AX-CS
Mini Current Switch

Product Overview

The AX-CS mini current switches provide a compact, cost effective solution for monitoring AC powered equipment such as motors, pumps and heating/cooling loads.

The solid core version is ideal for new installations, whilst the split core version offers greater versatility especially in retrofit applications without disconnecting existing equipment. Both fixed and adjustable setpoints are available.

Features

- Integral mounting flange for quick installation
- Solid core or split core versions
- Compact size fits in any space
- Fixed setpoint or adjustable setpoint versions

Applications

- BMS
- HVAC systems
- Lighting status and usage information

Product Specifications

Maximum AC Voltage:		600VAC
LED Indication:	Red LED	On when current above setpoint
	Blue LED	On when current below setpoint
Contact Type:		Normally Open
Contact Rating:		1A @ 36VAC/VDC
Isolation Voltage:		2200VAC
Sensor Power:		Self-powered
Operating Frequency:		50/60Hz
Ambient Temperature:		-30 to 60˚C
Operating Humidity:		0 to 95%, non-condensing
Aperture Diameter:		13.4mm
Weight:	Solid Core	68g
	Split Core	91g
Country of Origin:		USA

Order Codes

AX-CS-20	Current Switch 150A, Solid-Core Fixed Trip Point 0.20A
AX-CS-A32	Current Switch 150A, Solid-Core Adjustable Trip Point 0.32-150A
AX-CS-S55	Current Switch 150A, Split-Core Fixed Trip Point 0.55A
AX-CS-SA70	Current Switch 150A, Split-Core Adjustable Trip Point 0.7-150A

Installation

The AX-CS should be installed by a suitably qualified technician in conjunction with any guidelines for the equipment which it is to be connected to. Field wiring should be installed to satisfy the requirements set out by the manufacturer of the equipment that the module is being connected to.

Mount the switch in a suitable location using the two mounting holes in the base flange of the unit.

Ensure that the power supply to the circuit is off.

Disconnect the circuit line, slide the power conductor cable through the sensing hole of the current switch or snap on the conductor if split core version and reconnect the circuit line.

Connect the switch circuit to the two screw terminals using ring or fork type terminals.

Turn circuit back on.

Setpoint Calibration

The output switch of all devices is open. When the monitored current reaches the trip value as set by the setpoint calibration, the switch will close. The LED will indicate that this change has occurred.

Calibration for Under-Current Monitoring

Confirm the monitored load is on.

Turn the set point adjustment clockwise until the LED turns off.

Turn the adjustment anti-clockwise until the LED turns on.

Turn slightly further anti-clockwise to prevent nuisance tripping.

Under normal operating conditions the current is above set point, the LED is on, the output is short-circuit.

Calibration for Over-Current Monitoring

Confirm the monitored load is on.

Turn the set point adjustment anti-clockwise until the LED turns off.

Turn the adjustment clockwise until the LED turns on.

Turn slightly further clockwise to prevent nuisance tripping.

Under normal operating conditions the current is below set point, the LED is off, the output is open-circuit.

Increasing Measured Current

If the measured current is too low to be detected, wrap the conductor through the sensing hole and around the AX-CS body to produce multiple turns, increasing the measured current. Use the below formula to determine how many wraps are necessary.

Measured current = actual current x number of turns.

For example with actual current = 1.2A and 4 turns;

Measured current = 1.2 x 4 = 4.8A.

When using multiple turns, the current capacity may need to be de-rated to avoid damage to the unit.

Max current = current switch rating / number of turns

For example, with 3 turns and a maximum current rating of 150A
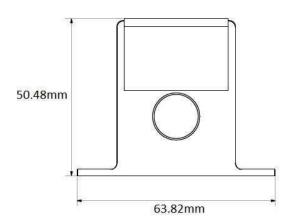
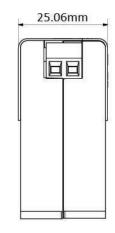New maximum current = 150A / 3 = 50A.

Datasheet Contents

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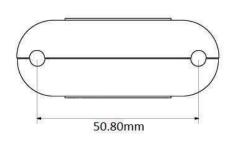
Dimensions

Solid-Core

- 25.06mm
- 50.48mm
- 63.82mm
- 50.80mm

Split-Core

- 46.14mm
- 25.06mm
- 60.49mm
- 67.19mm
- 54.49mm