

Delmarva Power – CT (Transformer-Rated) Metered Service Specification

- **Definitions:**
 - CT: Current Transformer
 - VT: Potential/Voltage Transformer – Required for 277/480V service ONLY
- The Non-fused disconnect and CT Cabinet (IF REQUIRED) are supplied and installed by the Customer (see appendix for installation diagrams and approved material lists)
- All conduits shall be supplied and installed by the Customer, as directed by your Delmarva Power (DPL) engineering representative.
- The customer must provide ¾" plywood backboard inside the CT cabinet.
- Delmarva Power (DPL) will SUPPLY to the customer the CT/VTs and CT meter socket.
- Delmarva Power will approve all CT Cabinet and meter socket locations.
- Delmarva Power will supply and install service wiring to the **line-side** of the **non-fused** disconnect.
 - Delmarva Power will supply a DPL lock for the line-side disconnect.
- Delmarva Power will supply and install CT meter socket wiring to CT/VTs.
- Delmarva will NOT permit mounting the Meter Socket to the CT Cabinet door.
- Delmarva Power will require 1" PVC schedule 40 grey electrical conduit between the CT cabinet and meter socket. Delmarva Power prefers mounting the meter socket adjacent to the cabinet. The CT meter socket can be placed above the CT Cabinet if the max height dimensions are maintained (see arrangement diagram). Delmarva Power (DPL) will allow the CT meter socket to be mounted farther away from the CT Cabinet if necessary; however, this deviation must be approved in advance by DPL.
- Delmarva Power prohibits attaching or running grounding conductors through the CT cabinet.

Important Note: After making application for service and discussing your project with your assigned Delmarva Power engineering representative, DPL will inform you as to whether you will follow Customer Process A (CT Metering Cabinet Required) or Customer Process B (CT Metering Cabinet NOT Required)

