

# Nexus 1260

Accu-Measure®  
Digital Sensing  
Technology

High Performance Utility Billing Meter

Load Profiling & Communication

- 0.06% Watt/Hr Revenue Meter
- 20 Year Time of Use
- Loss Compensation
- Basic Power Quality
- Data Logging & Event Recording
- Circuit Diagnostics
- Modbus & DNP 3.0 Protocols
- Multiple Communication Paths
- Internal Modem Support
- Ethernet/Web Communications
- Total Web Solutions

## Description

The Nexus 1260 provides one of the most profound analysis of electricity available in a socket meter. The unit offers extensive advanced monitoring features to meet the most critical power monitoring requirements. Using advanced DSP technology, the Nexus measures immediate and stored revenue power data coupled with power quality and communication. Designed specifically to meet the sophisticated standards required by utility companies and deregulated power providers, the Nexus 1260 basic package starts where most other meters end. Standard features in the Nexus 1260 provide the ability to meet advanced metering needs for the future.

### Accu-Measure® Digital Sensing Technology

EIG's patent pending Accu-Measure® Digital Sensing Technology provides unmatched accuracy.

- Energy & Power Accuracy to within 0.06%
- Auto-Calibration
- Temperature Compensation
- kWh Delivered
- kWh Received
- kVAh in Each Quadrant
- kVARh in Each Quadrant
- Demand Measurements

### Time of Use

- 8 TOU Schedules
- Bidirectional Consumption & Demand
- 4 Seasons/Year



### Featuring —

*Modbus & DNP Protocols  
On Board Ethernet/Web Ready  
Dial-Out on Outage or Alarm Alerts!*

- 20 Year Calendar
- Prior Month & Prior Season Readings for Each Schedule
- Present Month & Present Season Readings for Each Schedule
- Total to Date Readings for Each Schedule
- Interval Length from 1 Second to Many Hours
- Up to 255 Subintervals
- End of Interval Pulse Output

### Time Stamped Max. Demands

- kW Demand, Delivered & Received, Max/Min
- kVAR Demand, Delivered & Received, Max/Min
- kVAR Coincident with kW Demand
- kVA Demand, Max/Min
- Amps Demand, Max/Min
- Voltage Max/Min
- Each Value is date/time stamped

### Transformer Loss Compensation

Transformer loss compensation adjusts for both copper and iron losses with a simple user setup.

### Multiple Demand Windows

- Fixed Window Demand
- Rolling Window Demand
- Predictive Demand
- Thermal Demand



Designed and  
Manufactured



**Electro Industries/GaugeTech**  
The Leader in Web Accessed Power Monitoring



# The Most Advanced Revenue Metering Technology

## Data & Event Monitoring

### Multiple Historical Logs

- 2 Logs
- Up to 62 Quantities per Log Representing Temperature, Pressure, Etc.
- Choose from 526 Electrical Quantities
- Log Length Available in Excess of 600 days
- Independent Time Intervals

### Advanced Download Logic

Nexus' Advanced Download Control Logic collects only new data to minimize download time.

### Power Quality

The meter calculates %THD and harmonics to the 128th order for each voltage and current channel.

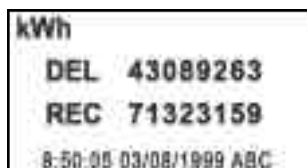
## Display Features

### Graphical LCD Display

The Nexus 1260 uses a graphical back-lit LCD display. This allows you not only to view energy data, but also to gather circuit diagnostic data such as voltage, current, harmonics and phasor information. Advanced capability makes the meter easy to install and useful in field applications.

### NORMAL MODE

- kWh Delivered & Received
- kVARh Delivered & Received
- kVAh Delivered & Received
- Peak Rolling Window Demands
- Peak Fixed Window Demands



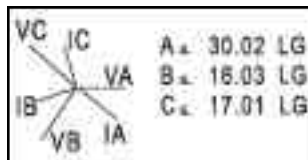
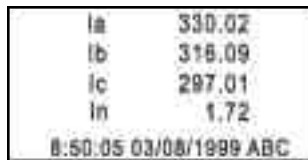
### Time of Use Mode

- kWh & kW Demand Delivered & Received for Each Register

- kWh & kW Demand Delivered & Received Total
- kVARh & kVAR Demand Delivered & Received for Each Register
- kVAh Delivered & Received for Each Register
- kVAh Delivered & Received Total

### Diagnostic Mode

- Voltage (all phases)
- Currents (all phases)
- Phasor Diagram
- Harmonic Spectrums to 63rd Order
- kW, kVA, kVAR and PF
- Frequency



### Lockable Reset Switch

The unit provides a lockable demand reset switch that prevents tampering.

