NEW FRONTIERS IN ENERGY MANAGEMENT

Circuit Level Metering + Big Data

Forensic Energy Analytics Enabled

metering   communications   software

-22%

-28%

-42%

-31%

-18%

New frontiers in energy management

CIRCUITMETER FEATURES AND BENEFITS AT A GLANCE

Put the best-in-market solution to work for your organization.

- **Lower cost.** A cost structure that's a fraction of existing metering systems – deployed throughout your facility right down to the circuit level.
- **Instant, granular data.** Updated real time data is available in the Cloud every two seconds.
- **Breakthrough technology.** Hardware and software deliver significant operational, energy conservation and demand management savings for commercial, industrial, and institutional markets.

Gain complete insight into your energy.

- **Complete electrical metering across your portfolio**, at the circuit level, enabling Forensic Energy Management™
- **Access to data anywhere and everywhere.** Information is delivered through the Cloud for remote energy monitoring.
- **The ability to act.** Data is contextualized through CircuitMeter's platform.
- **Historical and real-time data from all electrical equipment** available to engineers, analysts, accounting, and management. CircuitMeter's platform makes it easy to manage data and develop insight into energy use.

Reduce costs with access to real time circuit-level data.

- **Continuous energy audit.** Granular data is contextualized with software to minimize energy waste, reduce peak demand, and improve operational and equipment efficiency.
- **Major cost savings with conservation and demand programs.** Reduce or eliminate equipment operation when you don't need it. Identify equipment that can be replaced with newer, more efficient technology. Understand where and when peak demand charges are happening – and act to reduce those costs.
- **The ability to maintain with precision.** CircuitMeter makes it possible to benchmark equipment. When energy consumption rises due to malfunction or deterioration, real time notifications to management are issued – providing the ability to instantly address energy drift and high energy consumption.

Breakthrough technology stands alone in the industry – Real time, Circuit level metering & Software that is Affordable.

Forensic Energy Management™

MAKE INFORMED DECISIONS WITH CIRCUITMETER'S ADVANCED ENERGY ANALYTICS DRIVEN BY GRANULAR DATA

CircuitMeter's technology makes your energy visible

- Identify systems running unnecessarily and protect against re-occurrence.
- Provide regular feedback to employees and drive behavioral programs.
- Benchmark power use for all equipment.
- Receive notifications when power exceeds pre-set thresholds.
- Prevent "drift" in building performance by maintaining systems at energy benchmarks.
- Avoid the cost of periodic energy audits that only cover a percentage of your facility.

Detailed Demand Analysis

- Access real time energy demand data at machine and system level.
- Pinpoint makeup of peak demand.
- Target reductions to save on demand charges.
- Reduce disruption and costs associated with slowdown or shutdown.

Precision Maintenance

- Identify and analyze problems as they occur with continuous monitoring of power use and electrical characteristics.
- Effectively target just-in-time maintenance; avoid unscheduled shutdowns or the costs of over-maintenance.

Greenhouse Gas Emissions reporting

- Convert energy data to CO_2e production data.
- Quantify Greenhouse Gases for reduction analysis.

Advanced Energy Metering Applications

- Review energy consumption reporting for any equipment using electricity
- Measure precise electricity consumption in electric vehicle charging stations, manufacturing machinery, energy storage, cleantech generation and water/utility management.

Granular, circuit level data at low cost will generate a continuous stream of operating cost savings.

CONTACT:
info@CircuitMeter.com | 1.888.350.1790

Energy Management Solutions

TAKE ENERGY AND OPERATIONS MANAGEMENT TO NEW LEVELS OF EFFICIENCY AND PERFORMANCE

CircutMeter's technology makes your energy visible:

- Identify systems running unnecessarily and protect against re-occurrence.
- Provide feedback to employees to minimize electrical equipment "hours on".
- Benchmark power use for all equipment.
- Receive notifications when power exceeds pre-set thresholds.

CircuitMeter's energy management solutions make energy use visible, and can identify where energy is wasted. Wasted energy can come from systems powered up when not required, or from operating inefficiently. By identifying where and when this waste is occurring, management can take steps to eliminate or minimize – saving energy and cost, all while improving operational efficiency.

Unnecessary use can come from errors in control system settings that result when changes are made by personnel without full knowledge of a how the original controls strategy and systems were programmed. Fans running too many hours per week, cooling systems working in the winter, heating systems working in the summer – all reflect situations that occur when equipment control systems have setting errors, and staff don't have visibility 24/7. If the errors aren't obvious, they don't get caught.

