



# POWER METERS

**Application Solutions for:** Power Monitoring, Load Trending, Power Quality Analysis, Predictive Maintenance, ROI Project Justification, Burden/Energy Cost Reductions, Data Centers, Industrial Equipment, Renewable Energy, Electric/Energy/Water Metering

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**Automation Components, Inc.**

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## **Automation Components, Inc.**

*[Engineering a Better Sensor Solution]*

ACI has proudly supported the Heating, Ventilation, and Air Conditioning (HVAC) Industry since 1991. We are committed to providing a high quality, Revenue Grade Meter to meet your power monitoring requirements. Our newest line of Meters and Current Transformers will provide your Building Automation System (BAS) with the power and energy usage data required to make informed decisions.

ACI Meters can target key areas to lower your energy costs. They provide additional value by reducing maintenance costs through predictive maintenance, identifying outdated and underperforming equipment, and calculating project Return of Investment (ROI). Power monitoring solutions are also available for use without a traditional BAS type monitoring system through the on-board data logging capabilities, enabling the data to be downloaded into an excel (.csv) spread sheet.

As always, ACI's highly trained sales and technical support staff can help guide you through the specification and design process. The value of this line is provided by the numerous features, ease of installation, product availability and competitive pricing. **A Product Selection Guide can be found on pages 4 and 5 to help identify the devices needed on your next application.**





# POWER METERS



## KW350 SERIES POWER METER

3 Circuit, 0.5 Class Accuracy, Din Rail Mount, RS-485 Serial Communication Protocols

- Revenue Grade Accuracy
- BACnet™ MS/TP and Modbus RTU Protocols
- LCD Display
- Optional NEMA 4X Enclosure Option
- Energy Pulse Output



## KW320 SERIES POWER METER

3 Circuit, 0.2 Class Accuracy, Panel Mount, RS-485 Serial/Ethernet Communication Protocols

- Revenue Grade Accuracy
- BACnet™ (MSTP/IP), Modbus (RTU/TCP/IP) plus Additional Internet Protocols
- Including SMTP Email, HTTP/HTTPs Webserver, HTTP/HTTPs Push, FTP Post, sFTP Server, Ethernet/IP, MQTT, RSTP, IPV6 and WiFi) and more
- LCD Display
- Data Logging and Event Storage (8 GB On-Board Memory)
- Power Quality Analysis/Waveform Capture
- Dual Ethernet Ports
- Panel Upgrade with NEMA 4X enclosure, pre-wired and labeled terminals for CT's, terminal blocks for voltage input, power supply, and industrial grade fuses (Optional)
- Din Rail Mounting Adaptor (Optional)



## KW1850 SERIES POWER METER

18 Circuit, 0.5 Class Accuracy, Din Rail Mount, RS-485 Serial/Ethernet Communication Protocols

- Revenue Grade Accuracy, Measurement Canada Approved
- BACnet™ IP and Modbus (RTU and TCP/IP) plus Additional Internet Protocols
- Including SMTP Email, HTTP/HTTPs Webserver, HTTP/HTTPs Post, FTP Post, sFTP Server, Ethernet/IP, MQTT, RSTP, IPV6 and WiFi) and more
- LCD Display
- Data Logging and Event Storage (8 GB On-Board Memory)
- Power Quality Analysis/Waveform Capture
- Dual Ethernet Ports
- Includes SnapOn CT Installation Kit (Qty: 20)
- NEMA 4X Enclosure (Optional)



