

AT/ATR-TH SERIES

AC Current Transducers

AT/ATR-TH Series AC Current Transducers are the latest innovation for monitoring three-phase loads, motors, machines or buildings. The large triple-aperture solid-core design allows for a quick and easy installation. Just thread the conductors through the sensing windows (apertures) and reconnect on the other side. The transducer outputs should be powered by either a 24 VAC/VDC or a 120 VAC power supply that is isolated from the monitored circuit. Three outputs are proportional to the AC current in each phase and a fourth represents the average of the three. Each are available at any time. The sensor mounts on a back panel or a DIN rail and is designed to accommodate wire sizes for loads up to 200 amps.



Current Transducer Applications

Monitor Large Machines

- Detect over or undercurrent conditions before they cause break downs or interlock one process with another.

Water Delivery and Treatment

- Detect open discharge lines.
- Sense clogged filters or blocked intake to pumps.
- Measure increased current to show failing bearings or pump impeller cavitation.

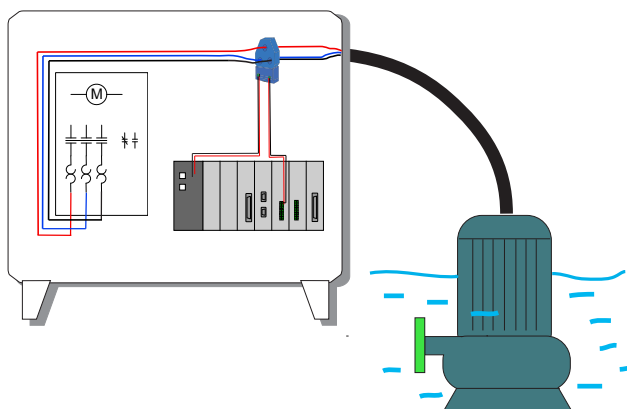
Generators

- Shed noncritical loads when demand reaches a set level.

Load Imbalance

- Monitor motor current draw which should be nearly equal in all three phases. A difference of 10% signifies trouble.

Submersible Pump Application



Current Transducer Features

Analog Signal Proportional to AC Current

- Both average responding and True RMS models available.
- Compatible with most automation and control systems.
- One output represents the current in each phase. A fourth produces a signal proportional to the average of the current in all three phases.

Externally Powered

- Simple and reliable connection.

Factory Calibrated and Warranted For Five Years

- Choice of ranges : 0–10 to 0–200 amps.
- Designed for longest life and reliability.

Solid-core Case

- Sensing windows provide ample space for single or multiple conductors per phase.

DIN Rail or Panel Mount

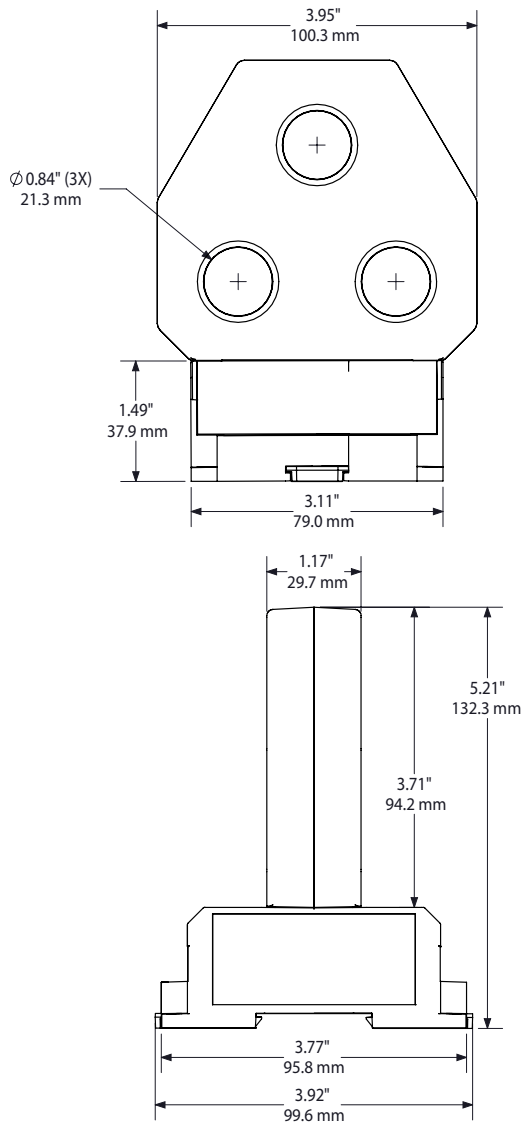
- Snap onto DIN rail or attach with screws to a panel for secure mounting.*

UL/cUL Listed and CE Certified

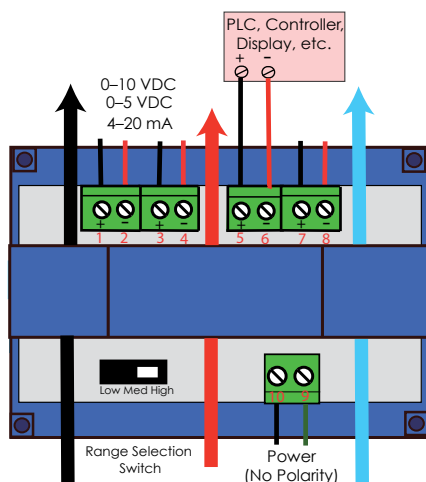
- Accepted worldwide.

*For information on the DIN rail accessories kit, see page 154.

Current Transducer Dimensions



Current Transducer Connections



Current Transducer Specifications



Power Supply	<ul style="list-style-type: none"> • 24 VAC/VDC (+/-10%) (output not isolated) • 120 VAC (+/-10%) (output isolated) 						
Power Consumption	<6 VA						
Output Signal	Three Individual analogs proportional to current in each phase, one analog proportional to the average of the three current levels.						
Output Loading	<ul style="list-style-type: none"> • 4–20 mA: <500 Ω • 0–5/10 VDC >2K Ω 						
Response Time	220 ms (90% step change)						
Range	<table border="1"> <tr> <td>1</td><td>0–10, 15, 30 A (selectable by slide switch)</td></tr> <tr> <td>2</td><td>0–30, 50, 100 A (selectable by slide switch)</td></tr> <tr> <td>3</td><td>0–100, 150, 200 A (selectable by slide switch)</td></tr> </table>	1	0–10, 15, 30 A (selectable by slide switch)	2	0–30, 50, 100 A (selectable by slide switch)	3	0–100, 150, 200 A (selectable by slide switch)
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Isolation Voltage	2200 VAC						
Frequency Range	50–60 Hz. (Avg.), 30–100 Hz (RMS)						
Sensed Current Limit	1.1x range continuous 3x range for 6 seconds 6x range for 1 second						
Case	UL94 V-0 Flammability Rated						
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing						
Listings	UL Listed to UL 508 (E342812), CE						

Ordering Information

Sample Model Number: ATR2-420-24U-TH, AC RMS current transducer, 0–100 A range, 4–20 mA output, 24 VAC/VDC, 3 hole solid-core case, DIN rail mount.

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(1) Output Type

	Average responding (blank)
R	True RMS

(2) Range

1	0–10, 15, 30 A
2	0–30, 50, 100 A
3	0–100, 150, 200 A

(3) Output Type

420	4–20 mA
005	0–5 VDC
010	0–10 VDC

(4) Power Supply

24U	24 VAC/VDC externally powered
120	120 VAC externally powered

(5) Case

TH	Three-hole, solid-core, base terminals, DIN rail or panel mount
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