# Low-noise fiber optic cable reel for mining



## Overview

For reliability, performance and protection, industry leaders turn to AFL for fiber optic products that are designed for use in the most extreme conditions.

## Key Takeaways

Rugged, portable fiber optic cable reels with low-noise operation are available for mining, designed to withstand harsh environments, mechanical stress, and repeated deployment.

### Mining-

### Grade Fiber Optic Cables

For mining applications, fiber optic cables must endure high-tensile pulls, crush, impact, and water ingress. Companies like Optical Cable Corporation (OCC) offer MSHA-rated cables with Core-Locked™ jackets and helical stranding, which distribute stress evenly across the cable, enhancing durability and flexibility during installation in underground or surface mines. These cables are also water-blocked and gel-free, providing reliable long-term performance in wet or harsh conditions.

### Portable and Low-



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## Noise Cable Reels

For temporary or mobile deployments, portable fiber optic cable reels are ideal. Options include: Metal or sheet-metal reels with auxiliary spools for safe transport and storage, designed for harsh environments and extreme temperatures (-40 °C to +55 °C operational range),. Retractable or push-pull reels that allow smooth cable deployment and retraction, minimizing noise and mechanical stress on the fiber.

Foam-coated barrels to reduce vibration and noise during operation, enhancing low-noise performance. These reels are suitable for underground mining, tunneling, and excavation, and can handle long cable lengths (up to ~1200 m depending on diameter) while remaining lightweight and portable for field use.

## Key Features to Consider

Durability: Sheet-metal construction, secure locking mechanisms, and auxiliary spools protect the cable from mechanical damage.

## Low-

Noise Operation: Foam-coated barrels and smooth rotation brakes reduce operational noise, critical in confined mining environments. Portability: Lightweight designs (~3. 5 kg without cable) and backpack or cart-mounted options facilitate easy transport underground.

Cable Compatibility: Supports MSHA-rated fiber optic cables, hybrid cables, and waterproof connectors for reliable data transmission. Environmental Resistance: Designed to operate in extreme temperatures, resist dust, moisture, and mechanical shocks.

## Recommended Applications

Underground mining and tunneling operations requiring reliable fiber optic communication. Temporary field deployments for mobile equipment or monitoring systems. Harsh outdoor environments where low-noise, durable, and portable cable management is essential.

By selecting a rugged, low-noise fiber optic cable reel with proper mining-grade cable, operators can ensure safe, reliable, and efficient fiber deployment in challenging mining conditions.

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## Article Content

Mining Fiber Optic Cable and Connectivity | AFL Global

For reliability, performance and protection, industry leaders turn to AFL for fiber optic products that are designed for use in the most extreme conditions. With more than three decades of experience, AFL

MINING SOLUTIONS QUICK REFERENCE GUIDE

Designed for uncompromised communications in the harshest of conditions, OCC provides cables proven to ensure safety and eficiency of any mining operation, whether above or underground.

FIBER OPTIC PRODUCTS FOR THE MINING INDUSTRY

Rugged easy to use composite cable consisting of flexible stranded Copper conductors and integrating communications links utilizing fiber optic technologies . The breakout design provides additional

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Corning dielectric, tray-rated, mining, and petrochemical fiber optic cables are designed for indoor and outdoor use in mining and petrochemical backbones (aerial and duct) as well as horizontal

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Mining Fiber Solutions 2025: Dust, Moisture & Vibration Resistance

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Mining fiber optic solutions improve safety and efficiency by providing reliable communication and real-time monitoring in harsh mining environments. Fiber optic cables resist dust,

A Complete Guide to Mining Optic Cable: Specifications, Types, and ...

Types of Mining Fiber Optic Cables Fiber optic cables used in mining operations are engineered to withstand some of the most demanding industrial environments on Earth. From

DTSX3000 Distributed Temperature Sensor

What Is Distributed Temperature Sensing? Distributed temperature sensing (DTS) measures temperature distribution over the length of an optical fiber cable using

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Mining is one of the industrial sectors where the cabling systems have high requirements regarding security and mechanical resistance. Fiber optic is a totally dielectric medium for data transmission,

ARES Reels

The ARES reels are made with a chemical and impact resistant polymer providing a rust-resistant, lightweight and durable reel for storage solutions and deploying fiber optic cable assemblies.

Fiber Optic Voice & Data Communications for the Mining Industry

We contribute to mining voice and data communications with fiber optic interconnect solutions designed specifically for the mining industry.

Deployable Fiber Optic Systems for Harsh Mining Environments

The fiber optic cable, however, is only a component of a complete, deployable system, explains Rick Hobbs, Director of Business Development at Optical Cable Corporation (OCC).

Pro-Tac Series | Fiber Optic Tactical Snake on Reel | Camplex

Pro-TAC HF-TRP Tactical Fiber Cable on Reels Pro-Tac single mode tactical fiber optic cable series with polyurethane jacket on a reel features fanouts in a protective pulling sleeve to withstand multiple

Fiber Optic Cable Reels, Cable Drum Dispensers, Spools

Cable drum dispensers for fiber cable pulling jobs, three piece lightweight spools for fiber storage, heavy duty cable reels for broadcast & tactic applications.

Deployable Fiber Optic Systems for Harsh Mining Environments

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The fiber optic cable, however, is only a component of a complete, deployable system. Other key elements include hardened cable jacketing; “genderless” connectors for quick deployment without

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