

Welcome to Bluebonnet Electric Cooperative

Bluebonnet Electric Cooperative is one of the largest electric cooperatives in Texas and has been serving its members since 1939. Bluebonnet owns and maintains more than 12,000 miles of power lines, serving thousands of homes and businesses throughout its 3,800-square-mile service area covering all or part of 14 Central Texas counties.

This packet is available to all residential members who wish to install a trench and conduit system for the construction of primary and secondary installation. It serves as a guide for members to install the electrical equipment needed to connect to Bluebonnet's distribution system.

The information presented in this packet is subject to change. For information and a digital copy of this packet, visit Bluebonnet's website at bluebonnet.coop/document-center.

If you have questions regarding the information in this packet or your project, contact new service at 800-842-7708 from 8 a.m. to 5 p.m. Monday through Friday.

Raymond Kuhn 800-842-7708 ext. 1598

Angela Santos (Spanish inquiries) 800-842-7708 ext. 1597

For other questions, contact a member service representative at 800-842-7708 from 8 a.m. to 5 p.m. Monday through Friday.

Thank you, Bluebonnet Electric Cooperative

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GUIDELINES AND PROCEDURES

- 1. Review construction specifications prior to trenching and installing underground conduit.
- 2. Provide and install all underground materials according to construction specifications.
 - Material location and conduit stubs must adhere to all construction specifications.
 - Bluebonnet will provide and install any hardware required above ground, such as sectionalizing cabinets and pad-mounted transformers along with pulling all primary conductors.
 - Service wire and associated labor from service point to member's meter location (structure or rack) are not included in the member's contribution in aid of construction (CIAC) and are solely the member's responsibility.
- 3. Request an open-ditch inspection when conduit and conduit stubs are installed before backfilling the trench. Inspections are only required for facilities owned by Bluebonnet and will occur after Bluebonnet is notified but no sooner than 48 hours after receiving notification. Trenches must remain open until inspected and approved by a Bluebonnet inspector. Once the inspection has occurred, members will be advised on the next steps.
 - Privately-owned secondary service, trench and wiring does not require an inspection by Bluebonnet but must adhere to the National Electric Code (NEC) and/or National Electrical Safety Code (NESC) guidelines.
 - Bluebonnet retains the right to terminate any conduit installation if findings reveal noncompliance with inspection policies, procedures or specifications until said issues are resolved and approved through reinspection.

MEMBER RESPONSIBILITIES

- Must confirm all easement requirements and provide an original copy of a signed and notarized Exhibit A to Bluebonnet prior to conduit installation.
- Contact Texas811 by dialing 811 or 800-344-8377 if out of state or visiting texas811.org to request locations of any existing utilities within the construction area.
- Adhere to Bluebonnet inspection guidelines and procedures prior to and during conduit installation. Members must ensure all specifications are met.
- Provide all materials required, including PVC conduit, elbows, cable-pulling tape, warning tape
 and pea gravel for installation of the conduit system. For additional information on the required
 materials, see page 5. Once installation is completed, Bluebonnet will maintain equipment
 between the power pole and pad-mounted transformer. The service line between the padmounted transformer and meter is the member's responsibility.
- All right-of-way clearing, including the removal of trees, shrubs and stumps must adhere to Bluebonnet's specifications. For more detail, refer to the Right-of-way clearing guide in the appendix.

COSTS & FEES

- Cost estimates are valid for 60 days upon receipt.
- Requests to change location of equipment are subject to additional fees and will be determined on a case-by-case basis.
- For more information, view Bluebonnet's line extension policy in the member handbook or online at bluebonnet.coop/line-extensions.

EASEMENTS & RIGHTS-OF-WAY

- Bluebonnet shall be granted access, at no cost and in writing suitable for recording, to all rightsof-way and easements necessary to construct, operate, repair or replace, and maintain or remove
 Bluebonnet assets located on the property, owned or leased, by the member, including all
 streets, roads or highways abutting the property. Bluebonnet property includes but is not limited
 to service lines, switches, meters and other appliances or equipment necessary to provide electric
 service.
- Attaching personal equipment and/or materials to Bluebonnet property is prohibited, except when required to provide electrical service and has been authorized by Bluebonnet.

REQUIRED MATERIALS

All materials listed below are required for underground primary installation.

- 3-inch gray schedule 40 and schedule 80 PVC conduit
 - o Couplers and/or bell ends must be primed and glued to ensure installation is secure and waterproof.



