

# EPM 5200

3-Phase Multi-Function Energy Meter



*Low Cost Multi-Function Power Monitors*

## Features and Benefits

- Multifunction power meter with high accuracy
- Rugged metal enclosure utility grade construction for panel mounting - fits in standard ANSI cut out
- Large, bright three line LED display visible even in complete darkness
- Economical design, small footprint easy to program and simple to install

## Applications

- Continuous metering of electrical loads such as generator panels, feeders, switchgear etc.
- Provides remote status when used with enerVista suite of software
- Low and Medium voltage applications

## Monitoring and Metering

- True RMS measurement of up to 80 electrical parameters with ANSI accuracy standards
- Measures 3-phase real time amps, volts, power, energy, power factor and frequency

## User Interfaces

- User selectable Modbus or DNP 3.0 protocol communication over RS-485
- KYZ pulse output for PLC and other device interfaces



## Standard Features

### Description

The EPM 5200 meter measures more than 80 electrical power parameters providing a low-cost, multifunction monitoring solution for utility, industrial and power generation applications. EPM 5200 can easily be mounted in a panel for generator monitoring, substation automation and more. Meter can also provide data to RTUs, PLCs and other control devices. When used with the enerVista suite of software, meters can be remotely monitored.

### Superior Price to Performance Ratio

EPM 5200 uses advanced 16-bit DSP technology to provide exceptional accuracy at a cost effective price. Meter is designed to meet vital functionality requirements for today's demanding applications.

### Advanced Measurement & Accuracy

The EPM 5200 measures and calculates over 80 parameters, including maximum and minimum values for every reading. This is a full four-quadrant meter with separate positive and negative Watt/hour counters. The unit complies with ANSI C-12 revenue certifiable metering accuracy requirements.

### Solid Construction with Mounting Versatility

The EPM 5200 is housed in a rugged metal enclosure protected from EMI and RFI emission. Internal protection circuits protect the power supply from damaging spikes and transients.

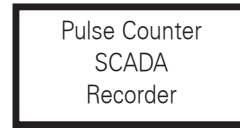
The unit easily retrofits into existing panels with its standard ANSI 39.1 switchboard meter cutout. Also, the small footprint ensures that the unit will easily mount into any switchboard enclosure, panel or door.



Modbus/DNP 3.0  
Communication

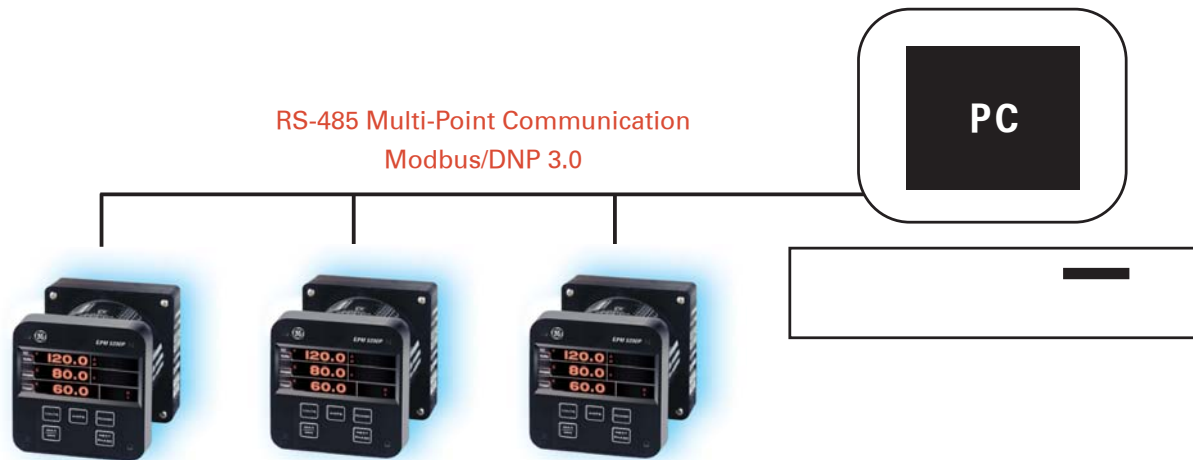


KYZ Pulse  
Outputs



*Available as a Stand-Alone Device  
or can be Integrated in to  
GE Distribution Equipment*





## Options

The EPM 5200 meter is offered with RS-485 communications as well as multiple user selectable open protocols such as:

- Modbus RTU/ASCII
- DNP 3.0

Using its non-proprietary open protocols EPM 5200 communicates with almost all utility RTUs, industrial PLCs and commercial energy-management systems. Integration into existing systems is simple and quick.

