

Meter Burden Voltage Calculator

Estimate meter burden voltage and resistive burden power from entered input resistance and test current for instrument-loading review.

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<https://www.elecatrix.com/testing-protection-grounding/meter-burden-voltage-calculator/>

Inputs

Input	Value	Unit
Meter input resistance	10	ohm
Meter current	0.02	A

Results

Result	Value	Unit
Burden voltage	0.2	V
Resistive burden power	0.004	W
Input resistance used	10	ohm
Current used	0.02	A

Calculation details

Detail	Value	Unit
Calculation basis	Burden voltage equals meter input resistance multiplied by current. Resistive burden power equals current squared multiplied by resistance.	
Screening boundary	Meter burden arithmetic only; verify instrument range, frequency response, accuracy, loading, CT/PT behavior, and test procedure separately.	

Formulas

burden voltage $V = \text{current } A \times \text{input resistance ohm}$

burden power $W = \text{current } A \text{ squared} \times \text{input resistance ohm}$

Warnings and limitations

This is meter-loading arithmetic only. It does not certify instrument accuracy, range, CT/PT loading, safety, calibration, or code compliance.