

# 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.

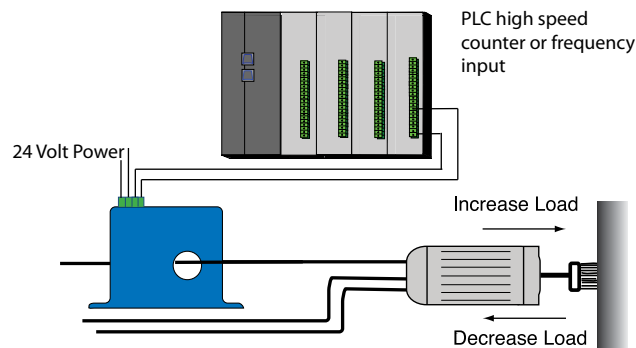
#### Isolation

- 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



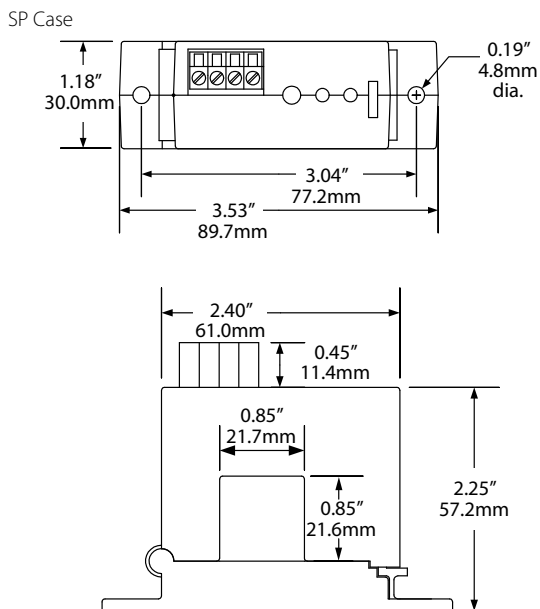
For additional Application Examples, go to [www.nktechnologies.com/applications](http://www.nktechnologies.com/applications)

OEMs

Test & Evaluation Units for OEMs

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

### AC Current Transducer Dimensions



### AC Current Transducer Specifications

<b>Power Supply</b>	24 VAC/DC, <1 VA (sensor only)
<b>Output</b>	<ul style="list-style-type: none"> <li>• 5K Hz at full range current</li> <li>• 10K Hz at full range current</li> </ul>
<b>Response Time</b>	100 ms (to 90% step change)
<b>Input Frequency</b>	10–400 Hz
<b>Pulse Width</b>	<ul style="list-style-type: none"> <li>• 5k: 90–100 m sec.</li> <li>• 10k: 45–50 m sec.</li> <li>On: 40 m sec. Off: Variable</li> </ul>
<b>Isolation Voltage</b>	Tested to 5000 VAC
<b>Frequency Range</b>	6–100 Hz
<b>Sensing Aperture</b>	0.85" (21.6 mm) square
<b>Case</b>	UL94 V0 Flammability Rated
<b>Environmental</b>	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing

AC Current Transducers

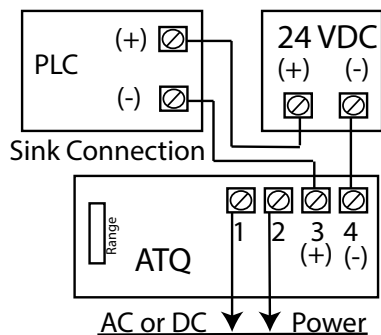
### AC Current Transducer Ordering Information

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

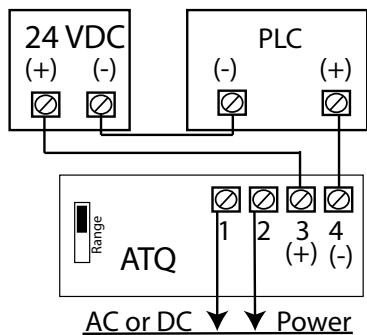


### AC Current Transducer Connections

Sinking Input Connection



Sourcing Input Connection



(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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