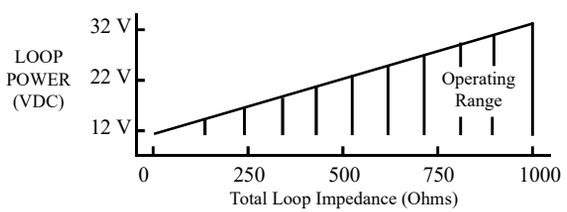
Specifications

Power Supply	24 VDC nominal, 40 VDC max Overvoltage CAT I, Class 2 or power limited power supply
Input Range	Field selectable from 0-2000 A 300 V line to neutral, CAT III
Output Signal	4-20 mA, loop powered
Output Limit	23 mA
Accuracy	1.0% FS
Measurement	True RMS or average responding
Frequency Range	ATR: 10-400 Hz AT: 50-60 Hz, sinusoidal
Isolation Voltage	Tested to 3 KV
Response Time	500 ms (to 90% of step change)
Sensing Aperture	3.0" (76 mm) diameter
Case	UL94 V-0 Flammability rated thermoplastic
Environmental	-4 to 122°F (-20 to 50°C) operating ambient temperature 0-95% RH, Non-condensing Pollution Degree 2 Altitude to 6561 ft (2000 meters)
Listings	UL and cUL listed CE certified RoHS compliant

Power Supply

Minimum Power Supply = 12 VDC + Total Loop Voltage Drop



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.

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.

Model Number Key

AT R 3 - 420 - 24L - FL

CASE STYLE
FL - Solid-Core

POWER SUPPLY:
24L - 24 VDC Loop Powered

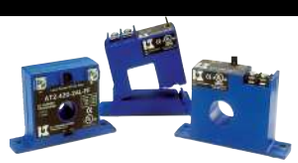
OUTPUT:
420 - 4-20 mA

RANGE
2 - 100, 133, 200 A
3 - 375, 500, 750 A
4 - 1000, 1333, 2000 A

Measurement
R - True RMS
(Blank) - Average Responding

SENSOR TYPE:
AT - AC current sensor, 4-20 mA output loop powered

Know Your Power





Other NK Technologies Products Include:
AC & DC Current Transducers
AC & DC Current Operated Switches
1ϕ & 3ϕPower Transducers
Current & Potential Transformers (CTs&PTs)

NK Technologies

Phone:
Fax:

NK Technologies

INSTRUCTIONS



AT & ATR 2, 3 & 4 SERIES

AC Current Transducers

4-20 mA Output

True RMS or Average Responding

Quick "How To" Guide

1. Run the wire you are monitoring through aperture.
2. Mount the sensor to a surface if needed.
3. Connect output wiring.
   A. Use 14-22 AWG 75˚C minimum copper conductors only and tighten to 5 inch-pounds torque.
   B. Make sure output load does not exceed product specifications.
   C. Connect 24 VDC power supply and load in series.
4. Select Range
   A. Choose correct range by positioning the Range switch.

292001301 Rev 4

Description

AT and ATR Series transducers combine a current transformer and a signal conditioner into a single package. This provides higher accuracy, lower wiring costs, easier installation and save valuable panel space. AT Series are available in solid-core with 4-20 mA outputs.

ATR Series feature a True RMS output. They are designed for application on distorted current waveforms such as VFD outputs.

Installation

Run wire to be monitored through the sensing aperture.

AT and ATR Series transducers work in the same environment as motors, contactors, heaters, pull-boxes, and other electrical enclosures. They can be mounted in any position or hung directly on wires with a wire tie. Just leave at least one inch distance between sensor and other magnetic devices.

Input Maximums

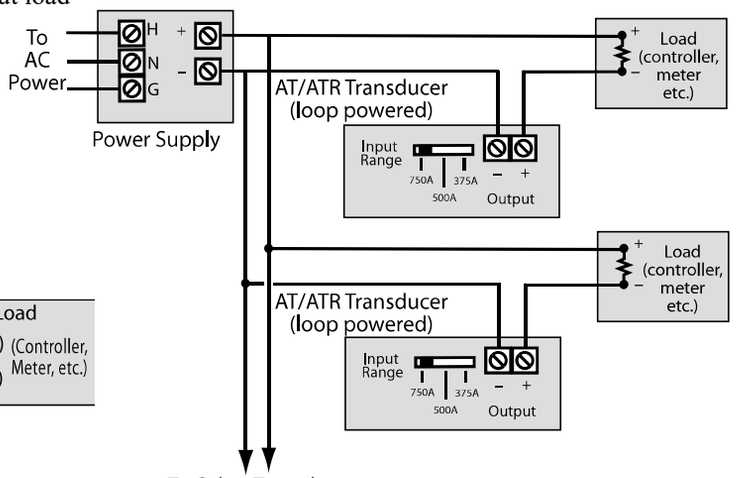
		----------MAXIMUM AMPS----------		
MODEL	RANGE	1 SEC	6 SEC	CONTINUOUS
AT2	All	2,500 A	1,000 A	500 A
ATR2	All	2,500 A	1,000 A	500 A
AT3	All	3,750 A	1,500 A	750 A
ATR3	All	3,750 A	1,500 A	750 A
AT4	All	10,000 A	4,000 A	2,000 A
ATR4	All	10,000 A	4,000 A	2,000 A

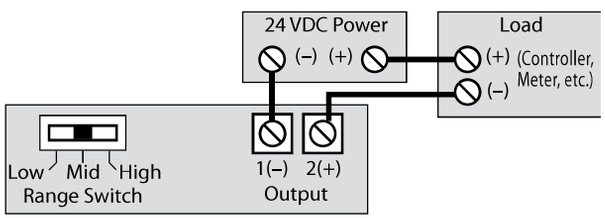
Output Wiring

Connect control or monitoring wires to the sensor. Use 14-22 AWG 75˚C minimum copper wire and tighten terminals to 5 inch-pounds torque. Be sure the output load does not exceed 800 ohms.

Connection Notes:

- Captive screw terminals
- 14-22 AWG 75˚C minimum solid or stranded
- Observe polarity
- See label for ranges & jumper positions





Range Select

AT and ATR 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. Move the three position range selector switch to the appropriate position.

Trouble Shooting

1. Sensor has no output

A. Power supply is not properly sized *Check power supply voltage and current rating.*

B. Polarity is reversed. *Check and correct wiring polar ity.*

2. Output Signal Too Low

A. The switch may be set in a range that is too high for current being monitored. *Move switch position to the correct range.*

B. The load current is not sinusoidal. *Select an ATR transducer for use with distorted waveforms.*

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 <u>inside</u> of the aperture.*

3. Sensor is always at 4 mA

A. Monitored load is not AC or is not on. *Check that the monitored load is AC and that it is actually on.*

4. Output Signal is always at 20 mA

A. The switch may be set in a range that is too low for current being monitored. *Move switch position to the correct range.*

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