High Performance Utility Billing Meters with Communication and Advanced Power Quality

**Highly Advanced Communication**
- Up to 4 Com Ports
- Modbus RTU and Modbus TCP/IP
- DNP3 Serial and Ethernet
- Combo RJ11 Modem and Ethernet Port
- Web Server and Email on Alarm
- High-Speed, Power Quality Waveform Recorder
- 9 Levels of Password Security

**Highly Advanced Revenue Meter**
- 0.06% Wh Accuracy
- Precision Auto-calibrating Metrology
- Multipoint Compensation Factors
- Pulse Totalizers
- Load Profilers and I/O
- MV90 Compatible
- Available in Socket, A-Base, and New Switchboard Form with Draw-out Meter Cradle

Electro Industries/GaugeTech™
**MV90 COMPATIBLE**

www.electroind.com
Accu-Measure Auto-Calibrating Metrology

The Nexus® 1262/1272 meters are designed for demanding smart grid and intelligent substation applications. They provide one of the most profound analyses of electricity available in a socket form revenue meter. The units offer extensive advanced monitoring features to meet the most critical power monitoring requirements. Using advanced DSP technology, the Nexus® meters provide immediate and stored revenue power data coupled with superior power quality and communication. To meet the sophisticated standards required by utility companies and de-regulated power providers, the Nexus® meters’ basic package starts where most other meters end. Standard features in Nexus® units provide the ability to meet your future advanced metering needs.

**ACCU-MEASURE™ AUTO-CALIBRATING METROLOGY**

EIG’s Accu-Measure™ auto-calibrating metrology provides unmatched accuracy.
- Energy and Power Accuracy to within 0.06%
- Auto-calibration over Time
- Automatic Temperature Drift Adjustments
- Improved Stability and Better Long Term Accuracy

**4 QUADRANT MEASUREMENT**

The unit is a full four quadrant meter and gathers hour data information in every quadrant.
- kWh Delivered and Received
- kVAh in Each Quadrant
- kVARh in Each Quadrant
- Q Hours

**TIME OF USE**

The 1262/1272 offers robust time of use functionality. Standard capabilities include:
- 8 TOU Schedules
- 4 Seasons/Year
- 20 Year Calendar
- Prior Month and Prior Season
- Programmable Freeze Registers

**LOAD AGGREGATION/UNIVERSAL METERING**

Using standard pulse inputs, the Nexus® 1262/1272 meter can count pulses from external meters and accumulate usage. The pulse inputs can be used to totalize electrical usage and utility values, such as water or gas use data.
- 8 Pulse Inputs
- Individual Accumulating Registers
- 4 Totalizing Registers (Add or Subtract)

**CT & PT COMPENSATION**

The Nexus® units compensate for errors in current transformers and potential transformers.
- Voltage Compensation
- Multipoint Current Compensation
- Multipoint Phase Angle Compensation
- Better than 0.01% Resolution

**MULTIPLE DEMAND WINDOWS**

The Nexus® 1262/1272 meter simultaneously monitors five demand structures.
- Interval Length from 1 Second to Many Hours
- End of Interval Pulse Output
- End of Interval Pulse Input
- Cold Load Pickup

**TIME STAMPED MAX. DEMANDS**

The units gather demand information for all power values. Each value is date/time stamped.
- kW Demand, Delivered & Received, Max/Min
- kVA Demand, Max/Min
- kVAr Coincident with kW Demand
- kVAR Demand, Delivered & Received, Max/Min
- Amps Demand, Max/Min
- Voltage, Max/Min
Configure Custom Display For Any Application

Unique Display Configurator

The Nexus® 1262/1272 meter is designed with one of the industry’s most advanced LCD display configuration technologies, which lets you choose from multitudes of pre-programmed display screens and create fully customized displays for any specific application. Build from scratch, as needed, user display screens that provide information on anything the meter measures (which is almost everything). Use the display to view not only electrical, but water or gas usage. Also use the meter as an aggregator for total usage. Provide ambient and transformer temperature or any other desired critical operational data on the display.

3 DISPLAY MODES/75 SCREEN SLOTS

The meter’s memory has 75 slots for custom and/or pre-programmed screens. These slots can be allocated to any view mode with any number of slots used in each of the modes.

