

Cable Tray Material Takeoff Calculator

Converts entered cable-tray route rows, stock lengths, fittings, splices, covers, partitions, supports, and allowances into a planning takeoff.

Generated October 10, 2026

<https://www.elecatrix.com/wire-raceway-ampacity/cable-tray-material-takeoff-calculator/>

Inputs

Input	Value	Unit
Splice plates per joint	2	plates
Length and section waste allowance	5	%
Tray route rows	Rows: 2	
Row 1 - Route label	Main route	
Row 1 - Route length	120	ft
Row 1 - Stock section length	10	ft
Row 1 - Fitting count	2	fittings
Row 1 - Splice joint count	11	joints
Row 1 - Cover length	60	ft
Row 1 - Partition length	40	ft
Row 1 - Support count	8	supports
Row 2 - Route label	Branch route	
Row 2 - Route length	75	ft
Row 2 - Stock section length	12	ft
Row 2 - Fitting count	1	fittings
Row 2 - Splice joint count	5	joints
Row 2 - Cover length	20	ft
Row 2 - Partition length	N/A	ft
Row 2 - Support count	5	supports

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Results

Result	Value	Unit
Total route length	195	ft
Straight sections before waste	19	sections
Straight sections to plan	20	sections
Straight-section waste allowance	1	sections
Fitting count	3	fittings
Splice joint count	16	joints
Splice plate count	32	plates
Cover length to plan	84	ft
Partition length to plan	42	ft
Support count	13	supports
Counted route rows	2	rows

Calculation details

Detail	Value	Unit
Calculation basis	Each route is rounded to its entered stock section length. Entered fittings, splice joints, and supports are summed; waste applies to straight sections and length-based covers or partitions.	
Takeoff boundary	Planning schedule only; verify the selected tray series, fitting catalog, splice hardware, support layout, project drawings, stock availability, and procurement units separately.	

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Formulas

$$N_{\text{row}} = \lceil \frac{L_{\text{route}}}{L_{\text{stock}}} \rceil$$

$$N_{\text{plan}} = \lceil N_{\text{straight}}(1 + (W/100)) \rceil$$

$$N_{\text{splice plates}} = N_{\text{joints}} \times N_{\text{plates/joint}}$$

$$L_{\text{cover,plan}} = \lceil L_{\text{cover}}(1 + (W/100)) \rceil$$

$$L_{\text{partition,plan}} = \lceil L_{\text{partition}}(1 + (W/100)) \rceil$$

Warnings and limitations

This is a preliminary material takeoff from an entered tray schedule. It does not read drawings, infer fittings, select a tray series, verify structural loading, price materials, or create a procurement-ready bill of materials.