

## WIRING REQUIREMENTS

It is the Customers responsibility to install commercial secondary and service if served from a pad-mounted transformer. Please contact CORED at 425-1803 for access to transformer. The Customer may select any wire size, however if the Customer selects a wire size for which CORED does not stock termination lugs, the Customer must supply the termination lugs. CORED will make secondary terminations.

CORED does not stock lugs for compacted or compressed wire.

CORED stocks lugs for the following sizes (aluminum or copper):

- #6
- #4
- #2
- #1
- 1/0
- 2/0
- 4/0
- 250
- 300
- 350
- 400
- 500
- 600
- 750

**The CORED Meter Department will install the meter after an account has been established and any required deposits or fees have been paid. CORED will not energize a service without proper inspections.**

## METER BASES

### Customer Responsibilities

Except where otherwise noted, the Customer is responsible for providing and installing all service equipment as noted in the customer handbook. All meter bases, enclosures, and conduit must be bonded and grounded in accordance with NEC Codes.

Meter and related equipment must be placed in area accessible By CORED Personnel.

Pole metering is not normally allowed. Where permitted all wiring and equipment beyond the meter point will be installed, operated and maintained by the customer.

Any vendor carrying a meter that meets the specifications in this handbook is acceptable. The following vendors are known to carry CORED and NEC approved meter bases:

Edwards Supply	Roden Electric	Stokes Electric	Wholesale Supply
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The following table is provided to ensure the meter equipment purchased will meet all requirements. To use, find the service type being metered, and reference all of the requirements lists on the following pages. Contact the CORED Meter Department (425-1803) with concerns or questions.

**Metering Requirements Look-up Table**

Service Type	Service Size	Lists that apply
<b>Single-phase, 120/240 Volts</b>		
Overhead	Up to 225 Amps	<ul style="list-style-type: none"> <li>• Single-phase Self-contained Meter Base Requirements</li> <li>• See drawing M-1 or M-6 for Combo Units</li> </ul>
Underground	Up to 225 Amps	<ul style="list-style-type: none"> <li>• Single-phase Self-contained Meter Base Requirements</li> <li>• Underground Meter Base Requirements</li> <li>• See drawing M-2 or M-6 for Combo Units</li> </ul>
Overhead (residential only)	400 Amps	<ul style="list-style-type: none"> <li>• Single-phase Self-contained Meter Base requirements</li> <li>• Class 480 Meter Base (K4 type) requirements</li> <li>• See drawing M-3</li> </ul>
Underground (residential or commercial)	Up to 600 Amps	<ul style="list-style-type: none"> <li>• Single-phase Self-contained Meter Base Requirements</li> <li>• Class 480 Meter Base Requirements</li> <li>• Class 480 (K4 Type) Underground Requirements</li> <li>• See drawing M-3</li> </ul>
Overhead or Underground (residential or commercial)	Greater than 600 Amp	<ul style="list-style-type: none"> <li>• CT-rated Meter base Requirements</li> <li>• Six-terminal meter base (4S) with test switches (supplied by utility).</li> </ul>
<b>Single-phase, 120/208 Volts</b>		
Overhead or Underground	All	<ul style="list-style-type: none"> <li>• Single-phase Self-contained Meter Base Requirements</li> </ul>
<b>Three phase 208Y/120 or 480Y/277 Volts</b>		
Overhead or Underground	Up To 200 Amps	<ul style="list-style-type: none"> <li>• Three-phase Self-contained Meter Base Requirements</li> <li>• Seven-terminal base (HQ7) with a manual bypass lever</li> <li>• Grounded neutral conductor connected or tapped to the third terminal from the left on the lower terminals</li> <li>• See drawing M-4</li> </ul>
Overhead or Underground	201 Amps to 600 Amps	<ul style="list-style-type: none"> <li>• Three-phase Self-contained Meter Base Requirements</li> <li>• Seven-terminal base (K-7) with a manual bypass block</li> <li>• Grounded neutral conductor connected</li> <li>• See drawing M-5</li> </ul>
Overhead or Underground	Over 600 Amps	<ul style="list-style-type: none"> <li>• CT-rated Meter base Requirements</li> <li>• Thirteen-terminal meter base (9S) with test switches supplied by utility</li> </ul>

## DETAILED REQUIREMENTS

### **Single Phase Self-Contained Meter Base Requirements**

All meter bases must:

- Be ringless (including combo units and gang bases).
- Amperage not to exceed rating.
- Have four meter jaws and one connection point for the neutral conductor.
- Be UL (Underwriters Laboratory) approved.
- Be rated for exterior use, and be rain-tight according to NEMA-3R.
- Have all unused opening closed with plugs that are locked tightly in place from inside the base or enclosures.
- Be level, plumb and securely fastened to the supporting structure at a height of 54 to 66" from finished grade.
- Be bonded and grounded in accordance with Articles 230 and 250 of the latest edition of the NEC. The neutral conductor must be connected to the neutral terminal in the base.
- Absolutely no jumpers to provide power.
- For single phase 120/208 service include a fifth terminal set at 9:00 position.
- Combo units must contain isolated, removable Utility Wire Chase.

