Make Energy Usage Smarter
CONTENTS

Chapter 1: About Accuenergy

Chapter 2: Accuenergy Meters

2.1 Acuvim II - Power & Energy Meter 4
2.2 Acuvim-L - Panel / Device Meter 6
2.3 Acuvim Communications Modules 8
2.4 AcuRev 1310 - DIN-Rail Power & Energy Meter 10
2.5 EV300 - Multi-Function Power Meter 12
2.6 AcuRev 2000 - Multi-Circuit Submeter 14
2.7 AcuDC 240 - DC Power & Energy Meter 16

Chapter 3: Panel Metering Solutions

3.1 AcuPanel 9100 - Pre-Configured Panel Meter 18

Chapter 4: Communications & Software Solutions

4.1 AcuLink 810 - Data Acquisition Gateway 20
4.2 AcuMesh - Wireless RS485 Metering Network 23
4.3 AcuCloud - Cloud-Based Metering Platform 25

Chapter 5: Current Transformers

5.1 AcuCT Flex - Flexible Rope Style CTs 29
5.2 RIK - Rogowski Integrator Kit 31
5.2 AcuCT R - Press to Open Split Core CTs 32
5.3 AcuCT mV - Revenue Grade 333mV CTs 33
5.4 AcuCT 5A - Revenue Grade 5A CTs 34
5.5 AcuCT Hinged - Compact 333mV Hinged CTs 35
5.6 AcuCT S113 - Solid Core Current Transformer 36
5.7 AcuCT S77 - Measurement Canada Approved Solid Core CTs 36
Accuenergy (Canada) Inc. specializes in power metering solutions that leads the industry in revenue grade energy metering, power quality analysis, ease of deployment and advanced communication methods. Our reliable power meters have been used across the globe to monitor electrical systems in commercial buildings, industrial facilities, data centres and cell towers for more than 18 years.

Our goal is to provide users with well designed products that are built to be easy to implement without sacrificing key functionality. Our pre-wired panel meters and wireless submeters were designed to offer the simplest tenant billing and metering solutions on the market, while providing ease of installation.
MASTER OF INTEGRATION

Highly configurable and designed for easy-integration in almost any metering application. The Acuvim II series offers a wide array of plug-in expansion modules for up to 15 different communication protocols.

KEY FEATURES

Four different models for Revenue Grade Metering, Data Logging, Time-of-Use and Power Quality.

Revenue grade ANSI C12.20 class 0.2 & IEC 62053-22 class 0.2s.

Built-in MODBUS RTU via RS485 port.

Level 2 DNP3 and IEC61850 2nd Edition MV90 Support

8GB Datalogging and event storage

COMtrade Waveform format

Plugin modules for Ethernet, WiFi, BACnet, Profibus.

Choose panel mount meter with display or DIN rail mount transducer with optional remote display.

Multifunction meter in NEMA3/NEMA4X housing with three line backlit graphical LCD display.

Optional DIN rail mount transducer form factor for system integration
DATA LOGGING
Acuvim IIR, IIE, and IIW adds data logging capability of historical data for trending, analysis and reports and tenant metering plus threshold alarms and remote monitoring. With AXM-WEB2, memory size expands to industry-leading 8GB memory with 1-second interval datalogging.

TIME-OF-USE
Acuvim IIE adds flexible time-of-use for industrial/commercial customers with complex time-based or tier-based rate structures.

POWER QUALITY MONITORING
The Acuvim IIW adds harmonic analysis and advanced power quality event logging with waveform capture and event logging.

ACUVIM II SERIES MODELS

<table>
<thead>
<tr>
<th></th>
<th>Acuvim II</th>
<th>Acuvim IIR</th>
<th>Acuvim IIE</th>
<th>Acuvim IIW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>General Use</td>
<td>Billing / Data Logging</td>
<td>Time-of-Use</td>
<td>Power Quality</td>
</tr>
<tr>
<td>Metering</td>
<td>400 Parameters</td>
<td>400 Parameters</td>
<td>400 Parameters</td>
<td>400 Parameters</td>
</tr>
<tr>
<td>Data Logging</td>
<td></td>
<td>•</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>8MB</td>
<td>8MB</td>
<td>16MB</td>
<td></td>
</tr>
<tr>
<td>With AXM-WEB-PUSH</td>
<td>4GB</td>
<td>4GB</td>
<td>4GB</td>
<td>4GB</td>
</tr>
<tr>
<td>With AXM-WEB2</td>
<td>8GB</td>
<td>8GB</td>
<td>8GB</td>
<td>8GB</td>
</tr>
<tr>
<td>Time-of-Use</td>
<td></td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Power Quality</td>
<td></td>
<td></td>
<td></td>
<td>•</td>
</tr>
</tbody>
</table>
ECONOMICAL SUB METERING

This economical series of meters offers quality and performance typically found in meters many times it’s price. The Acuvim-L series are versatile electrical meters for panel/device monitoring of three phase AC systems.

ACUENERGY.COM/ACUVIM-L

KEY FEATURES

Six different models for different applications including Time-of-Use, kWh metering, and MODBUS integration.

NEMA 4 rated tough design.

3-Line LCD display with backlight.

Multiple current transformer options.

Industry leading 5 year warranty.

Built-in MODBUS RTU (some models)

Optional DIN rail mount transducer (some models)

Built-in power supply for easier, faster installation.

