DPMS-PM
Multi-Function Digital Power Meter

FOR CONTROL, MONITORING, AND DATA ACQUISITION

ROCHESTER
SCIENTIFIC COLUMBUS

DIGITAL POWER METER

AMETEK's Multi-Function Digital Power Meter is an "all inclusive" power measurement system. A single unit will connect to any circuit type. The universal power supply will support a wide range of AC and DC voltages. Each unit comes with RS-232/485 serial communications using Modbus or DNP protocols. The unit has the ability to provide multiple analog and digital outputs without any external interfaces or converters, saving on installation and unit cost. All features are easily configured through software, so you truly have one unit that does all.

The DPMS-PM is several instruments in one:
- Digital Power Meter
- Power Transducer
- IED (Intelligent Electronic Device)

Save on installation, panel space and unit cost with our combined functionality.

Measurements
- Voltage, Current, Frequency
- Watts, Vars, VA, Power Factor
- Watthour, Varhour
- Harmonics (current & voltage THD)
- TLC (Transformer Loss Compensation)

Large Bright Display
- Large 0.56" H seven segment LEDs
- Three rows x 5 Digit LEDs for simultaneous display per phase
- Scrolling function displays all measurements

DPMS-PM Ordering Information

TYPICAL MODEL NUMBER (coded by color)

DPMS-PM	-A1D1	-R1

Code Description

DPMS-PM Digital Power Meter

Analog and Digital Output

A0D0 = No Analog or Digital Outputs
A1D1 = 0-1 mA with KYZ/Alarm Outputs
A2D1 = 4-20 mA with KYZ/Alarm Outputs

Remote Configurations

R0 = None (already have communication cable and software)
R1 = RS-485/232 cable with DPMS Talk Software

FEATURES AND BENEFITS

- One Unit for All Wiring Connections
  - *2, 2-1/2, 3 element connections configured by software*
  - *Universal AC/DC power supply*

- Analog Outputs
  - *Three independent outputs*
  - *4-20 mA or 0-1 mA*
  - *Can be configured to any measurement*
  - *Can be re-scaled without re-calibration*

- Digital Outputs
  - *Six independent solid state outputs*
  - *Can be configured as KYZ or alarms*

- Digital Communications
  - *RS-232/485 (software configurable)*
  - *Modbus RTU or ASCII, DNP 3.0*

- ANSI Standard Size
  - *Fits standard 4" round cutout. Quick fit for replacements or new installations.*

- High Accuracy
  - *Meets ANSI 460-1988 Class 0.25*
  - *$\pm$0.2% reading for Watt-hours/VAR-hours*

AMETEK®

POWER INSTRUMENTS

Experience the Power™

SPECIFICATIONS

INPUTS

Current
- Nominal: 5 amps
- Operating range: 0 to 10 amps
- Burden per element: 0.25 VA at nominal

Voltage
- Nominal: 120 volts
- Operating range: 85 to 150 V
- Burden per element: 0.05 VA at nominal

Frequency
- 45 to 65 Hertz

Sample Rate
- 128 Samples/Cycle

ANALOG OUTPUTS (OPTIONAL)

3 Channel Analog
- Independently assigned and scaled to any measurement

Option A1
- 0 to + 1 mA, maximum 10 V compliance

Option A2
- 4 to 20 mA, maximum 12 V compliance

Response Time
- $</=$ 200 mS

DIGITAL OUTPUTS (OPTION D1)

6 Channel Digital
- KYZ energy measurements
- Alarms, Hi/Lo thresholds with trip and reset functions
- Independently configured and scaled
- Solid-state rated 50 mA @135 VAC/VDC with less than 5 V drop. 54,000 CPH maximum

MEASURED AND/OR CALCULATED QUANTITIES

Watts/Vars/VA
- Per phase and system

Watthours/Varhours
- Delivered and received

Voltage
- Phase to neutral, phase to phase

Current
- Per phase and calculated Neutral

Power Factor
- Per phase and system

Frequency
- System (Phase A)

Harmonics
- THD (Total Harmonic Distortion)
- Current and voltage

TLC (Transformer Loss Compensation)
- 3-wire and 4-wire

ACCURACY

Volts, Amps, Watts, Vars, VA
ANSI 460-1988 Class 0.25
- Voltage: 0.2% reading
- Current: 0.1% reading +0.05% FS
- VA, Watts, VARs: 0.2% reading +0.1% FS

Watthours/Varhours
- 0.2% reading

Power Factor
- $\pm$0.008 (rated VA/input VA)

Frequency
- $\pm$0.02% reading

DIGITAL DISPLAY

Characteristics
- Simultaneous 3-phase display
- 3 line x 5 digits
- 0.56" H green LED
- 23 engineering unit selections
- Floating decimal point
- All measured quantities can be displayed using scroll function with 13 different screens

PROGRAMMABLE CONFIGURATION

- 2, 2-1/2, 3 element circuits
- Input/output scaling and assignment
- Digital and analog output selections
- Threshold limits (for alarms)
- Communications

COMMUNICATIONS

RS-232 (full duplex) or RS-485 (half duplex)
Programmable Protocols
- Modbus: RTU or ASCII Mode
- DNP 3.0

POWER REQUIREMENTS

Operating Range
- 95 to 265 VAC @ 50/60 Hz
- 95 to 265 VDC

Burden
- 9 VA Maximum @ 120 V

MECHANICAL

Size
- 4.50 in. H x 4.50 in. W x 9.25 in. D (114 mm x 114 mm x 235 mm)
- Fits standard 4" panel cutout
- Allow 8" depth behind panel

Weight
- 3.0 lb.

ENVIRONMENT

Operating Temperature Range
- 0 TO 50°C (32 to 122°F)

Surge Withstand
- ANSI/IEEE C37.90, IEC 801-4 Class 3,4

Isolation
- 2500 VAC RMS from input/output/power/case
- 500 VAC RMS between digital outputs

AMETEK®

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POWER INSTRUMENTS

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