## Power Meter Selection Guide

SPECIFICATIONS		KW350-P1-D-S-SC	KW350-P1-D-S-RC	KW320-P1-D-W-SC-XX	KW320-P1-D-W-RC-XX	KW320-P1-D-W-SC-PC	KW320-P1-D-W-RC-PC	KW320Q-P1-D-W-SC-XX	KW320Q-P1-D-W-RC-XX	KW320Q-P1-D-W-SC-PC	KW320Q-P1-D-W-RC-PC	KW1850-P1-D-S	KW1850-P1-D-W	
<b>POWER METER FEATURES</b>	SC= Split-Core CT, RC = Rogowski Coil CT	-SC	-RC	-SC	-RC	-SC	-RC	-SC	-RC	-SC	-RC	SC or RC (No Mix)	SC or RC (No Mix)	
	Traditional (333 mV) Split Core CT only	•		•		•		•		•		•	•	
	Rogowski Coil (333 mV) Flexible Rope CT only		•		•		•		•		•		•	
	Stocked Product	•	•	•	•	•	•					•	•	
	Number of CT Inputs	3		3		3		3		3		18	18	
	Uni-Directional Power Monitoring	•	•	•	•	•	•	•	•	•	•	•	•	
	Bi -Directional Power Monitoring	•	•	•	•	•	•	•	•	•	•	•		
	1 Phase (2 or 3 Wire)/ 3 Phase (3 or 4 Wire) Services	•	•	•	•	•	•	•	•	•	•	•	•	
	Volts AC (Line to Neutral), 50/60 Hz	100 - 415		100 - 415				100 - 415				100 - 415		
	Volts DC	100 - 300		100 - 300				100 - 300				100 - 300		
	ANSI C12.20	0.5 Class		0.2 Class				0.2 Class				0.5 Class		
	IEC 62053-22	0.5S Class		0.2S Class				0.2S Class				0.5S Class		
	Revenue Grade Accuracy	•	•	•	•	•	•	•	•	•	•	•	•	
	Measurement Canada Approved												•	•
	Data Logging			8 GB Data		8 GB Data		8 GB Data		8 GB Data			8 MB	8 GB
	1 Energy Pulse Output and 1 Alarm Output Standard	•	•											
	18 Digital Inputs/6 Digital Outputs/2 Relay Outputs Standard												•	•
	THD, Waveform Capture, Power Quality Event Logging							•	•	•	•			
	Optional AI / AO / DI /DO / Relay Output Modules Available			•	•	•	•	•	•	•	•	•		
	LCD Display	•	•	•	•	•	•	•	•	•	•	•	•	•
Meter Mounted/Pre-Wired NEMA 4X Encl, Fuses					•	•				•	•			
BACnet MS/TP	•	•	•	•	•	•	•	•	•	•	•			
Modbus RTU	•	•	•	•	•	•	•	•	•	•	•	•	•	
BACnet IP			•	•	•	•	•	•	•	•	•		•	
Modbus TCP			•	•	•	•	•	•	•	•	•		•	
Two RJ45 Ports			•	•	•	•	•	•	•	•	•		•	
<b>ACCESSORIES</b>	600 VAC/1A Fuse Kits	•	•	•	•			•	•			•	•	
	Model # KW350-ENC (NEMA 4X Polycarbonate Encl)	•	•											
	Model # KW1850-ENC (NEMA 4X Polycarbonate Encl)											•	•	
	Model # AXM-Din (Din Rail Adaptor)			•	•			•	•					
	Model # USB-RS485	•	•									•	•	
	Snap On CT Kit Model # SO-SP1 Kit (Qty: 20)											•	•	
<b>APPLICATIONS</b>	Sub-Metering Electrical / Sub-Panel (Mains)	•			•					•				
	Sub-Metering Elec. Sub-Panel (Multiple Loads/Circuits)											•	•	
	Equipment Monitoring Large Loads / Predicted Maintenance	•			•					•		•	•	
	Tenant Billing				•							•	•	
	Industrial	•			•					•		•	•	
	Power Quality									•		•	•	
	Return on Investment (ROI) Projects	•			•							•	•	
	Solar / Wind / Renewable Energy Projects	•			•					•		•	•	
	Energy Cost Accounting (Burden/Overhead Reduction)	•			•							•	•	
	"NET ZERO" / LEED / Green Buildings	•			•							•	•	
	Data Centers				•					•		•	•	
	Refrigeration	•			•					•		•	•	
	IoT / IIoT (Industrial/Internet of Things)				•					•		•	•	
Gas/Energy/Water Metering	•										•	•		





