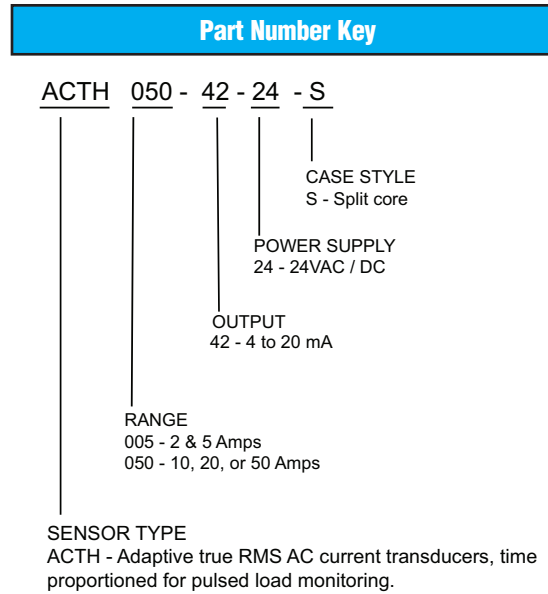


Specifications	
<b>Power Supply</b>	24 VAC/DC (+/-10%) <i>Intended for use with a Class 2 source with the secondary fused to limit power to a maximum of 100 VA</i>
<b>Power Consumption</b>	< 2VA
<b>Output Signal</b>	4-20 mA
<b>Output Limit</b>	100% of standard output range maximum value
<b>Frequency Range</b>	40-400 Hz, Adaptive true RMS
<b>Response Time</b>	400ms at 100% duty cycle, or duty cycle period plus 40ms
<b>Accuracy</b>	1.0% Full Scale
<b>Output Impedance</b>	500Ω maximum
<b>Isolation Voltage</b>	UL tested to 1240VAC
<b>Case</b>	UL 94V-0 Flammability rated thermoplastic
<b>Sensing Aperture</b>	0.86 in (21.9 mm) sq.
<b>Environmental</b>	-Temp -4 to 122°F (-20 to 50°C) -Humidity 0-95% RH, Non-condensing -Pollution degree 2 -Altitude 2000 meters
<b>Certifications</b>	cULus listed E197592 CE

Sensed Current Limit			
Model	Range	Max. 6 Seconds	Max. 1 Second
ACTH005	0 - 2A	125	250
	0 - 5A	125	250
ACTH050	0 - 10A	125	250
	0 - 20A	150	300
	0 - 50A	215	400

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

The ACTH Series may comply with EN 61010-1 CAT III 300V max line-to-neutral measurement category. If insulated cable is used for the primary circuit, the voltage rating of the measurement category can be improved according to the characteristics given by the cable manufacturer.



### Warning! Risk of hazardous voltage

When operating the device, certain parts may carry hazardous live voltage (e.g., primary conductor, secondary terminals). The device should not be put into service if the installation is not complete.

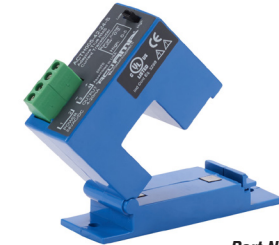


### Warning! Risk of electric shock or personal injury

Safe operation can only be guaranteed if the device is used for the purpose for which it was designed and within the limits of the technical specifications. When this symbol is used, it means you should consult all documentation to understand the nature of potential hazards and the action required to avoid them.



# ACTH SERIES INSTALLATION INSTRUCTIONS



Part No. ACTH005-42-24-S

## Quick Start Guide

1. Run the wire to be monitored through the aperture.
2. Mount the sensor on a surface, if needed.
3. Connect output wiring.  
Use up to 22-14 AWG copper wires, rated 75°C minimum and tighten terminals to 5-7 in-lbs.  
Maximum load connected to the output is 500 ohms.
4. Choose correct range by positioning the Range Jumper.
5. Confirm operation.  
Energize the sensor by connecting the appropriate voltage source to the power supply terminals.



