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**CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
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ELECTRIC METER SHOP**

**METER ENGINEERING PROCEDURE MEP - 8
REVISION 16**

LOW TENSION METERING INSTALLATIONS

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LOW TENSION METERING INSTALLATIONS

1. PURPOSE

This procedure covers the requirements for meter mounting and current transformer mountings for low tension indoor and outdoor alternating current meter installations.

2. APPLICATION

This procedure applies to all operating areas.

3. METER MOUNTINGS

3.1. New Installations for Self-Contained Meters

3.1.1. 120/208 Volt or 120/240 Volt Services

- a. A 5–jaw meter socket is to be installed for 2– or 3–wire load wiring from the meter where the conductors do not exceed the sizes shown in 3.1.3 below.
- b. A 7–jaw meter socket is to be installed for 4–wire load wiring from the meter where the conductors do not exceed the sizes shown in 3.1.3 below.
- c. Where socket meters are installed for commercial and industrial customers, the meter sockets are to be equipped with bypass facilities. Public L&P meter sockets installed in 2 and 3 family houses do not require bypass facilities. For Temporary services, installation of 5–jaw and 7–jaw socket equipment with or without bypass facilities is the customer choice with their knowledge that when the meter is removed (24/7) the service to the site is de-energized until a meter is installed.
- d. Where socket meters are installed for residential customers, the meter sockets can be equipped with bypass facilities at the customer’s request.

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3.1.2. Street Celebrations, Bazaars, Carnivals and Other Events requiring Temporary Service

Self-contained detachable meter mounting is to be used where the conductors do not exceed the sizes shown in 3.1.3 below. A 5-jaw meter socket is installed for 2- or 3-wire load wiring from the meter. A 7-jaw socket is installed for 4-wire load wiring from the meter.

3.1.3. Meter sockets are installed for the applications covered in 3.1.1 to 3.1.2 above, provided the conductors do not exceed the following sizes:

Type of Socket	Maximum Size of Line Conductors	Maximum Size of Load Conductors
Outdoor Trough Type. 5-Jaw	2/0 AWG * 500 KCMIL	1/0 AWG *4/0 AWG
Outdoor-Indoor Box Type. 5- or 7-Jaw	3/0 AWG Copper Type RH or 3/0 AWG Copper Type R or T or 250 KCMIL Aluminum	3/0 AWG Copper Type RH or 3/0 AWG Copper Type R or T or 250 KCMIL Aluminum

* For Residential Use Only

3.2. New Installations for Current Transformer Meters

3.2.1. 120/208 Volt or 120/240 Volt Services

A current transformer meter mounting is to be installed for all 4-wire loads for conductor sizes larger than the following:

- #3/0 AWG copper, Type RH, or
- #4/0 AWG copper, Type R or T, or
- 250 KCMIL aluminum

3.2.2. 265/460 Volt Services

A current transformer meter mounting is to be installed for 4-wire loads

3.3. Use of Existing Bottom-Connected Meter Mountings for Self-Contained Meters

3.3.1. Meters may be installed on existing 2– and 3–wire bottom-connected meter mountings only where no wiring alterations (or hardware modifications) have been made, and:

- a. Meters are reinstalled following non-payment meter removals, or
- b. Meters are reinstalled following no-occupancy removals, or
- c. Meters are reinstalled when changing from rent inclusion to individual supply under Rider E and Rider F of the PSC No. 9 Electric Tariff Section VI Schedule, provided that each meter mounting has a hinged cover, is in good condition, and will properly accommodate a socket adapter.

3.3.2. When changing from submetering to direct metering, all meter mountings whether for 2–, 3–, or 4–wire bottom-connected meters are to be replaced with approved watt hour meter sockets.

4. METERING SEQUENCE

4.1. Outdoor Metering (Self-Contained Meters)

4.1.1. New Installations

Outdoor metering has been established as a regular practice for all residential installations of one, two or three meters. It is required for all new 3– and 4–wire overhead or underground service installations to one-family detached or semi-detached houses and for all new 3–wire overhead or underground service installations to two-family detached or semidetached houses. Outdoor meter mountings are to be installed on the line side of the service disconnect.

4.1.2. Relocation of Meters from Indoors

- a. To relocate an underground service electric meter from indoors to outdoors it is necessary that the layout provide for diversion of the service entrance conduit to an outdoor service end box.
- b. To relocate an overhead service electric meter from indoors to outdoors, the point–of–service termination must be relocated to the face of the

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building.

- c. In all cases where electric meters are installed outdoors, no unmetered service is to be brought into the building.

4.2. Indoor Metering (Self-Contained Meters)

4.2.1. General

- a. Generally, Company meters are to be connected on the line side of all customer energy-consuming devices.
- b. Meters in group installations, are to be installed on the line side of individual circuit breakers or fuse protection.

