



We are very excited to release the second generation of our EKM Push system, that we're simply calling Push v.2, or Push2. This system builds upon the lessons learned with Push v.1 and introduces some new features and capabilities. In addition to our v.3 Omnimeters, Push v.2 now supports our v.4 Omnimeters as well. This allows the Push system, for the first time, to send electricity, and/or water, and/or gas data to the cloud. In other words, it is now possible to submeter all of your utilities, push your data to your cloud account, and then retrieve your data, for free, using one of our software solutions or our new Open API.

This system has truly unprecedented capabilities, and features plug-and-play integration. All you have to do is plug it in. The EKM Push gateway handles all of the meter communication, parses the meter data, and inserts the reads into a central cloud database. This completely eliminates all of the issues of configuring firewalls, dealing with dynamic IP addresses, and having a computer running all the time to make it happen. The Push system provides 1000 of the latest real time reads, as well as a long term summarized dataset indefinitely. These summaries allow you to access 15 min, hourly, daily, weekly, monthly, or yearly history for each meter read by the Push system. Data is available immediately, seamlessly, and can be accessed from anywhere in the world by using a unique User Key. In addition to the main User Key, that provides access to all of the meters in an account, every meter also has it's own unique Meter Key. This allows the account owners to share specific meters while keeping the rest private. So for example, using Meter Keys, a landlord could share meter data for each of their apartments with the appropriate tenants.

Up to 50 Omnimeters can be daisy-chain-connected to each EKM Push gateway, on up to 4000 feet of RS485 communication wire. The entire metering system has been designed to be robust, reliable, and highly accurate. We truly believe that the EKM Push system allows for the most reliable, scalable and economical metering solution on the market. This system is perfect for submetering rental units, or monitoring utility resources, irrigation, solar/wind energy generation, car charging stations, etc. We have designed this system to give you the kind of reliability that you would need to build your business around. There is nothing like this available. We believe the EKM Push and the EKM Push Pro will be the backbone of the next generation of metering. They represent an entirely new paradigm for meter data.

Our intent is to provide you with free, seamless, and unrestricted access to your meter data in real time. You can then use your data in ways that serve you best, whether it be logging for billing purposes or monitoring on dashboards to track your consumption and/or generation. If you decide that you want more interface options than we provide, you can also retrieve your raw Push data from our database using our open API, and then use it in any way you choose. There are already a number of 3rd party services that utilize the raw Push data for their own services. You can find them in our Push App Store.

Along with the release of Push2 comes a complete rethink, restructure, and rebuild of our Open API. Here are some of the biggest changes that you will notice:

- data can now be structured in html, xml, json, csv, timeseries, influx, or vector.
- It's now possible to call multiple meters in one URL call.
- It's possible to filter out the specific meter data that you want to see
- It's possible to adjust the default UTC time using timezones.
- It's possible to call all available reads from a specific sequence number.
- It's possible to call all available reads from a specific start date to a specific end date.
- It's possible to get all available reads from a specific number of minutes ago
- It's now possible to securely retrieve data using https://

Tools and Materials list:

- EKM Push communication device
- Twisted pair wire
- 12v power adapter (included)
- Ethernet cable
- Small standard screwdriver (included)

Installation instructions for use with the EKM-Omnimeter I v.3:

- Use a small standard screwdriver to install one strand of twisted pair wire from terminal 11 on your EKM-Omnimeter to terminal RS-485A (+) on the EKM Push.
- Use a small standard screwdriver to install one strand of twisted pair wire from terminal 12 on you Omnimeter to terminal RS-485 B(-) on the EKM Push.
- Connect an ethernet cable from you internet router to the ethernet port in you EKM Push.
- Connect the 12v power adapter from any 110-240v outlet to the appropriate port on your EKM Push.

Installation instructions for use with the EKM-Omnimeter II UL v.3:

- Use a small standard screwdriver to install one strand of twisted pair wire from terminal 20 on your EKM Omnimeter UL to terminal RS-485 A(+) on the EKM Push.
- Use a small standard screwdriver to install one strand of twisted pair wire from terminal 21 on your EKM Omnimeter UL to terminal RS-485 B(-) on the EKM Push.
- Connect an ethernet cable from you internet router to the ethernet port in you EKM Push.
- Connect the 12v power adapter from any 110-240v outlet to the appropriate port on your EKM Push.

