

# What wire size in mm<sup>2</sup> is best for a charging cabinet



## Overview

The short answer: 6 mm<sup>2</sup> twin-and-earth or 6 mm<sup>2</sup> SWA for a typical 32 A 7 kW single-phase home charger; 10 mm<sup>2</sup> or 16 mm<sup>2</sup> for a 22 kW three-phase unit. This guide walks the full sizing process including Section 722 PME mitigation requirements. EV charger wire gauge, also referred to as EV charger diameter or wire size, is the thickness of wires used in an electrical vehicle branch circuit. Wire size is typically measured in American Wire Gauge (AWG) in North America, or square millimeters (mm<sup>2</sup>) in metric systems. According to the. What wire specifications are needed for ev charger 7kw 32a?

The 7 kW Level 2 home charger works with standard household electricity at around 230 to 240 volts AC while drawing about 32 amps continuously. This setup typically adds between 25 and 30 miles of driving range each hour, making it great. The cable size depends on the charger's amperage and how it is set up. This helps stop voltage drop and overheating. When purchasing your car, the dealer may provide a charging cable, but it is not always compatible with all available charging options, whether it be slow or fast. Choosing the right EV charger wire size is not just about following a chart. Written and reviewed by Andrew Moore, founder of.



## Article Content

Jun 14, 2026

E|D\_BS\_Cable Size Chart\_REBRAND 2024\_V1.1

Find the correct cable length range. Please note that the cable length is total length of the positive and negative wires. I.E. Distance

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Cable Sizes and Wiring | Logistics Operational Guide

The above cable sizing table is used by running across the top row until the column with the relevant amperage is found, and then

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What Size Cable for EV Charger? | Perfect Cable Size

To efficiently and safely charge your electric vehicle, it is crucial to choose the appropriate

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Wire Size Calculator

Calculate the wire size needed for a circuit given the voltage and current rating required. Plus, calculate the size of a wire gauge in

May 15, 2026

A quick guide to cable sizes, applications, & selection for safe use

Understanding Cable Sizes Cable size refers to the cross-sectional area of the conductor, usually measured in square

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Cable Size & Current Rating Chart

Cross Sectional Area of Conductor (mm<sup>2</sup>)Approximate Overall Diameter of Insulated Cable (mm)Current RatingSingle Phase

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Standard Cable & Wire Sizes

Definitions Circ.Mils - cross sectional area in Circular Mils Awg - American Wire Gauge size mm<sup>2</sup> - Metric Wire Size

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## Wire Gauges Explained: The Best AWG to MM<sup>2</sup> Conversion Guide

Need to convert wire gauges? Learn AWG to MM<sup>2</sup> conversion with this expert guide. Get accurate, quick conversions

Dec 13, 2025

AWG to mm<sup>2</sup>, how to convert and choose the right cable size

AWG to mm<sup>2</sup> - Wire Gauge Conversion and Electrical Considerations Understanding Wire Sizing Systems The size of an electrical

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## Wire Size Calculator | Calculate Electrical Cable Thickness

Use this free wire size calculator to determine the correct cable thickness (mm<sup>2</sup> or AWG) for your electrical

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## Charger Types and Speeds | US Department of Transportation

The rule establishes minimum technical standards for charging stations, including required number of charging ports,

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## MM to AWG Wire Size Calculator According to IEC and NEC

Selecting the correct wire size is essential for safety, efficiency, and compliance in electrical systems. Electricians,

Mar 26, 2026

What size cable is suitable for electric vehicle chargers

The table below shows the recommended cable sizes for the most common charger types and amperages. Both European (mm<sup>2</sup>)

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## How to Find the Right Size of Wire and Cable in NEC

How to Determine the Suitable Size of Wire and Cable or Electrical Wiring Installation? Examples in

Jan 02, 2026

## Solar Wire Size Calculator: Complete Guide with Charts & NEC Code

This comprehensive guide provides everything you need to correctly size solar wires: calculation formulas, wire size

Mar 10, 2026

What Cable Size Do I Need for an EV Charger? (7 kW, 22 kW) | Elec

Cable size for UK EV chargers explained: 6 mm<sup>2</sup> for most 7 kW domestic chargers, 10 mm<sup>2</sup> or 16 mm<sup>2</sup> for 22 kW three

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Wire Size for EV Charger — Level 2

EV Charger Wire Size Guide Complete guide to selecting the right wire size for electric vehicle charging stations, from Level 1 to DC

