

SmartPole Meter for Service to Pole-Mounted Communication Equipment

SUMMARY

This bulletin describes a PG&E meter, called a SmartPole meter, approved for use with services connected to communication equipment mounted on steel and wood poles. The SmartPole meter and its enclosure is the preferred method for metering small loads. This bulletin also provides ordering information for the two types of SmartPole meters and enclosures as well as construction details to properly install a SmartPole meter.

Level of Use: Informational Use

AFFECTED DOCUMENT

Service Planning personnel must furnish non-PG&E personnel with a copy of this bulletin and the following documents, if applicable. See engineering document [027911, Installation Details for Service to Pole-Mounted Communication Equipment](#) for the main requirements when installing services to Pole-Mounted Communication and antenna Equipment.

[TD-027911B-003 Service to Communication Equipment on PG&E Owned Steel Streetlight Poles with Antenna Provisions](#)

[TD-027911B-004 PG&E Metering and Service Connections For Non-PG&E Owned Steel Streetlight Poles With Antenna and Communication Equipment](#)

[TD-027911B-005 PG&E Electric Service and Metering For Communication Company Equipment and Antennas on Non-PG&E Wood Poles](#)

TARGET AUDIENCE

PG&E electric departments: Service Planning, Estimating, Restoration, Maintenance and Construction, Inspection, Field Meter Operations

Non-PG&E Personnel: Communication Companies, Electrical Contractors, Installers, and designers

WHAT YOU NEED TO KNOW

1. Use Engineering Document 027911 and corresponding bulletins or detailed installation and clearance requirements for service to communication and antenna equipment. This document provides modified and additional installation requirements for installing service to a SmartPole meter.
2. Install a 2-wire (1-hot, 1-neutral) 1-phase 120 volt service to the SmartPole meter.
 - 2.1. The customer load must not exceed 16 amps for non-transformer rated SmartPole meters.
 - 2.2. The customer load must not exceed 68 amps for transformer rated SmartPole meters.
3. Do **not** install a 3-wire 1-phase 120/240 volt service or a socket based meter panel as this is the incorrect wiring, voltage, and meter equipment for a SmartPole metering application.

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4. Installation of a NEMA 3R enclosure unit with pole bracket is required. The enclosure with receptacle, pole bracket, and meter strap come together as one unit manufactured by Tesco Advent. See item 12 in Table 1 and Figure 2. There is also a combination enclosure that includes a disconnect switch and receptacle for the SmartPole meter. This All in one combination enclosure can be ordered using material code M241677. See item 12 in Table 1 and Figures 3 and 4 on pages 5 and 6.
5. Install the SmartPole Meter enclosure (Figure 2 or Figures 3 & 4) a minimum of 7 feet to a maximum of 8 feet above grade, as measured from the bottom of the enclosure, and not exposed to vehicular traffic.
6. The disconnect switch for customer equipment load (e.g., Communication Equipment and Backup Power Supply) is required and must be installed above, below, or on the side position of the SmartPole meter equipment. 12 inches of vertical clearance is required when placed above the SmartPole meter. Six inches of horizontal clearance is required when placed on the side or below SmartPole meter equipment. The clearance distance is measured from the closest edges of any part of the equipment.

Note: A separate disconnect switch is not required when the Meter & Disconnect combination enclosure unit is installed.

7. The installation of all customer equipment and PG&E's Smart Pole metering equipment must meet all PG&E requirements and CPUC General Order 95 rules.
8. Inspection and approval by a qualified PG&E inspector is required.

Note: For locations where an existing 2-wire 1-phase 240 volt secondary system is available the SmartPole meter may be connected. These locations are not common.

Table 1 Bill of Material to Be Furnished and Installed by the Communication Company

Item	Description	
1	Conduit, Rigid, PVC, Schedule 80, size as required	
3	Conduit Fittings, as required	
4	Wire, 600 V, Size as Required	
12 ¹	Tesco Advent - Enclosure Unit, Catalog # 700 Part # 700-200, includes NEMA 3R enclosure with 3-wire receptacle, internal ground/bond lug, meter strap, and pole bracket.	Code M241572
	The Tesco Advent, Meter & Disconnect enclosure Unit, Catalog # 700 Part # 700-300, includes a NEMA 3R enclosure with 3-wire receptacle, internal ground/bond lug and meter strap.	M241677
13	Disconnect Switch, for customer equipment (e.g. Communication Equipment and Backup Power Supply), as required	

1. To order use the PG&E material code. For questions contact John Greenewald at (609) 864-3358, John.Greenewald@adventdesign.com.