CUSTOM DISPLAY CONFIGURATOR TO CREATE EXACTLY WHAT’S NEEDED

- Make Custom Screens Based on Modbus Registers
- Make Any Custom Labels
- Customize Screen Numbering and Order
- Display Up To 5 Pieces of Information Per Screen
- Display Water, Gas and Other Types of Usage
- Add Diagnostic Information

NORMAL MODE
- kWh Delivered and Received
- kVARh Delivered and Received
- kVAh Delivered and Received
- Peak Rolling Window Demand
- Peak Block Window Demand

TIME OF USE MODE
- kWh and kW Demand Delivered and Received Total
- kVARh and kVAR Demand Delivered and Received for Each Register
- kVAh Delivered and Received for Each Register
- kVAh Delivered and Received Total

PRE-CONFIGURED DIAGNOSTIC SCREENS

Select from a large offering of diagnostic screens such as:
- Voltages
- Harmonic Magnitudes
- Meter Status
- Per Phase Amps
- Many More Diagnostic Screens Available

INFRARED TEST PULSE

The meter provides an infrared test pulse that can pulse for +Wh, -Wh, +VARh, -VARh, and VAh. This pulse uses time modulation, allowing the pulse to be accurate during short duration pulse tests using industry accepted reference standards.
Advanced Communication and I/O Capabilities

STANDARD MULTI-PORT COMMUNICATION
- Optical Port
- 2 RS485 Serial Ports
- Modbus RTU/ASCII
- DNP3
- Speeds Up to 115200 bps

OPTIONAL COMMUNICATION
- 10/100BaseT Ethernet (INP200)
- Ethernet/Modem Combo (INP202)

COMBINATION MODEM & WEB SOLUTION
This option allows you to access the meter through the web and through a modem for dial-up communication. Features include:
- 56k Modem
- 10/100BaseT Ethernet
- Total Web Solutions (Web Server)
- Email on Alarm
- 12 Modbus Sockets
- 5 DNP3 over Ethernet Sockets

STANDARD I/O
- IRIG-B 1 ms Time Synchronization to GPS Satellite Clock
- 4 Internal KYZ Pulse Outputs
- 8 KYZ Pulse/Status Inputs

OPTIONAL EXTERNAL I/O
Connect multiple external I/O Modules for enhanced I/O capability.
- Analog Outputs
- Analog Inputs
- Digital Status Inputs
- KYZ Outputs
- Relay/Alarm Outputs

CONTROL CAPABILITIES
- ElectroLogic™ Provides User-definable Control Outputs
- Action and/or Alarm on Abnormal Condition
- Action on Boolean Logic Combinations of Inputs or Electrical Conditions

DNP3 LEVEL 2 PLUS
The Nexus® 1262/1272 meter provides advanced DNP3 protocol implementations. DNP3 is available on the serial and Ethernet ports. EIG’s Nexus® 1262/1272 meter complies with all DNP3 Level 1 and Level 2 certification requirements PLUS a host of additional features including:
- Up to 104 Measurements:
  64 Binary Inputs, 8 Binary Counters,
  32 Analog Inputs Mapped to DNP Static Points in the Customizable DNP Point Map
- Up to 16 Relays and 8 Resets: Can Be Controlled through DNP
- Report-By-Exception Processing: (DNP Events) Deadbands Can Be Set on a Per-point Basis
- 250 Events in Combinations of Four Events:
  Binary Input Change, Frozen Counter, Counter Change, Analog Change
- Freeze Commands: Freeze, Freeze/No-Ack, Freeze with Time, Freeze with Time/No-Ack, Scheduled Freeze Command
- Freeze with Time Command: Enables the Nexus® Meter to Have Internal Time-driven Frozen Counter and Frozen Counter Event Data
- Third Party Certification is Available
- 5 Simultaneous DNP Ethernet Sessions

Total Web Solutions — Providing Advanced Metering Data Integration With the Web
Total Web Solutions is an advanced Ethernet communication architecture that lets you design custom webpages, display metering data and host your meter power information website directly on a Nexus® meter. The Nexus® meter hosts the web data without any need for dedicated server software, ActiveX Controls or Java Applets. The meter does the data collection, the formatting and the page hosting.

