



TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING

Connection devices for low voltage circuits for household and similar purposes Part 2-4 Particular requirements for twist-on connecting devices

IEC 60998-2-4 1. Edition (1993)

R=Required by Lab

S=May be subcontracted

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
8.1 to 8.3	Inspection of the marking	Not required	R
8.4	Durable and easily legible of the marking	Only chemicals	R
9	Protection against electrical shock	Standard test finger, indicator between 40 V and 50 V, heating cabinet	R
10	Connection of conductors	Not required	R
10.101 to 10.103	Connection of conductors	Cables	R
11.1 and 11.6	Construction	Cables according to IEC 228 or equivalent AWG conductors	R
11.101 to 11.102	Construction	Not required	R
12.1	Resistant to ageing	Heating cabinet, balance with weights and spanner with torquemeter	R
12.2	Humidity conditions	Humidity cabinet	R
13.1 to 13.2	Insulation resistance	Under consideration	R
13.3 to 13.4	Electrical strength	Adjustable high voltage test equipment, between 50 Hz and 60 Hz, output current at least 200 mA, overcurrent relay less than 100 mA	R



Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
14.1 to 14.2	Mechanical strenght	Tumbling barrel and impact test apparatus as specified	R
14.101 to 14.104	Mechanical strength	Specified test apparatus, weights and spanner with torquemeter	R
15.1 to 51.4	Temperature rise	AC source up to 125 A, temperature measuring instruments, current measuring devices and spanner with torquemeter	R
15.101 to 15.102.1	Temperature cycles test	Cycle heating cabinet, current and voltage measurement devices and spanner with torquemeter	R
15.102.2	Short-time withstand current test	AC source up to 4200 A, current and voltage measurement devices	R
16.1 to 16.3	Resistance to heat	Heating cabinet, standard test finger and specified test apparatus	R
17	Creepage distances and clearances	Appropriate measuring device for distances	R
18	Resistance of insulation material to abnormal heat and fire	Specified test apparatus according to IEC 60695-2-1	R
19	Resistance of insulation material to tracking	Specified tests apparatus according to IEC 60112	R

Note: The presence of equipment alone does not indicate a satisfactory situation. Assessors must evaluate the equipment design, calibration, uncertainty and documentation to ensure compliance with the directions of the standard. The requirements of ISO Guide 25 regarding validation are applicable, as the tests of this standard are not standardised tests.