



**IEC 60838-2-1 (1994) – A1 (1998) – A2 (2004)**  
**TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING**  
**Miscellaneous lampholders – Part 2: Particular requirements**  
**Section 1: Lampholders S14**

**R** = Required by Lab

**S** = May be subcontracted

**W** = Witness testing

**3PPS** = Three Phase Power Supply required

| <b>Clause</b> | <b>Measurement/testing</b>                          | <b>Testing / measuring equipment / material needed</b>  | <b>Subcontracting</b> |
|---------------|---|---|-----------------------|
| 7             | Marking shall be durable and easily legible         | Petroleum spirit, water, cloth.   | <b>R</b>              |
| 8             | Protection against electric shock                   | Standard test finger (IEC 60529), force gauge.  | <b>R</b>              |
| 9             | Terminals (screw terminals and screwless terminals) | Digital calliper (or equivalent), torque screw driver/spanner, pull test apparatus and various weights, A-meter, mV-meter, heating cabinet.                         | <b>R</b>              |
| 10            | Provision for earthing                              | AC/DC source $\geq 10$ A (max. 12 V), A-meter and mV-meter.   | <b>R</b>              |
| 11            | Construction  | Test caps(having nominal dimensions), A-meter, thermocouples or melting particles, micrometer, pull test apparatus, torque test apparatus, variable current supply. | <b>R</b>              |



**IEC SYSTEM FOR CONFIRMITY TESTING  
AND CERTIFICATION OF ELECTRICAL  
EQUIPMENT**

**COMMITTEE OF TESTING LABORATORIES**

| <b>Clause</b> | <b>Measurement/testing</b>   | <b>Testing / measuring equipment / material needed</b>   | <b>Subcontracting</b> |
|---------------|--|--|-----------------------|
| 12            | Switched lampholders   | Switch cycling device, voltage / current source, voltmeter, ammeter, insulation resistance and electric strength test equipment.   | <b>R</b>              |
| 13            | Moisture resistance, Insulation resistance test and electric strength test | Climate chamber, DC source 500 V, Megaohm meter, electric strength test equipment (output current > 200 mA, overcurrent relay <100 MA).  | <b>R</b>              |
| 14            | Mechanical strength test   | Pendulum hammer (specified in IEC 60068-2-75).   | <b>R</b>              |
| 15            | Screws, current carrying parts and connections                             | Equipment for chemical analysis, digital calliper (or equivalent), torque test screwdriver/spanner, test rods.   | <b>R</b>              |
| 16            | Creepage distances and clearances  | Digital calliper (or equivalent), feeler gauges.   | <b>R</b>              |
| 17            | Endurance  | Test caps, heating cabinet, A-meter, resistance meter.   | <b>R</b>              |
| 18            | Resistance to heat and fire  | Ball pressure test apparatus to figure 1 (see also CTL D.S. N. 391.mod), heating cabinet.<br>Glow wire test apparatus (IEC 60695-2-1).<br>Needle flame test apparatus (IEC 60695-2-2).<br>Proof-tracking test apparatus (IEC 60112).<br>Test caps or dummy lamps, heating cabinet, gauges of IEC 60061-3 as far as they exist. | <b>R</b>              |
| 19            | Resistance to excessive residual stresses (season tracking) and to rusting | Acetone and petrol spirit (or the like), ammonium chloride solution, test cabinet (closeable glass vessel).<br>Degreasing agent, glass bowls, 10% solution of ammonium chloride in water, test solution, heating cabinet.  | <b>R</b>              |