### KYZ Pulse Outputs

Meter can also provide KYZ pulse output for interfacing with external devices which may not have communication ports. The unit offers three separate KYZ pulses that can be configured for positive or negative Watt-hour and VA/Hr.

## Software

### enerVista Software

With the Modbus option, EPM 5200 is fully supported by GE Multilin enerVista suite of software. enerVista is the easy-to-use software suite designed

for tracking and controlling facility power. With just a few clicks of a mouse, you can gain real-time access to the family of Multilin IEDs and even to third party devices or systems. With enerVista's powerful analytical tools, you can do complete set-up for Multilin devices, perform advanced power quality analysis and generate bills by monitor energy consumption. It's all available through sophisticated graphics and a highly intuitive interface.

**enerVista PMCS:** Power Management Control System is a full-featured HMI that can be used for managing, tracking and controlling your entire facility's power system. With a few simple clicks of your mouse, you can gain real-time access to any power management device anywhere in your facility. PMCS offers a fully customizable solution that will automatically record all important system data and allow you to receive automatic warning messages of device events.

Using PMCS you will have a detailed up-to-the-minute profile of your power system and will allow you to identify trends, improve power usage efficiency and avoid peak demand surcharges which can mean saving thousands of dollars each

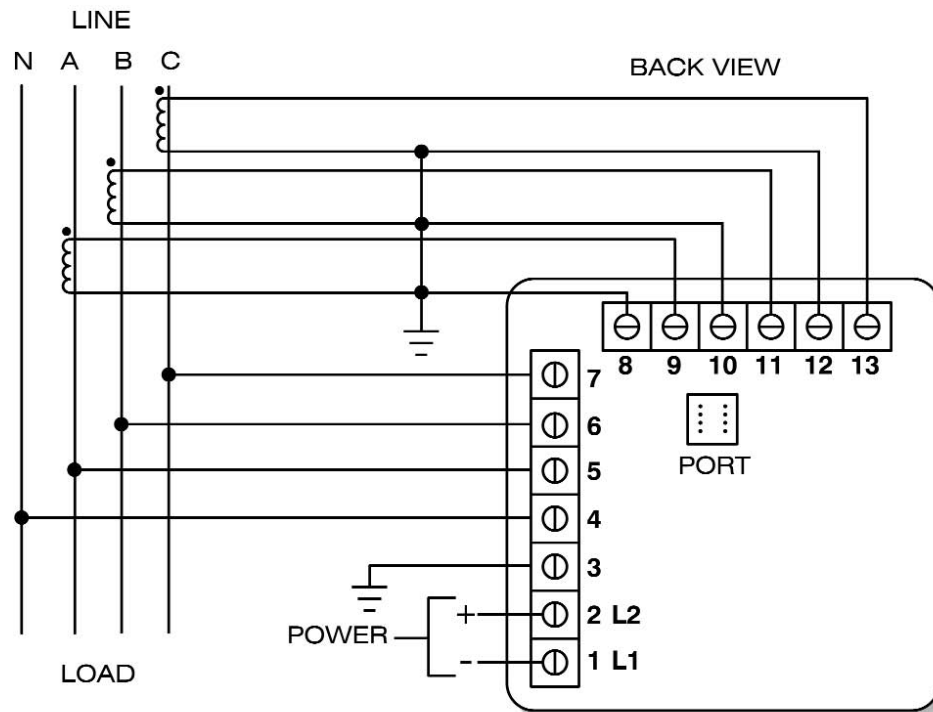
and every year.

**enerVista Energy Aggregator:** Built on state-of-the-art technology and boasting a sophisticated viewer, the Energy Aggregator enables users to compile data, provide statistical analysis and generate billing reports. This package is an ideal tool for managing energy usage in multiple locations (floors, tenants, sites, etc.). It provides financial analysis with a user friendly tool for generating bills in simple steps while simultaneously furnishing facility management teams with detailed technical data. Your business firm will have the best of both worlds.

