Glow Wire Test Apparatus

(IEC 60695-2-10)

IEC 60695-2-10 Fire hazard testing. Part 2: Test methods Glow-wire test and guidance.

The best method for testing electro technical products with regard to fire hazard is to duplicate exactly conditions occurring in practice.

In most cases this is not possible. Hence, for practical reasons, testing of electro technical products for fire hazard is conducted by simulating as closely as possible actual effects occurring in practice.
A loop of resistance wire is electrically heated to a specified temperature and the specimen being tested is brought into contact with this heated wire with a defined horizontal loading.
Observations and measurements are made to evaluate the fire hazard presented by the specimen during exposure to elevated temperatures.
The test described in IEC 60695-2-10.

Our Glow Wire Test Apparatus is fully automated, controlled by microcontroller.
You only should set:

- The time test
- The temperature test.
- The observation time.
- Put the sample in the car and press the Start button.

The sample holder will begin to move forward until glow loop touch and, after the elapsed time settings, the car will go back to the starting position.

Steps to make a test:

- Place the sample in the Glow Wire Test Apparatus.
- Place a piece of tissue paper (tissue paper) on timber that is in the box containment of waste and flames below the filament.
- Turn on the equipment.
- Run the sample holder (the car) to a position that the filament not radiates heat to the sample, using the keys of the car forward and reverse, respectively (Manual Mode).
- Go to "Start Automat. Test?" Screen. In this screen you can see the values that are currently settings.
- Press the START button, and the equipment will automatically raise and stabilize the filament temperature to 960 °C (or the temperature that you set). It is considered stable if, during a period of 60 seconds there is a greater variation in temperature to 10 °C.
- After that the sample holder automatically advances to make contact with the tip, will begin a timed to the display, 30 sec (or the time that you set), and withdrawn immediately, restarting a new count of 30 sec (or the time that you set), for evaluation. In this process the equipment will allow for maximum penetration of the filament in the sample 7 mm.
- During the test the operator must pay attention to two events:
  - In case of any fire you should press the button Start, and the equipment automatically recorded in the display in that time test started the fire.
  - In addition, you should see the metric rule behind the wire to see how is the height of the flame.
- After the test you will hear a beep to indicate that the test has finished and you can see on the display "Test Finished".
- If it is necessary to stop the test for any reason, press the reset button "Rst" (Reset), which returned to start the control program and stop the advance of any function being performed.

Seguridad Eléctrica reserves the right to change the specifications or design without prior notice.

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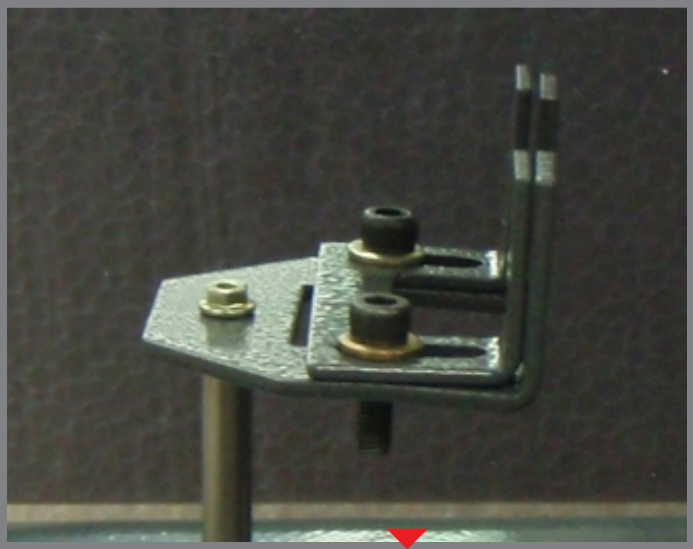
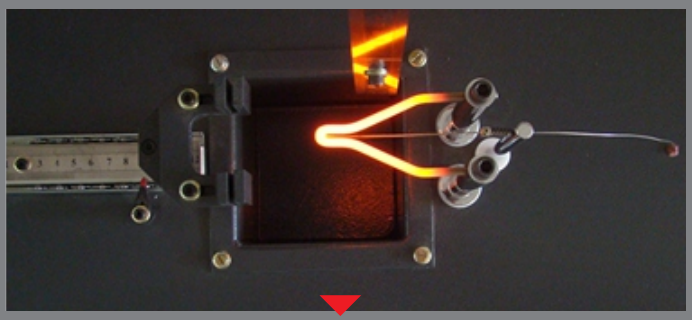


Sample Holder



Glow Wire to 960ºC

Keyboard

Height meter of flame

Technical characteristics.

- Totally controlled by microcontroller.
- Electrically heated by current transformer 150 A, to a predetermined temperature from 0 to 999ºC.
- Glow wire Nickel/Chromium (80:20), Ø 4mm, shaped as specified in standard.
- Temperature is measured by a Thermocouple Type K Ø 0.8mm and is indicated on digital display.
- Programmable Test Temperature.
- Motorized sample holder, low friction.
- Automatic, motorized forward and reverse motion of test specimen.
- Test sample contact force against glow wire preloaded to 1.0N (+/-0.2N).
- Penetration depth: 7mm (+/- 0.5mm).
- Digital timer to control Glow wire application time, test duration.
- Programmable temporized of the test sequence.
- Power supply: 220 Vca 50-60Hz.
- Dimensions: 500 x 400 x 440 (h) mm. Approximate.
- Weight: 33 Kg.
- Reference: IEC 60695-2-10.

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