Installation instructions for use with the v.4 Omnimeter models:

- Use a small standard screwdriver to install one strand of twisted pair wire from terminal 20 on your v.4 Omnimeter to terminal RS-485 A(+) on the EKM Push.
- Use a small standard screwdriver to install one strand of twisted pair wire from terminal 21 on your v.4 Omnimeter to terminal RS-485 B(-) on the EKM Push.
- Connect an ethernet cable from you internet router to the ethernet port in you EKM Push.
- Connect the 12v power adapter from any 110-240v outlet to the appropriate port on your EKM Push.

*Omnimeters can be daisy-chained together and connected to one EKM push. (see Fig. 1) Simply run twisted pair wire from terminal A(+) on the first meter to terminal RS-485 A(+) on the next meter, and so on. Repeat the process for the RS-485 B(-) terminals as well.

Operation:

- Assuming that your meter installed correctly and you have followed the appropriate instructions above, your EKM push should already be pushing data over the internet.
- No additional hardware or software is necessary in order for your EKM Push to send your Omnimeter data to the database. Check out:

<http://widget.ekmmetering.com/EKM2/?reads=100&key=MTAxMDoyMDIw&meter=10068>

- Click the gear icon and enter your user ID and password, or change the above URL to contain your own meter number and EKM Push Key(sent to you in an email when we sent your EKM Push).
- To Log your meter data through the EKM Push system, try our EKM Dash software for Windows, OSX, or Linux.
 - <http://www.ekmmetering.com/meter-software>

* Check out our Ethernet-to-Wifi Bridge in order to wirelessly connect your EKM Push to the internet. Or see our 485Bee to wirelessly connect your EKM Push to your EKM Omnimeters.

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LED Lights (from right to left):

- Power: solid green indicates the Push is powered up.
- Internet: solid green indicates an internet connection has been established
- RS-485: syncopated red and green blinking indicates data is being pushed over the internet. If your meter is set to be read once per minute, these lights will flash once per minute.

Troubleshooting:

- Meters are assigned to a specific EKM Push before we ship out your order. If you are adding Omnimeter(s) to an existing Push system, or are adding the Push system to your existing Omnimeter(s), please contact us so we can assign all of your meters to your EKM Push system.

Specs:

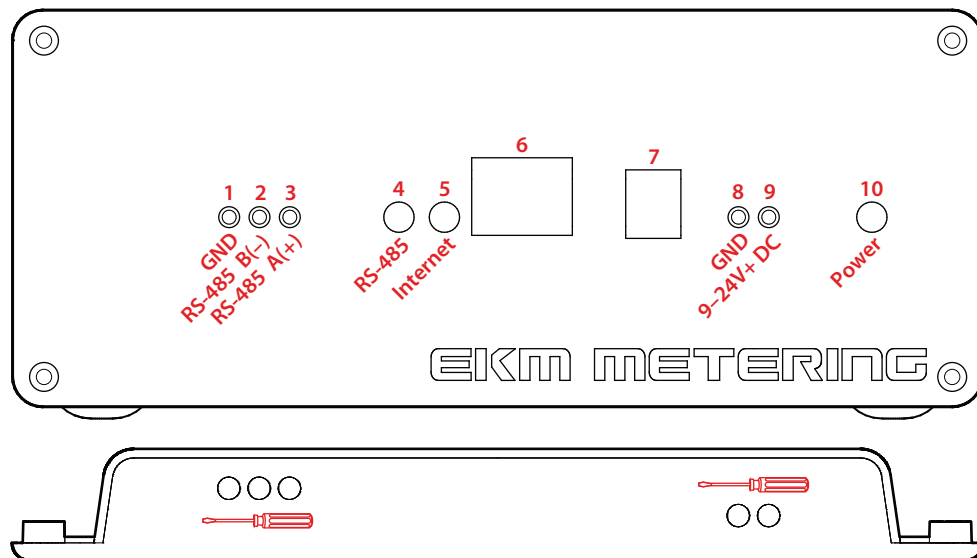
- Dimensions: (95mm deep) x (160mm wide) x (68mm tall)
- Power Consumption: less than 1 watt

Developers:

- For more information about the data provided by the EKM Push system, please visit the Developer Portal on our website for information regarding our Open API. <http://www.ekmmetering.com/developer-portal>

Ports and LEDs (Fig 1):

1. Ground
2. RS-485 B(-)
3. RS-485 A(+)
4. RS-485 LED
5. Internet LED
6. Ethernet
7. Power
8. Ground
9. 9-24V+ DC
10. Power LED



(fig 1)

* Ports 1,2,3,8, and 9 house terminals that are opened or closed through the holes in the top of the Push lid. Insert the screwdriver that came with your EKM Push, into these small holes in order to operate the terminals and connect your wires.