power
```

```
0-5vdc
```

```
- Common
```

```
1k
1/2-watt
```

NOTE: APPLICATIONS SHOWN ARE EXAMPLES ONLY. MANY OTHER HYDRAULIC CIRCUITS AND CONTROL COMBINATIONS ARE POSSIBLE.
**SETUP**

Step 1  Apply power to controller.

Step 2  Move JP13 to appropriate input signal range. Use 0.5 to 4.5v for transducer input applications. Use 0 to 5v for potentiometer applications.

Step 3  Press SELECT UP or SELECT DOWN buttons to choose which parameter to adjust. LED’s indicate selected parameter.

Step 4  Press INC or DEC buttons to adjust value of selected parameter. Display indicates value from 0-99% of adjustment range.

Step 5  Repeat steps 3 and 4 until all parameters have been adjusted to desired values.

**DESCRIPTION OF PARAMETERS:**

- **PWM OUT 1**
  - MIN: Minimum value for proportional output
  - MAX: Maximum value for proportional output
  - RAMP UP: Time for output to reach maximum value
  - RAMP DN: Time for output to reach maximum value
  - THRESHOLD: Adjusts how far the potentiometer must be moved from center before output begins to change. Increase this value to make the potentiometer less "touchy."
  - DITHER: Adjusts the amount of high-frequency signal applied to the proportional outputs. This enables fine control of the solenoid by preventing sticking.

**INPUT JUMPER SETTING:**

<table>
<thead>
<tr>
<th>PWR</th>
<th>HI 0.5-4.5vdc INPUT</th>
</tr>
</thead>
</table>
| LO 0-5vdc INPUT

**SETUP NOTES:**