

Transformer Secondary Current Calculator

Provides a preliminary transformer secondary line-current estimate from rated kVA, secondary voltage, and a single-phase or balanced three-phase model.

Generated October 10, 2026

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

Inputs

Input	Value	Unit
Transformer rating	75	kVA
Secondary line voltage	208	V
Phase model	Balanced three phase	

Results

Result	Value	Unit
Secondary current	208.1792	A
Apparent power used	75000	VA
Transformer rating used	75	kVA
Secondary voltage used	208	V
Phase multiplier	1.7321	x

Calculation details

Detail	Value	Unit
Calculation basis	Secondary current equals rated transformer VA divided by secondary voltage and the selected phase multiplier.	
Boundary	Screening current arithmetic only. No conductor, overcurrent protection, transformer equipment, temperature, grounding, utility, or code-compliance result is made.	

Formulas

$$S_VA[VA] = S_kVA[kVA] \times 1000$$

$$k_phase=1 \text{ for single-phase; } k_phase=\sqrt{3} \text{ for balanced three-phase}$$

$$I_secondary[A] = \frac{S_VA[VA]}{k_phase V_secondary[V]}$$

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Warnings and limitations

This is preliminary current arithmetic only. It does not select a transformer, conductor, breaker, fuse, service, grounding method, or installation.