Electrical Service Guidelines

Revised: May 23, 2013
# MTEMC's Electrical Guidelines

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MTEMC Requirements

Installation

In addition to the National Electrical Code, National Electrical Safety Code, and state and local building codes, MTEMC has installation requirements which must be followed.

Please check with an MTEMC engineer or representative before locating the meter base or if you have questions about requirements or specifications.

General Specifications

A. Overhead Services:
   1. Where a MTEMC engineering representative specifies an eyebolt for service attachment, install the eyebolt at a point lower than the weatherhead and no more than 18” horizontally from the weatherhead.
   2. Where a MTEMC engineering representative specifies a service mast for service attachments, install 2 1/2 inch rigid metal or IMC conduit fastened with a minimum of 2 mast clamps bolted through the wall on all residential services.
   3. All services must comply with Codes requirements for clearance. A minimum 18 ft. clearance is required on all non-residential services. In no case shall a point of attachment be less than 12 ft. or more than 30 ft. above final grade.
   4. See ESG-1 for additional specification details.

B. Underground Services: See ESG-2 or ESG-3 for specification details. See drawings 1S and 2S for the secondary ditch details.

C. Manufactured and Modular Home Services:
   1. A red HUD label identifies manufactured or mobile homes. Meters may not be installed on manufactured or mobile homes. See ESG-4 or ESG-5 for specification details.
   2. Modular homes are identified by a green State of Tennessee label. Services for modular homes may be identical to overhead or underground residential services. See ESG-1, ESG-2, or ESG-3 for specification details.

D. Temporary Services:
   1. Overhead - Temporary service pole must be within 125 ft. of MTEMC pole. See ESG-6 for specification details
   2. Underground - Temporary service pole must be located behind right corner of pad mount transformer or underground secondary box. See ESG-7 for specification details.

E. Meter on MTEMC’s Pole: MTEMC no longer allows meter installations on MTEMC poles. When a MTEMC pole is changed out, any meters on MTEMC’s poles shall be removed if possible. Meters on poles for communication companies may be transferred to new poles as necessary.

GENERAL SERVICE CONDUCTOR

Service conductors installed near other utility lines, structures, or obstructions require:

A. Conductors run parallel to water or gas lines must have a minimum 3 ft. separation.

B. Telephone and TV cable may run in the same ditch with a minimum 36 in. horizontal separation between service conductor and cable; or 12 in. vertical separation AND 18 in. horizontal separation.

C. All foreign utility perpendicular crossings must have 12 in. minimum separation from MTEMC ducts.
GENERAL METERING REQUIREMENTS

Non Residential- anything other than a single family dwelling

1. All meter sockets used in MTEMC’s service area must be one of the MTEMC approved meter sockets (bases). All sockets and hubs shall be furnished and installed by the member.

2. All meter sockets must be mounted between 4 and 6 feet above final grade.

3. All meter sockets shall be mounted outdoors in a location that is easily accessible for MTEMC personnel. Any variation must be approved in writing by a MTEMC engineering representative.

4. The maximum allowable service wire to connect to MTEMC padmount transformer is 750MCM. The maximum allowable service wire to connect in UG pull box is 500 MCM. For single phase services of 800 amps or less, MTEMC will pull the service wire from the transformer/pull box to the metering point.

5. For multiple services feeding from the same transformer a non-fused safety switch with provisions for an MTEMC padlock shall be installed on the source side each 277/480V self contained (400 Amps and smaller) meter and each instrument metering installation (larger than 400 Amps). 120/208V and 120/240V self contained (400 Amps and smaller) metering shall require a disconnect adjacent to the meter on the exterior of the building.

6. If more than one metering installation is fed from the same transformer, a disconnect shall be installed on the source side of all troughs and ganged metering installations.

7. If a service conductor feeds several meters (gang meter socket, metering trough, etc.), each meter and disconnect shall be labeled with identification numbers (address). These numbers shall be on a stamped or engraved brass or stainless steel label and attached with 2 or more rivets. They should be in a readily visible location on both the meter and disconnect. Labels shall be furnished and installed by the customer.

