

# NK Technologies Power Transducers

## Single Phase



▲ **APS**

- Also measures 3Ø balanced loads
- Direct connect to 120–600 VAC
- Input current to 180A
- 4-20 mA output
- Loop powered
- Easy two-wire installation
- 5 year warranty

The APS Series measures true power (HP or kW) on balanced loads. They account for voltage and power factor fluctuations and improve sensitivity to load changes. These 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.

### SPECIFICATIONS

Power Supply:	24 VDC loop-powered (12–40 V)
Output:	4–20 mA proportional to max. kW; 25 mA limit
Input Range:	120, 240, 480 or 600 VAC
Response Time:	100 ms (to 90% of step change)
Accuracy:	1% FS
Indication:	Power on LED
Max. Inrush Current:	300% FS (6 sec. duration)
Input Range:	0.5 KW to 100 KW; 1/4 HP @ 120 VAC to 150 HP @ 480 VAC
Frequency Range:	50–60 Hz
Case	UL94 V0 Flammability Rated
Environmental:	-4 to 122°F (-20 to 50°C), 0–95% RH, non-condensing
Listings:	UL 508 Industrial Control Equipment
Dimensions:	3.9" x 3.1" x 1.5" (98x80x38mm), including mounting feet. Window is 0.74" (19mm)

### ORDERING INFORMATION

To Order—Insert Code for Each Letter to Select Catalog Number.

APS  -  -  -  Example: APS1-420-24L-5.0

<b>A</b>	Input Voltage	
	1	120 VAC
	2	240 VAC
	4	480 VAC
	6	600 VAC (not UL listed)
<b>B</b>	Output Signal	
	420	4-20 mA
<b>C</b>	Power Supply	
	24L	24 VDC loop-powered
<b>D</b>	Input Range	
	0.5	0.5 kW
	0.75	0.75 kW
	1.0	1.0 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

## Three Phase



▲ **APT**

- Direct connect to 120–600 V
- Works with 5 A or 333 mV CTs
- 4-20 mA, 5 V & 10 V outputs
- Externally powered
- DIN rail or panel mount
- 5 year warranty

APT Power Transducers produce full range output when the current transformer is producing its maximum signal, the primary voltage is at the range maximum and power factor is at unity. For example, using the APT-480-5 A-120-420 with 400:5 current transformers, the transducer will produce 20 mA when there is 400 A through the CT and the primary voltage is 480. If the transducer is used to monitor a three-phase circuit using three CTs, 20 mA represents 332,544 watts. The equation for three phase wattage is voltage times amperage, times the square root of three (1.732) times power factor. If this transducer is used to monitor a three-phase load using two CTs, the transducer will produce 14.67 mA, or the output will represent 2/3 of the actual watts being used under the same conditions: 480 V primary voltage, 400 A through 400:5 CTs and unity power factor.

### SPECIFICATIONS

Power Supply:	24 VAC/DC (21–26 V) 120 VAC (108–132 V) 240 VAC (216–264 V)
Power Consumption:	<2 VA
Output:	4–20 mA, 0–5 or 0–10 VDC
Voltage Range:	0–600 VAC, direct connect
Response Time:	120 ms
Accuracy:	>1%
Isolation Voltage:	2200 VAC
Frequency Range:	6–100 Hz
Case:	UL94 V0 flammability rated
Mounting:	DIN rail or panel
Environmental:	-4 to 122°F (-20 to 50°C), 0–95% RH, non-condensing
Listings:	Designed to meet UL 508 Industrial Control Equipment
Dimensions:	6.8125" x 4.37" x 2.6" (189x111x66mm)

### ORDERING INFORMATION

To Order—Insert Code for Each Letter to Select Catalog Number.

APT-  -  -  -  Example: APT-120-5A-24U-010

<b>A</b>	Primary Voltage	
	120	120 VAC
	240	240 VAC
	480	480 VAC
	600	600 VAC
<b>B</b>	Current Input	
	MV	ProteCT current transformers, 333 mVAC secondary
	5A	5 A secondary current transformer
<b>C</b>	Power Supply	
	24U	24 VAC/DC
	120	120 VAC
	240	240 VAC
<b>D</b>	Output	
	420	4–20 mA proportional to wattage
	005	0–5 VDC
	010	0–10 VDC