### **Underground Meter Base Requirements**

In addition to basic meter base requirements, underground meter bases for a 120/240 Volt, 200 Amp service, must:

- Be left side connected (do not use center KO of base). See drawing M-2.
- Be at least four and one-quarter inches (4 1/8") deep by 11 inches wide by 14 inches high.
- Accept three-inch (3") rigid galvanized steel or schedule 80 PVC conduit, with a minimum knockout size of 3 1/2 inches.
- Have lugs (electrical connectors) that are marked to accept 350 aluminum conductors.

### **Class 480 Meter Base Requirements**

In addition to basic meter base requirements, Class 480 meter bases for a 120/240 Volt, 400 Amp service, must:

- Be rated for 120/240 Volts and 480 Amps continuous.
- Meter Base is to be a K-4, bolt-in meter base.

### **Class 480 Underground Requirements**

In addition to basic meter base requirements and Class 480 meter base requirements, Class 480 meter bases for underground service, must:

- Have lugs that accept 350 MCM aluminum wire.
- Accept three-inch (3") rigid galvanized steel or schedule 80 PVC conduit, through a knockout at the bottom left corner of the enclosure.
- Have at least eight and one-half inches (8 1/2 ") clearance between the bottom of the lugs and the bottom of the enclosure.

- Be UL Listed

### **Three-Phase Self Contained Meter Base Requirements**

In addition to basic meter base requirements, commercial meter bases must:

- Absolutely no jumpers allowed to provide power.
- Have terminals marked with a conductor range for aluminum or copper conductors. When aluminum conductors are used, the base must be approved and clearly marked by the manufacturer for that use.
- Be covered and sealed with a transparent cover plate when a meter is not installed if the base contains energized equipment.
- Have a manual bypass lever or block. Meter base and circuit breaker combinations are acceptable provided the meter base has a manual bypass.

### **Current Transformer (Ct) Rated Meter Base Requirements**

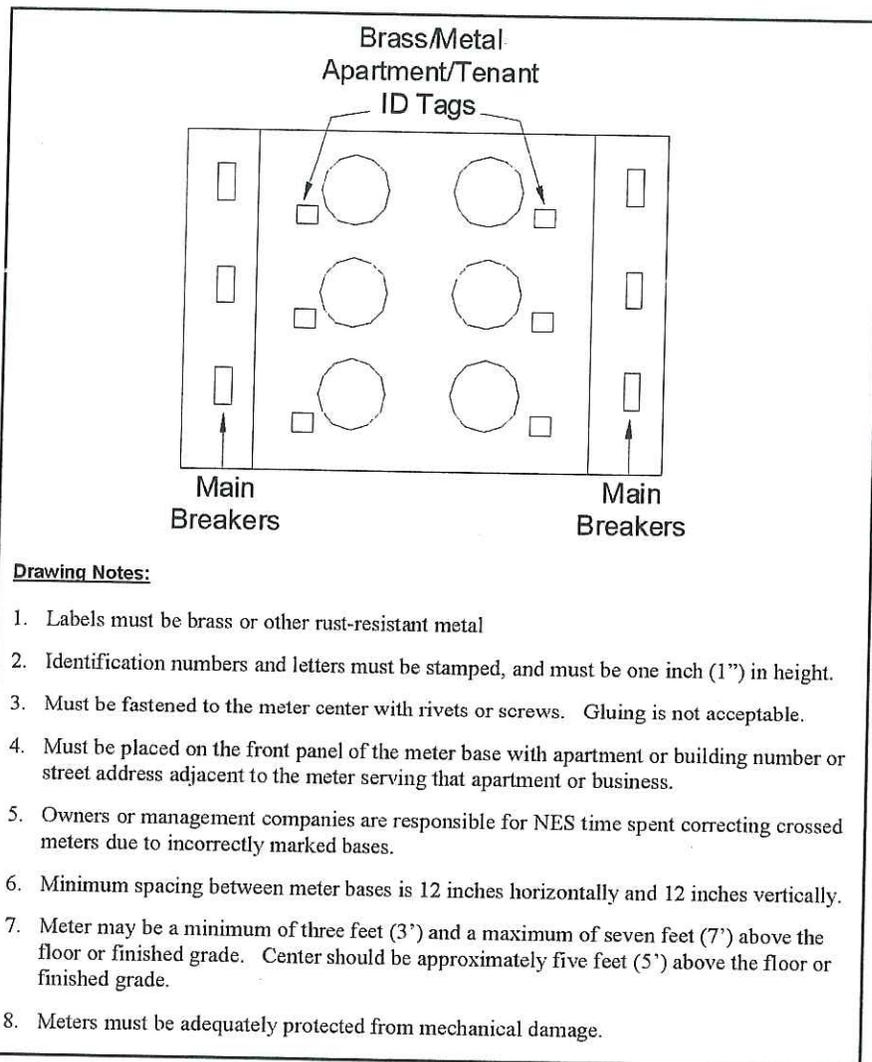
CORED provides the actual current transformers, meter base, and meter cabinet. Customer must purchase and install CT Cabinets.