Revenue grade ANSI C12.20 class 0.5 & IEC 62053-22 class 0.5s.
MODBUS INTEGRATION
Acuvim-L series meters are offered with built-in Modbus RTU communication via RS485 allowing meter parameters to be directly measured by a computer or master device when serial communication is in place.

TIME-OF-USE
Acuvim-EL features Time-of-Use functionality allowing users to segregate energy consumption to parallel utility tariffs in up to four different tariffs schedules, 12 seasons and 14 schedules. Ideal for sub metering in areas which have TOU or are tariff-based.

KWH METERING
All of the Acuvim-L series meters feature real-time bi-directional energy monitoring for clear, economical sub metering and kWh metering across single or three-phase circuits.

ACUVIM-L SERIES MODELS

<table>
<thead>
<tr>
<th></th>
<th>AL</th>
<th>BL</th>
<th>CL</th>
<th>DL</th>
<th>EL</th>
<th>KL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Analog Meter Replacement</td>
<td>Pulse Output Meter</td>
<td>MODBUS Integration</td>
<td>Multiple System Integration</td>
<td>Time-of-Use &amp; Tariff Metering</td>
<td>Low Cost kWh Submetering</td>
</tr>
<tr>
<td>Metering</td>
<td>Voltage, Current, Power</td>
<td>Current, Power</td>
<td>MODBUS RTU</td>
<td>Digital Input, Digital Output, Profibus</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Energy &amp; Demand</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Time-of-Use</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Built-in Communication</td>
<td>•</td>
<td>2 Digital I/O</td>
<td>MODBUS RTU</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Expansion Modules</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Digital Input, Digital Output, Profibus</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DIN Rail Mount Option</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>

ACUMESH COMPATIBLE PRODUCT
ACUPANEL COMPATIBLE METER
WWW.ACCUENERGY.COM
COMMUNICATION

AXM Modules are designed for use with Acuvim II meters, expanding the communications capabilities of the core meter itself. These field-expandable modules are easy to deploy and plug directly into the meter allowing for easy installation.

ACUVIM II COMMUNICATION MODULES

<table>
<thead>
<tr>
<th>Protocol/Interface</th>
<th>AXM-WEBC</th>
<th>AXM-WEBC PUSH</th>
<th>AXM-BMS</th>
<th>AXM-BIP</th>
<th>AXM-PROFI</th>
<th>AXM-RS485</th>
<th>AXM-MESH</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODBUS-RTU</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNP 3.0 Over IP</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IEC 61850</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MODBUS-TCP</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTTP/HTTPS Webserver</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMTP Email</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SNMP V3</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTTP/HTTPS Push</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FTP Post</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sFTP Server</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datalogging</td>
<td>8GB</td>
<td>4GB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BACnet-MS/TP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BACnet-IP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFIBUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WiFi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dual RJ45 Ports</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I/O MODULES INCLUDE

AXM-IO1
6 digital inputs, 24Vdc power for inputs, 2 relay outputs

AXM-IO2
4 digital inputs, 2 digital outputs, 2 analog outputs

AXM-IO3
4 digital inputs, 2 relay outputs, 2 analog inputs

Expansion Protocol Support
Modbus-TCP/IP, SNMP, SMTP, SNTP, HTTP(s) Post, HTTP(s) webserver, BACnet-MS/TP, BACnet-IP, Profibus, IEC61850, Second Modbus-RTU

Expansion Interface Support
Ethernet, Wireless Mesh Network, WiFi, Cellular, Profibus

ACCUENERGY.COM/AXM-MODULES
COMMUNICATIONS MODULES
These plug-in expansion modules are available for the Acuvim L line of economical power and energy meters.

**ACUVIM-L LX MODULES**

<table>
<thead>
<tr>
<th></th>
<th>Digital Input (DI)</th>
<th>Digital Output (DO)</th>
<th>RS485 Port</th>
<th>Profibus Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>LX-1</td>
<td>4</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>LX-2</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>LX-3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>LX-4</td>
<td>4</td>
<td>2</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

**ACUDC 240X MODULES**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X-1</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>X-2</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>X-3</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>X-4</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>X-5</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+/-15Vdc</td>
</tr>
<tr>
<td>X-6</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>+/-15Vdc</td>
</tr>
<tr>
<td>X-7</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>+/-15Vdc</td>
</tr>
</tbody>
</table>
DIN-RAIL MULTI FUNCTION POWER METER

The AcuRev 1310 combines high performance with easy integration to provide a cost-effective power and energy monitoring solution. Featuring a built-in LCD, MODBUS-RTU communication, and 4 channel current input.

KEY FEATURES

- Utility Revenue Grade Accuracy - IEC 62053-22 0.5s Class / ANSI C12.20 0.5 Class.
- Measurement Canada Revenue Meter approval
- Multiple CT Input Options compatible with any CT: 5A/1A, 333mV, Flexible Rogowski Coil, 80/100/200mA.
- 4 Channel current input including neutral current measurement.
- Residual current measurement available.
- 10-690Vac direct voltage input, fits all voltage rating system with one model.
- RS-485 port built-in with Modbus-RTU and BACnet-MSTP for integration with most systems
- Standard Din-rail mount for ease-of-installation.
- Compatible with both 50Hz and 60Hz systems.
- Built-in energy pulse output and alarm output.
- Optional relay output for alarm and remote control.

