

PV String Current Calculator

Separate module operating or short-circuit current from the effect of parallel PV strings, with an explicit adjustment factor and review limit.

Generated October 10, 2026

<https://www.elecatrix.com/solar-backup-power/pv-string-current-calculator/>

Inputs		
Input	Value	Unit
Module operating current (Imp)	10	A
Module short-circuit current (Isc)	12	A
Parallel strings	3	strings
Current basis	Operating current (Imp)	
Adjustment factor	1	x
Entered review limit	40	A
Results		
Result	Value	Unit
Module current used	10	A
String current	10	A
Array current before factor	30	A
Adjusted array current	30	A
Margin to entered limit	10	A
Entered-limit comparison	Within entered limit	
Current basis used	operating current (Imp)	
Calculation details		
Detail	Value	Unit
Calculation basis	A series string retains the selected module current. Parallel strings multiply the selected current. The entered adjustment factor and limit are user-supplied review inputs.	

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Selection boundary

PV current review only; no NEC current factor, conductor, fuse, disconnect, inverter, utility, interconnection, or code-compliance result is made.

Formulas

$$I_{\text{module}} = I_{\text{mp}} \text{ or } I_{\text{sc}}$$

$$I_{\text{string}} = I_{\text{module}}$$

$$I_{\text{array}} = I_{\text{string}} \times N_{\text{parallel}}$$

$$I_{\text{adjusted}} = I_{\text{array}} \times F_{\text{adjustment}}$$

$$I_{\text{margin}} = I_{\text{limit}} - I_{\text{adjusted}}$$

$$\text{Status} = \text{Within entered limit when } I_{\text{adjusted}} \leq I_{\text{limit}}$$

Warnings and limitations

This is a PV current planning estimate. It does not select conductors, fuses, disconnects, inverter inputs, equipment ratings, utility interconnection settings, or code-compliant current factors. Verify the module and equipment data, adopted requirements, project temperature, and AHJ direction separately.