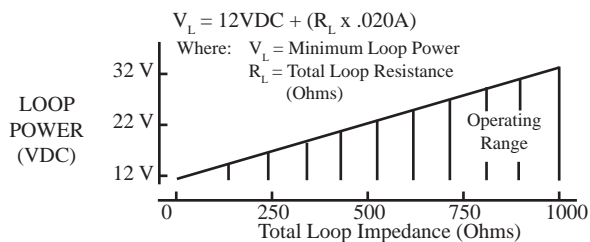


Specifications

Output	4-20mA
Output Limit	22mA
Accuracy	1% FS
Response Time	100 mS (to 90% of step change)
Frequency Range	10-400 Hz
Power Supply	24VDC Nominal Loop Powered 36 VDC Maximum
Power Inputs Expressed as:	
Amps	2-120A
kW	0.5 kW to 100 kW
HP	1/4HP@120 VAC to 150 HP@480 VAC
Voltage Input	120, 240 or 480 VAC Nominal
Voltage Variation	+/- 25% of nominal
Amperage Over-range	150% FS indefinitely 300% FS 10 Seconds 600% FS 5 Seconds
Output Terminals	Finger-safe captive screw, 10-24 AWG Torque to 4-5 inch pounds
Voltage Input Fusing	Up to 10 AWG wire, 600V max. External fusing of voltage input recommended
Indication	Power LED
Input Conditions	Across the line motors and VFDs
Environmental	-4 to 140° F, -20 to 60° C

Power Supply



Model Number Key

Example: APS4-420-24L-10.0

Single Phase watt transducer, 480VAC Input, 4-20mA output with 24VDC Loop powered, 10 kW max input.

APS 4 - 420 - 24L - 50.0	
Voltage	Full scale kW
1 120 VAC	0.5
2 240 VAC	0.75
4 480 VAC	1.0
Output	2.0
420 4-20 mA	5.0
	10.0
Power Supply	20.0
24L 24VDC	50.0
Loop-Powered	75.0
	100

Note: Not all kW ranges are available for each voltage input range.

Know Your Power



Other NK Technologies Products Include:

AC & DC Current Switches
Ground Fault Sensors
Voltage & Power Transducers
Current Transformers (CTs)



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INSTRUCTIONS



APS Series AC Power Transducer True Power of 1 ϕ or 3 ϕ Balanced Loads

Quick "How To" Guide

- Route wire to be monitored through aperture. For 480VAC and/or 3 phase installations, ensure wires are routed through the aperture in a two-pass configuration as shown on reverse side.
- Mount the sensor to a surface if needed.
- Connect voltage and output wiring to appropriate terminals. Ensure voltage is derived from same line that runs through the aperture. Use field supplied fuse or circuit breaker per standard wiring practice.
 - Use up to 10 AWG copper wires, tighten terminals to 4-5 inch-pounds torque.
 - Make sure loop power meets specifications.

Description

APS Series are power transducers, measuring voltage, current and power factor concurrently. They provide an analog signal proportional to the true power consumed by the monitored load. They can be applied on single phase loads and on balanced three phase loads.

Wiring

Current Sensing:

Determine the type of electrical load you are monitoring. The diagrams at right show some typical examples. The APS can be used to monitor total power on a balanced 3-phase load, or it can be used in a typical single-phase application. Use 10-24 AWG copper conductors rated at 75 deg. C minimum. Tighten terminals to 4-5 in-lb torque.

Voltage Connection:

Determine the voltage of the system you are monitoring and make sure the transducer is rated to match. Connect the leads to the appropriate terminal block on the unit as shown in the diagrams at right. Add fuses if required by local code (fuses not included). Use code approved splice materials and techniques.

Output Connection:

The APS transducer is a loop powered unit. Ensure a 24VDC power supply is in series with the sensor and load as shown. Be sure the supply has sufficient voltage and current available. See Power Supply section.

Environment:

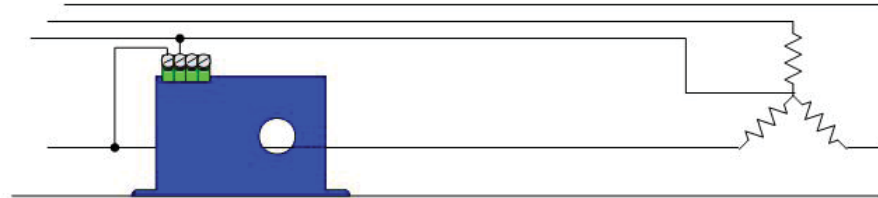
The APS transducer is intended for use in a Pollution Degree 2 environment.

Wiring Details and Output Calibration (con't)



Single Phase 240 VAC L-L
Single Phase 277 VAC L-N
Single Phase 120 VAC L-N
Single Phase 480 VAC L-L

The output will be proportional to the watts being used



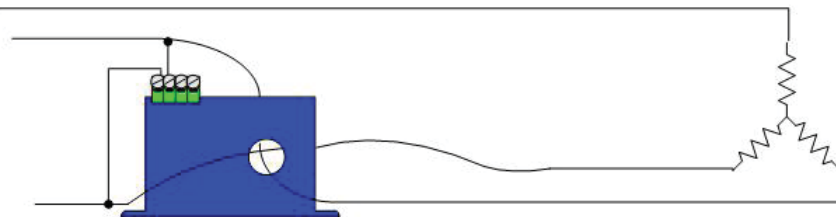
Three Phase 120 L-N, 208 L-L VAC
Three Phase 277 L-N, 480 L-L VAC

The output will be proportional to 1/3 of the watts being used



Three Phase 240 L-L VAC
Three Phase 460 L-L VAC

This configuration should not be used. The output will not be proportional to watts



Three Phase 208 L-L, 480 L-L VAC

Two phase monitoring

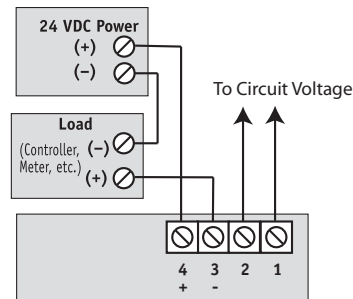
This configuration will be proportional to the watts used, granted that the current in each phase is balanced



Three Phase 240 L-L VAC
Three Phase 460 L-L VAC

Two phase monitoring

This configuration will be proportional to the watts used, granted that the current in each phase is balanced



4-20 mA Output

Output signal loop impedance should not exceed 600 ohms when powered by 24 VDC.