

# 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

Integrate with any building automation and control systems using BACnet-IP with peace of mind. BLT 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 to 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 BACnetIP 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

● Função; ⊗ Opção; NA em branco

| PARÂMETROS               | 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            | ●           |

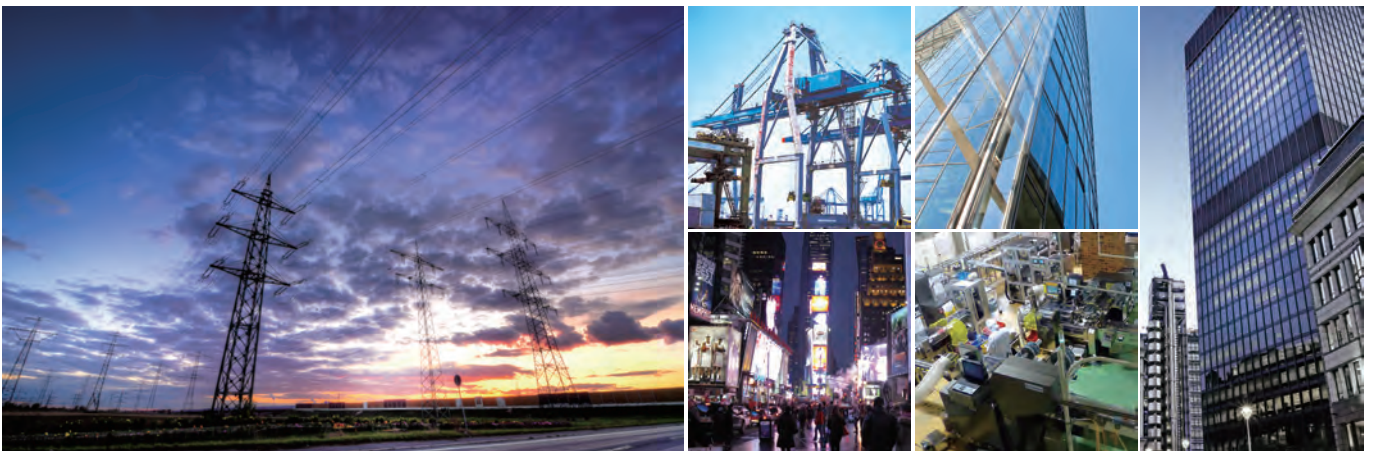
| PARÂMETROS                     | ITEM           | Acuvim IIBN |
|--------------------------------|----------------|-------------|
| Phase A Import Active Energy   | Kilowatt_hours | ●           |
| Phase A Export Active Energy   | Kilowatt_hours | ●           |
| Phase B Import Active Energy   | Kilowatt_hours | ●           |
| 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 | ●           |
| 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

