

TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING IEC 60320-1:2021

Appliance couplers for household and similar general purposes– Part 1: General requirements

“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)	SMT-02T10
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	GDJS-015B
14	Humidity treatment	Humidity chamber	
15.2	Insulation resistance	Insulation test equipment, measuring instruments (time), metal rod with appropriate diameter, metal foil	WB2681A
15.3	Dielectric strength	High voltage test equipment (output current >200mA), measuring instruments (time), metal rod with appropriate diameter, metal foil	

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)	
18	Resistance to heating of appliance couplers for hot or very hot conditions	Apparatus for heating test, heating cabinet, measuring instruments (temperature, time)	GW-500
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	
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)	WS-1
22.2	Cord anchorage	Figure 6: Apparatus for testing the cord anchorage Apparatus for torque test Caliper, screw-driver or spanner with torque meter	
22.3	Flexing test	Figure 7: Apparatus for the flexing test Weights, AC source, adjustable load (resistive), cycle-counter	WDT-B42
23.2	Free fall test	Tumbling barrel according to IEC 60068-2-32 Scale	IK07-10VT
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	PULL-2000KG
23.4	Impact test	Vertical hammer or spring hammer according to IEC 60068-2-75	ZBP-T

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	GW-500
23.6	Torque and pull test	Apparatus for torque test, weights or dynamometer, tensile test device	
24.1	Resistance to heat	Heating cabinet, ball-pressure test apparatus, measuring instrument (time, temperature), microscope	ZBP-T GW-500
24.2	Resistance to ageing	Heating cabinet, measuring instruments (temperature), rough cloth	GDJS-015B
25	Screws, current carrying parts and connections	Screw-driver or spanner with torque meter, caliper	
26	Creepage distances, clearances	Caliper, appropriate gauges	
27.1	Resistance to heat and fire	Glow-wire test apparatus according to IEC 60695-2-10 Pine-wood board, tissue paper	ZRS-3H
27.2	Resistance to tracking	Tracking test apparatus according to IEC 60112	TTC-1
28	Resistance to rusting	Chemicals, humidity cabinet, heating cabinet, measuring instrument (time, temperature)	GDJS-015B