Breakdown Voltage Tester

Model, RDT2

Model RDT2

Test procedure

Wire diameter up to 0.10 mm

A straight piece of wire with insulation removed at one end shall be connected to the upper terminal and wound around a 25 mm cylinder once. As specified in tab.1, a load shall be applied to the lower end of the wire to keep the specimen in close contact with the cylinder.

The test voltage shall be applied between the wire's conductor and the cylinder at a rate of 20V/1" for breakdown voltage up to 500V, 100V/1" between 500 and 2500V, or 500V/1" for higher breakdown voltage. The test shall be carried out at room temperature

Five specimens shall be tested. The five single values shall be reported.

Wire diameter from 0.10 mm to 2.50 mm

A straight piece of wire, approximately 400 mm in length, with the insulation removed at both ends, shall be twisted back on itself for a distance of 125 +/- 5 mm on a twisting machine with a load applied to the wire pair and with the number of twists given in tab.2. The loop at the end of the twisted section shall be cut at two places to provide a maximum spacing between the cut ends. Any bending to ensure adequate separation between the two wire ends shall avoid sharp bends or damage to the coating.

The test voltage shall be applied between the two conductors of the wires at a rate of 100V/1" for breakdown voltage from 500V up to 2500V or 500V/1" for higher breakdown voltage
Five specimens shall be tested. The five single values shall be reported

Wire diameter over 2.50 mm and strip wire
A sample of wire of approximately 350 mm in length with the insulation removed at one end shall be bent (on the flat for strip) around a mandrel to form a U; the mandrel diameter shall be:

25 mm for nominal thickness up to and including 2.500 mm
50 mm for nominal thickness and diameter over 2.500 mm

The specimen shall be placed in a container surrounded by at least a 5 mm shot. The ends of the specimen shall be sufficiently long to avoid flashover
The test voltage shall be applied between the wire's conductor and the shot at a rate of 100V/1" for breakdown voltage between 500 and 2500V, or 500V/1" for higher breakdown voltage
Five specimens shall be tested. The five single values shall be reported

System description

- Suitable for wire diameters from 0.018 to 8 mm (56 – ½ AWG) and strip.
- High voltage transformer rated power 600 VA
- Digital voltmeter: 4 ½ digits, resolution 1 V

- Suitable for determination of temperature index test and timed test
- Automatic rise time voltage according to the standards
- Digital timer for timed test from 0.2” up to 9999 h
- A double safety device is applied to the cell door
- Two testing voltage ranges: V10 0-2kV 0-10kV
- The environmental temperature test chamber is complete with a light and fan for air circulation
- The control unit with breakdown voltage is held on the panel meter
- Supplied with one electrode for round wire diameter 0.1 – 2.5 mm and one with steel balls for wire diameter >2.5 mm
- Fully automatic

DSE Test Solutions A/S
Sverigesvej 19
DK-8700 Horsens
Denmark

+45 7561 8811
www.dsetestsolutions.com
dse@dse.dk

Specifications

Model	RDT2
RDT2	
Dimensions	
Dimensions (WxDxH)	550x515x950 mm
Weight	90 kg / 198.4 lb
Power supply	
Volt	230 V
Hertz	50/60 Single phase
Volt-amperes	730
Options	**Test voltages**
V15 V15 V20 V30	 0-3 kV 0-15 kV 0-4 kV 0-20 kV 0-6 kV 0-30 kV
E0	Electrode suitable for wire diameter < 0.10 mm (38AWG), complete set of weights
TWM	Twist specimen fabricator, complete of loading weights and digital twist counter.
E4	Sample holder for wire >2.5mm with steel balls. One persample.
IND	Ten samples electrode, suita-ble for temperature index test
Standards	
IEC	60851-5.4
IEC	172
DIN	46453
NEMA	MW 1000
JIS C	3216-5

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