



# EKM METERING

METERING SOLUTIONS FOR FOR A MORE EFFICIENT FUTURE.

**EKM Metering Inc.** designs and sells electric meters, water meters, and gas meters, as well as communication systems that provide free and unrestricted access to meter data. Our vision is to provide submetering solutions to fill the niche between traditional “dumb” meters, which are costly to install and need to be individually and locally read, and very expensive metering services or metering systems that require a high level of expertise to install and configure.

Driving this vision is a desire to do something that will not only be of benefit to ourselves and to our customers—the basis of good business—but will be of benefit to the planet as well. Our own experience has convinced us that metering and monitoring of our energy consumption leads to immediate, significant reduction of energy use of up to 50% in some cases. What we offer are compact, state-of-the-art submeters, matched with user-friendly software and an inexpensive hardware interface. These are integrated in an easy-to-install but powerful system capable of remote, automatic reading and reporting to a local or remote computer or by e-mail. We offer submeters and submetering systems to meet the needs of homeowners, business owners, tenants and property owners with as few as one or up to thousands of units or devices to meter.

### **What sets EKM Metering apart from other metering companies?**

- We offer meters, such as our Omnimeters, that are much more capable than our competitor's meters, yet at a lower price than our competitors.
- We are introducing an entirely new meter communication system called the EKM Push that will provide you with free and unrestricted access to your sub meter data. This plug and play system allows you to instantly read your meters remotely from anywhere in the world via the internet with no networking configuration.
- While our competitors charge for billing services, we give you the tools to handle this yourself, with no monthly or annual fees!
- We pride ourselves on our customer service and make every effort to ensure that our customer's needs are met.
- Our meters are revenue-grade, industrial strength units that simultaneously measure the amperage, voltage and power factor of your system. This allows them to be much more accurate than other "energy monitors" on the market.
- Our Omnimeters feature the same chipset (Teridian) as meters that are five times more expensive.

### **What are our products used for?**

- Our metering systems are intended for non-utility use but we do offer revenue-grade sub-metering systems. An example of when they are ideal is in situations where a rental property has multiple units for rent but not every unit has its own utility meter. In this case our system can be installed to sub-meter those units, which allows the landlord, or property manager, to bill the tenants according to their actual energy or water usage, instead of a flat rate. This turns out to be a good deal for both the landlord and tenant, because the landlord doesn't have to pay for the tenants' energy use, and the tenants can save money by cutting down on their energy and water usage. Win-win. We have customers who do this with apartments, marinas, trailer parks, campgrounds, truck stops, etc.
- Our sub meters are also perfect for monitoring solar PV and wind energy generation, as our meters log kWh, reverse kWh (Solar generation), and total kWh. This can help you better understand how much electricity is coming from, or going into, the grid.
- Our meters can be used on a wide range of electrical systems. For example, they will work on a low voltage, low amperage, single phase, residential system but they will also work on a high voltage (up to 480V), high amperage (up to 5000A), 3-phase industrial electrical system.
- The EKM Push system, and the free data in the cloud that it provides, allows people to create their own dashboards and other interesting ways to view their data online. The data is available in XML format to make it easy for developers to work with.
- We also offer pulse-output Water Meters and pulse-output Gas Meters for submetering water and gas. The pulse out-put gives the meters the ability to be read remotely from anywhere in the world.
- Our systems are also used to meter individual circuits, machinery, pool pumps, electric vehicles, HVAC, as well as many other appliances and applications.

## Products and Services

EKM specializes in innovative kWh meter and communication system design. These are typified by a few of our products: Our EKM-Omnimeter line of universal smart meters and our EKM Push communication system. However, we offer many many different meter models, including water and gas, to suit nearly any need or price point.

### EKM-Omnimeter

These meters can meter most any electrical system that is commonly used in the world. They can operate on 50 or 60 Hz, 120 to 480 volts, 1-phase or 3-phase, they are accurate to 0.5%, and can meter up to 5000 amp systems. They meters use external current transformers(CTs) to measure the current in the electrical system and we offer a range of CTs to suit various wire diameters and amperages. You can read the meter on the face, or set it up to be read remotely with a computer. The remote read is a simple RS-485, 2 wire system which allows the meter string (up to 256 meters on a string) to be read from up to 4000 feet away. This string of meters can then be connected to one of our communication devices and from there you can read your meters over the internet from anywhere in the world. If you would like to go wireless, you can wirelessly bridge the hardwired RS-485 network at any point using our 485Bee wireless mesh.

