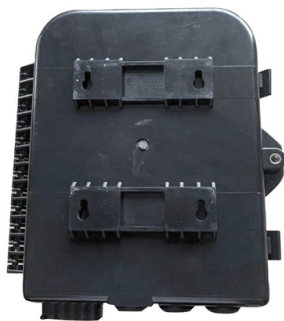


Cable and Optical Fiber Combustion Testing Equipment



Overview

Cable and fiber optic cable line integrity combustion testing machine. This testing machine ensures precise, standardized evaluation of cable and optical.

Key Takeaways

Cable and optical fiber combustion testing machines evaluate fire resistance and circuit integrity under high-temperature flame conditions, ensuring compliance with international safety standards.

Purpose and Applications

These testing machines are designed to assess the ability of cables and optical fibers to maintain circuit integrity when exposed to flames of at least 750°C. They are essential for type testing, factory inspections, research and development, and verification of fire-resistant cable designs. The equipment is widely used in cable manufacturing, electrical inspection agencies, fire safety laboratories, and research institutions to ensure safety in power distribution and communication systems during fire events .

Standards Compliance

The equipment complies with GB/T19216 and IEC60331 series standards, including:

- GB/T19216.21-2003 / IEC60331-21: Circuit integrity for cables up to 0.6/1.0 kV
- GB/T19216.23-2003 / IEC60331-23: Circuit integrity for electric data cables

- GB/T19216.25-2003 / IEC60331-25: Circuit integrity for optical fiber cables These standards define procedures, requirements, and test conditions to ensure reliable and repeatable fire-resistance testing .

Technical Features

- Modular Combustion Chamber: Typically cubic (3m x 3m x 3m, 27 m³), constructed with double-layer stainless steel and insulation for uniform flame distribution .
- Flame Generation: Equipped with Venturi mixing burners, ribbon-type propane burners, and dual flow meters for precise temperature control and stable combustion .
- Real-Time Monitoring: Continuous detection of open or short circuits during testing, with quantitative data on cable performance under fire conditions .
- Multiple Test Modes: Supports AC 1000V/3A line testing, vibration simulation, water spray, and mechanical impact tests to replicate complex environments .
- Safety Features: Includes leakage, overcurrent, and overvoltage protection, automatic high-voltage cutoff, and exhaust systems to prevent laboratory contamination .

Benefits

- Ensures accurate and repeatable fire-resistance testing.
- Provides quantitative evaluation of cable and optical fiber performance under extreme conditions.
- Supports research, quality control, and compliance verification for fire safety standards.
- Modular and configurable design allows testing of different cable diameters and types, including mineral-insulated and fire-resistant cables .

Additional Considerations

For laboratory or field applications, companies like OPTOKON provide complementary fiber optic measurement and diagnostic equipment, which can be used alongside combustion testing to evaluate signal quality, loss, and performance in optical networks . This equipment is critical for ensuring that cables and optical fibers maintain functionality during fire events, protecting both infrastructure and human safety.

Article Content

Cable and fiber optic cable line integrity combustion testing machine ...

This testing machine ensures precise, standardized evaluation of cable and optical fiber line integrity under extreme fire conditions,

Cable Integrity Combustion Testing Machine

This device is used for testing cables and optical fibers that are required to maintain circuit integrity when subjected to a flame with a

Optical Fiber Cable Testing Equipment | Torontech

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AEN071, Revision 4 Corning Optical Communications manufactures quality flame retardant optical fiber cables for indoor

Fiber Optic Testing and Certification

Fiber Optic Cable Certification Fiber Optic Test Kits / OLTS Optical Power Meters Optical Light Sources Visual Fault Locators Fiber

Cable and fiber optic cable line integrity combustion testing machine ...

The Cable and Fiber Optic Cable Line Integrity Combustion Testing Machine is designed to evaluate the fire resistance and circuit

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Essential Guide to Cable Combustion Testing and Fire Safety

For too long, companies have relied on outdated testing methods, or worse, simply accepted the manufacturer's word

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Fire-Resistance Cable Burning Test Apparatus

The apparatus subjects the test sample to a controlled gas flame under specified temperature, time, and electrical loading conditions,

Test Equipment

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