

Current Switch - Solid & Split Core (Fixed & Adjustable Setpoint)

Product Overview

The AX-CSL series of current switches is designed for versatility and convenience in monitoring AC currents. With the ability to handle currents up to 200A, these switches offer both solid-core and split-core options to suit different installation needs. The presence of solid-state switches, which are normally open, ensures reliability and durability. Additionally, the LED indicators provide a quick visual reference for power status and switch state, enhancing the user experience. For models with adjustable set points, a trim pot facilitates straightforward calibration during setup, ensuring ease of use and precise operation.



Products Features

- Self Powered
- LED Indicators for contact status
- Responds in less than 200ms
- CE approved

Product Specifications

Power Supply:	Self Powered
Operating Range:	0.2A to 200A continuous (solid-core) - Model Dependent 1A to 200A continuous (split-core) - Model Dependent
Set Point:	0.2A to 200A continuous (solid-core adjustable) - Model Dependent 1A to 200A continuous (split-core adjustable) - Model Dependent
Switch State:	Normally open
Output Rating:	See Order Codes
AC load frequency:	10-200Hz
Hysteresis:	≤ 1%
Accuracy:	10%
Repeatability:	100%
Power consumption:	1 W
Response time:	<200ms
Leakage current:	≤ 1mA
Temperature limit:	32 to 122°F (0 to 50°C)
Humidity limits:	10 to 95% RH (non condensing).
Enclosure Rating:	flammability rated ABS, insulation class 600V.
Maximum overload:	200% (< 200% of the rated feedthrough current).
Country Of Origin:	United Kingdom

Product Order Codes

Part Number	Description
AX-CSL-150-2	Current SW 150A Solid Core Fixed Set-Point 0.2A, Contact Rating 0.3A 135V AC/DC
AX-CSL-200-05	Current Switch 200A Solid Core Fixed Set-Point 0.5A, Contact Rating 0.3A 135V AC/DC
AX-CSL-200-05H	Current Switch 200A Solid Core Fixed Set-Point 0.5A, Contact Rating 1A 240VAC
AX-CSL-A150-03	Current Switch 150A Solid Core Adjustable Set-Point 0.3-150A, Contact Rating 0.3A 135V AC/DC
AX-CSL-A200-1H	Current Switch 200A Solid Core Adjustable Set-Point 1-200A , Contact Rating 1A 240VAC
AX-CSL-SA200-1	Current Switch 200A Split Core Adjustable Set-Point 1-200A, Contact Rating 0.25A 100V AC/DC
AX-CSL-SA200-1H	Current Switch 200A Split Core Adjustable Set-Point 1-200A, Contact Rating 1A 240VAC
AX-CSLM-A50-01	Current Switch 1A Solid Core Adjustable Set-Point 0.01-1A , Contact Rating 0.3A 130V
AX-CSLM-A50-05	Current Switch 50A Solid Core Adjustable Set-Point 0.5-50A , Contact Rating 0.3A 130V

Operation

The switch is based on the principle of electromagnet induction. Induced current will be produced when the AC current in the circuit changes. The state of the switch is normal open or normal closed. These switches are solid-state switches that activate a contact closure whenever the monitored primary circuit current exceeds a pre-set level. The red LED will indicate that this change has occurred.

Installation Instructions

- 1- Mount the switch in a suitable location using the two mounting holes in the base of the unit. If using ties, make sure ties are securely fastened and that the unit is stable. If using crews, tightly screw in one screw at a time into each hole.
- 2- Ensure that the power supply to the circuit is off.
- 3- For solid-core model, disconnect the circuit line, slide the power conductor cable through the sensing hole of the current switch, and reconnect the circuit line. For split-core model, press the tab with your finger to open the switch. After placing the wire in the opening, press the hinged portion firmly downward until a definite click is heard and the tab pops out fully.
- 4- Connect the switch circuit to the terminal block for the load.
- 5- Turn circuit back on.
- 6- If the green LED is on and the red LED is off, you should adjust the potentiometer to the low direction until the red LED is just lighted. If the red LED is on and the green is off, you should adjust the potentiometer to the high direction until the green LED is on, and then adjust the potentiometer to the low direction until the red LED is just on.
- 7- The AC Current switch is working now.

LED Indication

- Green LED: indicates that current is passing through the core, but the set point has not been reach and contacts are open.
- Red LED: indicates that the set point has been reached and contacts are now closed.

Troubleshooting

If measured current is too low to be detected:

Warp the conductor (wire through the sensing hole and around the body of the switch to produce multiple turns to increase the measured current. Use the below equation to determine how many wraps are necessary:

Measured current = actual current × the number of turns.

Notice: Failure to reduce the current capacity could result in damage to the switch when using multiple turns to increase the measured current. Use the following formula to determine the new maximum current:

New maximum current = rating current of the switch/ number of turns.

For example, with 2 turns and a maximum current rating of 50A: New maximum current = 50A/2=25A.

Troubleshooting

1: There is AC power to the unit, but neither of the LED is lighted;

Solution: Verify that the AC power to the unit is normal.

2: It's hard to make the red led be lighted when adjust the continuously variable potentiometer.

Solution: You have turned the potentiometer clockwise. Please turn it to counterclockwise direction.