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Table 2 Bill of Material to Be Furnished and Installed by PG&E

Item	Description	Code
11	SmartPole meter, Non-transformer rated, Watthour (3-pin SmartMeter) , 2-wire 1-phase 120 V or 2-wire 1-phase 240 V	M241490
	SmartPole meter, Transformer rated, Watthour (4-pin SmartMeter) , 2-wire 1-phase 120 V or 2-wire 1-phase 240 V	M241508

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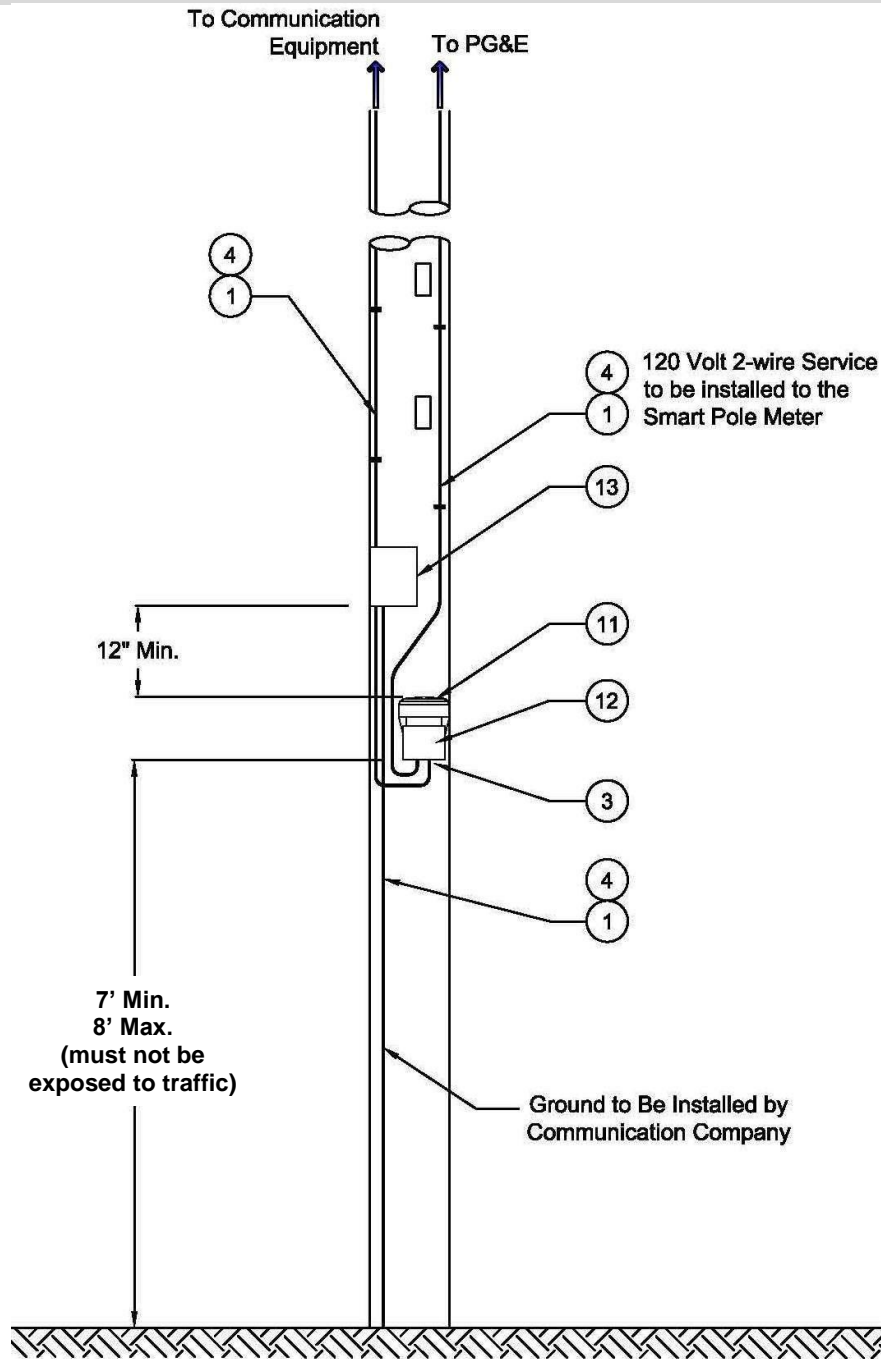