4.2.2. 120/208 Volt or 120/240 Volt Services

- a. An installation of one– or two–meter sockets for non-residential customers on a new service, and meter sockets for new: one, two or three–family houses are to be on the line side of the service disconnects. Three to six–meter sockets may be installed on the line side of the service disconnect. Where the installation of one additional meter socket or the replacement of existing meter mountings with new socket or sockets in a one or two or three family house necessitates the replacement of the existing service disconnect, the meter sockets are to be installed on line side of the service disconnects.
- b. Meter sockets for self-contained, 4–wire meters are to be installed on the line side of the service disconnect when only one customer is supplied by the service. Sockets for two to six meters may be installed on the line side, and when there are more than six meters the sockets shall be installed on the load side of the service disconnect.

4.3. Indoor Metering (Current Transformer Meters)

Current Transformers are to be installed on the line side of the service disconnect when only one customer is to be supplied by the service, where permitted by the Regulatory Authorities having jurisdiction.

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5. REQUIREMENTS FOR METER SOCKET INSTALLATIONS

5.1. New Installations

- 5.1.1. Contractor's color-coded conductors are to be connected to Company's service conductors with phase sequence so that for 3-wire service black leads red and 4-wire service black leads red leads blue leads black.
- 5.1.2. When the first meter order is issued for a detachable meter to be installed in a group of sockets, instructions are also to be issued to install (and seal) glass or plastic cover plates (Stock No. 451-0145), on any meter positions that are to remain without meters at that time.
- 5.1.3. Before a case is closed out involving the installation of a watt-hour meter socket, instructions are to be issued to install (and seal) either a meter or a glass cover plate. The temporary cover plates, authorized for use by contractors, are not to be left installed for an indefinite period of time on sockets having live jaws.
- 5.1.4. To avoid having rain enter socket meters mounted outdoors, sealing rings must be left with the seal at the lower part of the meter.
- 5.1.5. A minimum space of 9" from the front face of a meter socket cover to the inside face of an enclosure door, including any projections, is required for detachable meters without demand registers, and a minimum of 12" for detachable meters with demand registers.
- 5.1.6. Meter closets having less than three (3) feet between meter mounting covers and the inside of closet doors are to have a door opening extending at least six (6) inches beyond the right and the left sides of the bank of meter mountings, and three (3) feet of clear space in front of mounting covers with closet doors open.

5.2. Installation of Additional Socket

In a case where the service for an additional meter has been obtained by taking service from a socket already in use, the following action is to be taken prior to furnishing service to a new customer:

- 5.2.1. Remove the detachable meter from the socket from which service was taken, and
- a. remove any jumpers which are found,

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- b. check for proper wiring connections from the existing socket to the new socket

5.2.2. Reinstall the meter and seal.

5.2.3. Install new meter.

5.3. Installation of Reversing Adapters

5.3.1. Meter sockets installed prior to 1951 were designed for use with meters having line bayonets at the bottom. It was necessary to install reversing adapters on these sockets to accommodate modern meters which have line bayonets at the top.

5.3.2. Four jaw reversing adapters and five jaw reversing adapters are no longer available in stock.

5.4. Installation of Meter Change Adapters

5.4.1. Meter change adapters are not to be installed on meter sockets equipped with bypass facilities.

5.4.2. Meter change adapters are for use on group installations where 2-wire meters are to be temporarily installed on 3-wire sockets. Adapters are to be furnished to contractors at Company storerooms. There are two types of adapters as follows:

- a. For temporarily mounting bottom-connected meters; Stock No. 451-0384.
- b. For temporarily mounting detachable (socket type) meters; Stock No. 451-0350.

5.5. Meter Removal

When a detachable meter is removed for any reason and the socket is to remain in position, a glass or plastic cover plate (Stock No. 451-0145) is to be installed and secured in place.

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5.6. Correctness of Connections

5.6.1. When it is necessary to determine correctness of connections, voltages should be checked as shown below:

a. For 2–wire meters (4– or 5–jaw sockets), the voltage indicator should show:

1. 120 volts across top two jaws.
2. 120 volts from top left jaw to ground.
3. No voltage from top right jaw to ground.

b. For 3–wire meters (5–jaw sockets), the voltage indicator should show:

1. 208 or 240 volts across the top two jaws.
2. 120 volts from each top jaw to ground and also to the fifth jaw.
3. No voltage from the fifth jaw to ground.
4. No voltage across bottom jaws or from bottom jaws to ground.

c. For 4–wire meters (7–jaw sockets), the voltage indicator should show:

1. 120/208 Volt, 3–Phase, 4–Wire, Wye Service
 - 208 volts across any two top jaws.
 - 120 volts from each top jaw to ground and also to the third bottom jaw from the left.
 - No voltage across bottom jaws or from bottom jaws to ground.
2. 265/460 Volt, 3–Phase, 4–Wire, Wye Service (existing installations only).
 - 460 volts across any two top jaws.
 - 265 volts from each top jaw to ground and also to the third bottom jaw from the left.

