



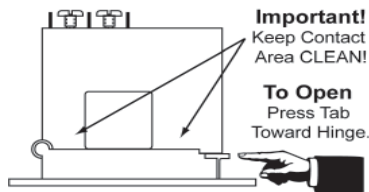
## Description

The ATH 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. The combination of these devices results in a single unit with higher accuracy, lower output ripple, and a space-saving simplified installation.

ATH Series transducers are available in solid or split-core enclosures and with 0-5VDC, 0-10VDC or 4-20mA analog outputs. Custom input and output ranges may also be available; please consult with the factory. ATH Series transducers are 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 ATH unit.
2. Mount ATH 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. For -SP versions (split-core enclosures) only: Press the tab in the direction as shown to open the sensor. After placing the wire in the opening, press the hinged portion firmly downward until a definite click is heard and the tab pops out fully.



### KEEP SPLIT-CORE SENSORS CLEAN.

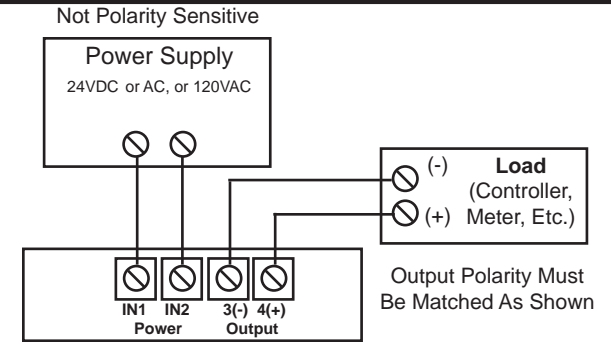
Silicone grease is factory applied on the mating surfaces to prevent rust and improve performance. Be careful not to allow grit or dirt onto the grease in the contact area. Operation can be impaired if the mating surfaces do not have good contact. Check visually before closing.

## Output Wiring

Connect control or monitoring wires to the sensor. Use 22-14 AWG copper wire 75°C or higher and tighten terminals to 5-7 inch-pounds torque.

### Connection Notes:

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



## Range Select

ATH 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.

## Trouble Shooting

### 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. Split Core models: The 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 low or too high. *Check output load, be sure it is at least 10K  $\Omega$  for voltage output models, 500  $\Omega$  maximum for current output models.*
- 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 ATH sensors are producing a signal proportional to the RMS current, and not the average current.
- B. Check that the test meter is RMS or the two readings will not match.

Note that True RMS current transducers will be accurate if the wave shape is sinusoidal or pulsed.