### Infrared Test Pulse

The meter provides an infrared test pulse that selects to pulse for +Watt-Hour, -Watt-Hour, +VAR-Hour, -VAR-Hour and VA-Hour. This pulse uses a time modulated pulse integration allowing the pulse to be accurate during short duration pulse tests using industry-accepted reference standards.

## Advanced Communications & I/O Capabilities

### Multiple Communication Ports Using Open Protocols

The Nexus 1260 features advanced communication.

Nexus' multi-port design allows multiple communication connections simultaneously.

Provide a direct digital link to your customer allowing them to gather selected data without affecting the meter or your data. All of the advanced features of the 1260 are made available through industry-standard Modbus and DNP 3.0 protocols.

### Standard Communications

- Optical Port
- RS-485 Serial Port
- Modbus RTU/ASCII
- DNP 3.0
- No Proprietary Protocols

### Optional Communications

The Nexus allows you to select an additional port for one of the following:

- Internal 56k Modem with Noise Rejection
- Internal Ethernet TCP/IP - Total Web Solutions (10/100 Base T)

### Optional Internal I/O

- 4 Form "C" or "A" KYZ Outputs
- Configure for End of Interval Pulse

### Upgradable External I/O

Connect multiple external I/O Modules for enhanced I/O capability.

- Analog Outputs
- Analog Inputs
- Additional Status Inputs
- KYZ Outputs
- Relay/Alarm Outputs

### Control Options

- ElectroLogic® Provides User-Definable Control Outputs

### Abnormal Condition

- Action on Boolean Logic Combinations of Inputs or Electrical Conditions

## Dial-Out on Alarm

### Dial-Out on Outage

The meter has a dial-out circuit with a battery that detects when voltage is lost and dials out to provide outage notification. Additionally, the meter's circuit configures to dial-out when many other circumstances occur. The Nexus 1260 dials to the EIG Dial-In Server which allows users to be paged or e-mailed with notifications of events.

### Dial-Out for Other Events

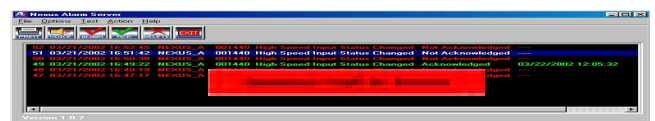
The meter will dial-out for the following circumstances:

- Limits Status Change
- High Speed Input Change
- Waveform Record Capture
- CBEMA Power Quality Event
- Control Output Change
- Filling of Meter Memory
- Cycling of Control Power
- Password Failure on a Call Coming into the Modem
- Meter Communication Failure

### Dial-In Server Capabilities

The EIG Dial-In Server will record all notifications, accept downloads from the meter and allows users to be notified by email and paging automatically. Feature of the Dial-In Server include:

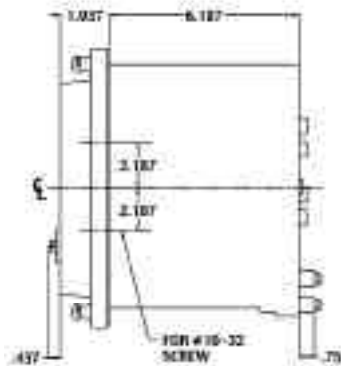
- Unlimited Meters
- Scalable Multi-Server Architecture
- E-Mail Notification
- Paging Notification
- Audible System Alarm



