



## TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING

### IEC 60669-1:1999-10, Edition 3.0

#### Switches for household and similar fixed electrical installations - Part 1: General requirements

R=Required by Lab

S=May be subcontracted

3PPS=Three Phase Power Supply required

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
6	Inspection of the marking	None	R
8	Marking	None	R
8.1 to 8.8	Inspection of the marking	None	R
8.9	Indelibility of markings	Chemicals	R
9	Dimensional measurement	Slide-gauge	R
10	Protection against electric shock		
10.1	Checking of the accessibility	Standard test finger, unjointed test finger, indicator, heating cabinet	R
10.2 to 10.7	See (sub-) clauses 11.4, 15.2, 16 and 23	See the relevant sub-clauses	R
11	Provision for earthing		
11.1 to 11.3	See Clause 12	See the relevant sub-clause	R
11.4	Measurement of contact resistance	AC source: max. 12V, max. 25A, measuring instruments	R
12	Terminals		
12 to 12.2.12	Mechanical tests (torque, pull) on screw terminals	Weights, screwdriver and spanner with torquemeter	R



IEC SYSTEM FOR CONFIRMITY TESTING AND  
CERTIFICATION OF ELECTRICAL EQUIPMENT

COMMITTEE OF TESTING LABORATORIES

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12.3 to 12.3.10	Mechanical tests on screwless terminals Electrical tests ; mV-Meter	Weights	R
12.3.12	Conductor deflecting test	Specified test apparatus with measuring instruments	R
13	Constructional requirements	Test on membranes, heating cabinet, refrigerator	R
14	Mechanism	Inspection, manual tests Not required	R
14.3	Slow operation	See clause 19	R
15	Resistance to ageing, to harmful ingress of water and to humidity		
15.1	Ageing test	Heating cabinet, climatic chamber	R
15.2	Ingress of water	Test devices for IP X4 and IP X5 according to IEC 60529	R
15.3	Humidity treatment	Humidity cabinet	R
16	Insulation resistance and electric strength		
16.1	Insulation resistance	DC source (500V) and instruments	R
16.2	Electric strength	Adjustable high voltage test equipment (AC) up to 4000V	R
17	Temperature-rise test	AC source up to 75A, temperature measuring instruments and devices	R
18	Making and breaking capacity tests specified according to the ratings	Test apparatus according to method of actuating the switch, supply source with a short circuit capacity of min. 1500A, adjustable load circuit (resistors and inductors), tungsten filament lamp load, measuring instruments	R 3PPS
19	Normal operation, tests specified according to the ratings	See also clause 18, special load circuit for fluorescent lamp loads	R
20	Mechanical strength		
20.1	Impact test	Specified test apparatus	R
20.2	Mounting test on cylinder surface	Specified test arrangement, test screwdriver	R
20.3	Test of screwed glands	Test spanner	R
20.4 to 20.8	Removal of covers, cover-plates	Specified gauges	R



Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
20.9	Pull test on operating member of an cordoperated switch	Dynamometer, weights	R
21	Resistance to heat, treatments according to test specifications	Heating cabinets	R
22	Screws, current carrying parts and connections		
22.1 to 22.4	Inspection, manual tests, lightening	Test screwdriver, spanner	R
22.5 to 22.7	Inspections and chemical tests on metals of current carrying parts	Instruments for chemical analysis	S
23	Creepage distances, clearances	Checking by measurement with slide gauges	R
24	Resistance of insulating material to abnormal heat, to fire and to tracking		
24.1.1	Gow-wire test	Test apparatus according to IEC 60695-2-1	R
24.2	Resistance to tracking	Test apparatus according to IEC 60112	R
25	Resistance to rusting, treatment	Chemicals, humidity cabinet, heating cabinet	R
26	EMC requirements		
26.1	Immunity	Not required	
26.2	Emission	Not required	

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 standardized tests.