PowerHawk® Smart Meters

4000 Series Energy Management Meters

Triacta's PowerHawk® 4000 series of smart energy management meters are used to meter or monitor remote loads in multi-tenant buildings, commercial, industrial or institutional spaces. They can be used on their own or seamlessly integrated with existing Building Automation Systems, Internet Protocol (IP) based IT servers, and business applications such as Energy Management Systems.

Triacta meters are built using standard industry protocols and ship with remotely upgradable firmware — making the 4000 series a future-proof solution that will perform for years to come. Reliable, full-featured, and fully networkable, PowerHawk meters can be quickly installed for both new construction and retrofits.

PowerHawk 4X06 Multi-point Meter

The PowerHawk® 4X06 is designed to meter or monitor branch offices, remote loads, and other low density applications. The PowerHawk 4X06 provides six meter elements that can be configured for 1, 2 (network), and 3 element meters.

PowerHawk 4X24 High Density Meter

The PowerHawk® 4X24 is a high density energy management meter designed for multi-tenant buildings, medium-sized retail and institutional spaces, or any other high density application. The PowerHawk 4X24 meter provides twenty-four meter elements that can be configured for 1, 2 (network), and 3 element meters.

√ CDFA certified, Measurement Canada approved, and NYPSC listed

√ Measures Wh delivered & received, VARh delivered & received, VAh, Vrms, Irms

√ Building Automation Protocols Built-in: MODBUS® TCP, MODBUS RTU over RS-485 and BACnet® IP

√ Internet Protocol: TCP/IP, DHCP, HTTP, PPP, SNTP, FTP

√ Datalogging: Non-volatile flash memory unaffected by power outages, stores up to 2.4 years of interval data

√ Remotely upgradable firmware for future protocol support

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PowerHawk 4000 Series Meter Features

- Measures Current (Irms), Voltage (Vrms), Energy (Wh delivered), Energy (Wh received), R. Energy (VARh delivered), R. Energy (VARh received), A. Energy (VAh)
- 2 Pulse inputs to collect data from electric, water and/or gas meters
- Multiple Communications Ports: Ethernet, RS-232, RS-485
- Building Automation protocols: MODBUS® TCP, BACnet®/IP
- Push reporting to an Energy Management System such as Triata's PowerHawk Manager
- Remotely configurable
- Interval and Net Metering

Metering Elements

4X06 Meters
- Electronic solid state device provide up to 6 single phase meters, 3 two phase or 2 three phase meters

4X24 Meters
- Electronic solid state device provide up to 24 single phase meters, 12 two phase or 8 three phase meters

Current Output

4X06 Meters
- 4106 supports 100mA CTs
- 4206 supports split-core 333 mV CT's
- 4306 supports 80 mA output CTs

4X24 Meters
- 4124 supports 100mA CTs
- 4224 supports split-core 333 mV CT's
- 4324 supports 80 mA output CTs

Communications Interfaces

- Single 10/100BASE-T Ethernet Port
- **TCP/IP:** HTTP, FTP, PPP, SNTP, DHCP
- **Building Automation**: MODBUS®-TCP, MODBUS-RTU over RS-485, BACnet® IP
- Communications Header accommodates Wireless Communications Module

Meter Specifications

- Voltage: 120/208V, 120/240V, 240/416V, 277/480V (Higher voltage supported with potential transformers)
- Voltage Tolerance: +/- 10%
- 50Hz and 60Hz models
- Service Type: Single, Poly & 3-Phase + Neutral
- Accuracy: ANSI C12.20 0.5 Accuracy Class
- Measurements: Wh delivered & Received, VARh delivered and received, VAh, Vrms, Irms
- Logged Interval: 1 to 60 minutes
- Operating Temperature: -40 to 70ºC
- Operating Humidity: 0 to 90% non-condensing
- For indoor use only; NEMA4 cabinet available for outdoor applications
- Maximum Altitude: 3000m
- Pollution Degree: 2

