

Transformer Regulation Calculator

Calculate voltage change between no-load and full-load conditions from transformer test data without determining impedance or approving equipment.

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<https://www.elecatrix.com/power-quality-transformers/transformer-regulation-calculator/>

Inputs

Input	Value	Unit
No-load voltage	126	V
Full-load voltage	120	V

Results

Result	Value	Unit
Voltage regulation	5	%
Voltage difference	6	V
No-load voltage used	126	V
Full-load voltage used	120	V

Calculation details

Detail	Value	Unit
Calculation basis	Voltage regulation uses the no-load to full-load voltage difference divided by full-load voltage.	
Selection boundary	Test-data arithmetic only; no transformer impedance, power factor, tap setting, temperature, manufacturer tolerance, or installation approval is determined.	

Formulas

$$\Delta V = V_{\text{no-load}} - V_{\text{full-load}}$$

$$\text{Voltage regulation} = \frac{\Delta V}{V_{\text{full-load}}} \times 100\%$$

Warnings and limitations

This calculation assumes comparable no-load and full-load voltage measurements. It is not a transformer selection, impedance, tap, or code-compliance result.