WEBEXPLORER
(Directly Host Metering Data)
EIG’s WebExplorer provides you with direct access to all power data through Internet Explorer in standard HTML format, without needing to download ActiveX controls or Java applets. WebExplorer is fully programmable, so you can customize your own SCADA quality webpages, graphics and configurations.
- Easily Incorporated Into Any Existing Web Applications
- Fully Programmable Webpage Generator
- Brings in Direct XML Links, Displaying Many Meters on One Page

WEBXML
Creates Real Time Data in XML Format. WebXML allows the Nexus® meter to gather data from the Nexus® host or through other meters and put the data directly into an XML format. This allows you to share data through the web with multiple applications and create custom webpages, using WebExplorer.
Total Web Solutions

WEBALARM – EMAIL ALERTS

EIG’s WebAlarm sends real time email alerts via the Internet to up to 9 recipients simultaneously for any combination of alert notifications.

- Real Time Alerts
- Simultaneous Emails to Multiple Recipients
- Update Users on Virtually Any Abnormality
- Uses Standard SMTP — Just Assign Email Addresses
- Shows the Last 10 Emails on Website for Later Investigation

WEBMOD

(Open Architecture 3rd Party Integration)

The 10/100BaseT design allows the unit to speak with 12 simultaneous sockets of Modbus TCP. EIG’s WebMod features Modbus TCP open protocol that can be easily integrated with most other software or hardware. And, with the built-in Modbus data concentrator, you can poll up to 8 devices or 512 unique polling items from any device that can speak Modbus RTU and/or Modbus TCP protocols.

View data from multiple meters generated from the Master Meter in your web browser.

WEBDNP

Using this feature, you can gain access to the meter speaking native DNP over Ethernet. This allows the unit to open an exclusive network socket for DNP3. Using this unique technology, all other meter web features are available simultaneously. Even with DNP3 over the Ethernet, you still have access to multiple Modbus sockets, email alarms, web servers and many other communication features.

WEBXML technology is easy to configure and extremely flexible. With WebXML, your data is instantly available to a host of software applications, including standard web browsers and documentation software.

- Automatically Process and Present Data In Readable XML Format
- Add Scale Factors, Multipliers or Other Desired HTML Capability
- Display Data From Host Meter and/or Any Other Meter Using Modbus RTU or TCP/IP (WebReacher)
- Customized Programming
- Easily Viewed by Different Applications
- Modbus Data Concentrator

WEBREACHER

With EIG’s exclusive WebReacher technology, you can now access remote meters around the world, retrieve data and consolidate it onto one webpage or website without any separate software SCADA package or client-side ActiveX controls or Java applets.

- No Additional Software Application Costs
- No Server System Required
- No Complex Integration
- No Costly Point Charges (Up to 32 Devices)
Nexus® 1272 Meter's Advanced Power Quality Analysis Pinpoints Electrical Reliability Issues

The processing capability and accuracy of the Nexus® 1272 meter makes it possible to gather power quality information with unmatched precision. The Nexus® 1272 unit is ideally suited for application on all critical loads. From health care to micro-electronics, the 1272 has what it takes to capture every anomaly. This insures that when there is a power problem, you have the information required to act. All Power Quality logs are time stamped to the nearest millisecond to insure accurate recording. The meter's Advanced Download Logic collects only new data, to minimize download times.

**EVENT/OUT OF LIMIT LOG**
- Records 1024 Events
- Out of Limit Recording
- High-Speed Input Event Recording
- Outage Detection
- Extensive Limit Setting Capabilities with Multiple Limits per Selected Quantity

**WAVEFORM LOG**
The waveform recording capability of the Nexus® 1272 unit is unparalleled by any other meter. Waveform records of this quality have historically been reserved only for transmission lines. The power of the Nexus® 1272 meter now makes this quality available to your critical customers.

- Extraordinary Resolution through 16-bit A/D Input
- Sample Rates from 16 to 512 Samples per Cycle
- Total Recording Time Over 100 Seconds
- Up to Six Channels
- Voltage and Current Triggers
- External Event Trigger
- Voltage Surge/Sag Recording
- Current Fault Analysis

**HARMONIC DISTORTION ANALYSIS**
- Log Harmonics into Historical Log for Later Analysis
- Recorded Waveforms Provide Harmonics to the 255th Order
- View Waveform Record

**CBEMA/ITIC LOG**
The separate CBEMA/ITIC Log captures all voltage transients that fall outside these standards. The onboard log holds 1024 events. The data is downloaded to a separate log in the meter database for easy analysis. See all voltage disturbances on one screen through the CommunicatorPQA™ software.