Customer Process A – 400 Amp TO 2000 Amp - CT Metering Cabinet Required

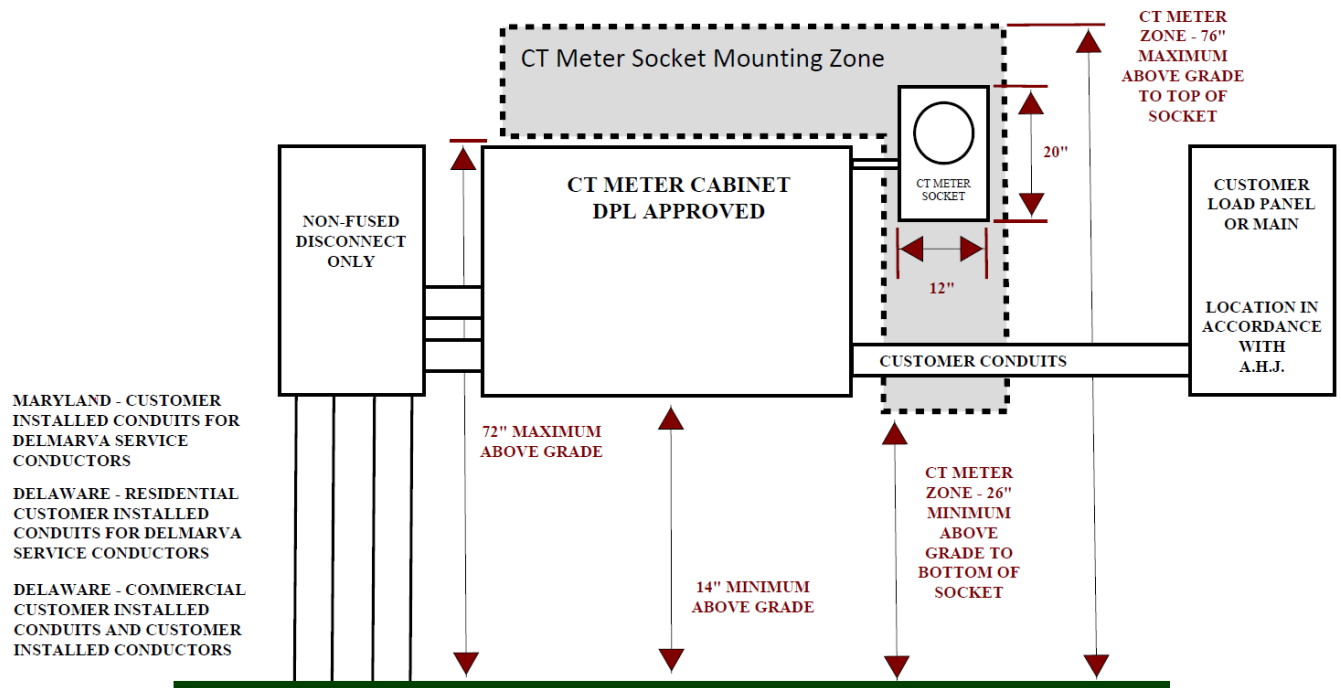
1. Customer makes Application for Service and indicates request for service. CT (Transformer-rated) metering is required for single phase services of 400A or greater and three-phase services greater than 200A.
2. Delmarva Power (DPL) at it's discretion, may require additional fees for CT (Transformer-rated) service if the Customer's demand is not sufficient to require the requested CT metered service.
3. The Delmarva Power Engineering representative will require that the applicant provide the following information to size the CT metering equipment:
 - Size and quantity of customer's service conductors (private).
 - Customer's Electrician (Name and Phone number)
 - Location of proposed non-fused disconnect and CT Cabinet (if applicable)
4. Customer will contact Delmarva Power representative and will schedule a date/time and location for the customer to pickup and sign for Delmarva Power Current Transformers (CT), Voltage Transformers (VT), and Meter Socket. Customer shall refer to this document for guidelines on the installation of the metering equipment and to the PHI Electrician's Handbook.
5. Customer will purchase and install **non-fused line-side** disconnect in accordance with the Authority Having Jurisdiction (AHJ). Customer will also purchase and install a Delmarva Power approved CT Cabinet in accordance with the enclosed drawing specification. Customer services 2000A or greater will require a switchboard with an integral metering equipment compartment. Please discuss (2000A or greater) equipment details with your Delmarva Power engineering representative as this equipment will require approval in advance of construction.
6. The Customer will install customer-owned service cables, starting with terminations from the load-side of non-fused disconnect and extending through the CT Cabinet and terminate to the Customer's main disconnect. This wiring will be Customer owned, maintained, installed and sized in accordance with applicable N.E.C guidelines. The Customer will install CTs (and VTs for 277/480V) in accordance with the guidelines contained within this document (see appendix).
7. The Customer will install the CT Meter socket in accordance with enclosed specifications.
8. The Customer will obtain a certified Electrical Inspection by the Authority Having Jurisdiction (AHJ) in your area. The AHJ will send the inspection certification electronically to Delmarva Power.
9. The Customer will contact the Delmarva Power representative and will schedule a date/time for the Meter department to wire the installed CT/VTs and CT Meter Socket, prior to the final energization of the service.
10. After all customer obligations have been met (inspection, payment, conduit, service agreements, rights of way, etc.)
 - Residential: Delmarva Power will install **DPL-owned service wire** to the **line-side** of the customer-provided **non-fused disconnect**, energize the service and install the meter.
 - Non-residential: The Customer will install Customer-owned service wire from the line-side of the customer provided non-fused disconnect to the Delmarva Power point of service. After installation, Delmarva Power will energize the service and install the meter.

