

Touch Voltage Safety Screen Calculator

Calculate touch voltage from fault current, grid resistance, and touch fraction, then compare it with an entered review value.

Generated October 10, 2026

<https://www.elecatrix.com/testing-protection-grounding/touch-voltage-safety-screen-calculator/>

Inputs

Input	Value	Unit
Entered fault current	1000	A
Grid resistance	0.4	ohm
Touch fraction	50	%
Entered comparison value	250	V
Method and version	worksheet-v1	
Source reference	record-touch	

Results

Result	Value	Unit
Touch voltage	200	V
Entered comparison margin	50	V

Status

Status	Value	Unit
Source note	Source reference recorded	
Comparison note	Entered values are comparable	

Calculation details

Detail	Value	Unit
Calculation basis	The calculation multiplies entered fault current, grid resistance, and touch fraction, then compares the result with the entered comparison value.	
Boundary	Mode comparison only; this does not establish a safe limit, determine exposure, or make a grounding or work-practice conclusion.	

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Formulas

Touch voltage = Fault current x Grid resistance x (Touch fraction/100)

Entered comparison margin = Entered comparison value - Touch voltage

Warnings and limitations

This estimate provides a preliminary touch-voltage comparison only. It does not establish a safe limit, determine exposure, or make a grounding or work-practice conclusion.