With CircuitMonitoring™ Platform, Energy Analysts and Operations & Maintenance personnel can access a vast array of graphic tools to virtually "walk through" a facility's complete equipment infrastructure. Energy use on a monthly, weekly, daily or minute by minute basis is available for review.

Unnecessary use is also a result of a lack of care from people that occupy a building or facility – staff that are responsible for powering

on or off everything from lights to copiers to heavy manufacturing equipment. Changing the way occupants use energy can lead to major energy savings – and the detailed usage information can be the key to modifying behavior.

With CircuitMeter, personnel see graphic and numerical summaries of the energy they use and have direct influence over. Information can be broken down to sections of a floor, or an individual production line, on a per shift basis. Over time, a culture can be developed in which energy targets become a part of a group's performance objectives – and people truly care about waste. What you can measure, you can manage.

Inefficient use can have a number of different causes:

- Equipment wear and tear can increase power consumption as motors draw more current i.e. wearing bearings.
- Equipment not properly sized or properly designed in conjunction with the overall

electrical system can experience low Power Factor.
- Equipment with components that fail can go undetected because observable operations continue. Energy efficiency is compromised, while high energy consumption continues for long periods of time.

With CircuitMeter, customers can set benchmarks for every circuit. Custom threshold values can be input to trigger real time email notification alerts. With precise feedback, equipment operating efficiency is maintained. If energy use spikes, the incident is captured in real time and an alert is generated.

CircuitMeter systems provide real time data that can interface with existing control systems, BAS systems, Energy Dashboard Systems and new granular control devices through its API. With granular data feeding into information and control systems, an entire new level of precision and energy efficiency is possible.

When your energy use becomes visible, it becomes manageable.

CONTACT:
info@CircuitMeter.com | 1.888.350.1790

Energy Monitoring and Analytics

Building energy performance is about what happens 24 hours a day. Getting the best results for your facilities is about having the proper data and the right analysis tools. CircuitMeter provides a cost effective solution that collects energy data within your remote facilities directly from each and every energy load... straight from the circuit breaker. Upon gathering this valuable information, it is placed into a safe data center where you have full access from a web-browser through our cloud service.
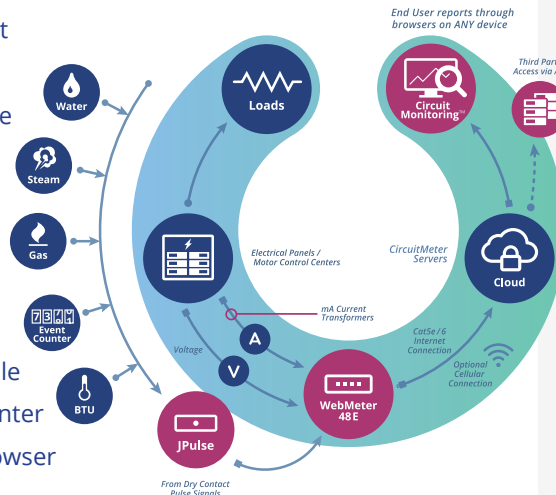
AN INFORMATION FOUNDATION

At the time of installation, just tag each circuit breaker, identifying the facility attributes, asset ID, and equipment type. Our uniquely designed WebMeter48™ will begin gathering your energy data and sending it to our cloud servers — storing real-time data up to 24 hours and aggregating the historical data. You have the ability to view and report on the energy usage of all of your facilities from a head office view, right down to the individual equipment. The real-time data is harnessed with the notification system so that your staff is alerted when needed.

Key Features

WebMeter48™

- WebMeter48™ accommodates 48 ports that can be configured to support 1/2/3 phase from current transformers and pulse data from the JPulse-4™
- WebMeter48E™ can accept pulse inputs from JPulse-4™
- Designed for easy and flexible installation
- Obtains and calculates up to 334 data points for each update, including amps, real power, consumption, power factor, voltage, reactive and apparent power, and more
- Transmits secured UDP data via IP to CircuitMonitoring™ system

CircuitMonitoring™

- System designed to support enterprise-wide portfolio
- An energy monitoring system designed around "Big Data"
- Analyze real-time performance and accurately compare your energy consumption with historical information
- Measure and compare energy consumption of all equipment and facilities that are similar and by their geographic location
- Confirm energy data for each tenant in the facility
- Establish notification rules to manage energy issues and warnings

COMPONENTS OF AN INFORMATION FOUNDATION

1 Data Collection:
- Circuit-level data captured with WebMeter48™
- Transmit data to data center in real time

2 Corporate Management:
- Hierarchical information – from Head-office to the circuit breaker
- For finance and operational personnel