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- No voltage across the bottom jaws or from bottom jaws to ground.

3. 120/240 Volt, 3–Phase, 4–Wire, Delta Service

- 240 volts across any two top jaws.
- 120 volts from the two top left jaws to ground and also to the third bottom jaw from the left.
- 208 volts from top right jaw to ground and also to the third bottom jaw from the left.
- No voltage across bottom jaws or from bottom jaw to ground.

5.6.2. No new single stator network meters are being installed but for existing ones with meter codes "34A" and "35A," the phase sequence of the service wiring to the two top jaws of the meter socket must be checked. The leading phase must be connected to the top right jaw.

5.6.3. Meters with code numbers "34A" or "35A" are equipped with a phase sequence indicating lamp. **When this lamp glows the service to the meter is incorrect.**

6. REQUIREMENTS FOR CURRENT TRANSFORMER INSTALLATIONS

6.1. General

6.1.1. Current transformers will be furnished by the Company and are to be installed by the customer on initial installation or upon subsequent alteration to the main cable or bus circuit.

6.1.2. Current transformers are to be installed on the line side of the service disconnect switch, where permitted by the regulatory authorities having jurisdiction. However, in the case of a 265/460–volt service, there must be a disconnect switch on the line side of the current transformers.

6.1.3. The meter mounting is to be located as near as practicable to the current transformers. It shall not exceed 10 feet without prior Con Edison approval.

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6.2. Current Transformer Mountings

The customer is to furnish and install for the applicable service:

6.2.1. A current transformer cabinet, MES No. 142-C

- a. 1– or 2–500 KCMIL or smaller copper cables per phase, or
- b. 1– or 2–750 KCMIL or smaller aluminum cables per phase.

6.2.2. A current transformer cabinet for 3 wire services (Trans A, MES 745) for large residential and non-standard CT services.

- a. One lug per phase. Each lug rated for (1) 600 kcmil - # 4 or (2) 250 kcmil - # 4 copper conductors.

6.2.3. Combination CT cabinet and meter enclosures (Trans S, MES 755 or Trans A, MES 745) for 200 amps or 400 amps service.

- a. One lug per phase. Each lug rated for (1) 600 kcmil - # 4 or (2) 250 kcmil - # 4 copper conductors.

6.2.4. Combination CT cabinet and meter enclosure (Trans S, MES 757 or Trans A, MES 750) for 400 amps or 800 amps service.

- a. Two lugs per phase. Each lug rated for (1) 600 kcmil - # 4 or (2) 250 kcmil - # 4 copper conductors.

6.2.5. Bus and cabinet details in accordance with MES No. 298-1 for bar type current transformers for the applicable size of service.

- a. Two cables per phase larger than 500 KCMIL copper or 750 KCMIL aluminum, or
- b. For bus with a maximum current carrying capacity of 1600 amps shall not exceed 4–600 KCMIL or 5–500 KCMIL copper or 5–750 KCMIL aluminum cables per phase

6.2.6. Bus and cabinet details in accordance with MES No. 377-D for window type current transformers.

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- a. For a capacity greater than 4–500 KCMIL copper or 4–750 KCMIL aluminum cables, or
- b. A vault bus take-off rated 1280 amperes or more to a single customer.

6.3. Secondary Wiring

6.3.1. Wiring Method

Current transformer secondary wiring and potential wiring is to be in rigid conduit or electrical metallic tubing, separate from all other wiring. Conduit and wiring shall be furnished and installed by the customer. The instrument transformer secondary wiring of one meter shall not be run in the same conduit with the wiring of another meter. It is preferable that current and potential transformer secondary wiring be in a single conduit for each meter. If two conduits per meter are used, the current transformer secondary wiring shall be in one conduit and the potential transformer secondary wiring shall be in the other conduit. Color-coded wires or multiple-conductor cable, according to N.E.M.A. color coding of control cables, shall be used for current and potential transformer secondary wiring. Color coded multiple conductor cable shall consist of #9 AWG (19/22) stranded copper or #10 AWG solid or stranded copper wire. Refer to National Electrical Code, Table 310-13 for appropriate wire type designation and specification. The Material used for wire insulation and jacket must be environmentally acceptable. Suitable closed-loop type lugs shall be used for connection of wires to the meter connection block and for potential wires to service bus. If multiple conductor cable is not used, the secondary wiring and potential wiring shall be of #10 AWG solid or stranded copper wire. Wire installed on railway properties to be nonleaded.