Residential- single family dwelling

1. All meter sockets used in MTEMC’s service area must be one of the MTEMC approved meter sockets (bases). All sockets and hubs shall be furnished and installed by the member.

2. All meter sockets must be mounted between 4 and 6 feet above final grade.

3. All meter sockets shall be mounted outdoors in a location that is easily accessible for MTEMC personnel. Any variation must be approved in writing by a MTEMC engineering representative.

4. The maximum allowable service wire to connect to MTEMC padmount transformer is 750MCM. The maximum allowable service wire to connect in UG pull box is 500 MCM. For single phase services of 800 amps or less, MTEMC will pull the service wire from the transformer/pull box to the metering point.

5. Meter base will not be located on or under porches, decks or carports. The meter base shall be located as close to MTEMC’s transformer/pull box as possible. If the distribution panel is not located in immediate vicinity of meter, a weatherproof disconnect may be required; refer to National Electric Code.

6. A grounding electrode conductor (ground wire) of a minimum of No. 4 copper or larger shall be run unspliced from a lug in the meter base to a driven grounding electrode (ground rod). An 8 ft. driven grounding electrode (ground rod) bonded to grounding electrode conductor (ground wire) with clamp suitable for direct soil burial will be installed below final grade.
NO ELECTRICAL METER ROOM WILL BE ALLOWED WITHOUT PRIOR MTEMC APPROVAL

City or County approval of meter room locations is not sufficient and will not be considered if a meter room is installed without prior MTEMC consultation.

A drawing showing the physical arrangement of all meters must be provided to MTEMC prior to obtaining approval. If physical space available requires that meter bases be installed in a vertical arrangement, the highest meter shall be not more than seven (7) feet above the floor to the center of the glass cover, and the lowest meter shall not be less than three (3) feet from the floor to the center of the glass cover.

When indoor meter locations are necessary and approved by MTEMC, the meters shall be located where they will be readily accessible at all times for emergencies, meter reading, testing and other maintenance purposes. All meter locations shall meet all NEC requirements regarding but not limited to access, egress and clear space around the meter. There shall be a minimum of three and one half (3.5) feet working space between the front of the meter socket and any walls or other obstructions. In the event that the meter room is located inside of the building, all secondary conductors under the building shall be encased in RED concrete and be installed 12 inches below all indoor facilities (water, gas, sewer). Raceway under the building shall be responsibility of owner to maintain or repair in the event of failure, therefore installing a spare conduit(s) at time of construction may be advantageous. The concrete encasement shall extend a minimum of three (3) feet from the edge of the building foundation. If the meter bases are located on an exterior wall then no encasement is required.

It is preferable that meter rooms be accessible without requiring entry into the building itself. Situations will be evaluated on a case-by-case basis, with MTEMC having the final decision making authority as to the acceptability of the proposed location. Further, it is preferable that meter rooms NOT have a door or gate, locking or otherwise. However, when a locked gate or door is required and approved by MTEMC, the customer shall either:

Provide and install a NEMA 3R “key box” adjacent to the meter room door or gate with provisions for an MTEMC padlock. (7/16th inch shank) Customer shall provide a key to the door or gate which will remain in the key box at all times.

Or

In the case of a gate, the use of a chain and lock for securing the entrance into the meter room is acceptable. MTEMC shall place its padlock in the chain in such a way that only the MTEMC key will be required to gain entry into the meter room.

Access is a critical issue for MTEMC related to its facilities. If access to the meter room is not possible due to key or lock issues, MTEMC reserves the right to remove the door or gate and is not responsible for any damages to those or for reinstalling them in the future.

Meter rooms shall not be used for other purposes such as storage closets, maintenance areas, etc.

Meter bases shall be surface mounted. Flush mounted or recessed meter installations are not acceptable.