- Sag/Swell Analysis
- Transient Recording
System Performance and Customer Reliability Analysis

The accuracy and precision of the Nexus® 1272 meter, coupled with its extraordinary logging capability, makes it an ideal tool for system performance and reliability analysis. For the first time, at the revenue metering site, users have the accuracy and precision of a digital fault recorder without the expense. The Nexus® 1272 meter’s 16-bit ADC accuracy and resolution for waveform records actually exceeds many digital fault recorder products. Combine the Nexus® 1272 unit with EIG’s suite of software solutions to further expand the level of understanding during any monitoring situation.

COMMUNICATORPQA™ SOFTWARE FAULT ANALYSIS

• Compares Multiple Fault Records
• Measures Waveform Traces
• Inserts Timing Marks to Analyze Waveform Transients
• Displays CBEMA Logs
• PQDIF File Format Converter Allows Nexus® Data to be Read by Standard EPRI Power Quality Viewing Software

AT THE INTERCHANGE POINT

The Nexus® meter gives you the power of a sequence of events recorder on every transmission line or interchange point. The unit is always watching, and has extended memory capability which can record multiple faults, or even frequency swings, during stability problems. Capture all voltages and currents.

Download the data and open the files with CommunicatorPQA™ software. Compare multiple channels; measure amplitudes and timing with millisecond resolution; see system reliability events that lasted for several seconds.

TEST PROTECTIVE EQUIPMENT

Need to test protective equipment performance? Simply take the Nexus® record and convert it to COMTRADE format. Insert the file directly to protective test equipment to verify relay performance.

AT THE CUSTOMER

When that key customer calls, simply perform a download from the Nexus® 1272 meter. In a few minutes, all the data related to any event is on your desktop, letting you find the answers the customer needs.

Need to perform a more detailed evaluation? Simply open the viewer to look at the waveforms and see exactly what happened to voltages and currents throughout the event. Only the Nexus® meter provides precise pictures for many seconds.

Supported Meter Forms

<table>
<thead>
<tr>
<th>FORM</th>
<th>RATED VOLTAGE</th>
<th>HOOKUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>9S</td>
<td>0 to 277 V</td>
<td>3E, 4 wire, Wye</td>
</tr>
<tr>
<td></td>
<td>L-N</td>
<td></td>
</tr>
<tr>
<td>36S</td>
<td>0 to 277 V</td>
<td>2½ E, 4 wire, Wye</td>
</tr>
<tr>
<td></td>
<td>L-N</td>
<td></td>
</tr>
<tr>
<td>45S</td>
<td>0 to 480 V</td>
<td>2E, 3 wire, Delta</td>
</tr>
<tr>
<td></td>
<td>L-L</td>
<td></td>
</tr>
<tr>
<td>SWB2</td>
<td>0 to 277 V</td>
<td>Programmable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Universal Forms)</td>
</tr>
<tr>
<td>9A</td>
<td>0 to 277 V</td>
<td>A Base Form</td>
</tr>
<tr>
<td></td>
<td>L-N</td>
<td></td>
</tr>
</tbody>
</table>

Accuracy

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>ACCURACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>0.02%</td>
</tr>
<tr>
<td>Current</td>
<td>0.05%</td>
</tr>
<tr>
<td>Frequency</td>
<td>0.001 Hz</td>
</tr>
<tr>
<td>W</td>
<td>0.06%</td>
</tr>
<tr>
<td>Wh @1.0 PF</td>
<td>0.06%</td>
</tr>
<tr>
<td>Wh @0.5 PF</td>
<td>0.10%</td>
</tr>
<tr>
<td>VAR</td>
<td>0.10%</td>
</tr>
<tr>
<td>VA</td>
<td>0.10%</td>
</tr>
<tr>
<td>PF</td>
<td>0.10%</td>
</tr>
</tbody>
</table>
Data and Event Monitoring/Recording

MULTIPLE MEMORY LOGS
Nexus® meters provide many logs to record historical, alarm and system event data. These logs can be used for profiling, recording events and logging electrical power parameters over time. Additionally, using the advanced I/O available with the product, you can also log process measurements, including temperature, pressure, flow, etc.

TWO HISTORICAL TREND LOGS
These logs allow you to trend virtually any electrical parameter over time. This includes all electrical and I/O parameters.
- Up To 64 Values per Log
- Programmable Trend Times
- Provides Magnitude and Duration of Event
- Millisecond Resolution
- 2 Separately Programmable Logs
- Separately Recorded Time Base
- Records Alarms for Electrical and I/O Channels

OUT OF LIMITS LOG
This log records all out-of-limit alarms, including the magnitude and the duration of the alarm.

