

Instrument Transformer Burden Calculator

Estimate burden voltage and apparent burden from an entered transformer secondary current and resistive burden.

Generated October 10, 2026

<https://www.elecatrix.com/testing-protection-grounding/instrument-transformer-burden-calculator/>

Inputs

Input	Value	Unit
Secondary current	5	A
Burden resistance	1	ohm

Results

Result	Value	Unit
Burden voltage	5	V
Resistive burden	25	VA
Burden resistance used	1	ohm
Secondary current used	5	A

Calculation details

Detail	Value	Unit
Calculation basis	For the entered resistive burden, voltage equals current times resistance and apparent burden equals current squared times resistance.	
Screening boundary	Instrument-transformer burden arithmetic only; verify burden class, frequency, phase angle, wiring, saturation, accuracy, protection, and test procedure separately.	

Formulas

burden voltage V = secondary current A x burden resistance ohm

burden VA = secondary current A squared x burden resistance ohm

Warnings and limitations

This is instrument-transformer burden arithmetic only. It does not approve a CT/PT, protection system, accuracy class, saturation limit, or code compliance.