

Acuvim IIBN Series BACnet Power Meter



BTL Certified

0.2 Class

BACnet

Panel Mount or Din-Rail

5 Year Warranty



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 or Modbus TCP/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 and Modbus-TCP/IP protocol simultaneously.
- Modbus-TCP/IP protocol provides industry-leading 100ms update and response rate.

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 Active 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	●

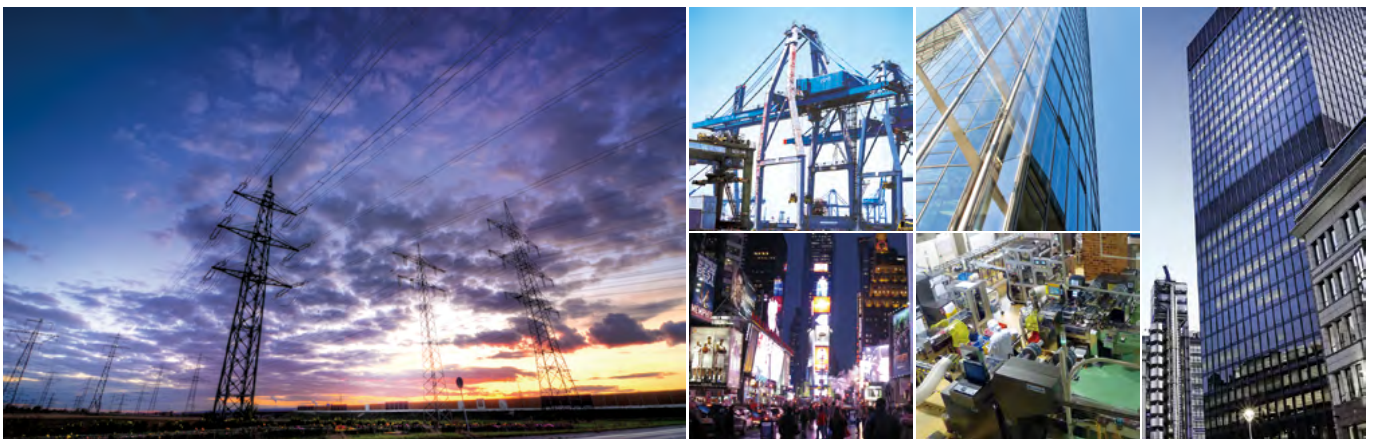
Parameter	ITEM	Acuvim IIBN
Phase B Import Reactive Energy	Kilowatt_hours	●
Phase B Export Reactive Energy	Kilowatt_hours	●
Phase C Import Reactive Energy	Kilowatt_hours	●
Phase C Export Reactive Energy	Kilowatt_hours	●
Phase A Apparent Energy	Kilowatt_hours	●
Phase B Apparent Energy	Kilowatt_hours	●
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	0-99999999.9kWh
	Secondary	0.2%	0.001kWh	0-999999.999kWh
Reactive Energy	Primary	0.2%	0.1kvarh	0-99999999.9kvarh
	Secondary	0.2%	0.001kvarh	0-999999.999kvarh
Apparent Energy	Primary	0.2%	0.1kVAh	0-99999999.9kVAh
	Secondary	0.2%	0.001kVAh	0-999999.999kVAh

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 0.05VA (Typical) @ 5Arms
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 rd Harmonic (50Hz or 60Hz type) 15 th Harmonic (400Hz type)
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CONTROL POWER

