

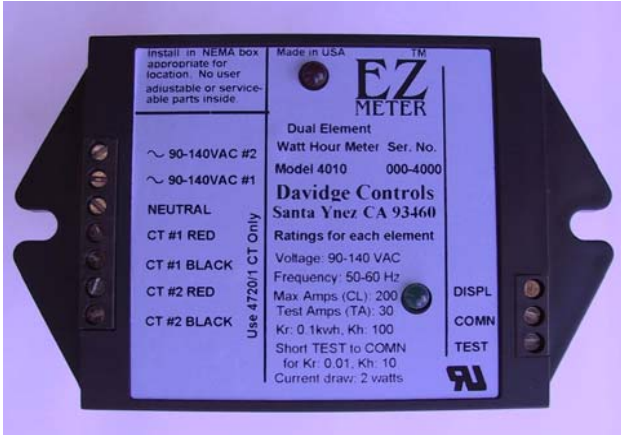
Single Phase EZ Meters

Sequoia - Single Element Meter

2 Wire, 90-140 Volts to Neutral. Used in North America for a single 120 volt service. Most often used in marinas for a small boat or to measure power used by a single appliance.

Yosemite - Dual Element Meter

3 Wire, 90-140 Volts to Neutral, 180-280 Volts Line to Line. The most common meter we sell in North America. Used for apartments, RV parks, large boats in marinas, office suites, and anywhere you need to measure 120 volt and 240 volt power usage.



Glacier - Single Element Meter

2 Wire, 240 Volts Line to Line.

Biscayne - International Meter

2 Wire, 220 Volts to Neutral. The standard meter for Europe, Asia and Africa.

Denali - Dual 2-in-1 Meter

2 Wire, 90-140 Volts to Neutral. Measure the power to two separate 120 volt services and display the power for each service on a separate counter. Most frequently used when two slips in a marina share a single power pedestal.

Olympic - Dual 2-in-1 Meter

A 2 Wire, 90-140 Volts to Neutral service and a separate 3 Wire, 90-140Volts to Neutral, 180-280 Volts Line to Line service with power for each service displayed on a separate counter.

Everglades - Bidirectional Meter

3 Wire, 90-140Volts to Neutral, 180-280 Volts Line to Line. This meter displays the power flowing in each direction on a separate counter. It is useful with solar and wind powered systems connected to the grid for net metering.

Three Phase EZ Meters

Yellowstone - 3 Phase Wye Meter

4-Wire, 90-140 Volts to Neutral, 180-280 Volts Line to Line.

Olympic - 3 Phase Wye Meter

4-Wire, 90-140 Volts to Neutral. Order the Plus or Plus IO version if you need to read all three phases with the computer.

Zion - 3 Phase Delta Meter

3 Wire, 180-280 Volts Line to Line. Use when a neutral is not present and a balanced load exists.

Gettysburg - Wild Leg Meter

4 Wire Delta, 120/120/208 Volts to Neutral, 208 Volts line to line. Also called a Stinger or Five Jaw meter. Used on electric systems where two legs are 120 volts to neutral and the third (wild or stinger) leg is 208 volts to neutral.

Lassen - 3 Phase Wye Meter

4 Wire, 277 Volts to Neutral, 480 Volts Line to Line

Shenandoah -Wild Leg Meter

4 Wire Delta, 220/220/440 Volts to Neutral. Similar to the Gettysburg, but higher voltages

Sorry, no 277/480 3 Wire Delta. The capacitors needed won't fit in the case.



Current Capacities

All models of EZ Meter are available in 20, 100, and 200 amp versions with solid core current transformers (CTs) and 75, 200 and 500 amp versions with split core CTs. Add US\$12.00 for each 75 amp split core CT and US\$60.00 for each 200 or 500 amp split core CT.