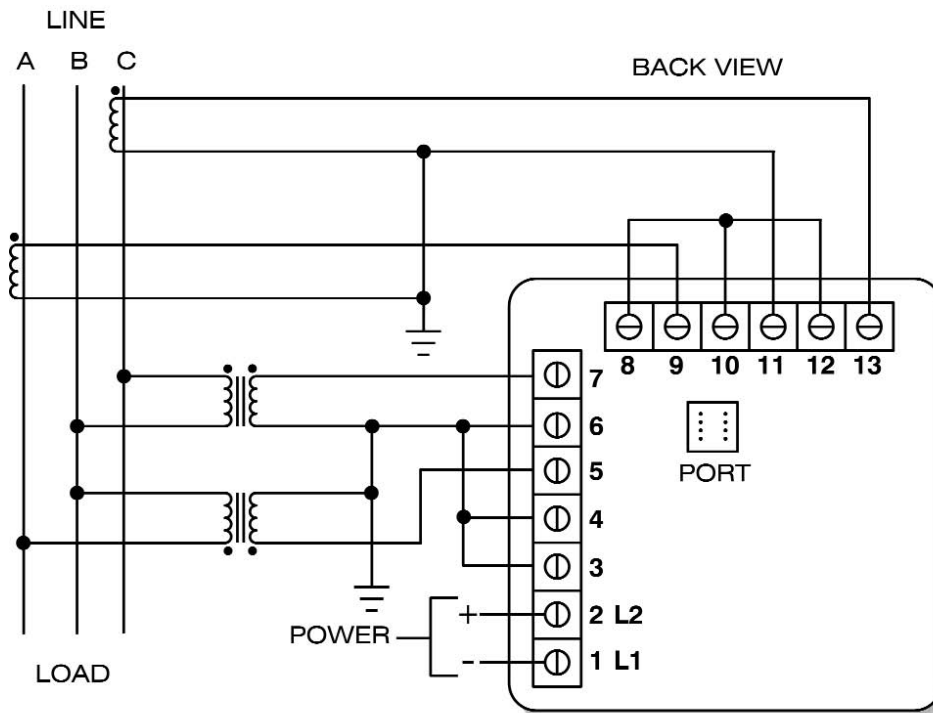
**enerVista Viewpoint:** enerVista Viewpoint instantly puts critical real-time device data on your PC through pre-configured graphical screens. Now you can spend your time managing your GE Multilin devices - not creating monitoring screens.

- Pre-configured screens
- Out-of-the-box communications
- Simple and powerful diagram editor
- Built-in data logging
- Powerful notification

## Typical Wiring



**3 PHASE WYE with CT's**



**3 PHASE OPEN DELTA**



## EPM 5200 Technical Specifications

METERING			
MEASURED VALUES			
MEASUREMENTS	ACCURACY	RESOLUTION	RANGE
Volts(All Channels)	0.3%	0.1%	0 - 2000
Volt Max/Min Demand	0.3%	0.1%	0 - 100%
Amperes	0.3%	0.1%	0 - 2000
Amp Max/Min Demand	0.3%	0.1%	0 - 100.0%
kW	0.5%	0.1%	0 - 2000
kVA	0.5%	0.1%	0 - 2000
KVAR	0.5%	0.1%	0 - 2000
PF	0.5%	1.0%	0 - 2000
kW Max/Min Demand	0.5%	0.1%	1.0 - 5%
kW-Hour	0.5%	1 kW Hour	0 - 100%
kVA-Hour	0.5%	1kVA Hour	0 - 999,999
Frequency	0.02Hz	0.01Hz	45-75Hz

DEMAND MONITORING	
<b>Measured values:</b>	Phase A/B/C/N current (A) 3 $\phi$ real power (kW) 3 $\phi$ reactive power (kvar) 3 $\phi$ apparent power (kVA)
<b>Measurement type:</b>	Thermal exponential Programmable block interval

POWER SUPPLY	
<b>CONTROL POWER</b>	
<b>Input options:</b>	95-135 Volt AC Power Supply 100-150 Volt AC/DC Power Supply 24-48 Volt DC Power Supply
<b>Frequency:</b>	45-75 Hz
<b>Operating Power:</b>	6 VA max

INPUTS	
<b>INPUT VOLTAGE RANGE</b>	
<ul style="list-style-type: none"> <li>■ 150V phase to neutral, 300V phase to phase*</li> <li>■ 300V phase to neutral, 600V phase to phase</li> </ul> *To be used also with PTs for extended input voltage.	
<b>INPUT CURRENT RANGE</b>	
<ul style="list-style-type: none"> <li>■ 5A input at full scale, 10A maximum (programmable with any CT ratio)</li> </ul>	
<b>FREQUENCY RANGE</b>	
<ul style="list-style-type: none"> <li>■ Fundamental 45-75 Hz</li> </ul>	
<b>BURDEN</b>	
<ul style="list-style-type: none"> <li>■ Voltage: 0.1 VA, maximum</li> <li>■ Current: 0.1 VA, maximum</li> </ul>	
<b>SENSING METHOD</b>	
<ul style="list-style-type: none"> <li>■ True RMS Sampling at 64 samples per cycle</li> </ul>	
<b>UPDATE TIME</b>	
<ul style="list-style-type: none"> <li>■ 1 second</li> </ul>	

