

# Acuvim IIBN Series BACnet Power Meter



**BTL Certified**

**0.2 Class**

**BACnet**

**Panel Mount or Din-Rail**

**5 Year Warranty**

**MOD-TRONIC**  
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ISO9001 Certified

Acuvim IIBN BACnet multifunction power and energy meter is the ideal choice for the monitoring of electrical system parameters in building and facilities.

Natively support BACnet-IP protocol (BTL-listed) allows the meter seamlessly integrates with any Building Automation System.

Secure and mobile-friendly HTTPs web interface allows users to view and configure meter from any device.



# FEATURES

## BACnet-IP

Integrate with any building automation and control systems, using BACnet-IP with a peace of mind. BTL certified.

## Revenue Grade Certified

ANSI C12.20 Class 0.2 and IEC 62053-22 0.2s class revenue grade accuracy allows revenue submetering applications such as billing and cost allocation.

## Suitable for Any Electrical Systems Configuration

- Measures essential electrical system parameters in single element, two element and three element systems.
- Acuvim IIBN supports all electrical system configurations from single phase to three phase, all in one meter.

## No PT/VT Needed

Directly measures up to 400V-I 690V-I without potential transformers.

## Universal Current transformer support

Support all types of CT from solid, split core and flexible Rogowski coil, ideal for new and retrofit metering projects.

## Real-time Monitoring

- All parameters can be monitored in real-time from built-in web interface.
- Over 100 parameters can be accessed in real-time via BACnet-IP protocol.

## Secure Access to Data

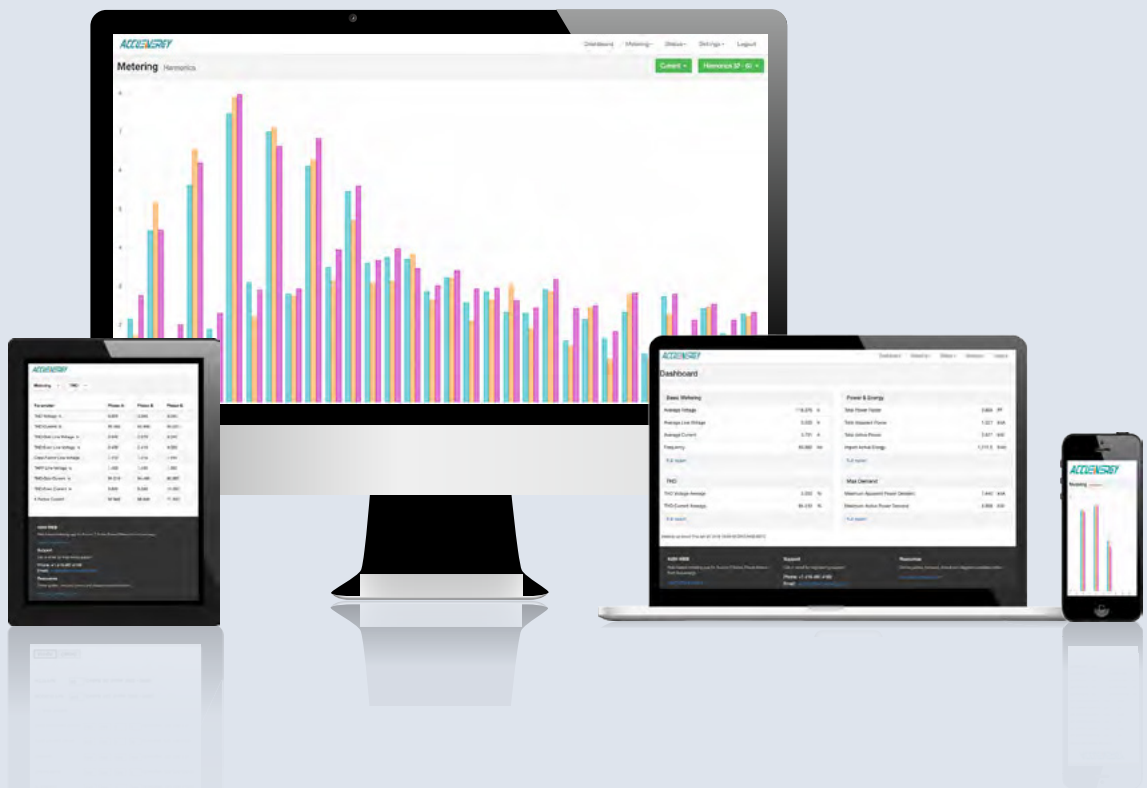
HTTPs web server are used on entire web interface. All data communication are encrypted and secured. The encryption ensures critical data is secured in communication between meter and user's access.

