

TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING
IEC 62271-200:2011-10 Edition 2.0
High-voltage switchgear and controlgear –
Part 200:AC metal-enclosed switchgear and controlgear for rated voltages
above 1 kV and up to and including 52 kV
PROVISIONAL

“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
6.2.6.1	Power-frequency voltage tests	Power-frequency voltage source Voltage measurement system	R
6.2.6.2	Lightning impulse voltage tests	Impulse voltage source Voltage measurement system	R
6.2.8	Artificial pollution tests for outdoor insulators	Power-frequency voltage source Voltage measurement system Test chamber with fog spray or steam-fog generator	S
6.2.9	Partial discharge tests	Power-frequency voltage source Voltage measurement system Coupling capacitor Partial discharge test system	R
6.2.10	Dielectric tests on auxiliary and control circuits	Withstanding voltage tester	R
6.2.11	Voltage test as condition check	Power-frequency voltage source Voltage measurement system	R
6.2.101	Dielectric tests on cable testing circuits	Power-frequency voltage source and voltage measurement system Direct current voltage source and voltage	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
		measurement system	
6.4	Measurement of the resistance of circuits	Circuit resistancemeasurement instrument	R
6.5	Temperature-rise tests	Current/voltage source Current measuring system The temperature data acquisition system	R
6.6	Short-time withstand current and peak withstand current tests	Short circuit current generating system Measurement control system	R or S*
6.7.1	Verification of the IP coding	Test-finger, test-rod, test-wire Dust chamber Raining test facility	R
6.7.2	Verification of the IK coding	Spring hammer Pendulum hammer	R
6.8	Tightness tests	Leak detector Pressure meter	R
6.9.1	Emission tests	Anechoic chamber EMI Receiver Artificial Mains Network(AMN) Antenna	S
6.9.2	Immunity tests on auxiliary and control circuits	The generator of power voltage dips The generator of lightning surge test The generator of electrical fast transient/burse test The generator of damped oscillatory wave test The generator of static electricity discharges test The generator of power frequency magnetic field test The generator of pulse magnetic field test Shielding Room	S
6.9.3	Additional EMC tests on auxiliary and control circuits	The generator of power voltage dips The generator of lightning surge test The generator of electrical fast transient/burse test The generator of damped oscillatory wave test The generator of static electricity discharges test The generator of power frequency magnetic field test The generator of pulse magnetic field test	S

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
		Shielding Room	
6.10	Additional tests on auxiliary and control circuits		
6.10.3/ 6.10.4	Electrical continuity of earthed metallic parts test/ Verification of the operational characteristics of auxiliary contacts	Low voltage direct current generator set	R
6.10.5	Environmental tests	Environmental test chamber Vibration response test device Seismic tests device	S
6.10.6	Dielectric test	Withstanding voltage tester	R
6.11	X-radiation test procedures for vacuum interrupters	X-ray inspection instrument	R
6.101	Verification of making and breaking capacities	Short circuit current generating system Voltage generating system Measurement control system	R or S*
6.102	Mechanical operation tests	Mechanical characteristic testing instrument	R
6.103	Pressure withstand test for gas-filled compartment	Pressure gauge	R
6.104	Tests to verify the protection of persons against dangerous electrical effects	Power-frequency voltage source Voltage measurement system Leakage currents measurement instrument	R
6.105	Weatherproofing test	Artificial precipitation device	R
6.106	Internal arc test	Short circuit current generating system Voltage generating system Measurement control system Indicator	S

Note: in clauses 6.6, 6.101, S* denotes that the measurement/testing which needs short circuit current capacity above 25kA may be subcontracted..