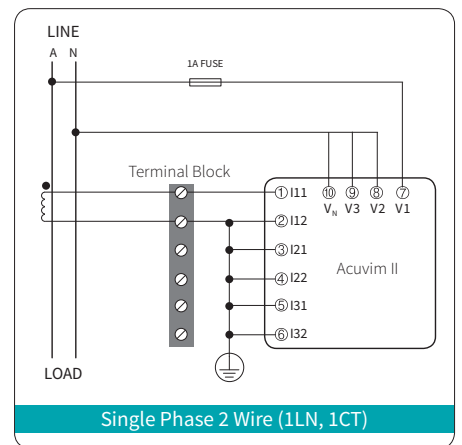
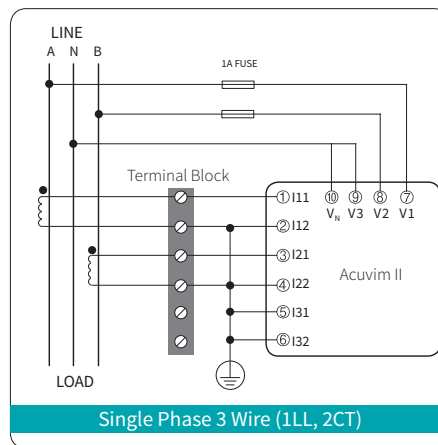
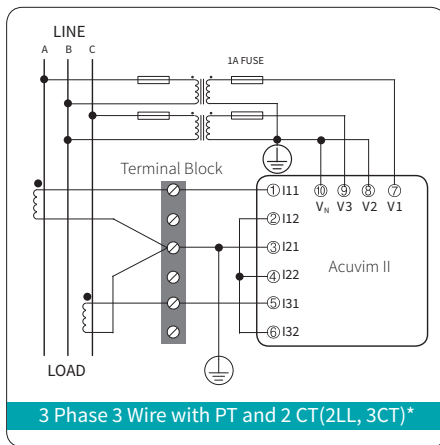
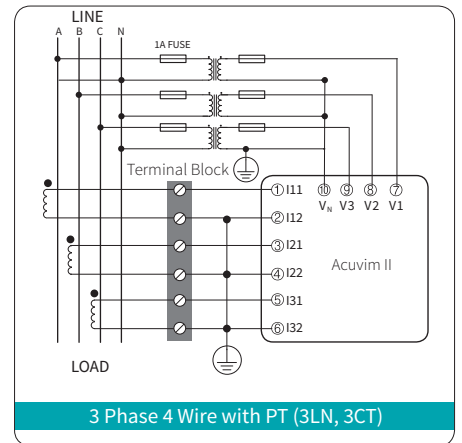
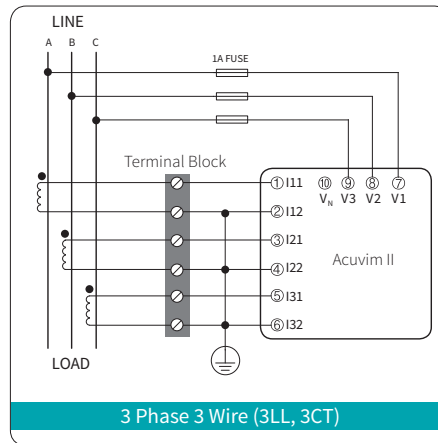
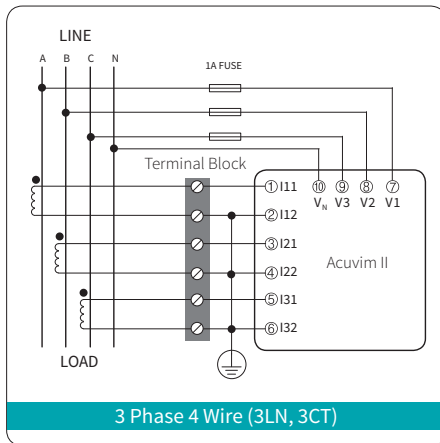
| METERING              |           |          |            |                                                                   |
|-----------------------|-----------|----------|------------|-------------------------------------------------------------------|
| Parameters            |           | Accuracy | 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)<br>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                                |                                                                                         |
|--------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Current Inputs (Each Channel)</b> |                                                                                         |
| 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<br>100Arms for 1 second, Non-Recurring               |
| Burden                               | 0.05VA (Typical) @ 5Arms                                                                |
| Accuracy                             | 0.2% Full Scale                                                                         |
| <b>Voltage Inputs (Each Channel)</b> |                                                                                         |
| Nominal Full Scale                   | 400Vac L-N, 690Vac L-L (+20%)                                                           |
| Withstand                            | 1500Vac Continuous<br>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                                                                         |
| <b>Energy Accuracy</b>               |                                                                                         |
| Active                               | Class 0.2s (According to IEC 62053-22)<br>Class 0.2s (According to ANSI C12.20)         |
| Reactive                             | Class 2 (According to IEC 62053-23)                                                     |
| <b>Harmonic Resolution</b>           |                                                                                         |
|                                      | 63 <sup>rd</sup> Harmonic (50Hz or 60Hz type)<br>15 <sup>th</sup> Harmonic (400Hz type) |

| 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,<br>IEC 61000-3-2, IEC 61000-6-2/4 |
| Outlines Standard      | DIN 43700, ANSI C39.1                                                    |

