

Microinverter Count Calculator

Estimate unit count, AC/DC capacity, DC/AC ratio, and branch-group count from entered module and microinverter data.

Generated October 10, 2026

<https://www.elecatrix.com/solar-backup-power/microinverter-count-calculator/>

Inputs

Input	Value	Unit
Module count	24	modules
Inputs per microinverter	2	inputs
Module STC power	420	W
Microinverter AC power	800	W
Entered branch-circuit planning limit	3840	W

Results

Result	Value	Unit
Microinverter count	12	units
Total PV DC power	10080	W
Total microinverter AC power	9600	W
AC-to-DC ratio	0.9524	x
Entered-limit branch-circuit groups	3	groups
Unused microinverter inputs	N/A	inputs

Planning comparison

Review branch-circuit grouping separately.

Calculation details

Detail	Value	Unit
Calculation basis	Count uses entered module count and microinverter inputs per unit, then compares entered DC and AC nameplate watts.	

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Review boundary

Counting screen only; no microinverter model, circuit, rapid-shutdown, utility, or code-compliance approval is made.

Formulas

$\text{microinverter count} = \text{ceiling}(\text{module count} / \text{inputs per microinverter})$

$\text{total PV DC watts} = \text{module count} \times \text{module STC watts}$

$\text{total AC watts} = \text{microinverter count} \times \text{microinverter AC watts}$

$\text{AC-to-DC ratio} = \text{total AC watts} / \text{total DC watts}$

$\text{branch groups} = \text{ceiling}(\text{total AC watts} / \text{entered branch-circuit planning limit})$

Warnings and limitations

This microinverter count screen does not select or approve a microinverter, AC branch circuit, rapid-shutdown method, utility interconnection, listing match, or code-compliant PV design.