



METER REQUIREMENTS

GENERAL REQUIREMENTS

This chapter provides you with general requirements for the metering equipment that you need in order to have your service energized. Your meter base needs to meet the following criteria for our meter to properly connect.

Your meter base and other equipment installation must meet the requirements of your local electrical inspector. If you have specific questions regarding your meter installation please contact your local electric inspection agency (see Page 4).

SERVICE RATING OPTIONS

As stated in Chapter One, CLPUD's metering equipment requirements for single-family residential structures (*not apartments or condominiums*) are based upon the following single-phase service ratings [and the customer must select which amperage rating is required for the project]:

Ampere Rating	Voltage
200 Amp	120/240
400 Amp	120/240
over 400 Amps*	120/240

* If you need a service over 400 amps or a three phase service, please contact your nearest service office (see appendix). Those services will be addressed individually and are not covered in this handbook.

You are responsible for providing and installing all equipment other than:

- The meter.
- The service line from CLPUD's facilitates to the point of attachment.

METER BASE REQUIREMENTS

The meter base you purchase and install shall meet the following general requirements. Specific requirements for 200 and 400 amp services, and for outbuildings, are listed later in this chapter.

Your meter base must be:

- UL (Underwriters Laboratory) approved.
- Rated for exterior use, and be rain-tight according to NEMA-3R.
- Must have all unused openings tightly sealed from the inside of the base.
- Must be plumb and securely fastened to the supporting structure.

200 AMP SERVICES

The 120/240 volt, 200 ampere service is the most common service installed by CLPUD. Typically it's installed in homes with a living area of less than 2500 square feet.

However, depending upon what type of equipment you are installing you may want a larger service. It is your responsibility to determine your electrical requirements and to notify CLPUD of the size of service you would like.

Meter bases for 200 amp services shall also:

- Be rated for 120/240 volts and 200 amps.
- Contain four meter-jaws and one connection point for the neutral conductor.
- Be at least 4-1/4 inches deep, 11 inches wide, and 14 inches high (see Figures 24 and 25).
- Accept 2 inch PVC (preferred) or 2 1/2 inch rigid steel conduit.
- Have lugs (electrical connectors) that are marked to accept 4/0 aluminum conductors.

The center knockout should not be used on underground because of the bending radius of the cable.

If your outbuilding or ancillary service will be used for commercial purposes (i.e. a professional shop, dairy barn, illuminated sign, multifamily/community well) you will have additional requirements. If this is the case please refer to the *CLPUD Electric Service Handbook for Non-Residential Services*.

GROUNDING REQUIREMENTS

All meter bases and conduit shall be bonded and grounded in accordance with the NEC. Beginning in 1996, new construction shall have a "UFER" ground installation poured in the footings and be inspected by the building official. It is your responsibility to coordinate this installation with the proper authorities and receive their approval.

CLEARANCE REQUIREMENTS

The following clearances are required around all meter installations. It is your responsibility to provide and maintain these clearances.

- The center of the meter shall be between 5 and 6 feet above finished grade (except meter pedestals).
- A working space of 36 inches wide by 42 inches deep is required around the meter see Figure 23). This working space is to be kept clear of any obstructions including landscaping.
- There shall be a minimum horizontal clearance of 36 inches between the center of the electric meter and gas meters.
- If a recessed meter base is installed, a clearance of 18 inches is required from the meter center to the closest portion of the wall.
- If a flush or recessed meter base is installed, the siding or finished surface of the structure shall not overlap the cover of the meter base.

- Recessed meter base will not be recessed more than 6 inches.

400 AMP SERVICES

The meter base required for a 120/240 volt, 400 ampere service is called a "Class 320" meter base (see Figure 26).

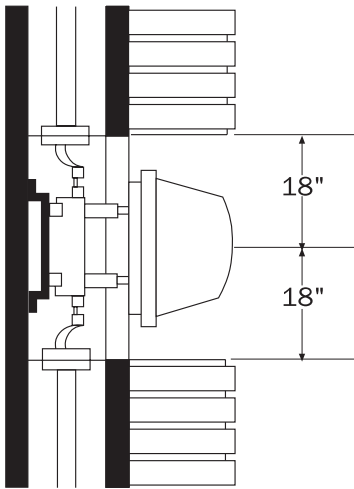


Figure 23.
Recessed meter base installation showing minimum clearance.

