

Enercept® Networked Power Transducers (Modbus® RTU)

H8035 & H8036 Series



U.S. Patent No. 6,373,238



SPECIFICATIONS

| | |
|----------------------|---|
| Agency Approvals | UL508 |
| INPUTS | |
| Voltage Input | 208 to 480VAC, 50/60 Hz RMS ^{1,2,3} |
| Current Input | Up to 2400A continuous per phase ^{2,3} |
| ACCURACY | |
| System Accuracy | ±1% of reading from 10% to 100% of the rated current of the CTs, accomplished by matching the CTs with electronics & calibrating them as a system |
| OUTPUTS | |
| Type | Modbus RTU ^{4,5} |
| Baud Rate | 9600, 8N1 format |
| Connection | RS-485, 2-wire + shield |
| ENVIRONMENTAL | |
| Operating Temp Range | 0° to 60°C (32° F to 140°F), 50°C (122°F) for 2400A |
| Humidity Range | 0 - 95% noncondensing |

Approved for California CSI Solar applications (check the CSI website for model numbers).

1. Do not install on the line or load side of a VFD unit, or on any other equipment generating harmonics. For line side applications, use the E5x Series meters.

2. Contact factory to interface for voltages above 480VAC or current above 2400 Amps.

3. Do not apply 600 V Class current transformers to circuits having a phase-to-phase voltage greater than 600 V, 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.

4. Detailed protocol specifications are available at: <http://www.veris.com/modbus>

5. Modbus TCP, BACnet MS/TP, BACnet IP and LON TP/FF-10 protocols available via accessories.

Integral Monitoring Solution Eliminates the Need for Separate Enclosures

FEATURES

- Revenue Grade measurements
- Precision electronics and current transformers in a single package...reduces the number of installed components...creating significant labor savings
- Monitor energy parameters (kW, kWh, kVAR, PF, Amps, Volts) at up to 63 locations on a single RS-485 network...greatly reduces wiring time and cost
- Fast split-core installation eliminates the need to remove conductors...saves time and labor
- Smart electronics eliminate CT orientation concerns...fast trouble-free installation
- CSI approved...eases submission process for California Solar Initiative

APPLICATIONS

- Energy management and performance contracting
- Monitoring for commercial tenants
- Activity-based costing in commercial and industrial facilities
- Real-time power monitoring
- Load shedding

DESCRIPTION

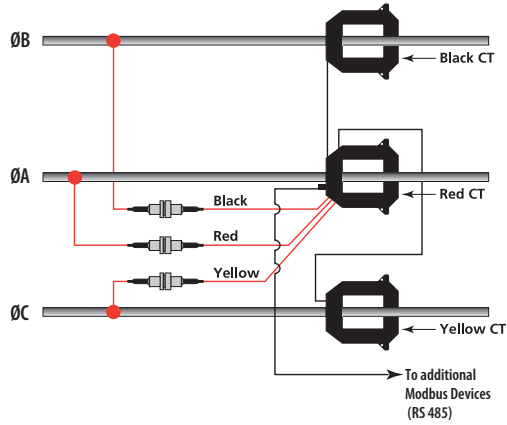
The **Enercept H8035 and H8036 Series** are innovative three-phase networked (Modbus RTU) power transducers that combine measurement electronics and high accuracy industrial grade CTs in a single package. The need for external electrical enclosures is eliminated, greatly reducing installation time and cost.

There are two application-specific platforms to choose from. The Basic Enercept energy transducers (H8035) are ideal for applications where only kW and kWh are required. The Enercept Enhanced power transducers (H8036) output 26 variables including kW, kWh, volts, amps, and power factor, making them ideal for monitoring and diagnostics.

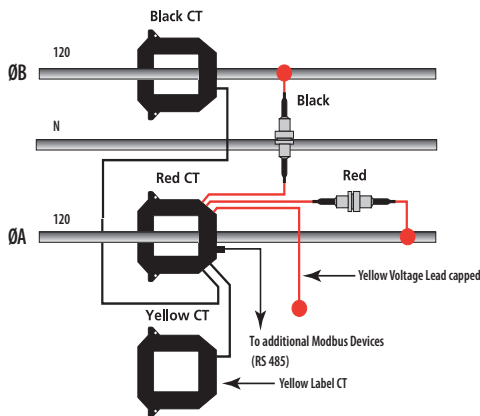
Color-coordination between voltage leads and CTs makes phase matching easy. Additionally, the Enercept automatically detects and compensates for phase reversal, eliminating the concern of CT load orientation. Up to 63 Enercepts can be daisy-chained on a single RS-485 network.