Figure 1
SmartPole Meter on Wood Pole with 120 Volt 2-Wire Service Connection to Communication Equipment

SmartPole Meter for Service to Pole-Mounted Communication Equipment

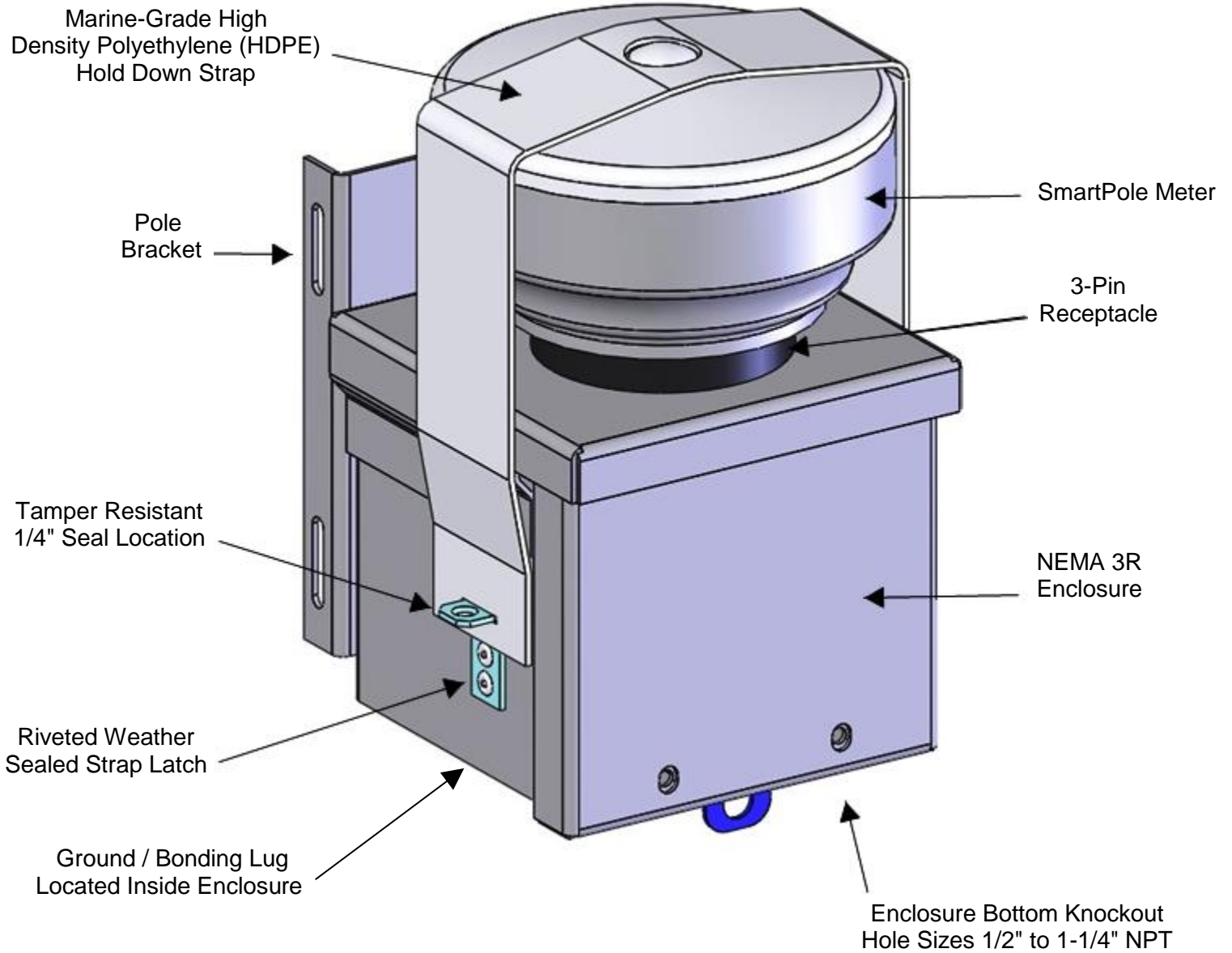


Figure 2
SmartPole Meter, Enclosure, and Pole Bracket

SmartPole Meter for Service to Pole-Mounted Communication Equipment

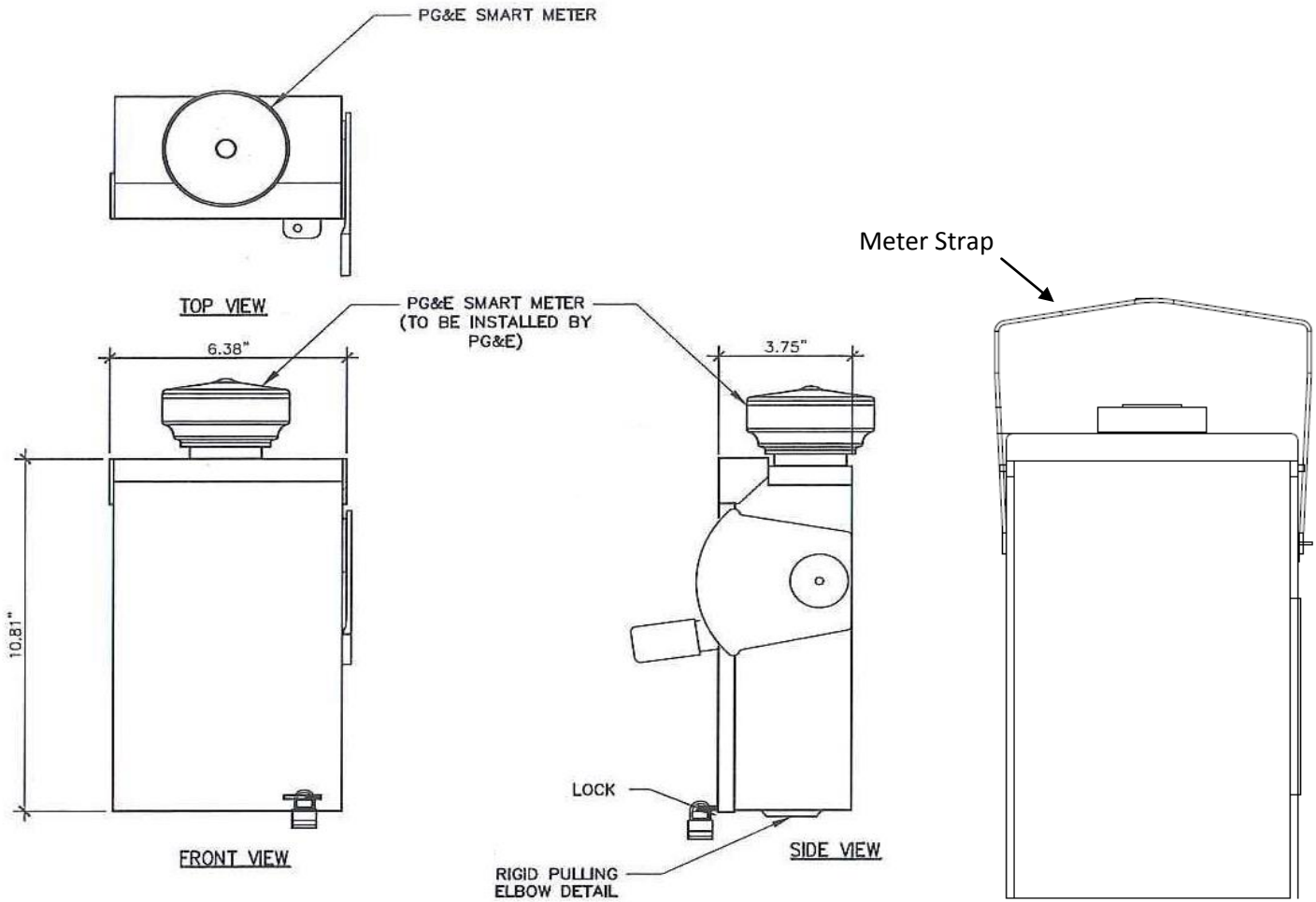


Figure 3 – Meter and Disconnect Switch Combination Enclosure

Note: The Tesco Advent, Meter & Disconnect enclosure Unit, Catalog # 700 Part # 700-300, includes a NEMA 3R enclosure with 3-wire receptacle, internal ground/bond lug and meter strap. To order use the PG&E material code M241677 and contact John Greenewald at (609) 864-3358 or John.Greenewald@adventdesign.com.