• 3-inch gray schedule 40 PVC 48-inch sweeps



• 3/8-inch washed pea gravel



- 6-inch wide "Caution Buried Electric Line Underground" warning tape
 - o Normally sold in 1,000 foot rolls.
 - o It should be red with black lettering.





- Cable-pulling tape or MULETAPE, minimum rating of 1,800 psi
 - o Normally sold in 3,000 foot rolls
 - Place in conduit and secure at both ends with duct tape or by tying to a nearby pole or structure to ensure the tape does not fall inside the conduit



MISCELLANEOUS INFORMATION AND PHOTOS

The trench must be 48 inches deep with the conduit placed at the bottom of the trench and the warning tape placed 38 inches below ground level. For more details, refer to the Ditch and conduit placement: non-road crossing and Riser pole conduit documents in the appendix.



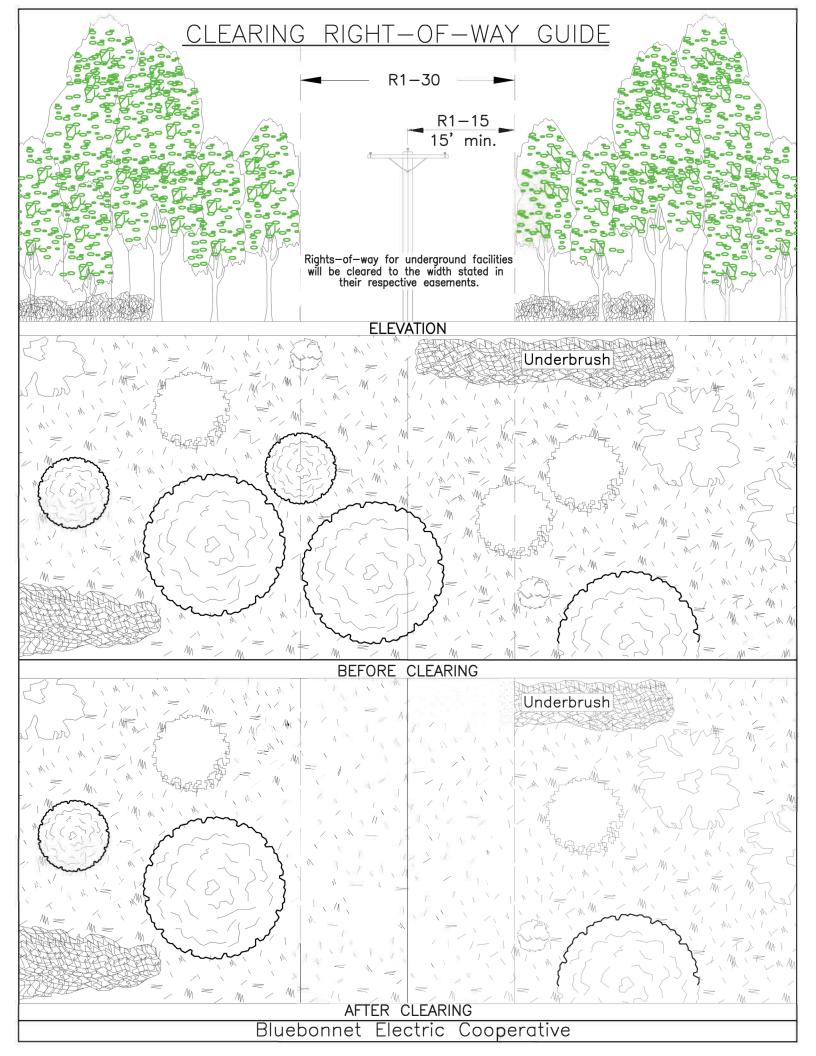
Pad-mounted transformer after inspection and approval.

CAUTION: Hazardous voltage inside. Can shock, burn or cause death. Keep out.

If unlocked or open, call Bluebonnet's member services immediately at **800-842-7708**.

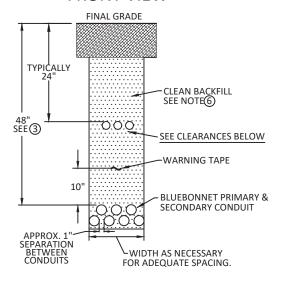


Keep shrubs, plants and structures at least 10 feet from the front and 5 feet from the remaining sides of the pad-mounted transformer. Bluebonnet has the right to remove any obstructions without notice to the property owner. Removal of obstructions will cause delays in power restoration.

