

Locked Rotor Current Calculator

Estimates motor locked-rotor current from full-load current and a selected multiplier, with an optional comparison against a starting-current reference.

Generated October 10, 2026

<https://www.elecatrix.com/motors-starters/locked-rotor-current-calculator/>

Inputs		
Input	Value	Unit
Full-load current	28	A
Locked-rotor multiplier	6	x
Starting-current reference	140	A

Results		
Result	Value	Unit
Estimated locked-rotor current	168	A
Full-load current reference	28	A
Locked-rotor multiplier used	6	x
Starting-current reference	140	A
Comparison margin	28	A
Comparison ratio	1.2	x

Calculation details		
Detail	Value	Unit
Calculation basis	Locked-rotor current is estimated by multiplying entered full-load current by the entered locked-rotor multiplier.	
Selection boundary	Planning estimate only; verify motor nameplate locked-rotor amps, NEMA code letter, starter data, protection, utility rules, and manufacturer limits before design use.	

Formulas		
Estimated locked-rotor current = full-load current x locked-rotor multiplier		

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Comparison margin = estimated locked-rotor current - starting-current reference
when a reference is entered; otherwise 0

Comparison ratio = $\begin{cases} \text{estimated locked-rotor current} / \text{starting-current reference} & \text{if reference} > 0 \\ 0 & \text{if reference} = 0 \end{cases}$

Warnings and limitations

This locked-rotor current estimate is planning arithmetic. It does not replace motor nameplate locked-rotor amps, NEMA code-letter data, controller ratings, protection settings, utility review, or code compliance.