

Product Details and Certifications

Cross Reference RA Part Number: PN-54375



Product: **1426-M8E-CNT**

Description: 1426 PowerMonitor 5000 M8 Unit, Advanced Power Quality Meter, with Native EtherNet and optional ControlNet Network Communication



Representative Photo Only (actual product may vary based on configuration sections)

POWER SUPPLY DATA

Bulletin Number	BUL 1426 - Power Monitor 5000 Unit
Accessory Selection	Individual Accessory Selection

SELECTION

1426- Accessories	PowerMonitor 5000 M8 unit with native Ethernet and optional ControlNet network communication
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Bulletin 1426 - PowerMonitor 5000 Unit

Overview

Do you need a more advanced metering option with power quality features?

Do you have compliance initiatives within your organization?

The PowerMonitor 5000 unit is the next generation of high-end electric metering products from Rockwell Automation. This new family of meters provides advanced technology, new functionality, faster response, and superior accuracy. The M5 model is the base version and provides an extensive range of metering functionality. The PowerMonitor 5000 unit communicates power and energy parameters to controllers, HMI software, and applications such as FactoryTalk EnergyMetrix software over the Ethernet network or other optional networks. The PowerMonitor 5000 unit works with controllers or software applications to address key customer applications including the following:


- Load profiling
- Cost allocation
- Billing and sub-billing
- Power system monitoring and control
- Demand management
- Demand response
- Power Quality Event Identification
- Power Reliability
- Power Quality Analysis



Features

The following features are available on PowerMonitor 5000 units. X = Available; O = Optional; Blank = Not Available

PowerMonitor 5000 Unit Features

Feature	1426-M5E-xxx	1426-M6E-xxx	 1426-M8E-xxx
Electrical Parameters			
Voltage (V)	X	X	X
Current (A)	X	X	X
Frequency (Hz)	X	X	X
Energy Management			
Power			
Power (kW)	X	X	X
Reactive power (kVAR)	X	X	X
Apparent power (kVA)	X	X	X
True Power Factor	X	X	X



PowerMonitor 5000 Unit Features

Feature	1426-M5E-xxx	1426-M6E-xxx	1426-M8E-xxx
Consumption			
Real power consumption (kWh)	X	X	X
Reactive power consumption (kVARh)	X	X	X
Apparent power consumption (kVAh)	X	X	X
Current consumption (kAh)	X	X	X
Demand			
Demand (kW)	X	X	X
Demand (kVA)	X	X	X
Demand (kVAR)	X	X	X
Demand Power Factor	X	X	X
Demand (Amps)	X	X	X
Projected kW Demand	X	X	X
Projected kVAR Demand	X	X	X
Projected kVA Demand	X	X	X
Projected Amps Demand	X	X	X
Power Quality Management			
Voltage Unbalance	X	X	X
Current Unbalance	X	X	X
Crest factor	X	X	X
K-Factor	X	X	X
Voltage sag and swell detection	X	X	X
Individual Harmonics (DC-63rd)		X	X
Individual Harmonics (DC-127th)			X
Total Harmonic Distortion (THD)	X	X	X
Interharmonics			X
Transient Detect			X
Flicker			X
Waveform capture		X	X
Communication			
EtherNet/IP	X	X	X
ControlNet	0	0	0
DeviceNet	0	0	0
Input/Outputs			
Status Input	X	X	X
Pulse (digital) Output (Relay and KYZ)	X	X	X
Logs			
Waveform Log		X	X
Energy Log	X	X	X
Minimum/Maximum Log	X	X	X
Load Factor Log	X	X	X



PowerMonitor 5000 Unit Features

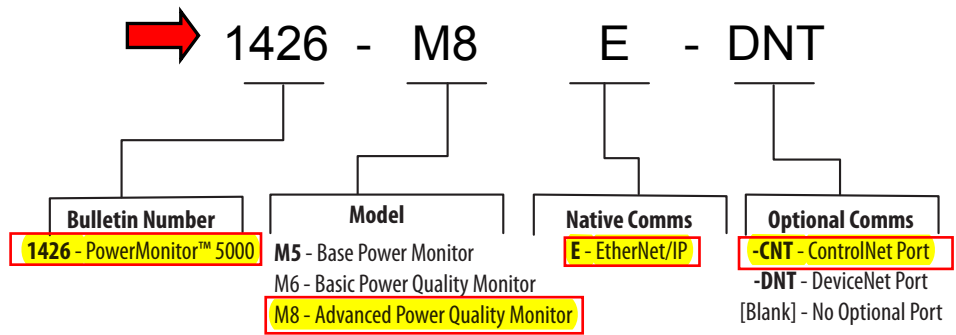
Feature	1426-M5E-xxx	1426-M6E-xxx	1426-M8E-xxx
Time of Use Log	X	X	X
Alarm Log	X	X	X
Event Log	X	X	X
Setpoint Log	X	X	X
Data Log	X	X	X
Power Quality Log		X	X
Trigger Data Log		X	X
Snapshot Log		X	X
EN 50160 Weekly and Yearly Logs			X
Other Features			
Configurable via webpage	X	X	X
Revenue Accuracy	X	X	X
Virtual wiring correction	X	X	X
Setpoint programming	X	X	X
Time Sync	X	X	X
Event Sync		X	X
CIP Energy Object	X	X	X