If a customer installation requires a dedicated pad mounted transformer and it is not feasible to connect additional customers to the transformer, customer may request transformer mounted metering. If approved, customer supplied CT cabinets are not required.

- Install CT cabinet, including lockable hinged doors. CT cabinet must not block a safe exit while open. Must be clearly labeled with “CT’s Enclosed”.
- Install so that the top of the CT cabinet is a maximum of seven feet (7’) above the floor or finished grade; the bottom is a minimum of 36 inches above the floor or finished grade. CT cabinets must not be mounted in crawl spaces, attics, any confined areas, or mounted on ceilings.
- Install CORED supplied meter cabinet (Note: Under special conditions, CORED may grant permission to modify this sequence in group installations of less than six individual occupancies, provided all equipment ahead of the meter is sealed by CORED).
- Supply and install 1” EMT conduit between the meter base and CT enclosure. Conduit must be as short as possible, and must not exceed 30 feet in length. Flex conduit must not be used in meter circuits. The conduit must not contain condulets or junction boxes.
- Disconnect installed behind the meter base
- For 3 phase 3 CT’s are required (480Y/277 voltage also requires a 2.5:1 PT, CT’s and PT’s are supplied by CORED).
- Disconnect installed behind the meter base

### Multiple Meter Installations ("Gang Meters")

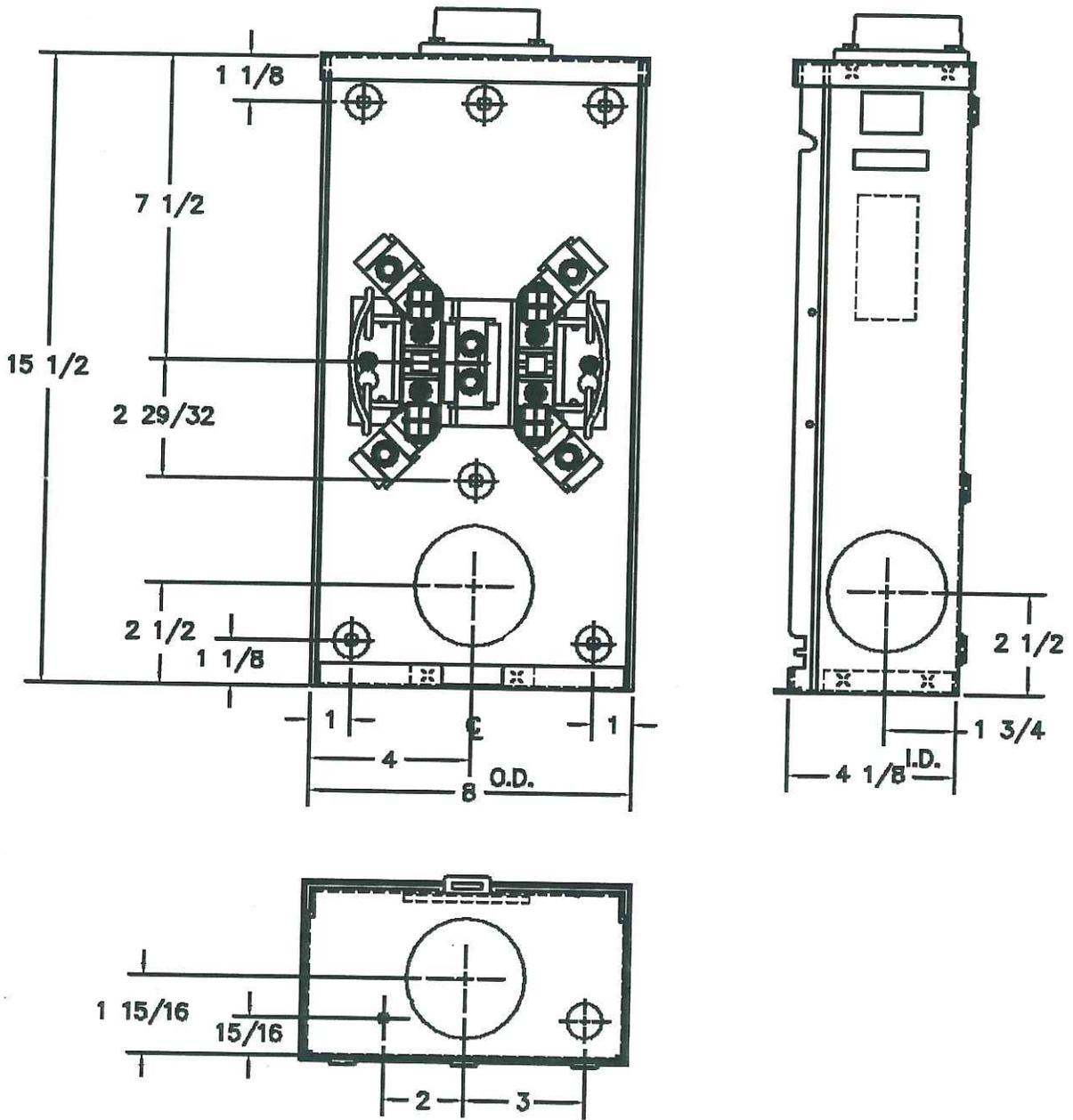
Multi-unit, or "gang" meters, must be labeled as follows to identify the part of the premises they serve before service will be energized:



