TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING
IEC 60320-1:2001-06+A1:2007-08, Edition 2.0
Appliance couplers for household and similar general purposes – Part 1: General requirements

R = Required to be at Lab
S = May be subcontracted
W = May be witnessed at MTL
SF = Specialized Facility
3PPS = Three Phase Power Supply required

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
8	Check of markings	Water, petroleum spirit, piece of cloth	
9	Check of dimensions	Figures 2; 4; 5; 5A; 6; 7; 8; 9 to 9T; 27: GO- and NOT-GO gauges, Caliper	
10	Protection against electrical shock	Figure 10: Standard test finger, Heating cabinet, measuring instruments (time, temperature)	SMT-PB
12	Test of screw-type terminals	Test equipment according to IEC 60999-1	
13.4	Construction: Test for non-solid pins	Figure 11: Device for testing non-solid pins Heating cabinet, measuring instruments (time, temperature), weights or dynamometer	
14	Humidity treatment	Humidity chamber	GDJS-015B
15.2	Insulation resistance	Insulation test equipment, measuring instruments (time), metal rod with appropriate diameter, metal foil	WB2681A
15.3	Electric strength	High voltage test equipment (output current >200mA), measuring instruments (time), metal rod with appropriate diameter, metal foil	WB2671B

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
16	Withdrawal force test	Figure 12: Apparatus for checking the withdrawal force Gauges for maximum withdrawal force (multi pin gauges) Gauges for minimum withdrawal force (single pin gauges)	BCL-1
18	Resistance to heating of appliance couplers for hot or very hot conditions	Figure 13: Apparatus for heating test, Heating cabinet, measuring instruments (temperature, time)	
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	CZKS-6 DFX-20
21	Temperature rise	AC source, measuring instruments (current, time, temperature), Screw-driver or spanner with torque meter	WS-1
22.3	Torque test	Apparatus for torque test Caliper, Screw-driver or spanner with torque meter	
22.4	Flexing test	Figure 17: Apparatus for flexing test Weights, AC source, adjustable load (resistive), cycle-counter	SW-6
23.2	Tumbling barrel test	Tumbling barrel according to IEC 60068-2-32 Scale	LS-DDT1-B
23.3	Pulling test	Figure 19: Apparatus for pulling test Weights	GNGPL-3610-2PA
23.4	Pressure test	Figure 20: Apparatus for pressure test Weights, measuring instruments (time)	
23.5	Impact test	Figure 21: Apparatus for impact test	IK01-06
23.6	Deformation test	Figure 22: Blades for checking of the resistance against deformation, Heating cabinet, measuring instruments (time, temperature), microscope	
23.7	Separation of parts	Apparatus for torque test, weights or dynamometer	
23.8	Pressure test	Figure 24: Apparatus for pressure test on connectors Measuring instruments (time)	
24.1.1	Resistance to heat	Heating cabinet Measuring instrument (time, temperature)	GDJS-015B
24.1.2	Ball pressure test	Figure 23: Apparatus for ball pressure test, Heating cabinet, measuring instruments (time, temperature), microscope	ZBP-T GDJS-015B

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
24.1.3	Pressure test	Figure 24: Apparatus for pressure test on connectors, Heating cabinet, measuring instruments (time, temperature)	
24.2.	Resistance to ageing	Heating cabinet, measuring instruments (temperature), rough cloth	
25	Screws, current carrying parts and connections	Screw-driver or spanner with torque meter	
26	Creepage distances, clearances	Caliper, appropriate gauges	CK-1
27.1	Glow-wire test	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