

Motor Slip Frequency Calculator

Express motor slip as frequency for a motor or drive review. The result does not diagnose a motor or tune a drive.

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<https://www.elecatrix.com/motors-starters/motor-slip-frequency-calculator/>

Inputs

Input	Value	Unit
Supply frequency	60	Hz
Slip	3.3333	%

Results

Result	Value	Unit
Slip frequency	2	Hz
Frequency used	60	Hz
Slip used	3.3333	%

Calculation details

Detail	Value	Unit
Calculation basis	Slip frequency equals supply frequency multiplied by slip expressed as a decimal.	
Equipment boundary	Ideal induction-motor slip-frequency estimate only; no rotor design, drive tuning, motor diagnosis, or manufacturer limit is determined.	

Formulas

$$f_{\text{slip}} = f_{\text{supply}} \times (\text{Slip\%/100})$$

$$\text{Slip\%} = (n_s - n_r/n_s) \times 100$$

Warnings and limitations

This is an ideal slip-frequency calculation. Confirm the slip basis and drive or motor operating conditions before using the result for equipment decisions.