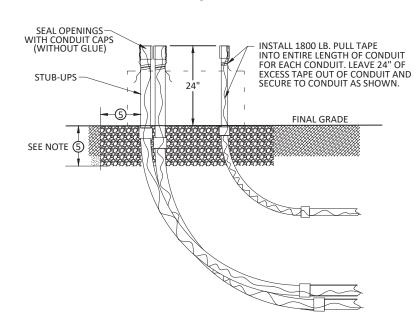


DITCH AND CONDUIT PLACEMENT NON-ROAD CROSSING

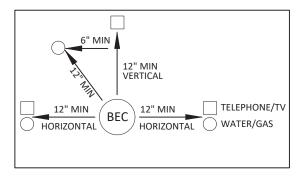
DITCH ASSIGNMENT FRONT VIEW



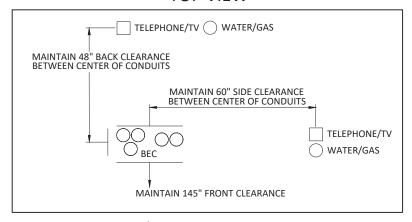
CONDUIT STUB-UP SIDE VIEW



CONDUIT CLEARANCES FRONT VIEW



CONDUIT STUB-UP CLEARANCES TOP VIEW



ANY CONDUITS STUBBED OUT FOR FUTURE USE SHALL EXTEND A MINIMUM OF 5' FROM EQUIPMENT. ENDS SHALL BE MARKED WITH 3" DIAMETER GREY PVC CONDUIT, EXTENDING 4' ABOVE GRADE AND PAINTED RED.

NOTES:

- 1. CONDUIT SHALL BE GREY SCHEDULE 40 PVC. | PRIMARY & SECONDARY= 3" | LIGHTING= 2"
- 2. CONDUIT ELBOW: PRIMARY & SECONDARY= 90°, 48" SWEEP | STREETLIGHT = 90°, 24" SWEEP
- 3. NORMAL DITCH COVER DEPTH IS 48". ADJUSTMENTS MAY BE MADE TO 48" DEPTH IF NECESSARY UPON BLUEBONNET APPROVAL.
- 4. SEPARATION FROM OTHER UTILITIES SHALL BE 12" MINIMUM OR SUFFICIENT TO PREVENT ANY FORESEEN DAMAGE OF EITHER FACILITY TO THE OTHER.
- 5. GRAVEL FOR PADS SHALL BE 3/8" WASHED PEA GRAVEL. DEPTH AND WIDTH SHALL BE TO EQUIPMENT SPECIFICATION.
- 6. BACKFILL MATERIAL SHALL BE CLEAN AND FREE FROM ALL ORGANIC MATERIAL, UNSTABLE MATERIALS, DEBRIS, LUMPS, OR BROKEN PAVING. NO ROCKS OR STONES SHALL BE GREATER THAN 1" IN ANY BACKFILL. THE BACKFILL MUST PROVIDE AN EVEN SUPPORT FOR CONDUITS. MATERIAL FOR BACKFILL MAY BE MATERIAL RESULTING FROM EXCAVATION, IF SUITABLE IN THE OPINION OF THE BBEC INSPECTOR OR BBEC PROJECT COORDINATOR.



RISER POLE CONDUIT

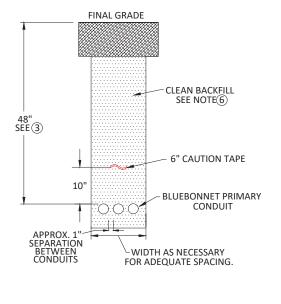
SEAL OPENINGS — WITH CONDUIT CAPS

(WITHOUT GLUE)

STUB-UPS

SCH. 80 PVC CONDUIT

DITCH ASSIGNMENT FRONT VIEW



CONDUIT STUB-UP SIDE VIEW

ADDED.

24

INSTALL 1800 LB. PULL TAPE
INTO ENTIRE LENGTH OF CONDUIT
FOR EACH CONDUIT. LEAVE 24" OF
EXCESS TAPE OUT OF CONDUIT AND
SECURE TO CONDUIT AS SHOWN.

