

Introduction

The ECS Economy Power Supply is a low-cost solution to many of the difficulties that can be encountered when powering a 24V process instrumentation loop.

ECS output incorporates full-time short-circuit and overload protection. Power-to-output isolation is 1500Vrms. Unit power selection is set at the factory, but can be re-configured in the field. A front panel potentiometer adjusts output voltage $\pm 10\%$ of span.

There are two types of ECS available; 70mA and 200mA output drives.

Specifications

The unit specifications and ordering information appear on the back of this sheet.

Switching the Power Setting

Check the "Power Input" field of the unit model number label, affixed to one of the housing side panels, to find out how the ECS internal jumper has been set. If the setting is not correct, use a flat-tipped screwdriver to pry the housing apart, and see Figure 1 for the location of the power selection jumper.

Calibrating ECS Output

To calibrate the output voltage of the ECS, use the setup shown in Figure 2. With the unit connected as shown, adjust the ECS front panel potentiometer until the reading on the voltmeter is 24V, $\pm 10\text{mV}$.

NOTE:

With the appropriate input power applied, the ECS front panel LED lights up.

Figure 1. Selecting ECS Input Power

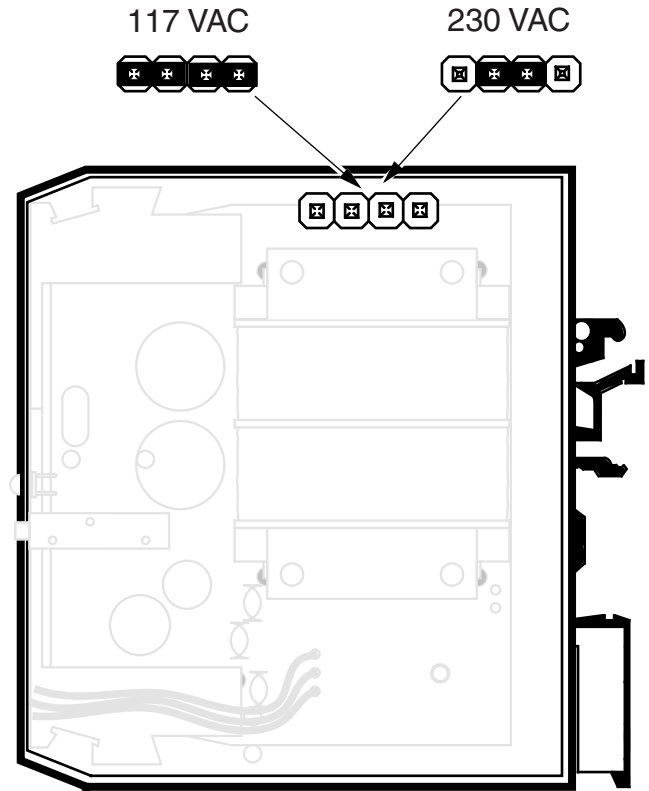
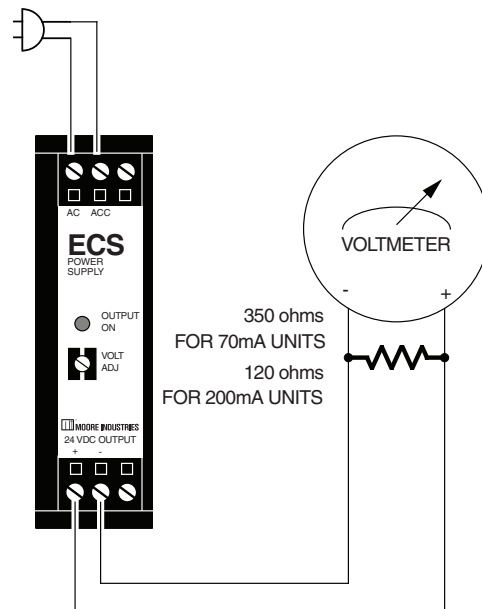


Figure 2. Calibrating ECS Output



Specifications

<p>Performance Efficiency: 75%, typical, rated at full load</p> <p>Output Regulation: ±0.1% for a ±10% line variation</p> <p>Load Regulation: ±0.5% from 0 to 100% of load</p> <p>Ripple: 50mV, peak-to-peak, maximum</p>	<p>Performance Input Frequency: (continued) 50 to 60Hz</p> <p>Isolation: 2500Vrms, supply to output</p> <p>Ambient Conditions Ambient Temperature Operating Range: 70mA units, -40 to +80 °C (-40 to +176 °F) 200mA units, -20 to +65 °C (-4 to +149 °F)</p>	<p>Ambient Conditions Ambient Temperature Effect: ±0.03% of output per °C change, for both 70 and 200mA units</p> <p>Adjustments Multi-turn potentiometer on front panel adjusts output voltage ±10% of span</p> <p>Weight 70mA ECS: 167 grams (5.9 oz) 200mA ECS: 272 grams (9.6 oz)</p>
--	--	--

Ordering Information

Unit	Voltage Output	Current Output	Power Input	Housing
ECS Economy Power Supply	24VDC	70MA 200MA	117AC 230AC Power can be switched from one AC voltage to the other in the field by repositioning an internal jumper	ECD Thermoplastic, economy DIN-style housing mounts on both 32mm G-type (EN50035) and 35mm Top Hat (EN50022) rail

When ordering, specify: Unit / Voltage Output / Current Output / Power Input [Housing]

Model number example: ECS / 24DC / 70MA / 117AC [ECD]

Figure 3. ECS Installation Dimensions

