



TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING
IEC 61095:2009-02, Edition 2.0
Electromechanical contactors for household and similar purposes

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
9.2.2.1	Test of resistance to ageing	Climatic chamber 70 ± 2 °C Forcemeter 5 N	R
9.2.2.2	Test of resistance to humidity	Climatic chamber (IEC 60068-2-78) Dielectric strength test equipment: 2500 V~ (45 Hz ÷ 65 Hz) Minimum short circuit current: 0,2 A No over current tripping: < 0,1 A	R
9.2.2.3	Test of resistance to heat	Ball-pressure apparatus Heating cabinet $40...125 \pm 2$ °C Standard test finger Forcemeter 5 N	R
9.2.2.4	Test of resistance to abnormal heat and fire	Glow-wire test apparatus (IEC 60695-2-10, 60695-2-11)	R
		Flammability classification test equipment (IEC 60695-11-10) Hot wire ignition test equipment	S
9.2.2.5	Test of resistance to rusting	Refined petrol 10 % Solution of ammoniumchloride Heating cabinet 100 ± 5 °C	R
9.2.2.6	Test of resistance to tracking	Apparatus (IEC 60112), Solution A	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
9.2.3	Test on screws or nuts other than those on terminals	Torque-screwdriver: 0,2 Nm to 10 Nm Torque-spanner: 0,2 Nm to 10 Nm	R
9.2.4 (Annex H)	Test of protection of enclosed contactor	Test apparatus acc. IEC 60529: Jointed test finger Rigid sphere 50 mm diameter Rigid sphere 12,5 mm diameter Rigid steel rod 2,5 mm diameter Rigid steel rod 1,0 mm diameter	R
		Dust chamber	S
		Drip box Drip box -15° Oscillating tube/spray ± 60° or spray nozzle/spray ± 60° Oscillating tube/spray ± 180° or spray nozzle/spray ± 180°	R
		Water jet hose nozzle – nozzle 6,3 mm diameter Water jet hose nozzle – nozzle 12,5 mm diameter Immersion tank	S
9.2.5	Mechanical properties of terminals	Torque-screwdriver: 10 Nm Torque-spanner: 10 Nm Forcemeter: 10 N to 190 N Weight 0,3 kg to 6,8 kg Gauges A and B Test equipment for flexion test	R
9.2.6	Test of resistance to impact	Pendulumhammer 0,5 J Sphere test apparatus 2 J	R
9.2.7	Test of durability of marking	Water petrol	R
9.3.3.1	Operation	Transient recorder, oscilloscope	R
9.3.3.2	Operation limits	AC/DC power supply, multimeter, oscilloscope	R
9.3.3.3	Temperature-rise	Thermometer or fine thermocouples (0,2 mm) Resistance meter	R
9.3.3.4	Dielectric properties	Impulse voltage generator up to 12 kV (1,2 μs / 50 μs) Voltage up to 4 kV~ (45 Hz – 65 Hz)	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
9.3.3.5 9.3.3.6	Making and breaking capacities Operational performance capability	Transient recorder, oscilloscope Auxiliary switch Load equipment Power supply 1500 A~, U _e Timer	R 3PPS
9.3.4	Performance under short-circuit conditions	Transient recorder, oscilloscope Power supply and load equipment min. 6000 A~ Equipment for determining I ² t – values	S 3PPS
9.3.5	Overload current withstand capability	Power source for 8 × I _c	R
Annex I	Tests for equipment with protective separation	Equipment for distance measurement Impulse voltage generator up to 12 kV (1,2 μs / 50 μs) Voltage up to 4 kV~ (45 Hz – 65 Hz)	R