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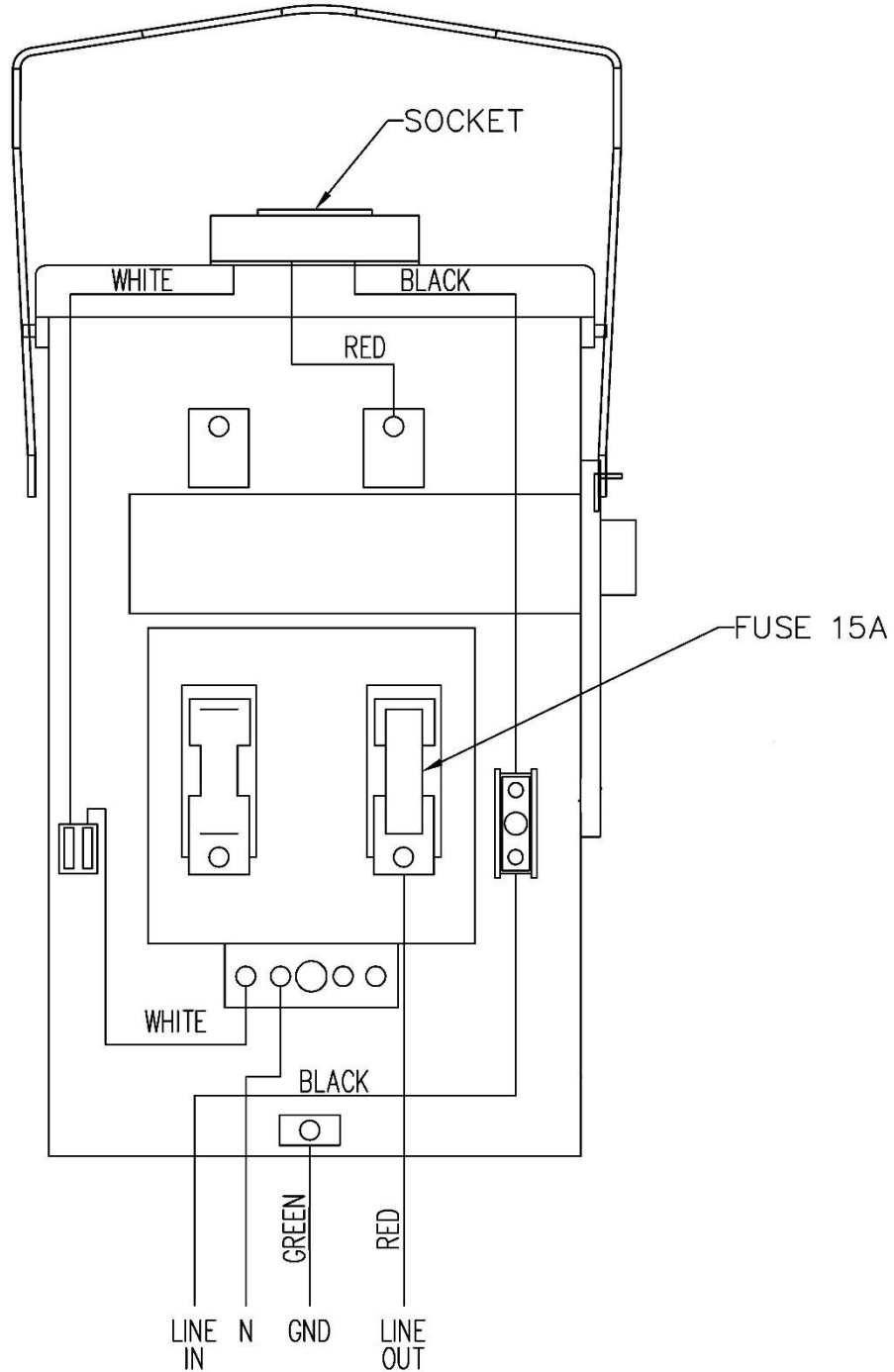


