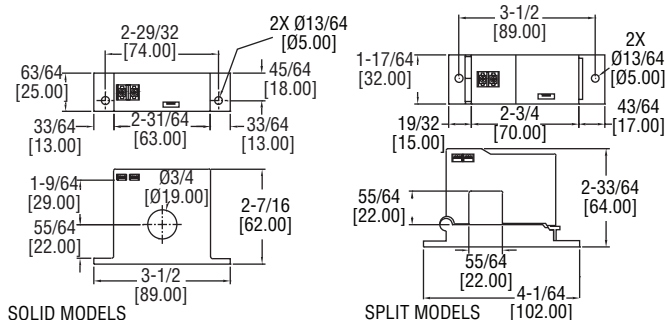




Series CCS Current Switches

Specifications - Installation and Operating Instructions



The Series CCS Current Switches are ideal for monitoring the operating status of fans, pumps, and motors. These self-powered switches can be hung or tied directly to cables or wires. For use on existing installations, split core models can be installed without disconnecting cables. LED indicators provide a visual confirmation that the current is flowing through the core. Both fixed and adjustable set points are available. The adjustable models utilize a potentiometer to easily adjust the set point.

OPERATING INSTRUCTIONS

NOTICE The Series CCS Current Switches are intended to provide an input to equipment under normal operating conditions. Where failure or malfunction of the current switch could lead to personal injury or property damage to the controlled equipment or other property, additional precautions, must be designed into the control system. Incorporate and maintain other devices such as supervisory or alarm systems or safety or limit controls intended to warn of, or protect against, failure or malfunction of the CCS.

RISK OF SHOCK

WARNING Disconnect power supply before making electrical connections. Contact with components carrying hazardous voltage can cause electrical shock and may result in severe personal injury or death.

INSTALLATION

MOUNTING

1. Mount the switch in a suitable location using the two mounting holes in the base of the unit.
2. If using ties, make sure ties are securely fastened and that the unit is stable. If using the provided screws, tightly screw in one screw at a time into each hole.

WIRING

1. Ensure that the power supply to the circuit is off.
2. **For solid core devices:** 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 devices: open the core using the release tab. Snap the core closed around the power conductor cable. Make sure that the core release tab is locked in its original position.
3. Connect the switch circuit to the two screw terminals using ring or fork type terminals.
4. Turn circuit back on.

SPECIFICATIONS

Amperage Range: 0 to 200 A AC.

Maximum Switch Rating:

For dry contact models: 0.3 A @ 135VAC/DC;

For non-dry contact models: 1 A @ 240VAC.

Power Requirements: None, self-powered.

Operating Temperature: -22 to 158°F (-30 to 70°C).

Operating Humidity: 0 to 95% (non-condensing).

Isolation Voltage: 2000V.

Frequency: 40 to 400Hz.

Enclosure Rating: UL, 94 V-O flammability rated, ABS plastic housing.

Approvals: CE, UL.

LED INDICATORS

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

INCREASING MEASURED CURRENT

If measured current is too low to be detected:

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

Measured current = actual current x the number of turns.

NOTICE

Failure to derate the current capacity could result in damage to the Series CCS when using multiple turns to increase the measured current. Use the following formula to determine the new maximum current:

New maximum current = CCS current rating / number of turns.

For example, with 4 turns and a maximum current rating of 200 A: New maximum current = 200 A / 4 = 50 A.

SET POINT CALIBRATION (For adjustable models only)

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

Series CCS current switches are factory set at the minimum switch point (adjustment fully clockwise).

To increase the set point:

Use the potentiometer to adjust the range:

- Confirm that the monitored load is on.
- Turn the adjustment counter-clockwise, until the output turns off as indicated by the red LED.
- Then turn the adjustment clockwise, until the red LED comes back on indicating that the output is now on.

NOTICE

The adjustment should be turned slightly clockwise past a certain point to ensure normal line current variations do not cause false conditions.

TROUBLESHOOTING

Symptom	Solution
Series CCS output does not function.	• Verify that the maximum amperage range has not been exceeded. Voltages or currents above the rated levels may damage the Series CCS.
Set point potentiometer keeps turning.	• Turn the potentiometer counterclockwise, to return the unit to its original setting. Start the calibration procedure again.
Motor (or other equipment using current) is turned on and switch does not close.	• Insufficient current to the load leads to reach the set point threshold. To turn switch on, follow the instructions if current is too low to be detected.

MAINTENANCE

Upon final installation of the Series CCS Current Switches, no routine maintenance is required. A periodic check of system calibration is recommended. The Series CCS is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return of goods authorization number before shipping.