

TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING
IEC 61810-1:2015, Edition 4.0
Electromechanical elementary relays – Part 1: General and safety requirements

“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
7.3	Marking	Distilled water and petroleum spirit	R
8	Heating	Heat chamber without forced convection up to 125 °C Torque screwdriver (for screw type terminals) Coil voltage supply (a.c. or d.c.) up to 550 V Contact load supply up to 100 A Voltmeter, amperemeter, ohmmeter Temperature meter and fine wire thermocouples	R
9	Basic operating function	Heat chamber without forced convection up to 125 °C Refrigerating cabinet Coil voltage supply (a.c. or d.c.) up to 550 V Contact load supply up to 100 A Voltmeter, amperemeter Temperature meter	R
10	Dielectric strength	Heat chamber with a temperature of 55 °C ± 2 K Climatic test cabinet with a relative humidity between 91 % - 95 % and a temperature of 25 °C ± 5 K High-voltage transformer AC 50/60 Hz or DC, up to 5000 V Output current is at least 200 mA, not trip when the output current is less than 3 mA	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
11	Electrical endurance	Heat chamber up to 125 °C Power source for coil energization Switching (coil control) device Power source for contact loads Control device Measuring and indicating device	R 3PPS
12	Mechanical endurance	Power source for coil energization Switching (coil control) device Power source for contact load (pilot duty load) Control device Measuring and indicating device	R
13	Clearances, creepage distances and solid insulation	Suitable measurements, e.g. vernier caliper, feeler gauge, micrometer gauge, profile projectors	R
14	Terminations	Torque screwdriver, force gauge (pull force, push-force), optical measurements according to clause 13, solder bath 260 °C, soldering iron 350 °C Sockets shall comply with IEC 61984	R
15	Sealing	Water bath (for RT III) For RT IV and RT V relays an appropriate test of IEC 60068-2-17 shall be selected.	R S
16	Heat and fire resistance	Glow-wire test according to IEC 60695-2-10 Ball pressure test according to IEC 60695-10-2	R
Table 15	Material groups	Proof tracking test according to IEC 60112	R