## Mobile Friendly

Mobile-Friendly web interface allows user to monitor and configure meter on any device from laptop to mobile phone.

# MULTI-PLATFORM ACCESS

Built-in web server provides computer, tablet and smartphone access.



# PARAMETER LIST

● Function; ⊙ Option; Blank NA

Parameter	ITEM	Acuvim IIBN
Frequency	Hertz	●
Phase A Voltage	Volts	●
Phase B Voltage	Volts	●
Phase C Voltage	Volts	●
Average Voltage	Volts	●
Line Voltage AB	Volts	●
Line Voltage BC	Volts	●
Line Voltage CA	Volts	●
Average Line Voltage	Volts	●
Phase A Current	Amperes	●
Phase B Current	Amperes	●
Phase C Current	Amperes	●
Average Current	Amperes	●
Netural Current	Amperes	●
Phase A Active Power	Kilowatts	●
Phase B Actuve Power	Kilowatts	●
Phase C Active Power	Kilowatts	●
Total Active Power	Kilowatts	●
Phase A Reactive Power	Kilovolt_ amperes_reactive	●
Phase B Reactive Power	Kilovolt_ amperes_reactive	●
Phase C Reactive Power	Kilovolt_ amperes_reactive	●
Total Reactive Power	Kilovolt_ amperes_reactive	●
Phase A Apparent Power	Kilovolt_ amperes	●
Phase B Apparent Power	Kilovolt_ amperes	●
Phase C Apparent Power	Kilovolt_ amperes	●
Total Apparent Power	Kilovolt_ amperes	●
Phase A Power Factor	Power_factor	●
Phase B Power Factor	Power_factor	●
Phase C Power Factor	Power_factor	●
Total Power Factor	Power_factor	●
Voltage Unbalance Factor	Percent	●
Current Unbalance Factor	Percent	●
Load Type	N/A	●
Active Power Demand	Kilowatts	●
Reactive Power Demand	Kilovolt_ amperes_reactive	●
Apparant Power Demand	Kilovolt_ amperes	●
Phase A Current Demand	Amperes	●
Phase B Current Demand	Amperes	●
Phase C Current Demand	Amperes	●
Import Active Energy	Kilowatt_hours	●
Export Active Energy	Kilowatt_hours	●
Import Reactive Energy	Kilowatt_hours	●
Export Reactive Energy	Kilowatt_hours	●
Energy Total	Kilowatt_hours	●
Energy Net	Kilowatt_hours	●
Reactive Energy Total	Kilowatt_hours	●
Reactive Energy Net	Kilowatt_hours	●
Apparent Energy	Kilowatt_hours	●
Phase A Import Active Energy	Kilowatt_hours	●
Phase A Export Active Energy	Kilowatt_hours	●
Phase B Import Active Energy	Kilowatt_hours	●
Phase B Export Active Energy	Kilowatt_hours	●
Phase C Import Active Energy	Kilowatt_hours	●
Phase C Export Active Energy	Kilowatt_hours	●
Phase A Import Reactive Energy	Kilowatt_hours	●
Phase A Export Reactive Energy	Kilowatt_hours	●

