

Fire Resistance Assemblies Tester

케이블 내화 성능 시험기, FRA-815, UL1685, IEEE1202, IEEE 383



Introduction

FESTEC's Fire Resistance Assemblies Tester is included in both the IEEE 1202 and IEEE 383 standards. This test method is proceed in a chamber with a set volume for 20 minutes. During the 20 minutes, a sample cable is ignited with theoretically 20kW(70,000Btu/hr) flame using an ignition source fixed in a vertical position. This equipment evaluates a spread of flame of single core cable or multi core cable. If user wants to measure H.R.R (Heat Release Rate), Smoke density and so on, Heat Release Facility (additional part) is adoptable to this equipment.

Standard

- UL 1685 - Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables
- IEEE 1202 - IEEE Standard for Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial occupancies
- IEEE 383 - IEEE Standard for type Test of Class IE Electric Cables, Field Splices, and Connection for Nuclear Power Generation

Feature

- Test Enclosure dimensions : 2,600(W) x 2,600(D) x 3,100(H) mm, internal volume : 20.28m³, and Internal floor dimensions : 6.76m².
- It has a Hood and a Collection Box up to Chamber for catch to combustion gas.
- A thermocouple and Bi-directional Velocity Probe to measure temperature and velocity of waste gas are installed on the Exhaust Duct.
- Especially, Bi-directional Velocity Probe can be accurately measured flow velocity inside duct even combustion gas of high temperature and turbulence under conditions.
- The Tray of Vertical Tray Flame Tester test is made of steel ladder. The basic size of the Tray is 305(W) x 76(D) x 2438(H) mm and steel width of the horizontal column is 25±6mm and distance between the center of the vertical column is 229mm.
- When specimen install on the tray, tray can be put on the floor on using a rotation of Vertical Tray. After tray makes straight up vertically, it starts test.
- Burner used in the Vertical Tray Flame Tester is a Propane gas burner of ribbon type including a Ventury mixer that meets IEC60332-3.
- The flow meter used in the Vertical Tray Flame Tester is not the existing rota-meter type of flow meter but a Mass Flow Controller that can provide a regular flux even if propane and air pressure change.
- Using DAQ Board the internal Enclosure and flame temperature of burner can be accurately measured; Gas and Air solenoid valve can be controlled.
- Solenoid valve and igniter in Control Rack can be manually controlled, in emergency cases by fitting the emergency switch the power, excluding the computer, can be shut off.

Test Result

- Test result data is automatically recorded in the program. If record is missing, it is enable to users to type directly.
- Test Date, Test Location, Quantity of Test, Test Manager, Observer of Test, Name of Manufacturer
- Inside for enclosure size (if do not comply with this standard)
- Manufacturers identification/type and catalog number
- Detail for cable structure description (Minimum structure and the highest weight structure)
- The highest weight structure for weight of non-metallic and metal structure
- NEC or CEC for contraptious

Specification

Model	FT-FRA-815
Size	2,600 × 2,600 × 3,100
Size(Control)	600 × 750 × 1,600
Power	AC 220V, 50/60Hz, 15A
Weight	500kg(chamber), 130kg(control)
Exhaust	37.8~40.2 m ³ /min(measuring), Min. 100m ³ /min(extraction)
Utilities	Propane Gas, Compressed Air, Hood, Duct, Dust Collector