

Roll-up Fiber Optic Cable Laying



Overview

When laying loops of fiber on a surface during a pull, use “figure-8” loops to prevent twisting the cable.

Key Takeaways

Proper roll-up and laying of fiber optic cable requires careful handling, figure-8 deployment, tension control, and frequent support to prevent kinks, twists, or fiber damage. Preparing the Cable

Before installation, ensure the cable reel is placed on a stable surface or reel stand, with the forks of a forklift perpendicular to the reel if used for lifting, to prevent dropping or twisting the cable during handling . Keep the cable clean by using a plastic sheet under the reel and avoid dragging it over rough or uneven terrain . Inspect the cable for any protective layers removed for inspection and re-fit them before installation .

Roll-up and Figure-8 Laying

When unspooling, lay the cable in a figure-8 pattern on the ground. This method introduces a half twist on one side of the 8 and removes it on the other, preventing kinks and mechanical stress . Each figure-8 loop should be slightly offset from the previous one to minimize pressure points. Flip the cable over so the end to be pulled next is correctly oriented.

Pulling and Tension Control

Fiber optic cables are designed to withstand pulling forces through their strength members, usually aramid yarn (Kevlar). Always pull the cable by these strength members unless the manufacturer specifies otherwise . Avoid twisting the cable during pulling; use a swivel pulling eye to prevent torsion . Ensure that the pulling tension does not exceed the cable's maximum recommended load, and for vertical installations, clamp the cable at frequent intervals to prevent excessive stress from its own weight .

Supporting and Securing

For vertical or indoor runs, drop the cable down rather than pulling it up whenever possible . Support the cable at regular intervals using hook-and-loop fasteners or hand-tightened cable ties to avoid crushing the jacket . Service loops can be added to facilitate future repairs or rerouting.

Protection and Routing

Use innerduct or conduit for additional protection, especially in areas prone to mechanical damage. For armored cables, Aluminum Interlocking Armor (AIA) can provide crush resistance without the need for separate conduit . Plan the route to avoid sharp bends, high temperatures, or proximity to power lines, and always respect the minimum bend radius specified by the manufacturer .

Safety Considerations

Wear appropriate personal protective equipment, including gloves and harnesses when working at heights or with aerial installations . Avoid stepping on cables or exposing them to laser light, which can damage the eyes . Follow all company safety protocols and local building codes during installation. By following these practices, roll-up fiber optic cable can be laid efficiently while maintaining the integrity and performance of the fibers throughout the installation process .

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All Fiber Optic Cable reels should be stored upright Laying the reel on its side may cause damage to the reel flange and/or cause the

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Fiber Optic Cable Installation Method Statement

Below is given the fiber optic cable installation method statement for performing the

CableTransportationAndHandling Issue2 Aug 2023

Common mishandlings include rolling the cable against the "roll direction" arrows (illustrated in section 5.6) or allowing

Figure 8 Method for Fiber Optic Installation | PDF

This document provides instructions for using the "figure 8" technique when installing fiber optic cable over long distances. It

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