TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING
IEC 60252-2:2010/AMD1:2013, Edition 2.0
AC motor capacitors –
Part 2: Motor start capacitors

"R"	Required
"S"	May be subcontracted, see OD 2012
"SPTL"	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
Clause 5 – Self-healing motor start capacitors			
5.1.6	Visual examination	No special equipment required	-
5.1.7	Voltage test between terminals	AC source Voltage measurement instrument	R
5.1.8	Voltage test between terminals and case	AC high voltage tester (0 to 3 kV) Voltage measurement instrument	R
5.1.9	Capacitance measurement	Capacitance meter (measurement at rated voltage) (Alternatives decribed in the standard)	R
5.1.10	Check of dimensions	Slide caliper	R
5.1.11.1	Robustness of terminations (tensile, bending, torsion, torque)	Mechanical testing facilities according to IEC 60068-2-21	R
5.1.11.2	Soldering	Soldering iron / soldering bath	S
5.1.11.3	Vibration	Vibration test equipment	S
5.1.11.4	Fixing bolt or stud	Torque meter	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
5.1.12	Sealing test	Ventilation oven 40 to 150 °C ± 2 °C	R
5.1.13	Endurance test	AC source 200 to 850 V ± 2 % Switching device for starting operation testing Ventilated oven 40 to 150 °C ± 2 °C Range of series resistors	R
5.1.14	Damp-heat test	Climatic chamber 40 °C ± 2 °C / 93 % ± 3 % RH	R
5.1.15	Self-healing test	AC source Voltage measurement instrument Apparatus for detection of self-healing breakdowns (e.g. acoustic detection) Insulation resistance meter	R
5.1.16	Destruction test – Sequential DC and AC test	AC source DC high voltage supply Voltage measurement instrument Current measurement instrument Variable inductor or range of inductors Temperature chamber (forced circulation)	R
5.1.16	Destruction test – Simultaneous DC and AC test	AC source DC high voltage supply DC decoupling capacitor $C \geq 10 \times C_x$ (C_x: Capacitor under test) Voltage measurement instrument Current measurement instrument Temperature chamber (forced circulation)	R
5.1.17	Resistance to heat, fire and tracking	Ball pressure test apparatus; Heating cabinet Glow-wire test apparatus Tracking test device	R
5.3.1	Creepage distances and clearances	Slide caliper	R
5.4	Marking	No special equipment required	-
Clause 6 – Electrolytic motor start capacitors			
6.1.5	Visual examination	No special equipment required	-
6.1.6	Voltage test between terminals	AC source Voltage measurement instrument	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
6.1.7	Voltage test between terminals and case	AC high voltage tester (0 to 3 kV) Voltage measurement instrument	R
6.1.8	Capacitance and power factor measurement	AC source Voltage measurement instrument Current measurement instrument Active power measurement instrument (designed to operate accurately at cos φ = 0,1)	R
6.1.9	Check of dimensions	Slide caliper	R
6.1.10.1	Robustness of terminations (tensile, bending, torsion, torque)	Mechanical testing facilities according to IEC 60068-2-21	R
6.1.10.2	Soldering	Soldering iron / soldering bath	S
6.1.10.3	Vibration	Vibration test equipment	S
6.1.10.4	Fixing bolt or stud	Torque meter	R
6.1.10.5	Rapid change of temperature	Temperature change test chamber	R
6.1.11	Sealing test	Ventilation oven 40 to 150 °C ± 2 °C	R
6.1.12	Endurance test	AC source 200 to 850 V ± 2 % Switching device for starting operation testing Ventilated oven 40 to 150 °C ± 2 °C Range of series resistors	R
6.1.13	Damp-heat test	Climatic chamber 40 °C ± 2 °C / 93 % ± 3 % RH	R
6.1.14	Pressure relief test	AC source 200 to 850 V ± 2 %	R
6.1.15	Resistance to heat, fire and tracking	Ball pressure test apparatus; Heating cabinet Glow-wire test apparatus Tracking test device	R
6.3.1	Creepage distances and clearances	Slide caliper	R
6.4	Marking	No special equipment required	-