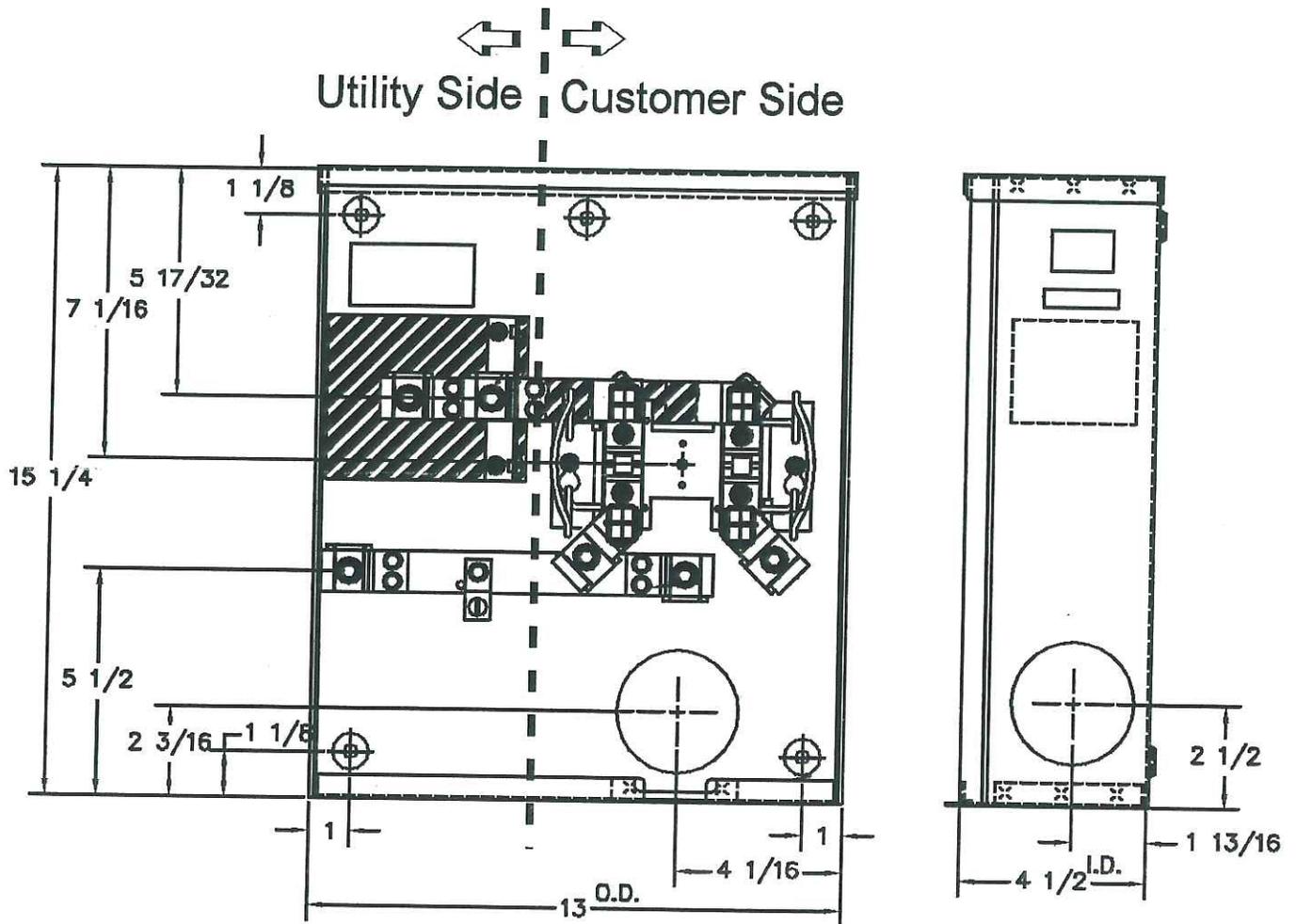
**Drawing Notes:**

1. Labels must be brass or other rust-resistant metal
2. Identification numbers and letters must be stamped, and must be one inch (1") in height.
3. Must be fastened to the meter center with rivets or screws. Gluing is not acceptable.
4. Must be placed on the front panel of the meter base with apartment or building number or street address adjacent to the meter serving that apartment or business.
5. Owners or management companies are responsible for NES time spent correcting crossed meters due to incorrectly marked bases.
6. Minimum spacing between meter bases is 12 inches horizontally and 12 inches vertically.
7. Meter may be a minimum of three feet (3') and a maximum of seven feet (7') above the floor or finished grade. Center should be approximately five feet (5') above the floor or finished grade.
8. Meters must be adequately protected from mechanical damage.

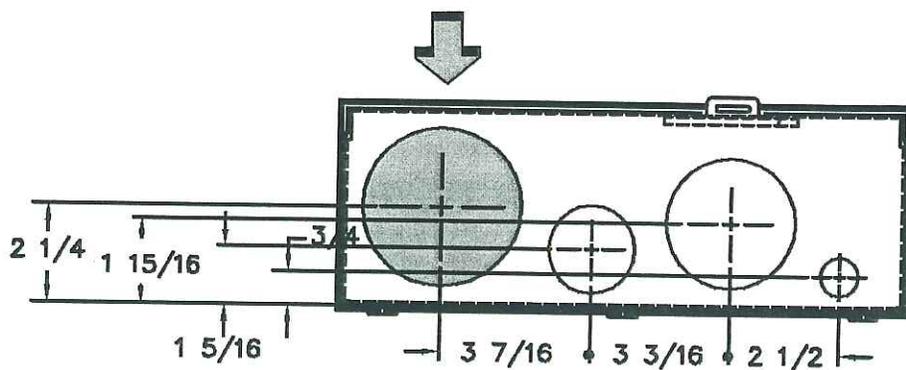
Figure 21: Gang Meter Labels



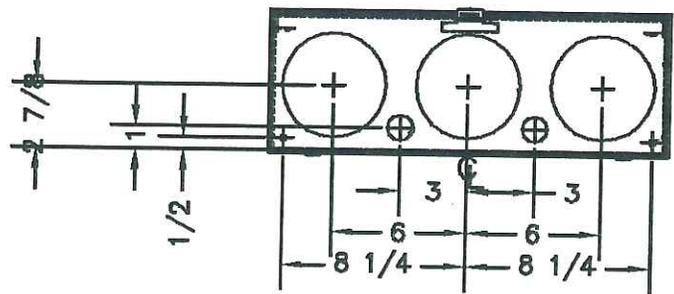
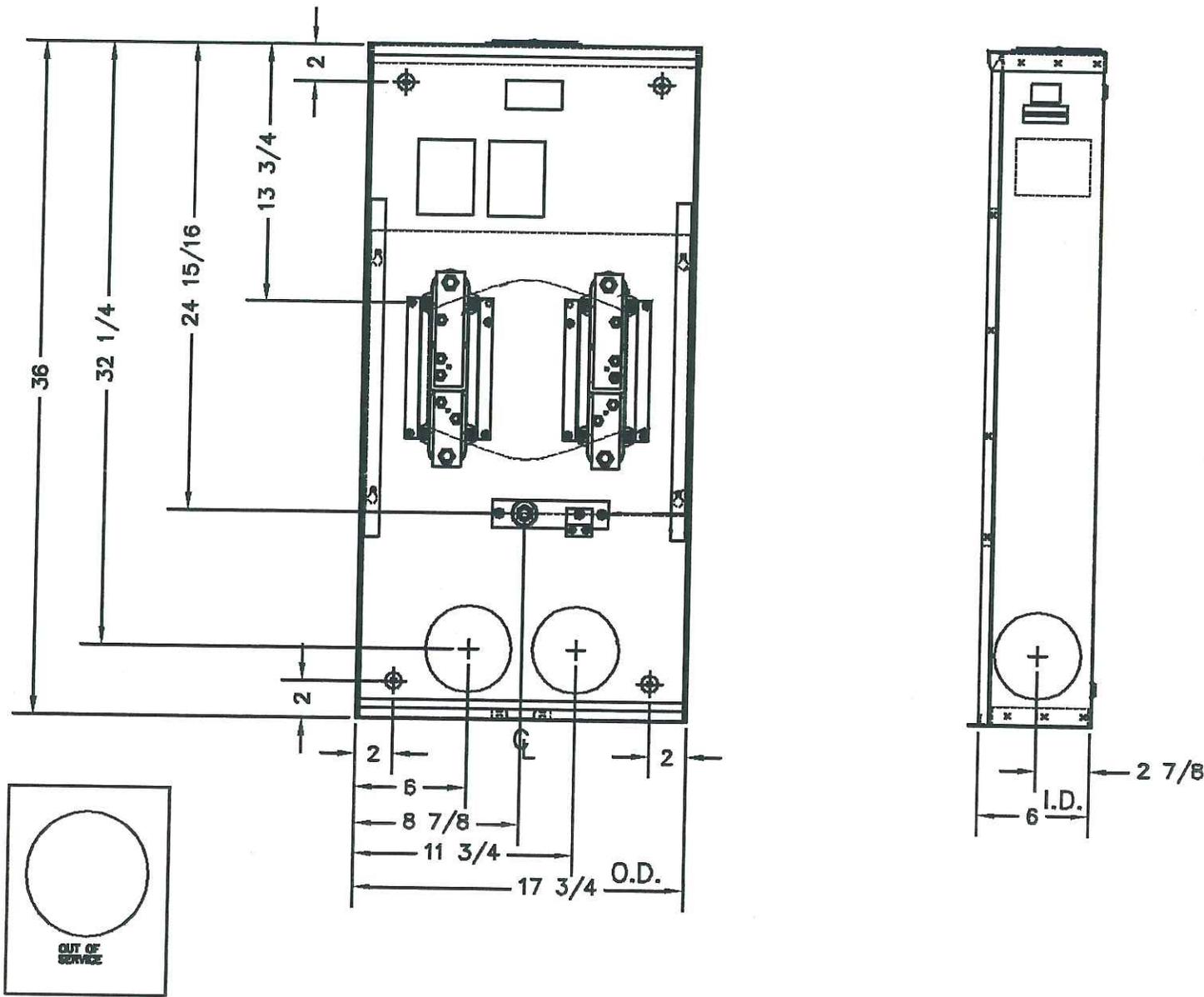
1 phase 120/240 volt  
 up to 225 Amp  
 Overhead Meter Base  
 (Milbank 7021 Shown)  
 Fig. M-1



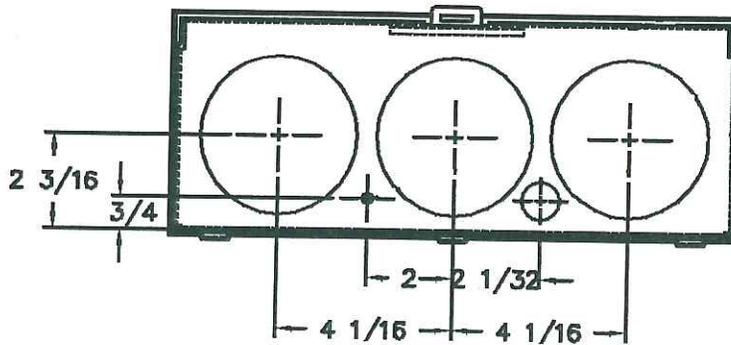
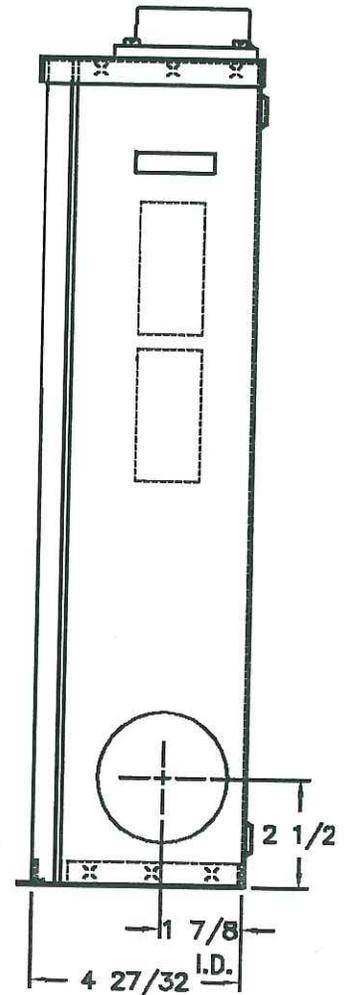
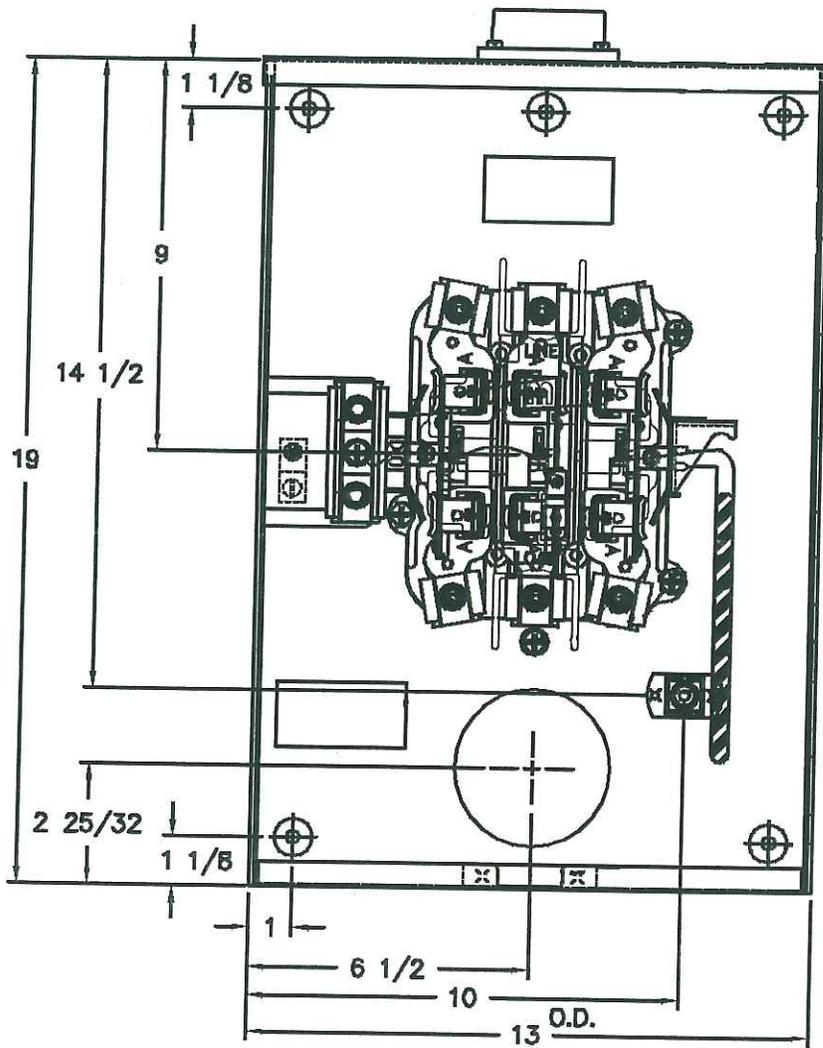
Utility Wire Only