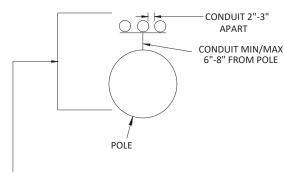
FINAL GRADE

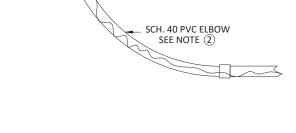
6" CAUTION TAPE

IF POLE IS NOT THERE, STOP CONDUIT 5FT FROM STAKE. YOU WILL NEED TO COME BACK LATER TO

TURN SWEEPS. A MARKER PIPE WILL NEED TO BE

TOP VIEW





NOTES:

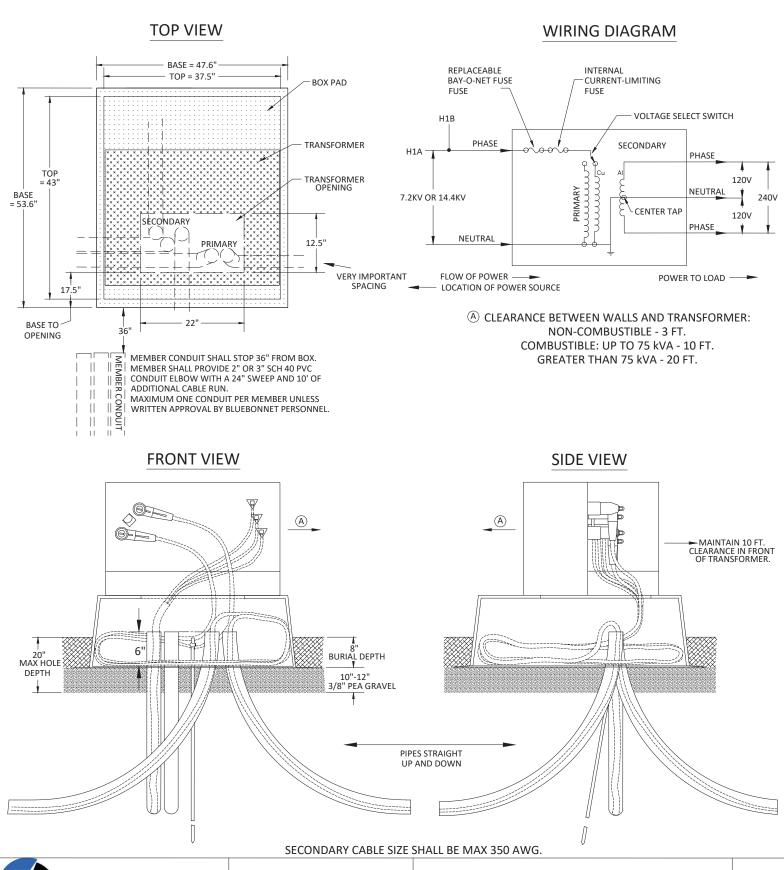
CENTER CONDUIT

- 1. CONDUIT BELOW GROUND SHALL BE GREY SCHEDULE 40 PVC. | PRIMARY & SECONDARY= 3" | LIGHTING= 2"
- CONDUIT ELBOW: PRIMARY & SECONDARY= 90°, 48" SWEEP | STREETLIGHT = 90°, 24" SWEEP
- 3. NORMAL DITCH COVER DEPTH IS 48". ADJUSTMENTS MAY BE MADE TO 48" DEPTH IF NECESSARY UPON BLUEBONNET APPROVAL.
- 4. SEPARATION FROM OTHER UTILITIES SHALL BE 12" MINIMUM OR SUFFICIENT TO PREVENT ANY FORESEEN DAMAGE OF EITHER FACILITY TO THE OTHER.
- 5. BACKFILL MATERIAL SHALL BE CLEAN AND FREE FROM ALL ORGANIC MATERIAL, UNSTABLE MATERIALS, DEBRIS, LUMPS, OR BROKEN PAVING. NO ROCKS OR STONES SHALL BE GREATER THAN 1" IN ANY BACKFILL. THE BACKFILL MUST PROVIDE AN EVEN SUPPORT FOR CONDUITS. MATERIAL FOR BACKFILL MAY BE MATERIAL RESULTING FROM EXCAVATION, IF SUITABLE IN THE OPINION OF THE BBEC INSPECTOR OR BBEC PROJECT COORDINATOR.
- 6. CONDUIT ABOVE GROUND SHALL BE GREY SCHEDULE 80 PVC.
- 7. FIRST BRACKET WILL BE INSTALLED 24" FROM FINAL GRADE.
- 8. ROTATE CONDUIT TO AVOID CONFLICT WITH COMMUNICATION ATTACHMENTS.



