

Enercept® Networked Power Transducers (Modbus® RTU)

Integral Monitoring Solution
Eliminates the Need for
Separate Enclosures



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

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.

APPLICATIONS

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

SPECIFICATIONS



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 and calibrating them as a system
Outputs:	
Type	Modbus RTU ^{4,5}
Baud Rate	9600, 8N1 format
Connection	RS-485, 2-wire + shield
Environmental:	
Operating Temperature Range	0° to 60°C (32° F to 140°F), 50°C (122°F) for 2400A
Humidity Range	0 - 95% noncondensing
Agency Approvals	UL508

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 ESx 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.

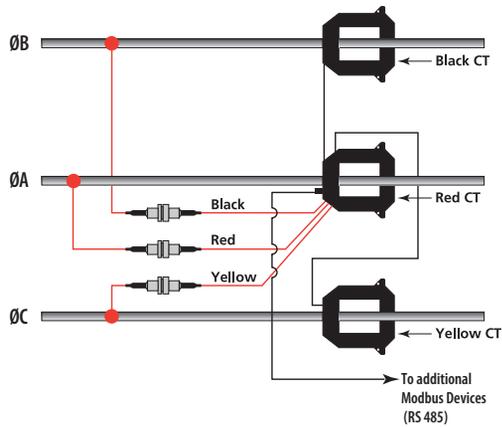
⁴ Detailed protocol specifications are available at: <http://www.veris.com/modbus>

⁵ Other protocols available. Please consult factory.

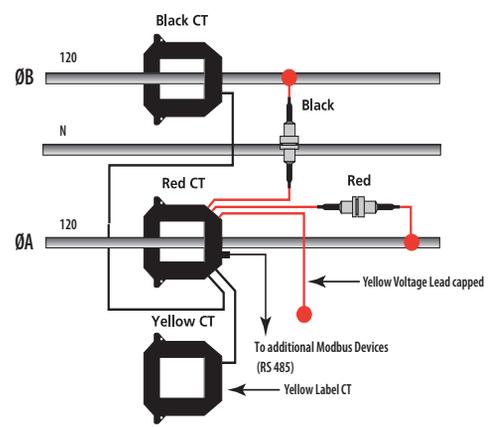
POWER/ENERGY MONITORING

APPLICATION/WIRING EXAMPLES

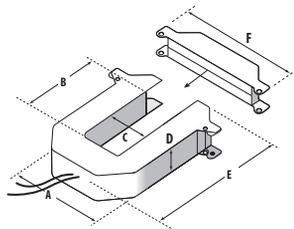
208 or 480VAC 3Ø, Installation



240VAC 1Ø, 3-Wire Installation

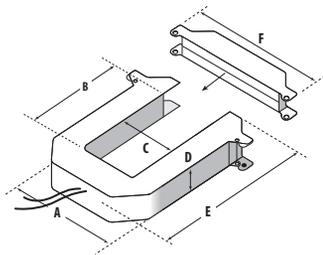


DIMENSIONAL DRAWINGS



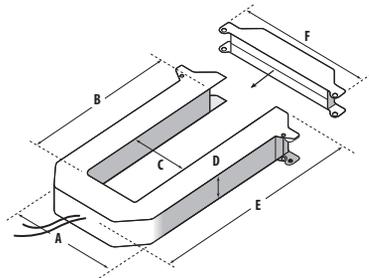
SMALL
100/300 Amp

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)



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

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.

POWER/ENERGY MONITORING

ACCESSORIES

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



H8920 Series



U013-0012



AH06



E8950