ACUENERGY.COM/ACUREV-1310
4 CHANNEL CT INPUT
Accurately measure neutral current with 4th CT and provide residual current measurement.

AUTO PHASE-CHECK
Designed to automatically check most common wiring mistakes such as CT direction, voltage and current phase alignment.

SUPPORTS ALL ELECTRICAL SYSTEMS
Three phase three wire (3P3W), three phase four wire (3P4W), single phase three wire (1P3W two element), single phase two wire (1P2W one element) and more.

ACUREV 1310 SERIES MODELS

<table>
<thead>
<tr>
<th></th>
<th>1311</th>
<th>1312</th>
<th>1313</th>
<th>1314</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>DIN-Rail mounted real-time energy monitoring</td>
<td>DIN-Rail mounted real-time power and energy monitoring</td>
<td>DIN-Rail mounted real-time bi-directional power and energy monitoring</td>
<td>DIN-Rail mounted real-time multifunction monitoring with neutral current measurement and calculated residual current</td>
</tr>
<tr>
<td>Current Input</td>
<td>5A/1A: Field-Configurable 5A or 1A Current Transformer Input 333mV: 333mV Current Transformer Input RCT: Flexible Rogowski Coil Current Transformer Input 80/100/200mA: Field Configurable 80mA, 100mA or 200mA Current Transformer Input</td>
<td>One relay output for alarm and remote control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I/O Options</td>
<td>One relay output for alarm and remote control</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NEMA4X RATED WALL MOUNT ENCLOSURE FOR ACUREV 1310 SERIES
The AcuRev1310 enclosure (AcuRev 1310-ENC) offers a mounting option for AcuRev1310 Series energy meters that helps protect from tampering and the elements.
THREE-PHASE POWER METER

Three-Phase power and energy meters offering a low-cost solution for reliable power metering. The EV300 series offers bi-directional energy metering with utility revenue grade accuracy in a compact panel-mountable meter.

ACCUENERGY.COM/EV300

KEY FEATURES

- Bi-directional Energy Metering.
- Utility Revenue Grade Accuracy.
- Field Configurable 5A/1A CT Input.
- Compatible with both 50Hz and 60Hz system.
- RS485 port Built-in with Modbus-RTU.
- Standard Panel Mount 96mm DIN- Direct Retrofit.
- Switch Status Monitoring and Controlling.
- Energy Pulse Output.
- 4-20mA Analog Transducer Output.
- Lowest Cost in the Same Class Guaranteed.
VOLTAGE
Measuring from 10V to 230/400V directly that works with any voltage rating system. Potential Transformer ratio configuration supported.

CURRENT
5A and 1A CT input field-configurable that suits any industrial current transformer.

FREQUENCY
Automatically adapt to 50Hz and 60Hz system without compromising the accuracy, which simplify design and eliminate international OEM frequency issues.

EV300 SERIES MODELS

<table>
<thead>
<tr>
<th></th>
<th>EV387</th>
<th>EV390</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Panel-Mounted Economical kWh Metering</td>
<td>Economical Three-Phase Panel Monitoring</td>
</tr>
<tr>
<td>LCD Display</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Digital Input</td>
<td>2 Digital Inputs</td>
<td>•</td>
</tr>
<tr>
<td>Additional I/O Functions Available</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>
MULTI-CIRCUIT POWER & ENERGY METER

AcuRev 2000 is a series of multi-circuit power and energy meters that offer revenue-grade accuracy and are engineered for multi-tenant / high-density electrical metering. Offering built-in data logging capabilities, multi-tariff time-of-use functionality, power quality metering, and capacity for up to 18 single-phase circuits or 6 three-phase circuits.

KEY FEATURES

18 channels for 18 single phase or 6 three phase circuits.

Revenue grade standard ANSI C12.20 class 0.5 and IEC 62053-22 class 0.5s.

External CTs for retrofit applications.

Optional direct current input to 80A for new installation.

Built-in MODBUS RTU via RS485 for integration.

Optional Ethernet and WiFi communication with built-in HTTPs Webserver

Built-in data logging for historical recording.

Over/under limit alarms for demand control.

4 Programmable tariff periods with 12 independent seasons, 14 schedules, and 10 year holiday configuration.
DATA LOGGING
All monitored parameters such as the individual branch circuit consumption and demand along with I/O integrated units can be recorded for historical data logging and analysis on the meters non-volatile memory.

TIME-OF-USE
AcuRev 2000 series meters features Time-of-Use functionality allowing users to segregate energy consumption to parallel utility tariffs in up to four different tariffs schedules, 12 seasons and 14 schedules. Ideal for sub metering where TOU or tariff-based rates are applied for all connected individual circuits.

POWER QUALITY
AcuRev 2020 meters provide power quality parameters such as voltage and current THD, individual voltage and current harmonics up to 31st order, voltage crest factor, current K factor, voltage and current unbalance all monitored in real time per branch circuit and available for data logging.