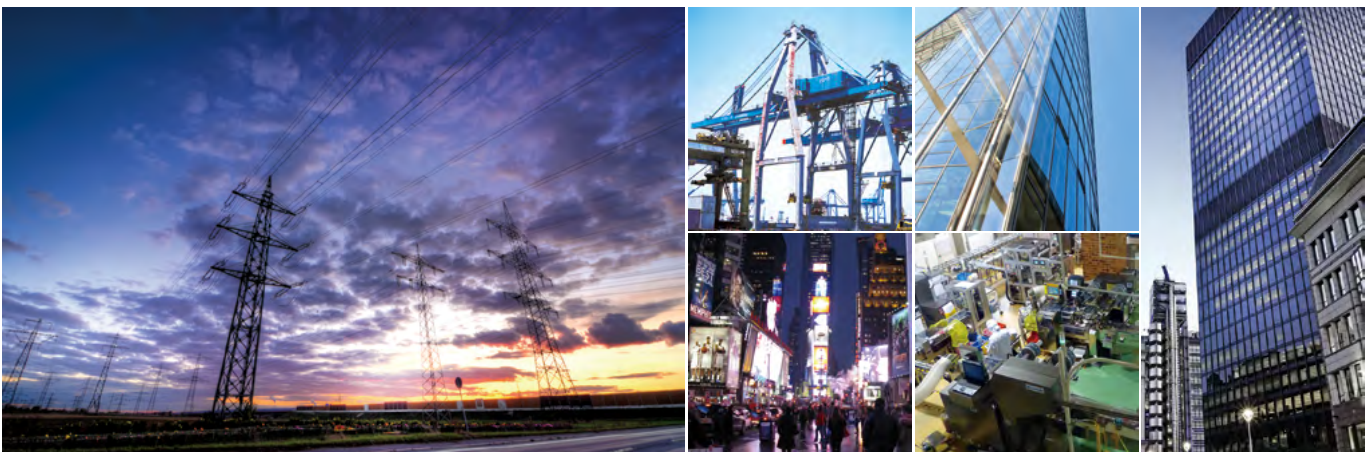
Parameter	ITEM	Acuvim IIBN
Phase B Import Reactive Energy	Kilowatt_hours	●
Phase B Export Reactive Energy	Kilowatt_hours	●
Phase C Import Reactive Energy	Kilowatt_hours	●
Phase C Export Reactive Energy	Kilowatt_hours	●
Phase A Apparent Energy	Kilowatt_hours	●
Phase B Apparent Energy	Kilowatt_hours	●
Phase C Apparent Energy	Kilowatt_hours	●
Phase A Voltage THD	Percent	●
Phase B Voltage THD	Percent	●
Phase C Voltage THD	Percent	●
Average Voltage THD	Percent	●
Phase A Current THD	Percent	●
Phase B Current THD	Percent	●
Phase C Current THD	Percent	●
Average Current THD	Percent	●

Top quality components are meticulously engineered into a line of products offering best-in-class capability that exceeds the toughest standards and ratings.

## APPLICATIONS

Submeters for high performance monitoring and analysis, system integration & speciality applications.

- Building Automation And Control Systems
- Commercial Buildings
- Industrial facility metering
- Data Center Monitoring
- Tenant Submetering



# SPECIFICATIONS

METERING			
Parameters	Accuracy	Resolution	Range
Voltage	0.2%	0.1V	10V~1000kV
Current	0.2%	0.1mA	5mA~50000A
Power	0.2%	1W	-9999MW~9999MW
Reactive Power	0.2%	1var	-9999Mvar~9999Mvar
Apparent Power	0.2%	1VA	0~9999MVA
Power Demand	0.2%	1W	-9999MW~9999MW
Reactive Power Demand	0.2%	1var	-9999Mvar~9999Mvar
Apparent Power Demand	0.2%	1VA	0~9999MVA
Power Factor	0.2%	0.001	-1.000~1.000
Frequency	0.02%	0.01Hz	45.00~65.00Hz (50 or 60Hz type) 300.00Hz~500.00Hz (400Hz type)
Energy	Primary	0.2%	0.1kWh
	Secondary	0.2%	0.001kWh
Reactive Energy	Primary	0.2%	0.1kvarh
	Secondary	0.2%	0.001kvarh
Apparent Energy	Primary	0.2%	0.1kVAh
	Secondary	0.2%	0.001kVAh