3 Reporting & Notifications:
- Real-time reporting (24 hours)
- Historic data (15 minutes) showing trends and summaries for 10 years
- Unlimited custom reports to fit your requirements
- 24 x 7 continuous energy tracking with email notifications for misbehaving equipment
- Print results or export data to CSV format
- Personalized dashboards

FOR REMOTE FACILITIES:

- Identify and compare equipment across entire portfolio by similar region, equipment type, time or even outside temperatures
- Notify if specific equipment (e.g. AC) has not turned on during warmer climate or specific times
- Detect intrusions by creating notifications that combine sensing lights and motion sensors
- Use the real-time analytics and notifications to minimize the need for site visits
- For multi-tenant sites, easily identify energy use by each tenant and enable tenants to self-monitor their equipment
- Remotely view real-time data of equipment
- Use analytics to assist energy audits and validate saving investment decisions
- Finally, a solution that supports your energy audits, sustainability initiatives, marketing promotions and corporate conservation
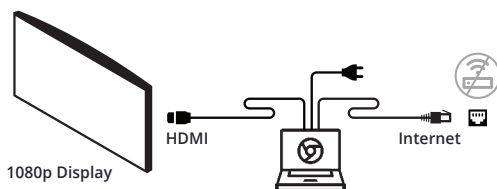
EnergyWindow™

Providing awareness and insight into your facility's energy consumption

EnergyWindow™ provides a way to present CircuitMeter's CircuitMonitoring™ energy dashboard platform via a "lobby-friendly" television display that shows key energy metrics. The software provides an option to view real time data and historical trends in report mode, but also features the ability to operate as *a public information portal*, including displays of your entire organization's energy data or selected elements on publicly located display monitors. This '**TV mode**' display function is in growing demand as a way to publicly display accountability regarding conservation goals.

1080p Display   HDMI   Internet

TV MODE REQUIREMENTS

Display:	1080p resolution (eg. Chromebook)
Power:	110V outet
Connection:	Internet
Cables:	HDMI cable *(from Converter to Display)*

Key features of **EnergyWindow**™
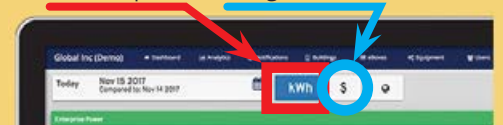

Main View (Widget Mode);
Summary view showing real-time data with comparisons by date range for the Enterprise, Equipment, Energy Hogs and Carbon Footprint

Report Mode;
Detailed view for each section with both live and trending data
- Select to compare current vs. last period; by day, week, month or quarter
- Consumption or Budget view

TV Mode;
Run from URL link with custom programming on a continuous loop designed for a broad audience including detailing your facility's weather, live clock, live X feeds, custom messages, and custom video messages via YouTube URL link

*****SUBJECT TO CHANGE WITHOUT NOTICE*****

Key Differentiators

WHAT SETS OUR REAL TIME ENERGY MONITORING PLATFORM APART

CircuitMonitoring™

- Aggregation of millions of data points providing real time analytics
- Scalable software – from a single metering point to entire portfolios of buildings
- High performance data mining with easily customized dashboards
- Suite of applications – CM DataStudio™, CM PulseStudio™, EnergyWindow™, Peak Profile, Common Area Reporting, Degree Days, Baseline Reporting, Customizable Notifications and more
- EnergyWindow™ TV Mode for real time enterprise visualization
- Unlimited number of users per client account
- Permission based for user access rights
- SSL security access

WebMeter48™ Series

- 48 ports – combination of current and/or pulse
- Accommodates Delta and Wye and combinations of single, poly and 3 phase loads
- Single design supports up to 600Vac and 6000Amps
- Sampling each port at 12,500 samples/sec; Sampling voltage 200,000 samples/sec
- Produces up to 334 data points including amps, voltage, real power, energy consumption, power factor, reactive and apparent power, and operating "time on"
- Storage of 15 minute consumption/generation interval data
- Built-in diagnostics with LCD display information
- Powered from voltage lines
- Single, easily installed unit meeting ESA requirements
- Remote management of WebMeter™ – firmware and configurations
- Meets ANSI 12.20 accuracy requirement and CSA, UL and CE safety standards
- RoHS compliant 50-60 Hz
- Supports Solid/Split Core CTs up to 200A with CAT III and Split Core CT 500A to 6000A with CAT IV. All approved with UL61010-1
- Secondary wire is 18AWG, UL1015, 600V, 105C

Communications & Security

- Full AES-256 Encrypted with SHA-256 hashed authentication
- Firewall does not require any inbound open ports
- Communication from behind corporate firewall
- Internet uses UDP Protocol (small packets and secure)
- Meter can be set up using cellular connectivity
- Low monthly overhead on client's network

