Specifications	
Power Required	None - self powered
Output Switch	Solid state, normally open
Switch Rating	0.15A @ 240VAC/VDC
Off Start Leakage	<10µA
Response Time	100ms
Inrush Delay	2 second delay before output changes state upon first energization
Hysteresis	Minimum 3% of setpoint
Setpoint Ranges	Ranges from 1-50A
Isolation Voltage	UL Tested to 3,000VAC
Monitored Circuit	600VAC line-to-line max. 0-150A
Frequency	10-100 Hz
Setpoint Range	3/4-turn potentiometer
Aperture	0.55" (14mm) solid core, 0.85" (21.6 mm) split core
Case	UL94V-0 Flammability Rating
Environmental	Operating Temperature: -4 to 122°F (-20 to 50°C)
	Relative Humidity: 0-95% RH, Non-condensing
	Pollution Degree 2
	Altitude to 2000 meters
Agency Approvals	UL/cUL (E222847), CE

For products intended for the EU market, the following is applicable to the CE compliance of the product:

The ACSL series comply with EN61010-1 CAT III 300Vrms max line-to-neutral measurement category. If insulated cable is used for the primary circuit, the voltage rating can be improved according to the insulation characteristics given by the cable manufacturer.

WARNING! RISK OF DANGER:
SAFE OPERATION CAN ONLY BE GUARANTEED IF THE CURRENT SWITCH IS USED FOR THE PURPOSE FOR WHICH IT HAS BEEN DESIGNED FOR AND WITHIN THE LIMITS OF THE TECHNICAL SPECIFICATIONS. WHEN THIS SYMBOL IS USED, IT MEANS YOU MUST CONSULT ALL DOCUMENTATION TO UNDERSTAND THE NATURE OF POTENTIAL HAZARDS AND THE ACTION REQUIRED TO AVOID THEM.

WARNING! RISK OF ELECTRICAL SHOCK:
WHEN OPERATING THE CURRENT SWITCH CERTAIN PARTS MAY CARRY HAZARDOUS VOLTAGE (E.G. PRIMARY CONDUCTOR). THE CURRENT SWITCH SHOULD NOT BE PUT INTO OPERATION IF THE INSTALLATION IS NOT COMPLETE.

Part Number Key

ACS L - 010 - A E - F

CASE STYLE:
F - Fixed Core
S - Split Core

OUTPUT (Solid State Switch):
Normally Open, 0.15 A, 240 VAC/VDC

SETPOINT RANGES:
010 - 1-10 A - fixed core
050 - 10-50 A - fixed core
020 - 2-20 A - split core
050 - 20-50 A - split core

ADJUSTMENT:
L - Linear adjustment

TRANSDUCER TYPE:
AC current operated switch

Maximum Amps				
Type	***Setpoint Ranges***	***Maximum Input Amps***		
		Continuous	***6 Sec.***	***1 Sec.***
Fixed Core	1-10A	150	400	1000
	10-50A	150	400	1000
Split Core	2-20A	150	400	1000
	20-50A	150	400	1000

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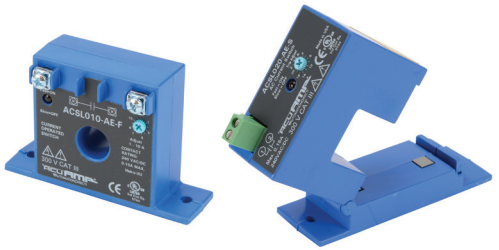
ACSL - Inst - Rev 3 1020 P-N 394000017

ACUAMP®

ACSL SERIES INSTALLATION INSTRUCTIONS



Quick Start Guide

1. **Route monitored wire through aperture.**
2. **Mount the sensor.**
3. **Connect output wiring.**
   - **A. Use 14-22 AWG (2.5mm²-0.33mm²) 75/90°C copper wires.**
   - **B. Ensure load matches that shown on sensor label.**
4. **Adjust setpoint.**
   - **A. Use trip adjust potentiometer to choose setpoint.**
   - **B. 3/4 turn, current level shown on label.**

Description

ACSL series units are self powered, current operated switches which trigger when sensed current levels exceed the adjusted setpoint and provide a N.O. (closes on current rise) solid state contact.