SYSTEM EVENTS LOG
The unit records the following system events for security and anti-tampering.
- Power Up
- Power Down
- Password Access
- Password Modification
- Change of Programmable Settings
- Change of a Run Time
- Change of Clock Time by Communication (Modbus or DNP3)
- Test Mode Usage
- Meter Resets (Logs, Max/Min, Energy)

INPUT STATUS LOG
This log records when a digital status change occurred in either the internal or external inputs.
- Status Log for External Events
- Internally Labeled to Define Events

CONTROL OUTPUT LOG
This log records the logic and state that triggered a control output. The graphical log shows all the steps that led up to the event.
- Displays Pre and Post-Analysis
- Internally Labeled to Define Events
- Advanced I/O Analysis

Logging Specifications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>HISTORICAL LOG 1</th>
<th>HISTORICAL LOG 2</th>
<th>CBEMA/TIC</th>
<th>OUT OF LIMIT LOG</th>
<th>WAVEFORM LOG</th>
<th>OUTPUT LOG</th>
<th>INPUT LOG</th>
<th>SYSTEM EVENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1272</td>
<td>555 Days</td>
<td>133 Days</td>
<td>512</td>
<td>1024</td>
<td>95</td>
<td>256</td>
<td>1024</td>
<td>1024</td>
</tr>
<tr>
<td>1262</td>
<td>480 Days</td>
<td>133 Days</td>
<td>N/A</td>
<td>512</td>
<td>N/A</td>
<td>512</td>
<td>1024</td>
<td>1024</td>
</tr>
</tbody>
</table>

1 Assumes logs store 4 scaled energy readings every 15 minutes
2 Number of events recorded (assumes 14 parameters monitored)
3 Number of waveform records - each record may be from 8 to 64 cycles in duration depending upon meter setup
**ADVANCED METER SECURITY**

The Nexus® 1262/1272 meter offers advanced security, with multi-level passwords, an anti-tampering System Events log, and a physical seal on the meter.

**MULTI-LEVEL SECURE COMMUNICATION**

The Nexus® 1262/1272 meter offers up to nine levels of password security to protect the meter from unauthorized use. The first step in enabling security is creating a Level 1 and Level 2 Password. The Level 2 password is the Admin, who can enable the multi-level security and create and configure the other user levels. Only the Admin user can enable or disable security.

Each user level can be configured to enable specific capabilities, so that a Utility or other entity can control access to functions according to the type of user. For example, one user level may be able to create and change TOU calendars, while a different user level is able to read TOU data, but not change anything. Another user may be able to view TOU data and change settings, but not have access to the meter’s external devices.

You can view the current protection status and the current user and user level capabilities through the CommunicatorPQA™ software’s Tools menu. The functions that can be assigned to the user levels are as follows (the Admin user has access to all of the functions):

- **Read TOU Calendars/Data** - allows the user to view the time of Use Calendars and Registers.
- **External Device Access** - allows the user to access and program external devices.
- **Modify Preset Energy** - allows the user to access the preset energy capability.
- **Modify CT/PT Compensation** - allows the user to change the CT/PT compensation tables.
- **Modify Date/Time** - allows the user to set a new date and time.
- **Modify TOU Calendars** - allows the user to modify existing calendars and upload new calendars.
- **Update Firmware** - allows the user to change the existing firmware in the meter.
- **Modify Programmable Settings** - allows the user to change existing programmable settings and program them to the meter.
- **Retrieve PQ Logs** - allows the user to retrieve the Power Quality logs: PQ, Waveform, Alarm, and Flicker.
- **Retrieve Historical Logs** - allows the user to retrieve non-PQ logs: Historical and Digital.
- **Reset Demand** - allows the user to reset the Demand Registers.
- **Reset PQ Logs** - allows the user to reset the Power Quality logs: PQ, Waveform, Alarm, and Flicker.
- **Reset Logs** - allows the user to reset the non-PQ logs: Historical and Digital.
- **Reset Energy** - allows the user to reset the Energy Accumulators.
- **External Relay Control** - allows the user to manually fire the External Relays.
- **Manual Waveform Capture** - allows the user to send the Manual Waveform Capture command, if supported by the meter.
- **Other** - allows the user to use the Flicker function and any other Level 2 function that is not defined above.