COMMUNICATIONS	
<b>Format:</b>	1 start bit, 8 data bits, 1 stop bit; programmable up to 9600 baud
<b>Media:</b>	RS485 2-wire, half duplex, isolated
<b>Baud rate:</b>	1,200 - 9,600 bps
<b>Protocol:</b>	ModBus <sup>®</sup> RTU/ASCII, DNP 3.0
<b>Functions:</b>	Read/write setpoints Read actual values

OUTPUTS	
<b>PULSE OUTPUT</b>	
<b>Pulse Outputs:</b>	Three programmable KYZ
<b>Parameters:</b>	+ve kWh, -ve kWh, + kvarh, - kvarh
<b>Demand Interval:</b>	1-9999 in steps of 1 sec

ENVIRONMENTAL	
<b>Humidity:</b>	95% non-condensing
<b>Temperature:</b>	-20° C to +70° C ambient
<b>CONSTRUCTION</b>	
<ul style="list-style-type: none"> <li>■ Metal housing with standard switchboard dimensions and cutout per ANSI 39.1</li> </ul>	
<b>PACKAGING</b>	
<b>Shipping box:</b>	11" L x 9.5" H x 8" D (275 mm x 238 mm x 200 mm)
<b>Ship weight:</b>	5 lbs (2.3 kg)

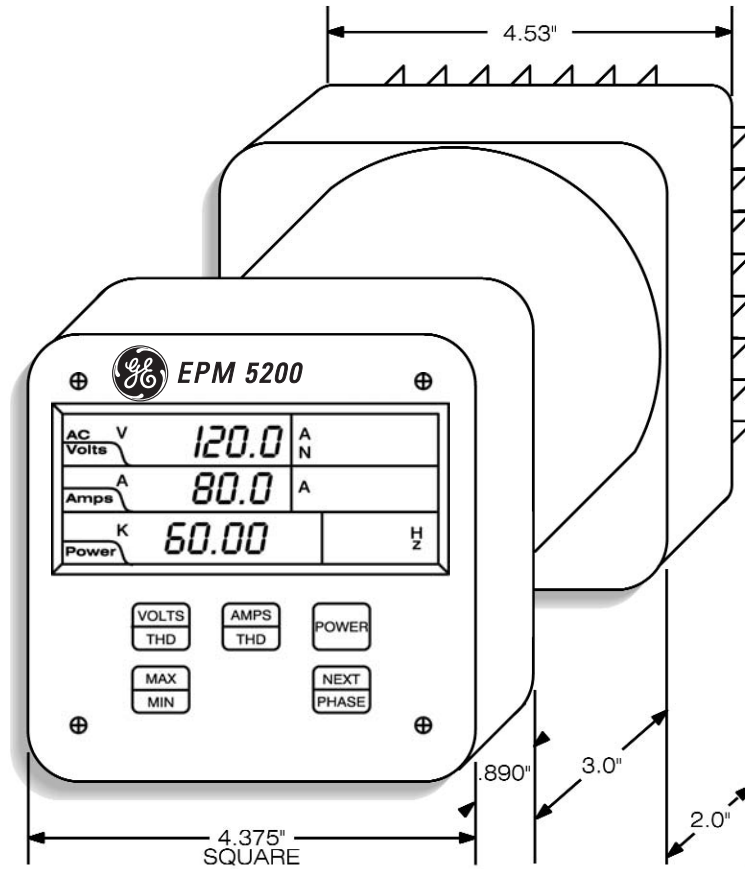
Specifications subject to change without notice.

## EPM 5200 Guideform Specifications

For an electronic version of the EPM 5200 guideform specifications, please visit: [www.GEindustrial.com/Multilin/specs](http://www.GEindustrial.com/Multilin/specs), fax your request to 905-201-2098 or email to [literature.multilin@indsys.ge.com](mailto:literature.multilin@indsys.ge.com).



## Dimensions



## Ordering

### EPM 5200 - 3-Phase Multi-Function Energy Meter

PL 5200	*	*	*	*	0 0 0 0 0	Description
<b>Voltage Input</b>	0					120/208 Volt, 3 Element, 3 voltages, 3 currents, Wye
	1					277/480 Volt, 3 Element, 3 voltages, 3 currents, Wye
	2					120 Volt, 2 Element, 2 voltages, 2 or 3 currents, Open Delta
	3					347/600 Volt, 3 Element, 3 voltages, 3 currents, Wye
<b>Control Power</b>	A					95-135 Volt AC Power Supply
	B					100-150 Volt AC/DC Power Supply
	C					24-48 Volt DC Power Supply
<b>Relays</b>	0					No Relay Outputs
	1					Three kyz Pulse Outputs
<b>Communication</b>	A					No Communications Output
	B					RS-485 Digital Communication w/ Modbus RTU/ASCII, DNP 3.0 Protocol

### Accessories:

**PL 35MNTKT** - EPM 5000 Series Mounting Kit