13.19 in (33.5 cm)

13.53 in (34.37 cm)

2.48 in (6.3 cm)

Top View

End View

Display
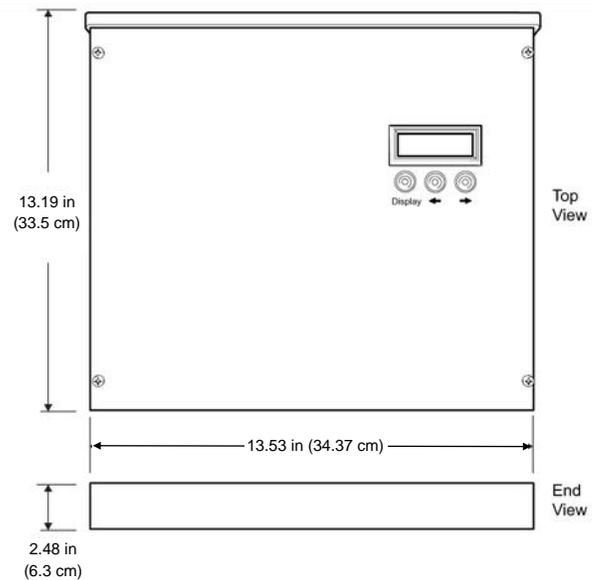
Regulatory Approvals

- **Safety:** UL certified to IEC/EA/UL/CSA - 61010-1, 2nd Edition CSA-C22.2 No. 61010-1-04
- **Emissions (EMC):** FCC Part 15 Class B, ICES-003, IEC6100-4-5
- **Surge power/telephone lines**: ANSI TIA968-A: 2002
- **Accuracy & Billing:** ANSI C12.20 0.5 Class
- **BACnet Testing Laboratories (BTL)**: Product listing — BTLBACnet Smart Actuator (B-SA)

Reporting Capabilities

Datalogging and Format
- Interval config (1 to 60 min)
- Data storage (up to 2.4 years)
- CSV/TR3 file (via FTP push)

AMR Functionality
- PowerHawk Manager AMR
- Scheduled push reporting (FTP)
- Config report schedule (hr, day)
- Data polling (Modbus, BACnet)
- Real-time data viewing (e.g. HTTP)

- On-Board Display: Liquid Crystal with button scroll
- Pulse Inputs: two pulse in terminal blocks (2 wire) compatible with dry form A and solid state form A contacts
- On-Board Memory: Non-volatile flash memory is unaffected by power outages; holds up to 2.4 years of meter data (1 hour intervals) for 20 years
- On-Board real-time clock with battery back-up (holds time up to 10 years)

Meter Configuration and Resource Management

Every Triacta meter ships with meter and resource management software — everything needed to create and manage a metering infrastructure.
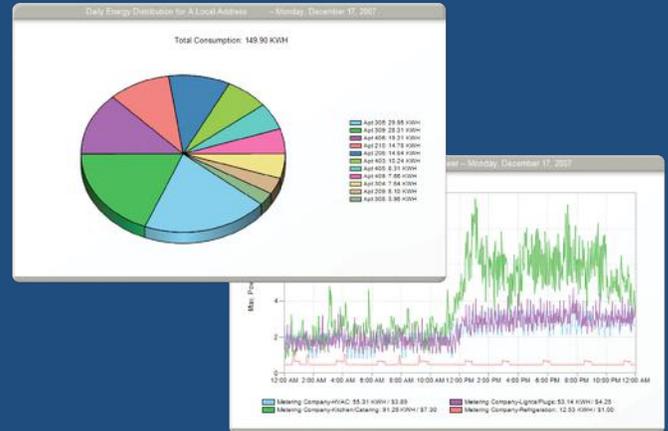
Meter Management

PowerHawk meters can be programmed on site or remotely. Configuration and management is simple and straight-forward. On-site programming can be performed from a PC-based configuration tool. Alternatively, connecting a meter to the Internet can immediately download a pre-programmed meter configuration from Triacta's PowerHawk Manager platform — reducing installation time dramatically for multiple meter deployments.