If the acceptance of a meter room by MTEMC requires additional communication infrastructure related to the reading of the meters by the MTEMC AMI system, the additional costs will be the responsibility of the customer.
MTEMC PREFERRED METHOD

3" sch 80 conduit by customer

MTEMC ALTERNATE METHOD

NOTE:
SEE MTEMC ENGINEERING REPRESENTATIVE FOR APPROVAL

400 AMP RESIDENTIAL METERING
When Disconnects are Required
MIDDLE TENNESSEE ELECTRIC MEMBERSHIP CORPORATION requires all labeling on meter sockets to meet the following specifications:

1. LABELS SHALL BE BRASS OR STAINLESS STEEL
2. IDENTIFICATION NUMBERS AND LETTERS SHALL BE STAMPED OR ENGRAVED
3. LABELS SHALL BE FASTENED TO THE METER BASE WITH RIVETS
4. LABELS SHALL BE PLACED IN A READILY VISIBLE LOCATION FOR BOTH THE DISCONNECT AND THE METER. BOTH THE DISCONNECT AND THE METER SHALL BE LABELED FOR CLARITY.
5. REFER TO DRAWING COM-6 FOR ADDITIONAL SERVICE REQUIREMENTS.

EXCEPTION: On gang meter sockets, only one label required for meter and disconnect.

These labels can be purchased from trophy shops or any business which supplies engraved dog tags.
Notes:

1. Weatherhead must be above point of service drop attachment.

2. An eyebolt (5/8" minimum) and related hardware will be furnished and installed by the member. The eyebolt must pass through a plate consisting of two 2"x6"s doubled together similar to a window header spanning two or more wall studs and secured to the studs with a minimum of two four-inch lag screws in each end of the 2"x6" assembly. If the eyebolt is installed outside a finished wall, such that the nut and washer protruding past the doubled 2"x6" into the interior of the structure will hinder finishing of the interior wall, the alternate method may be used. This consists of a single 2"x6" equal in length to a wall stud, turned 90 degrees, nailed to a wall stud along its entire length, and backed by an additional stud situated normally and nailed to the 90 degree 2"x6". The 2"x6" shall be nailed in with a minimum of 5 nails per side, no more than 14" between nails along its length. This assembly will provide a cavity for the nut and washer assembly to clear the stud side of the interior wall wallboard. See "Alternate Eyebolt Detail". The eyebolt must be below, and within 18 inches of weatherhead and minimum of 12 feet above final grade. Point of service drop attachment will be of sufficient height to provide minimum clearances as specified by the National Electrical Code (NEC) and the National Electric Safety Code (NESC).

3. Service entrance conductor must extend 36" out of the weatherhead.

4. Rigid conduit, IMC, EMT, or SC, 40 electrical PVC with rain-tight couplings and connectors may be used as service entrance conductor raceway. Service entrance raceways will be secured with a minimum of 2 conduit straps, the lower being within 3 ft. of top of meter base.

5. Where a mast riser is used, weatherhead will be a minimum of 36 in. above roof. If weatherhead is more than 42 in. above roof, a guy wire with eyebolt through rafter is required.

6. Service clevis assembly will be furnished and installed by MTEMC.

7. Service mast will be a minimum of 2 1/2 in. rigid metal secured with a minimum of 2 mast clamps fastened through the wall with 1/2" clamping bolts; the lower being within 3 feet of top of meter base and the upper being within 3 feet of where the mast passes through the roof. Sections of conduit must be connected using threaded couplings.

8. See General Metering Requirements for additional metering information.
Notes
*Be sure to call Tennessee One Call before digging or opening ditches: 1-800-351-1111 or 811

1. MTEMC will furnish and install the following materials at the service pole:
   A. Conduit, to include all related hardware
   B. Service conductor from transformer to meter base
   C. Where junction box (not shown) is present at service pole, see a MTEMC engineering representative for specifications.

2. Member will open ditch from service pole or junction box to meter location with the following specifications:
   A. Where ditch length will exceed 250 ft. see MTEMC engineering representative prior to opening ditch.
   B. Depth sufficient to bed conduit with service conductors 24 in. below final grade.
   C. Where impractical to obtain 24 in. depth, see a MTEMC engineering representative.
   D. Member will backfill ditch after inspection by MTEMC — 24 hr. notice required (call 877-896-8362 or visit www.MTEMC.com to fill out an online request)