ACUREV 2000 SERIES MODELS

<table>
<thead>
<tr>
<th></th>
<th>1EM</th>
<th>2EM</th>
<th>1DM</th>
<th>2DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Retrofit Multi-Tenant Submetering</td>
<td>Branch Circuit Monitoring</td>
<td>New distribution panel with up to 80A circuits per phase</td>
<td>New distribution panel with up to 80A circuits per phase</td>
</tr>
<tr>
<td>Number of Single Phase Hot Circuits Monitored</td>
<td>9</td>
<td>18</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Number of Three Phase Circuits Monitored</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Additional CTs Required</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>CT Input</td>
<td>Via 333mV CTs or Rogowski Coil CT</td>
<td>Via 333mV CTs or Rogowski Coil CT</td>
<td>Direct Current Input</td>
<td>Direct Current Input</td>
</tr>
</tbody>
</table>
DC POWER & ENERGY METER

The AcuDC 240 series of DC power and energy meters are designed for monitoring DC consumption and generation in applications like renewable energy. The AcuDC 240 is a capable metering device able to read voltage, current, power, energy and ampere-hour.

ACCUENERGY.COM/ACUDC-240

KEY FEATURES

- Built-in three-line LCD display.
- Optional MODBUS RTU communications.
- Monitor and control power switches.
- Standard 72x72mm size allows for drawer type panel installation.
- Accessible with SCADA, PLC systems.
- Onboard datalogging provides historical logging of all DC metering parameters for analysis.
- Built-in hall effect sensor power supply (+/-15Vdc) for ease of measuring with hall effect sensor.
- Optional digital input and output, analog and relay output I/O expansions.
SOLAR ARRAYS
Monitor the power and energy produced directly from the solar array before the inverter for the most accurate analysis of solar production.

VEHICLE CHARGING
Audit and observe the electrical consumption of recharging stations or individual EV motors from a charge station in real time, as an accumulated total, and with historical data logging.

WIND TURBINES
Meter the production and effectiveness of wind generated energy before being sent into the grid, and integrate with existing systems through Modbus RTU.

ACUDEC 240 SERIES MODELS

<table>
<thead>
<tr>
<th>Application</th>
<th>AcuDC 241</th>
<th>AcuDC 242</th>
<th>AcuDC 243</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metering</td>
<td>Meter integration and monitoring of DC voltage</td>
<td>Meter integration and monitoring of DC current</td>
<td>All DC monitoring and metering applications</td>
</tr>
<tr>
<td>Metering</td>
<td>Voltage</td>
<td>Current</td>
<td>Voltage, Current, Power, Energy, Ampere-Hour</td>
</tr>
<tr>
<td>I/O Modules Available</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Data Logging</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional built-in MODBUS RTU</td>
</tr>
<tr>
<td>Communications</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional built-in MODBUS RTU</td>
</tr>
</tbody>
</table>

ACUDEC 240 SERIES DIN RAIL MOUNTING ADAPTER
AcuDC 240 Series DIN Rails adapter (DC-DIN) provide easy installation of panel-mount AcuDC 240 series meter on DIN rail in all models and IO options.
EASY INSTALL PANEL METER

Cut down on costly installation with these pre-configured and pre-installed panel metering systems. The AcuPanel series also features some of Accuenergy’s most powerful meters including the Acuvim II and Acuvim L series, all enclosed in either a NEMA 4 or NEMA 4X enclosure for versatile installation options.

ACCUENERGY.COM/ACUPANEL

KEY FEATURES

Factory pre-wired for fast, reliable installation.

Factory pre-configuration eliminates meter programming on-site.

Required accessory components are all pre-installed.

Self-powered panel does not require separate power supply.

Durable enclosures provide high tolerance for external force with well protection.

Available metering options include the Acuvim II series and Acuvim L series.

Housed in either a NEMA 4 rated industrial steel panel, or NEMA 4X rated polycarbonate panel for either indoor or outdoor implementation.

ACU CLOUD
CLOUD BASED METERING
CLEAN FACTORY WIRING
Tight, reliable and tested factory installed connections and components provide for a more reliable error-free install.

COMPONENTS INCLUDED
Shorting blocks for CTs and fused terminal blocks for voltage connections pre-installed, color-coded and labelled.

PRE-CUT ENCLOSURE
Two pluggable pre-cut holes allow wires to be fed through the panel without any modification.

ACUPANEL SERIES MODELS

<table>
<thead>
<tr>
<th></th>
<th>AcuPanel 9104</th>
<th>AcuPanel 9104X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Industrial Strength indoor plug n' play installation where highly secure/durable steel casing is needed.</td>
<td>Weather resistant plug n' play retrofit installation where weather proof enclosures are necessary.</td>
</tr>
<tr>
<td>NEMA Rating</td>
<td>NEMA 4</td>
<td>NEMA 4X</td>
</tr>
<tr>
<td>Suitable for Indoor Use</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Suitable for Outdoor Use</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Pre-Configured</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Pre-Wired</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Dimensions</td>
<td>10&quot; x 13.52&quot; x 8.68&quot; (254 x 324 x 220.5 mm)</td>
<td>7.88&quot; x 11.81&quot; x 7.34&quot; (200 x 300 x 186.5 mm)</td>
</tr>
</tbody>
</table>
ADVANCED DATA ACQUISITION

The Accuenergy’s AcuLink 810 is a data acquisition gateway and server designed to collect data meters and sensors and distribute them to various energy management systems. Energy and sensor data are available to be stored locally or transferred to remote servers and controllers via IP-based network.

