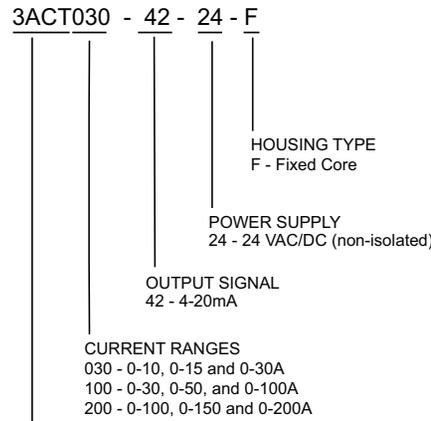


Specifications	
<b>Power Supply</b>	24 VAC/DC (+/- 10%), Intended for use with a Class 2 source with the secondary fused to limit power to a maximum of 100 VA <b>Note: Power Supply and output signal ARE NOT isolated. Do not connect the negative terminals to a common point.</b>
<b>Power Consumption</b>	< 6.0 VA
<b>Output Signals</b>	4-20mA Four outputs, three proportional to the current in that phase, one an average of all three.
<b>Output Limit</b>	20.8 mA
<b>Output Impedance</b>	500Ω maximum
<b>Accuracy</b>	1.0% FS
<b>Response Time</b>	220ms (90% step change)
<b>Frequency Range</b>	3ACT: 50/60Hz, Average Responding 3ACTR: 30-100Hz, True RMS
<b>Sensed Current Limit</b>	1.1x range continuous 3x range for 6 seconds 6x range for 1 second
<b>Isolation Voltage</b>	UL tested to 1240VAC
<b>Sensing Apertures</b>	0.74 in (18.8 mm) dia.
<b>Case</b>	UL 94V-0 Flammability rated thermoplastic
<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

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

The 3ACT/3ACTR 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.

**Part Number Key**



3ACT: 3-phase AC current transducer, average responding  
3ACTR: 3-phase AC current transducer, True RMS



**Warning! Risk of hazardous voltage**

When operating the transducer, certain parts may carry hazardous live voltage (e.g., primary conductor, secondary terminals). The transducer 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 transducer 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.



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**3ACT/3ACTR  
SERIES  
INSTALLATION  
INSTRUCTIONS**



Part No. 3ACT030-42-24-F

**Quick Start Guide**

- Mount the 3ACT/3ACTR Current Transducer to a DIN rail or panel in a suitable enclosure.**
- With monitored load off, install each phase through the sensing windows. Designate one phase as A, B, and C.**
- Select the current range using the slide switch.**
- Connect output terminals + and - using 22-14 AWG copper wires rated 75/90°C. Tighten to 5-7 inch-pounds torque.**
- Connect power supply voltage to terminals 9-10.**
- The output will be proportional to the current in each phase, plus one which is the average of the three.**
- Any of the four analog signals can be used independently, or all four can be used at the same time.**

## Description

The 3ACT/3ACTR Series current transducers are intended to monitor current of three phase loads. They provide an analog signal proportional to the current in each of the three phases, and another which will be proportional to the average of the three phase currents. The transducer can be mounted on a back panel using screws through the mounting holes in the base or snapped onto a 35mm DIN rail. Each model can be set for three current measurement ranges.

## Wiring

### Power Supply

Connect power supply to transducer as shown in the wiring diagram. Use 75/90°C rated copper wire. Tighten terminals to 5-7 inch-pounds torque. Use a Class 2 power limited source fused to limit power to a maximum of 100 VA.

### Output Signal

Observe polarity and connect each 4-20 mA output signal to controller or display using 75/90°C rated copper wire. Tighten the terminals on the transducer to 5-7 in-lbs torque. Confirm that the connected load impedance is less than 500 ohms.

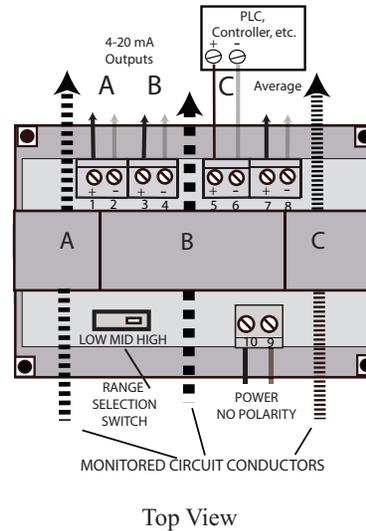
### Monitored Circuit

Each of the three phases passes through the three windows of the top section. All conductors should pass through the sensor in the same direction (from the front or the back) for appearance, but not required for accuracy or reliability. If the phases use multiple conductors, all wires of one phase must pass through the same sensing window or aperture.

The transducer is designed to monitor circuits, whether the conductor is insulated or bare. Each aperture has an inside diameter of 0.74" (18.8 mm), allowing 4/0 THHN (120 mm<sup>2</sup>) to pass through easily. Centering the conductor in the aperture is not necessary.

## Wiring Schematic Drawing

**Note:** Power supply and output signal ARE NOT isolated. Do not connect the negative terminals to a common point.



## Troubleshooting

1. Sensor has no output.
  - A. Power supply is not energized or connected to the transducer.  
**Check voltage at terminals 9 and 10. There is no isolation between the power and the output signals.**
  - B. The monitored circuit is not energized or drawing current.  
**Check that the monitored circuit is energized.**
  - C. Polarity is not properly matched.  
**The output signals are polarity sensitive, and the result would be no signal to the controller or whatever is reading the transducer outputs.**
2. Output signal too low.
  - A. The transducer range may be too high to read the monitored circuit current.  
**Select a lower range using the Range Selection Switch, use a model with a lower range, or loop each conductor through the sensing windows to increase the current through each aperture.**
  - B. Power supply may not have enough capacity to operate the transducer outputs.  
**Use a power supply with at least 6VA available to operate the transducer.**
3. Outputs are always at the minimum (4mA).

The monitored load is not energized or is not AC.  
**Be sure that the monitored circuit is AC (3ACT 50/60 Hz, 3ACTR 30 to 100 hertz).**
4. Outputs are always at the maximum (20mA).

The monitored load is drawing more current than the transducer range.  
**Select a model with a higher range, or set the range selection to a higher range. Be very careful when selecting the model to suit the application. Check the range selection slide switch. Check the actual current used with a hand-held ammeter and set the range accordingly.**