API (Application Programming Interface)

- Single connection via API key to all client data
- Standard JSON format
- Retrieval of historical and real time data
- API tool kit (with use case examples)
- Read-Only for high security
- OpenAPI specification (Swagger)

WebMeter-48™ E-Series

SPECIFICATIONS

The WebMeter48E™ is the next generation of affordable intelligent metering for your energy network. The fully enclosed meter is designed to accept voltage and amperage data from single, poly or three phase circuits. Pulse data from third party meters e.g. water, gas, steam, BTU, can be connected using the CircuitMeter JPulse-4™. The WebMeter48E™ accommodates any combination of up to 48 current transformers or pulse inputs to capture granular electrical and non-electrical information. Sampling rates up to 200,000 samples/second, the WebMeter48E™ delivers accuracy at the circuit-level and reports the information every 2 seconds to the CircuitMonitoring™ system providing a full spectrum of real time data. The WebMeter48E™ is a complete energy management metering solution allowing for widespread granular metering for industrial, commercial, institutional and multi-residential installations. At a dramatically lower cost per circuit with easy installation, the WebMeter48E™ is designed for economic deployment across a portfolio of facilities while metering at the individual circuit and equipment level.

GENERAL OVERVIEW

WebMeter48™ Series
- E-Series: UL Listed energy meter

WebMeter48E™ Attributes
- Produces up to 334 data points including amps, voltage, real power, energy consumption, power factor, reactive and apparent power, and operating "time on"
- Standalone energy meter with complete enclosure for mounting adjacent to electrical box
- Meets all UL 61010 standards (UL, CSA, CE)
- Installed as a UL Listed product
- Voltage range up to 600VAC (L-N)
- Can accommodate any combination of single, poly and three phase loads
- Supports up to 48 inputs of any combination of current transformers and/or pulse inputs via the JPulse-4™ supplied by CircuitMeter
- Supports current transformers up to 6000A supplied by CircuitMeter
- All features supported by the CircuitMonitoring™ system
- One year memory @ 15 min intervals for energy consumption and generation when internet is offline
- Rechargeable capacitor maintains clock for 24 hours
- Supports global AC mains voltages 208V, 240V, 380-415V, 480V, 600V

Easy Installation
- Compact one piece installation via four (4) mounting screws
- Pre-punched knockouts on three sides allows for universal mounting
- Spring clip connectors for current transformer secondary wires, voltage wires, and JPulse-4

Connecting to the Internet
- Industry standard RJ45 jack (T586B)
- Fully encrypted UDP protocol
- Cloud software configuration
- Automatic remote updates

Remote Verification for Data Quality
- Auto-retrieve waveform of voltage elements and CT connection
- CircuitMonitoringTM system analyzes CT phase alignment and CT orientation
- CircuitMonitoringTM system remotely corrects installation issues

Supported AC Power Systems
- 3 phase 4 wire 208 Wye/120V (3 Lines + neutral)
- 3 phase 4 wire 380 Wye/230V (3 Lines + neutral)
- 3 phase 4 wire 415 Wye/240V (3 Lines + neutral)
- 3 phase 4 wire 480 Wye/277V (3 Lines + neutral)
- 3 phase 4 wire 600 Wye/347V (3 Lines + neutral)
- 3 phase 3 wire delta 208/380/415/480/600V no neutral
- 1 phase 3 wire 120/240V (a.k.a. split phase) with neutral

All configurations 50 - 60Hz (600V is 60Hz)

CERTIFICATIONS

Safety Standards
- UL 61010-1
- UL 61010-2-030
- CAN/CSA C22.2 No. 61010-1:2012
- CAN/CSA C22.2 No. 61010-2-030-12
- CE
- Hi-pot test: 5.4 KV (5 seconds) 3.6 KV (60 seconds)
- RoHS compliant

Accuracy[1]
- ANSI C12.20 0.2 Accuracy Class

DATA OUTPUTS

Internet Connection:	Cat5e (T586B)
Protocol:	UDP
Display:	2-Line Backlit LCD

WebMeter48™ E-Series
- WebMeter48-208 (208VAC, 3 Phase)
- WebMeter48-240 (240VAC, Split Phase)
- WebMeter48-400 (380-415VAC, 3 Phase)
- WebMeter48-480 (480VAC, 3 Phase)
- WebMeter48-680 (600VAC, 3 Phase)

MECHANICAL & DIMENSIONS

Weight:	640g (1.41 lbs)
Size:	40.94 cm / 16.00 in (L)
	23.16 cm / 9.00 in (W)
	11.27 cm / 4.50 in (D)
Mounting Holes:	35.66 x 17.88 cm
	(14.04 x 7.04 in)