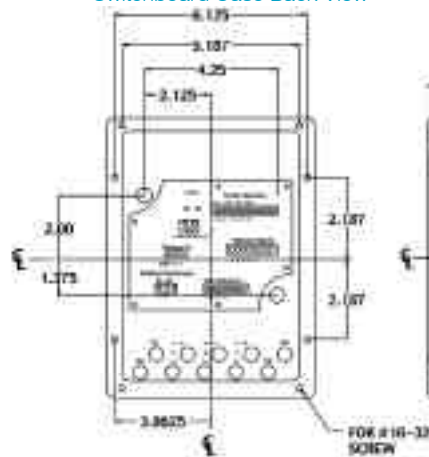
Visual Alarm Server

## Mounting & Dimensions

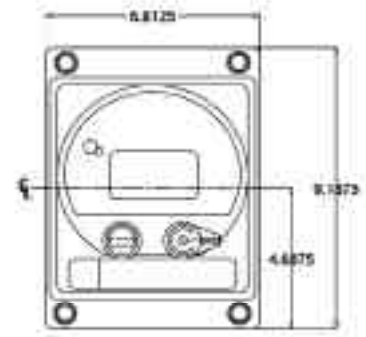
Nexus 1260  
Switchboard Case Side View



Nexus 1260  
Switchboard Case Back View



Nexus 1260  
Switchboard Case Front View



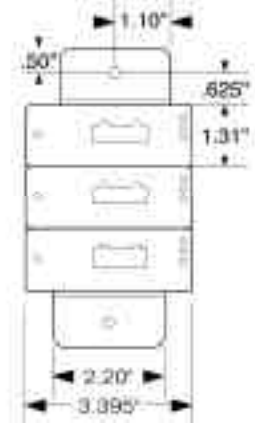
Nexus 1260  
Front View Without Cover



Nexus 1260  
Side View



Nexus I/O Modules  
Front View



## Specifications

### INPUT CURRENT

- 3 or 4 Current Inputs Depending on Form (IA, IB, IC, and IN)
- CT Rated 1-20 Amps Class 20
- CT Rated 1-2 Amps Class 2
- Transformer Rated
- Continuous 10% of Meter Class
- Overload 100 Amps for 1 Second, Non Recurring

### INPUT VOLTAGE

- 0-277 Line to Neutral
- 0-480 Line to Line

### BURDEN (Sense Inputs)

- Voltage Inputs: 0.33VA@576V
- Current Inputs: 0.0125VA@25A

### ISOLATION

- All Inputs and Outputs Isolated to 2500 Volts
- Com Ports Isolated From Each Other to 1000 Volts

### SENSING

- Accu-Measure® Technology
- 16 bit A/D Inputs
- True RMS
- 8 Channel Sample & Hold

### MEMORY

- All Meter Setup Parameters, Measurements & Logs Contained in Non-Volatile RAM

### STANDARD COMMUNICATIONS

- LCD Display
- IR Port
- Two RS-485 Serial Ports
- Modbus RTU, Modbus ASCII, and DNP 3.0 Protocols
- Data Speeds of up to 115k bps

### OPTIONAL COMMUNICATIONS

- Internal Modem with Data Buffering for Faster Downloads & Noise Rejection
- Internal 10/100Base T - Total Web Solutions

### INTERNAL 4ch SOLID STATE OUTPUTS (kyz)

- Type: Form A or C
- On Resistance: 23-35
- Peak Voltage: 350V DC
- Continuous Load Current: 120mA
- Peak Load Current: 350mA (10ms)
- Off State Leakage Current @350V DC: 1:  $\mu$ A
- Opto Isolation: 3750V rms (60Hz, 1 min.)

### TIMING

- Internal Clock with Accuracy of Better than 1 Minute per Month

### ENVIRONMENTAL

- Operating Temperature: -40°C to +85°C
- Display Operating Temperature: -20°C to +60°C
- Raintight Lexan Cover

### POWER SUPPLY OPTIONS

- Standard (OPTIONS)  
Auto-Ranging 3 Phase. Meter Power Provided by any of the 3 Phase Voltage Sources Being Monitored
- Standard External (OPTIONSE)  
96 to 276 Volts AC 50/60 Hz or 125V DC ( $\pm 20\%$ ). Max Power Consumption: 16VA@276V AC
- Low Voltage (OPTION LV)  
69VAC  $\pm 20\%$  - Low Voltage Supply for 69 Volt L-N Applications
- Low Voltage External (OPTIONDE)  
18 to 60V DC - External Low Voltage Supply for DC Powered Applications

### SECURITY

- Hardware Lock Secures Meter Settings
- Two 10-Character Passwords
- One Password Controls Access to Read Meter Digitally
- Separate Password Controls Access to Program Meter

### SHIPPING

- Weight: 10 Lbs
- Dimensions: 10" x 11" x 13"

