

Problems encountered during cable tray installation



Article Overview

Common cable tray installation problems include improper support spacing, overfilled trays, incorrect bend radii, missing expansion joints, corrosion, and grounding issues, all of which can compromise safety and system reliability.

Key Installation Problems

1. **Improper Support Spacing** Supports placed too far apart can cause tray sag, mechanical stress, and eventual structural failure. Standard practice recommends supporting FRP trays every 1.5-2.5 meters, adjusted for load and tray width. Excessive spacing can lead to cable insulation damage and system collapse over time .
2. **Overfilled Trays** Exceeding the recommended fill ratio (40% for ladder trays, 40-50% for perforated trays, 45-50% for trough trays, 50-60% for channel trays) can cause overheating, reduced ampacity, insulation failure, and fire risk. Overfilling is common during facility expansions without proper planning .
3. **Incorrect Bend Radius** Using bends with a radius smaller than the minimum required for installed cables, especially fiber optic or high-voltage power cables, can damage insulation, increase fiber attenuation, and lead to cable failure .
4. **Missing Expansion Joints** Installing tray sections butt-to-butt without expansion gaps can result in buckling, stress fractures, and joint failures, particularly in outdoo...

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