DATA COLLECTION

AcuLink polls and logs data in user-defined interval from downstream devices. All data logs are time-stamped and store in onboard memory that are available to be downloaded from webpage or posted to remote server.

Data posting/pushing is available in HTTP, HTTPs, FTP in CSV or JSON format via Ethernet RJ45 port or WiFi network. External cellular modem can be connected to enable data post via cellular network.

- 32 Modbus RTU devices via RS485 port
- Additional 32 Modbus-RTU devices via USB port
- 100 Modbus-TCP/IP devices via network
- 8 Digital Inputs for pulse counter

EMBEDDED WEB SERVER

Access real-time and datalogs from connected devices with AcuLink 810 web interface for an intermediate view of all collected devices with summary details, setup, alarms, and configurable upload channels.

- Web-server accessible via ethernet or WiFi
- SSL and TLS1.2 compliant with enhanced cybersecurity protection
- Access each devices real-time measurement reading
- Configure communication for downstream devices and upload channels
- Over/Under alarm monitoring for connected devices
- No software required – all configurations are available in webpages
COMMUNICATION CHANNELS AND INTEGRATION

The AcuLink 810 has wide range of compatibility with existing software systems and control systems.

- Protocols supported: HTTP, HTTPs, FTP, sFTP, SMTP, NTP
- Log file format supported: CSV and JSON
- Easily integrate with any energy management system, billing software, efficiency analysis services.
- Support Modbus gateway function that allows all RTU devices to be polled by remote Modbus master directly
- Dual RJ45 ethernet ports and WiFi connection enables simply connection to network and secure separate network connection
- USB: USB expansion port, available for serial converter to expand the communication channel

KEY FEATURES & BENEFITS

- Ethernet Gateway for Modbus RS485 and Digital Output Devices
- Access Energy Information Remotely via Web Server, or Push to IP-based Master Devices or Software
- Data Acquisition and Logging with 8GB On-Board Memory
- Embedded Web-server for Real-Time Data and Easy Configurations
- Controller/Master System can Poll Data from all RTU Devices via Modbus-TCP/IP Protocol
- Dual Ethernet RJ45 Port and WiFi Communication Channels
- Enhanced Cybersecurity for Critical Infrastructure Deployment
- Compact DIN Rail Mount Design
- Track Energy Usage and Peak Demand
- Quick and Simple software-free setup
APPLICATIONS

AcuLink 810 is an adaptable and integral tool in data collection enabling user to see a more complete picture in essential power and energy applications such as:

- Building Automation Systems
- Energy Management Systems
- SCADA Systems
- Measurement & Verification
- Remote access energy information
- Energy Audits
- Facility Monitoring
- Campus Monitoring
- Sub Metering
- Performance contracts and Benchmarking
- Demand Response
- LEED / Energy Star Certification
- Cost Allocation
WIRELESS RS485 NETWORK

The AcuMesh networking solution is capable of connecting RS485 enabled devices including meters, sensors, gateways, PLCs, and more, into a seamless wireless network. Offering a cost-effective non-intrusive installation requiring no additional communications wiring.

KEY FEATURES

- Devices are connected automatically on power up without configuration or software.
- Compatible with devices running Modbus-RTU via RS485 port, e.g. Modbus-RTU, BACnet, etc.
- 900MHz and 868MHz frequency band available in most countries.
- Highly secure communication with 128 bit Advanced Encryption Standard (AES).
- Advance configuration available for complex network setup with free software.
- Communicate wirelessly between meters, and any devices with RS485 running any protocol within a building or campus.
- Field upgradable firmware.
- Long-range communication: 1000 ft (305m) indoor / 4 Miles (6.5km) outdoor in a single hop.

ACCUENERGY.COM/ACUMESH
ACUMESH WIRELESS RS485 NETWORK

The AcuMesh wireless RS485 network solution eliminates the need for RS485 communication wiring. Devices can directly connect to an AcuMesh transceiver, and the job is done. The AcuMesh transceiver transparently runs with any protocol and transmits data and commands wirelessly within a network.
CLOUD-BASED ENERGY METERING PLATFORM

The AcuCloud is a cloud-based facility metering platform that provides users access to real-time and historical data from power and energy meters. The data is available to view, download, forward, analyze and report.

KEY FEATURES

Seamless integration with all Accuenergy meters such as Acuvim II series three phase power meter and AcuRev 2000 series multi-channel energy meter, and all other meters via AcuLink 810 directly.

Designed for energy professionals, Energy Saving and efficiency companies facility manager and building energy managers who are looking for professional and user friendly software to get the job done effectively.

Variety of tools designed for real time energy monitoring, measurement and verification, energy usage trend, demand monitoring and analysis, heatmaps and energy portfolio analysis.
METERING DATA STORAGE
AcuCloud stores metering data such as per phase and system voltage, current, power, energy, power factor, demand and pulses in 5-minutes interval. Provide users unparalleled granular level into historical metering data.

DATA DOWNLOAD
Users can download and export historical metering data in CSV format for further offline analysis.

DATA FORWARD + INTEGRATION
Metering data has no value without analysis from great software. With AcuCloud, user can forward all metering data to your or other 3rd party software for analysis, reporting, billing, energy efficiency studies, measurement and verification projects. AcuCloud support HTTP, HTTPS, FTP protocols with CSV and JSON data format.

