

RULES FOR ELECTRIC METER & SERVICE INSTALLATIONS



RULE 5

- (a) Capacity-Residential Installations
- (b) Capacity-Commercial and Industrial Installations
- (c) Common Connection for Multiple Conductors
- (d) Weather Head Installation
- (e) Service Entrance Conduit and Conductors
- (f) Bare Grounded Neutral
- (g) Conductor With Higher Voltage To Ground for 3 Phase, 4 Wire, 120/240 Volt Delta Service
- (h) Grounding Conductor for 3 phase, 3 wire, 480 Volt Delta Service

RULE 5 — SECONDARY SERVICE — UP TO 600 VOLTS — SERVICE ENTRANCE CONDUCTORS

a. **Capacity — Residential Installations:**

The National Electrical Code (NEC) or any other applicable code prescribes a minimum size of service entrance conductors for residential customers. Experience has proven that service equipment installed to meet only minimum requirements becomes inadequate as additional load is added to the service. PPL EU recommends installing excess capacity initially in anticipation of load growth.

b. **Capacity Commercial and Industrial Installations:**

Commercial and industrial customers should size service entrance equipment to accommodate load growth, either by installing excess capacity initially or by making provisions for future paralleling of service conductors.

c. **Common Connection for Multiple Conductors:**

The customer owns, installs, and maintains the equipment required to terminate all conductors at a common connection (for each phase and the neutral) when there are 2 or more conductors per phase, or for multi meter installation. See **Sketches #8B, 14C, 14D, 28, 48, 49, and 49A.**

For overhead service only, this rule applies to installations involving more than two 200 Ampere service entrances.

d. Weather Head Installation:

The weather head shall be located approximately 12 inches above the designated point of service drop attachment. The service entrance conductors shall extend at least 18 inches out of the weather head.

e. Service Entrance Conduit and Conductors:

The service entrance conductors of an individual service shall be continuous without joints or splices from the weather head to the metering equipment. Service entrance conductors shall be either service entrance cable or conductors installed in PVC Schedule 40, threaded galvanized rigid or intermediate steel conduit. Where conduit is used, all joints and fittings must be weatherproof.

f. Bare Grounded Neutral:

An un-insulated and grounded neutral service entrance conductor may be used where the nominal service voltage to ground does not exceed 300 Volts.

g. Conductor with Higher Voltage to Ground for 3 Phase, 4 Wire, 120/240 Volt Delta Service:

The conductors having the higher voltage to ground on a 3 phase, 4 wire delta service must be permanently and clearly identified at the weather head and in the self-contained meter base, instrument transformer cabinet (CT cabinet) or switchgear.

PPL EU also requires that the conductor(s) with the higher voltage to ground be installed in the right-hand position in any self-contained metering equipment. For installations with instrument transformers in a cabinet, the conductor(s) with the higher voltage to ground is to be located on the connector position farthest from the neutral. For installations with switchgear the conductor(s) with the higher voltage to ground is to be located in the position specified by the manufacturer.

h. Grounding Conductor for 3 Phase, 3 Wire, 480 Volt Delta Service:

PPL EU extends its ground wire with a 3 phase, 3 wire, 480 Volt delta service. For overhead installations, when the metering transformers are located outdoors on the service rack, by exception only, the customer furnishes and installs a grounding device for metal service entrance conduit and metal meter cable conduit, to which PPL EU makes the connection.

For overhead installations, where the metering transformers are located in a cabinet, the customer installs a grounding conductor of at least #6 copper in the service entrance conduit between the service entrance and the customer's ground in the cabinet.

For underground installations, PPL EU installs a ground wire with the service lateral cables.

For all installations, PPL EU makes the connection to the customers grounding conductor.

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