

Motor Circuit Conductor Size Calculator

Estimate an entered motor conductor ampacity reference and compare it with selected ampacity for qualified review.

Generated October 10, 2026

<https://www.elecatrix.com/motors-starters/motor-circuit-conductor-size-calculator/>

Inputs

Input	Value	Unit
Motor FLA	28	A
Entered ampacity factor	125	%
Selected conductor ampacity	40	A
Source reference	motor-record-a	

Results

Result	Value	Unit
Entered required ampacity	35	A
Selected conductor ampacity	40	A
Ampacity margin	5	A
Ampacity margin	14.2857	%

Record comparison

Source reference recorded

Calculation details

Detail	Value	Unit
Calculation basis	Entered motor FLA is multiplied by the entered ampacity factor and compared with selected conductor ampacity.	
Boundary	Preliminary entered-value comparison only; no conductor table, conductor size, temperature adjustment, or final motor design result is made.	

Formulas

entered required ampacity = motor FLA x entered ampacity factor / 100

ampacity margin = selected conductor ampacity - entered required ampacity

ampacity margin percent = ampacity margin / entered required ampacity x 100

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Warnings and limitations

Preliminary entered-value comparison only; verify motor nameplate, adopted motor rules, conductor data, temperature basis, overloads, protection, and qualified review separately.