

How to determine the multiplier of a secondary distribution box

Overview

The amount by which the voltage and current are reduced is known as the circuit multiplier. $360 \div 120 = 3$ Current transformers (CT.) - $3 \times 80 = 240$ So how does a meter tech determine the meter multiplier of a particular service?

It really boils down to basic math. A typical CT ratio might be 200:5 or 400:5. What this means is that a CT will step down higher current levels to a level that the meter. Before we dive into calculations, let's get familiar with a few essentials: 1. Your Project's Total Power Demand This isn't just adding up wattages randomly. Think of your home as a busy kitchen—not every appliance runs at once. Do you really need the hair dryer, microwave, and vacuum running. To correctly calculate box fill for an electrical box containing multiple switches, you must follow the provisions of National Electrical Code (NEC) Section 314. The meter's registering capacity may only. What size distribution box do you need for a house?

How do you know which circuit breaker to use?

Can you add more breakers later?

Why do you need GFCI or AFCI breakers?

Choosing the right size and setup for your distribution box keeps your electrical system safe and working well.

Article Content

Dec 19, 2025

Instrument Transformers and the Meter Multiplier

A technical article on meter multipliers by the experts at Peak Demand Inc, a global supplier of transmission and distribution products.

Sep 21, 2025

Understanding Meter Multipliers in Electric Meters

Learn how meter multipliers work in electric meters, why they are essential for accurate energy measurement, and how to calculate them effectively. Read more at SM Engineering.

Jan 17, 2026

How to Calculate the Size and Number of Circuits for a Distribution ...

Okay, let's talk distribution boxes. You know that metal cabinet packed with switches and wires you see in basements? Yeah, that's the heart of your electrical system. Getting its sizing right isn't just about ...

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Power Distribution Systems

If using a program such as SKM to calculate the down-stream short-circuit values, the cable lengths and conduit types as well as the transformer impedance would factor into the calculations.

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How to understand the multiplier

The meter multiplier is similar to a map scale in that it relates to the meter's scaled down reading of the actual consumption. A metering installation has both an internal and external multiplier. The product ...

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Box Fill Calculator

This electrical box fill calculator (or in short, box fill calculator) will help you determine the total box fill volumes you will need to meet so that each of your electrical utility boxes will pass the National ...

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How to Calculate Box Fill for Multiple Switches (NEC ...

A step-by-step guide to calculating electrical box fill for multiple switches and devices according to NEC 314.16, ensuring code compliance.

Oct 21, 2025

Size configuration of multiple circuit breakers in the ...

Choose the right size and setup for multiple circuit breakers in your distribution box to ensure safety, code compliance, and room for future upgrades.

Dec 08, 2025

8 NEC Basic Feeder Circuit Sizing Requirements

Once the branch circuit loads are calculated, the feeder circuit loads may be calculated by applying demand factors to the branch circuit loads. 1. General Lighting Loads.

Jan 16, 2026

Calculation Tools for Distribution System Protection

This calculator performs basic distribution system protection calculations, including base current, secondary current, plug setting multiplier, and relay operating time.

Contact Us

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