

Transformer Delta-Wye Voltage Calculator

Calculate ideal secondary line-to-line and line-to-neutral voltage from primary line voltage, turns ratio, and the selected delta or wye connection.

Generated October 10, 2026

<https://www.elecatrix.com/power-quality-transformers/transformer-delta-wye-voltage-calculator/>

Inputs

Input	Value	Unit
Primary line voltage	12470	V
Primary-to-secondary turns ratio	60	x
Secondary connection	Wye	

Results

Result	Value	Unit
Secondary line voltage	207.8333	V
Secondary phase voltage	119.9926	V
Line-to-phase divisor	1.7321	x

Calculation details

Detail	Value	Unit
Calculation basis	Secondary line voltage equals primary line voltage divided by turns ratio. A wye secondary phase voltage divides line voltage by square root of 3; a delta secondary phase voltage equals line voltage.	
Boundary	Ideal voltage conversion only. No vector-group phase shift, tap position, winding impedance, grounding, phase sequence, paralleling, equipment approval, or code-compliance result is made.	

Formulas

Secondary line voltage = (Primary line voltage/Turns ratio)

Wye phase voltage = (Secondary line voltage/sqrt(3))

Delta phase voltage = Secondary line voltage

Warnings and limitations

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