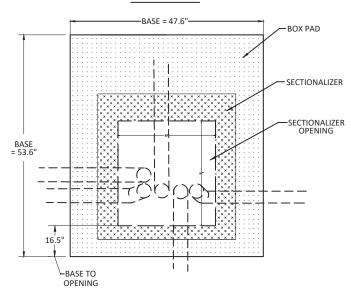
2	Drawn:	Approved:	Date:	
	JW	Standards	Mar. 26, 2024	

1PH PADMOUNT TRANSFORMER DIMENSIONS AND WIRING

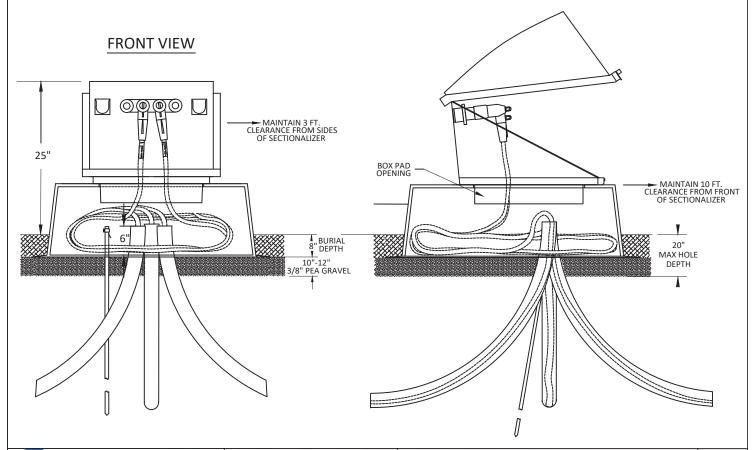


1PH PADMOUNT SECTIONALIZER DIMENSIONS AND WIRING

TOP VIEW



SIDE VIEW





DATE APPROVED: JUNE 24, 2025

UNDERGROUND DISTRIBUTION

Metering Guidelines

Latest Update to all specs can be found at Bluebonnetelectric.coop

For the member's safety, wiring installation and material shall conform to the requirements of the NEC, TDLR and NESC. All Wiring Installations must also meet local guidelines, if applicable, set forth but the city, county, or other governing entity in the event these requirements are more stringent than Bluebonnet specifications.

General Notes

Applicable to All Specs

- 1. Weatherproof fittings are required for all connections.
- 2. The main electrical disconnect for each electrical service, if not mounted on a Bluebonnet pole or on an approved rack, shall be unenclosed and installed on the exterior of the building or approved structure in a location approved by Bluebonnet Electric Cooperative
- 3. Meter assembly must remain unenclosed on the exterior of a structure.
- 4. Meter assembly cannot be mounted on a mobile home.
- 5. Any part of a meter rack or equipment rack shall be a minimum of six feet from Bluebonnet poles or equipment, and shall not impede access for maintenance to Bluebonnet's poles or equipment.
- 6. Bluebonnet poles must remain free of structures and private attachments other than the meter loop/meter loop riser assembly.
- 7. Meter loops or risers shall be installed on pole by Bluebonnet.
- 8. All secondary connections are to be made by Bluebonnet.
- 9. Neutral(s) must be insulated and may only be reduced two sizes on residential applications. No reduction of the neutral(s) is allowed on commercial applications.
- 10. Each phase must be sized to accommodate the total main fuses or breakers installed
- 11. Electric service to fire pumps shall be served through a CT-metered service.
- 12. Where three-phase is used to provide single-phase service to individual occupants, the load must be balanced between all three phases as equally as possible. This applies whether the single phase services are individually metered or not.
- 13. For all jobs requiring excavation, including rack or underground, the individual or contractor performing the work shall call TEXAS811 for locating jobs before digging to Bluebonnet equipment. No private utilities will be located.
- 14. Mobile Home Feeder Cables may not be used from Transformer or UJB to Meter unless the fourth (Green or Bare) Ground wire can be and is removed before installing.



CT Metering Notes

Applies to: MS-112B1, MS-112B3, MS-113B1, MS-113B3, MS-114A1, MS-114B3, MS-115-1, MS-115-3, MS-202A1, MS-202B3, MS-204B1, MS-204B2, MS-204B3, MS-207B, MS-301B, MS-301C, MS-406A, MS-533-1, MS-533-3, MS-554-1, MS-554-3

1. CT Enclosures may be purchased from Techline (512-332-2978) and Installed by Member:

Minimum Size 1 Phase: Main Enclosure 30" x 30" x 12"

Backup Enclosure 24" x 30" x 13"

Minimum Size 3 Phase: Main Enclosure 42" x 30" x 13"

Backup Enclosure 24" x 30" x 13"

- 2. CT enclosures may be purchased at any supplier as long as it meets the minimum dimensions and is able to accommodate a Bluebonnet pad lock.
- 3. Bluebonnet to provide CTs.
- 4. The electrical contractor will notify Bluebonnet 72 hours in advance to schedule Bluebonnet personnel to deliver the CT's. The electrician shall install the CT's on the rack with the correct polarity before the conductor is brought through the CT enclosure. Call (800-842-7708) to schedule a connect.
- 5. Electric service to fire pumps shall be served through a CT-metered service.