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EV Charger Cable Size Calculator: Best Tool

Calculate the perfect cable size for your EV charger with our EV Charger Cable Size Calculator. Get accurate wire sizing for safe and

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Wire Size Chart: How to Choose the Right Gauge

Learn how to use a wire size chart to select the right wire gauge for your project. Includes

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Current Carrying Capacity Table | Calculate Cable Cross Section

Current carrying capacity of electric cables For the cable dimensioning the nominal cable section of each conductor has to be chosen

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Wire Sizing for EV Charging Stations | Guide

Learn how to properly size wire for Level 2 EV charging stations. Covers NEC requirements, circuit calculations, and

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What Size Cable for EV Charger? | Perfect Cable Size Guide

Electrical cables are available in a range of sizes expressed in mm<sup>2</sup>. The number of conductors required depends on

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Cable Size AWG ↔ mm<sup>2</sup> converter

What is the AWG ↔ mm<sup>2</sup> Cable Size Converter with Ampacity? This AWG ↔ mm<sup>2</sup> Cable Size Converter is a tool designed to:

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Wire Size Calculator

At this point, our DC and AC wire size calculator will already display a wire gauge of 24 AWG, a wire cross-sectional

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EV Charging Infrastructure Cable Guide: Standards & Sizing 2026

Complete guide to cables for EV charging stations: BS 7671 Section 722, SWA vs LSZH armoured cable selection, voltage drop

Apr 06, 2026

Cable Size Calculator (AWG / mm<sup>2</sup>) | SolarMathLab

Cable size calculator to find the correct wire gauge (AWG) or cross-sectional area (mm<sup>2</sup>) based on current,

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Wire Gauge Chart Master Guide: AWG to mm<sup>2</sup> & Amps

Looking for the correct wire size? Access our expert Wire Gauge Chart (2025) with instant

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Conductor cross-section (mm<sup>2</sup>)

Learn why conductor cross-section (mm<sup>2</sup>) matters in electrical installations for optimal performance and safety.

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7kW 32A EV Charger Wire Size Guide: 6mm<sup>2</sup> vs 10mm<sup>2</sup>

Although 6 mm<sup>2</sup> may meet minimum code requirements in controlled environments, 10 mm<sup>2</sup> is increasingly

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Choosing the Right EV Charger Wire Gauge

The EV Charger Wire Gauge Chart below lists common electrical vehicle branch circuit wire sizes for Level 1 and

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## Choosing the Right Cable Size for EV Charging: Is Bigger Always

Selecting the right cable size ensures safe and efficient EV charging while keeping costs reasonable. While 6mm<sup>2</sup> is

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## What size cable is suitable for electric vehicle chargers

Choose the correct cable size for your electric vehicle charger by considering amperage, cable length, and safety codes to ensure

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## Cable Size Calculator – Find the Right IEC Cable in mm<sup>2</sup>

Calculate the correct cable size in mm<sup>2</sup> for any electrical load. Enter current, cable length, and voltage to find the minimum cable that

Aug 14, 2025

## How to Choose the Optimal Electrical Cable Size.

When we refer to the electrical cable size, we are really talking about the cable's cross

May 10, 2026

## Wire Size Calculator — AWG & mm<sup>2</sup> | FIRGELLI Engineering

Calculate wire gauge, cross-sectional area, voltage drop, and power loss for DC and AC circuits. Six calculation

Oct 11, 2025

## Wire Size for EV Charger — Level 2

Complete guide to selecting the right wire size for electric vehicle charging stations, from Level 1 to DC fast charging, following NEC

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## Cable Size Types Explained: mm, mm<sup>2</sup>, AWG & B& S Guide

Confused by cable sizes? Get our complete guide to mm<sup>2</sup>, AWG, and B& S standards. Includes conversion tables,

Oct 08, 2025

## AWG to MM2 Wire Gauge Size Chart | LEX Innovations

Wire Gauge Size Chart: American Wire Gauge (AWG) to Square Millimeters (MM2)  
American Wire Gauge (AWG) is the U.S.

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### EV Charger Cable Size Calculator – Find the Right Cable Size Instantly

Calculate the correct EV charger cable size with our free EV Charger Cable Size Calculator. Ensure safe charging, prevent

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### Wire Size Calculator – Electrical Cable Sizing by Current & Length

Choosing the right wire size is essential for safe and efficient electrical installations. This

## Contact Us

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