# **S** AC CURRENT SENSOR

#### **DESCRIPTION**

The Model AVO-103A measures load currents of devices such as fans, pumps and other critical items in HVAC systems. It is intended for use with DDC/PLC control systems where run status may be proven by establishing analog limits in software. The signal output of this device is completely isolated from the input current.

The AVO-103A is not intended for use where precise current measurement is required. Consult factory for precision measurement options.



## **SPECIFICATIONS**

#### **INPUT**

Current Range (Jumper-selectable)...... 1-10A, 2-20A, 5-50A The usable/operational current range is 10%-100% of total current range: 1-10A on 10A range, 2-20A on 20A range, and 5-50A on 50A range.

Frequency......Nominal......60Hz
Insertion Impedance..... $\leq$ 0.00038 $\Omega$ 

#### **OUTPUT**

Type		0-5Vdc
Scaling 1-10A Range	.1-10A Input =	0-5Vdc Output
2-20A Range	.2-20A Input =	0-5Vdc Output
5-50A Range	.5-50A Input =	0-5Vdc Output
Loading		≥10MΩ

INSTRUMENT POWER ......Self-powered

#### **ACCURACY**

Linearity	(typical)	±3% F.S.
Setpoint.	1-10A range	±3% F.S.
	2-20A range	±5% F.S.
	5-50A range	+7% F.S

#### **CONNECTIONS**

Input	. Current-carrying cable is inserted through
	circular window opening.
	Maximum cable size #3/0 (dia. <0.62")
Output	. Wire-retaining screw terminals - No. 6/32
·	Maximum wire size is #14AWG

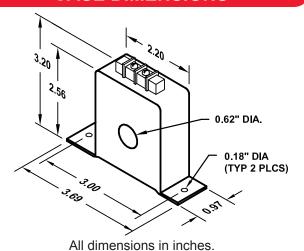
#### **TEMPERATURE**

Operating Range......10°F to 135°F

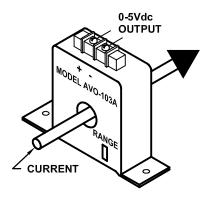
### **PHYSICAL**

Enclosure	ABS, Cyclolac@	®, UL94V-0, Black
Net Weight		0.25lb

## CASE DIMENSIONS



# **CONNECTIONS**



OHIO SEMITRONICS, INC 4242 REYNOLDS DRIVE \* HILLIARD, OHIO \* 43026-1264 PHONE: (614) 777-1005 \* FAX: (614) 777-4511 www.ohiosemitronics.com \* 1-800-537-6732

## **INSTALLATION**

The AVO-103A may be mounted in any type of protected enclosure, motor starter, motor control center, control system field panel or disconnect switch.

The current carrying cable must pass through the circular window opening. Permanently affix the AVO-103A to the cable with a conventional cable tie or similar nonconductive material. The unit may be oriented in any position.

Alternatively the AVO-103A may be mounted to any flat surface such as the back panel of the enclosure - see Case Dimensions for mounting feet dimensions.

Should mounting space be limited the mounting feet of the AVO-103A may be snapped off.

## **SETUP**

Set range selection jumper for appropriate range to match load amperage. Energize the load and observe signal output status. No other setup is required.

- Note 1: The AVO-103A operates from 10% to 100% of the selected current range minimum valid input current of 1A on the 10A range, etc. The output signal is directly proportional to the usable/operational portion of the input current range 10% to 100% of range input is proportional to the 0 to 5Vdc output signal.
- Note 2: For load amperages greater than 50A use an external current transformer (C.T.) of an appropriate ratio such as 500:5. Feed the C.T. secondary through the AVO-103A window with two passes. Set the range selection jumper to the 1-10A range. A 5Vdc signal output from the AVO-103A is now equal to the primary rating of the C.T. (500A in this example).
- Note 3: Locked rotor current of 2.5 times the range setting for longer than 5 seconds can damage the AVO-103A.