Product Selection

Cat. No.	Description
1426-M5E	PowerMonitor 5000 M5 unit with native Ethernet communication network
1426-M5E-CNT	PowerMonitor 5000 M5 unit with native Ethernet and optional ControlNet network communication
1426-M5E-DNT	PowerMonitor 5000 M5 unit with native Ethernet and optional DeviceNet network communication
1426-M6E	PowerMonitor 5000 M6 unit with native Ethernet communication network
1426-M6E-CNT	PowerMonitor 5000 M6 unit with native Ethernet and optional ControlNet network communication
1426-M6E-DNT	PowerMonitor 5000 M6 unit with native Ethernet and optional DeviceNet network communication
1426-M8E	PowerMonitor 5000 M8 unit with native Ethernet communication network
1426-M8E-CNT	PowerMonitor 5000 M8 unit with native Ethernet and optional ControlNet network communication
1426-M8E-DNT	PowerMonitor 5000 M8 unit with native Ethernet and optional DeviceNet network communication



Catalog Number Explanation



Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
PowerMonitor 5000 USB Driver Installation and Configuration, publication 1426-IN001	Provides instructions for installing and configuring the USB driver.
FactoryTalk® EnergyMetrix™ User Manual, publication FTEM-UM003	Provides information on the use of FactoryTalk EnergyMetrix software.
PanelView™ 800 HMI Terminals User Manual, publication 2711R-UM001	Provides instructions for setup and operation of the PanelView 800 terminal.
PanelView Component HMI Terminals User Manual, publication 2711C-UM001	Provides instructions for setup and operation of the PanelView Component terminal.
PanelView™ Plus Terminal User Manual, publication 2711P-UM001	Provides instructions for setup and operation of the PanelView Plus terminal.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, http://www.rockwellautomation.com/global/certification/overview.page	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at <http://www.rockwellautomation.com/global/literature-library/overview.page>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

Accessories

Cat. No.	Description
1426-COMM-DNT	DeviceNet optional communication module
1426-COMM-CNT	ControlNet optional communication module
1426-UPGR-56 ⁽¹⁾	M5 to M6 firmware upgrade
1426-UPGR-58 ⁽¹⁾	M5 to M8 firmware upgrade
1426-UPGR-68 ⁽¹⁾	M6 to M8 firmware upgrade
1426-DM	PanelView™ 800 terminal with factory-installed applications

(1) You can purchase firmware upgrades to add capabilities to your power monitor (for example, promoting an M5 unit to an M6 or M8 unit). Firmware upgrades use the ControlFLASH™ utility. To purchase model upgrades, contact your local Rockwell Automation representative or Allen-Bradley distributor.



Specifications

General Specifications - 1426-MxE, 1426-MxE-xxx

Attribute	Accuracy in % of Reading at 25 °C (77 °F) 50/60 Hz Unity Power Factor	
		Rating, nom/Metering Range, max
Voltage sense inputs: V1, V2, V3, VN	±0.1%	Line-neutral rms: 398V AC/15...660V AC Line-line rms: 690V AC /26...1144V AC
VG	-	Connect to power system earth ground only. This is a functional ground
Current sense input: I1, I2, I3, I4	±0.1%	5 A / 0.05 - 15.6 A rms
Frequency	±0.05 Hz	50 or 60 Hz / 40...70 Hz
Power functions: kW, kVA, kVAR Demand functions: kW, kVA, kVAR Energy functions: kWh, kVAh, kVARh	<ul style="list-style-type: none"> ANSI C12.20 -2010 Class 0.2⁽¹⁾ Clause 5.5.4 EN 62053-22 -2003 Class 0.2⁽¹⁾ Accuracy Clause 8 	
Metering update rates	One update per line cycle; 1024 samples per cycle per channel	

(1) For catalog number 1426-M5E (PN-54351) units manufactured from July 2012... January 2013, the accuracy is Class 0.5 not Class 0.2. All other characteristics and products are not impacted. The impacted units are those with manufacturing date codes of 0712, 0812, 0912, 1012, 1112, 1212, 0113.



Input/Output Specifications - 1426-MxE, 1426-MxE-xxx

Attribute	Maximum Rating
Control Power (L1, L2)	85...264V AC 47...63 Hz Or 106...275V DC
Control Power (24V DC)	22.8...25.2V DC
Voltage Sense Inputs: V1, V2, V3, VN	Input Impedance: 5M ohm min Input current: 1 mA max
Current Sense Inputs: I1, I2, I3, I4	Overload Withstand: 22 A Continuous, 200 A for one second Burden: Negligible Impedance: Negligible Maximum Crest Factor at 5 A is 4.0 Starting Current: 5 mA
Status Inputs	Contact Closure (Internal 24V DC)
KYZ Output	Solid State KYZ: 80 mA at 240V AC/V DC
Control Relay	ANSI C37.90 trip duty: 2005

Environmental Specifications - 1426-MxE, 1426-MxE-xxx

Attribute	Maximum Rating
Temperature, operating	-20...+70 °C (4...158 °F)
Temperature, storage	-40...+85 °C (-40...+185 °F)
Humidity, noncondensing	5...95%
Vibration	2 g
Shock, operating	30 g
Shock, nonoperating	50 g
Dielectric withstand	UL61010, EN61010
Installation location	Indoor use only
Altitude	2000 m (6560 ft) max

Certifications - 1426-MxE, 1426-MxE-xxx

Attribute	Description
UL/CUL	UL 61010 listed, File E345550, for Measuring, Testing and Signal-generation Equipment and CUL Certified.
CE Certification	If this product bears the CE marking, it is approved for installation within the European Union and EEA regions. It has been designed to meet the following directives. EMC Directive This product is tested to meet Council Directive 2004/108/EC Electromagnetic Compatibility (EMC) and the following standards, in whole, documented in a technical construction file.