

APS SERIES

Power Transducers

APS Series kWh Power Transducers offer an inexpensive way to measure kWh on single- and three-phase balanced loads. The APS Series constantly measures motor power consumption, which is proportional to the amount of work being done and an indication of the motor load. Ideal for mixing, grinding, machining and pumping applications where power measurement is needed, the APS Series includes a CT, voltage sensor and output signal conditioner in a single package designed for easy installation. Available for input currents up to 180 A and voltages up to 600 VAC.



Power Sensing Applications

Grinding and Milling Control

- Measure grinder horsepower; optimize feed rates.

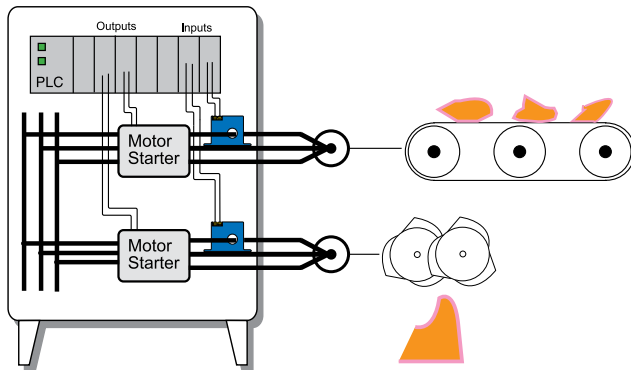
Viscosity Control

- Continuously calculate mixer kW draw; monitor viscosity without entering vessel.

Tool Monitoring and Jam Protection

- Measure drive motor HP to determine tool travel or contact with work.
- Monitor motor horsepower to provide an indication of motor jams.

Crusher/Grinder/Shredder Motor Interlocks



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

Power Sensing Features

True Power Measurement

- Measures true power (HP or kW) on balanced loads; accounts for voltage and power factor fluctuations and improves sensitivity to load changes.
- Requires only one or two power legs for installation.

Fast and Easy Installation

- Current and voltage sensors in one package and 24 VDC loop-powered supply allows for quick and easy two-wire installation.

Factory-calibrated Ranges

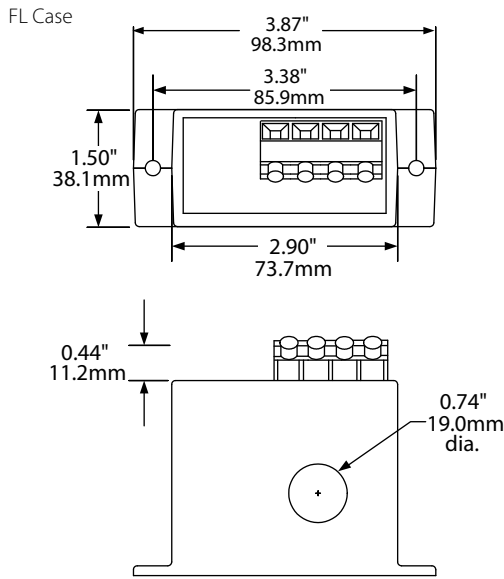
- Single range factory calibrated to ensure accuracy.

UL/cUL Approved

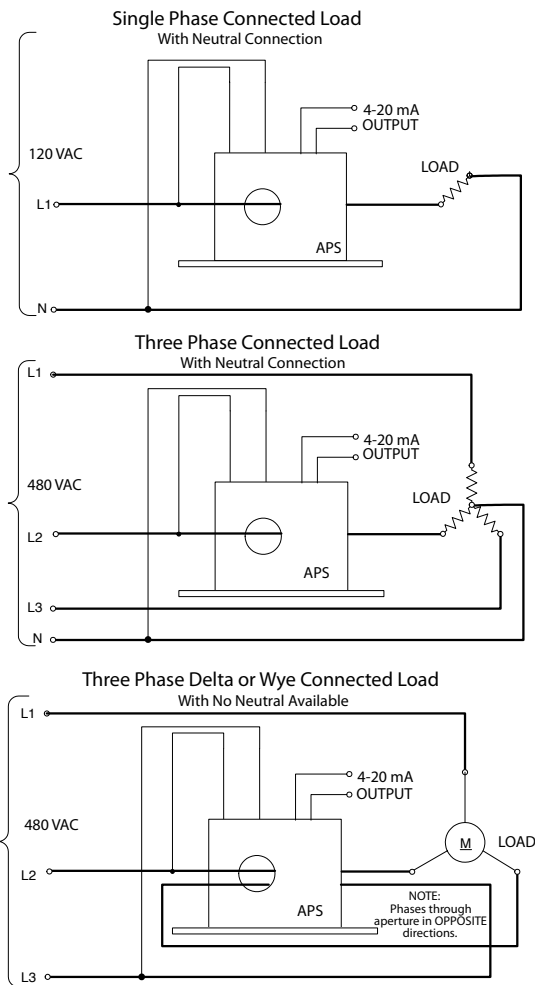
- Accepted worldwide.



Power Sensing Dimensions



Power Sensing Connections



Power Sensing Specifications

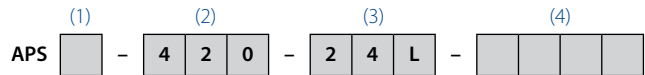


| | |
|------------------------------|---|
| Power Supply | 24 VDC loop-powered (12–36 V) |
| Primary Voltage Input | 120, 240, 480 or 600 VAC |
| Output | 4–20 mA proportional to max. KW; 25 mA limit |
| Accuracy | <1% FS |
| Loading | 500 Ω @ 24 VDC |
| Response Time | 100 ms (to 90% of step change) |
| Isolation Voltage | UL listed to 1270 VAC, tested to 5 KV |
| Frequency Range | 50–60 Hz |
| Case | UL94 V-0 Flammability Rated |
| Environmental | -4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing |
| Listings | UL/cUL (except 600 V models) |

Power Sensing Ordering Information

Sample Model Number: APS4-420-24L-10.0

Single phase watt transducer, 10 kW range, 480 VAC input, may be wired with two opposite current wire passes, 4–20 mA output, loop-powered.



(1) Input Voltage

| | |
|---|-------------------------|
| 1 | 120 VAC |
| 2 | 240 VAC |
| 4 | 480 VAC |
| 6 | 600 VAC (not UL listed) |

(2) Output Signal

| | |
|-----|---------|
| 420 | 4–20 mA |
|-----|---------|

(3) Power Supply

| | |
|-----|---------------------|
| 24L | 24 VDC loop-powered |
|-----|---------------------|

(4) Input Range

| | |
|------|---------|
| 0.5 | 0.5 KW |
| 0.75 | 0.75 KW |
| 1.0 | 1.0 KW |
| 2.0 | 2.0 KW |
| 5.0 | 5.0 KW |
| 10.0 | 10 KW |
| 20.0 | 20 KW |
| 50.0 | 50 KW |
| 75.0 | 75 KW |
| 100 | 100 KW |

Note: Not all ranges available for every voltage range. Minimum current for stated accuracy is 2 A, maximum current 180 A.

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