6.3.2. Connections

Wiring to current transformer secondaries shall be cut and formed to proper length and identified by the customer. The Company will make final connections to current transformer secondary terminals or leads. Potential connections shall be made by the customer to the line side of the current transformers. Connections to the bottom of the meter connection block shall be made by the customer. A minimum length of eighteen (18) inches of #10 AWG solid copper wire shall be connected by the customer

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to each terminal at the top of the meter connection block. The Company will install the watt-hour meter and make final connections.

6.3.3. **Continuity**

The secondary wiring of current transformers and the potential wires shall be continuous without splices between the current transformers and the meter connection block.

6.3.4. **Short Circuiting of Transformer Secondary Terminals**

Short circuiting wires and tags on current transformers shall be removed by Company forces when making connections to the watt-hour meter. It is necessary if the circuit is carrying load at the time of meter connection that the transformer secondary be kept short circuited until final connections to the meter are completed in order to avoid undesirable open circuit voltages across the secondary terminals which may exceed 2000 volts.

6.3.5. **Double Ratio Tapped-Secondary Current Transformers**

When double-ratio tapped secondary (single secondary winding) current transformers are used, it is necessary that the unused secondary terminal **remain open-circuited** for proper operation of the meter. Secondary wiring shall be left with sufficient slack to reach either set of transformer secondary terminals.

7. **GROUNDING**

7.1. The customer shall furnish, install and connect ground wires. Ground wires shall be continuous without splices or intermediate connections.

7.2. Authorities having jurisdiction requires that the ground conductor, service neutral and metal housing of the electric service equipment are connected together at the service equipment. The customer/contractor must follow and consult the local municipal codes or the National Electric Code for grounding requirements.

8. **TEMPORARY CONSTRUCTION SERVICE**

8.1. **Supplied from Low Tension Distribution System**

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Requirements as to mounting facilities for watt hour meters, demand meters and current transformers are the same as for new permanent installations, except that installations in weatherproof cabinets may be specified when necessary.

9. DEMAND and INTERVAL METERING

- 9.1. Recent regulatory changes require metering that records load profile data (energy usage that has a time stamp in intervals of 15 minutes-referred to as reactive metering) for customers with a monthly maximum demand equal to or greater than 500 KW. Each individual meter will have a load profile channel that records reactive power, known as KVARs, in addition to the KW energy measurement. The meters will have communications to the Company billing system where the energy, reactive and demand charges are calculated. See MEP-1 for details of interval metering installations.
- 9.2. New installations will no longer require pulse wiring from meters to a totalizer or recorder for coincident demand billing. Demand billing will be generated by the billing system using the interval data from each meter.
- 9.3. If the customer requires a pulse output to a third party BMS, they must request additional demarcation boxes, if additional boxes are required, for each meter through the Meter Upgrade Electric (MUE) program. The customer is responsible for conduits, cabling and connections to the demarcation boxes.

10. SEALING

10.1. Service End Box

- 10.1.1. Any enclosure installed between the point of service entrance and the meter, which allows access to the service wiring, is to be secured and sealed. New approved service end boxes are provided with suitable sealing and locking facilities. The cover of the service end box is to be secured by using one cadmium plated steel break off screw, MES No. 361 (Stock No. 451-0251), two standard cadmium plated round head #10-32 machine screws and a seal. New approved boxes are to be provided with sealing lips having provisions to accommodate standard seals with 5/16" diameter hasp. The use of enclosures, except at the point of service entrance should be kept to a minimum.
- 10.1.2. Any enclosure that has provisions to be locked, where such provisions were added while in service or as part of the original design must be locked.

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If supplied or previously installed locking hardware was damaged, misplaced or determined defective, it is the responsibility of the operating organization working on the equipment to perform required corrective actions in order to lock the equipment when work is completed.

10.2. All Other Metering Equipment

10.2.1. All meters and associated devices, including but not limited to, current transformer cabinets, ring-less socket equipment, etc. shall be secured and sealed.

10.2.2. Any associated device that has provisions to be locked, where such provisions were added while in service or as part of the original design must be locked. If supplied or previously installed locking hardware was damaged, misplaced or determined defective, it is the responsibility of the operating organization working on the device to perform required corrective actions in order to lock the device when work is completed.

11. CHANGES IN EXISTING INSTALLATIONS

11.1. Load Decrease

11.1.1. When the maximum load (include short duration loads such as welders and elevators) on an existing self-contained meter (ampere rating on the nameplate) decreases to below 10% of the rating, the meter should be replaced with a self-contained solid-state meter.

11.1.2. When the maximum load (include short duration loads such as welder and elevators) on an existing bar type current transformer installation decreases to below 20% of the capacity of the installed current transformer connected to a meter with a demand register, or to below 10% of the capacity of installed current transformer connected to a meter without a demand register, smaller current transformers should be installed, using a minimum size of 200 amperes. In such cases, a solid-state transformer-rated meter should be used.