Customer Process B – 400 Amp and Over – CT Cabinet NOT REQUIRED

1. Customer makes Application for Service and indicates request for service. CT (Transformer-rated) metering is required for single phase services of 400A or greater and three-phase services greater than 200A.
2. Delmarva Power (DPL) at it's discretion, may require additional fees for CT (Transformer-rated) service if the Customer's demand is not sufficient to require the requested CT metered service.
3. Delmarva Power Engineering representative will require that the applicant provide the following information to size the CT metering equipment:
 - Size and quantity of customer's service conductors (private).
 - Customer's Electrician (Name and Phone number)
4. For this arrangement, Delmarva Power metering personnel (in advance of construction) will install the CTs on the Utility transformer secondary terminals (bushings).
5. The Customer will obtain a certified Electrical Inspection by the Authority Having Jurisdiction (AHJ) in your area. The AHJ will send the inspection certification electronically to Delmarva Power.
6. The Customer will prepare the transformer pad site and install continuous Customer-owned conduit from the transformer pad site to the Customer's main disconnect (for private secondary conductors) in accordance with plans and specifications provided by the DPL engineering representative. DPL will provide and install the transformer pad and distribution transformer.
7. The Customer will contact the Delmarva Power representative and will schedule a date/time for the Meter department to wire the installed CT/VTs and CT Meter Socket, prior to the final energization of the service, if applicable (discuss with your DPL engineering representative)
8. The Customer working in conjunction with DPL construction personnel, will install customer-owned service cables, starting with terminations at the utility transformer secondary terminals and terminating to the Customer's main disconnect. Upon consultation with your Delmarva Power engineering representative, DPL may supply lay-in lugs for terminating customer-owned cables or alternatively, the customer will be responsible for pressing lugs on customer-owned cables for DPL construction personnel to bolt directly on to the utility transformer secondary terminals. This wiring will be Customer owned, maintained, installed and sized in accordance with applicable N.E.C guidelines.
9. After all customer obligations have been met (inspection, payment, conduit, service agreements, rights of way, etc.), Delmarva Power Crews will energize the service and install the meter.

Appendix

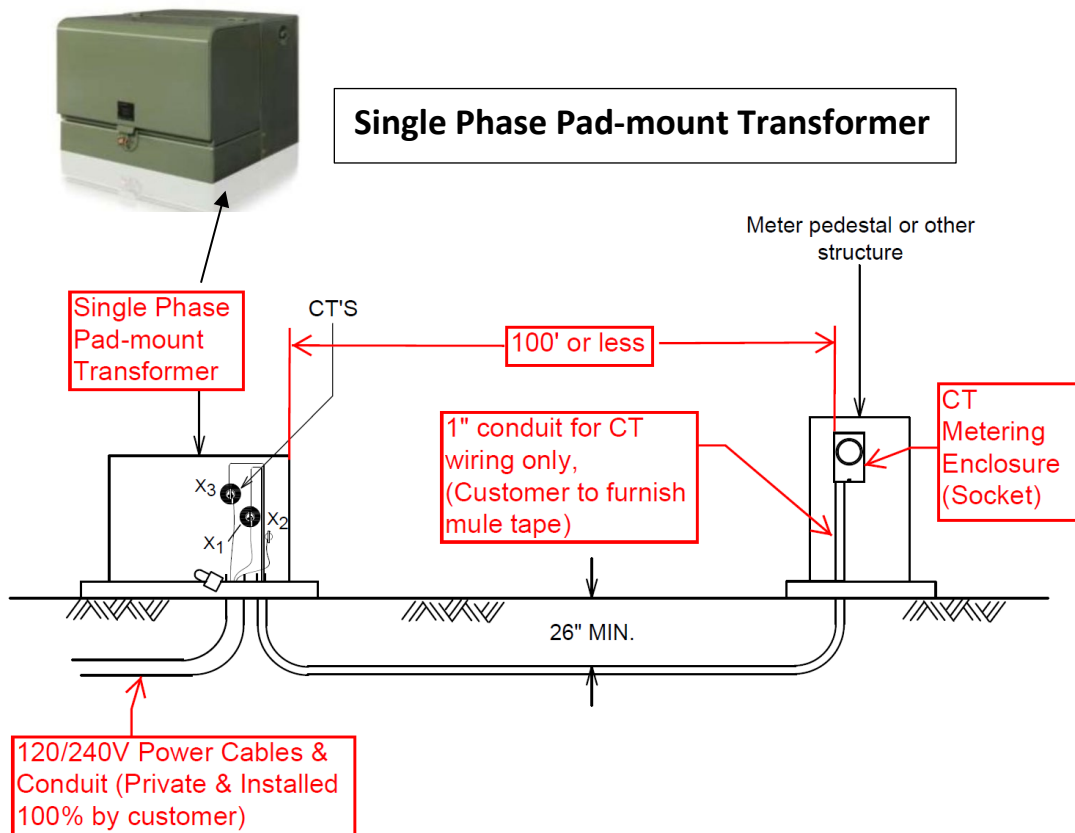
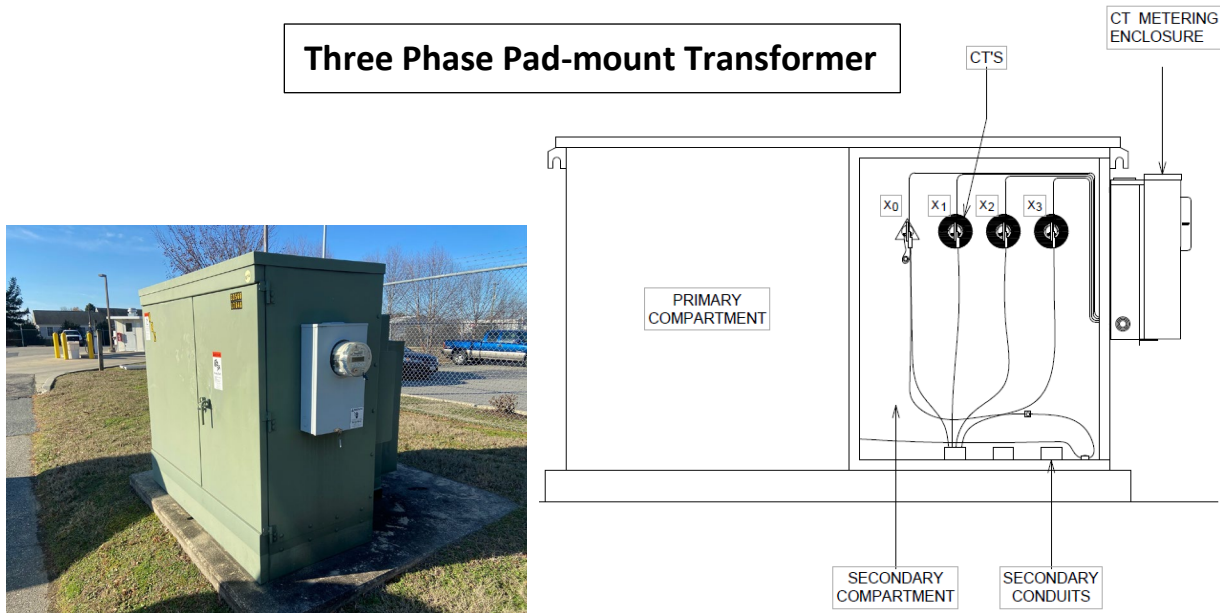
Customer Process A - Non-Fused Disconnect, CT Cabinet, and Meter Socket Arrangement Diagram