Figure 4 – Wiring for Meter and Disconnect Switch Combination Enclosure

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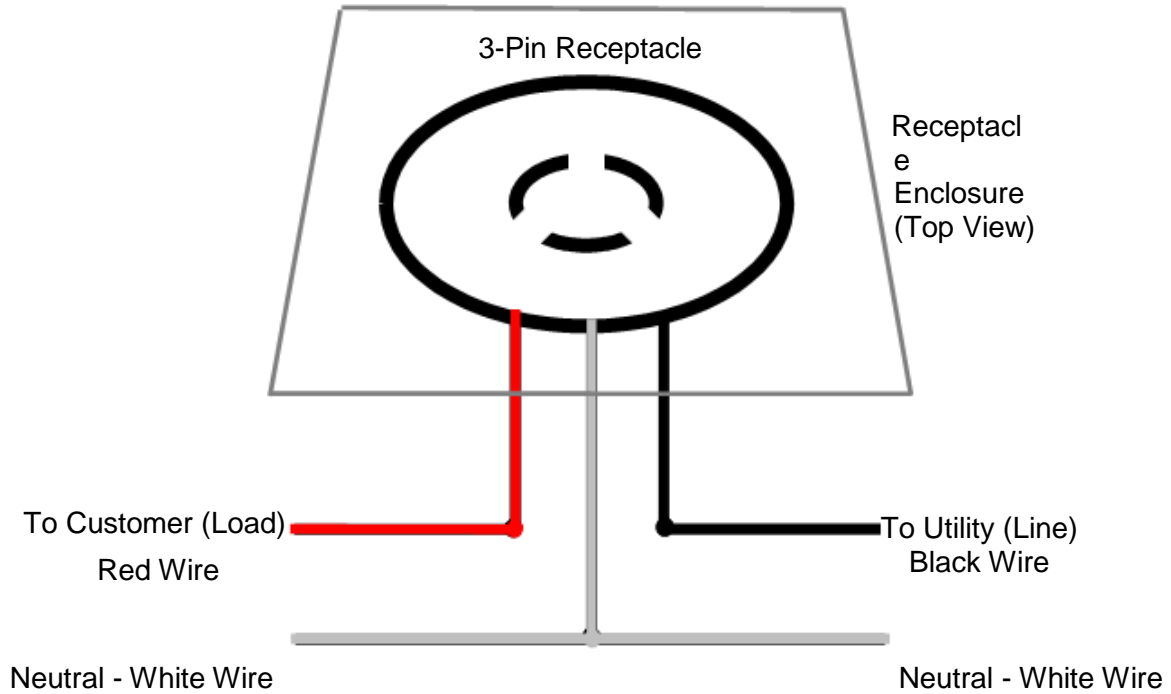