### COMPLIANCE

- ANSI/IEEE C37.90.1 - Surge Withstand
- ANSI C62.41 - Surge Immunity
- ANSI C12.20 Class 0.2 - Revenue Meters
- ANSI C12.18 (Optical Port)
- IEC687 - Certified by KEMA Labs
- IEC 1000-4-2 - ESD
- IEC 1000-4-3 - Radiated Immunity
- IEC 1000-4-4 - Fast Transient
- IEC 1000-4-5 - Surge Immunity
- IEC 1000-4-6 - Conducted Immunity
- IEC 60068-2-6 - Vibration (Sinusoidal)
- IEC 60068-2-27 - Shock Test
- IEC 695-2-1 - Resistance to Heat and Fire
- IEC 529 - Dust and Water
- IEC 68-2-1
- IEC 68-2-2 - Dry Heat
- IEC 68-2-30 - Damp Heat

## Supported Meter Forms

Form	Rated Voltage	Hookup
9S	120 to 277V L-N	3E, 4W, Wye
36S	120 to 277V L-N	2 $\frac{1}{2}$ E, 4W, Wye with Neutral
45S	120 to 480V L-L	2E, 3W, Delta
SWB	120 to 277V L-N	Programmable

## Accuracy

Parameter	Accuracy
Voltage	0.02%
Current	0.05%
Frequency	0.001Hz
kWh	0.06%
kWh@1.0PF	0.06%
kWh@0.5PF	0.10%
kVAR	0.10%
kVA	0.10%
PF	0.10%

## Logging Specifications

Model	Memory	Historical Log 1 <sup>1</sup>	Historical Log 2 <sup>1</sup>	Event Log <sup>2</sup>	Output Log <sup>2</sup>	Input Log <sup>2</sup>
1260	Standard	80 Days	32 Days	1024	512	512
1260	Advanced	691 Days	132 Days	1024	512	512

<sup>1</sup> Assuming Log 1 is storing 6 readings every 15 minutes

<sup>2</sup> Number of Events Recorded

## Ordering Information

	Model	Memory	Form	Class (Amps)	Frequency	Internal Pulse Outputs	Power Supply	Optional Communication
Option Numbers:	-	-	-	-	-	-	-	-
Example:	1260	S	9S	0-20	60Hz	4IPO	S	INP100
	1260	S Std	9S 36S	0-2 Amps	60 Hz 50 Hz	4IPO	S Std	X No Optional Com
		A Adv	45S	0-20 Amps			SE Std Ext	INP2 Modem with Dial Out
			SWB (Switchboard)				DE 18-60V DC	INP100 Total Web Solutions
							LV 69V AC $\pm$ 20%	

## Accessory Options

The Nexus can also be mounted in an A Base enclosure. Contact factory for dimensional and mounting information.

### OUTPUT MODULES *Option Numbers*

<b>1mAON4</b>	4 Analog Outputs, 0-1mA
<b>1mAON8</b>	8 Analog Outputs, 0-1mA
<b>20mAON4</b>	4 Analog Outputs, 4-20mA
<b>20mAON8</b>	8 Analog Outputs, 4-20mA
<b>4RO1</b>	4 Relay Outputs
<b>4PO1</b>	4 Solid State Pulse Outputs

### INPUT MODULES *Option Numbers*

<b>8AI1</b>	8 Analog Inputs, 0 $\pm$ 1mA
<b>8AI2</b>	8 Analog Inputs, 0 $\pm$ 20mA
<b>8AI3</b>	8 Analog Inputs, 0 $\pm$ 5 VDC
<b>8AI4</b>	8 Analog Inputs, 0 $\pm$ 10 VDC
<b>8DI1</b>	8 Digital Status Inputs

### POWER *Option Number*

<b>PSIO</b>	Additional I/O Power Supply
<b>BAT1</b>	External Replaceable Battery for Dial Out on Outage

### MOUNTING *Option Number*

<b>MBIO</b>	I/O Mounting Bracket Power supply and Mounting Bracket Required with any Accessory I/O Option
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### SOFTWARE *Option Numbers*

<b>NXC2.0.1C</b>	Nexus Communicator 2.0 for Windows® Single-Computer License (One Site)
<b>NXC2.0.MC</b>	Nexus Communicator 2.0 for Windows® Multiple-Computer License (One Site)
<b>NXDS 1.0C</b>	Dial-In Server Single-Computer License (One Site)
<b>NXDS 1.0MC</b>	Dial-In Server Multi-Computer License (One Site)



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