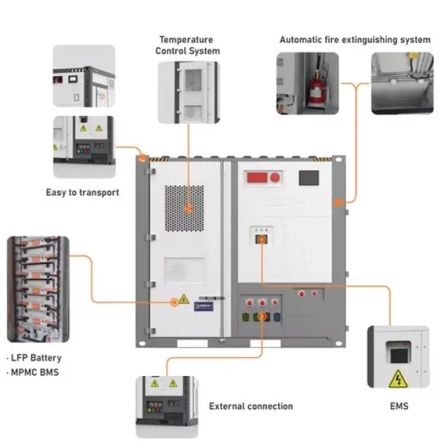
COETZER OPTICAL SYSTEMS (Pty) Ltd

How was the fiber optic cable severed



Overview

Yesterday the internet fiber optic cable was accidentally cut, I contacted the internet provider and today they came to fix it.

Key Takeaways

A severed fiber optic cable can be repaired using mechanical or fusion splicing, typically restoring network service within a few hours once technicians are onsite.Immediate Steps and Safety

When a fiber optic cable is cut, it is crucial to ensure safety first. Fiber strands are made of glass and can cause injury, so always wear safety glasses and avoid touching broken ends with bare hands . Identify the damaged section and leave some extra cable slack to facilitate splicing .

Tools Required

Essential tools for repair include:

• Fiber optic strippers and cutters to remove damaged ends

• Kevlar shears for cutting the cable jacket

• Precision cleaver to create clean fiber ends

• Alcohol wipes for cleaning exposed fibers

• Mechanical splice kits or fusion splicing machines

• Visual fault locator or fiber optic meter to test the connection

Repair Methods

• Mechanical Splicing: Aligns the cut ends using a sleeve or clamp. This method is faster and suitable for temporary or quick fixes but may have slightly higher signal loss .

• Fusion Splicing: Uses heat to melt and fuse the fiber ends together, providing a low-loss, permanent connection ideal for long-term deployment .

Step-by-Step Repair Process

• Cut out the damaged portion of the cable to create clean working edges .

• Strip back the outer jacket and protective coatings to expose the fiber strands .

• Clean the fiber ends with alcohol wipes to remove impurities .

• Cleave the fiber to the recommended length using a precision cleaver .

• Insert the fibers into a mechanical splice or fusion splicer and secure them .

• Test the connection using a visual fault locator or fiber optic meter to ensure proper alignment and low signal loss .

• Apply protective covers or heat shrink tubing to seal the splice and protect it from environmental damage .

Expected Repair Time

Repair duration depends on the number of fibers, type of splicing, and complexity of the damage. Most fiber optic repairs can be completed within 2–4 hours after technicians arrive onsite, though complex cases may take longer . Fusion splicing generally provides the most reliable long-term performance, while mechanical splicing is faster for temporary restoration .

Conclusion

Repairing a severed fiber optic cable requires precision, proper tools, and careful handling. Following the correct procedures ensures a low-loss, reliable connection and minimizes network downtime. For critical or complex networks, professional technicians are recommended to guarantee long-term stability and performance .

Article Content

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Help to understand the repair of cut fiber optic cable by ...

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