



**TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING  
IEC 61347-2-1:2000 - A1 (2005) – A2 (2013)**

**Lamp controlgear – Part 2-1: Particular requirements for starting devices (other than glow starters)**

- “R” Required
- “S” May be subcontracted, see OD 2012
- “SF” 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	Subcontracting
12	Pulsing test	Pulse counter, oscilloscope, variable supply, voltmeter	<b>R</b>
14	Fault conditions	Meter to measure lamp current and pre-heat current, equipment to measure winding temperature	<b>R</b>
14.7	Fault conditions of independent devices	Thermocouples or similar, meter to measure lamp current, variable supply, voltmeter, meter to measure current through ballast	<b>R</b>
15	Heating	Test corner, draught proof enclosure	<b>R</b>
15.1	Normal operation	Ammeter, voltmeter, thermometer, thermocouples or other suitable device	<b>R</b>
15.2	Abnormal operation	Substitution resistor or deactivated lamp, thermometer, thermocouples or other suitable device, voltmeter	<b>R</b>
16	Pulse voltage	Test circuit acc to fig 1, capacitor 20pF, oscilloscope with high voltage probe or static voltmeter or spherical gap	<b>R</b>
17.1	Mechanical strength	Tumbling barrel, spring hammer	<b>R</b>
17.2	Mechanical strength	Test screwdriver or spanner (torque application devices)	<b>R</b>