

## Formula for cable tray supports



### Overview

Cable tray support quantity can be calculated using a simple formula:  $\text{Support Quantity} = \text{Total Length} \div \text{Support Spacing} + 1$ .  $20 \div 2 + 1 = 11$  supports. In a typical project, a 20-meter cable tray with 2-meter spacing requires 11 supports. As a key structure supporting the cable tray, the accurate calculation of the support quantity directly affects construction costs, efficiency, and safety. In complex engineering environments, the Hubbell Wiring Device-Kellems and Hubbell Premise Wiring are divisions of Hubbell Incorporated, a U.S. headquartered manufacturer with over 130 years of supplying solutions for the electrical and data markets. Follow these simple steps: Define Tray Dimensions: Enter the width and depth of your planned cable tray (in mm or inches). The mechanical and electrical characteristics, tests, certifications, overall quality management, recommendations mentioned. Selection of cable tray is very critical because if cable tray size is not sufficient the cables may become damaged due to improper handling and excessive heating etc.

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Definition: Cable tray support calculation involves determining the appropriate spacing and load capacity of supports for a cable tray system.  
Formula:  $( S = \frac{W}{L_s} )$  Example:  $( S = \frac{150}{2} )$



This guide covers the critical steps, from selecting the right electrical cable tray and performing accurate cable fill calculations to managing a safe cable pull through and ensuring all bonding and grounding ...



Pick a span (often 1.5–3 m) and verify the uniform load rating exceeds your cable weight plus a safety factor. Check deflection limits to protect terminations and fibre.



Use this cable tray sizing calculator to check fill %, select tray size, and comply with IEC 61537 & NEC 392 with formulas, example and checklist.



When fitting cable trays and their accessories, the products are cut on site to create changes of direction, adjust sections, etc. Damage can also occur during handling; as a result, both the ...



Our cable tray fill calculator is designed to compute the appropriate size and capacity of cable trays. You need to install 50 power cables, each with a diameter of 0.5 inches, in a 4-inch deep cable tray.



The radius for cable ladder and cable tray fittings is usually determined by the bending radius and stiffness of the cables installed on the cable ladder or cable tray.



Easily calculate cable tray fill ratios with our free tool. Supports mixed cable sizes, NEC 40% rules, and metric/imperial units. Download your PDF report instantly.



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Once the load/foot has been determined, the weight on each cable tray support can be determined by multiplying the load/foot by the number of feet between supports.



To incorporate this in the tray design the following formula can be used to convert the concentrated static load in pounds to an equivalent uniform load (W ) in pounds per foot.

## Contact Us

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