3. Continuous raceway from service pole base to meter base will be furnished and installed by member to the following specifications:
   A. Conduit size is to be 3 inch with appropriate fittings and/or bushings as required. For all conduit connections use long, integral belted and conduit.
   B. Raceway between elbows is to be schedule 40 electrical PVC, schedule 80 electrical PVC or rigid steel conduit.
   C. Elbows are to be either schedule 80 electrical PVC or rigid steel with a minimum sweeping radius of 24 inches.
   D. Conduit extending from meter base to one foot below grade is to be schedule 80 electrical PVC or rigid steel.
   E. A polyvinyl, non rot or mildew proof, pull string with a minimum breaking strength of 200 pounds is to be installed inside the raceway.
   F. Under certain loading and/or density conditions, an alternate sized conduit may be used with the approval of MTEMC district office engineering representative.
   G. 2 Conduit Straps: Place one conduit strap 12" below meter base and place second conduit strap 12" above ground.

4. A MTEMC approved meter base of proper size and type shall be furnished and installed by the member. See General Metering Requirements for additional metering information.

MTEMC
Underground Residential Service

ESG-2

May 23, 2013

Sheet 1

Of 1 Sheets
**Caution!**

Before digging, call TN-1-CALL (1-800-351-1111 or 811) to determine location of underground facilities. Hand-dig ditch within 5 feet of transformer.

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**Notes:**

1. **MTEMC** will furnish and install the following materials:
   - A. Service conductor from transformer to meter base
   - B. Where junction box (not shown) is present, see a MTEMC engineering representative for specifications.

2. Member will open ditch from transformer to meter location with the following specifications:
   - A. Where ditch length will exceed 250 ft., see a MTEMC engineering representative prior to opening ditch.
   - B. Hand-dig ditch when within 5 ft. of transformer.
   - C. Depth sufficient to bed conduit with service conductors 24 in. below final grade.
   - D. Where impractical to obtain 24 in. depth, see a MTEMC engineering representative.

3. Member will backfill ditch after inspection by MTEMC — 24 hr. notice required (call 877-888-8302 or visit www.MTEMC.com to fill out an online request).

4. Before working with the transformer, notify MTEMC so that MTEMC representation can be present.

3. Continuous raceway from transformer to meter base will be furnished and installed by member to the following specifications:
   - A. Conduit size is to be 3 inch as specified below with appropriate fittings and/or busings as required. For all conduit connections use long, integral belted end conduit.
   - B. Raceway between elbows is to be either schedule 40 electrical PVC, schedule 80 electrical PVC or rigid steel conduit.
   - C. Elbows are to be either schedule 80 electrical PVC or rigid steel with a minimum sweeping radius of 24 inches.
   - D. Conduit extending from meter base to one foot below grade is to be schedule 80 electrical PVC or rigid steel.
   - E. A polyvinyl, non rot or mildew proof, pull string with a minimum breaking strength of 200 pounds is to be installed inside the raceway.
   - F. Under certain loading and/or density conditions, an alternate sized conduit may be used with the approval of MTEMC district office engineering representative.
   - G. 2 Conduit straps: Place one conduit strap 12" below meter base and place second strap 12" above ground.

4. A MTEMC approved meter base of proper size and type shall be furnished and installed by the member. See General Metering Requirements for additional metering information.
Notes:

An external building can sometimes be served efficiently by installing the new meter beside an existing meter on a house or building. While this usually results in lower construction costs, members are subject to additional charges if existing service drop conductor size or transformer size must be increased.

1. Maximum separation between weatherheads shall be no more than 2 ft. Additional specifications for weatherheads, points of attachment, clearances, service entrance conductors, conduit, etc., are identical to Overhead Residential Service.

2. A MTEMC approved meter base and hub of proper size and type shall be furnished and installed by the member. See General Metering Requirements for additional metering information.

3. If connecting to a manufactured home a weatherproof, UL listed, multi-circuit disconnect is to be located within 30 feet of the manufactured home. Whether located below meter base on member's pole or on stub, in no case will disconnect be less than 2 feet above grade.

4. For information about conductors, conduit and grounding, refer to National Electrical Code.

5. 2 Conduit Straps: Place one conduit strap 12" below disconnect and place second strap 12" above ground.
Notes:

1. Where meter service will be located on Member’s pole, MTEMC will furnish and install:
   A. service drop conductor from service pole to member’s pole
   B. guy wires and anchors as required (minimum 10 ft. separation between pole and anchor).