Figure 5
Wiring Diagram For 3-Pin Receptacle



Figure 6
3-Pin Receptacle

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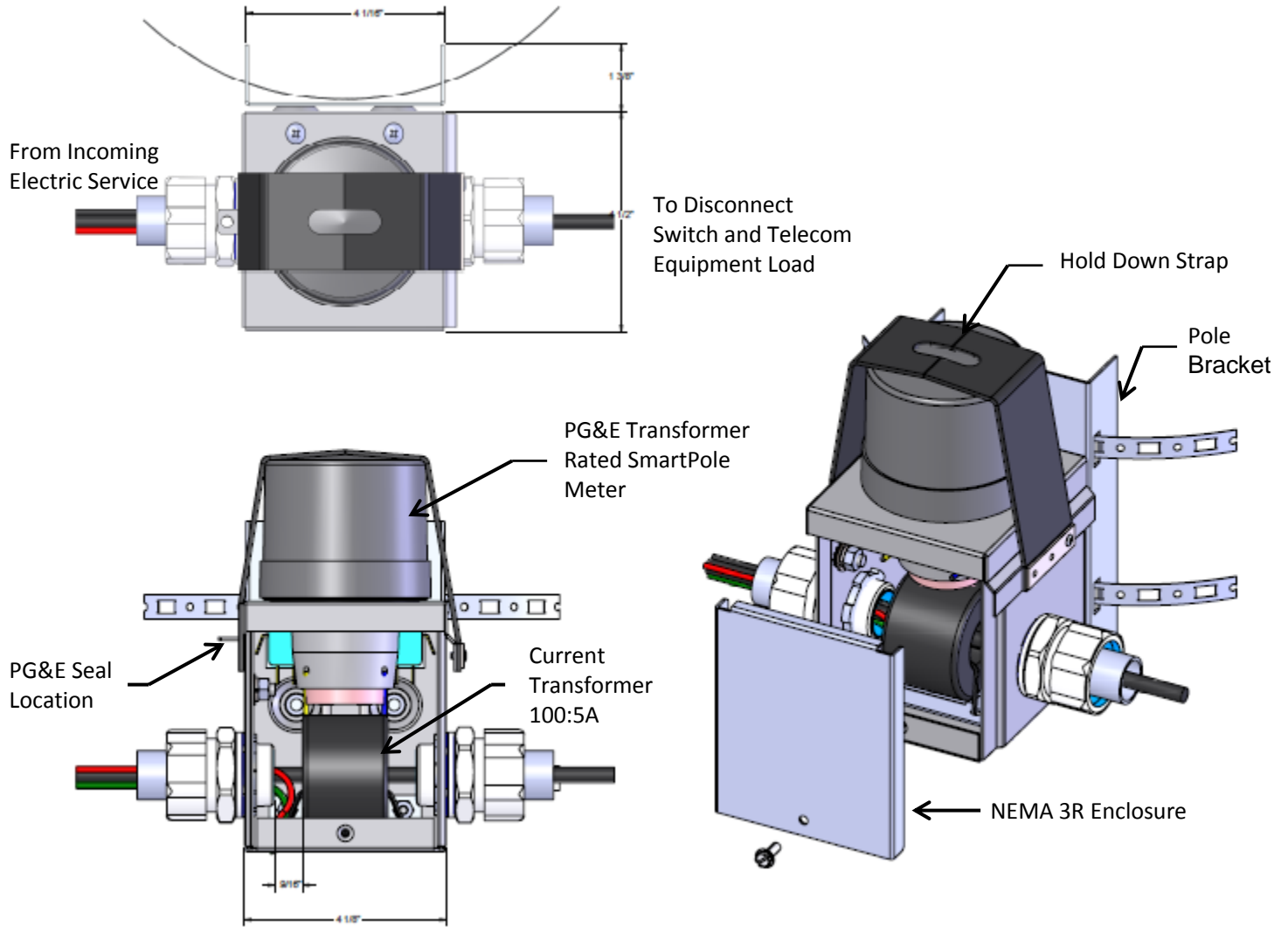


Figure 7: Transformer Rated SmartPole Meter and Enclosure

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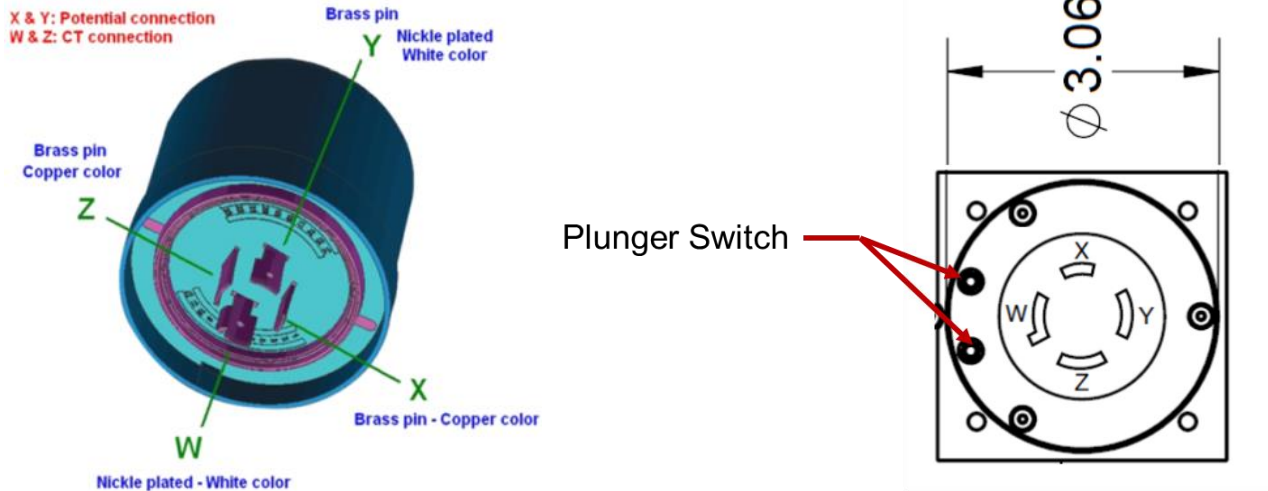


