

ADSS fiber optic cable has no span



Overview

Wrong span length selection, underestimated wind loading, or incorrect sag design leads to cable failure and outages.

Key Takeaways

ADSS fiber optic cable is self-supporting and does not require a separate messenger wire, but its span length depends on the cable type and installation conditions. Self-Supporting Nature

ADSS (All-Dielectric Self-Supporting) fiber optic cable is designed to be installed on utility poles or transmission towers without a separate support or messenger wire. The cable incorporates high-strength non-metallic reinforcing materials, such as aramid yarns, which provide sufficient tensile strength to support its own weight across spans. This all-dielectric construction eliminates risks associated with metallic components, such as induced currents or galvanic corrosion, making it safe for installation near energized power lines .

Span Lengths

While ADSS cable is self-supporting, the span length between poles or towers varies depending on the cable design and environmental conditions:

- Short-span ADSS cables: Typically support spans of 50 meters, suitable for closely spaced poles .
- Medium-span ADSS-S cables: Available in 50m, 100m, and 200m spans, ideal for medium-distance aerial installations .

- Long-span ADSS-D cables: Designed with double jackets for enhanced durability, supporting spans from 100m up to 700m, and in some specialized designs, even longer spans up to 1,500m or more .
- Custom designs: Some ADSS products, such as AFL-ADSS, can accommodate spans up to 3,500 feet (approximately 1,067 meters) depending on tensile strength, environmental loading, and installation hardware .

Installation Considerations

Even though ADSS cable is self-supporting, proper installation is critical:

- Tension management: The cable must be pulled under controlled tension to avoid exceeding the minimum bending radius and to prevent damage .
- Hardware selection: Tangent clamps, armor grip suspensions, and dead-ends are used depending on span length and angle changes between poles .
- Environmental factors: Wind, ice, and temperature variations affect sag and tension, influencing the maximum allowable span .

Summary

ADSS fiber optic cable does not require a separate support wire, but it is not "spanless" in the literal sense. The cable's self-supporting design allows it to bridge distances between poles, with span lengths ranging from 50 meters for short spans to over 1,500 meters for specialized long-span installations. Selection of the appropriate ADSS type and installation hardware ensures safe and reliable aerial deployment .

Article Content

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AFL-ADSS (All-Dielectric Self-Supporting) fiber optic cable is a non-metallic cable which supports its own weight without the use of

ADSS Fiber Optic Cables

The ADSS cable shall be attached to the pulling rope using a double swivel eye and woven wire grip. The double swivel eye insures

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Installation of Solo® ADSS All-Dielectric Self-Supporting Fiber

Like other fiber optic cables, ADSS cable weighs less than equivalent copper cables and will tend to sag less over a given aerial

The FOA Reference For Fiber Optics -Outside Plant Construction

Since ADSS does not have a steel messenger, wind vibration can be a problem with the lightweight fiber optic cable. Wind vibration

What is ADSS Fiber Optic Cable and the Role of Span?

All-Dielectric Self-Supporting (ADSS) fiber optic cables have become a vital component in modern communication

Specification DNA-33385 Flex-Span® ADSS Fiber Optic Cable

Recommended Installation Procedures for All-Dielectric, Self-Supporting (ADSS) Fiber Optic Cable AFL-ADSS® Fiber Optic Cable

Technical Parameters of ADSS Fiber Optic Cables

ADSS Fiber Optic Cable work in a large-span two-point support (usually hundreds of meters, or even more than 1 km)

Things You Should Know About ADSS Cable

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ADSS Fiber Optic Cable Guide | Specs, PE/AT Sheath, Span

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