11.1.3. Where an existing double-ratio current transformer installation has its transformers connected for the higher ratio and the maximum load shows a decrease for a period of one (1) year to below 1500 amperes for a 2000/4000 ampere transformer or to below 750 amperes for 1000/2000 ampere transformer, the operating area field personnel should reconnect the current transformer secondaries for the lower ratio and install a transformer

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rated solid state meter.

11.2. Load Increase

11.2.1. A meter should be replaced with a larger Class 200 self- contained solid state meter due to the following new or additional loading: the maximum load on an existing self-contained meter increases to more than 150% of the meter rating for 5-75 ampere meters of the older types (Types OA, OB, H and I-14); or to more than 400% for 15 ampere meters or more than 200% for 50 ampere meters of other types not having a "Class" designation on the nameplate. For meters with a "Class" designation on the nameplate. For meters with a "Class" designation, the "Class" denotes the maximum of the load range in amperes. The meter mounting should be of adequate capacity.

11.2.2. When, due to new or additional load, the maximum load on an existing current transformer installation increases to more than the following percentages of the current transformer rating for the types listed, the current transformers should be replaced with larger size transformers of the proper capacity:

- a. -200% of 200 and 400 amperes rated bar type current transformers.
- b. -150% for 800 ampere rated bar type current transformers.
- c. -150% for 1000/2000 and 2000/4000 window type current transformers.
- d. -125% for all other types. Consult the Electric Meter Shop for older type current transformers.

11.2.3. Where an existing double-ratio current transformer installation has its transformers connected for the lower ratio and the maximum sustained load increases to above 2500 amperes for a 2000/4000 ampere transformer or to above 1250 amperes for a 1000/2000 ampere transformer, the operating area field personnel should reconnect the current transformer secondaries for the higher ratio and install transformer rated solid state meter.

11.3. Alterations

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All cases where meters in service are relocated or reinstalled in new mountings or where current transformer secondary wiring is reconnected or replaced, they are to be referred to the operating area field personnel.

12. SPECIAL LOW TENSION METERING INSTALLATIONS

Metering of special installations and applications not addressed by this specification shall be referred to Electric Meter Shop Engineering.

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13. SYSTEM ELECTRIC METERING

The attached diagrams are for reference purposes to determine type of meter required for any characteristic of service which might be encountered on the Company's system. (See Appendix A)

14. REFERENCES

Requirements for Electric Service Installations

MEP 1 - Installation Requirements for Low Tension Interval Metering
<http://distribution/distrib/specs/MEP-1.pdf>

MEP 44 - Short-Circuiting Secondaries of Current Transformers
<http://distribution/distrib/specs/MEP-44.pdf>

MES 142-C - Current Transformer Cabinet for Not More Than Two 500 KCMIL Copper or Two 750 KCMIL Aluminum Cables Per Phase
<http://distribution/distrib/Specs/MES-142-C.pdf>

MES 195-C - Wiring Diagram for Meter for 200-800 Amp, Bar-Type Current Transformers
<http://distribution/distrib/Specs/MES-195-C.pdf>

MES 298-1 - Bus and Cabinet Details for Installation of Low Voltage 400, 600 or 800 Amp Bar Type Current Transformers
<http://distribution/distrib/Specs/MES-298-1.pdf>

MES 361 - Break-off Screw for Service End Boxes

MES 377-D - Mounting Details and Wiring for 1000-4000 Amp Window Type Current Transformers
<http://distribution/distrib/Specs/MES-377-D.pdf>

MES 394-A - Installation of Outdoor Watthour Meter Socket
<http://distribution/distrib/Specs/MES-394-A.pdf>

MEP 395-A - Installation of Indoor Watthour Meter Sockets On Line Side of Service Disconnects
<http://distribution/distrib/Specs/MES-395-A.pdf>

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Filing Information		FIELD MANUAL		No. 16 - Section 3 & No. 4 - Section 6	

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MES 447-B - Watthour Meter Sockets On Load Side of Service Disconnect
<http://distribution/distrib/Specs/MES-447-B.pdf>

MES 528-1 - Space Requirements for Metering Closet
<http://distribution/distrib/Specs/MES-528-1.pdf>

MEP 547 - Control Step Down Transformers
<http://distribution/distrib/Specs/MES-547.pdf>

MEP 637 - Socket Adapter for "A" Base Metering Equipment
<http://distribution/distrib/Specs/MES-637.pdf>