Figure 8: Transformer Rated SmartPole Meter And 4-pin Socket

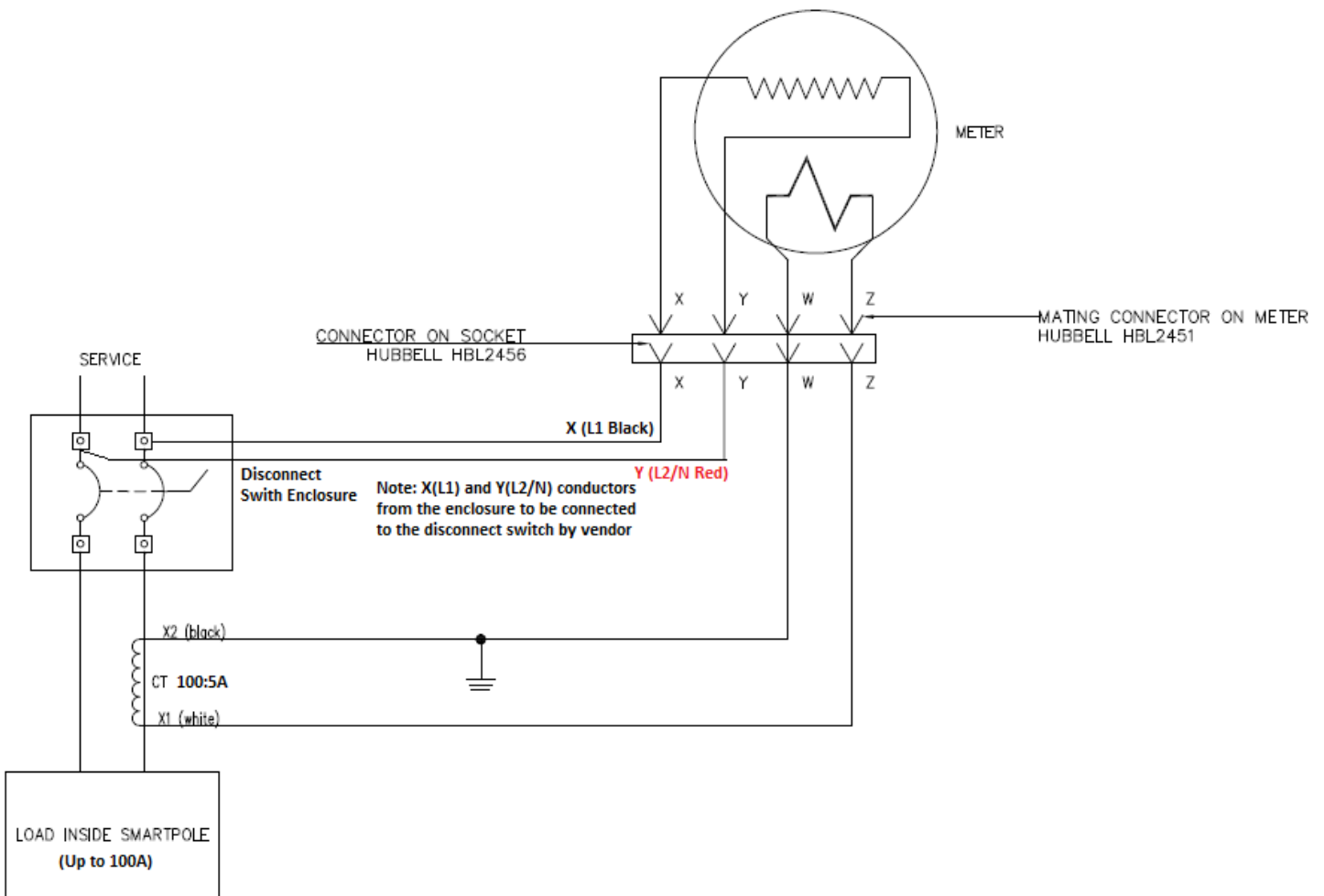


Figure 9: Wiring Diagram Transformer Rated SmartPole Meter

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DOCUMENT APPROVER

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INCLUSION PLAN

There is no inclusion plan for this document at this time.

DOCUMENT REVISIONS

1. Added and updated notes throughout document.
2. Included references to additional PG&E documents.
3. Added information and new figures on the new transformer rated SmartPole meter.
4. Listed the maximum ampacities allowed for non-transformer rated and transformer rated SmartPole meters.