**PHYSICAL SEALING AND SEALING SWITCH**

The Nexus® 1262/1272 meter offers a Sealing Switch, which lets you add additional restriction to functions of the meter. The Sealing Switch acts as a physical barrier, requiring buttons to be pressed to allow a user to enter a password and configure the meter. The Sealing Switch adds another layer of security to the meter, since the button is located under an area that can be secured with a physical seal, which would indicate tampering if removed. The Sealing Switch is enabled through the CommunicatorPQA™ software’s Tools screen. Once enabled, the switch must be activated at the meter before the restricted functions can be performed. The Nexus® 1262/1272 meter’s Sealing Switch restricts access to resetting of logs, Max/Min, Energy, TOU, and related features; and enabling/disabling passwords.
Dimensions and Mounting

Nexus® 1262/1272 Switchboard Case
Front View

Nexus® 1262/1272 S-Base Case
Front View

Nexus® 1262/1272 A-Base Case
Front View

Nexus® I/O Modules Front View

Modules Height: 4.14” (10.51cm)

Mounting Bracket

Side View

Back View
Wiring Diagrams

Form 9S, 4-Wire Wye and Delta

Form 45S, 3-Wire Delta

Switchboard Mount, 4-Wire Delta

Switchboard Mount, 3-Wire Delta

Note: Additional configurations are available - see the meter's installation manual for more options.
### Specifications

**SENSE INPUTS: CURRENT (ac)**
- Transformer (CT) rated
- 2 or 3 current inputs depending on Form (A, B, or C)
- Class 2 – 1 A nominal, burden 0.0003122 VA@2.5 A
- Class 10, 20 – 5 A nominal, burden 0.0125 VA@25 A
- 0.1% of nominal pickup current
- 120% over range of Meter Class
- Current surge withstand (at 23 °C) – 100 A

**VOLTAGE (ac)**
- Blade powered unit, standard voltage (option S): 480 V max between Vref and Va, Vb, Vc inputs; Burden total 12 VA max (including power supply); 600 V max between Va, Vb, Vc inputs
- Blade powered unit low voltage (option LV): 69 V max between Vref and Va, Vb, Vc inputs; Burden total 12 VA max (including power supply); 120 V max between Va, Vb, Vc inputs
- Externally powered units (options SE, DE): 480 V max between Vref and Va, Vb, Vc inputs; Burden 0.33 VA@576 V; 600 V max between Vref and Va, Vb, Vc inputs

**EXTERNAL POWER SUPPLY OPTIONS**
- Separate power cord
- Externally powered units; Burden total 12 VA max (including power supply); 600 V max between Vref and Va, Vb, Vc inputs
- Input impedance 1 Mohm/phase
- 20% over range of rated voltage
- 2 V pickup voltage

**SENSING**
- All Inputs and Outputs isolated to 2500 V
- Current transformers are individually isolated
- Opto Isolation: 3750 V rms (60 Hz, 1 minute)
- Analog Inputs: 16 bit A/D Inputs
- Current surge withstand (at 23 °C) - 100 A

**CLASS COMMUNICATION**
- IR Port/ANSI
- Two RS485 Serial Ports
- Modbus RTU, Modbus ASCII, DNP3
- Data Speeds of up to 115200 bps
- Eight High-Speed Input Channels

**OPTIONAL COMMUNICATION**
- Internal 10/100BaseT with Total Web Solutions
- Modem/Ethernet Combo Card
- Modbus TCP and DNP LAN/WAN

**INTERNAL 8ch DIGITAL INPUTS**
- Type: Self Excited, for Dry Contacts Only
- Internal Wetting Voltage: 12 VDC Typical

**INTERNAL 4ch SOLID STATE OUTPUTS (KZ)**
- Type: Form C contacts, pulse or transition based counts
- On Resistance: 23-35 Ω
- Peak Voltage: 350 V DC
- Continuous Load Current: 120 mA
- Peak Load Current: 350 mA (10 ms)
- Off State Leakage Current @350 V DC: 1 μA

**SHIPPING**
- Weight: Socket: 10 Lbs; Switchboard: 16 Lbs
- Dimensions: Socket: 13” x 10” x 11”; Switchboard: 16” x 14” x 10.5”

**DISPLAY**
- Type: FSTN Liquid Crystal Display (LCD)
- Resolution: 128 x 64 pixels
- Size: 72 (H) mm x 32 (W) mm (2.8” x 1.26”)
- Temperature: Operational from (-20 to +60) °C
- Backlight: LED (Green)

