

Sub-metering & Billing Solutions

Sub-meter Types

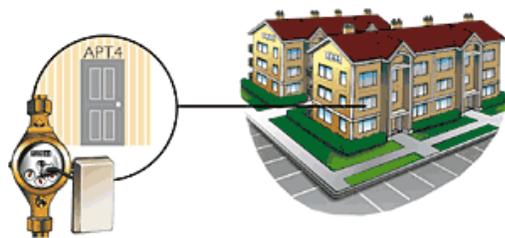
MeterNet offers three distinct sub-meter types, these are:



1) Visual-manual read; the least expensive and most reliable meter type, due to simplicity and no electronic components these meters set the reliability standard to which all others are compared. MeterNet offers several brands of manual read meters and will help select the best choice for your installation configuration.



2) Encoder read; designed for applications where the meter must be installed out of reach or out of sight of the meter-reader, these systems are nearly as reliable as manual read meters and less expensive than radio read. MeterNet offers several brands of encoder type meters and in most cases we recommend Elster-Amco for their reliability and flexibility.

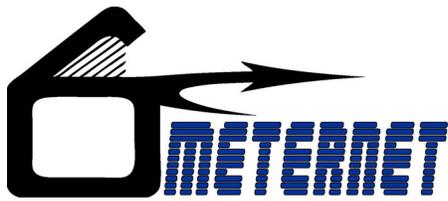


3) Wireless radio read; by far the most flexible option, we offer Cereniti and Inovonics radio-type remote reading systems for their flexibility and reliability. Radio reading systems work in conjunction with several meter types, and this is great technology for applications where the meters must be installed in inaccessible locations.

Installation Location and Meter Selection:

Sub-meters can be installed anywhere. Reading them and keeping the installation compliant with state regulations is a whole other story! So the best location is almost always the one with the easiest access; preferably outside or in a vault underground. In many cases however, the plumbing configuration dictates that the meter be installed inside the garage, or even inside the unit; this is where the encoder and radio read systems come into play. Once the install location is identified, deciding on the type of meter to install becomes fairly easy.

When it comes to water meters, the simplest meter and reading system is usually the one that is most reliable and least expensive. In other words, the more technology involved, the higher the cost will be and the more potential failure points there are.



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General Requirements:

Sub-meter regulations vary widely from state to state. It is best to contact us directly regarding state specific requirements. Some basic guidelines that should always be followed are:

- 1) Always use meters that meet AWWA accuracy standards.
- 2) Meters should be installed in an accessible location, where the customer can visually read their own meter if necessary and if this is not possible a remote readout display device should be installed.
- 3) Meters must be installed according to manufacturer specifications, in most cases this means the meter needs to be in a horizontal position with the face of the meter facing upwards and level. This is very important as many meters will not read accurately if they are in the wrong orientation, if the meter needs to be installed in a non-standard position, use a meter that is designed to do so; both Elster-Amco and MasterMeter have meters designed to operate in any position.
- 4) Never install a cold water meter in a hot water line, it will not work properly.
- 5) Use meters that read in the same unit of measure as the providing utility (city water district).

California specific requirements:

Sub-meters in California are regulated by the California Department of Food and Agriculture, Division of Measurement Standards (aka; Weights and Measures or W&M). This is a state agency with regulation enforcement administered by each County. There are several very important guidelines set by W&M:

- 1) Only type approved meters (approved by W&M) may be used in California, a current list of type approved meters can be found here:
<http://apps.cdfa.ca.gov/CTEP/default.aspx?srchCertificateNumber=&srchApplicant=&srchModelS=&srchDeviceType=40&srchDateSearchType=equal&srchEffective=&srchEffectiveRangeMin=&srchEffectiveRangeMax>
- 2) All meters must be submitted to the local County W&M office for testing, registration and certification prior to being installed.
- 3) Meters must be installed in accordance with the Type Certificate guidelines (orientation).
- 4) The customer (resident) needs to be able to easily read the meter after it is installed or a remote readout display needs to be used.
- 5) Each sub-metered complex must be registered with W&M, the registration fee (due date depends on zip code) is based on the number of meters.
- 6) Water sub-meters must be tested and recertified every ten-years or less, with not more than 50 meters submitted for recertification per year (for example; a 150-meter complex should re-certify 50 meters in year 8,9 &10, NOT all 150 in year 10). There is a re-certification period for each complex, based on their zip code, meters must be submitted to W&M during that period.
- 7) The state of California has mandated that all new plumbing components must be lead-free, sub-meters need to be specified as 'lead-free', many manufacturers make both 'regular' and 'lead-free' meters.

These guidelines are for informational purposes only, for a complete set of requirements you should contact your local County W&M office or go to the State website <http://www.cdfa.ca.gov/dms/>.