2. Location and height of member pole to be determined by a MTEMC engineer.
   Member’s pole will be a treated utility pole set a minimum of 3 feet in the ground.

3. Weatherhead must be above point of service drop attachment and within 6 in. of top of pole.

4. Service entrance conductor must extend 36” out of the weatherhead.

5. Rigid conduit, IMC, EMT, or SC, 80 electrical PVC with rain-tight couplings and connectors may be used as service entrance conductor raceway. Service entrance raceways will be secured with a minimum of 2 conduit straps, the lower being within 3 ft. of top of meter base.

6. A MTEMC approved meter base and hub of proper size and type shall be furnished and installed by the member.

7. If connecting to a manufactured home a weatherproof, UL listed, multi-circuit disconnect is to be located within 30 feet of the manufactured home. Whether located below meter base on member’s pole or on stub, in no case will disconnect be less than 2 feet above grade. If space block in necessary behind meter base or disconnect, use treated wood or metal brackets.

8. For information about conductors, conduit and grounding, refer to National Electrical Code.

9. See General Metering Requirements for additional metering information.

10. 2 Conduit Straps: Place one conduit strap 12” below disconnect and place second strap 12” above ground.

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**MTEMC**

**Member Pole Service**

**Standard underground**

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SCALb:\ K.15
DRAWN BY: EDR
CHECKED BY: MG

ESG-5
May 23, 2013

1 SHEET
1 OF 1 SHEETS
1. MT EMC will furnish and install the following materials at the service pole:

   A. Conduit, to include all related hardware.

   B. Service conductor from transformer to meter base.

   C. Where junction box (not shown) is present at service pole, see a MT EMC engineering representative for specifications.

2. Member will open ditch from service pole or junction box to meter location with the following specifications:

   A. Where ditch length will exceed 250 ft. see MT EMC engineering representative prior to opening ditch.

   B. Hand-dig ditch when within 5 ft. of transformer.

   C. Depth sufficient to bed conduit with service conductors 24 in. below final grade.

   D. Where impractical to obtain 24 in. depth, see a MT EMC engineering representative.

   E. Member will backfill ditch after inspection by MT EMC – 24 hr. notice required (call 877-886-8362 or visit www.MTEMC.com to fill out an online request).

3. Continuous raceway from transformer to meter base will be furnished and installed by member to the following specifications:

   A. Conduit size is to be 3 inch as specified below with appropriate fittings and/or bushings as required. For all conduit connections use long, integral belled end conduit.

   B. Raceway between elbows is to be schedule 40 electrical PVC, schedule 80 electrical PVC or rigid steel conduit.

   C. Elbows are to be either schedule 80 electrical PVC or rigid steel with a minimum sweeping radius of 24 inches.

   D. Conduit extending from meter base to one foot below grade is to be schedule 80 electrical PVC or rigid steel.

   E. A polyvinyl, non rot or mildew proof, pull string with a minimum breaking strength of 200 pounds is to be installed inside the raceway.

   F. Under certain loading and/or density conditions, an alternate sized conduit may be used with the approval of MT EMC district office engineering representative.

4. Service conductors see "General Service Conductor Requirements".

5. The bottom of a weatherproof, UL listed, multi-circuit disconnect shall be located no less than 2 ft. above grade.

6. For information about conductors, conduit and grounding, refer to National Electric Code.

7. See General Metering Requirements for additional metering information.
Notes:

MT EMC will provide service to temporary services that have passed state wiring inspection at present site and meet the following wiring and construction standards:

1. Service equipment and meter base securely fastened to a 2 in. metal pipe, 4x4 post, or 2x6 board, and set in the ground at a minimum depth of 2 ft.
2. Temporary services will not be attached to trees or to MT EMC poles.
3. Each temporary will have a minimum of 4 braces, 2 of which will brace against pull of service drop. Braces will be attached at least 9 ft high on pole and extend at least 6 ft from pole to base.
4. Temporary service will not be located more than 125 ft from existing MT EMC service pole. Consult with a MT EMC engineering representative for specific location, if necessary.
5. Weatherhead must be above point of service drop attachment.
6. The contractor will furnish and install a 5/8" eyebolt, preformed dead end, insulator, and Minimum No. 4 aluminum triplex pigtail.
7. Point of service drop attachment will be of sufficient height to provide a minimum clearance of 12 ft.
8. Service entrance conductors should extend from weatherhead to grade after connecting to pigtail and attaching pre-formed dead end to 5/8" eyebolt.
9. Service entrance raceway may be rigid conduit, EMT, IMC, or schedule 40 electrical PVC with rain-tight couplings and connectors. Service entrance cable with weatherhead may also be used.
10. A weatherproof, UL listed temporary service panel will be located below MT EMC approved meter base. In no case will the bottom of the panel be less than 2 feet above grade.
11. All receptacles will have ground fault protection for personnel unless otherwise exempted by the NEC.
12. If a temporary service has been left in place for 3 years it must be removed and a permanent service must be installed.
13. See General Metering Requirements for additional metering information.

Note: All materials furnished and installed by contractor.
MTEMC will provide service to temporary located adjacent to pad-mounted transformers or underground secondary boxes. Temporary must pass state wiring inspection at present site and meet the following wiring and construction standards:

1. Service equipment and meter base securely fastened to a 4x4 post set in the ground at a minimum depth of 2 ft.
2. Locate post behind right rear corner of pad-mounted transformer or underground secondary box. Allow 2 ft. clearance between post and transformer or secondary box. If the preferred location can not be obtained, a MTEMC engineering representative must spot the location for new temporary service as well as additional temporary services.
3. Service entrance raceway of weatherproof flexible conduit will extend from bottom of panel to not less than 1 ft. below grade.
4. Service entrance conductors will extend 10 ft. out of service entrance raceway. Connections in transformer cabinet or underground secondary box will be made by MTEMC.
5. A weatherproof, U.L. listed, temporary service panel will be located at the MTEMC approved meter base. In no case will the bottom of the panel be less than 2 ft. above grade.
6. See General Metering Requirements for additional metering information.

Be sure to call Tennessee One Call before driving ground rods 1-800-351-1111 or 811
NOTES:

1. METER SOCKETS MOUNTED OUTDOORS UNLESS METER ROOMS ARE REQUIRED BY LOCAL GOVERNMENT JURISDICTION. NO DOORS ARE REQUIRED ON THE METER ROOMS. IMEKC MUST HAVE 24-HOUR ACCESS TO THE METER ROOMS; FAILURE TO PROVIDE ACCESS TO METER ROOMS MAY RESULT IN CUT-OFF OF ELECTRICITY UNTIL ACCESS IS RETURNED TO IMEKC. METER ROOMS MINIMUM SIZE SHALL BE 6 FEET BY 8 FEET. IMEKC ENGINEERING SHALL APPROVE THE METER ROOM DESIGN AND LAYOUT PRIOR TO CONSTRUCTION OF THE METER ROOM. NOTHING MAY BE STORED IN THE METER ROOM.

2. M.T.E.M.C. TO MAKE ALL METERING CONTROL CABLE CONNECTIONS IN METER SOCKET AND C.T. CABINET. CUSTOMER TO MAKE ALL CONNECTIONS IN WIRE TROUGH AND SELF-CONTAINED METER SOCKETS.

3. CONDUCTORS CARRYING METERED AND UN-METERED ENERGY SHALL NOT BE ALLOWED IN SAME WIRING TROUGH OR CONDUIT.

4. ALL WIRING, EQUIPMENT RATINGS, NUMBER OF SERVICES, ETC. SHALL BE IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE.

5. C.T.'S FURNISHED BY M.T.E.M.C. AND INSTALLED BY CUSTOMER IN THE PRESENCE OF M.T.E.M.C. PERSONNEL.

6. FOR SINGLE PHASE LOADS ON A THREE PHASE TRANSFORMER, USE A 5 TERMINAL NETWORK METER SOCKET.

7. REFER TO GENERAL METERING REQUIREMENTS FOR ADDITIONAL METERING INFORMATION.

8. GROUND CUSTOMER SERVICE EQUIPMENT IF PRESENT.

9. FOR OVERHEAD SERVICES, CUSTOMER SHALL FURNISH AND INSTALL CONDUIT AND SERVICE LATERALS. INSTALLATIONS TO BE INSPECTED BY STATE ELECTRICAL INSPECTOR.