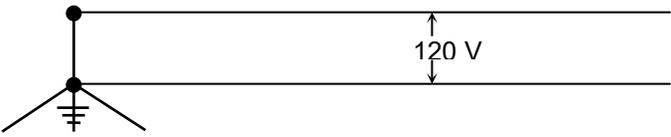
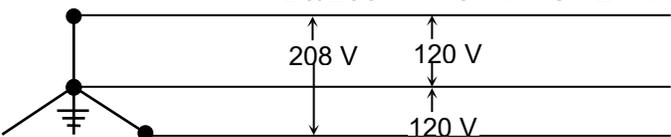
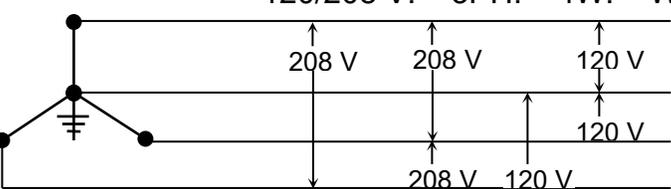
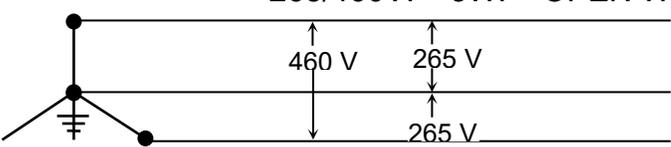
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APPENDIX A

SYSTEM ELECTRIC METERING

LOW TENSION ALTERNATING CURRENT

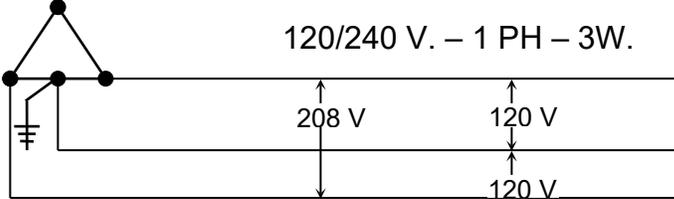
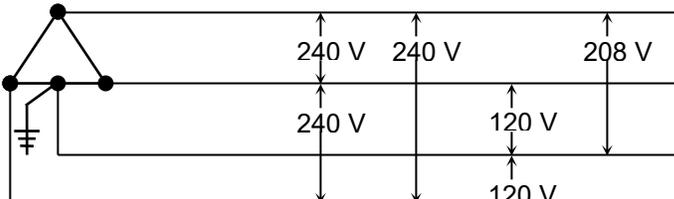
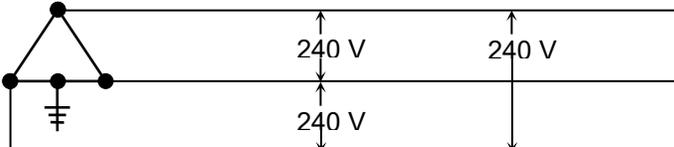
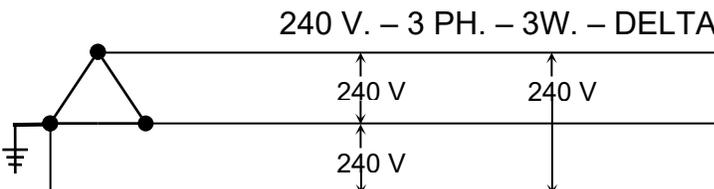
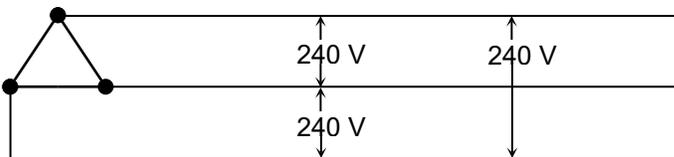
CHARACTERISTIC OF SERVICE	SERVICE CONDUCTORS TO METER	KIND OF METER* REQUIRED
<u>STANDARD SERVICE</u>	<p>120 V – 1 PH. – 2 W.</p> 	120 V. – 1 STATOR – 2W
	<p>120/208 V. – 3W. – OPEN WYE</p> 	120/208V. – 1 STATOR – 3W. OR 120V. – 2 STATOR – 3W.
	<p>120/208 V. – 3PH. – 4W. – WYE</p> 	120V. – 2 STATOR – 4W. OR 120V. – 3 STATOR – 4W.
<u>NON-STANDARD SERVICES</u>	<p>265/460V. – 3W. – OPEN WYE</p> 	265 V. – 2 STATOR – 3W.

LOW TENSION ALTERNATING CURRENT (CONT.)