Customer Process A - CT and VT Installation Diagram



Customer Process B – 1ph & 3ph Transformer-mounted CTs – Non-Fused Disconnect & CT Cabinet NOT REQUIRED



Delmarva Power Approved Utility Meter Cabinets

Meter Devices, Inc.

Voltage	Amperage	Dimensions	Part #
208/240V	400A to 1200A	32" W x 24" H x 10"D	# 506-2210-D
208/240/480V	400A to 1200A	36" W x 32" H x 13"D	# 507-2298
208/240/480V	400A to 2000A	42"W x 36" H x 13"D	# 507-2297

Hoffman

Voltage	Amperage	Dimensions	Part #
208/240/480V	400A to 2000A	40"W x 40"H x 14"D	# A404014CTDP

Delmarva Power Approved Trans-Rated Meter Sockets

<u>Brooks Utility Products</u>	Terminal/Form	Cat #
3-Wire Service	8 Term / 5S	# 683-3690-T180
4-Wire Service	13 Term / 9S	# 683-3690-T179

Delmarva Power Approved Disconnect Switches

Single and three Phase 120/208 Volt Services

General Duty Switches

Approved Manufacturer	Catalog Number
<u>Cutler Hammer</u>	DG32 UR Series
<u>General Electric</u>	TGN332 RH Series (With Less than 400 Amp; use Heavy Duty for 400 Amps and above)
<u>Square D</u>	DU 32 RB Series
<u>Siemens</u>	GNF 36 R Series

Single and three Phase 277/480 Volt Services

Heavy Duty Switches

Approved Manufacturer	Catalog Number
<u>Cutler Hammer</u>	DH36 UR Series
<u>General Electric</u>	THN336 RH Series
<u>Square D</u>	HU36 RB Series
<u>Westinghouse</u>	RHUN 36 Series
<u>Siemens</u>	HN36 Series

Note:

Local Code Enforcement Authorities may require a Fused Disconnect Switch. Prior to purchase and or installation of the Disconnect Switch consult with the local AHJ.