## INPUT

### Current Inputs (Each Channel)

Nominal Current	① 5A, ② 1A, ③ 1A(333mV), ④ 1A(100mV Rope-CT), ⑤ 1A(80mA/100mA/200mA)
Metering Range	① 0~10A, ② 0~2A, ③ 0~1.2A, ④ 0~1.2A, ⑤ 0~1.2A
Pickup Current	① 5mA, ② 1mA, ③ 5mA, ④ 5mA, ⑤ 5mA
Withstand	20Arms Continuous, 0.1% of Nominal 100Arms for 1 second, Non-Recurring
Burden	0.05VA (Typical) @ 5Arms
Accuracy	0.2% Full Scale

### Voltage Inputs (Each Channel)

Nominal Full Scale	400Vac L-N, 690Vac L-L (+20%)
Withstand	1500Vac Continuous 2500Vac, 50/60Hz for 1 Minute
Input Impedance	2Mohm per Phase
Metering Frequency	45Hz~65Hz, 300Hz ~ 500Hz
Pickup Voltage	10Vac
Accuracy	0.2% Full Scale

### Energy Accuracy

Active	Class 0.2s (According to IEC 62053-22) Class 0.2s (According to ANSI C12.20)
Reactive	Class 2 (According to IEC 62053-23)

### Harmonic Resolution

Metered Value	63 <sup>rd</sup> Harmonic (50Hz or 60Hz type) 15 <sup>th</sup> Harmonic (400Hz type)
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## STANDARD COMPLIANCE

Measurement Standard	IEC 62053-22; ANSI C12.20
Environmental Standard	IEC 60068-2
Safety Standard	IEC 61010-1, UL 61010-1, IEC 61557-12
EMC Standard	IEC 61000-4/-2-3-4-5-6-8-11, CISPR 22, IEC 61000-3-2, IEC 61000-6-2/4
Outlines Standard	DIN 43700, ANSI C39.1

