ZITHA TECH SPECIALTY CABLES (Pty) Ltd

Fiber optic cable needs to be wrapped



Overview

Optical attached cable (OPAC) is a type of fibre-optic cable that is installed by being attached to a host conductor along overhead power lines. The attachment system varies and can include wrapping, lashing or clipping the fibre-optic cable to the host.

Key Takeaways

Fiber optic cables can be wrapped either helically on overhead conductors for power line communications or bundled with hook-and-loop ties for indoor cable management.

Outdoor Wrapping on Power Lines

For installations along overhead power lines, fiber optic cables are often helically wrapped around ground wires or phase conductors using specialized equipment. This method, known as Optical Attached Cable (OPAC) or branded as SkyWrap, allows the cable to follow the host conductor while minimizing mechanical load and environmental exposure . Key points include:

• Installation Equipment: A spinning or wrapping machine attaches the cable under controlled conditions. For low-voltage lines, the machine can sometimes be pulled by hand, while high-voltage lines require radio-controlled or engine-powered units .

• Cable Protection: Dual-layer jackets (Birdshot design) protect against environmental hazards and accidental damage, such as shotgun activity .

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

• Voltage Ratings: Standard SkyWrap is suitable for distribution lines up to 150kV, while High Voltage SkyWrap can handle up to 300kV, and AccessWrap is designed for lines up to 50kV .

• Installation Advantages: The cable can be installed while the line remains live in some cases, reducing downtime and maintaining service continuity .

Indoor or Network Cable Bundling

For indoor or data center applications, fiber optic cables are typically bundled and secured using hook-and-loop fasteners rather than metallic ties to prevent damage:

• FIBERtie Fasteners: Made from Velcro-style hook-and-loop material, these ties are gentle on fibers, reusable, and adjustable .

• Installation Method: Wrap the tie around the cable bundle and secure it onto itself, ensuring a snug but not overly tight hold. This prevents crushing or bending the fibers.

• Color Coding: Available in multiple colors to match cable jackets, aiding in identification and organization .

• Reusability: Can be opened and closed hundreds of times without leaving adhesive residue or damaging the cable .

Best Practices

• Avoid Sharp Bends: Maintain the minimum bend radius specified by the cable manufacturer to prevent signal loss or fiber breakage.

• Secure at Intervals: For long runs, secure the cable at regular intervals to prevent sagging or movement.

• Environmental Considerations: For outdoor installations, ensure the cable jacket is rated for UV exposure, moisture, and mechanical stress.

• Use Proper Tools: Always use the recommended wrapping machines or cable ties to ensure safe and efficient installation.

By following these methods, fiber optic cables can be safely wrapped and managed for both high-voltage outdoor applications and indoor network environments, ensuring long-term reliability and minimal signal degradation .

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Article Content

Optical attached cable

OverviewEtymologyHistoryTechnologyLashed cableUsesAlternativesIn the media

Optical attached cable (OPAC) is a type of fibre-optic cable that is installed by being attached to a host conductor along overhead power lines. The attachment system varies and can include wrapping, lashing or clipping the fibre-optic cable to the host. Installation is typically performed using a specialised piece of equipment that travels along the host conductor from pole to pole or tower to tower, wrapping, clipping or la

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

Contact Us

Continue your research online:

Website: https://zithatech.co.za
Technical inquiry: https://zithatech.co.za/contact.html

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved