For Your Information

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Send all plans and drawings to:

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Attn: Development Services

This revision dated OCTOBER 2019 supersedes all previous issues.
Electric Metering Standards

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Introduction

This handbook is provided by OUC–The Reliable One as a guide for use by customers, electrical contractors, engineers, architects and local inspecting authorities. The specifications and procedures in this handbook are subject to change without notice. Therefore, communication between the user and OUC is essential in all circumstances. The following page provides the user with contacts within OUC.

If items in this handbook fall short of the most recent National Electrical Code (NEC) or local inspecting authority standards, the NEC and/or local standards will prevail. However, OUC reserves the right to exceed the NEC and local authority standards on installations that it serves.

Under no circumstances is compliance with the information contained within this handbook to relieve the user of his/her responsibility for compliance with all applicable codes or safety standards.

Electric service will not be energized until:

1. Specifications and requirements are met.
2. A contract for electric service has been made.
   (Call OUC Customer Service at 407.423.9018)
3. The electric service has passed local authority inspection and OUC has been notified by that authority.

If OUC turns down the service (does not install meter), OUC will leave a door hanger onsite indicating the reason why a meter was not installed. The Owner/Contractor is required to fix installation issues.

Installation of Unauthorized Customer Equipment

OUC does not permit the installation of any equipment at or near the electric service meter which, in OUC’s opinion, may jeopardize the reliability or operations of the OUC electric transmission or distribution system. OUC may remove any such equipment installed between the transformer to the meter and may require the Customer, as a condition of continued service, to remove any such equipment that is installed after the meter on the customer’s system.

Initial Contacts and Communication

1. At the onset of any new project, contact OUC Development Services, 407.236.9651. A site plan showing the proposed project layout, a landscaping plan, stormwater retention and the electric service requirements (E-plans which include load calculations, power and voltage requirements, size of service, riser diagram, etc.) is required. Additionally, for multi-tenant buildings, the building addresses and unit numbers are needed as early as possible. It is important that the addresses used for permits match the addresses for which the orders for service are placed. OUC’s Electric Engineering, 407.434.4427, will review the site plan and service requirements to assess the availability and location of service. Contact them for any changes to an existing electric service. If necessary, the Owner/Contractor/Developer may be required to pay in advance if any extension of existing facilities is required. The costs will be determined as set forth in OUC’s Administrative Policy Manual. As your project proceeds you can contact OUC’s Development Service Representatives for any additional information you may require.

2. Temporary electric service (2 years or less) may be required during the construction of your project. The Owner/Contractor/Developer is required to have a temporary pole installed on site and have a UL approved meter base properly attached to the pole (see page 6). For concrete block, residential, detached homes our Temporary Underground Service (TUG) program is available. It is the responsibility of the Owner/Contractor/Developer to request an electrical inspection from the City/County. Call OUC’s Commercial Service Representatives, 407.423.9018, to place an application for the meter installation and account application. When the inspection clearance and application have been received, OUC will attempt to install a meter(s) within five (5) to seven (7) business days. (Note: three phase or CT service may require additional time for scheduling.) Temporary line extension costs, deposits and/or connection fees are required to be paid prior to scheduling.

3. Permanent electric service is the final electric service required to bring the building to completion for occupancy. Call OUC’s Commercial Service Representatives, 407.423.9018, to establish the amount of security deposit required to be paid for the application of the permanent electric meter installation. It is the responsibility of the Owner/Contractor/Developer to request a final electrical inspection from the City/County. If OUC has not received an inspection clearance, services will not be energized and meters will not be set. The
City/County must be contacted to pursue the reason why a clearance was not received. When the final inspection clearance and application have been received, OUC will attempt to install a meter(s) within five (5) to seven (7) business days. (Note: three phase service may require additional time for scheduling.)

4. To schedule transformer stand-by to: install any conduit, pull wire, or land wire (Not CT’ed); contact OUC Electric Distribution, 407.434.4111 or email standbyrequest@ouc.com

5. For changes of service involving current transformers (CTs) within a CT cabinet, contact OUC Electric Operations, 407.434.4269.

6. For a service change which requires OUC personnel after hours, additional overtime charges may apply.

7. In order to schedule an appointment for meter installation in multi-tenant buildings, see page 9.

8. Special Notice: OUC offers 400 amp services for single-phase residential services (320 amp MEG socket meter base w/bypass handle, no “K” base). For services 400 amps and less, OUC requires contractors in residential subdivisions to install the conduit from the transformer or junction box to the meter base.

9. Conduit shall be used with the appropriate type ells and shall be buried a minimum of 36”. Warning tape shall be installed above all buried conduits. Five (5) to seven (7) days notice is necessary for OUC to run the permanent service to the house. Grey electrical grade schedule 40 or 80 pvc conduit (5º chamfered edges) is the approved pipe for underground residential installations unless the electrical engineer indicates otherwise. 200 lb. test pulling string shall be installed throughout all conduit runs. Long radius galvanized or OUC approved fiberglass composite bends are to be installed on primary conduit runs. For an approved list, contact engineering. Heating the pvc pipe is not allowed for bending. All installation questions should be directed to your OUC project manager.
**Initial Contact Telephone Directory**

**Development Services**
- Plan review and project coordination ............... 407.236.9651

**Customer/Commercial Services**
- Deposit, connection and service applications ....... 407.423.9018

**Electric Engineering**
- Changes to existing electric service(s) .............. 407.434.4427

**Electric Meter Shop**
- Inquire if CTs can be picked up (no scheduling) ..... 407.434.4057
- Schedule meter installation in multi-tenant buildings

**Electric Distribution**
- Schedule stand-by or de-energize transformer ....... 407.434.4111

**Electric Operations**
- Changes of service involving current transformers (CTs). 407.434.2136

**Revenue Protection**
- Schedule unlocking meters in multi-tenant buildings. 407.423.9018 (at IVR prompt; respond “not a customer”, and “electric”)

**Special Electric Requests**
- For contractors to check installation status and schedule requests ................................. 407.423.9018 (at IVR prompt; respond “not a customer”, “no”, and then respond with one of the options)

**OUCConvenient Lighting**
- Street and private lighting .............................. 407.434.4427

**OUC Renewables**
- Photovoltaic system information/questions ............. 407.434.2263

**Inspection Authorities**
- City of Orlando ......................................... 407.246.2271
- Orange County .......................................... 407.836.5550
- City of St. Cloud ........................................ 407.957.7386
- Osceola County ......................................... 407.343.2225

**Sunshine State One-call** ............................... 800.432.4770

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**Electric Service and Meter Installation Requirements**

**Meter Base Requirements**

1. Meter bases are provided by the Customer/Contractor and shall be electrical grade, steel, UL listed and stickered, NEMA 3R, and have a maximum rating of 320 amps (residential)/200amps (commercial). Meter bases must have a provision to accept an OUC lock or seal. Additionally, 320 amp meter bases must be on the Meter Equipment Group (MEG) approved list. A short list is shown on page 33.

2. Commercial services shall have a lockable main disconnect that will accept an OUC padlock.

3. For all commercial services and services over 200 AMPS, contact Electric Engineering first.

4. Meter bases are provided for transformer-rated (CT) services. Electric Metering must receive information from Electric Engineering (see above) to issue any equipment. Instrument transformer cabinets must be provided by the Customer/Contractor. See specific requirements for these services.

5. Multi-gang meter bases for residential type installations (apartments, condos) shall have a ring type cover.

6. Meter bases for commercial services and 320 single-phase residential services shall be provided with lever bypass handles.

7. Meter bases shall include a neutral conductor (except multi-gang).

8. For multiple meter bases, (all services except single family under one roof), meter bases must be clearly and permanently marked with element resistant labeling indicating the floor, suite, apartment, room or building served by the meter. Each building must also be clearly and permanently labeled with the respective address number. Permanent numbers must be located on or adjacent to unit doors. This marking is required before the service connection is made by OUC. Final unit number/address verification will be made when meters are set. The Owner/Contractor must be on site to assist with this task. **If at any time the meter base label is not visible and/or legible, service may be terminated.** The following methods meet the requirement for clear and permanent marking and are acceptable.

   * Metal plates, riveted or screwed to meter base, with engraved or stamped lettering.

   * Plastic plates, riveted or screwed to meter base, with engraved or stamped lettering.

   **Paper decals or any non-permanent labels shall not be accepted.**
Electric Service and Meter Installation Requirements

Do not use paint or marking pens to label meter bases or plates attached to meter bases. The inside of the meter base shall be labeled with the address or unit number with a permanent marker.

If at any time the meter base label is not visible and/or legible, service may be terminated.

9. Meter bases shall be surface mounted (do not recess) using the following approved fasteners:
   * Tap Conns
   * Lead Anchors
   * Toggle Bolts
   * 1/4” Nylon Nail-ins
   * ZINK Mushroom Head 1/4” Pin Drives
   * Screws (wood construction only)
   * Nylon Toggle (drywall construction only)

10. Nails, shoot-in-nails, or plastic anchors are unacceptable and not approved.

11. Meter bases must be attached to the structure in a quality fashion using good workmanship as to prevent binding or inoperability of the unit. Poor quality and workmanship can result in refusal of electric service.

12. A clear space of 3 feet is required in front and to the side of all meters at all times. Please consult with OUC to avoid conflict with landscaping projects.

13. Do not wire through the back of the meter socket.

14. Use the provided conduit knockouts only.

15. A #4 copper grounding electrode shall not be installed within the same chase as the line conductors.

16. No meter base shall be located downstream of a photocell or similar control device, nor a customer owned transformer.

Additional Requirements

The Customer/Contractor must provide OUC with a suitable point of attachment for the electric service cable as required by the NEC. This point of attachment must be sufficient to allow proper cable clearance as stipulated by NEC/NESC as well as proper strength to support the cable weight. Shoot-in fasteners or plastic anchors should not be used. Insufficient points of attachment must be relocated and/or replaced at Customer/Contractor expense.

Electric Service and Meter Installation Requirements

Service Entrance Specifications for Commercial Services Over 200 AMPS and Single Phase Residential Services Over 400 AMPS (CT Required)

1. Contact your OUC project engineer prior to construction for approval of the location of the meter base, current transformers (CTs), CT cabinet and conduit size/routing; and allowable conductor size. The OUC Project Engineer will need information to fill out a Service & Metering Information form. This form will be sent to Development Services so that CT equipment may be picked up by the customer/contractor. See page 5 for further meter base requirements.

2. All material shall be electrical grade, steel, NEMA 3R, and UL listed and must conform to National Electrical Code (NEC), local requirements and OUC specifications.

3. The meter base and CTs will be supplied by OUC and installed by Customer/Contractor. Meter base must be grounded with #4 solid copper to the service grounding electrode conductor and must be externally visible (do not place in service or metering conduit or raceway). Meter ground wire shall be secured sufficiently with straps and lag screws.

4. Meter base to be surface mounted (do not recess). Use the provided knockouts only. Do not mount meter base with shoot-in fasteners or plastic anchors.

5. CT cabinet to be supplied and installed by customer/contractor. Cabinet size must conform to current NEC requirements. CT cabinet shall be Hoffman number A242411CT, A303011CT, A363611CT, or equal. Equivalents shall be approved by Electric Metering. CT Cabinets are for service entrance conductors ONLY and shall include a neutral conductor. For outside installations, a sealing type lock nut shall be used for conduits entering the top or sides of CT cabinet. No other circuits of any kind will be allowed.

6. The maximum height of a CT Cabinet shall be 6 foot at the top. The minimum bottom height shall be 1 foot off the ground.

7. Customer/contractor to supply and install a 1” to 1 1/2” conduit from CTs to meter base. Meter conduit shall be IMC rigid metallic or schedule 80 or better above ground and PVC underground. Conduit shall be strapped sufficiently with 2 hole straps and lag screws. Conduit to enter the side or bottom of meter base. Use the provided knockouts only. No junction boxes
are allowed in the conduit run nor splicing in the CT cabinet. The distance from CT’s to the meter should be kept under 40 linear feet. Exceptions must be approved by OUC project engineer and electric metering.

8. CT polarity mark (dot or H1) shall face towards line feeding service (towards OUC). See additional drawing for wiring CT for single phase service. For 3 phase delta services, mount “high leg” CT at furthest right or bottom position. No exceptions.

9. On transformers with bushing CTs, Customer/Contractor shall not land secondaries until CTs have been installed. Coordinate with your OUC project engineer.

10. Customer/Contractor shall supply and install service entrance conductors from main panel through CT and/or weatherhead. Length of conductors out of weatherhead or CT to be determined by OUC Project Engineer and Electric Metering. Conductors must be color marked on the line side of the CT.

11. CTs will not be permitted in customer switchgear.

12. Mount lightning arresters no more than 8” from weatherhead.

13. Commercial services shall have a lockable main disconnect that will accept an OUC padlock.

14. CTs located inside a building must comply with all NEC rules regarding location of the cabinet.

15. If installation does not conform to OUC specifications, the Customer/Contractor will be required to relocate or replace it at their expense.

**Electric Service Will Not Be Energized Until:**

- Specifications and requirements are met.
- A contract for electric service has been made. (Call Customer Service.)
- The electric service has passed local authority inspection and OUC has been notified by that authority.
Multi-Tenant Electric Meter Installation Requirements and Procedures

**Definition:** OUC defines multi-tenant as all premises except single-family homes under one roof.

These requirements are for contractors requesting single phase self-contained metering in gang type bases involving multiple family residential, or commercial projects of a similar nature.

1. Contact OUC Development Services (407-236-9651) to advise them of the proposed project layout. This will include: a site plan, a power riser diagram, and a landscaping plan showing storm water retention. Landscaping must be designed to ensure adequate accessibility for OUC personnel for all equipment maintenance purposes. **IMPORTANT:** Building addresses and unit numbers for tenant spaces are needed as soon as possible. The addresses used to pull permits MUST match the addresses under which orders for electric service are placed, and match those permanently marked on the meter bases as specified in this handbook. (Page 5-6)

2. Contact OUC Commercial Services (407-423-9018) to place an order for new electric service. Please specify “multi-tenant”.

3. When building(s) have been cleared for power (final inspection received) by the inspection authority, OUC Service Planning is notified. If OUC has not received an inspection clearance, transformers will not be energized and meters will not be set. Contact the inspection authority to pursue the reason why a clearance was not received. (Contacts page 4)

4. After all the above items are satisfied, contact OUC Electric Distribution to schedule transformer energizing. (407-434-4111)

5. Contractor is responsible to schedule stand-by to install secondary conductor and perform “bolt up”.

6. After transformer is energized, contact the Electric Meter Shop for electric meter sets. (Contacts page 4)

OUC will attempt to install meter(s) within three (3) business days after the transformer(s) have been energized provided the contractor has met all requirements. Inclement weather, emergency calls, exposed wiring, or other conditions beyond OUC’s control may cause delays. A representative for the Owner/Contractor/Developer must be on site to assist the OUC representative in verifying unit numbers and addresses.

**Note:** It is imperative that the meter bases are permanently marked to OUC specifications. (Pages 5-6) If at any time the meter base label is not visible and/or legible, service may be terminated. In addition, permanent numbers must be located on or adjacent to unit doors so that OUC cross checks can be made with the project electrician or designated representative. Each building must also be clearly and permanently labeled with the respective address number. If meter bases and/or units are not permanently labeled, meters will not be set. Additional trips to multi-tenant buildings will result in additional charges as set forth in OUC’s Administrative Policy Manual.
TEMPORARY CONSTRUCTION SERVICE FROM PADMOUNTED TRANSFORMER, SECONDARY JUNCTION BOX (200 AMP OR LESS)

NOTE:
1. Customber must provide adequate grounding of facilities in accordance with the N.E.C. or local codes.
2. Meter base provided and installed by customber per O.U.C. requirements.

SERVICE PEDESTAL FURNISHED AND INSTALLED BY CUSTOMBER:
- Pipe size: 2" galvanized minimum
- Post size: 6" X 6" X 10' pressure treated wood
- Concrete size: 6" X 6" X 8"

ELECTRICAL CONTRACTOR TO LEAVE:
- Adequate length of cable and flexible conduit for termination in transformer. O.U.C. to complete pigtail installation into transformer.

O.U.C. PAD - MOUNTED TRANSFORMER

MAIN SERVICE OVER CURRENT PROTECTION DEVICE

SERVICE ENTRANCE CONDUCTOR IN CONDUIT OR INTERLOCKED ARMORED CABLE WITH A MAXIMUM OUTER DIAMETER OF 2"

CABLE COVERED 36" MINIMUM

PIPE OR POST

O.U.C. SINGLE PHASE TRANSFORMER PAD:
- Small pad 40" X 40" large pad 48" X 60"

PRIMARY TRANSFORMER SECONDARY TRANSFORMER

TOP VIEW

TYPICAL TEMPORARY CONSTRUCTION SERVICE POLE

NOTE:
1. All runner dimensions to be trade size
2. All lumber to be decay and terminate resistant
3. Pole will be rated for direct burial in soil
4. Minimum pole size 4" X 4" X 10' long
5. Pole must be sufficiently ridged and/or braced to withstand 200 lbs. of pull at the top
6. For all temporary services, O.U.C. engineering department must be contacted

POINT OF ATTACHMENT PROVIDED AND INSTALLED BY CUSTOMBER MUST WITHSTAND 200 LBS. OF CONTINUOUS PULL

5 TO 6 FT LONG

STRAPS: A SUFFICIENT NUMBER TO PROPERLY SECURE CONDUCT TO POLE. MINIMUM OF TWO.

SERVICE ENTRANCE CABLE OR SERVICE ENTRANCE CONNECTORS IN CONDUIT AS REQUIRED BY LOCAL ORDINANCE

METER ENCLOSURE PROVIDED AND INSTALLED BY CUSTOMBER PER O.U.C. ELECTRIC METERING REQUIREMENTS

MAIN SERVICE OVER CURRENT PROTECTION DEVICE

PLAN VIEW

12" MINIMUM

72" MAXIMUM

48" MINIMUM

2" X 4" BRACE

4" MINIMUM

2" MINIMUM

1/2 MOW OF POLE ABOVE GROUND

2" X 4" STAKE

NOTE:
TYPICAL LAYOUT, SITE CONDITION & LENGTH OF SPAN MAY AFFECT DESIGN. CONTACT OUC ENGINEER FOR SPECIFIC DESIGN CRITERIA.

CONSTRUCTION STANDARDS
The Reliable One
Oil & Gas Distribution System
Orlando Utilities Commission

Drawn by
Checked by
Approved by
Date

No. Date

Revision
Ch.

Jordain
Bramlett
9-19-86

12-13-00
TYPICAL OVERHEAD RESIDENTIAL
SERVICE INSTALLATION 400A OR LESS
(SELF-CONTAINED METER BASE)

NOTE:
1. CABLE OR TELEPHONE CABLE SHALL NOT BE ATTACHED TO THE SERVICE MAST.
2. FOR SPECIFIC HEIGHT REQUIREMENTS & CLEARANCES, REFER TO N.E.C. AND LOCAL CODES.
3. METER BASE PROVIDED AND INSTALLED BY CUSTOMER PER O.U.C. APPROVED WIRING INSTALLATION REQUIREMENTS.
4. SERVICE RISER SHALL BE 2" MINIMUM RIGID METAL CONDUIT PROVIDED AND Installed BY CUSTOMER.
   SERVICE RISER MUST WITHSTAND 200 LBS. OF CONTINUOUS FULL LOAD.
5. MAXIMUM CONNECT DEPTH ABOVE THE GROUND IS 48".
6. MEANS OF ATTACHMENT AS REQUIRED BY THE N.E.C.

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CONSTRUCTION STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

1  4/28/08  ADDED NOTE 6  PT. Drawn by:  Checked by:  Approved by:  DATE
No. Date  Revision  Ok:  JOHAN  HAMMERTON  06-19-08

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CONSTRUCTION STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

1  05-30-10  05-30-10
No. Date  Revision  Ok:  05-30-10
Electric Service and Meter Installation Requirements

SINGLE PHASE RESIDENTIAL UNDERGROUND SERVICE WITH CURRENT TRANSFORMER (CTS)

To verify details & to insure that the most current specifications are used, contact electric department's engineering department before starting work.

NOTE:

CONTACT ELECTRIC ENGINEERING DEPARTMENT BEFORE STARTING WORK
SECONDARY JUNCTION BOX 13x24x18

NOTES:
1. BOX AND COVER TO BE OUC STOCK NO. 046-58000
2. TOP SURFACE OF JUNCTION BOX TO BE + 4" ABOVE FINAL GRADE
3. ALL CONDUITS SHALL EXTEND 2" VERTICALLY ABOVE GROUND.
4. CONTACT OUC ENGINEER TO DETERMINE IF SLEEVES ARE TO BE PVC OR GALVANIZED.
5. USE PENTA MEAD LOCK DOWN BOLTS.
6. FOR CONCRETE INSTALLATIONS TOP SURFACE OF JUNCTION BOX TO FLUSH WITH FINAL GRADE.

TOP VIEW

SIDE VIEW

UNDERGROUND REQUIREMENTS FOR SINGLE-PHASE PAD-MOUNT TRANSFORMER INSTALLATIONS

NOTE:
1. THE LOCATION OF THE CONCRETE PAD & CONDUITS WILL BE SPECIFIED BY O.U.C.
2. PAD-MOUNT TRANSFORMERS MUST MEET THE LOCATION REQUIREMENTS FOR OIL FILLED EQUIPMENT.
3. ALL SECONDARY CONDUITS SHALL BE INSTALLED FLUSH WITH THE TOP OF THE CONCRETE PAD.
# Requirements for Three-Phase & Single Phase UG Pad-Mount Transformer Installations

**NOTE:**
1. Concrete pad and conduit locations to be determined by OUC engineer.
2. The clearance area shall have no landscaping, equipment, structure or obstacles that may interfere accessibility to O.U.C. transformers. Contact OUC engineer for approved layout.
3. 12-foot clearance required on door side (front) of transformer.

## Three Phase Installations

<table>
<thead>
<tr>
<th>Secondary Voltage Available</th>
<th>Maximum Allowed Cables per Phase</th>
<th>Approved Conductor Type</th>
<th>Approved Conductor Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>277/480Y</td>
<td></td>
<td>Copper</td>
<td>1/0</td>
</tr>
<tr>
<td>120/240Y</td>
<td></td>
<td>Copper</td>
<td>3/0</td>
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<tr>
<td>300</td>
<td>8</td>
<td>Copper</td>
<td>500 Ecm</td>
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<tr>
<td>500</td>
<td>8</td>
<td>Copper</td>
<td>750 Ecm</td>
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<tr>
<td>750</td>
<td>12</td>
<td>Copper</td>
<td>1000 Ecm</td>
</tr>
<tr>
<td>1500</td>
<td>16</td>
<td>Copper</td>
<td>2000 Ecm</td>
</tr>
</tbody>
</table>

*A multi-port lug or spade extension may be required for more than 4 conductors per phase. Contact O.U.C. Engineer.*

## Single Phase Installations

<table>
<thead>
<tr>
<th>Secondary Voltage Available</th>
<th>Maximum Allowed Cables per Phase</th>
<th>Approved Conductor Type</th>
<th>Approved Conductor Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 KVA</td>
<td>6</td>
<td>Copper</td>
<td>#6 Aluminum to 500 MCM</td>
</tr>
<tr>
<td>50 KVA</td>
<td>6</td>
<td>Copper</td>
<td>#6 Aluminum to 500 MCM</td>
</tr>
<tr>
<td>100 KVA</td>
<td>6</td>
<td>Copper</td>
<td>#6 Aluminum to 500 MCM</td>
</tr>
<tr>
<td>167 KVA</td>
<td>6</td>
<td>Copper</td>
<td>#6 Aluminum to 500 MCM</td>
</tr>
</tbody>
</table>

*Any exceptions must be approved by O.U.C. Electric Engineering.*

### Spade Lugs

**Conductor Terminal Lug:**
Terminal lug (only NEMA approved lugs are acceptable) shall have an ampacity rating equal to or greater than the conductor(s) connected to it. Terminal lug shall be capable of accepting either aluminum or copper conductors and be filled by manufacturers with an oxide inhibitor.

Terminal lug shall have at least two circular mounting holes for single conductors or four circular mounting holes for multi-conductors, 0.562 (9/16) inches in diameter and spaced 1.750 (1 3/4) inches center to center (standard NEMA spacing for mounting holes). Use only lugs which will not contact with other lugs, spades or current transformers.

Terminal lug connectors shall be compression type or set screw type. Set screw type connectors must have two (2) set screws per conductor for all conductors over 4/0 in size. (See drawing below.) Spade lugs can typically be found in 1, 2, 3, 4, 6, and 8 port configurations.

![Spade Lugs Diagram](image)

**Note:** One conductor per port.

### Two Set Screws for Conductors above 4/0

**One Set Screw for Conductors 4/0 and Below**

**Mounting Hardware**
Bolt: 1/2" - 13 THDS/INCH - GRADE 5 WITH ZINC FINISH - HEX HEAD (3/4" ACROSS FLATS)
Nuts: 1/2" - 13 THDS/INCH - GRADE 5 WITH ZINC FINISH - HEX HEAD (3/4" ACROSS FLATS)
Washers: Two 1/2" flat uss (1 1/4" outer diameter) - grade 5 with zinc finish
One 1/2" lock washer with zinc finish

**Final Hardware Assembly Should Have a Minimum 1/4" Thread Beyond Nut.**

**Tightening Bolt and Nut:** Use two wrenches to gain equal opposition which reduces the chance of bushing leakage or breakage. Torque to 57 lb-ft.

**Customer’s Contractor/Electrician is Responsible for Landing Secondaries.**

50 Padmount transformer: eight (8) conductors per phase typical.
INDEX FOR METER BASE INSTALLATIONS

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<td>3 Wire 120/240v (Comm. w/bypass)</td>
<td>5CD/6CD/7CD</td>
<td>M3, 4</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>3 Wire 120/208v Network*</td>
<td>SXD</td>
<td>M5</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>3 Wire 240/480</td>
<td>5CM (node)</td>
<td>M12</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>3 Wire 277/480</td>
<td>Go to 3 Phase</td>
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<tr>
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<td>4 Wire 240/480v Delta</td>
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* Contractor must install 5th terminal in meter base

NOTE FOR OUC:
SCR & 5XR meters are identical to 5CD & SXD except without an internal disconnect. 2PV meters are identical to SCR meters except configured for bi-directional PV services.

NOTES:
1. Contact OUC Engineer for the location of conduit on pole prior to construction.
2. All material to be supplied and installed by customer.
3. a) Customer to permanently attach conduit to wood pole. Maximum distance between strap is 6 feet.
   b) Customer to temporarily attach conduit to concrete pole. OUC will make permanent attachment. Do not drill or smooth fasteners in pole.
4. Customer to install conductors through the weatherhead, with a minimum of 8 of conductors out of the weatherhead.
5. Customer to connect the lightning arresters leads 8" to 6" from weatherhead. Do not attach lightning arresters to OUC equipment.
6. If installation does not conform to OUC specifications, the customer will be required to relocate or replace it at his or her expense.
7. Entire installation must meet or exceed all local and national electrical codes and will remain a component of the owner's customers service equipment.

* Galvanized rigid steel may be required in some locations. Contact OUC Engineer and the local electrical inspector.
**TYPICAL OVERHEAD RESIDENTIAL**

120/240V SINGLE PHASE, 3 WIRE METER SOCKET FOR 200 AMPS OR LESS SERVICE

- DO NOT INSTALL #4 COPPER GROUNDING ELECTRODE WITHIN THE LINE CHASE/COMPARTMENT
- DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY
- DO NOT RECESS

**TYPICAL COMMERCIAL 120/240V SINGLE PHASE, 3 WIRE METER SOCKET FOR 200 AMPS OR LESS SERVICE**

- DO NOT INSTALL #4 COPPER GROUNDING ELECTRODE WITHIN THE LINE CHASE/COMPARTMENT
- DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY
- DO NOT RECESS
TYPICAL UNDERGROUND RESIDENTIAL 120/240V, 1Ø
3 WIRE, METER SOCKET FOR 200 AMPS OR LESS SERVICE

* DO NOT INSTALL #4 COPPER GROUNDING ELECTRODE
WITHIN THE LINE CHASE/COMPARTMENT

* DO NOT WIRE THRU BACK OF SOCKET
USE PROVIDED KNOCKOUTS ONLY
DO NOT RECESS

TYPICAL RESIDENTIAL NETWORK 120/208V, 1Ø
3 WIRE, METER SOCKET FOR OVERHEAD SERVICE 200 AMPS OR LESS

* DO NOT INSTALL #4 COPPER GROUNDING ELECTRODE
WITHIN THE LINE CHASE/COMPARTMENT

* DO NOT WIRE THRU BACK OF SOCKET
USE PROVIDED KNOCKOUTS ONLY
DO NOT RECESS

M4
M5A
NOTES:

1. NO "K" BASES
2. REFERENCE METER EQUIPMENT GROUP(MEG) LIST STEEL ONLY (NO ALUMINUM)

* DO NOT INSTALL #4 COPPER GROUNDING ELECTRODE WITHIN THE LINE CHASE/COMPARTMENT

* DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY DO NOT RECESS

METERING STANDARDS
OH & UG Distribution System
Orlando Utilities Commission
METER EQUIPMENT GROUP APPROVED 320AMP BASES

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<th>Manufacturer</th>
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NOTES:
1. CUSTOMER/CONTRACTOR TO SUPPLY AND INSTALL CONDUIT PER NEC REQUIREMENTS.
2. CUSTOMER/CONTRACTOR TO SUPPLY AND INSTALL SERVICE ENTRANCE CONDUCTORS FROM MAIN PANEL THROUGH TO O.U.C. SECONDARY JUNCTION BOX. ALLOW A MINIMUM OF 1' (FEET) OF CONDUCTOR IN SECONDARY BOX FOR MAKEUP BY O.U.C. PER NEC REQUIREMENTS.
SINGLE PHASE CT WIRING DIAGRAM

FROM O.U.C. (LINE)  
A # CONDUCTOR(S)  
B # CONDUCTOR(S)  

TO MAIN (LOAD)

NOTE: ALL SIMILAR PHASE CONDUCTORS SHOULD GO THROUGH THE CT IN THE SAME DIRECTION. SEE PAGES M7 - M10 FOR MOUNTING SPECIFICATIONS.

OVERHEAD SERVICE ENTRANCE LARGER THAN 200 AMPS (CT REQUIRED) WITH CT CABINET

MEANS OF ATTACHMENT AS REQUIRED BY NEC.

OVERHEAD RISER

UL LISTED, STEEL, NEMA 3R CT ENCLOSURE AS SPECIFIED ON PAGE 8

CT CABINET

TO MAIN DISCONNECT

MIN 1’0”

MAX 6’0”

4’0” TO 6’0”

TO SERVICE GROUNDING ELECTRODE CONDUCTOR

MINIMUM #4 SOLID COPPER GROUND WIRE

METER BASE 1’2” X 20”

NOTE:
1. CONDUCTORS MUST BE COLOR MARKED IN CT CABINET ON LINE SIDE OF CT. FOR DELTA SERVICES, MOUNT CT FOR HIGH LEG TO THE RIGHT OR BOTTOM.
2. CT’S REQUIRED FOR COMMERCIAL SERVICES LARGER THAN 200 AMPS.
3. FOR CT’S LOCATED INSIDE A BUILDING REFER TO THE NEC REGARDING LOCATION OF THE CABINET.

OUC METERING STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

Drawn by

Checked by

Approved by

Date

No. Date Revision Ch. JOBAN 8-25-92

OUC METERING STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

Drawn by

Checked by

Approved by

Date

No. Date Revision Ch. JOBAN 09-11-97
UNDERGROUND SERVICE ENTRANCE LARGER THAN 200 AMPS (CT REQUIRED) WITH CT CABINET

NOTE:
1. Conductors must be color marked
   in CT cabinet on line side of CT.
   for delta services mount CT for
   high leg to the right or bottom.
2. CTs required for commercial services
   larger than 200 amps.
3. For CTs located inside a building refer to
   the NESC regarding location of the cabinet.

MINIMUM #4 SOLID COPPER GROUND WIRE

METERING STANDARDS
OH & Distribution System
Orlando Utilities Commission
Electric Service and Meter Installation Requirements

**NOTES:**

1. The lower left portion of the meter socket is reserved for use by the company on underground services.

*DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY DO NOT RECESS*

OUC METERING STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

**NOTES:**

1. Main disconnects do not meet the requirement for non-fused disconnects. This is for individual service requirements.

2. Grounding shown for non-metallic nipples between meter base and disconnect.

3. Secondary lightning arrester shall be installed by electrical contractor at weatherhead or main disconnect.

CUSTOMER'S MAIN DISCONNECT TO BE PERMANENTLY MARKED IN APPROXIMATE LOCATION AS SHOWN

*COMMERCIAL SERVICE SHALL HAVE LEVER BYPASS DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY DO NOT RECESS*

OUC METERING STANDARDS
OH & UG Distribution System
Orlando Utilities Commission

**NOTES:**

1. Main disconnects do not meet the requirement for non-fused disconnects. This is for individual service requirements.

2. Grounding shown for non-metallic nipples between meter base and disconnect.

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CUSTOMER'S MAIN DISCONNECT TO BE PERMANENTLY MARKED IN APPROXIMATE LOCATION AS SHOWN

*COMMERCIAL SERVICE SHALL HAVE LEVER BYPASS DO NOT WIRE THRU BACK OF SOCKET USE PROVIDED KNOCKOUTS ONLY DO NOT RECESS*
**NOTES:**

1. MAIN DISCONNECTS DO NOT MEET THE REQUIREMENT FOR NON-FUSED DISCONNECTS. THIS IS FOR INDIVIDUAL SERVICE REQUIREMENTS.
2. GROUNDING SHOWN FOR NON-METALLIC NIPPLES BETWEEN METER BASE AND DISCONNECT.
3. SECONDARY LIGHTNING ARRESTER SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR AT WEATHERHEAD OR MAIN DISCONNECT.

**MINIMUM 
#4 SOLID COPPER TO SERVICE GROUNDING ELECTRODE CONDUCTOR**

**NOTES:**

1. USE MIN. 4500 P.S.I. CONCRETE REINFORCED WITH FOUR (4) #4 REBARS SPACED IN A 4" X 4" SQUARE CENTERED IN THE POST.
2. ALL EDGES TO HAVE 1/2" CHAMFER.
3. TOP HOLE WILL BE 9/16" CAST OR DRILLED THROUGH POST 4" FROM END.
4. MOUNT METER BASE ON 1" X 1/2" KINDORF CHANNEL OR EQUAL. DO NOT DRILL OR PUNCH HOLES IN METER BASE. USE PROVIDED KNOCKOUTS.
5. MOUNT KINDORF CHANNEL USING 1/2" BOLT THROUGH POST OR LEAD ANCHOR AND BOLT. DO NOT USE POWER GUN TO SHOOT FASTENERS INTO POST. DO NOT USE PLASTIC ANCHORS.
6. DIMENSION TO MATCH MOUNTING BOLTS IN METER BASE.
7. KINDORF CHANNEL IS NOT TO EXTEND PAST SIDES OF METER BASE.
8. WHEN MANUFACTURING POST, SECOND MOUNTING HOLE AND KINDORF CHANNEL INFORMATION DOES NOT APPLY.

**NOTES:**

1. MAIN DISCONNECTS DO NOT MEET THE REQUIREMENT FOR NON-FUSED DISCONNECTS. THIS IS FOR INDIVIDUAL SERVICE REQUIREMENTS.
METER POST RACK INSTALLATION

NOTES:

1. TWO 6"x6"x8" CONCRETE METER POSTS
2. USE MIN. 4500 P.S.I. CONCRETE REINFORCED WITH FOUR (4) #4
   REBARS SPACED IN A 4"x4" SQUARE CENTERED IN THE POST.
3. ALL EDGES TO HAVE 1/2" CHAMFER.
4. TOP HOLE WILL BE 9/16" CAST OR DRILLED THROUGH POST 4" FROM END.
5. KINERDORF CHANNEL IS NOT TO EXTEND PAST SIDES OF METER BASE.
6. MOUNT METER BASE ON 1" X 1/2" KINERDORF CHANNEL OR EQUAL. DO NOT DRILL OR PUNCH HOLES IN METER BASE. USE PROVIDED KNOCKOUTS.
7. MOUNT KINERDORF CHANNEL USING 1/2" BOLT THROUGH POST OR LEAD ANCHOR AND BOLT, DO NOT USE POWER GUN TO SHOOT FASTENERS INTO POST. DO NOT USE PLASTIC ANCHORS.
8. WHEN MANUFACTURING POST, SECOND MOUNTING HOLE AND KINERDORF CHANNEL INFORMATION DOES NOT APPLY.

PULSE METER APPLICATION

NOTES:

1. 8" X 8" X 6" ENCLOSURE (EQUIVALENT TO HOFFMAN A-886HCLR) SHALL BE SUPPLIED AND INSTALLED BY CONTRACTOR.
2. ALL METERING CONDUITS SUPPLIED AND INSTALLED BY CONTRACTOR.
3. IF THE CUSTOMER PLANS ON HAVING AN ENERGY MANAGEMENT SYSTEM WHICH UTILIZES METER OUTPUT PULSES, THEY MUST REQUEST PULSE METER(S) FROM OUC.

TO APPLY FOR SPECIAL METERING EQUIPMENT AND INFORMATION ON ASSOCIATED CHARGES CONTACT:

Irvin Lane
OUC
P.O. Box 3193
Orlando, FL 32802
(407) 434-4066
ilane@ouc.com