

APN SERIES

Power Monitor

APN Series Power Monitor measures three phases of current and voltage and computes fourteen values necessary to track power usage. The monitor uses current transformers to measure the amperes. The line voltage connects directly to the transducer, up to 600 VAC. The result is 14 data points in the RS485 Modbus RTU format. There is also a pulse contact which opens and closes as watt hours are accumulated. The APN can be configured to accept five amp secondary current transformers or the safer ProteCT™ low voltage output CTs. Either type will produce an accurate set of data to help you save energy and avoid utility surcharges.



A low profile housing reduces cabinet depth requirements.

Applications

Plant Energy Management

- Measure the power usage of a single piece of equipment, an area of a plant, or the entire facility.

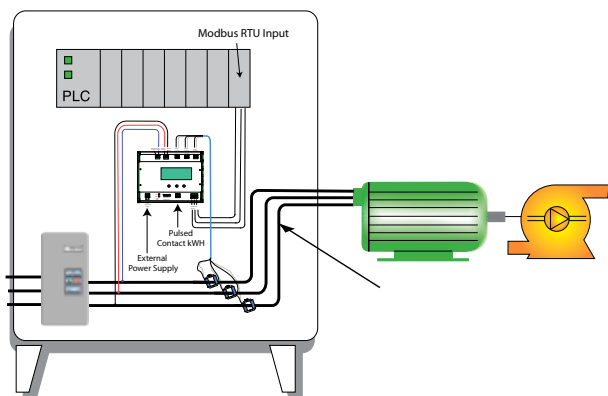
Conveyors

- Detect jams and overloads.
- Check that the belt is loaded properly by measuring the power consumption.

Pump Monitoring

- Detect dry run from clogged, intake, or discharge line.
- Monitor impeller cavitation and bearing wear.

Pump Jam & Suction Loss Protection



For additional Application Examples, see page 108 and www.nktechnologies.com



Free program expedites evaluation process. See page 1 for details.

Features

Modbus RTU Output

- RS485 communication protocol reduces the cost involved with proprietary data logging software.
- Compatible with most automation systems.

Externally Powered

- Improves reliability when used in conditions where power interruptions and voltage sags are common.

Compact DIN Mounted Housing*

- Clearly labeled terminals provide quick installation.
- Low profile reduces cabinet depth requirements.

LED Displays Network Communication

- Provides quick visual indication that network is operational

Finger Safe Terminals

- Safe and secure connectors.

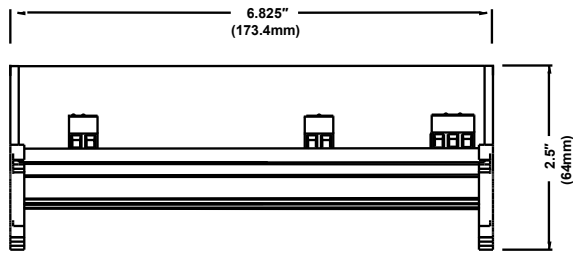
Designed to Meet UL, CUL and CE Approval

- Accepted worldwide.

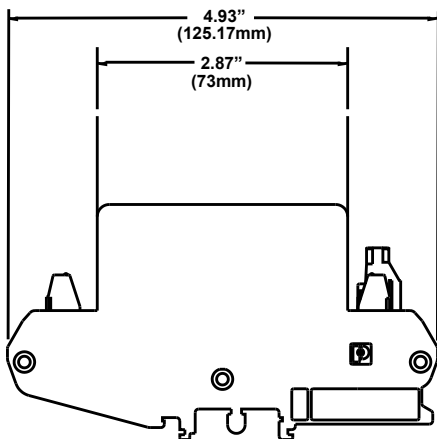
*For information on the DIN Rail accessories kit, see page 107.

Dimensions

Case Side View

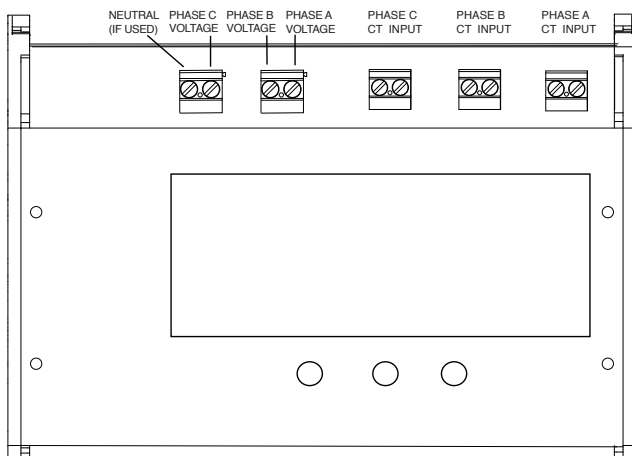


Case Top View



Note: Drawings are not to scale.

Connections



Specifications

Power Supply	24 VAC/DC, 120 VAC or 240 VAC
Output	<ul style="list-style-type: none"> Modbus RTU - 14 Data Points Pulsed Contact kWh
Display	4X20 LCD (Four lines, 20 Characters each)
Voltage Ranges	100 to 600 VAC
Response Time	120 ms
Isolation Voltage	2200 VAC to meet UL standards
Frequency Range	6-100Hz
Case	UL94 V0 Flammability Rated
Environmental	-4 to 122°F (-20 to 50°C) 0-95% RH, non-condensing
Listings	Designed to Meet UL 508 Industrial Control Equipment (USA & Canada)

Data Point Table

	Phase A	Phase B	Phase C	Type
Current	*	*	*	RMS
Voltage	*	*	*	RMS
kW	*	*	*	Active
Power Factor	*	*	*	Instantaneous
Power Factor				Average
kWH				Total

Ordering Information

Sample Model Number: APN-60T-MV-120-MOD

AC Power transducer, 600 VAC maximum input, ProteCT™ current inputs, 120 VAC powered, RS485 Modbus output with pulse contact for kWh.



(1) Maximum Primary Voltage	60T	600 VAC
(2) Current Input Type	MV	ProteCT™ current transformers, 333 mVAC secondary
	5A	5 amp secondary current transformers
(3) Rating Power Supply	24	24 VAC/DC (100 mA max.)
	120	120 VAC (50 mA max.)
	240	240 VAC (25 mA max.)
(4) Output Type	MOD	Modbus RTU (RS485), pulse contact for kWh

