

Conductor Ampacity Correction Factor Calculator

Apply reviewed ambient and conductor-count factors to a base ampacity, then compare the adjusted ampacity with entered load current.

Generated October 11, 2026

<https://www.elecatrrix.com/wire-raceway-ampacity/conductor-ampacity-correction-factor-calculator/>

Inputs

Input	Value	Unit
Base ampacity	100	A
Ambient temperature factor	0.91	x
Conductor count factor	0.8	x
Load current	70	A
Source reference	ampacity-record-a	

Results

Result	Value	Unit
Adjusted ampacity	72.8	A
Total correction factor	0.728	x
Ampacity margin	2.8	A
Load utilization	96.1538	%

Status

Status	Value	Unit
Factor source check	Entered values comparable	

Calculation details

Detail	Value	Unit
Calculation basis	Adjusted ampacity is the entered base ampacity multiplied by the entered ambient and conductor-count factors.	
Selection boundary	Worksheet arithmetic only; factor sources, conductor data, installation conditions, and adopted rules remain separate.	

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Formulas

$$F_{\text{total}} = F_{\text{ambient}} \times F_{\text{conductor-count}}$$

$$I_{\text{adjusted}} = I_{\text{base}} \times F_{\text{total}}$$

$$M_I = I_{\text{adjusted}} - I_{\text{load}}$$

$$U_{\%} = \frac{I_{\text{load}}}{I_{\text{adjusted}}} \times 100$$

Warnings and limitations

Entered-factor arithmetic only; verify source tables, conductor material, insulation, ambient conditions, conductor count, installation method, and qualified review separately.