



OPTICAL CABLE FIRE RESISTANCE TESTER

IEC 60331-25, IEC 60331-11

Optical Cable Fire Resistance Tester TTOFTFS-2000 is a precision testing instrument designed to assess the fire resistance and circuit integrity of optical cables.

APPLICATIONS

Optical Cable Fire Resistance Tester

Sample Preparation

A sample should include a completed cable segment of at least 5 meters, with both ends extending outside the test chamber. Identical optical fibers must be connected at each end, if needed, to ensure a total length suitable for the optical testing method.

Continuity Checking Arrangement

At the end of the test, verify the continuity of each fiber or the specific fibers outlined in the relevant cable specification.

Test Procedure

Secure the sample in the clamp and supports. Position the burner correctly based on the x and y values determined during the verification process (refer to IEC 60331-11). Connect the fiber(s) or those specified in the cable requirements to optical equipment to monitor or measure changes in optical transmittance per IEC 60793-4, method C10. Unless specified otherwise in the relevant standard, conduct the test at the declared nominal operational wavelength. Ignite the burner and adjust the

propane and air flow rates to match the values established during the verification process (see IEC 60331-11). Activate the optical equipment and monitor attenuation levels. The test must continue for the duration specified in the performance requirements. After extinguishing the flame, keep the cable sample connected to the optical monitoring equipment for an additional 15 minutes. The total test duration includes both the flame application and the 15-minute cooling period.

Performance Requirement

Flame Application Time The flame application duration should follow the relevant cable standard. If no specific standard is provided, a 90-minute flame application is recommended.

Acceptance Criteria

The cable maintains circuit integrity as long as the maximum increase in attenuation during the test does not exceed the value specified in the relevant standard.

Retest Procedure

If a failure occurs based on the requirements of the relevant standard, two additional samples must be tested. The test is considered successful if both samples meet the criteria.

Test Report

The test report must include the following details:

1. Full description of the cable tested
2. Cable manufacturer
3. Test wavelength
4. Any deviations from the standard testing methodology

5. Actual performance requirement applied (referencing clause 7 or the relevant cable standard)
6. Flame application time

Note: The flame application time typically corresponds to the circuit integrity rating specified in the cable requirements. If the cable is marked to indicate compliance with this standard, it is recommended to include the flame application time as well, e.g., "IEC 60331-25(90)" for a 90-minute flame application.

TECHNICAL SPECIFICATIONS

Model	TTOFTFS-2000
Test Platform	One
Adjustable Fire Temperature	450~950°C
Fuel Type	Propane
Combustion-supporting gas	Compressed Air > 1MPa
Temperature Sensor	K-type Coupler
Air Flowmeter range	20~200L/min
Fuel Flowmeter range	5~25L/min
Ignition	Automatic
Exhaust Fumes Filtering Tank	Filter exhaust fumes throughout the test
Testing chamber	Schematic for the chamber to be manufactured locally
Voltage	AC380V 50Hz 1kW



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