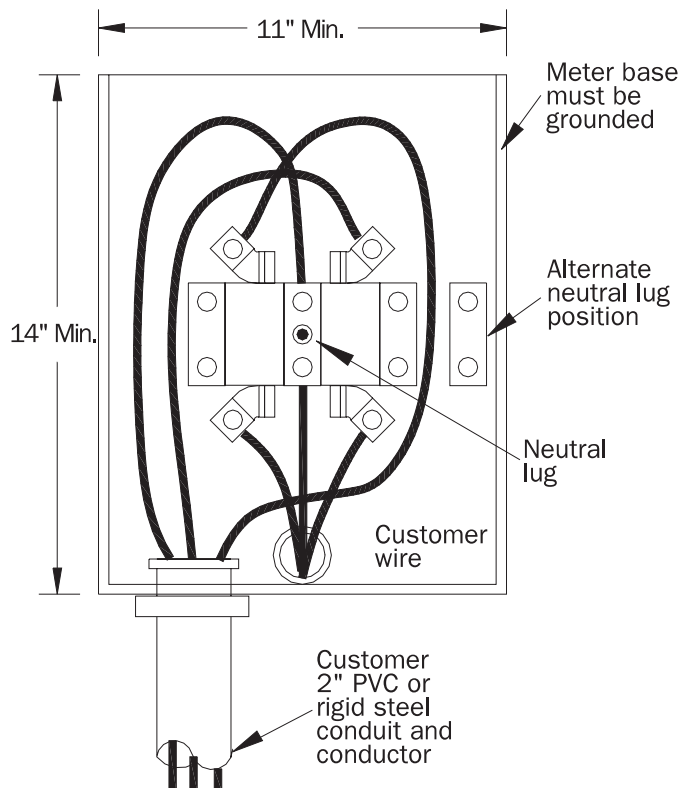


Figure 24.
200 Amp underground meter base.

It is larger than the 200 amp meter base, but it is still a self-contained meter base (it doesn't require instrument transformers). It can be installed on residences where the continuous current rating is 320 amps or less. If your structure will require more than 320 amps continuous, you are required to install an instrument transformer (CT or PT) service.

Class 320 meter bases for 400 amp services shall, in addition to the meter base requirements listed on page 17;

- Be rated for 120/240 volts and 320 amps continuous.
- Contain four meter-jaws and one connection point for the neutral conductor.
- Contain a Class 320 manual bypass (see Figure 26).
- For underground meter bases we recommend:
 - 3 inch schedule 40 or 80 PVC or steel conduit through a knockout in the bottom left corner of the enclosure.
 - Have a least 8-1/2 inches of clearance between the bottom of the lugs and bottom of the enclosure (see Figure 26).

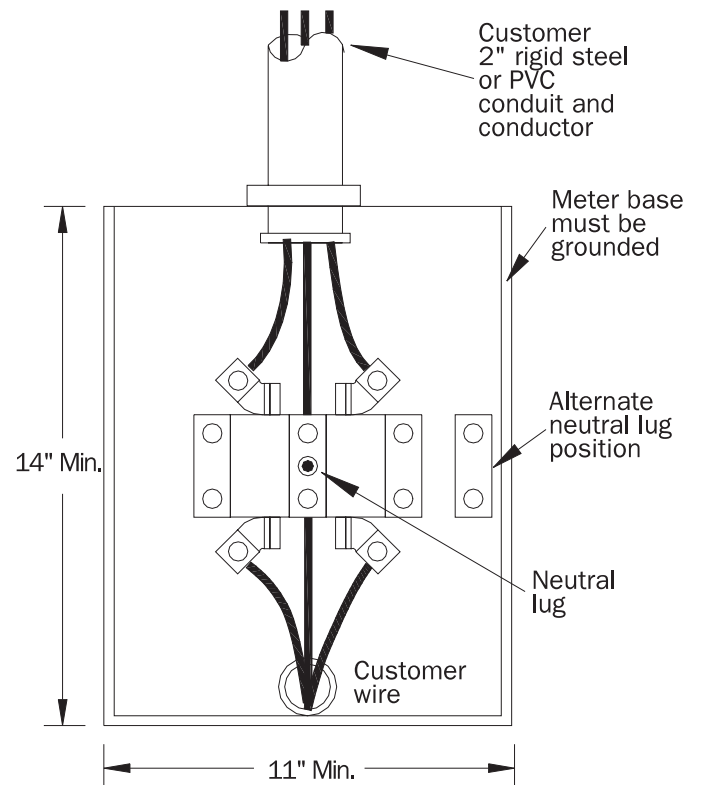


Figure 25.
200 Amp overhead meter base.

