

AT/ATR-MS SERIES

AC Current Transducers

AT/ATR-MS Series Current Transducers combine a current sensing element and signal conditioner into a single package. The large, easy-to-install split-core design allows for installation over existing conductors without the need to disconnect the load, even in applications where there are multiple conductors per phase. Whether installing over existing conductors or in a new control system, installation is very simple and quick. Just remove the top portion of the sensing ring, place the conductors inside, and snap the top back in place. The transducer uses two wires to connect to the power supply or the load, (a programmable logic controller, a panel meter, or a data acquisition system).

AC Current Transducer Applications

Monitor Large Machines

- Measure the current use to detect over or under current conditions before they cause break downs.

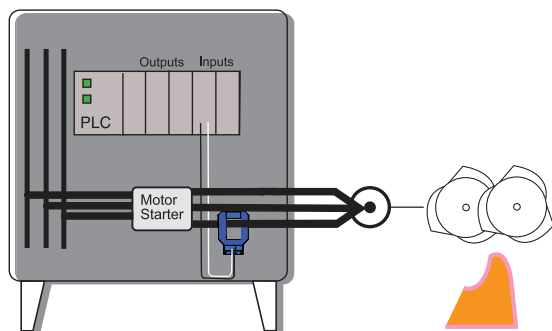
Water Delivery and Treatment

- Detect open discharge lines.
- Locate clogged filters or blocked intake to pumps.

Grinding and Shredding

- An analog output will allow the control system designer to allow brief periods of drive overload when the processed product varies in density. If the blades hit something foreign (e.g. steel when the machine is designed to reduce paper), then the control will alarm or shut down the process.

Shredder Monitoring



- For additional Application Examples, go to www.nktechnologies.com/applications

OEMs

Test & Evaluation Units for OEMs

Free program expedites evaluation process. See page 1 for details.



AC Current Transducer Features

Industry Standard Output

- 4–20 mA signal proportional to the AC current.
- Compatible with most automation systems.

Loop-powered

- Use the “live zero” output to verify proper connections, where the sensor output is 4 mA with no current through the sensing ring.

Factory Calibrated

- Eliminates zero and span potentiometer adjustment.

Split-core Case

- Sensing window provides ample space for bus bar, single or multiple conductors.

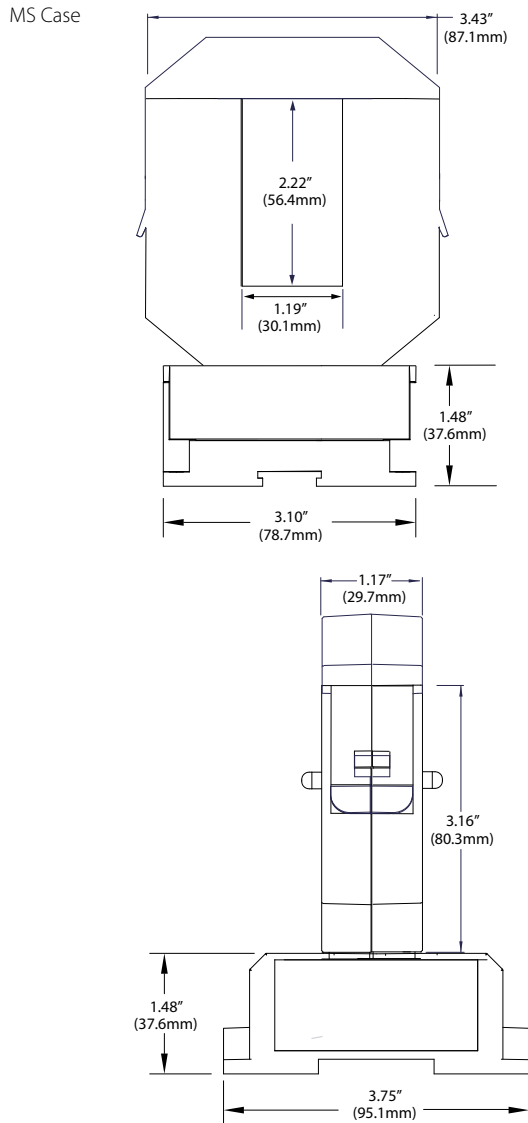
DIN Rail Mount

- Simply snaps onto DIN rail for secure mounting.

Designed to Meet UL, CUL and CE Approval

- Accepted around the world.

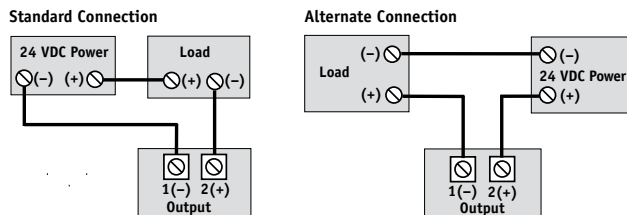
AC Current Transducer Dimensions



Note: Drawings are not to scale

AC Current Transducer Connections

Single Transducer Installation



AC Current Transducer Specifications

Power Supply	24 VDC nominal (12–32 VDC)								
Output	4–20mA analog signal								
Output Impedance	750 ohms maximum								
Output limit	23 mA								
Accuracy	1% from 10–100% of range								
Response Time	600 ms (90% step change)								
Ranges	<table border="1"> <tr> <td>2</td> <td>0–200 A</td> </tr> <tr> <td>4</td> <td>0–400 A</td> </tr> <tr> <td>6</td> <td>0–600 A</td> </tr> <tr> <td>8</td> <td>0–800 A</td> </tr> </table>	2	0–200 A	4	0–400 A	6	0–600 A	8	0–800 A
2	0–200 A								
4	0–400 A								
6	0–600 A								
8	0–800 A								
Isolation Voltage	Tested to 2200 VAC								
Frequency Range	AT: 50/60 Hz (average responding) ATR: 20–400 Hz (True RMS responding)								
Sensing Aperture	1.19" (30.1 mm) x 2.2" (56.4 mm)								
Case	UL94 V0 Flammability Rated DIN rail mounting								
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing								
Listings	Designed to meet UL 508 Industrial Control Equipment (USA & Canada)								

AC Current Transducers

AC Current Transducer Ordering Information

Sample Model Number: ATR6-420-24L-MS
 AC current transducer, 0–600 A range, RMS output 4–20 mA, loop-powered medium split-core case, DIN rail mounting.



(1) RMS Responding

Blank	Average responding output signal
R	Designates RMS responding output for distorted current

(2) RMS Responding

2	0–200 A
4	0–400 A
6	0–600 A
8	0–800 A

(3) Output Type

420	4–20 mA
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(4) Power Supply

24L	24 VDC Loop-power (12–32 VDC)
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(5) Case Style

MS	Split-core, base terminals, DIN rail mounting
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