10. IF MULTIPLE INSTALLATIONS FEED OFF ONE TRANSFORMER, EACH BUILDING, TROUGH AND/OR GANGED METER INSTALLATION REQUIRES A DISCONNECT.
* Security lighting of either 100 or 250 watts may be installed on MTEM C poles or member's poles.

* 250 watts Directional lighting is also available.

* See a MTEM C engineering representative for details.
NOTES:
1. Conduits run horizontal to water or gas lines must have a minimum 36" horizontal separation.
2. Telephone or cable utility minimum separation from MTEMC ducts shall be either:
   a.) 36" parallel
   b.) 12" vertical
3. All foreign utility perpendicular crossings must have 12" minimum separation from MTEMC ducts.
4. Conduit shall be PVC schedule 40, size and no. as specified on plans, with long coupling integral bells.
5. No sharp bends will be allowed. Horizontal bends must be greater than 6' radius. Contractor should plan runs to building sites such that no sharp bends will be necessary to serve the building.
6. If above not practical, then options shown on secondary ditch detail 2s may be used.
FOLLOWING OPTIONS ALLOWED AT DISCRETION OF MTEMC ENGINEERING WHERE ROCK WILL NOT ALLOW DWG 1S TO WORK.

SECONDARY DITCH DETAIL OPTION NO. 1

SECONDARY DITCH DETAIL OPTION NO. 2

NOTES:

1. CONDUITS RUN HORIZONTAL TO WATER OR GAS LINES MUST HAVE A MINIMUM 36" HORIZONTAL SEPARATION.

2. TELEPHONE OR CABLE UTILITY MINIMUM SEPARATION FROM MTEMC DUCTS SHALL BE EITHER:
   a.) 36" PARALLEL
   b.) 12" VERTICAL

3. ALL FOREIGN UTILITY PERPENDICULAR CROSSINGS MUST HAVE 12" MINIMUM SEPARATION FROM MTEMC DUCTS.

4. USE SECONDARY DITCH DETAIL IS WHERE PRACTICAL; USE ONE OF THE ABOVE OPTIONS ONLY IF DETAIL 1S IS NOT PRACTICAL

5. NO SHARP BENDS WILL BE ALLOWED. HORIZONTAL BENDS MUST BE GREATER THAN 6' RADIUS. CONTRACTOR SHOULD PLAN RUNS TO BUILDING SITES SUCH THAT NO SHARP BENDS WILL BE NECESSARY TO SERVE THE BUILDING.

SCALE: 3/4"=1'-0"
DIMENSIONS FOR CURRENT TRANSFORMER ENCLOSURES

SCOPE:
The customer shall be responsible for supplying and installing a NEMA 3R enclosure that adheres to the following specifications along with a 3" rigid metal or intermediate conduit connecting the current transformer enclosure with the transformer rated meter socket. Meter socket will be furnished and installed by the customer. Top of meter base will be located between 4 and 6 ft. above final grade. Bottom of the CT cabinet shall be a minimum of 18" above grade.

MATERIAL:
The enclosure shall be constructed of aluminum. The aluminum shall be a minimum thickness of nine hundredth (0.009) inches. All bolts, nuts, and washers shall be stainless steel or aluminum. The backboard shall be 3/4 inches treated, exterior, BB grade plywood. A galvanized steel cabinet with ANSI G1 light duty gray re-castable powdercoat (electrostatically applied and oven cured) may be substituted for the aluminum box.

DESIGN:
All joining edges shall have a minimum of one (1) inch overlap. The front of the enclosure shall have a minimum of one (1) inch flanges on all sides. The door panel shall be removable with a minimum of one (1) inch flange on the sides and bottom. The door shall be fastened with two (2) locking hasps. The plywood backboard shall be mounted on the inside back of the unit with four stainless steel bolts, nuts, and washers and maintain a minimum of 1/4 inch spacing between the board and cabinet. The enclosure shall be provided with one (1) ground lug.