WIRING DIAGRAMS

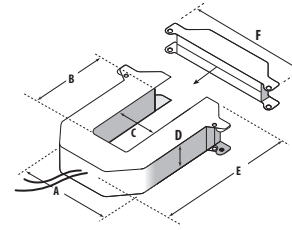
208 or 480VAC 3Ø, Installation



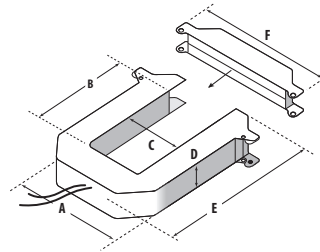
240VAC 1Ø, 3-Wire Installation



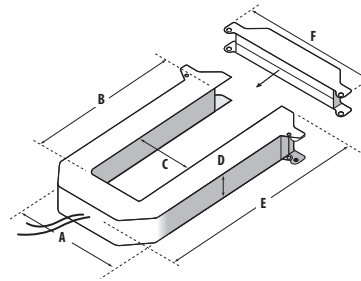
DIMENSIONAL DRAWINGS



- SMALL**
100/300 Amp
- A = 3.8" (96 mm)
 - B = 1.2" (30 mm)
 - C = 1.3" (31 mm)
 - D = 1.2" (30 mm)
 - E = 4.0" (100 mm)
 - F = 4.8" (121 mm)



- MEDIUM**
400/800 Amp
- A = 4.9" (125 mm)
 - B = 2.9" (73 mm)
 - C = 2.5" (62 mm)
 - D = 1.2" (30 mm)
 - E = 5.2" (132 mm)
 - F = 6.0" (151 mm)



- LARGE**
800/1600/2400 Amp
- A = 4.9" (125 mm)
 - B = 5.5" (139 mm)
 - C = 2.5" (62 mm)
 - D = 1.2" (30 mm)
 - E = 7.9" (201 mm)
 - F = 6.0" (151 mm)

DATA OUTPUTS

H8035
kWh
kW

H8036
kWh, Consumption
kW, Real Power
kVAR, Reactive Power
kVA, Apparent Power
Power Factor
Average Real Power
Minimum Real Power
Maximum Real Power
Voltage, L-L
Voltage, L-N*
Amps, Average Current

*Based on derived neutral voltage.

ORDERING INFORMATION



*Modbus Basic Power Transducers**

| MODEL | MAX. AMPS | CT SIZE |
|--------------|-----------|---------|
| H8035-0100-2 | 100 | SMALL |
| H8035-0300-2 | 300 | SMALL |
| H8035-0400-3 | 400 | MEDIUM |
| H8035-0800-3 | 800 | MEDIUM |
| H8035-0800-4 | 800 | LARGE |
| H8035-1600-4 | 1600 | LARGE |
| H8035-2400-4 | 2400 | LARGE |

*H8035 models work with H8920-5 LON nodes

*Modbus Enhanced Data
Stream Power Transducers**

| MODEL | MAX. AMPS | CT SIZE |
|--------------|-----------|---------|
| H8036-0100-2 | 100 | SMALL |
| H8036-0300-2 | 300 | SMALL |
| H8036-0400-3 | 400 | MEDIUM |
| H8036-0800-3 | 800 | MEDIUM |
| H8036-0800-4 | 800 | LARGE |
| H8036-1600-4 | 1600 | LARGE |
| H8036-2400-4 | 2400 | LARGE |

*H8036 models work with H8920-1 LON nodes

ACCESSORIES

- LON Gateway (H8920)
- CT Mounting brackets (AH06)
- Modbus-to-BACnet Converter (E8950)
- Modbus TCP Gateway (U013-0013)



H8920 Series



U013-0012



AH06



E8950