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PS-AC-0.8

AC Remote Amplifier Control Unit

OPERATOR'S MANUAL



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Introduction

Michigan Scientific's *AC Remote Amplifier Control Unit* is a complete system for controlling all Michigan Scientific Spinning Amplifiers. The PS-AC-0.8 powers the amplifiers, controls excitation to strain gage bridges, and commands Spinning Strain Gage Amplifiers to apply their internal shunt calibration resistor to the appropriate arm of the strain gage bridge. The bridge excitation off feature allows the user to detect self-generated system response (noise) from undesired environmental conditions.

Features

- Bipolar power supply for spinning amplifiers
- Powers up to 18 spinning strain gage amplifiers*
- Remote bridge excitation On/Off capability
- Remote electronic shunt calibration capability
- Operates on 120 VAC @ 50/60 Hz**
- Ideal for laboratory applications

* with 5 Volt bridge excitation and 350 ohm bridge resistance

** other input voltages available

Operation

Operation with Strain Gage Amplifier

The power switch on the PS-AC-0.8 unit activates the *AC Remote Amplifier Control Unit* and illuminates the LED.

The bridge excitation switch, when used with the modular strain gage spinning amplifier, turns the excitation to the bridge on or off without turning off the amplifier. This is done by inverting the polarity of the ± 15 V supply pins.

The shunt calibration switch remotely applies a positive or negative shunt resistance across bridge terminals when used with a strain gage amplifier.

The LED is illuminated whenever the power is turned on.

Operation with Thermocouple Amplifier

The power switch on the PS-AC-0.8 unit activates the *AC Remote Amplifier Control Unit* and illuminates the LED.

The bridge excitation and shunt calibration switches do not effect the operation of the thermocouple amplifier.

The LED is illuminated whenever the power is turned on.

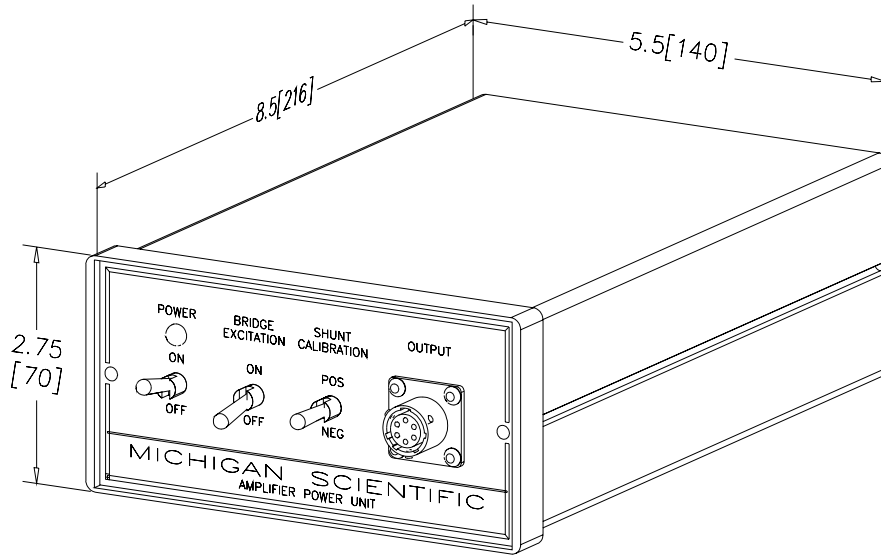
Specifications

PARAMETER	SPECIFICATIONS
OUTPUT	
Voltage	± 15 V
Maximum Voltage Error (No Load)	± 0.75 V
Ripple and Noise Voltage (No Load)	± 60 mV
Maximum Source Resistance	0.40Ω
Temperature Coefficient	0.30 %/°C
Maximum Current	0.8 A
Maximum Transient Response	< 50 μ s
INPUT	
Voltage	100 - 120 VAC or 220 - 240 VAC
Frequency	50 / 60 Hz
ENVIRONMENT	
Operation	0 to +50°C (+32 to +122°F)
Storage	-40 to +85°C (-40 to +185°F)

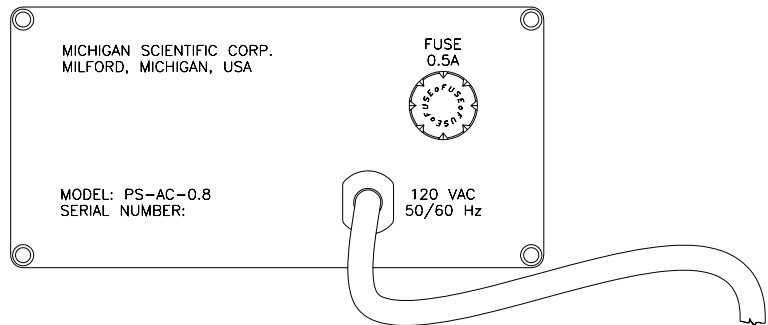
Output Connections

Switch Position		Output (Volts) Socket on Output Connectors					
Bridge Excitation	Shunt Calibration	A	B	C	D	E	F
Off	Center	-15 V	15 V Common	+15 V	15 V Common	Input Ground	0.0 V
Off	Positive	-15 V	15 V Common	+15 V	15 V Common	Input Ground	+15 V
Off	Negative	-15 V	15 V Common	+15 V	15 V Common	Input Ground	-15 V
On	Center	+15 V	15 V Common	-15 V	15 V Common	Input Ground	0.0 V
On	Positive	+15 V	15 V Common	-15 V	15 V Common	Input Ground	+15 V
On	Negative	+15 V	15 V Common	-15 V	15 V Common	Input Ground	-15 V

Dimensions



DIMENSIONS ARE INCH[mm]



REAR PANEL

Input Voltage

Normal input voltage for the *AC Remote Amplifier Control Unit* is 120 VAC at 50/60 Hz. However, Michigan Scientific Corp. can modify the *AC Remote Amplifier Control Unit* to use 220 VAC or 240 VAC at 50/60 Hz. If the unit has been modified, it will be indicated on the rear panel near the power cord.

Troubleshooting

Symptom	Possible Cause	Test to Verify Problem	Solution
Power Light doesn't come on	+15 V shorted to common	Remove cable from output connector	Find short and fix it
	+15 V shorted to -15 V	Remove cable from output connector	Find short and fix it
	Blown fuse	Check resistance across fuse	Replace fuse
	No Power to Unit	Check Voltage from source	Turn on power