

What size cable is needed for a 47kW distribution box



Article Overview

For a 47 kW three-phase distribution box at 400V with a power factor of 0.8, a typical copper cable size would be around 16–25 mm², depending on installation conditions and cable length.

Calculating Load Current

To determine the cable size, first calculate the load current using the formula for three-phase systems:

$$I = (kW \times 1000) / (\sqrt{3} \times V \times PF)$$

For a 47 kW load at 400V three-phase with a power factor of 0.8:

$$I = (47 \times 1000) / (\sqrt{3} \times 400 \times 0.8) \approx 84.7 \text{ A}$$

This is the continuous current the cable must carry .

Selecting Cable Size

Cable sizing must consider:

- Current-carrying capacity (ampacity): The cable must safely carry the calculated current without overheating....

Article Content

Free Cable Sizing Calculator AS/NZS 3008.1.1 | ELEK Software

This Cable Sizing Calculator can calculate minimum active, neutral, and earth cable sizes in compliance with Australian Standards

Cable and Breaker Size Reference Chart

This document provides information on the appropriate circuit breaker, cable size, and power rating in kilowatts (KW) for electrical

Cable Sizing Guide: IEC Standards & Calculations | Enginist

Complete cable sizing guide: IEC 60364-5-52 standards, ampacity calculations, voltage drop formulas, derating

Cable Size by Power and Current | Calculator

Calculating the appropriate cable size based on power and current is crucial before making a purchase. This calculator assists in

Cable Sizing Calculator UK | BS 7671 18th Edition | TradeCalcs

Free cable sizing calculator for UK electricians. BS 7671:2018+A2:2022 compliant. Calculate cable sizes with voltage drop analysis,

Cable Sizing Calculator for Engineers and Electricians

Use the cable sizing calculator to accurately size copper or aluminum cables for any project and avoid costly oversizing.

ccalculators .uk

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Cable Size Calculator (mm² & AWG) – NEC & IEC Wire Sizing

Free professional electrical cable size calculator. Sizes copper & aluminium conductors by ampacity, voltage drop, temperature &

Cable Sizing Calculator

Easily calculate the ideal cable size for any electrical load with our Cable Sizing Calculator—accurate, fast, and beginner-friendly.

Cable calculator – TERALEC

Always consult with a qualified electrical engineer or licensed electrician before making final decisions on cable selection. The user

Cable Sizing Guide | Enginist

Proper cable sizing requires careful consideration of multiple factors including design current, correction factors for

kW to Cable Size Calculator – Accurate Electrical Wire...

Use our free kW to Cable Size Calculator to find the correct wire size. Enter kW, voltage, and length for IEC-compliant copper or

Cable Size Calculator

Quickly calculate the ideal cable size for your electrical projects with our easy-to-use Cable Size Calculator tool online.

KW to Cable Size Calculator (Wire Size Calculator by KW)

Easily find the right cable size for your electrical load with our KW to cable size calculator (Wire Size Calculator by

Cable Calculator

Eland Cables' Cable Size Calculator can help you determine the most appropriate cable size for your installation against British and

Cable Selection Calculator

A Cable Selection Calculator is a powerful tool that helps electricians, engineers, and DIYers determine the appropriate cable size for

Cable Sizing for Commercial Installations | UK Guide

How to Size Cable Correctly for Commercial Installations In commercial sites, cable sizing is never just a box-ticking exercise. In the

Cable Size Calculator

Instantly size conductors for DC, single-phase, and three-phase AC circuits. Computes the minimum AWG by both ampacity and

KW to Cable Size Chart and Amp Chart

Our kW to Cable Size and Amp Chart can help you determine the appropriate cable size for your electrical projects.

Cable Cross-Section Calculator

An online calculator for determining cable and wire cross-sections based on power or current. Easily select the appropriate cable size

Electrical Cable Size Calculator

Proper cable sizing is crucial in any electrical system to ensure efficiency, safety, and performance. Choosing the wrong size can

Cable & Circuit Breaker Size Calculator | Building Calculators

This Calculator estimates the minimum size of Cable or Circuit Breakers required for a given load (kW). Based on the above

Cable Size Calculator — Free, Fast & IEC/NEC Compliant

Free cable size calculator for single-phase and 3-phase systems. Enter current, length & install method — get mm²

Cable Size Calculator

Estimate AWG cable size from amps, voltage, run length, conductor material, derating factors, voltage drop, and

Electric cable sizing calculator

Disclaimer The Electric Cable Sizing Calculator is designed to help you estimate the appropriate cable size needed to connect a

Cable Size Calculator — Free, Fast & IEC/NEC Compliant

A cable size calculator determines the minimum wire cross-section (in mm² or AWG) that safely carries your load

Contact Us

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