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

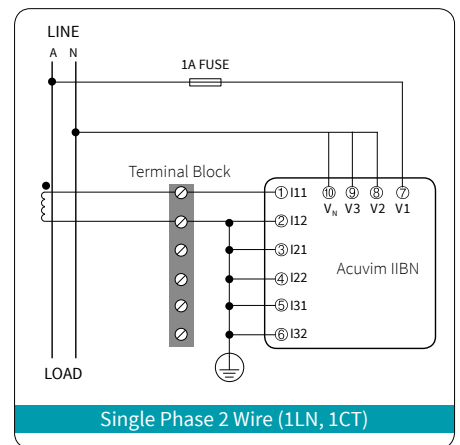
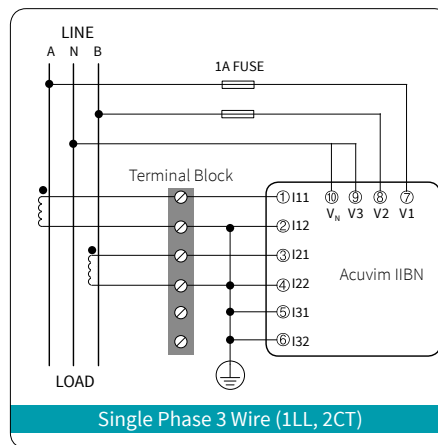
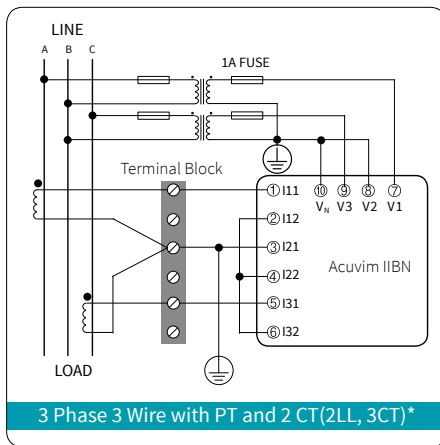
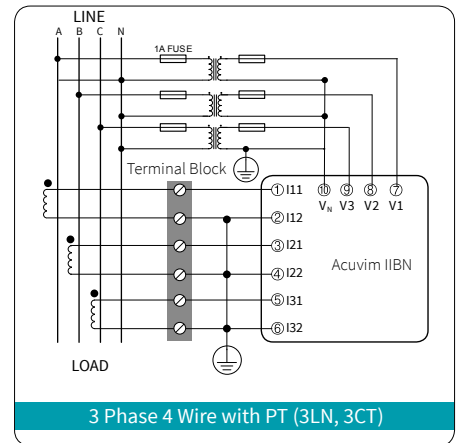
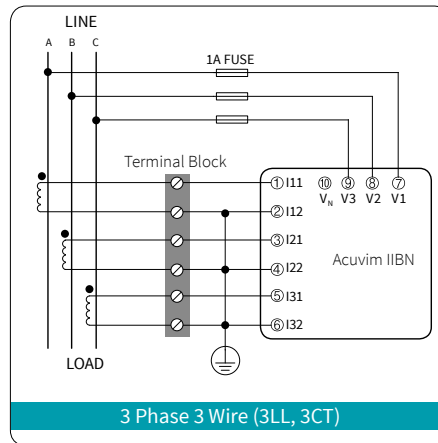
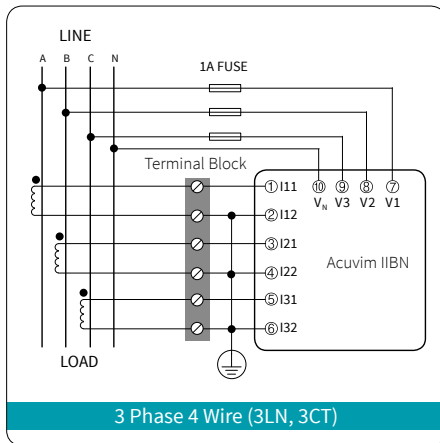
OPERATING ENVIRONMENT