The ACSL series current switches are intended for use in Pollution degree 2 environments.

Installation

For All Versions

ACSL 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 or hung directly on wires with a wire tie. Ensure at least one inch clearance exists between sensor and other magnetic devices.

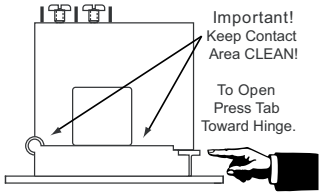
Run wire to be monitored through aperture (opening) in the sensor.

For control wiring, use 14-22 AWG (2.5mm^2-0.33mm^2) copper wire and tighten terminals to 5 in lbs (0.6 Nm) torque. Be sure the output load does not exceed the switch rating.

Connect output wiring to terminals. Note that if unit is powered and monitored conductor has current flow, the output contacts may energize depending on setpoint.

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.

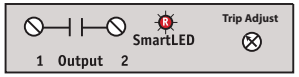


KEEP SPLIT-CORE SENSORS CLEAN.

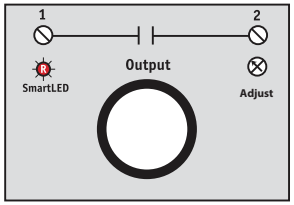
KEEP SPLIT-CORE SENSORS CLEAN.

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



Split Core Connection



Solid Core Connection

Inrush Delay

The ACSL series current sensing switches provide a 2 second delay before the output changes state upon initial energization of the monitored load. After the delay, the sensor will change state based on stated response time on current increase. This feature allows the monitoring of a motor load without adding a bypass contact or an external timing relay added to the circuit.

Setpoint Adjustment

ACSL Series setpoint is adjusted through one 3/4-turn pot which has an arrow indication of the selected value. The unit comes from the factory with setpoint set to its maximum.

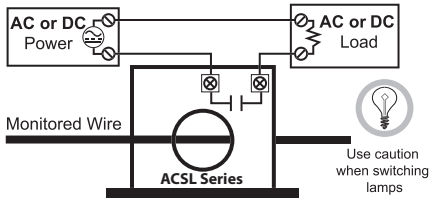
Typical Adjustment:

1. Turn the **Trip** pot to minimum setpoint.
2. Ensure normal operating current running through sensor. The output should be tripped since the pot is at its minimum setpoint and status LED should change from slow to fast flash indicating contact is tripped.
3. Turn the **Trip** pot Clock Wise until the unit untrips. This is indicated by the LED changing from fast to slow flashing and by the changing of the output switch status.
4. Now turn the **Trip** pot Counter Clock Wise slowly until the unit trips again.
   It is now set at the current level being monitored. This value can be confirmed by reading the trip point from the graded scale on the sensor label.

   A. To Set for UNDERLOAD indication - Leave the setting where it is (tripped with load at normal)

   B. To Set for OVERLOAD indication - Turn pot slightly Clock Wise. (untripped when current is at normal level)

The output connection is simple, and is not polarity sensitive. Bring the control circuit voltage to one terminal, and connect the controlled load to the other. When closed, the contact will pass the control circuit voltage from the source to the load.



Troubleshooting

When the sensor has current through the aperture, the LED on the unit should indicate that the unit is on by flashing slowly. When the current is over the adjusted trip point, the LED will flash quickly.

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 the pot CW to decrease setpoint.
   - B. Monitored current is below minimum required.
     Loop the monitored wire several times through the aperature until the "sensed" current rises above minimum. Sensed Amps = (Actual Amps) x (Number of Loops). Count loops on the Inside of the aperature.
   - C. Switch has been overloaded and contacts are burned out.
     Check the output load, remembering to include inrush on inductive loads (coils, motors, ballasts).