

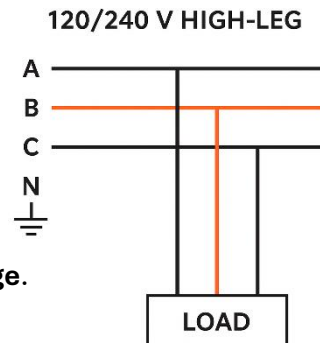
WHAT IS A 120/240V HIGH-LEG LOAD AND HOW IS IT METERED?

☑ What is a 120/240 V High-Leg System?

A **120/240 V high-leg delta** is a 3-phase, 4-wire service created by placing a **center tap on one winding** of a delta transformer. The center tap becomes the **neutral**, which provides:

◇ Voltages you get from this system

- **120 V:** From **Phase A** → **Neutral**
- **120 V:** From **Phase C** → **Neutral**
- **240 V:** Between **any two phases** (A-B, B-C, A-C)
- **208 V (approx. 208–215 V):** From **Phase B** → **Neutral**
→ This is the **high leg**, required by NEC to be colored **orange**.



◇ Why the “high leg” exists

Because only **one** transformer winding is center-tapped, the delta geometry causes one phase-to-neutral voltage to be much higher (≈ 208 V). This leg **must NOT be used for 120 V loads**.

◇ When is a high-leg used?

- Older commercial buildings
- Shops that need **both 3-phase 240 V equipment and single-phase 120/240 V**
- Locations with legacy delta distribution

Modern systems use **120/208 Y**, so use of a high-leg delta is uncommon today.

🔌 Dent PowerScout can meter 120/240 V high-leg delta 3-phase, 4-wire loads:

- **Voltage Range:** Their meters accept line-to-line voltages from 90–600 VAC, which covers the 120/240 V systems. [dentinstruments.com]
- **Service Type:** They support 3-phase, 4-wire configurations, including WYE and delta systems with a high leg.
- **Installation:** Be sure to connect the power / voltage reference leads *from the same source as the load to be metered*, orient the CTs with the label marked “LOAD” pointed in the same direction of the load being metered. [manualslib.com]
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For more info contact your local distributor or TBWC Sales Representative:

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