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.

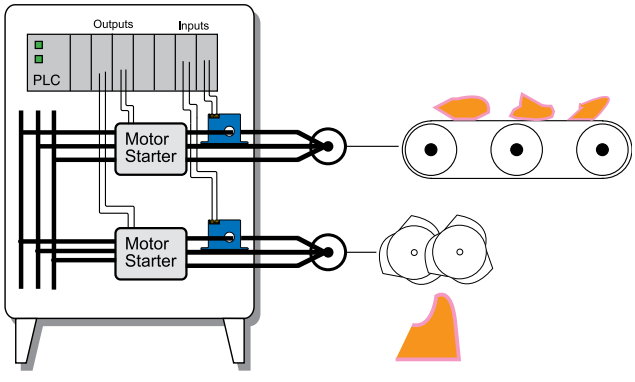
Power Sensing Applications

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.

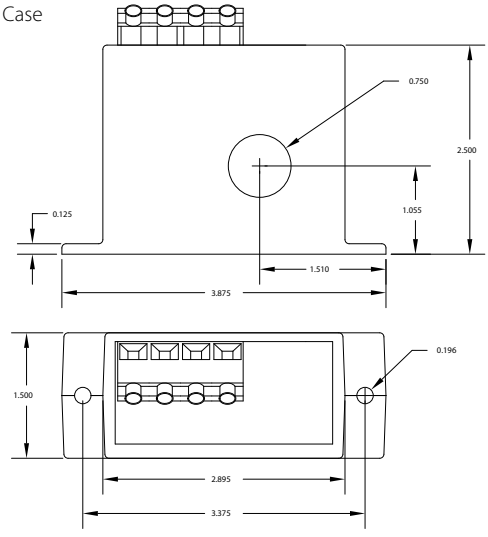
Factory-calibrated Ranges
- Single range factory calibrated to ensure accuracy.

UL/cUL Approved
- Accepted worldwide.

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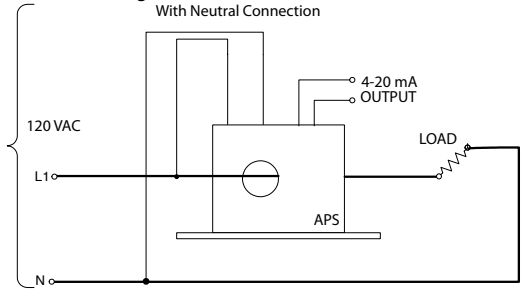
Power Sensing Dimensions

FL Case

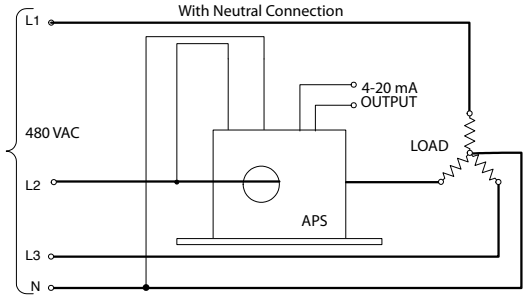


Power Sensing Connections

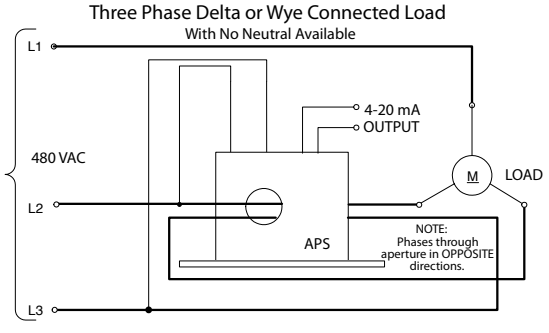
Single Phase Connected Load
With Neutral Connection



Three Phase Connected Load
With Neutral Connection



Three Phase Delta or Wye Connected Load
With No Neutral Available



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

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)		(2)			(3)				(4)			
APS		–	4	2	0	–	2	4	L	–			

(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.

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