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

STANDARD COMPLIANCE

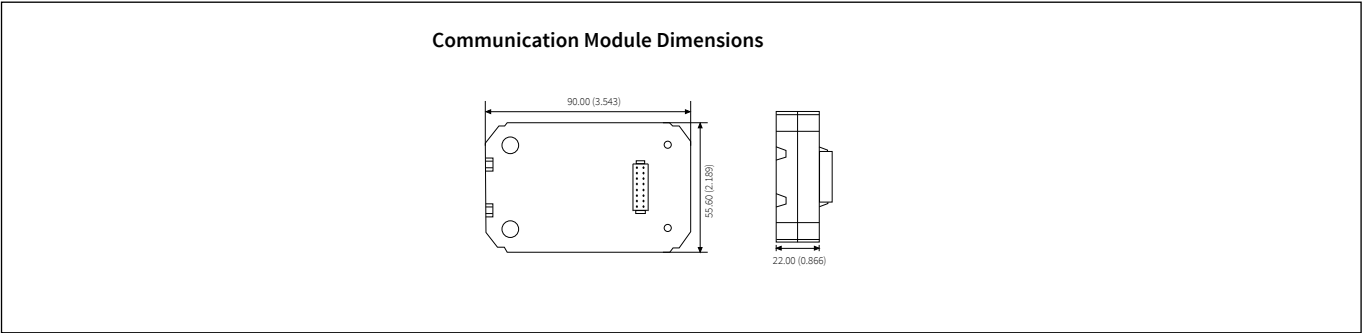
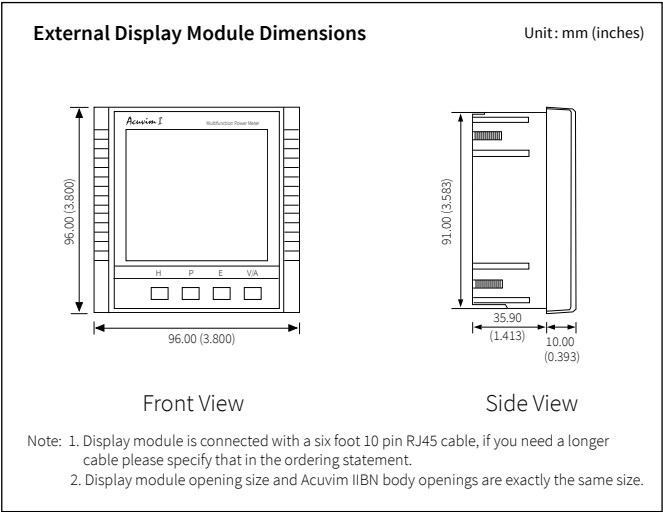
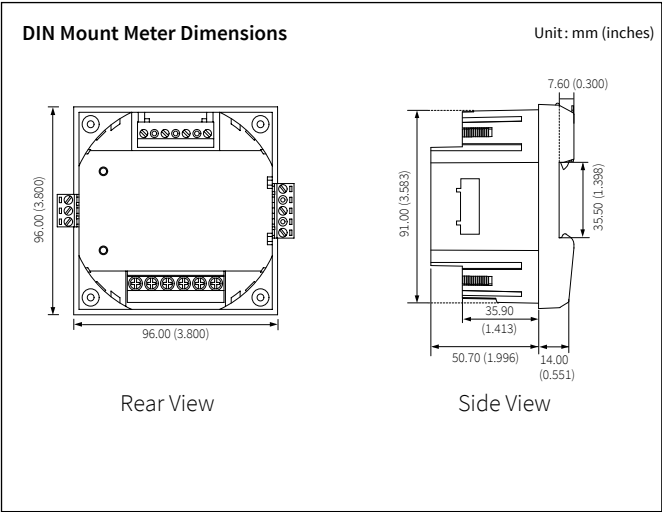
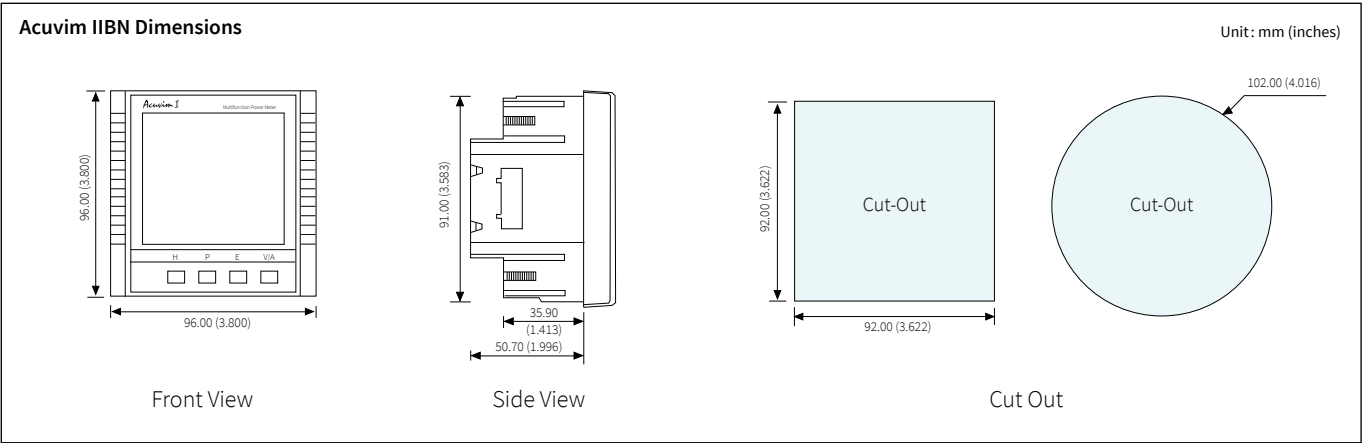
Measurement Standard	IEC 62053-22; ANSI C12.20
Environmental Standard	IEC 60068-2
Safety Standard	IEC 61010-1, UL 61010-1, IEC 61557-12
EMC Standard	IEC 61000-4/-2-3-4-5-6-8-11, CISPR 22, IEC 61000-3-2, IEC 61000-6-2/4
Outlines Standard	DIN 43700, ANSI C39.1

TYPICAL WIRING



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

DIMENSIONS



ORDERING INFORMATION

	Model	Mounting Option	Current Input	Power Supply
Ordering Number	-	-	-	-
Ordering Example	Acuvim IIE	D	5A	P1
	Acuvim IIBN-xx-xx-xx	D: Integrated with LCD Display (Panel Mount Meter/Transducer)	5A:5A Input	P1: 100-415Vac, 50/60Hz 100-300Vdc
		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 Acuvim IIW.

Remote Display Option:

REM- ☐ — DS2: Compatible with Acuvim 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.