Commercial Energy Consumption Meters

The H81xx Series Energy Meters are easy to install and provide exceptional system accuracy, making them ideal for all submetering applications.

Each meter is factory-matched with one to three split-core CTs. Matching serial numbers assure that the meter and CT were calibrated together. The meter/CT pairs are system-calibrated to provide excellent total system accuracies of 1% from 2% to 100% of the amperage rating of the CTs (e.g., 2-100 amps with 100 amp CTs).

**APPLICATIONS**

- Commercial tenant submetering
- Performance contracting
- Allocating costs
- Real-time power monitoring via local display or through control/data acquisition systems

**SPECIFICATIONS**

**Voltage Tolerance:**
- H8150: 90 - 132VAC line-to-neutral
- H8163: 90 - 300VAC line-to-neutral

**Electrical Services:**
- H8150: 120/240 VAC with neutral, 208Y/120 VAC line to neutral
- H8163: Any service where the phase A-N voltage is ≤300VAC & the phase-to-phase voltage is < 480VAC nom, with neutral

**Power Consumption**
- 50VA

**Insulation Class**
- 600VAC†

**Internal Isolation**
- 2500VAC

**LCD Display**
- 1.2” (31mm) x 3.8” (97mm) viewing area, 160 segments, back-lit with green LEDs

**Sample Rate**
- 1280Hz

**Operating Temp. Range**
- 0° to 50°C (32° to 122°F) (<95%RH, non-condensing)

**Storage Temp. Range**
- -40° to 70°C (-40° to 158°F)

**Systems Accuracy**
- ±1% of reading from 2% to 100% of the rated current of the CTs, accomplished by matching the CTs with a meter and calibrating them as a system

**Frequency**
- 50/60Hz

**Pulse Output (H8163 only)**
- N.O., Opto-FET, 100mA at 24VAC/DC

**Pulse Rate (H8163 only)**
- 0.10*, 0.25**, 0.50, or 1.00 kWh per pulse

**Pulse Width (H8163 only)**
- 200msec closed

**Phase Loss Alarm Output (H8163 only)**
- N.O. (opens on alarm), Opto-FET, 100mA at 24VAC/DC

**Protection Class**
- NEMA 1

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*Not supported at >1600A
**Not supported at >2400A
†Do not apply 600V Class current transformers to circuits having a phase-to-phase voltage greater than 600V, unless adequate additional insulation is applied between the primary conductor and the current transformers. Veris assumes no responsibility for damage of equipment or personal injury caused by products operated on circuits above their published ratings.

Note: Meter and CT’s serial numbers must match...
### DIMENSIONAL DRAWINGS

**MICRO**  
100 Amp  
- **A**: 2.2" (55 mm)  
- **B**: 1.3" (33 mm)  
- **C**: 0.5" (13 mm)  
- **D**: 0.9" (24 mm)  
- **E**: 2.3" (60 mm)  
- **F**: 3.5" (90 mm)  

**MINI**  
200 Amp  
- **A**: 2.6" (66 mm)  
- **B**: 1.7" (28 mm)  
- **C**: 0.8" (19 mm)  
- **D**: 1" (25 mm)  
- **E**: 2.9" (74 mm)  
- **F**: 3.5" (90 mm)  

**SMALL**  
300 Amp  
- **A**: 3.8" (95 mm)  
- **B**: 1.5" (38 mm)  
- **C**: 1.3" (32 mm)  
- **D**: 1.1" (29 mm)  
- **E**: 5.6" (141 mm)  
- **F**: 5.9" (150 mm)  

**MEDIUM**  
400/800 Amp  
- **A**: 4.9" (124 mm)  
- **B**: 2.9" (73 mm)  
- **C**: 2.5" (62 mm)  
- **D**: 1.1" (29 mm)  
- **E**: 8.1" (207 mm)  
- **F**: 5.9" (150 mm)  

**LARGE**  
800/1600/2400 Amp  
- **A**: 4.9" (124 mm)  
- **B**: 5.5" (140 mm)  
- **C**: 2.5" (62 mm)  
- **D**: 1.1" (29 mm)  
- **E**: 8.1" (207 mm)  
- **F**: 5.9" (150 mm)

### ORDERING INFORMATION

#### 120VAC-240VAC (nom.)

<table>
<thead>
<tr>
<th>AMPS</th>
<th>ONE CT</th>
<th>TWO CTs</th>
<th>THREE CTs</th>
<th>VOLTAGE</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 Micro</td>
<td>H8150-0100-0-1</td>
<td>H8150-0100-0-2</td>
<td>H8150-0100-0-3</td>
<td>120VAC</td>
<td>Display Only</td>
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<tr>
<td>200 Mini</td>
<td>H8150-0200-1-1</td>
<td>H8150-0200-1-2</td>
<td>H8150-0200-1-3</td>
<td>120-480VAC</td>
<td>Pulse and Phase Loss</td>
</tr>
<tr>
<td>300 Small</td>
<td>H8150-0300-2-1</td>
<td>H8150-0300-2-2</td>
<td>H8150-0300-2-3</td>
<td>120VAC</td>
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<tr>
<td>400 Med</td>
<td>H8150-0400-3-2</td>
<td>H8150-0400-3-3</td>
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<td>Display Only</td>
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<td>H8150-0800-3-2</td>
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</tr>
</tbody>
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#### 120VAC-480VAC (nom.)

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<th>OUTPUT</th>
</tr>
</thead>
<tbody>
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<td>120VAC</td>
<td>Display Only</td>
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### ACCESSORIES

Fuse and Fuseholders...see page 220.
**APPLICATION/WIRING EXAMPLES**

240VAC, 3-wire, Single Phase, 100 Amp Service

DATA OUTPUT SPECIFICATIONS

- kWh, Consumption
- kW, Real power
- kVAR, Reactive power
- kVA, Apparent power
- Power factor
- Voltage, line to line
- Voltage, line to neutral
- Amps, Average current
- kW, Real Power ØA
- kW, Real Power ØB
- kW, Real Power ØC
- Power factor ØA
- Power factor ØB
- Voltage, ØA to ØB
- Voltage, ØB to ØC
- Voltage, ØA to ØC
- Voltage, ØA to Neutral
- Voltage, ØB to Neutral
- Voltage, ØC to Neutral
- Amps, Current ØA
- Amps, Current ØB
- Amps, Current ØC

**POWER MONITORING**

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