We have three versions of the Omnimeter:

- **Omnimeter I v.3** - (see description above)
- **Omnimeter UL II v.3** - Similar the the Omnimeter I v.3 but it has received UL listed approval and will only operate up to 240 volts.
- **Omnimeter Pulse v.4** - This is our newest addition to the Omnimeter family and features a few new capabilities: It has the ability to count pulses from up to three pulse output devices, such as our pulse output water meters and pulse output gas meters. It also has two controlable outputs that can activate relays. This gives the meter the ability to turn things on and off remotely, such as a hot tub, lights, or air conditioning. This meter can also display over 40 different values of data per meter read, including VARs on each line, kWh on each line, rev. kWh on each line, TOU kWh, Total kVARh, and more.

### EKM Push

This communication system uses our Omnimeters for metering, but instead of having to send requests from a computer and having the meter respond over a network, the EKM Push gateway handles all of the meter communication, parses the meter data, and inserts the reads into a central database. This completely eliminates all of the configuration issues of firewalls, dynamic IP, and having a computer running all the time to make it happen. Data is available seamlessly and immediately from a known, fixed location. Up to 256 EKM-Omnimeters can be daisy chain connected to each EKM Push on up to 4000 feet of wire. The entire system has been designed to be a robust, scalable, metering system, with an easy plug-and-play installation.

If this of interest to you, take a look at this data from live meters that are spread all over the world:

<http://cl.ekmmetering.com/>

The sample Group ID is: 1010 and the Password is: 2020

(Firefox works well for viewing and a good meter to check out: 10068)

These are rudimentary graphs meant to convey the abilities of this new system.

You can change the number of reads to 360 or 720 to see more history.

If you were to get your own EKM Push you will be given your own user ID and password to view your meters.

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You can also check out this web data dump:

<http://cl.ekmmetering.com/10068~300.xml?MTAxMDoyMDIw>

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Or in Linux command line or Mac OSX Terminal (be sure to include the curl, this is for 300 reads from meter 10068, this is useful for developers): `curl http://cl.ekmmetering.com/10068~300.xml?MTAxMDoyMDIw`

Here is a widget we have been working on that is using live EKM Push Data (doesn't yet work with Internet Explorer 8). We can share the code for this if you are interested: <http://widget.ekmmetering.com/10068/>

Our intent is not to get into the data business, but to provide the end user with the data and let them do what they want with it, whether it be nice dashboards, billing systems, or other kinds of reports. We will be providing some minimal user interface. But the idea is that for anyone who wants more than that, they will retrieve the data from our server on a regular schedule, we'll dump the data once it's confirmed that the data has been transferred, and they'll do what they need to with the data. At the level of 1 minute read intervals with one day retention, our plan is to provide the data for free. We're extremely pleased and excited by how robust this system is, and how fast it responds. We really believe that this will give us a huge advantage in terms of making our meters a really compelling product.

## Basic kWh Meters

EKM offers meters to suit nearly any need. While our universal Omnimeters will work on almost any electrical system that is commonly used, we also offer a variety of basic, affordable, read-off-the-face meters that will work for most foreign and domestic metering needs.

## Water and Gas

EKM also offers pulse-output water and gas meters that can either be read off the face of the meter or remotely via a pulse-input device such as the EKM-Omnimeter Pulse v.4. The pulse outputs facilitate remote reading from anywhere in the world. These meters, when combined with our pulse input meter and communication device, provide a reliable, accurate, and remote-readable system that brings your meter data to you.

## Software

Our new user-friendly EKM Dash software allows you to read meters which are connected to your computer, whether it be a PC, Linux box, or a Mac running OS X, and whether the meter is connected directly with one of our USB to RS-485 converters, over a LAN network, or over the internet with the iSerial TCP/IP to Serial Converter. From this application you can, read all of the meter parameters, set meter numbers (addresses), set passwords, reset demand to zero, and have meter usage logged to a .CSV file, and have monthly reports e-mailed to individual users or formatted for printing and mailing. This is a direct replacement for our legacy EKM Reader software. It features all of the same functionality and more, in a much more stable and easy to use package.

## Quantity Pricing

### EKM-Omnimeter:

- x10 -- 10% off
- x20 -- 20% off
- x50 -- 30% off
- x100 -- 40% off

### Current Transformers:

- x20 -- 10% off
- x100 -- 20% off

### 3/4" Pulse Output Gas Meter

- x10 -- ≈5.8% off
- x50 -- ≈12.5% off
- x100 -- ≈21.4% off
- x500 -- ≈33.2% off
- x1000 -- ≈40.3% off

### 3/4" Pulse Output Water Meters

- x10 -- ≈6.3% off
- x50 -- ≈14% off
- x100 -- ≈21.9% off
- x500 -- ≈28.9% off
- x1000 -- ≈39% off

Please inquire about quantity discounts for our other metering products as all of our products will receive some level of discount. Discounts for quantities over 100 are determined on a case by case basis. If you are interested in larger quantities, please let us know how many meters you will need and we will offer you some very attractive quantity discounts. Orders of quantities over 100 will be FOB our factory in China, so please allow at least six weeks for delivery.

For more information about our products and services, please visit our website listed at the bottom of this page.