ENVIRONMENTAL

Operating Temp:	-30^{0}C to +70^{0}C
Storage Temp:	-30^{0}C to +70^{0}C
Humidity Range:	10 to 80% non-condensing

VOLTAGE INPUTS

Voltage Range:	240 - 600 VAC (L-N)
Sampling Rate:	200,000 samples/second
Connector Type:	Push-in spring clips

### CURRENT TRANSFORMER INPUTS

Sampling Rate:	12,500 samples/second
# of supported CTs or Pulse	48 – supporting any combination of 1/2/3 phase circuits or JPulse-4 inputs
CT Type:	mA self shorting
Available:	40A – 6000A
Connector Type:	Push-in spring clips

Current transformers from CircuitMeter

Solid Core: CT040, CT100, CT200
Split Core: SP040, SP100, SP200, SP500-1, SP2000-1
Bus Bar – Custom sizes avalable: 3000A to 6000A

Real Time Metering System
WebMeter48E

End User reports through browsers
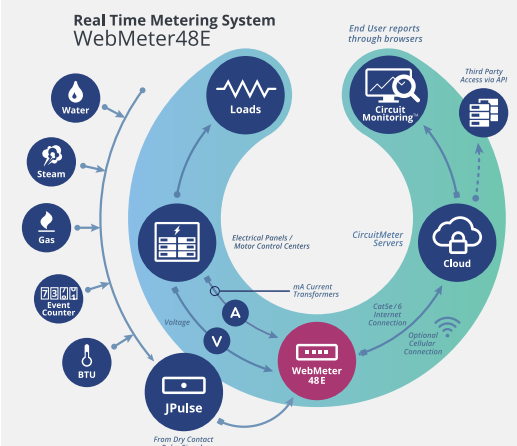
CONTACT:
info@CircuitMeter.com | 1.888.350.1790

VERSION 3.3
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[1] CERTIFICATION PENDING APPROVAL

JPulse-4™
SPECIFICATIONS

CircuitMeter's JPulse-4™ is a uniquely designed pulse counter which is able to count pulses produced by any metering device that supports a standard dry contact output. The pulses are detected by the WebMeter48E™, which sends the pulse information to the CircuitMonitoring™ system in real-time. The JPulse-4™ is designed with both RJ45 and wired outputs and is tightly integrated with the CircuitMonitoring™ system which will automatically convert the pulse signals from measuring water, gas, steam, and even generate an event counter.
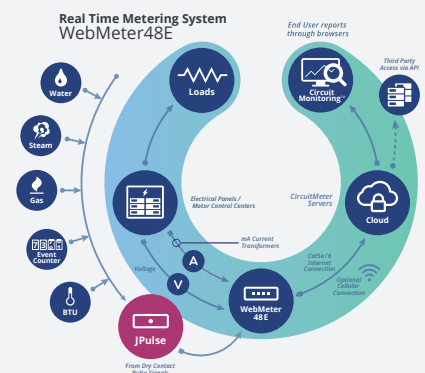
SPECIFICATIONS

Type	3 Wire Dry Contact *(Common, Loop & Pulse)*
Isolation	2500 VAC (High Pot)
Power	6V AC Adapter (Inc.)
Contact Current	10 mA (Maximum)
Pulse Width	100 ms (Minimum)
Update Rate	10 seconds (to Host)
Pulse Generators	1 to 4 monitored
3 Wire Cable	1000 feet (Maximum)

FEATURES
- Active cable break detection
- Active AC power loss detection
- Very low pulse current required

REQUIREMENTS
- WebMeter48E™
- JPulse-4™
- CircuitMonitoring™

GENERAL OVERVIEW
Monitoring Capabilities
Upon configuration, the CircuitMonitoring™ system will remotely reconfigure the port on the WebMeter48E™ to switch to reading pulses (rather than current). This allows for total flexibility within the overall design of the CircuitMeter solution where the WebMeter48E™ is able to sense voltage, current and pulses.

The CircuitMonitoring™ system will generate reports and analytics for:
- Water
- Steam
- Gas
- Event Counter
- BTU
- Plus, any custom measurement(s) from dry contact pulse readings

SAFETY CERTIFICATIONS
Safety Standards
- UL 61010-1
- CAN/CSA C22.2 No. 61010-1
- E113521
- CE

MECHANICAL
The JPulse-4™, which detects industry standard dry contact pulses, utilizes a 3 wire connection (common, loop, and pulse) with the option for 2 wires. The various voltage levels are presented as wired outputs (connected directly to the WebMeter48E™) for pulse detection and interpretation of each pulse is calculated within the CircuitMonitoring™ system. The JPulse-4™ is enclosed in a metal box.