Standby Generator Notes

Applies to: MS-400, MS-401, MS-401A, MS-402, MS-402A, MS-403, MS-404, MS-405, MS-406, MS-406A, MS-407, MS-408, MS-412

- 1. Generators shall be placed a minimum of 15' away from Bluebonnet's pole(s) and/or equipment and outside of Bluebonnet's easement.
- 2. Transfer switches may be on Bluebonnet pole, only if they are in place of a main panel. They may not be in addition to a panel.
- 3. Any transfer switch that serves as a main (first device past meter) must be service rated
- 4. Generators must be connected with a dedicated transfer switch. Breaker interlocks are not acceptable.
- 5. Portable generators may be connected to an inlet through a transfer switch.
- 6. Transfer switches that plug into the meter base are not acceptable.

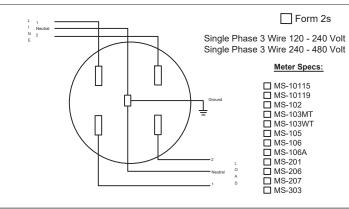
Renewable Energy Connection Notes

Applies to: MS-501, MS-502, MS-507T, MS-553-1, MS-553-3, MS-554-1, MS-554-3, MS-41115, MS-41119

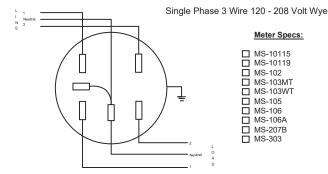
- The solar and/or battery disconnect(s), if not mounted on an approved rack, shall be installed on the exterior of the building or approved structure in a location approved by Bluebonnet Electric Cooperative.
- 2. DG disconnect must be clearly labeled and identified.
- 3. Bluebonnet poles must remain free of structures and private attachments other than the meter loop assembly or riser.
- 4. Inspection may be required by local jurisdiction if applicable.
- 5. DG meter or equipment rack (If Applicable) shall be a minimum of 6' away from Bluebonnet's poles and/or equipment.
- 6. Any installation with Batteries are required to have an accessible disconnect or method of shutdown to disable batteries.



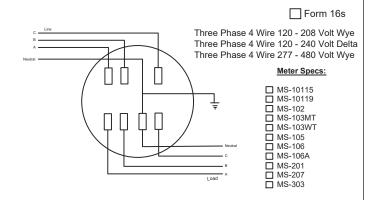
SELF CONTAINED (200 AMPS OR LESS)



Form 12s



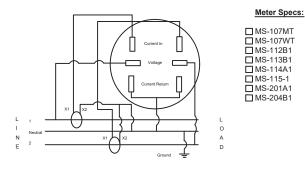
Form 12s Three Phase 3 Wire Straight 480 Volt Delta Meter Specs: ☐ MS-10115 ☐ MS-10119 ☐ MS-102 ☐ MS-103MT ■ MS-103WT MS-105 MS-106 ☐ MS-106A ☐ MS-301A



CT. RATED (LARGER THAN 200 AMPS)

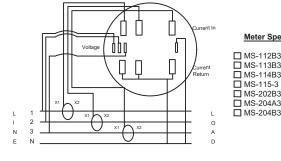
Form 4s

Single Phase 3 Wire 120 - 240 Volt Over 400 Amp





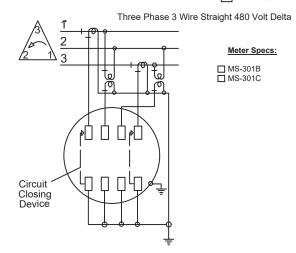
Three Phase 4 Wire 120 - 208 Volt Wye Three Phase 4 Wire 120 - 240 Volt Delta Three Phase 4 Wire 277 - 480 Volt Wye



Meter Specs:

- ☐ MS-113B3 ■ MS-114B3 ☐ MS-115-3 ☐ MS-202B3 ☐ MS-204A3
- MS-204B3

Form 45s





METER BASES

drawn:	approved:	date:	
JW	Standards	Jan. 30, 2024	