AutomationDirect.com (ADC)  
3505 Hutchinson Road, Cumming, GA 30040  
Phone: (800) 633-0405 or (770) 889-2858

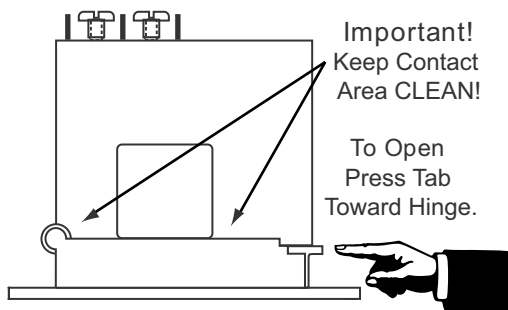
## Description

The ACTH Series powered AC current transducers combine a current transformer and signal conditioning electronics in a single package for use in applications where the current wave is pulsed. ACTH Series AC current transducers will produce a signal proportional to the current used even when the controller is supplying power in one cycle increments.

ACTH Series transducers are available in split-core enclosures with 4-20mA analog outputs. ACTH Series transducers are adaptive true RMS responding and designed for use in variable heating applications, with zero-crossing fired SCR controls, but will also be accurate when used to monitor sinusoidal current wave shapes.

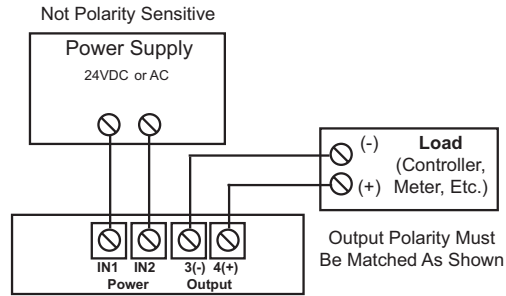
## Installation

1. Place wire in which current is to be monitored through aperture of ACTH unit.
2. Mount the ACTH unit using screw holes in mounting base unit, taking care maintain at least one-inch clearance in all directions between the sensor and other magnetic devices for proper operation. Note: The transducer is not directionally sensitive and can be mounted in any position or hung directly on wiring with the use of wire ties.
3. 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 22-14 AWG 75°C or higher copper wire and tighten terminals to 5-7 in-lbs torque.

### Connection Notes:

- Deadfront captive screw terminals
- 14-22 AWG solid or stranded
- Observe Polarity

## Range Select

ACTH Series transducers feature field selectable ranges. The ranges are factory calibrated, eliminating time consuming and inaccurate field setting of zero or span.

1. Determine the normal operating amperage of your monitored circuit.
2. Select the range that is equal to or slightly higher than the normal operating amperage.
3. Place the range jumper in the appropriate position.

## Troubleshooting

1. Sensor has no output.
  - A. Polarity is not properly matched.  
**Check and correct output wiring polarity.**
  - B. Monitored load is not AC or is not on.  
**Check that the monitored load is AC and that it is actually on.**
  - C. The split-core contact area may be dirty.  
**Open the sensor and clean the contact area.**
2. Output signal too low.
  - A. The jumper may be set in a range that is too high for current being monitored.  
**Move jumper to the correct range.**
  - B. Output load too high.  
**Check output load; be sure it is 500 ohms maximum.**
  - C. Monitored current is below minimum required.  
**Loop the monitored wire several times through the aperture until the 'sensed' current rises above minimum.**  
Sensed Amps = (Actual Amps) x (Number of Loops).  
**Count loops on the inside of the aperture.**
3. Output signal is always at maximum.
  - A. The jumper may be set in a range that is too low for current being monitored.  
**Move jumper to the correct range.**
4. Output does not match the current measured with a hand meter.
  - A. The ACTH sensors are producing a signal proportional to the RMS current and not the average current.  
**Check that the test meter is RMS or the two readings will not match.**

**Note: Adaptive true RMS current transducers will be accurate if the wave shape is sinusoidal or pulsed.**