ALERTS
We understand you want to be notified when certain data reaches its threshold or when meter is offline. AcuCloud offers email alerts to be triggered based on conditions set by the user.

REPORTS
AcuCloud offers the ability to download and/or email reports direct to your colleagues for collaborative analysis and insightful decision making. You can send all or select report dashboards. These reports cover key energy management areas such as Facility Energy Consumption Trend Analysis, Top Consuming Meter Points, Deployment, Meter Point Energy Consumption Trend Analysis, Meter Point Operations Analyzer and Meter Point Active Power & Weekdays Analysis.

USER MANAGEMENT
AcuCloud offers various user access levels for your organization’s data. The default access level include facility, admin, manager and view-only.

DATA ANALYTICS
AcuCloud offers quick and simple data analytics tools such as trending, energy profile analysis and comparison, energy usage trends, heatmaps, demand analysis, real-time data trend and comparison, measurement and verification and etc.
ACUCLOUD INTEGRATION EXTENSIONS:

**DASHBOARD**
Configurable widgets allow for monitoring measurements, metrics, and savings.

**TRENDING ANALYTICS**
Continually learning and profiling your power usage giving users the data they need to identify irregularities.

**MEASUREMENT AND VERIFICATION**
An advanced and effective alternative to conventional spreadsheets. Track energy conservation measures, calculate average consumption, and more.

**TARIFF ANALYTICS**
Offering a quick way to assess the expected savings when negotiating new energy contracts with utilities. Enter proposed tariffs and our tool calculates what you would have been paid over the past 12 months.
**MONITOR TENANT KILOWATT-HOUR PROFILES**

- Profiling the energy usage for each tenant group
- Provide tenants with accounts to view real-time energy consumption and historical energy consumption trends and profiles
- Increase awareness with tenant consumption profiles and compare against building average

**TENANT BILLING MANAGEMENT**

- Manage individual tenant bill with different billing
- Process different billing structures
- Generate bill for virtual meters that are grouped from multiple submeters for internal rebilling or cost allocations
- AcuBilling creates bills based on customizable rate structure and formulas
SIMPLICITY OF INSTALLATION

Providing the ultimate ease-of-integration this high specification line of flexible AC current transformers for power metering, power quality and general use are at their best where space is limited.

ACUCTION.COM/ACUCT-FLEX

ACUCTION FLEX SERIES OPTIONS

<table>
<thead>
<tr>
<th></th>
<th>RCT16</th>
<th>RCT24</th>
<th>RCT36</th>
<th>RCT47</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Range</td>
<td>5A - 50000A</td>
<td>5A - 50000A</td>
<td>5A - 50000A</td>
<td>5A - 50000A</td>
</tr>
<tr>
<td>Output Option</td>
<td>Output to Specified RCT input</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Window Size</td>
<td>4.17” (106mm)</td>
<td>7.01” (178mm)</td>
<td>10.67” (271mm)</td>
<td>14.53” (369mm)</td>
</tr>
<tr>
<td>Length</td>
<td>15.75” (400mm)</td>
<td>23.62” (600mm)</td>
<td>35.43” (900mm)</td>
<td>47.24” (1200mm)</td>
</tr>
<tr>
<td>Accuracy</td>
<td>0.5% Combined with Acuvim II Series at Any Point</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard / Certifications</td>
<td></td>
<td></td>
<td>UL Recognized</td>
<td></td>
</tr>
</tbody>
</table>

KEY FEATURES

High accuracy for demanding applications.
Wide frequency range means excellent choice for harmonics and power quality.
Wide current input range 5A - 50,000A AC.
Choice of 16”, 24”, 36” or 47” length.
No additional power supply needed when used with Acuvim II Series meters.
4 STANDARD LENGTHS
We offer four lengths of coil, 16", 24", 36" and 47". Custom lengths available upon request.

FLEXIBLE STYLE CT
Allows Rope-like coil to be fit into any limited space where regular CTs cannot be used.

WIDE CURRENT SENSING
Measure current from 5A to 50,000A on each standard coil. Higher current range available upon request.

WIDE FREQUENCY RESPONSE RANGE
Standard frequency response range 10 Hz - 20kHz. Higher frequency ranges available upon request.

STANDARD & CUSTOM OUTPUT
Multiple options of output ratio such as: 100mV/1000A, 40mV/1000A, 25mV/1000A, 10mV/1000A.

HIGH ACCURACY & LINEARITY
Across the entire range of measurement the accuracy is 0.5%.
FLEXIBILITY FOR ANY SYSTEM

This plug-n-play solution can be integrated with almost any power meter and equipment. Individual CT ratios can be configured for each channel. Compatible with any single or three phase application with different current ratings.

ACCUENERGY.COM/ACUCT-RIK

KEY FEATURES

Seven field-configurable CT ratios: 500A, 1kA, 2.5kA, 5kA, 10kA, 25kA, 50kA.

Output types include 0-5A, 0-1A, 0-333mV, 4-20mA, 0-20mA, 0-5V, 0-10V.

0-1A Output Relay Class (5P20)

Individual CT ratios can be configured for each channel. Works in any single phase application with different current ratings.

Works in both 50Hz and 60Hz systems.

Choice of 16”, 24”, 36” or 47” length.
HIGH ACCURACY SPLIT CORE CTS

High-accuracy split core current transformers with a unique press-to-open hinged design and current input range from 5A to 5000A AC. AcuCT R also offers revenue grade accuracy for billing applications.

