

PT Ratio Calculator

Estimate a measured potential-transformer voltage ratio and signed ratio error from primary, secondary, and nominal ratio entries.

Generated October 10, 2026

<https://www.elecatrix.com/testing-protection-grounding/pt-ratio-calculator/>

Inputs

Input	Value	Unit
Primary voltage	12000	V
Secondary voltage	120	V
Nominal ratio	100	x

Results

Result	Value	Unit
Measured ratio	100	x
Nominal ratio used	100	x
Ratio error	N/A	%
Primary voltage used	12000	V
Secondary voltage used	120	V

Calculation details

Detail	Value	Unit
Calculation basis	Measured PT ratio equals primary voltage divided by secondary voltage. Ratio error compares that result with the entered nominal ratio.	
Screening boundary	Ratio arithmetic only; no PT accuracy class, burden, polarity, insulation, relay setting, calibration, or acceptance result is made.	

Formulas

$$R_{\text{measured}} = \frac{V_{\text{primary}}}{V_{\text{secondary}}}$$

$$\text{Ratio error}_{\%} = \frac{R_{\text{measured}} - R_{\text{nominal}}}{R_{\text{nominal}}} \times 100$$

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Warnings and limitations

This is PT ratio arithmetic only. It does not certify accuracy, burden, insulation, polarity, relay performance, calibration, or code compliance.