

Polarization Index Calculator

Estimates the 10-minute-to-1-minute insulation-resistance ratio and compares it with an entered reference PI. The result is a comparison calculator, not an acceptance decision.

Generated October 10, 2026

<https://www.elecatrix.com/testing-protection-grounding/insulation-polarization-index-calculator/>

Inputs

Input	Value	Unit
1-minute resistance	100	MOhm
10-minute resistance	250	MOhm
Reference PI	2	

Results

Result	Value	Unit
Polarization index	2.5	
Reference margin	0.5	

Status

Status	Value	Unit
Reference comparison	At or above reference	

Calculation details

Detail	Value	Unit
Calculation basis	Polarization index is the ten-minute insulation resistance divided by the one-minute insulation resistance.	
Testing boundary	Ratio calculator only; no acceptance criterion, test-voltage, temperature-correction, equipment-condition, manufacturer, safety, or inspection result is made.	

Formulas

$$PI = \frac{R_{10min}}{R_{1min}}$$

$$M_{reference} = PI - PI_{reference}$$

Warnings and limitations

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This polarization index estimate is a ratio calculator. It does not establish an acceptance criterion, verify test voltage, temperature correction, equipment condition, manufacturer rules, or safety procedures.