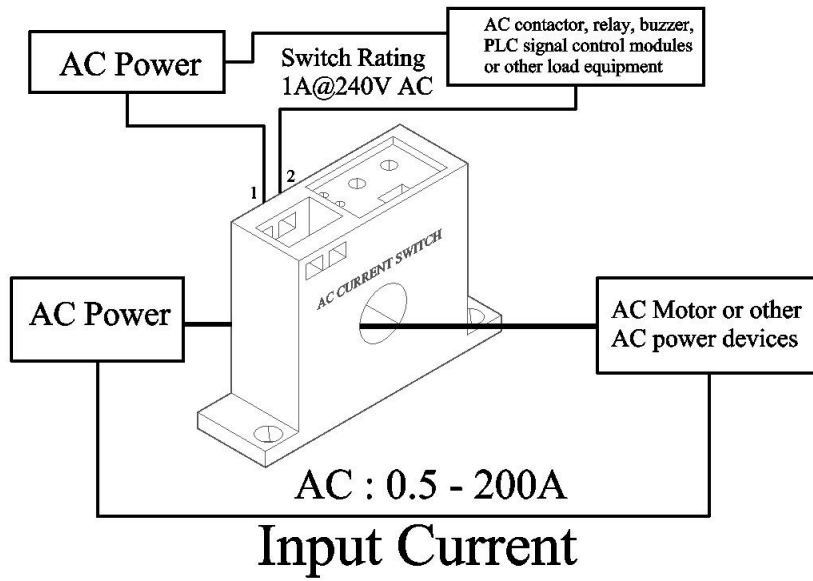
3: The switch output does not function.

Solution: Verify that the maximum amperage range has not been exceeded and the connection of the output is well-connected. Voltages or currents above the rated levels may damage the switch.

4: Set point potentiometer keeps turning.

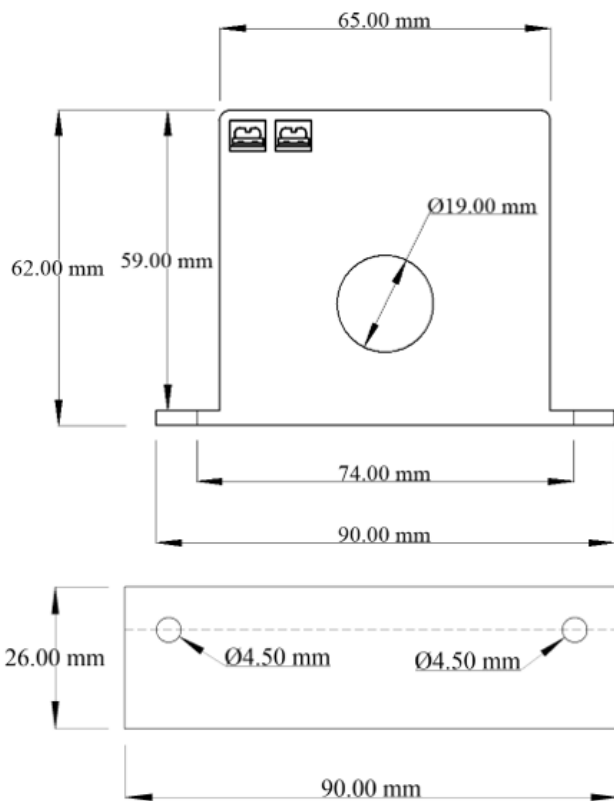
Solution: Turn the potentiometer counterclockwise, to return the unit to its original setting. Start the calibration procedure again.

Typical Electrical Connection

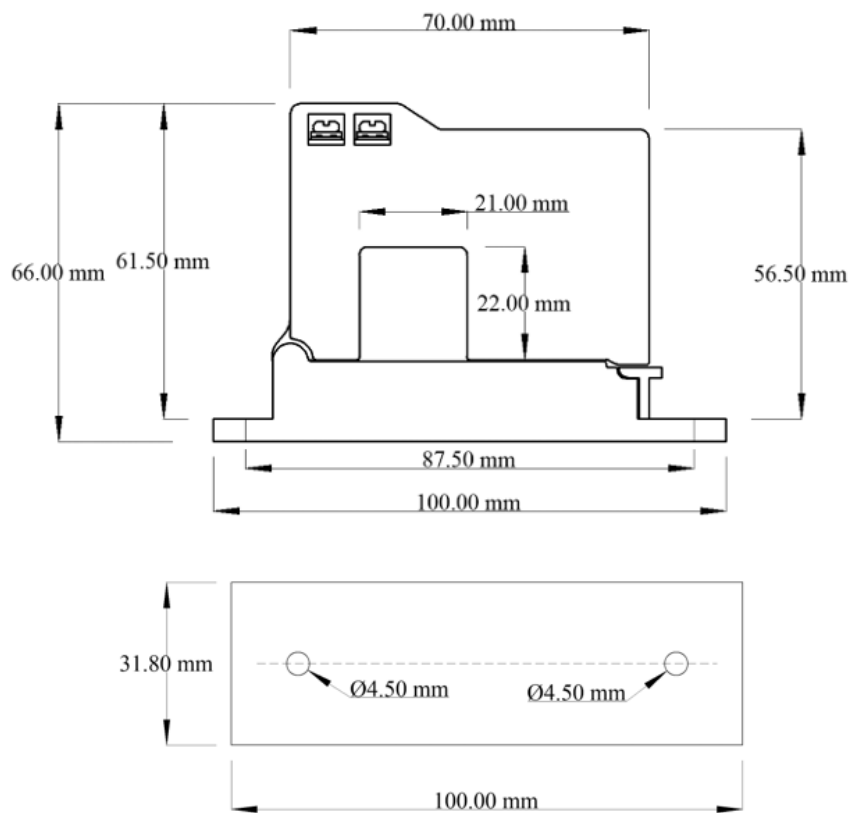


Dimensions (not to scale)

Solid Core



Split Core



Datasheet Contents

Every effort has been taken in the production of this data sheet to ensure accuracy. Annicom do not accept responsibility for any damage, expense, injury, loss or consequential loss resulting from any errors or omissions. Annicom has a policy of continuous improvement and reserves the right to change this specification without notice.