ACUCTION.COM/ACUCT-R

KEY FEATURES

5A - 5000A AC current input range.

Revenue grade accuracy meets IEC 60044-1 Class 0.5s.

UL listed for XOBA UL2808 standard, CSA C22.2 No. 61010-1.

Multiple voltage or current secondary output options including 5A and 333mV.

Multiple mounting options with included accessories, and multiple window shapes and sizes available.

ACUCT R SERIES OPTIONS

<table>
<thead>
<tr>
<th></th>
<th>AcuCT-075R</th>
<th>AcuCT-100R</th>
<th>AcuCT-125R</th>
<th>AcuCT-200R</th>
<th>AcuCT-3135R</th>
<th>AcuCT-4161R</th>
<th>AcuCT-5170R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Range</td>
<td>1A - 150A</td>
<td>5A - 250A</td>
<td>5A - 400A</td>
<td>5A - 1000A</td>
<td>5A - 1500A</td>
<td>5A - 5000A</td>
<td>5A - 5000A</td>
</tr>
<tr>
<td>Output Option</td>
<td>333mV, 80mA, 100mA, 200mA</td>
<td>1A, 333mV, 80mA, 100mA, 200mA</td>
<td>1A, 333mV, 80mA, 100mA, 200mA</td>
<td>1A, 1A, 333mV, 80mA, 100mA, 200mA</td>
<td>5A, 1A, 333mV, 80mA, 100mA, 200mA</td>
<td>5A, 1A, 333mV, 80mA, 100mA, 200mA</td>
<td>5A, 1A, 333mV, 80mA, 100mA, 200mA</td>
</tr>
<tr>
<td>Window Size</td>
<td>0.75” x 0.75” (19.5 x 19.5 mm)</td>
<td>1” x 1” (25 x 25 mm)</td>
<td>1.25” x 1.25’’ (32 x 32 mm)</td>
<td>2” x 2” (51 x 51 mm)</td>
<td>3.1” x 3.5” (80 x 90 mm)</td>
<td>4.1” x 6.1” (105 x 155 mm)</td>
<td>5.1” x 7” (130 x 180 mm)</td>
</tr>
<tr>
<td>Exterior Dimensions</td>
<td>2.3” x 2.3” x 0.9” (58 x 58 x 22 mm)</td>
<td>2.6” x 2.6” x 0.9” (65 x 65 x 22 mm)</td>
<td>3.2” x 3.2” x 0.9” (82 x 82 x 22 mm)</td>
<td>4.4” x 4.4” x 1.25” (111 x 111 x 32 mm)</td>
<td>5.7” x 6.1” x 1.25” (144 x 154 x 32 mm)</td>
<td>7.3” x 9.3” x 1.8” (185 x 235 x 45 mm)</td>
<td>8.3” x 10.2” x 1.8” (210 x 260 x 45 mm)</td>
</tr>
<tr>
<td>Accuracy</td>
<td>IEC 60044-1 0.5s class</td>
<td>IEC 60044-1 0.5s class</td>
<td>IEC 60044-1 0.5s class</td>
<td>IEC 60044-1 0.5s class</td>
<td>IEC 60044-1 0.5s class</td>
<td>IEC 60044-1 0.5s class</td>
<td>IEC 60044-1 0.5s class</td>
</tr>
</tbody>
</table>
AKE FEATURES

Current transformers offering a conventional split core form factor.

Safe mV secondary output.

0.5% accuracy from 10-120% of rated current.

20A - 5000A AC current input range.

UL recognized.

ACUCT MV SERIES OPTIONS

<table>
<thead>
<tr>
<th></th>
<th>AcuCT-075</th>
<th>AcuCT-125</th>
<th>AcuCT-200</th>
<th>AcuCT-3050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Range</td>
<td>10A - 200A</td>
<td>30A - 600A</td>
<td>60A - 1500A</td>
<td>40A - 5000A</td>
</tr>
<tr>
<td>Rated Option</td>
<td></td>
<td></td>
<td>333mV</td>
<td></td>
</tr>
<tr>
<td>Window Size</td>
<td>0.75&quot; x 0.75&quot; (19.1 x 19.1 mm)</td>
<td>1.25&quot; x 1.25&quot; (31.8 x 31.8 mm)</td>
<td>2&quot; x 2&quot; (50.8 x 50.8 mm)</td>
<td>3&quot; x 5&quot; (76.2 x 127 mm)</td>
</tr>
<tr>
<td>Exterior Dimensions</td>
<td>2&quot; x 2.098&quot; x 0.669&quot; (50.8 x 53.3 x 17 mm)</td>
<td>3.248&quot; x 3.35&quot; x 1.025&quot; (82.5 x 85.1 x 26 mm)</td>
<td>4.764&quot; x 5&quot; x 1.81&quot; (121 x 127 x 30 mm)</td>
<td>5.748&quot; x 7.5&quot; x 1.402&quot; (146 x 190.5 x 35.6 mm)</td>
</tr>
<tr>
<td>Accuracy</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Standard / Certifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ACCUENERGY.COM/ACUCT-MV
INDUSTRIAL STANDARD 5A

Light-weight, compact split core 5A current transformers. High accuracy CTs available in a range of sizes with input ranges from 5A to 5000A AC, the AcuCT 5A offers specialized mounting clips and tension screws for ideal installation.

