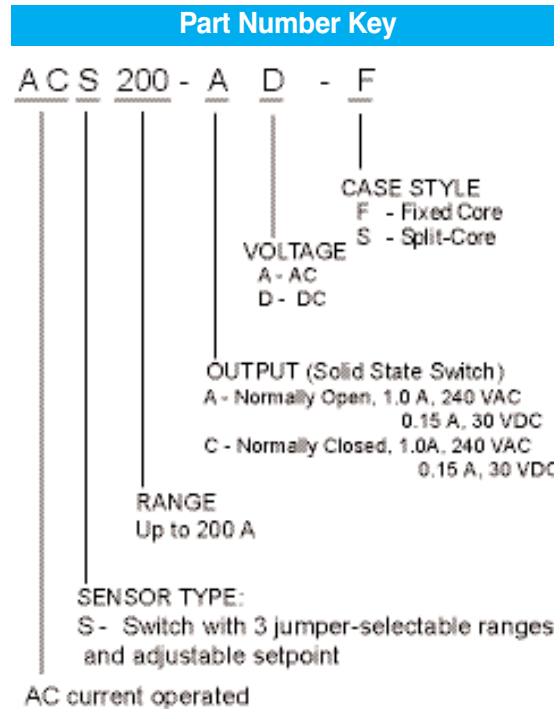


Specifications	
<b>Power Required</b>	None - self powered
<b>Output Switch</b>	Isolated solid-state switch
<b>AC Switch Rating</b>	N.O./N.C.: AC: 1.0 A @ 240VAC,
<b>Off State Leakage</b>	<10µA
<b>DC Switch Rating</b>	N.O./N.C.: 0.15 A @ 30VDC
<b>Off State Leakage</b>	<10µA
<b>Response Time</b>	40 to 120 ms
<b>Hysteresis Approx</b>	low: 0.15 A, mid: 0.3 A, high: 0.9 A
<b>Input Ranges</b>	Fixed core: 1-6, 6-40 & 40-175 A Split core: 1.75-6, 6-40 & 40-200 A
<b>Setpoint Adjust</b>	4 Turn potentiometer
<b>Isolation Voltage</b>	UL Listed to 1,270 VAC, Tested to 5,000 VAC
<b>Frequency Range</b>	6 to 100 Hz
<b>Sensing Aperture</b>	-F 0.55" (14mm) dia. -S 0.85" (21.7 mm) sq.
<b>Case</b>	UL 94V-0 Flammability rated
<b>Environmental</b>	-58 to 149°F (-50 to 65°C) operating temperature 0-95% RH, Non-condensing humidity
<b>Listings</b>	UL 508 and cUL Listed, UL File E222847 CE Certified



# ACS200 SERIES INSTALLATION INSTRUCTIONS



## Ranges & Maximum Amps

RANGE JUMPER	RANGE FIXED CORE	RANGE SPLIT CORE	MAXIMUM 6 Seconds	MAXIMUM 1 Second
NONE	1 - 6A	1.75 - 6A	400A	600A
MID	6 - 40A	6 - 40A	500A	800A
HIGH	40 - 175A	40 - 200A	800A	1200A

## Quick Start Guide

1. Run the wire to be monitored through aperture.
2. Mount the sensor.
3. Connect output wiring.
  - A. Use up to 14 AWG copper wires.
  - B. Ensure load matches the output shown on the sensor label.
4. Use the potentiometer to adjust setpoint.



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 3505 Hutchinson Road, Cumming, GA 30040  
 Phone: (800) 633-0405 or (770) 889-2858  
 Fax: (770) 889-7876

## Description

ACS200 Series are solid-state current operated switches. They operate (switch) when the current level through the sensing aperture exceeds the adjustable setpoint. Internal circuits are totally powered by induction from the line being monitored. See the Specifications table for output ratings.

## Installation

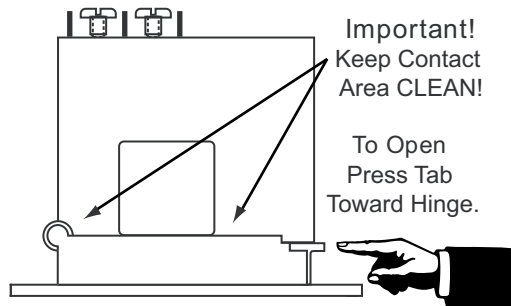
### For All Versions

Run wire to be monitored through the opening in the sensor. ACS200 switches work in the same environment as motors, contactors, heaters, pull-boxes, and other electrical enclosures.

