

Dwelling Detached Structure Load Calculator

Calculate detached-structure load, planned load with spare, and feeder-capacity margin from entered load groups.

Generated October 10, 2026

<https://www.elecatrix.com/residential-load-service/dwelling-detached-structure-load-calculator/>

Inputs

Input	Value	Unit
Lighting load	0.8	kW
Receptacle load	1.2	kW
Equipment load	3	kW
HVAC load	2.5	kW
Spare factor	25	%
Entered feeder capacity	12	kW

Results

Result	Value	Unit
Base detached-structure load	7.5	kW
Planned load with spare	9.375	kW
Entered feeder capacity margin	2.625	kW

Calculation details

Detail	Value	Unit
Calculation basis	Detached-structure screen sums entered load groups, applies spare percent, and compares with entered feeder capacity.	
Review boundary	Planning worksheet only; no feeder sizing, grounding, bonding, voltage-drop, or code-compliance approval is made.	

Formulas

base structure load = lighting + receptacle + equipment + HVAC loads

planned structure load = base structure load x (1 + spare percent / 100)

feeder capacity margin = entered feeder capacity - planned structure load

Dwelling Detached Structure Load Calculator

Calculate detached-structure load, planned load with spare, and feeder-capacity margin from entered load groups.

Generated October 10, 2026

<https://www.elecatrix.com/residential-load-service/dwelling-detached-structure-load-calculator/>

Warnings and limitations

This detached-structure screen does not size or approve a feeder, grounding electrode system, bonding method, OCPD, voltage drop, service equipment, or code compliance.