Specifications

Output	0-5 VDC, 0-10VDC or 4-20mA
Accuracy	0.5% FS (True RMA kW)
Response Time	100 mS (to 90% of step change)
Frequency Range	6-400 Hz
Power Supply	24VAC or 120VAC, +/- 10%
kW Output:	Calculated: kW = Volts x CT Amperage x 1.732

Example:

CT	kW at Max output
50A	41.57 kW
100A	83.14 kW
150A	124.71 kW
200A	166.28 kW
250A	207.85 kW
300A	249.42 kW

Voltage Input	480 VAC Nominal (See Ordering Information)
Voltage Variation	+/- 25% of nominal
Output Terminals	Finger-safe captive screw, 14-22 AWG
Voltage Input	< 14AWG wire, 600V max
Fusing	Use Field supplied fuses or circuit breakers
Indication	Power LED
Isolated Voltage	1250VAC
Enclosure	UL94 V0 Flammability rated
Pwr Consumption	<2.0 VA
Environmental	-4 to 140 DegF, -20 to 60 Deg C

Model Number Key

APT - 48T - 5A - 024 - 005

APT Series kW Transducer

Monitored Voltage
- 12T 120V 3-Ph
- 24T 240V 3-Ph
- 48T 480V 3-Ph

CT Inputs
- 5A XXX:5 Ratio 5A secondary
- MV XXX:333mV secondary ProteCT

Power Supply
- 024 24 VAC
- 120 120 VAC

Full Scale Output
- 005 0-5 VDC
- 010 0-10 VDC
- 420 4-20 mA

Other Available Products Include:

DC Current Switches, Ground Fault Sensors
AC & DC Current Switches
Power Transducers
Current & Potential Transformers (CTs&PTs)

NK Technologies
3511 Charter Park Drive, San Jose, CA 95136
Toll free: 800-959-4014, Phone: 408-871-7510
Fax: 408-871-7515
sales@nktechnologies.com, www.nktechnologies.com

NK Technologies

INSTRUCTIONS

APT Series

Active Power Transducer w/Proportional Analog Output

Quick "How To" Guide

1. Mount APT KW Transducer to DIN rail in suitable enclosure.
2. With monitored load off, install CTs on monitored lines and secure with mounting feet or tie-wrap as appropriate. Connect CTs to terminals 8 -- 13, observing polarity.
3. Connect line voltage and neutral to terminals 4 -- 7, ensuring phase relationships between the CTs and voltages is consistent. Use of field supplied fuses/circuit breakers as a means for disconnect is recommended.
4. Connect output terminals 18 and 19 using up to 14 AWG copper wires. Tighten to 4.5 inch-pounds torque.
5. Connect supply voltage (24VAC or 120VAC; model dependent) from control power transformer to terminals 1-3. Wherever possible, ensure APT supply power is derived from a different source than monitored load. Green LED indicates unit is powered.

APT Instruction Sheet Rev 2.0 4/10 p/n 792000001

Description

APT Series transducers are intended to monitor KW consumption of three phase motors. They provide an analog signal proportional to the true power consumed by the monitored load and are intended for application on balanced three phase loads.

Wiring

Current Sensing:

Determine the type of electrical load you are monitoring. The APT is typically used to monitor total power on a balanced 3-phase load but may also be used in certain single-phase applications (consult factory). CT inputs must be 0-5A or 0-333mV (model dependent, see ordering information) full-scale. Ensuring monitored load is off, place conductor through aperture in split-core CT and mount CT to back plane of control panel (or other suitable structure) using integral mounting feet. Be sure to observe all notes on polarity. Connect CT to appropriate terminals on KW transducer using 12-22 AWG copper conductors. Tighten terminals to 4.5 in-lb torque.

Voltage Connection:

Ensure the voltage of the system you are monitoring and rated voltage for APT transducer match. Connect voltage directly to terminal blocks on APT transducer as indicate on the wiring diagram to the right. Add fuses if required by local code (fuses not included). Use code approved splice materials and techniques.

Power Supply and Output Connection:

Connect output wiring to supervisory or other controller. Connect power supply to transducer as shown in wiring diagram. Green Power LED should illuminate to indicate power is supplied to unit. Energize load to confirm KW transducer is sensing current/voltage and outputs correct voltage signal proportional to KW being sensed.

Wiring Schematic Diagram