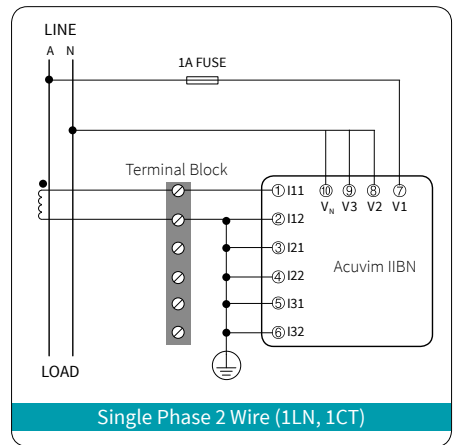
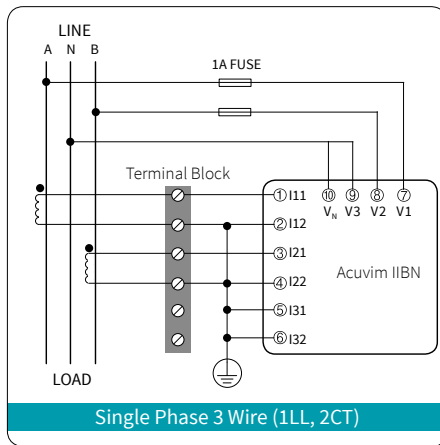
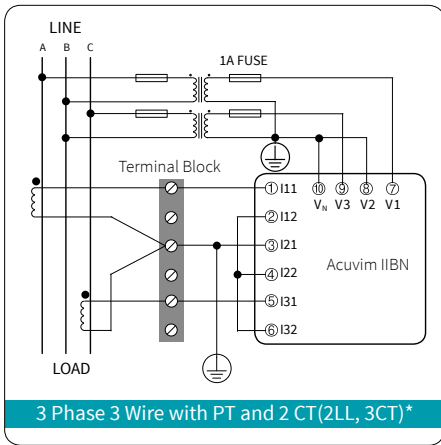
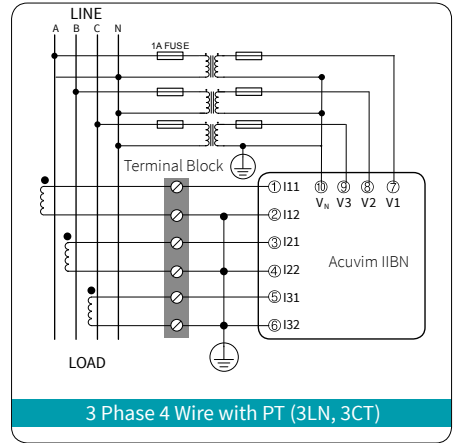
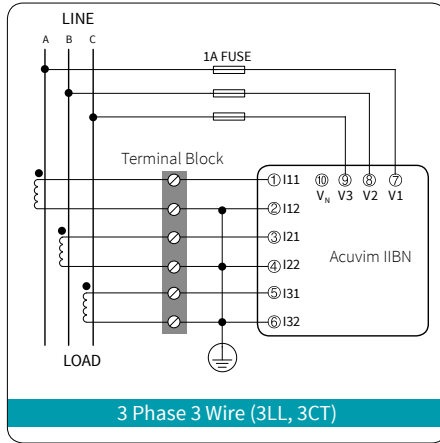
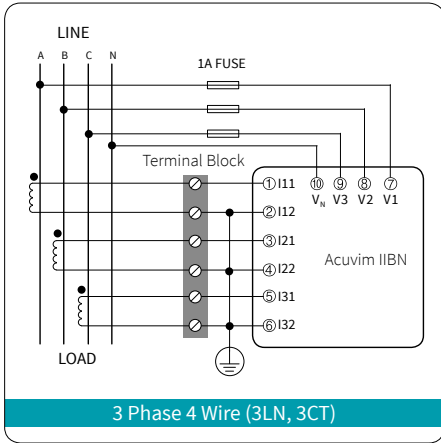
## CONTROL POWER

Universal	AC or DC
<b>AC/DC Control Power</b>	
Operating Range	100~415Vac, 50/60Hz; 100~300Vdc
Burden	5W
Frequency	50/60Hz
Withstand	3250Vac, 50/60Hz for 1 minute
Installation Category III (Distribution)	