CHARACTERISTIC OF SERVICE	SERVICE CONDUCTORS TO METER	KIND OF METER* REQUIRED
	265/460V. – 3PH. – 4W. – WYE 460 V 460 V 265 V 460 V 265 V	265 V. – 2 STATOR – 4W. OR 265 V. – 3 STATOR – 4W.
	133/230 V. – 3PH. – 4W – WYE 230 V 230 V 133 V 230 V 133 V	120V. – 2 STATOR – 4W. OR 120V. – 3 STATOR – 4W.
	139/240 V. – 3 PH. – 4W. WYE 240 V 240 V 139 V 240 V 139 V	120V. – 2 STATOR – 4W. OR 120V. – 3 STATOR – 4W.
	208 V. – 3 PH. – 3W. – WYE 208 V 208 V 208 V	SPECIAL CASE – REFER TO METER ENGINEERING
	120 V. – 1 PH. – 2W. 120 V	120V. – 1 STATOR – 2W.

LOW TENSION ALTERNATING CURRENT (CONT.)

CHARACTERISTIC OF SERVICE	SERVICE CONDUCTORS TO METER	KIND OF METER* REQUIRED
---------------------------	-----------------------------	-------------------------

	<p>120/240 V. – 1 PH – 3W.</p> <p>208 V 120 V</p> <p>120 V</p>	<p>120V. – 2 STATOR – 3W. (120/240 V. – 1 STATOR – 3W. IN WESTCHESTER).</p>
	<p>120/240 V. – 3 PH. – 4W - DELTA</p> <p>240 V 240 V 208 V</p> <p>240 V 120 V</p> <p>120 V</p>	<p>240 V. – 2 STATOR – 4W. OR 240 V – 3 STATOR – 4W</p>
	<p>240 V. – 3 PH. – 3W. – DELTA</p> <p>240 V 240 V</p> <p>240 V</p>	<p>SPECIAL CASE – REFER TO METER ENGINEERING</p>
	<p>240 V. – 3 PH. – 3W. – DELTA</p> <p>240 V 240 V</p> <p>240 V</p>	<p>240 V. – 2 STATOR – 3W.</p>
	<p>240 V. – 3 PH. – 3W. – DELTA</p> <p>240 V 240 V</p> <p>240 V</p>	<p>240 V. – 2 STATOR – 3W.</p>

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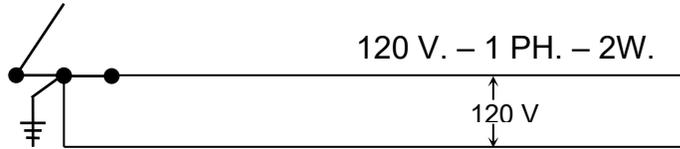
MEP – 8	Rev 16	7/2024	7/05/2024	1939 - 2024 Consolidated Edison Co. of New York, Inc. ¹
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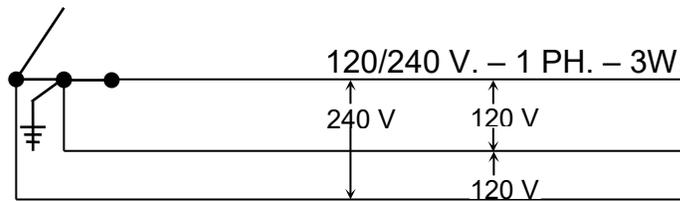
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LOW TENSION ALTERNATING CURRENT (CONT.)

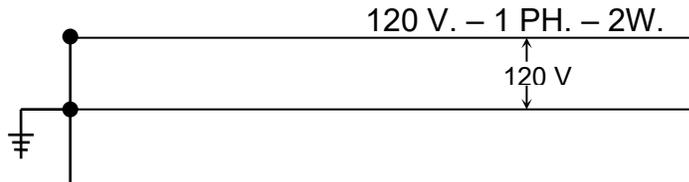
CHARACTERISTIC OF SERVICE SERVICE CONDUCTORS TO METER KIND OF METER* REQUIRED



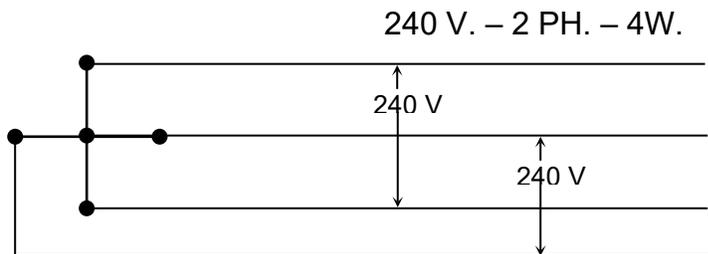
120 V. – 1 STATOR – 2W.