**ENVIRONMENTAL**
- Operating Temperature: (-40 to +85) °C
- Display Temperature: (-20 to +60) °C
- Rainlight Lexan Cover (Socket meter)
- Temperature Specifications to Indirect Sunlight

**SECURITY**
- Hardware Lock Secures Meter Settings
- Up to 9 10-Character Passwords
- One Password Controls Access to Read Meter Digitally
- Separate Password Controls Access to Program Meter
- Additional 8 level password sequence available by user configuration

**POWER OPTIONS**
- I/O Power Supply (Required with I/O Module)
- CommunicationPA™ 5 Software for Windows Single-Computer License (One Year)
- CommunicatorPQA™ 5 Software

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### Ordering Information

(To order, please use this guide)

<table>
<thead>
<tr>
<th>Option Numbers:</th>
<th>Model</th>
<th>Memory</th>
<th>Form</th>
<th>Class (Amps)</th>
<th>Frequency</th>
<th>Power Supply</th>
<th>Optional Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td>1272</td>
<td>A</td>
<td>9S</td>
<td>20</td>
<td>60</td>
<td>DE</td>
<td>INP200</td>
</tr>
<tr>
<td></td>
<td>1262</td>
<td>36S</td>
<td>10 A</td>
<td>60</td>
<td>DE</td>
<td>INP200</td>
<td>10/100BaseT Ethernet</td>
</tr>
<tr>
<td></td>
<td>45S</td>
<td>20 A</td>
<td>LV</td>
<td>69 V AC</td>
<td>DE</td>
<td>INP202</td>
<td>Modem &amp; Ethernet Combo</td>
</tr>
<tr>
<td></td>
<td>9A</td>
<td></td>
<td></td>
<td>(A Base)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### Accessory Options

#### OPTIONAL I/O MODULES

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1mAON4</td>
<td>4 Analog Outputs, 0±1mA</td>
</tr>
<tr>
<td>1mAON8</td>
<td>8 Analog Outputs, 0±1mA</td>
</tr>
<tr>
<td>2mAON4</td>
<td>4 Analog Outputs, 4-20mA</td>
</tr>
<tr>
<td>2mAON8</td>
<td>8 Analog Outputs, 4-20mA</td>
</tr>
<tr>
<td>4RO1</td>
<td>4 Relay Outputs</td>
</tr>
<tr>
<td>4PO1</td>
<td>4 Solid State Pulse Outputs</td>
</tr>
<tr>
<td>8AI1</td>
<td>0±1mA, 8 Analog Inputs</td>
</tr>
<tr>
<td>8AI2</td>
<td>0±20mA, 8 Analog Inputs</td>
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<tr>
<td>8AI3</td>
<td>0±5VDC, 8 Analog Inputs</td>
</tr>
<tr>
<td>8AI4</td>
<td>0±10VDC, 8 Analog Inputs</td>
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<tr>
<td>8DI1</td>
<td>8 Status Inputs, Wet/Dry</td>
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#### POWER OPTIONS

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<tr>
<th>Module</th>
<th>Description</th>
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<tbody>
<tr>
<td>PSIO</td>
<td>I/O Power Supply (Required with I/O Module)</td>
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#### SOFTWARE OPTIONS

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<tr>
<th>Module</th>
<th>Description</th>
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<tbody>
<tr>
<td>COMMPQA5P1Y</td>
<td>CommunicatorPA™ 5 Software</td>
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### Compliance Standards

- ANSI C12.20 Accuracy
- ANSI/IEEE C37.90.1 Surge Withstand
- ANSI C62.41 Surge Immunity
- IEC/CISPR 14-1 Continuous EM Disturbance
- IEC 61000-4-2 (EN 61000-4-2 / IEC 801-2): Electrostatic Discharge
- IEC 61000-4-3 (EN 61000-4-3 / IEC 801-3): Radiated EM Field Immunity
- IEC 61000-4-4 (EN 61000-4-4 / IEC 801-4): Electric Fast Transient
- IEC 61000-4-5 (EN 61000-4-5 / IEC 801-5): Surge Immunity
- IEC 61000-4-6 (EN 61000-4-6 / IEC 801-6): Conducted Immunity
- IEC 62053-22 Class 0.25 Accuracy
- IEC 62052-11 General Requirements
- IEC 62052-22 Mechanical Properties

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Note: Please see Product manual for comprehensive specifications.