

# EV Charger Load Calculator

Estimate the panel or service load impact of one or more EVSE units using entered charger current, quantity, continuous-load factor, voltage, phase, existing load, and rating.

Generated October 10, 2026

<https://www.elecatrix.com/residential-load-service/ev-charger-load-calculator/>

## Inputs

| Input                    | Value        | Unit  |
|--------------------------|--------------|-------|
| EVSE current             | 48           | A     |
| Charger count            | 1            | count |
| Continuous multiplier    | 125          | %     |
| System voltage           | 240          | V     |
| Phase                    | Single-phase |       |
| Existing calculated load | 110          | A     |
| Panel or service rating  | 200          | A     |

## Results

| Result                     | Value | Unit |
|----------------------------|-------|------|
| EV load current            | 48    | A    |
| Adjusted EV load           | 60    | A    |
| EV load apparent power     | 11520 | VA   |
| Adjusted total load        | 170   | A    |
| Panel utilization          | 85    | %    |
| Remaining entered capacity | 30    | A    |

## Capacity comparison

Within entered panel or service rating

## Calculation details

| Detail | Value | Unit |
|--------|-------|------|
|--------|-------|------|

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Calculation basis

EV load equals EVSE current times charger count, multiplied by the entered continuous-load factor before adding it to entered existing load.

Selection boundary

EV charger load estimate only; no service load calculation, load management, conductor, breaker, EVSE setting, utility, permit, or code-compliance result is made.

## Formulas

$EV\ load\ (A) = EVSE\ current \times charger\ count$

$Adjusted\ EV\ load\ (A) = EV\ load \times (continuous\ multiplier\ (\%)/100)$

$Phase\ multiplier = 1\ for\ single-phase,\ \sqrt{3}\ for\ balanced\ three-phase$

$EV\ load\ (VA) = EV\ load \times voltage \times phase\ multiplier$

$Adjusted\ total\ load\ (A) = existing\ calculated\ load + adjusted\ EV\ load$

$Panel\ utilization\ (\%) = (adjusted\ total\ load/panel\ rating) \times 100\%$

## Warnings and limitations

This EV charger load estimate is a planning comparison. It does not perform a service load calculation, approve load management, select conductors or breakers, or prove code compliance.