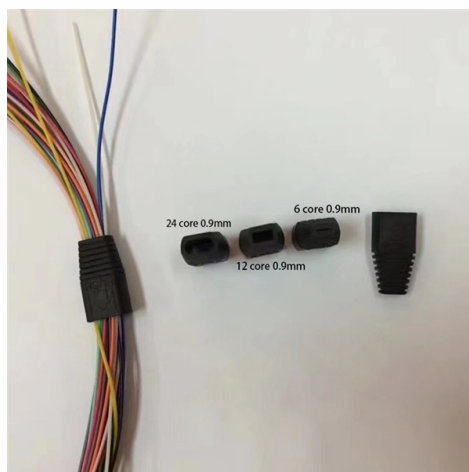


RIVO MULTITRADE OPTICAL SYSTEMS

Installation Solution for Columbia Optical Cable Wrapped Tubes at a Depth of 1200mm



Overview

Optical Cable System Installation Guidelt details procedures for direct buried cable installation, including trench dimensions and depths, cable placement.

Key Takeaways

For installing Columbia optical cable wrapped tubes at a depth of 1200mm, use protective conduits with proper bedding, trenching, and backfill techniques to ensure long-term cable integrity and minimize maintenance. Recommended Burial Depth and Protection

A depth of 1200mm (48 inches) is considered suitable for protecting fiber optic cables from plowing, wildlife, and soil erosion, especially in areas with loose soil or agricultural activity . At this depth, it is essential to use protective conduits or ducting to shield the cable from mechanical damage and environmental stress. Conduits also facilitate future maintenance or cable replacement without extensive excavation.

Trenching and Bedding

- **Trench Width and Depth:** Excavate a trench slightly wider than the conduit to allow for proper bedding and backfill. Ensure the trench bottom is smooth and free of sharp rocks or debris.
- **Bedding Material:** Use sand or fine granular material as bedding to cushion the cable and prevent point loads that could damage the optical fibers.

- **Backfill:** After laying the cable, backfill with the same fine material up to a warning tape level, then complete with native soil. Warning tapes or marker tapes should be placed approximately 300mm above the cable to alert future excavators.

Cable Installation Techniques

For wrapped optical cables, such as Columbia or SkyWrap systems, the following considerations apply:

- **Cable Handling:** Avoid excessive bending or tension during installation. Wrapped tubes are sensitive to sharp bends, which can compromise fiber performance.
- **Pulling Equipment:** Use cable rollers and winches to guide the cable through the conduit, minimizing friction and stress.
- **Splice Closures:** Plan for accessible splice points at intervals recommended by the manufacturer, ensuring proper sealing against moisture ingress.

Environmental and Safety Considerations

- **Moisture Protection:** Ensure conduits are sealed at entry and exit points to prevent water accumulation.
- **Thermal Expansion:** Allow for slight movement of the cable within the conduit to accommodate soil expansion or contraction.
- **Mapping and Documentation:** Record GPS coordinates and depth of the cable for future maintenance and to prevent accidental damage during excavation .

Summary

Installing Columbia optical cable wrapped tubes at 1200mm depth requires a combination of adequate trenching, protective conduits, proper bedding, and careful handling. Following these practices ensures mechanical protection, environmental resilience, and long-term network reliability. For high-voltage or complex environments, specialized installation equipment similar to SkyWrap systems may be adapted for underground use, ensuring controlled deployment and minimal fiber stress .

Article Content

Optical Cable System Installation Guide

It details procedures for direct buried cable installation, including trench dimensions and depths, cable placement, backfilling, and

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The objective of this document is to be an optical fibre cable installation and laying guide, addressed to new installers, also being

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Three different types of fibre-optic cable have been developed for installation on overhead power utility lines: optical ground wire

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The cable on the reel should be covered at the factory with a UV/thermal wrap until just prior to installation to protect it from exposure

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This document provides guidelines for laying optical fibre cables, including detailed surveying the cable route, soil

General Optical Fiber Cable Installation Considerations

General Optical Fiber Cable Installation Considerations Some key considerations for installing optical fiber cable are highlighted

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GENERAL INFORMATION

A conduit cable installation involves placement of one or more optical cables inside a preinstalled conduit that runs between access

The FOA Reference For Fiber Optics -Outside Plant Construction ...

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Microsoft Word

1.0 GENERAL 1.01 The methods described in this document for placing cable in ducts are intended for use only as guidelines. It is

OPTICAL FIBRE CABLES INSTALLATION GUIDE

The objective of this document is to be an optical fibre cable installation and laying guide, addressed to new installers, also being

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