1 phase 120/240 volt  
up to 225 Amp  
Underground Meter Base  
(Milbank 1980 shown)  
Fig M-2

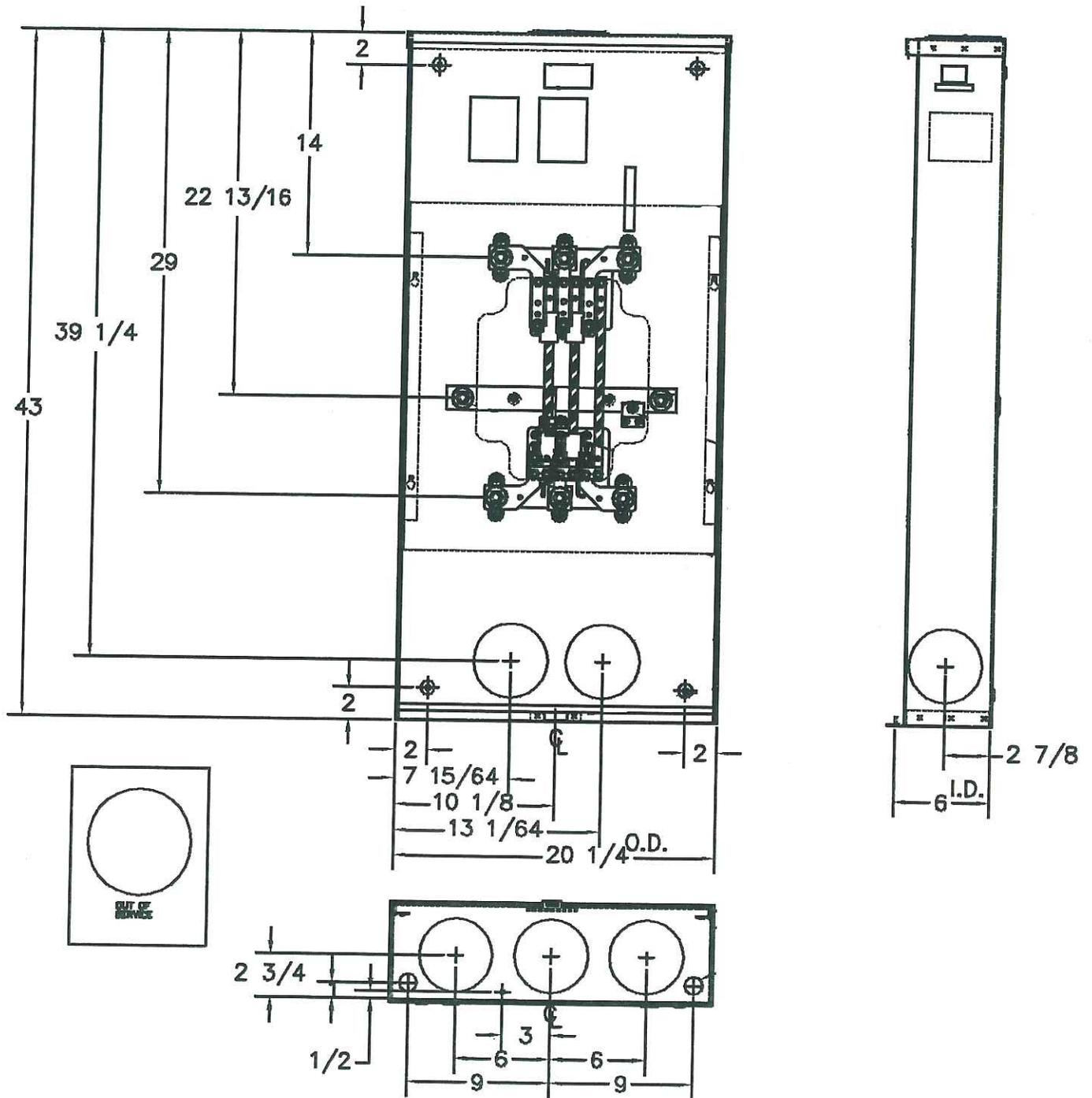


**K-4 Meter Base**  
 Single Phase 120/240 v  
 up to 600 Amp Service UG or OH  
 (Milbank 4664 Shown)  
 Fig M-3

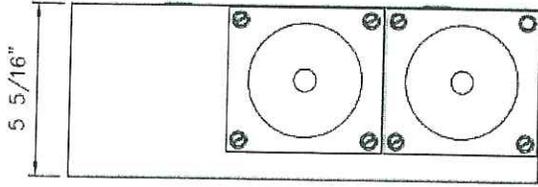


3 phase 120/208 or 277/480 v  
 Up to 200 AMP OH or UG  
 (Milbank 7423 Shown)

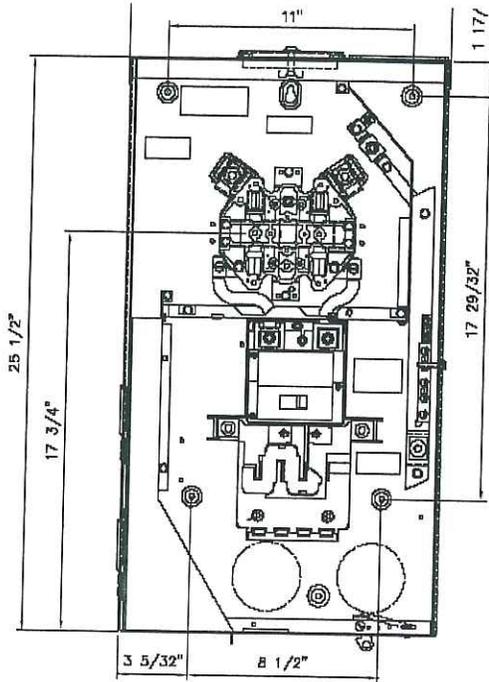
