

Feeder Load Calculator

Estimates feeder VA and line current from connected load, demand factor, continuous-load treatment, voltage, and phase.

Generated October 10, 2026

<https://www.elecatrix.com/commercial-industrial-loads/feeder-load-calculator/>

Inputs

Input	Value	Unit
Connected load	60000	VA
Demand factor	80	%
Continuous load portion	12000	VA
Continuous multiplier	125	%
System voltage	480	V
Phase	Balanced three-phase	

Results

Result	Value	Unit
Connected load	60000	VA
Demand load	48000	VA
Continuous adder	3000	VA
Adjusted feeder load	51000	VA
Feeder current	61.3435	A
Phase multiplier	1.7321	x

Calculation details

Detail	Value	Unit
Calculation basis	Adjusted feeder load equals entered connected load after demand factor, plus the extra adder created by the entered continuous-load multiplier.	
Selection boundary	Feeder load estimate only; no conductor, breaker, demand table, load calculation, utility approval, or code-compliance result is made.	

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Formulas

Demand load (VA) = connected load x (demand factor (%) / 100)

Continuous adder (VA) = continuous load x ((continuous multiplier (%) / 100) - 1)

Adjusted feeder load (VA) = demand load + continuous adder

Feeder current = (adjusted feeder load / phase multiplier x voltage)

Warnings and limitations

This feeder load estimate uses user-entered load and factor assumptions. It does not apply NEC demand tables, select conductors, select breakers, or prove code compliance.