MECHANICAL & DIMENSIONS

Weight:	640 g (1.4 lbs)
Size:	12.192 cm / 4.80 in (W)
	12.192 cm / 4.80 in (H)
	5.080 cm / 2.00 in (D)

ENVIRONMENTAL

Operating Temp:	4⁰C to +40⁰C
Storage Temp:	-17⁰C to +80⁰C
Humidity Range:	10 to 90% non-condensing
Enclosure:	Metal

Real Time Metering System
WebMeter48E

CURRENT TRANSFORMERS
Solid Core

This series of solid core current transformers ("CT") is simple and designed for connection to the WebMeter products from CircuitMeter. Meets the most demanding accuracy requirements and has a small cross section.

Installation must be installed by a certified electrician and adhere to local electrical safety guidelines.

KEY FEATURES

- Accuracy class of 0.1
- Designed for WebMeter48™
- Designed for energy monitoring
- AC input, 50/60 Hz
- 600 VAC Rated, CAT III
- Primary current range from 40A to 200A

SPECIFICATIONS

	CT 040	CT 100	CT 200
Type[1]	Solid	Solid	Solid
Rated Primary Current	40A	100A	200A
Turn Ratio	1:2000	1:2000	1:2000
Operating Temperature	-40^C ~ +80^C	-40^C ~ +80^C	-40^C ~ +80^C
Accuracy Class	0.1	0.1	0.1
Accuracy Class Amps Range	2 – 40A	5 – 100A	10 – 200A
Reference Amps*	6A	15A	30A
Minimum Amps with WebMeter	0.4A	1.0A	2.0A
Maximum Burden	10 Ohm	10 Ohm	10 Ohm
Pollution	PD 2	PD 2	PD 2
Dielectric Withstanding Voltage	CAT III 600V	CAT III 600V	CAT III 600V
UL / CSA / CE / RoHS	Yes	Yes	Yes
Safety Standard	UL 61010-1	UL 61010-1	UL 61010-1
Secondary Wire	18AWG – UL1015	18AWG – UL1015	18AWG – UL1015
Secondary Wire Length – (meters)	1.5	1.5	1.5
– (feet)	4.9	4.9	4.9
Dimensions (L x H x W) – (mm)	24 x 25 x 11	38 x 39 x 15	50 x 50 x 21
– (inches)	0.94 x 0.98 x 0.43	1.5 x 1.54 x 0.59	1.97 x 1.97 x 0.83
Window Size – (mm)	6.5	13	23.2
– (inches)	0.26	0.51	0.91
Locking Mechanism	N/A	N/A	N/A

[1] *For use on insulated conductors only*   * *ANSI C12.20 - 2015 table 8 (23 degrees celsius, power factor 1.0)*

CURRENT TRANSFORMERS
Split Core

This series of split core current transformers ("SP") is simple and designed for connection to the WebMeter products from CircuitMeter. Split core current transformers may minimize shutdown time.

Installation must be installed by a certified electrician and adhere to local electrical safety guidelines.

KEY FEATURES

- Accuracy class between 0.5 and 1.0
- Designed for WebMeter48™
- Designed for energy monitoring
- AC input, 50/60 Hz
- 600 VAC Rated
- Primary current range from 40A to 2000A