## Current Transformer Product Selection Guide

FEATURES	SPECIFICATIONS	AcuCT-H040 Series	AcuCT-H100 Series	AcuCT-075 Series	AcuCT-125 Series	AcuCT-200 Series	AcuCT-075R Series	AcuCT-100R Series	AcuCT-125R Series	AcuCT-200R Series	AcuCT-3135R Series	AcuCT-4161R Series	AcuCT-5170R Series	S77 Series	RCT16 Series	RCT24 Series	RCT36 Series	RCT47 Series
			Stocked Product	•	•	•	•	•									•	•
CT Style	Solid Core													•				
	Hinged Split Core	•	•															
	Split Core			•	•	•	•	•	•	•	•	•	•					
	Rope/Rogowski Coil														•	•	•	•
Max. Voltage	600 VAC Line-Line max.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Aperture (Hole Size)	0.400"	•					•							•				
	0.750"			•			•											
	1.000"		•					•										
	1.125"				•				•									
	2.000"					•				•								
	3.1" x 3.5"										•							
	4.17"														•			
	4.1" x 6.1"												•					
	5.1" x 7.0"													•				
	7.01"															•		
10.67"																•		
14.53"																	•	
Accuracy	0.15 Class													•				
	0.5% (10 to 120%)	•	•	•	•	•									•	•	•	•
	0.5s Class						•	•	•	•	•	•	•					
	Meet Standard IEC 60044-1			•	•	•	•	•	•	•	•	•	•	•				
Agency Approvals	UL Listed 2808						•	•	•	•	•	•	•	•				
	UL 61010-1						•	•	•	•	•	•	•	•				
	CSA 22.2						•	•	•	•	•	•	•	•				
	UL Recognized (cURus)	•	•	•	•	•									•	•	•	•
Amperage Ranges Available in Series	5 Amps																	
	20 A	•																
	30 A	•																
	40 A	•																
	50 A	•		•			•											
	60 A	•																
	100 A		•	•			•	•	•					•				
	150 A						•											
	200 A		•		•				•	•				•				
	250 A							•										
	300 A				•					•								
	400 A				•					•	•							
	600 A				•	•				•	•							
	800 A					•				•	•							
	1000 A									•	•							
	1200 A														•	•	•	
	2000 A												•					
2500 A															•	•	•	
3000 A																•	•	
4000 A																	•	
5000 A																	•	
6000 A																	•	
Lead Length Available	1 foot													•				
	2 meters (6.5 ft)														•	•	•	•
	2.5 meters (8 ft)	•	•	•	•	•	•	•	•	•	•	•	•					
	10 meters (32.5 ft)	•	•		•		•	•	•	•	•	•	•					



## CURRENT TRANSFORMERS

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### ACUCT-H040/100 SERIES

Hinged Split Core, Standard Accuracy

- Aperture Window Sizes: 0.4" (H040), 1.0"(H100)
- Amp Ranges: 20, 30, 40, 50, 60 Amps (H040); 100, 200 Amps (H100)
- 8 Foot (2.5 meter) Leads



### ACUCT-075 SERIES

Split Core, Standard Accuracy

- Aperture Windows Sizes: 0.75"
- Amp Ranges: 50, 100 Amps
- 8 Foot (2.5 meter) Leads



### ACUCT-S77 SERIES

Solid Core, High Accuracy, Measurement Canada Approved

- Aperture Window Sizes: 0.78"
- Amp Ranges: 100, 200 Amps
- 1 Foot (30.5 cm)



### ACUCT-XXXX SERIES

Split Core, High Accuracy

- Aperture Window Sizes: See Product Selection Guide (Page 5)
- Amp Ranges: 50 to 4000 Amps Available



### RCT SERIES

Flexible Rogowski Coil, Standard Accuracy

- Aperture Windows Sizes: See Product Selection Guide (Page 5)
- Amp Ranges: 1000 to 6000 Amps Available



## ACCESSORIES

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### **KW350-ENC**

KW350 Series Enclosure

- NEMA 4X Polycarbonate Enclosure
- DIN Rail Mounting Hardware
- Multiple Locking Options
- Swing Panel Included



### **KW1850-ENC**

KW1850 Series Enclosure

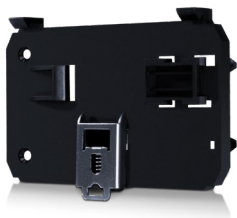
- NEMA 4X Polycarbonate Enclosure
- DIN Rail Mounting Hardware
- Multiple Locking Options
- Swing Panel Included



### **SO-SP1**

Snap On CT Connector Kit (Qty:20)

- Plug directly into Meter in seconds
- Reduces Polarity errors



### **AXM-DIN**

KW320 Series DIN Rail Mounting Adapter

- Provides easy panel installation



### **USB-RS485**

RS485 to USB Converter

- Programming cable for meter setup/programming

