AT/ATR-LS SERIES
AC Current Transducers

AT/ATR-LS Series Current Transducers combine a current transformer 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 monitored load, even in applications where there are multiple conductors per phase. For new installations, the process is just as easy. 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 and the load (a programmable logic controller, a panel meter or a data acquisition system).



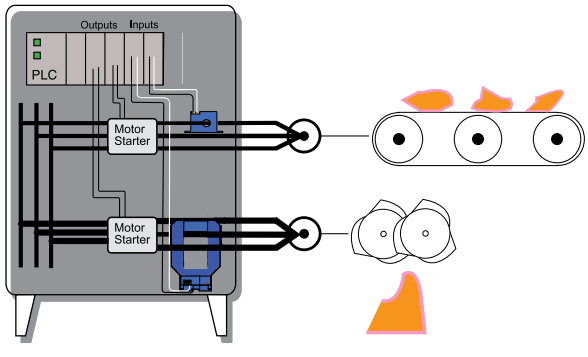
AC Current Transducer Applications

Monitor Large Machines
- Measure the current use to detect over or undercurrent conditions before they cause break downs.

Water Delivery and Treatment
- Detect open discharge lines.
- See clogged filters or blocked intake to pumps.

Generators
- Keep the power system running by monitoring the output.

Grinder/Shredder Application



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

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 (sensor output with no current flowing confirms the system is ready to go).

Factory Calibrated
- Eliminates zero and span potentiometer adjustment.

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

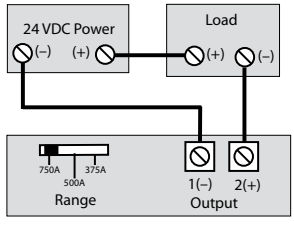
DIN Rail Mounted Case*
- Simple snap onto DIN rail for secure mounting.

UL/cUL and CE Approved
- Accepted worldwide.

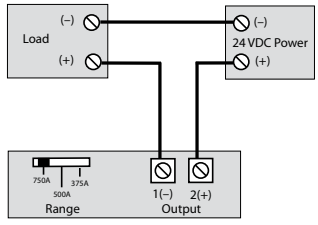
*For information on the DIN rail accessories kit, see page 140.

AC Current Transducer Connections

Standard Connection



Alternate Connection



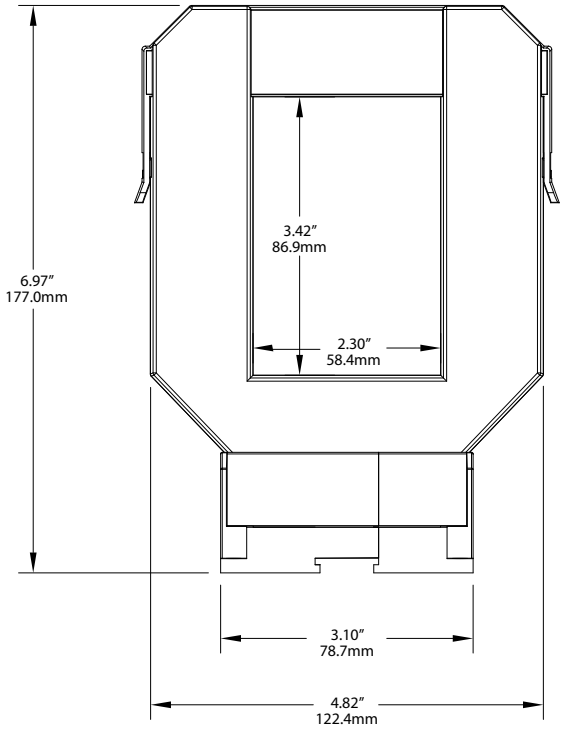
OEMs Test & Evaluation Units for OEMs
Free program expedites evaluation process. See page 3 for details.

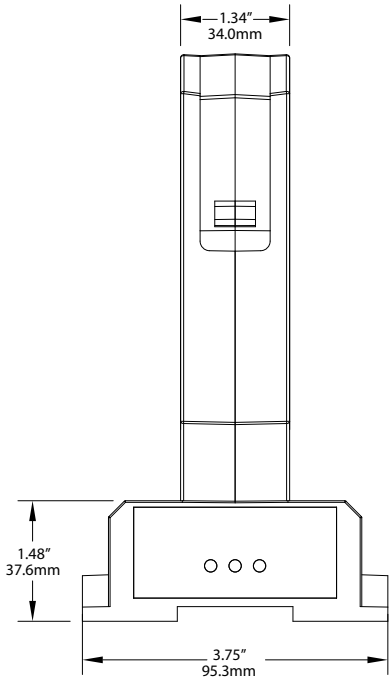
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AC Current Transducer Dimensions

LS Case





Note: Drawings are not to scale

AC Current Transducer Specifications

Power Supply	24 VDC nominal (12–32 VDC)
Output Signal	4–20 mA loop-powered, average or True RMS
Output Limit	23 mA
Output Impedence	<750 Ω @ 24 VDC
Accuracy	1.0% FS
Response Time	600 ms (90% step change)
Range	8: 0–800 A 10: 0–1000 A 12: 0–1200 A 16: 0–1600 A
Frequency Range	• AT: 50/60 Hz (average responding) • ATR: 20–400 Hz (True RMS responding)
Isolation Voltage	UL tested to 2000 VAC isolation, monitored conductor to output terminals
Case	UL94 V-0 Flammability Rated
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
Listings	UL/cUL, CE

AC Current Transducer Ordering Information

Sample Model Number: ATR10-420-24L-LS

AC current transducer, 0–1000 A range, True RMS output 4–20 mA, loop-powered, large split-core case, DIN rail mounting.

	(1)	(2)		–	(3)			–	(4)			–	(5)	
AT				–	4	2	0	–	2	4	L	–	L	S

(1) Measurement

	Average responding (blank)
R	True RMS responding output for distorted current

(2) Range

8	0–800 A
10	0–1000 A
12	0–1200 A
16	0–1600 A

(3) Output Type

420	4–20 mA

(4) Power Supply

24L	24 VDC loop-powered

(5) Case Style

LS	Split-core, base terminals, DIN rail mounting

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