Once configured, PowerHawk Manager's extensive set of meter management tools allow operators to monitor meter operation and receive notification of extraordinary events.

Resource Management

PowerHawk® Manager is a complete Metered Resource Management System (energy, water, gas and monetizable derivatives such as green house gases) that combines automated data collection, powerful analysis tools and flexible billing capabilities with "cloud-based" software delivery. PowerHawk Manager delivers stakeholders as much or as little information as they need, at the office or remotely — 24/7. And with PowerHawk Manager's live update dashboard, all stakeholders can be kept apprised of critical resource use information in a timely and convenient way, on personal devices or public monitors.

Software as a Service

Most multi-tenant metering systems are managed through onsite meter management systems, proprietary gateways, or dedicated server-based applications. Installing these systems presents obstacles to provisioning, accessibility, flexibility, and management. With PowerHawk Manager Software as a Service (SaaS), there are no distracting set-up issues or deployment costs, no software licensing fees, and no additional hardware to buy.

With PowerHawk Manager, any energy stakeholder can distill meaningful information from electricity, gas, water and BTU meters to pinpoint savings opportunities, create an accurate picture of a building's carbon footprint and identify failing equipment and expensive peak demand charges.

Transform Properties into Intelligent Buildings

The 4000 series meter transforms properties into Intelligent Buildings — bridging the energy information gap by making data visible to all stakeholders via building automation, financial, and energy management systems. It accomplishes this by communicating concurrently with building automation systems over building automation protocols, and with IT systems over IP. With Triacta meters in place, data that was once only available within facilities management is now also accessible to anyone with the need to know via IP systems and IT.

The PowerHawk 4000 series meter transmits data over MODBUS TCP, MODBUS RTU over RS-485, and BACNet/IP connections to form the metering foundation for building automation applications. PowerHawk 4000 meters also incorporates Triacta's advanced IP Push communications technology for communicating metrology and status information to remote servers.
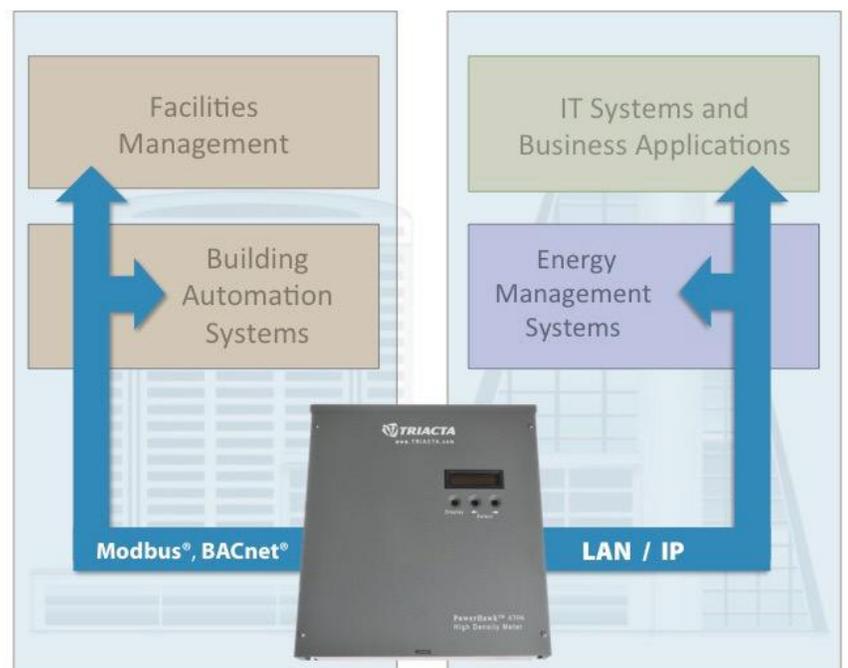
Bridging the Energy Information Gap: Triacta meters seamlessly integrate Building Automation Systems, IT Systems, Business Applications, and Energy Management Systems

PowerHawk 4000 Series Part Matrix

For information related to retail and tiered distributor pricing, please contact your Triacta sales representative.