## OPERATING ENVIRONMENT

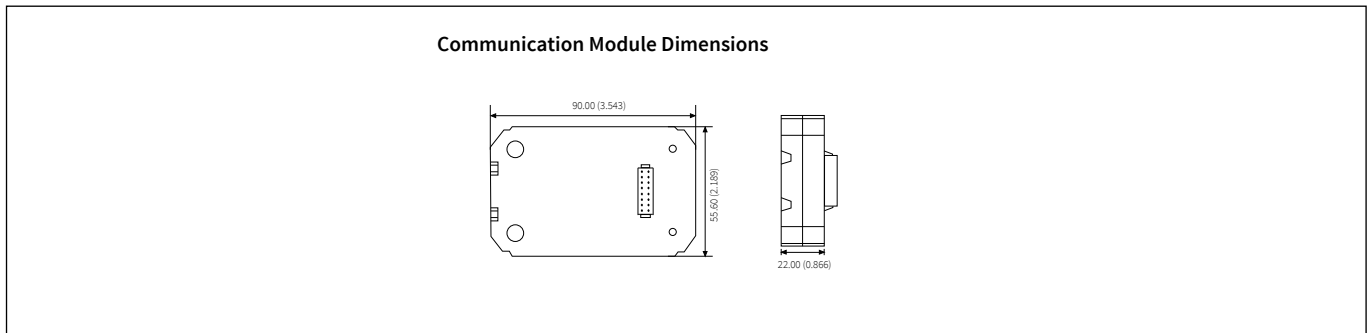
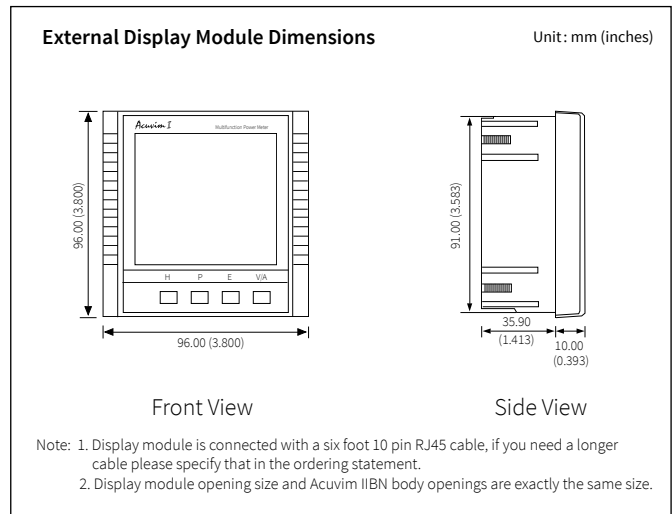
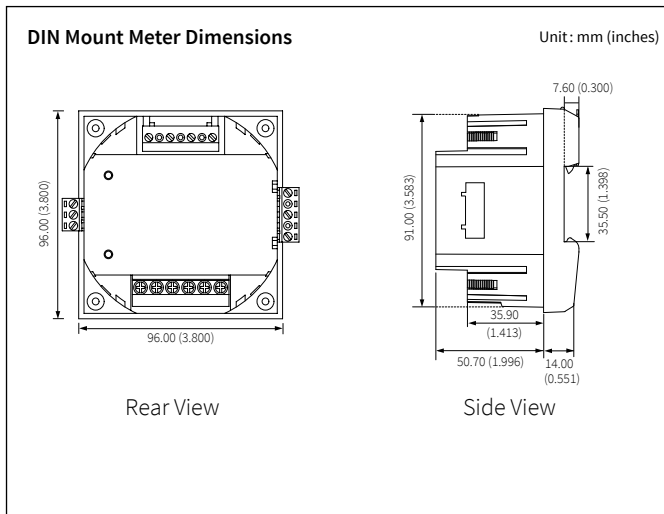
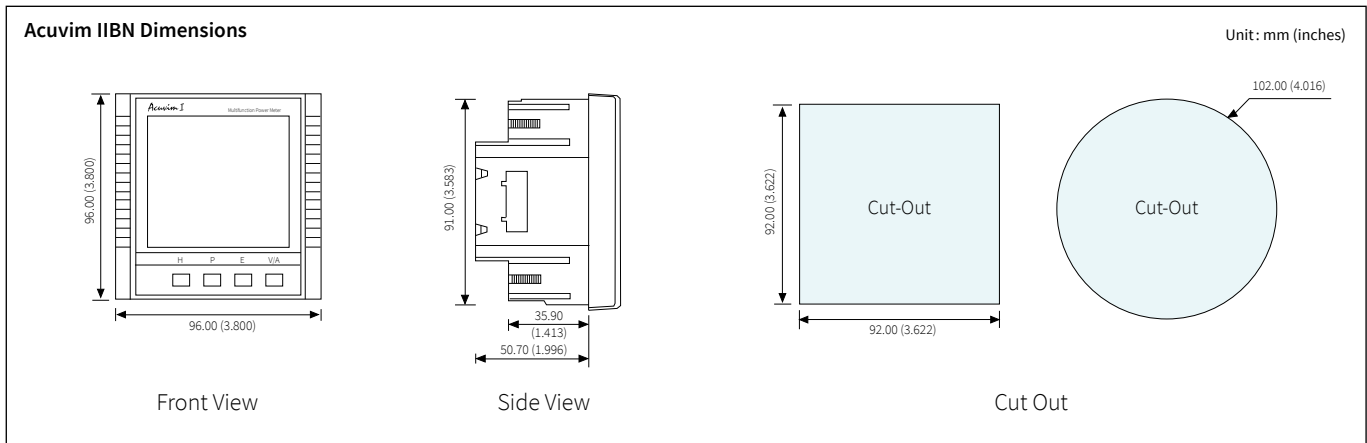
Operation Temperature	- 25°C to 70°C
Storage Temperature	- 40°C to 85°C
Relative Humidity	5% to 95% Non-Condensing