120 V. – 2 STATOR – 3W.
(120/240 V. – 1 STATOR – 3 W.
IN WESTCHESTER)



120 V. 1 –STATOR – 2W.

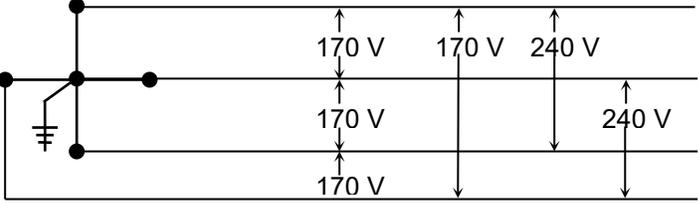
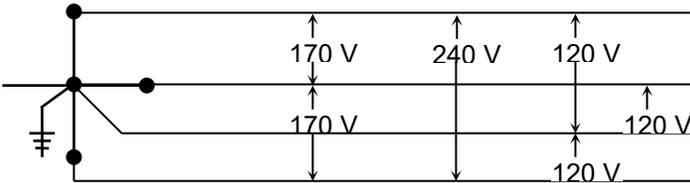
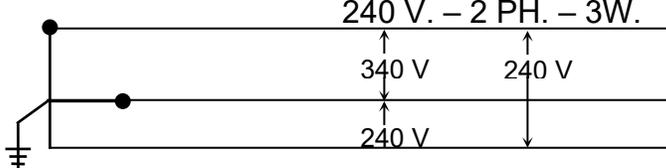
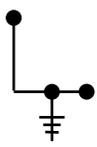
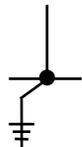
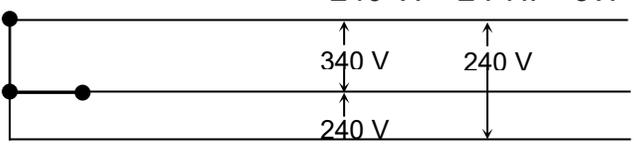


SPECIAL CASE – REFER TO
METER ENGINEERING

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LOW TENSION ALTERNATING CURRENT (CONT.)

CHARACTERISTIC OF SERVICE	SERVICE CONDUCTORS TO METER	KIND OF METER* REQUIRED
	240 V. – 2 PH. – 4W.	SPECIAL CASE – REFER TO METER ENGINEERING
	120/240 V. – 1½ PH. – 4W.	120 V. – 3 STATOR – 4W.
	240 V. – 2 PH. – 3W.	240 V. 2 STATOR – 3W.
	120/240 V. – 2 PH. – “L” ANY NUMBER OF SERVICE CONDUCTORS.	SPECIAL CASE – REFER TO METER ENGINEERING
	2 AND 3 PH. EXTENDED “T” ANY NUMBER OF SERVICE CONDUCTORS.	SPECIAL CASE – REFER TO METER ENGINEERING
	240 V. – 2 PH. – 3W	240 V. – 2 STATOR – 3 W. SPECIAL CASE – REFER TO METER ENGINEERING

*CHANGES SHALL NOT BE MADE TO EXISTING METER INSTALLATIONS UNLESS OTHERWISE REQUIRED BY THE PROVISIONS OF THE RATE SCHEDULE. IF A CASE SHOULD ARISE WHERE THE CHARACTERISTICS OF SERVICE DIFFERS FROM ANY SHOWN, CONSULT THE ELECTRIC METER SHOP.

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Prepared By: Michael Parobek
 Reviewed By: Michael Parobek

<u>DATES</u>	<u>FILE</u>
Initial Issue: December 1939	Field Manual No. 16 Sec. 3 Field Manual No. 4 Sec. 6
Revision 10: Vincent Ferguson; October 1992 <ul style="list-style-type: none"> • Removed 1A2, 2B3, 265 volt socket installation no longer allowed. • Changed 3C2, reversing adapters. • Deleted fire alarm stock numbers. 	
Revision 11: Thomas Wong; September 2005 <ul style="list-style-type: none"> • Updated various sections of spec as required. Revised format to agree with writer's guide EO-1070. 	
Revision 12: Thomas Wong; July 2010 <ul style="list-style-type: none"> • Reformatted Spec • Revised Section 9 to address requirements for Reactive and Interval metering of 500 kW customers 	
Revision 13: Costas Magoulas; May 2014 <ul style="list-style-type: none"> • Converted document to new format per EO-1070. • Revised section 3.1.1. (c) on temporary service. • Revised section 10 on Sealing. 	
Revision 14: September 2019 <ul style="list-style-type: none"> • Clarified sections 6.2 and 6.3 • Revised section 9 • Updated references 	
Revision 15: Costas Magoulas December 2020 <ul style="list-style-type: none"> • Changed MCM to Kcmil in document 	

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<ul style="list-style-type: none"> • Clarified sections 6.2.2(a), 6.2.3(a) and 6.2.4(a) regarding trans-S enclosure cable installation details. • Clarified section 6.3.5 on double (dual) tapped-secondary current transformers and leaving unused secondary open. <p>Revision 16: Michael Parobek July 2024</p> <ul style="list-style-type: none"> • Clarified section 6.1.2 	
<p>Review by: July 2029</p>	