

Transformer Current Calculator

Estimates transformer primary and secondary line current from kVA, primary and secondary voltage, and the selected phase model.

Generated October 10, 2026

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

Inputs

Input	Value	Unit
Transformer size	75	kVA
Primary voltage	480	V
Secondary voltage	208	V
Phase	Balanced three-phase	

Results

Result	Value	Unit
Primary current	90.211	A
Secondary current	208.1792	A
Apparent power	75000	VA
Phase multiplier	1.7321	x

Calculation details

Detail	Value	Unit
Calculation basis	Transformer current is apparent power divided by voltage and the selected phase multiplier.	
Selection boundary	Estimate only; no conductor, overcurrent protection, transformer impedance, temperature, enclosure, grounding, utility, manufacturer, or code-compliance selection is made.	

Formulas

Transformer apparent power (VA) = Transformer size (kVA) x 1,000

Single-phase current = (VA/Voltage)

Three-phase current = (VA/sqrt(3) x Line voltage)

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Warnings and limitations

This transformer current estimate uses entered kVA, voltage, and phase only. It does not size conductors, protection, or transformer equipment.