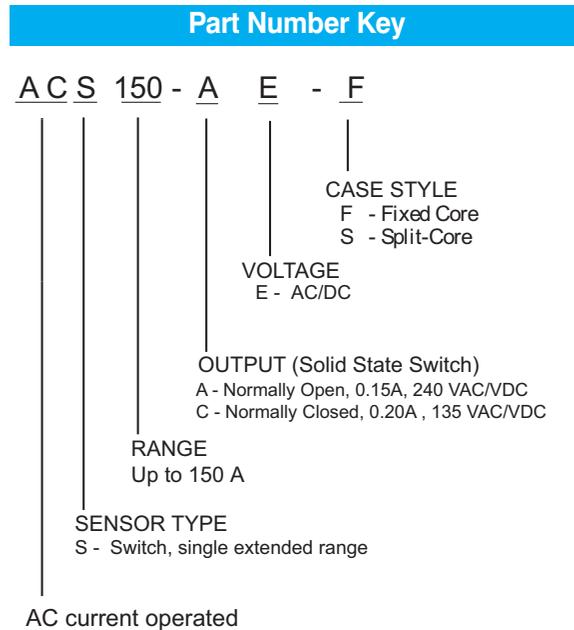


Specifications	
<b>Power Required</b>	None - self powered
<b>Output Switch</b>	Isolated solid state switch
<b>Switch Rating</b>	N.O.: 0.15A @ 240 VAC/VDC, N.C.: 0.20A @ 135 VAC/VDC
<b>Off State Leakage</b>	<10 µA
<b>Response Time</b>	120 ms
<b>Hysteresis, Approx</b>	5% of setpoint
<b>Input Ranges</b>	N.O. Fixed core 1-150 A; N.O. Split core 1.75-150A N.C. Fixed core 1-150A, N.C. Split Core 1.75-150A
<b>Setpoint Adjust</b>	4 turn potentiometer (S) 15 turn potentiometer (F)
<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: 0.75" (19 mm) 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



# ACS150 SERIES INSTALLATION INSTRUCTIONS



## 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.

Ranges & Maximum Amps				
Adjustable Sensors				
TYPE	RANGE	MAXIMUM INPUT AMPS		
		CONTINUOUS	6 SEC	1 SEC
<b>N. O. FIXED CORE</b>	1 to 150 A	150 A	400 A	1000 A
<b>N. O. SPLIT CORE</b>	1.75 to 150 A	150 A	400 A	1000 A
<b>N. C. FIXED CORE</b>	1 to 150 A	150 A	400 A	1000 A
<b>N. C. SPLIT CORE</b>	1.75 to 150 A	150 A	400 A	1000 A



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## Description

ACS150 Series are self-powered, solid-state current-operated switches which trigger when the current level sensed through the aperture exceeds the adjusted setpoint. The solid state output contacts can switch AC or DC; this “universal” output makes them well suited for application in automation systems.

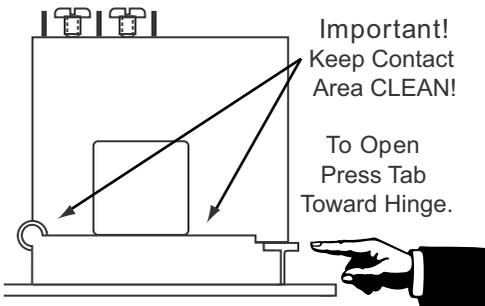
## Installation

### For All Versions

Run wire to be monitored through aperture (opening) in the sensor. ACS150 switches can be located in the same environment as motors, contactors, heaters, pull-boxes, and other electrical enclosures. Mounting can be done in any position. Allow at least one inch clearance 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 5 inch-pounds torque. Be sure the output load does not exceed the switch rating.



**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

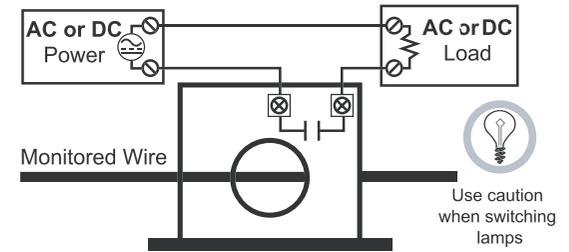
ACS150 series setpoint is adjusted with a 4-turn potentiometer (-S case style) or a 15-turn potentiometer (-F case style). The potentiometer is shipped factory-set to the lowest setpoint, fully clockwise (CW). Turning the potentiometer counter-clockwise (CCW) will increase the setpoint. The potentiometer has a slip-clutch to prevent damage at either end of its rotation. To determine where the adjustment is, turn the potentiometer all the way 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. It is recommended that setpoint be adjusted to allow for voltage variations of 10-15%.

### Typical Adjustment

1. Turn the potentiometer to minimum setpoint (4 or 15 turns CW).
2. Have normal operating current running through sensor. The output should be tripped since the potentiometer is at its minimum setpoint.
3. Turn the potentiometer CCW until the unit output status changes. 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 potentiometer CW slowly until the unit trips again. It is now set at the current level being monitored.
  - A. To set UNDERLOAD - Turn the potentiometer about 1/8 turn further CW.
  - B. To set OVERLOAD - Turn the potentiometer about 1/8 turn further CCW.



## Troubleshooting

1. **Sensor is always tripped**
  - A. The setpoint may be too low.  
**Turn pot CCW to increase setpoint.**
  - B. 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 setpoint may be too high.  
**Turn pot CW to decrease setpoint.**
  - B. Split Core models: The core contact area may be dirty.  
**Open the sensor and clean the contact area.**
  - 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.**
  - 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)