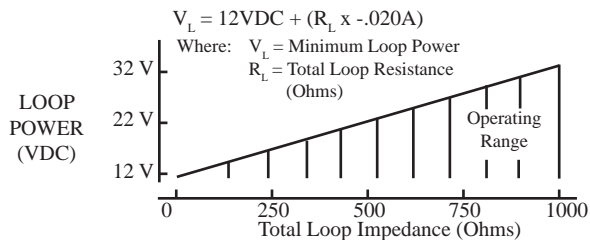


Specifications

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 40 VDC Maximum
Power Inputs Expressed as:	
Amps	2-180A
kW	0.2 kW to 110 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, 14-22 AWG
Voltage Input	18AWG wire, 600V max. (standard range scaled at 480 VAC)
Fusing	Internally protected from short circuit on input or output.
Indication	Power LED
Input Conditions	Across the line motors and VFDs
Environmental	-4 to 140 Deg F, -20 to 60 Deg C

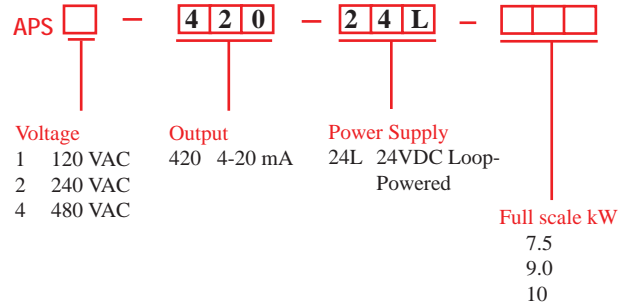
Power Supply



Model Number Key

Example: APS4-420-24L-9.0

Single Phase watt transducer, 480VAC Input, 4-20mA output with 24VDC Loop powered, 9.0kW max input. Input may be wired with two opposite current wire passes.



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 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 14 AWG copper wires, tighten terminals to 9.0 inch-pounds torque.
 - Make sure loop power meets specifications.

Description

APS Series are single phase power transducers. 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 12-22 AWG copper conductors rated at 75 deg. C minimum. Tighten terminals to 9.0 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.

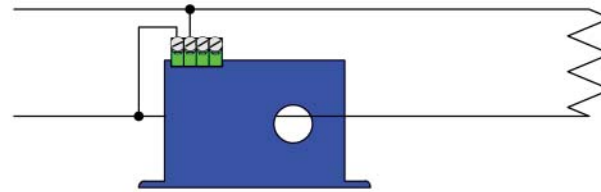
Output Connection:

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.

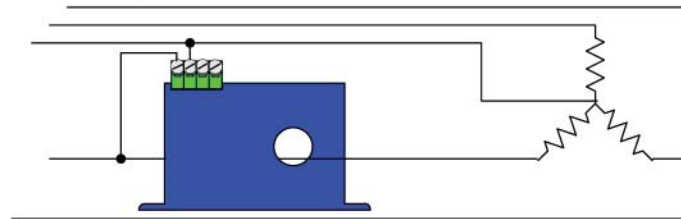
Environment:

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

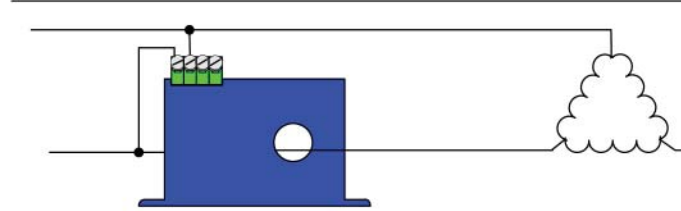
Wiring Details and Output Calibration (con't)



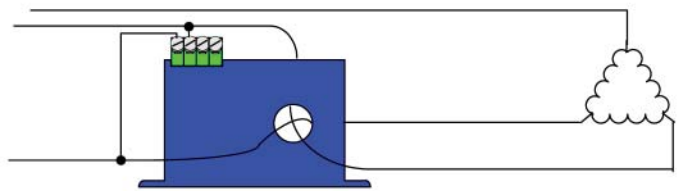
Single Phase 120 VAC L-N
 Single Phase 240 VAC L-L
 Single Phase 277 VAC L-N
 Single Phase 480 VAC L-L
The output will be proportional to the watts being used



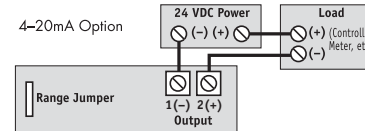
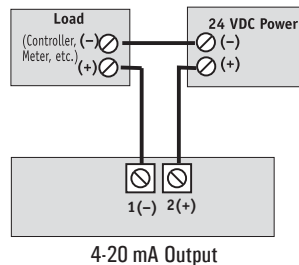
Three Phase 120 L-N, 208 L-L VAC
 Three Phase 277 L-N, 480 L-L VAC
The output will be proportional to 1/3 of the watts being used



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 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



Either connection will work properly. Load loop impedance should not exceed 750 ohm when powered by 24 VDC.