SPECIFICATIONS

	SP 040	SP 100-1	SP 200	SP 500-1	SP 2000-1
Type[1]	Split	Split	Split	Split	Split
Rated Primary Current	40A	100A	200A	500A	2000A
Turn Ratio	1:3000	1:2000	1:2000	1:5000	1:20000
Operating Temperature	-40^C ~ +70^C	-40^C ~ +65^C	-40^C ~ +65^C	-40^C ~ +75^C	-40^C ~ +60^C
Accuracy Class	1.0	0.5	1.0	0.5	0.5
Accuracy Class Amps Range	4 – 40A	10 – 100A	20 – 200A	25 – 500A	10 – 2000A
Reference Amps	NA	NA	NA	NA	NA
Minimum Amps with WebMeter	NA	NA	NA	NA	NA
Maximum Burden	10 Ohm	10 Ohm	10 Ohm	10 Ohm	10 Ohm
Pollution	PD 2	PD 2	PD 2	PD 2	PD 2
Dielectric Withstanding Voltage	CAT III 600V	CAT III 600V	CAT III 600V	CAT IV 600V	CAT IV 600V
UL / CSA / CE / RoHS	Yes	Yes	Yes	Yes	Yes
Safety Standard	UL 61010-1	IEC 61869-2	UL 61010-1	IEC 61010-1	UL2808, IEC 61010-1
Secondary Wire	18AWG – UL1015	18AWG – UL1015	18AWG – UL1015	18AWG – UL1015	18AWG – UL1015
Secondary Wire Length – (meters)	2.0	2.0	2.0	2.5	3.0
– (feet)	6.6	6.6	6.6	8.2	9.8
Dimensions (L x H x W) – (mm)	31.5 x 48 x 31.4	32 x 46 x 31.5	76 x 57 x 21	142.5 x 109 x 28.5	232 x 164 x 44
– (inches)	1.24 x 1.89 x 1.24	1.26 x 1.81 x 1.24	2.99 x 2.24 x 0.83	5.61 x 4.29 x 1.12	9.13 x 6.46 x 1.73
Window Size – (mm)	16	16	25	55	160 x 80
– (inches)	0.63	0.63	0.98	2.17	6.3 x 3.15
Locking Mechanism	Locking Tab	Locking Tab	Screw	Locking Tab / Security Pin	Security Pin

[1] For use on insulated conductors only
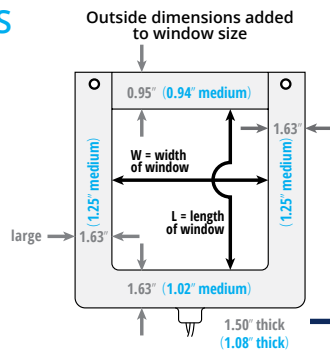
CURRENT TRANSFORMERS
Custom Busbar

This series of custom large split core current transformers ("SP") are simple and designed for connections to the WebMeter products from CircuitMeter.
These have specified window sizes to fit various busbar equipment. Installing these CTs requires a shutdown.

Installation must be installed by a certified electrician and adhere to local electrical safety guidelines.

KEY FEATURES

- Accuracy class 1.0
- Designed for WebMeter48™
- Designed for energy monitoring
- Uniform molded window size openings
- AC input, 50/60 Hz
- 600 VAC Rated, CAT IV
- Primary current range from 3000A to 6000A

SPECIFICATIONS

Outside dimensions added to window size

0.95″ (0.94″ medium)
1.63″
(1.25″ medium)
W = width of window
(1.25″ medium)
L = length of window
large → 1.63″
1.63″ (1.02″ medium)
1.50″ thick (1.08″ thick)

Choose the amperage size from the left column below and select the window size needed from the right column

Example custom order spec.
SP3000 – 5.0 x 7.0

SP XXXX

Type	Split
Rated Primary Current	3000A to 6000A
Turn Ratio	1:2000
Operating Temperature	-40^C ~ +70^C
Accuracy Class	1.0
Accuracy Class Amps Range	/
Reference Amps	NA
Minimum Amps with WebMeter	NA
Maximum Burden	10 Ohm
Pollution	PD 3
Dielectric Withstanding Voltage	CAT IV 600V
UL / CSA / CE / RoHS	Yes
Safety Standard	UL 2808
Secondary Wire	18AWG – UL1015
Secondary Wire Length – (meters)	2.5
– (feet)	8.2
Dimensions	Various Sizes Available
Locking Mechanism	Security Pin

Amperage	Window Sizes – inches (W x L)
3000A	4.0 x 6.0
3000A	5.0 x 7.0
3000A	6.0 x 6.0
3000A	6.0 x 8.0
4000A	4.0 x 6.0
4000A	5.0 x 7.0
4000A	6.0 x 6.0
4000A	6.0 x 8.0
5000A	5.0 x 7.0
5000A	6.0 x 8.0
6000A	4.0 x 7.0

Most Common Sizes
(Custom sizes are available)

CircuitMonitoring™ Your Energy Management Solution

The system architecture of the CircuitMonitoring™ system is specifically designed to support channel partners and customers with large portfolios on an enterprise scale and managers of large facilities. Whether you are new to more extensive granular energy data or have an existing energy dashboard, CircuitMeter™ has the right solution.

The CircuitMonitoring™ system leverages a Big Data model. We handle thousands of circuits reporting from WebMeters that aggregate the energy data in real-time. In addition to having the ability to store and retrieve large amounts of data with virtually instant response times that support very fast what-if analayses, our solution also incorporates a portal for channel partners, an application program interface ("API") for system to system data connectivity, and naturally, the ability to scale as WebMeters are added.