SIZE:
The minimum dimensional requirements for the enclosure are given in the following table.

<table>
<thead>
<tr>
<th>TABLE 1</th>
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<tbody>
<tr>
<td>SERVICE</td>
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<tr>
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</tr>
<tr>
<td>3 PHASE</td>
</tr>
<tr>
<td>3 PHASE</td>
</tr>
<tr>
<td>1 PHASE</td>
</tr>
</tbody>
</table>

If these measurements cannot be met, the length and width may be altered provided the volume of the enclosure is maintained. In no way is the depth of the enclosure to be less than twelve (12) inches for three phase and ten (10) inches for single phase.
Notes:

Preface

At Middle Tennessee Electric, the safety of our Members and Employees is of highest importance. In keeping with this philosophy, the following is a guideline for our members who wish to use power generators both at the residential and commercial level.

For Green Power Partners (solar, wind, etc.) contact a MTEMC engineering representative.

Definition

Article 702 of the National Electric Code states that "Optional standby systems are intended to protect private business or property where life safety does not depend on the performance of the system. Optional standby systems are intended to supply on-site generated power to selected loads either automatically or manually."

Any standby generators connected to MTEMC service locations will be considered "Optional standby systems." All specifications to follow will be regarding said systems.

Requirements

It is required that a "double throw switch" be present when a generator is connected to an MTEMC service point. The purpose of a double throw switch is to isolate an installed generator from the MTEMC system. A double throw switch will ensure that the generator is not interconnected with MTEMC distribution lines. In the event of a power outage, the absence of such a switch could endanger MTEMC employees conducting repairs on the lines. Be aware that during an outage, a generator interconnected with the MTEMC system can result in serious injury including the death of any MTEMC employees working to restore power. A double throw switch will insure interconnection does not exist. The distribution panel circuit breaker is not a sufficient method of system isolation. "Installed switches must be approved by a state of Tennessee Licensed Electrical Inspector."

Required Switch Configuration

The diagrams shown describe how the double throw switch should be configured with your connection.
Notes:

Preface

At Middle Tennessee Electric, the safety of our Members and Employees is of highest importance. In keeping with this philosophy, the following is a guideline for our members who wish to use Generlink brand meter collars for quick connection/disconnection for portable generators both at the residential and commercial level.

For Green Power Partners (solar, wind, etc.) contact a MTEMC engineering representative.

Definition:

Article 702 of the National Electric Code states that "Optional standby systems are intended to protect private business or property where life safety does not depend on the performance of the system. Optional standby systems are intended to supply on-site generated power to selected loads either automatically or manually."

Any standby generators connected to MTEMC service locations will be considered "Optional standby systems." All specifications to follow will be regarding said systems.

Requirements:

1. Main distribution panel must be 200 amps or less. Panels greater than 200 amps will be required to install the normal transfer switch arrangement as shown in drawing ESG-9.

2. Member must purchase the Generlink device.

3. MTEMC will install the Generlink device.

4. Only the Generlink MA23/24-N/S device will be allowed.

The diagrams shown describe how the Generlink device should be configured with your connection.

Physical Dimensions:

- Diameter: 6½"
- Depth: 5¼"
- Weight w/o surge: 5½ lbs
- Weight w/ surge: 5¾ lbs
MTEMC Office Locations

FRANKLIN
2156 Curd Lane
Franklin, Tennessee 37067

LEBANON
201 Maddox-Simpson Parkway
Lebanon, Tennessee 37087

Mt JULIET
1475 North Mt. Juliet Road
Mt. Juliet, Tennessee 37122

WOODBURY
911 West Main
Woodbury, Tennessee 37190

SMYRNA
317 S. Lowry Street
Smyrna, Tennessee 37167

MURFREESBORO
326 St. Andrews Drive
Murfreesboro, Tennessee 37128

CORPORATE
555 New Salem Road
Murfreesboro, Tennessee 37129

Customer Service: 1-877-777-9020