# TYPICAL WIRING



\*Note: 2CT configuration is optional only in 3 Phase 3 Wire system.

# DIMENSIONS



## ORDERING INFORMATION

	Model	Mounting Option	Current Input	Power Supply
<b>Ordering Number</b>	-	-	-	-
<b>Ordering Example</b>	Acuvm IIE	D	5A	P1
	Acuvm IIBN-xx-xx-xx	D: Integrated with LCD Display (Panel Mount Meter/Transducer)	5A:5A Input	P1: 100-415 Vac, 50/60 Hz 100-300 Vdc
		M: DIN-Rail Mount Transducer without Display (Optional Remote Display Available)	1A:1A Input	P2: 20-60Vdc
			80mA/100mA/200mA Input	
			RCT: Rogowski Coil Input (Coil to be Ordered Separately from Below)	
			333: 333mV Input	

- Note: 1. Accuenergy suggests using USB-RS485 converter for configuration, and 3 CTs per three phase circuits.  
 2. All fields must be completed to create a part number.  
 3. Add "-S" after power supply for anti-tampering seal option.  
 4. Contact Accuenergy for 400Hz frequency option; 400Hz type, it don't support Acuvm IIW.

### Remote Display Option:

REM-  — DS2: Compatible with Acuvm II Series "M" (DIN Mount)  
Models Only



**Rogowski Coil Ordering Information:**

	Size	Current Range
Ordering Number	-	-
Ordering Example	RCT16	- 1000
	RCT16 : 15.75" Coil, 4" Diameter	1000: Metering Range 5A to 1200A
	RCT24 : 23.62" Coil, 7" Diameter	2500: Metering Range 12.5A to 3000A
	RCT36: 35.43" Coil, 10.67" Diameter	5000: Metering Range 25A to 6000A
	RCT47: 47.24" Coil, 14.5" Diameter	10000: Metering Range 50A to 12000A
		50000: Metering Range 250A to 50000A

Note:1. Make sure maximum current rating in system being metered is within the current metering range for Rogowski coil.  
 2. Please contact Accuenergy if other lengths of coil or current ranges are needed.

## Additional Accessories

**AcuPanel ordering information:**

AcuPanel 9014 (NEMA4 Indoor Panel)  
 AcuPanel 9104X (NEMA4X Waterproof)

**Split Core CT Ordering Information:**

	Model	Rated Input	Output
Ordering Number	-	-	-
Ordering Example	AcuCT-2031	- 600	- 5
	AcuCT-0812	- 250	- 5
		200: 200A	5: 5A Input
		250: 250A	
		300: 300A	
		400: 400A	
	AcuCT-2031	- 400	- 5
		400: 400A	5: 5A Input
		600: 600A	
		800: 800A	
		1000: 1000A	
	AcuCT-3147	- 1000	- 5
		1000: 1000A	5: 5A Input
		1200: 1200A	
		1600: 1600A	
	AcuCT-3163	- 2000	- 5
		2000: 2000A	5: 5A Input
		2500: 2500A	
		3000: 3000A	
		4000: 4000A	
		5000: 5000A	

Note: Please contact Accuenergy if CTs in other sizes and ratios are needed.

**[www.mod-tronic.com](http://www.mod-tronic.com) | [sales@mod-tronic.com](mailto:sales@mod-tronic.com) | 1-800-794-5883**