Display Resolution

Standard resolution for all EZ Meter models is 0.1 kilowatt hours (kwh) with 0.01 kwh in test mode. They can also be special ordered in the following resolutions:

| | |
|-------------------------------|------------------------|
| 1.0 kwh (0.01 kwh in test) | 1000 wh (10wh in test) |
| 0.01 kwh (0.001 kwh in test) | 10 wh (1 wh in test) |
| 0.001 kwh (0.0001kwh in test) | 1 wh (0.1 wh in test) |

When ordering a different resolution, consider that the counter is capable of about 10 counts per second. A standard Yellowstone meter running 200 amps of 120 volts in all three phases puts out 1 click every 5 seconds. 500 amp meters should be ordered with 1.0 kwh resolution

Packaging Options

EZ Meters as priced above consist of an electronics module, one or more solid-core current transformers, and one or two display counters. They must be installed in a NEMA enclosure appropriate for the location.

Mounting Plate

If you furnish your own enclosure, our stainless steel mounting plate for the counter will save time installing the meter.

NEMA-4X Enclosure

Our NEMA-4X enclosure is a beige plastic box with a hinged clear plastic cover. The meter is mounted inside on a panel with a cut-out (or two if needed) for the counter(s). Anchors are furnished on the bottom of the box to secure the current transformers. The CTs can be mounted in the enclosure or in a nearby breaker panel if the local code allows.



Automatic Meter Reading Options

The standard EZ Meter must be read manually. EZ Meter Plus and EZ Meter Plus IO models can be read by a computer via an RS-232 Interface. The RS-232 Interface can be connected directly to a computer, through a telephone modem, or through an ethernet adapter allowing access from the internet. The EZ ReadIt Gold software package (see back panel) for Windows does billing, data logging, and control of the Plus IO auxiliary ports.

Two options are available for automatic meter reading (AMR) via a computer.

EZ Meter Plus

EZ Meter Plus meters communicate over the power lines (using a 132 KHz radio signal) to a Power Line Interface then via a twisted pair (LAN or telephone wire) to an RS-232 Interface. They have the same electromechanical display counter as the stand alone meters. See the AMR Installation instructions for details.

EZ Meter Plus IO

The EZ Meter Plus IO meters have all the features of the EZ Meter Plus and (1) twisted pair communication directly to the RS-232 Interface plus (2) three Input/Output ports that can be used for reading a dry-contact switch position, controlling a relay, or counting KYZ pulses coming from a water or gas meter.

AMR Support Equipment

RS-232 Interface

One 4810 RS-232 Interface is required for each facility. It will support any number of meters. It connects via a twisted pair to either one or more 4820 Power Line Interface modules or directly to the twisted pair port on the EZ Meter Plus IO modules.

Power Line Interface

The 4820 Power Line Interface connects the twisted pair coming from the RS-232 Interface to the power line. It connects to the low voltage side of every step-down transformer in the electrical system (In an apartment there is probably only one; RV parks and marinas may have several).

Line Conditioning Capacitors

Capacitors are needed across the line voltage wires at major branches (breaker boxes) and at the ends of long runs to prevent signal reflections and improve communications. Three phase systems require three at each point, single phase systems require one.

EZ ReadIt Gold Software

EZ ReadIt Gold is a comprehensive Windows compatible software package for use with stand-alone EZ Meter meters and computer readable EZ Meter Plus and EZ Meter Plus IO meters. With the stand-alone meters, the program performs basic billing functions using meter readings entered manually by the user. With the computer readable meters, the program reads the meters and prepares invoices automatically. It may also be used for data logging if billing is not required. All data is stored in Microsoft Access data files.

Security Items

The EZ Meter Plus and EZ Meter Plus IO were designed for marinas where there would be a direct connection to the meter network from the office. When using a telephone modem or ethernet connection, a hacker could enter the system and change meter readings if he know how to do it. Comparing AMR readings with manual counter readings periodically will detect this.

The NEMA-4X enclosure has tabs for affixing a wire seal.

Tamper Shield Kit

For meters not installed in a sealable enclosure, Davidge offers a tamper shield kit that consists of two bars that can be secured to four tabs glued to the corners of the meter case. The bars are then secured with a wire seal.

EZ Meter

Watt-hour Meters for Submetering



Yosemite Plus IO Meter with (clockwise from top) display counter with mounting plate, Power Line Interface, RS-232 Interface, EZ ReadIt Gold CD-ROM, split core CT, 200 amp CT, 100 amp CT.

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