

Article Overview

Trunk optical cables should be installed carefully in trunking systems, following proper handling, routing, and securing procedures to prevent damage and ensure optimal performance.

Planning and Preparation

Before installation, conduct a route survey to identify the path for the trunk cable, including wall, ceiling, or floor trunking, and verify conduit or duct suitability (). Ensure all necessary approvals, shop drawings, and project specifications are available (). Prepare the work area by cleaning manholes, marking cable loops, and ensuring proper signage and safety measures ().

Handling and Offloading

- o Keep the protective covering on the cable reel until installation begins ().
- o Store reels vertically on their flanges and chock them to prevent rolling ().
- o Use lifting slings at a 45° angle for drum handling; avoid manual lifting ().
- o Ensure the storage base is smooth and horizontal to prevent cable deformation ().

Trunking Installation

- o Drill mounting holes in the trunking bottom according to the system specifications (e.g., o 7.5 mm for wall brackets) ().
- o Use appropriate screws (approx. 6 mm) without sharp edges to avoid damaging cables ().
- o Lift the trunking onto wall brackets and press until it locks in place ().
- o Adjust the distance between the trunking and wall using adjustment pieces if needed to compensate for uneven surfaces ().
- o Install ventilation ribs to cover gaps between the trunking and wall ().

Cable Pulling and Placement

- o Respect the minimum bend radius of the fiber cable; avoid twisting or excessive tension ().
- o Use cable lubricant for long duct runs or tight conduit paths ().
- o Pull cables slowly, monitoring tension to prevent crushing or stretching ().
- o Leave cable reserves in loops or figure-eight shapes for future maintenance ().

Splicing and Connections

- o Use splice protectors and leave sufficient fiber reserves ().



Trunk Optical Cable Installation

- o Perform connections with pigtails or direct connector mounting where possible ().
- o Ensure all unused fibers are properly secured and not stressed ().

Testing and Verification

- o Conduct OTDR and OLTS testing to verify signal integrity and loss ().
- o Inspect endfaces with IEC 61300-3-35-compliant scopes to ensure cleanliness ().
- o Confirm that the installation meets TIA-568, ISO/IEC 11801, and ITU-T standards ().

Safety Considerations

- o Follow OSHA, NESC, and local safety regulations ().
 - o Avoid standing under tensioned cables or near moving reels ().
 - o Use barricades, warning signs, and proper scaffolding when working above floor level ().
 - o Never look directly into fiber ends carrying laser light ().
- By following these steps, trunk optical cables can be installed safely and efficiently, ensuring long-term performance and compliance with industry standards.

A comprehensive guide to fiber optic installation - everything you need to know about fiber

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Trunk Optical Cable Installation

This comprehensive guide delves into the intricacies of fiber optic installation, exploring topics ranging from cable

The Installation After the process of designing fiber optic networks is completed, the next step is to install it. What do we mean by the

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