CircuitMonitoring™ Channel Partner Portal

Customers have access to a comprehensive dashboard through which users can easily review, analyze, create notifications and export the energy information gathered by the WebMeters. As a channel partner, you will be provided a higher level of access within the system enabling you to add and manage your own customers. The CircuitMonitoring™ system automatically takes care of emailing your customer with the information to get started. As you begin managing many customers, you can easily switch from one customer account to another. As a channel partner, you will have the ability to provide a custom marketing/support message and apply your name to their reports.

CircuitMonitoring™ is truly Big Data

The CircuitMonitoring™ system delivers scalable analytics, using proprietary techniques that combine processing, management and analytics for large amounts of data that is cost effective and reliable. You will be amazed at the speed in which you can data-mine the information and how the data is aggregated. The use of Big Data is becoming a crucial way for leading companies to outperform their competition. Forward-thinking leaders are aggressively leveraging Big Data within their organization.

CircuitMonitoring™ Provides an API

For those that have their own dashboards or have a need to automatically rollup the data into their system, connectivity to the CircuitMonitoring™ system can be achieved through an API. The API is based on a REST implementation. Upon access through a secured authentication process, any level of detail can be "Requested" where the "Response" is returned in a standard JSON representation. The ability to filter the data to meet your needs, just like what you would see in the real-time and historical analytics, can be completely automated.

CIRCUITMONITORING™ SYSTEM FOUNDATION

Channel Partner Portal:
- Online system to manage your customers
- Access to knowledgebase for installation, guides, and resources

Big Data:
- Big Data can unlock significant value by making information transparent
- Allows organisations access the transactional data for decision making

CircuitMonitoring™ API:
- Based on Representational state transfer (REST) architecture
- Full security access with authentication token
- POST requests with JSON response for data representation
- The response data response is the same as CircuitMonitoring™ pivot table
- Request for both real-time and historical data

Cloud Computing:
- Enterprise-wide portfolio management
- Eliminate continual software purchases
- Leverage infrastructure without the costs (cap-ex free)
- Single point of access for all your customers or facilities
- Increase collaboration with employees enabling them access to the data from anywhere
- Centralized security
- Better for the environment
- Improve market competitiveness

CircuitMeter's technology is ground-breaking in its power and economics. Never before has it been economically feasible to meter at the circuit level, in real time.

CircuitMeter corporate strategy is to serve a wide range of Partners and User Groups and become the foundation upon which they build their energy management platforms.

PARTNERS & USER GROUPS INCLUDE:

- Energy Management & Service Companies
- Industrial, Institutional, Commercial Facilities
- Original Equipment Manufacturers (OEMs)
- Local Distribution Companies/Utilities

BEST IN MARKET

THE MOST POWERFUL METERING TECHNOLOGY

1   Cost structure at a fraction of current metering systems — can be economically deployed throughout a facility at the circuit level.

2   Real time communication to the Cloud every two seconds — CircuitMeter delivers the ultimate in granular energy data.

3   Ground-breaking techology includes hardware and software — commercial, industrial, and institutional markets can benefit with major savings from energy conservation and demand management programs.

GAIN INSIGHT

YOU CAN'T MANAGE WHAT YOU CAN'T MEASURE

1   CircuitMeter enables the electrical metering, and ultimately, Forensic Energy Management™ — for individual facilities or entire portfolios.

2   Information delivered through the Cloud, provides remote energy monitoring capabilities — information is easy to manipulate and utilize through CircuitMeter's Big Data software package.

3   Historical and real-time data from all electrical equipment within a building or facility is now available to engineers, analysts, accounting, and management – CircuitMeter software makes it easy to manage data and develop insight into energy use.

REDUCE COSTS

COMPLETE FACILITY ENERGY DATA IN REAL TIME = MAJOR COST SAVINGS

1   Granular data and Big Data software provides a continuous energy audit, leading to minimized energy waste, reduced peak demand, and improved operational and equipment efficiency.

2   Conservation and demand programs can yield major cost savings.

   a. Employee engagement and revised control system functions can minimize or eliminate the operation of equipment when not required, and identify equipment that can be replaced with newer, more efficient technology.

   b. Real time data allows users to understand where and when their peak demand charges are generated and the opportunities to reduce peak demand charges.

3   Precision maintenance can become a reality: all electrical equipment can be benchmarked together with user defined thresholds. When energy consumption rises due to malfunction or deterioration, real time notifications to management are issued — energy drift and high energy consumption can be addressed immediately.

CIRCUITMETER™ —
A FOUNDATION UPON WHICH TO BUILD
ENERGY MANAGEMENT PLATFORMS

circuitmeter.com

Meter All Circuits. In Real Time.
Understand Energy Use. Reduce Costs.