6 Elements (CTs)

CT Type	Accuracy	Control Voltage	Notes	Product	Part No.
100mA	+/- 0.5%	120V 60Hz	• BACnet® IP, MODBUS® TCP, MODBUS-RTU over RS-485 • No V.90 Modem • Not Sealable • For 5A applications combine with 5A/80mA converters • **All reference voltages are 100V-300V**	PowerHawk 4106/120-60	900-142-01
		240 60Hz		PowerHawk 4106/240-60	900-142-02
		230V 50Hz		PowerHawk 4106/230-50	900-142-03
		277V 60Hz		PowerHawk 4106/277-60	900-142-05
333mV	+/- 0.5%	120V 60Hz		PowerHawk 4206/120-60	900-136-01
		240 60Hz		PowerHawk 4206/240-60	900-136-02
		230V 50Hz		PowerHawk 4206/230-60	900-136-03
		277V 60Hz		PowerHawk 4206/277-60	900-136-05
80mA	+/- 0.5%	120V 60Hz		PowerHawk 4306/120-60	900-137-01
		240 60Hz		PowerHawk 4306/240-60	900-137-02
		230V 50Hz		PowerHawk 4306/230-50	900-137-03
		277V 60Hz		PowerHawk 4306/277-60	900-137-05

24 Elements (CTs)

CT Type	Accuracy	Control Voltage	Notes	Product	Part No.
100mA	+/- 0.5%	120V 60Hz	• BACnet® IP, MODBUS® TCP, MODBUS-RTU over RS-485 • No V.90 Modem • Not Sealable • For 5A applications combine with 5A/80mA converters • **All reference voltages are 100V-300V**	PowerHawk 4124/120-60	900-143-01
		240 60Hz		PowerHawk 4124/240-60	900-143-02
		230V 50Hz		PowerHawk 4124/230-50	900-143-03
		277V 60Hz		PowerHawk 4124/277-60	900-143-05
333mV	+/- 0.5%	120V 60Hz		PowerHawk 4224/120-60	900-138-01
		240 60Hz		PowerHawk 4224/240-60	900-138-02
		230V 50Hz		PowerHawk 4224/230-50	900-138-03
		277V 60Hz		PowerHawk 4224/277-60	900-138-05
80mA	+/- 0.5%	120V 60Hz		PowerHawk 4324/120-60	900-139-01
		240 60Hz		PowerHawk 4324/240-60	900-139-02
		230V 50Hz		PowerHawk 4324/230-50	900-139-03
		277V 60Hz		PowerHawk 4324/277-60	900-139-05

About Triacta

Triacta Power Solutions designs and manufactures advanced metering systems for energy management and tenant billing in multi-unit commercial, institutional and residential applications. Every Triacta meter ships with software that combines meter management, automated data collection, powerful analysis tools and flexible billing capabilities — everything needed to create and manage a metering infrastructure.

Triacta's hardware and software make it possible to monitor hundreds of meter points within a facility in real-time. Triacta's meters can be integrated with existing building management and automation systems or used on their own to form a metering fabric for part of a building, an entire building, or a complete real estate portfolio.

Long known for its high-reliability, revenue-grade, multi-protocol submetering products, Triacta's meters have been deployed by submetering companies, property owners, building system integrators, and local distribution companies since 2003.

More Information

For more information about Triacta's advanced submetering solutions, visit www.triacta.com, email info@triacta.com, or call 1-877-797-4295, 1-613-256-2868 or in the U.S. 1-214-280-2556

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