They can be mounted in any position. Leave at least one inch distance between sensor and other magnetic devices.

### Split-Core Versions (-S Suffix)

Press the tab in the direction as shown to open the sensor. After placing wire in aperture, press the hinged portion firmly downward until a click is heard and the tab pops out fully.



### KEEP SPLIT-CORE SENSORS CLEAN.

Silicone grease is factory applied on the mating surfaces to prevent rust and improve performance. Be careful not to allow grit or dirt onto the grease in the contact area. Operation can be impaired if the mating surfaces do not have good contact. Check visually before closing.

## Output Wiring

Connect control or monitoring wires to the sensor. Use up to 14 AWG copper wire and tighten terminals to 7 inch-pounds torque. Be sure the output load does not exceed the switch rating. DC output models are polarity sensitive.



**CAUTION: INCANDESCENT LAMPS CAN HAVE "COLD FILAMENT INRUSH" CURRENT OF UP TO 10 TIMES THEIR RATED AMPERAGE. USE CAUTION WHEN SWITCHING LAMPS ON AND OFF.**

## Setpoint Adjustment

ACS200 switches have two setpoint adjustment mechanisms, as follows:

1. Select the setpoint RANGE with the Range Jumper.
2. Fine tune the SETPOINT with the 4 turn potentiometer (pot). See the product label for the amp ranges and jumper positions.

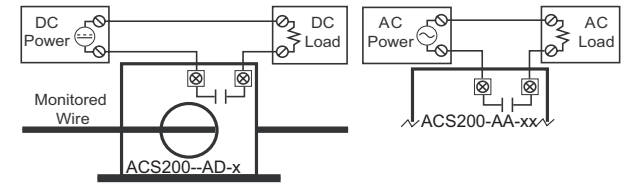
The 4-turn pot is shipped from the factory set fully clockwise (CW) to the lowest setpoint. Turning the pot counterclockwise (CCW) will increase the setpoint. The pot has a slip-clutch to prevent damage at either end of its rotation. To determine where the adjustment is, turn the pot at least 4 times CW. This will return it to the minimum setpoint.

### Adjustment Notes:

1. Output contacts are solid-state. Check output status by applying voltage to the contacts and reading the voltage drop across the contacts. An ohmmeter set on "Continuity" will give misleading results.
2. We recommend adjusting the setpoint to allow for usual utility company voltage variations of 10-15%.

### Typical Adjustment

1. Move the jumper to the desired range. Turn the pot to minimum setpoint (4 turns CW).
2. Have normal operating current running through sensor. The output should be tripped since the pot is at its minimum setpoint. For units with LED, it should be flashing fast (2 to 3 times per second).
3. Turn the pot CCW until the unit output changes state. This is indicated by the slow flashing of the LED (once every 2 to 3 seconds), or by the changing of the output switch status.
4. Now turn the pot CW slowly until the unit trips again. It is now set at the current level being monitored.
  - A. To Set UNDERLOAD - Turn the pot about 1/8 turn further CW.
  - B. To Set OVERLOAD - Turn the pot about 1/8 turn further CCW.



## Troubleshooting

1. Sensor is always tripped
  - A. The jumper may be set in a range that is too low for current being monitored.  
**Move jumper to the correct range.**
  - B. The setpoint may be too low.  
**Turn pot CCW to increase setpoint.**
  - C. Mismatched Polarity (DC Output Only).  
**Check polarity on output wiring; correct as needed.**
  - D. Switch has been overloaded and contacts are burned out.  
**Check the output load, remembering to include inrush on inductive loads (coils, motors, ballasts).**
2. Sensor will not trip
  - A. The jumper may be set in a range that is too high for current being monitored.  
**Move jumper to the correct range.**
  - B. The setpoint may be too high.  
**Turn pot CW to decrease setpoint.**
  - C. Monitored current is below minimum required.  
**Loop the monitored wire several times through the aperture until the "sensed" current rises above minimum.**  
$$\text{Sensed Amps} = (\text{Actual Amps}) \times (\text{Number of Loops}).$$
  
**Count loops on the inside of the aperture.**  
Split Core models: The core contact area may be dirty.  
**Open the sensor and clean the contact area.**
  - D. Switch has been overloaded and contacts are burned out.  
**Check the output load, remembering to include inrush on inductive loads (coils, motors, ballasts).**

Monitored Amps	Output N.O.	Smart-LED (if present)
None or less than minimum	OPEN	OFF
Below Trip level	OPEN	SLOW (2 sec.)
Above Trip level	CLOSED	FAST (0.5 sec.)