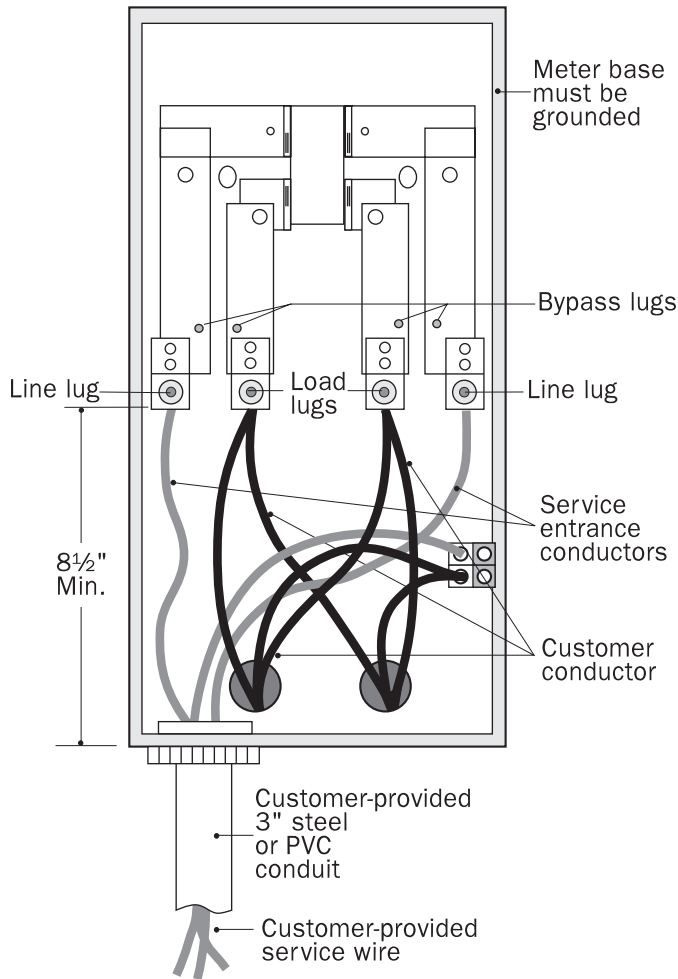


Figure 26.
Typical Class 320 meter base with bypass lugs.

- All meter bases will be unenergized until the inside breaker box has a **permanent metal cover** installed. CLPUD crews must be able to see that the breaker box cover is installed and secure.

400 AMP CT SERVICE

CT services are also known as “instrument transformers”. You may request a 120/240 volt, 400 amp CT service, available at an additional charge. This service requires a different meter base (see Figure 27). It also requires additional equipment (CT enclosure, conduit, CT mounting bracket, etc.). Contact our nearest service office (see appendix) and ask to speak to the meter department.

Phase	Service Amperage	CT's No. of Transf.	Dimensions		
			W	H	D
1	401-800A	2	24"	24"	11"
3	201-400A	3	36"	36"	11"

SERVICES OVER 400 AMPS

120/240 volt services over 400 amps require CT metering. Please contact your nearest service office (see page 21) for more information and ask to speak to the meter department.

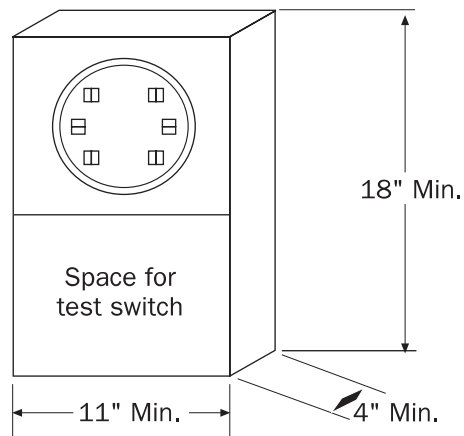


Figure 27.
120/240 Volt single-phase CT meter