ACU CT 5A SERIES OPTIONS

<table>
<thead>
<tr>
<th></th>
<th>AcuCT-0812</th>
<th>AcuCT-2031</th>
<th>AcuCT-3147</th>
<th>AcuCT-3163</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Range</td>
<td>5A - 400A</td>
<td>5A - 1000A</td>
<td>5A - 1600A</td>
<td>5A - 5000A</td>
</tr>
<tr>
<td>Output Option</td>
<td>5A, 1A</td>
<td>5A, 1A</td>
<td>5A, 1A</td>
<td>5A, 1A</td>
</tr>
<tr>
<td>Window Size</td>
<td>0.83&quot; x 1.22&quot; (21 x 31 mm)</td>
<td>1.97&quot; x 3.15&quot; (50 x 80 mm)</td>
<td>3.15&quot; x 4.72&quot; (80 x 120 mm)</td>
<td>3.15&quot; x 6.3&quot; (80 x 160 mm)</td>
</tr>
<tr>
<td>Exterior Dimensions</td>
<td>3.5&quot; x 4.13&quot; x 1.57&quot; (89 x 105 x 40 mm)</td>
<td>4.89&quot; x 5.71&quot; x 1.97&quot; (114 x 145 x 50 mm)</td>
<td>5.67&quot; x 7.28&quot; x 1.97&quot; (144 x 185 x 50 mm)</td>
<td>6.93&quot; x 9.72&quot; x 2.76&quot; (176 x 247 x 70 mm)</td>
</tr>
<tr>
<td>Accuracy</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Standard /</td>
<td></td>
<td></td>
<td>UR, CE, RoHS</td>
<td></td>
</tr>
<tr>
<td>Certifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

KEY FEATURES

0.5% accuracy from 10%-120% of rated current.
100A to 6000A measurement range.
Industrial standard 5A secondary output.
Optional 1A output.
Accessory kits included for mounting in multiple locations.
UL recognized.
KEY FEATURES

Quick & simple install with hinged clip.
Safe mV secondary output.
5A - 630A AC current input range.
0.5% accuracy from 10-120% of rated current.
UL recognized.

COMPACT HINGED CTS

Compact, light-weight split core current transformers designed for installation on branch circuits within an electrical panel. The AcuCT Hinged series is simple to install allowing for quick deployment in demanding applications.

ACUCT HINGED SERIES OPTIONS

<table>
<thead>
<tr>
<th></th>
<th>AcuCT-H040</th>
<th>AcuCT-H063</th>
<th>AcuCT-H100</th>
<th>AcuCT-H138</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input Range</strong></td>
<td>5A - 75A</td>
<td>5A - 150A</td>
<td>5A - 250A</td>
<td>10A - 630A</td>
</tr>
<tr>
<td><strong>Typical Input</strong></td>
<td>20A, 30A, 40A, 50A, 60A</td>
<td>50A, 100A, 150A</td>
<td>100A, 120A, 200A, 250A</td>
<td>200A, 400A, 600A</td>
</tr>
<tr>
<td><strong>Rated Output</strong></td>
<td></td>
<td>333mV</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Window Diameter</strong></td>
<td>0.4” (10.2 mm)</td>
<td>0.63” (16 mm)</td>
<td>1” (25.4 mm)</td>
<td>1.38” (35 mm)</td>
</tr>
<tr>
<td><strong>Exterior Dimensions</strong></td>
<td>1.16” x 1.66” x 1.04” (29.4 x 41.7 x 26.4 mm)</td>
<td>1.42” x 2.09” x 1.2” (36 x 53 x 30.5 mm)</td>
<td>2” x 2.76” x 1.52” (50.8 x 70.1 x 38.6 mm)</td>
<td>2.56” x 3.27” x 1.57” (65 x 83 x 40 mm)</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td></td>
<td></td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td><strong>Standard / Certifications</strong></td>
<td></td>
<td></td>
<td>UR, CE, RoHS</td>
<td></td>
</tr>
</tbody>
</table>
HIGH ACCURACY SOLID CORE CTS

The Accuenergy solid core CTs are compact and low-cost current transformers with high accuracy. This series of CTs is designed specifically for integration into products which require exceptionally accurate signal transformation.

KEY FEATURES

- **<1000V Rated Voltage**
- **0-200A(r.m.s) Current Input**
- **0-5A(r.m.s) Current Output**
- **≤3.75VA Burden**
- **1.2In RF**
- **50Hz-60Hz Rated Frequency**
- **≤±1.0% Ratio Error**
- **≤60° Phase Error**
- **5-120% Measurement Range**
- **500V/100MΩ min Insulation resistance**
- **<90% Humidity**
- **Terminal Output Form Factor**
- **Lightweight, 177g Weight**
- **-25°C+70°C Operating Temperature**
- **-40°C+85°C Storage Temperature**

- **0.15 class Accuracy**
- **10 kV Impulse Insulation (BIL)**
- **50 MΩ Insulation Resistance**
- **UL94V-0 Enclosure Plastic**
- **18 AWG UL 1015 Lead Wire**
- **25°C/80% C/80%~90% Temperature & Humidity**
- **cULus Approved**
- **Measurement Canada Approved**