Fig. M-4



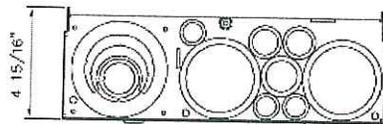
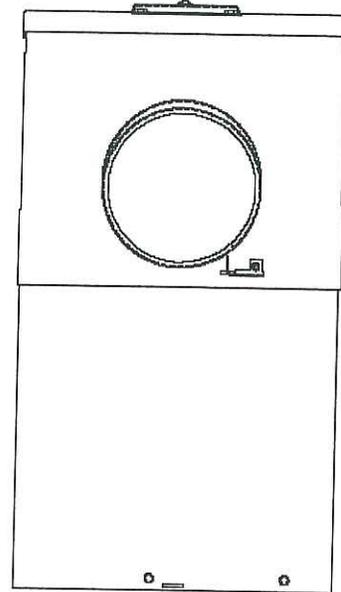
**K-7 Meter Base**  
 3 phase 120/208 or 277/480 v  
 201 to 600 AMP UG or OH  
 (Milbank 4667 Shown)  
 Fig. M-5



TOP SURFACE



MBT48B125BTS



BOTTOM

1 phase 120/240 volt  
 Amperage as Rated  
 Overhead/Underground Combination  
 Meter Base - Disconnect  
 (Cutler Hammer MBT48BXXXBTS Shown)  
 Fig. M-6