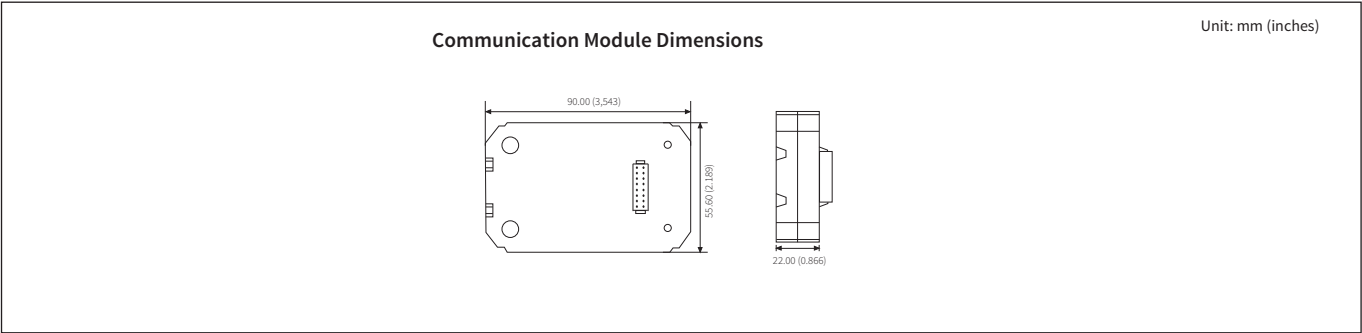
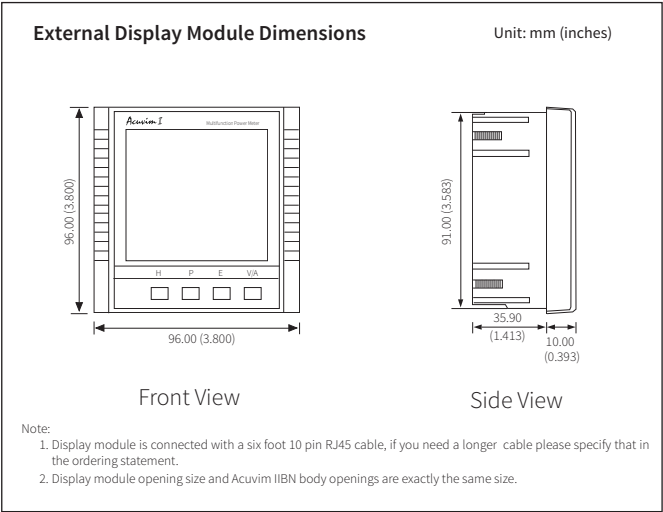
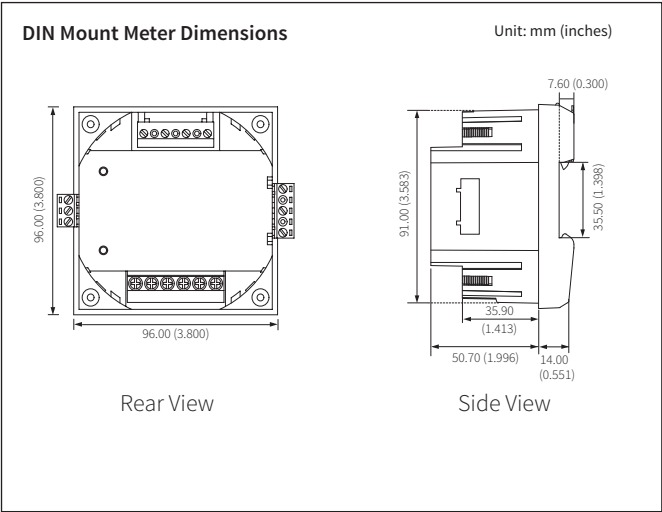
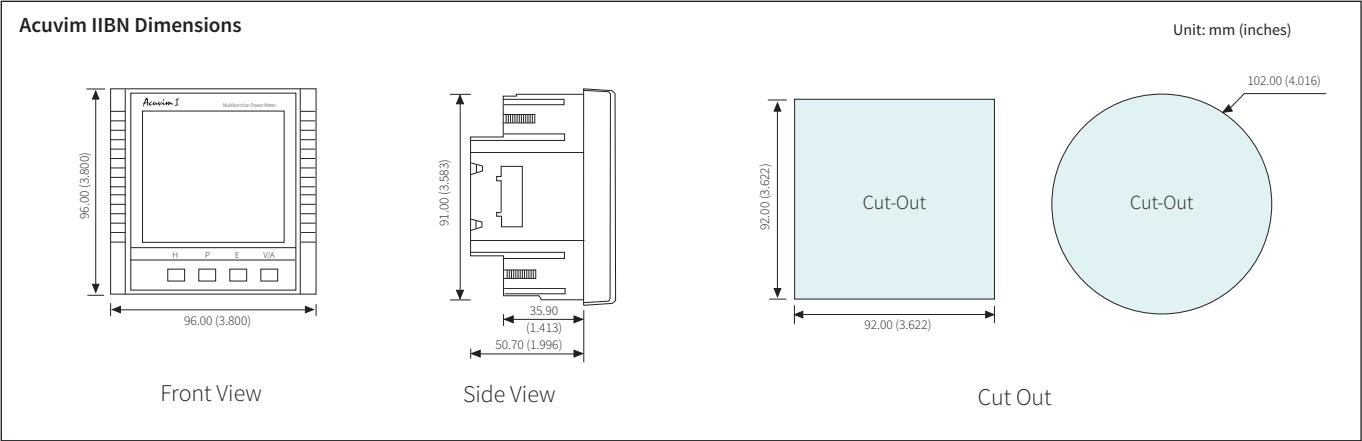
| CONTROL POWER                            |                                 |
|------------------------------------------|---------------------------------|
| Universal                                | AC ou DC                        |
| <b>AC/DC Control Power</b>               |                                 |
| 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                                |
|------------------|----------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------|
| Ordering Number  | -                    | -                                                                                      | -                                                                         | -                                           |
| Ordering Example | Acuvim IIE           | D                                                                                      | 5A                                                                        | P1                                          |
|                  | Acuvim IIBN-xx-xx-xx | D: Integrated with LCD Display<br>(Panel Mount Meter/Transducer)                       | 5A: 5A Input                                                              | P1: 100 ~ 415Vac, 50 / 60Hz<br>100 ~ 300Vdc |
|                  |                      | M: DIN-Rail Mount Transducer<br>without Display (Optional<br>Remote Display Available) | 1A: 1A Input                                                              | P2: 20~60Vdc                                |
|                  |                      |                                                                                        | 80mA/100mA/200mA Input                                                    |                                             |
|                  |                      |                                                                                        | RCT: Rogowski Coil Input<br>(Coil to be Ordered Separately<br>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.