

# PRODUCT PROFILE

## POWERMONITOR™ 3000

## COMPACT POWER METER WITH ENHANCED COMMUNICATIONS

### FEATURES

- Power and energy metering (voltage, current, power, energy, demand, power factor)
- Demand projection
- Configurable setpoints for alarming and control
- KYZ energy pulse output
- Two status inputs for external pulse counting
- One configurable relay output for alarming or breaker control
- External demand synchronization
- Trend logs, Min/Max logs, Event logs
- ANSI revenue metering accuracy (see specifications)
- Configurable via software (RSEnergyMetrix®, RSPower™, RSPower™Plus)
- Optional display module for local display and configuration

### ADVANCED FEATURES

- Internal web page for real-time updates
- Voltage sag/swell detection
- Load factor calculation
- Waveform capture on software trigger or event (up to 408 cycles per channel)
- Sub-cycle transient detection and simultaneous waveform capture (up to 108 cycles per channel)
- Harmonic analysis (up to the 63rd order depending on model)
- Harmonic calculations: TIF, %THD, %DIN, K-factor, Crest factor
- IEEE-519 compliance
- SCADA friendly: OPC, CIP messaging, PCCC messaging



If you don't measure it, you can't manage it. Gain valuable insight and knowledge into your industrial electric power systems with the Allen-Bradley® Powermonitor™ 3000; a sophisticated three-phase power quality and energy meter.

The Allen-Bradley Powermonitor 3000 combines high functionality and accuracy metering with popular industrial network communications in a compact footprint, to offer you the latest in industrial electric metering. Whether your application is power quality analysis, revenue metering, energy monitoring, or distribution system control, the Powermonitor 3000 can offer you the right functionality to meet your application needs.

## AVAILABLE COMMUNICATIONS

- EtherNet/IP, DeviceNet, ControlNet, Remote I/O, DF1 (RS485/RS232), Modbus RTU, Modbus TCP

## APPLICATIONS

- RSEnergyMetrix, RSPower, RSPowerPlus
- Energy accountability
- Power quality analysis
- Revenue accuracy metering
- Demand management
- Load shedding
- Distribution system monitoring and control

	M4 (not upgradeable)	M5 (Upgradeable to M6/M8)	M6 (Upgradeable)	M8
<b>Metering Accuracy</b>				
Volts	±0.2 %	±0.05 %	±0.05 %	±0.05 %
Current	±0.2 %	±0.05 %	±0.05 %	±0.05 %
Frequency	±0.05 Hz	±0.05 Hz	±0.05 Hz	±0.05 Hz
Power	±0.4%	±0.10%	±0.10%	±0.10%
Energy	Class 1.0 - ANSI C12.16	Class 0.5 - ANSI C12.20 / EN 60687 Class 0.2 also available	Class 0.5 - ANSI C12.20 / EN 60687 Class 0.2 also available	Class 0.5 - ANSI C12.20 / EN 60687 Class 0.2 also available
<b>Metering Features</b>				
Configurable Setpoints	10	10	20	20
Waveform Captures	-	-	8	2
<b>Harmonic Analysis</b>				
Order	-	-	41st	63rd
%THD	✓	✓	✓	✓
TIF	-	-	✓	✓
K-factor	✓	✓	✓	✓
Crest factor	-	-	✓	✓
IEEE 519 Compliance Check	-	-	✓	✓
Transient Detection	-	-	-	✓

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Input and Output Ratings	
Parameter	Rating
Control Power Input	120V...240V ac 50...60 Hz or 125V...250V dc (0.2 A maximum loading)
Voltage Input Impedance	1 Mohms minimum, 399V ac maximum; V1, V2 and V3 to N
Current Sense Inputs:	Overload Withstand: 15 A continuous, 200 A for one second Burden: 0.05 VA Impedance: 0.002 ohms Maximum Crest Factor at 5 A is 3.0
Status Inputs	Contact Closure (Internal 24V dc)
Control Relay Output	ANSI C37.90-1989
KYZ Output	Solid State KYZ — 80 mA at 240V dc — 300V dc

Range		
Parameter	Nominal	Range
Volts	347V 600V	15...399V <sub>L-N</sub> RMS 26...691V <sub>L-L</sub> RMS
Current	5A	50 mA...10.6 A RMS
Frequency	50 or 60 Hz	40...75 Hz

Environmental Ratings	
Operating Temp., Ambient	
1404-MX05X-000, DNT, 1404-DM 1404-MX05X-RIO, RS232, ENT	-20...+60 °C (-4...+140 °F) +0...+55 °C (+32...+132 °F)
Storage Temperature	-40...+85 °C (-40...+185 °F)
Humidity	5...95%, Noncondensing
Vibration	10...500 Hz: 2G Operational (±0.012 in) 2.5G Non-operational (±0.015 in)
Shock	1/2 Sine Pulse, 11 ms duration: 30G Operational and 30G Non-operational