

ATQ SERIES

Frequency Output AC Current Transducers

ATQ Series AC Current Transducers have a patented frequency output design used as an input to high-speed counter or frequency PLC modules, panel meters or programmable relays. Use where no analog inputs are available. Eight ranges, from 0–2 to 0–200 A, across three models provide the best available resolution. The ATQ Series AC Current Transducers are designed with a split-core case for easy installation.



AC Current Transducer Applications

Motion and Motor Control

- Pump, grinder, and fan motor status monitoring.
- Belt jam sensing in conveyor applications.
- Motor control in deburring/brush operations.
- Detect strain, acts as an electronic shear pin.

Current Measurement

- Measure current use in machine tools, polishing, and cutting operations where a small PLC has sufficient capacity to accept the sensor inputs measuring speed, time of use and electrical demands of the equipment.

AC Current Transducer Features

True RMS Output

- True RMS technology is accurate on distorted waveforms like VFD or SCR outputs.

Jumper-selectable Ranges

- Reduces inventory.
- Eliminates zero and span pots.

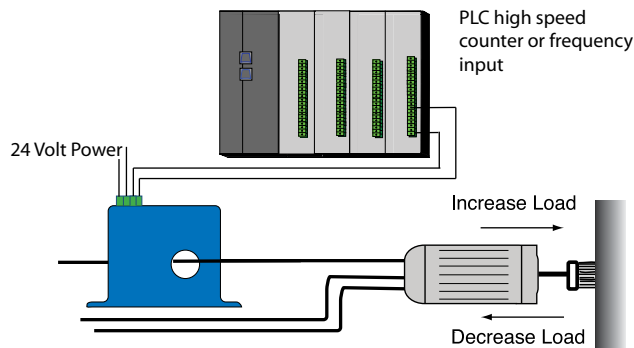
Isolation

- Output is magnetically isolated from the input for safety.
- Eliminates insertion loss (voltage drop).

Easy Installation

- Split-core case means the monitored conductor does not need to be disconnected to install the sensor.

Frequency Output Control

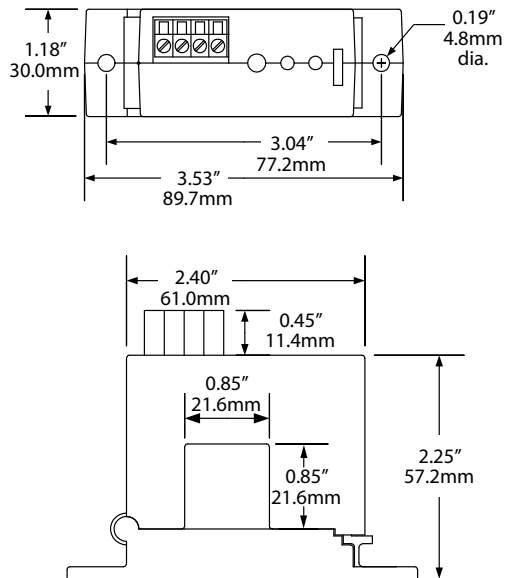


For additional Application Examples, go to www.nktechnologies.com/applications

OEMs Test & Evaluation Units for OEMs
Free program expedites evaluation process. See page 1 for details.

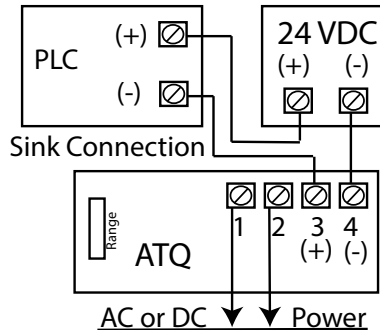
AC Current Transducer Dimensions

SP Case

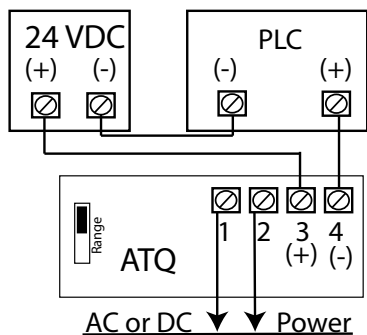


AC Current Transducer Connections

Sinking Input Connection



Sourcing Input Connection



AC Current Transducer Specifications

Power Supply	24 VAC/DC (19–26 V)
Power Consumption	<1 VA
Output Signal	• 5 KHz at full range current • 10 KHz at full range current
Response Time	100 ms (to 90% step change)
Frequency Range	6–100 Hz
Input Frequency	10–400 Hz
Pulse Width	• 5 K: 90–100 ms • 10 K: 45–50 ms On: 40 ms Off: Variable
Isolation Voltage	UL listed to 1270 VAC, tested to 5 KV
Case	UL94 V-0 Flammability Rated
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing

AC Current Transducer Ordering Information

Sample Model Number: ATQ1-05K-24U-SP
AC current transducer, 5K frequency at 10, 20 or 50 A, split-core case.



(1) Range

0	2 and 5 A
1	10, 20, 50 A
2	100, 150, 200 A

(2) Frequency Output

05K	5K Hz
10K	10K Hz

(3) Power Supply

24U	24 VAC/DC power (external)
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(4) Case Style

SP	Split-core
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