

TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING
IEC 60320-1:2015/AMD1:2018, Edition 3.0
Appliance couplers for household and similar general purposes –
Part 1: General requirements
PROVISIONAL

“R”	Required
“S”	May be subcontracted, see OD 2012
“SP”	Specialized Facility, see IECEE 02-2
“W”	Witness testing in the categories “MED” and “MEAS”
“3PPS”	Three Phase Power Supply required

Clause	Measurement/testing	Testing / measuring equipment / material needed	Equipment Classification
8	Check of markings	Water, petroleum spirit, piece of cloth	R
9	Check of dimensions and compatibility	IEC 60320-3:2014 GO- and NOT-GO gauges, caliper	R
10	Protection against electrical shock	IEC 61032 standard test probe B, standard test finger, heating cabinet, measuring instruments (time, temperature)	R
12	Test of screw-type terminals	Test equipment according to IEC 60999-1	R
13.4	Construction: Test for non-solid pins	Figure 2: Device for testing non-solid pins Heating cabinet, measuring instruments (time, temperature), weights or dynamometer	R
14	Humidity treatment	Humidity chamber	R
15.2	Insulation resistance	Insulation test equipment, measuring instruments (time), metal rod with appropriate diameter, metal foil	R
15.3	Dielectric strength	High voltage test equipment (output current > 200 mA), measuring instruments (time), metal rod with appropriate diameter, metal foil	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Equipment Classification
16	Withdrawal force test	Figure 3: Apparatus for checking the withdrawal force Figure 4: Gauge for verification of the minimum withdrawal force Gauges for maximum withdrawal force (multi pin gauges) Gauges for minimum withdrawal force (single pin gauges)	R
18	Resistance to heating of appliance couplers for hot or very hot conditions	Apparatus for heating test, heating cabinet, measuring instruments (temperature, time)	R
19 20	Breaking capacity Normal operation	Appropriate test apparatus for making and breaking test, AC source, adjustable load (resistors and inductors), measuring instruments (voltage, current, power factor, time), cycle-counter Figure 5: Circuit diagram for breaking capacity and normal operation tests	R
21	Temperature rise	AC source, measuring instruments (current, time, temperature), screw-driver or spanner with torque meter withstand the test of Clause 16.: Figure 3: Apparatus for checking the withdrawal force Figure 4: Gauge for verification of the minimum withdrawal force Gauges for maximum withdrawal force (multi pin gauges) Gauges for minimum withdrawal force (single pin gauges)	R
22.2	Cord anchorage	Figure 6: Apparatus for testing the cord anchorage Apparatus for torque test Caliper, screw-driver or spanner with torque meter	R
22.3	Flexing test	Figure 7: Apparatus for the flexing test Weights, AC source, adjustable load (resistive), cycle-counter	R
23.2	Free fall test	Tumbling barrel according to IEC 60068-2-32 Scale	R
23.3	Lateral pull test	Figure 8: Example of apparatus for pulling test Weights withstand the test of Clause 16.3 Figure 4: Gauge for verification of the minimum withdrawal force	R
23.4	Impact test	Vertical hammer or spring hammer according to IEC 60068-2-75	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Equipment Classification
23.5	Deformation test	IEC 60320-3:2014 Figure 9: Blades for checking of the resistance against deformation Heating cabinet, measuring instruments (time, temperature), microscope	R
23.6	Torque and pull test	Apparatus for torque test, weights or dynamometer, tensile test device	R
24.1	Resistance to heat	Heating cabinet, ball-pressure test apparatus, measuring instrument (time, temperature), microscope	R
24.2	Resistance to ageing	Heating cabinet, measuring instruments (temperature), rough cloth	R
25	Screws, current carrying parts and connections	Screw-driver or spanner with torque meter, caliper	R
26	Creepage distances, clearances	Caliper, appropriate gauges	R
27.1	Resistance to heat and fire	Glow-wire test apparatus according to IEC 60695-2-10 Pine-wood board, tissue paper	R
27.2	Resistance to tracking	Tracking test apparatus according to IEC 60112	R
28	Resistance to rusting	Chemicals, humidity cabinet, heating cabinet, measuring instrument (time, temperature)	R