

QC Electrical Low-Voltage Switchgear Checklists

Section 26.23.00

Equipment nameplate ratings (voltage, current, short-circuit rating) match approved submittals and project power system study.	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							
Switchgear lineup is plumb and level on its foundation within 1/8 inch over 10 ft, with floor tolerances documented.		FTQ	QC	<input checked="" type="checkbox"/>	NA		
Observations							
Seismic or structural anchorage hardware matches approved details and is fully tightened; anchor embedment depth and pattern verified against drawings.	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							
Main and tie bus joints are cleaned, coated with manufacturer-approved joint compound, and bolted to specified torque (record torque values).	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							
Equipment grounding conductor sized per NEC Table 250.122 is landed on switchgear ground bus with listed lugs and verified continuity to building grounding electrode system (<math><0.1 \Omega</math>).	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							
Field power cable terminations are phased correctly, insulation fully enters lugs, and compression/crimp lugs are installed with calibrated tools to manufacturer torque.		FTQ	<input checked="" type="checkbox"/>	OPN	NA		
Observations							
Working clearance in front (minimum 3 ft for ≤ 600 V), rear, and ends of switchgear is unobstructed after installation, providing required NEC 110.26 access.		FTQ	<input checked="" type="checkbox"/>	OPN	NA		
Observations							
Mechanical interlocks and safety shutters operate smoothly and positively prevent contact with energized parts when draw-out devices are in the test or removed position.	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							
Circuit breaker, relay, and fuse settings are set to values listed in the approved coordination/arc-flash study; setting sheets are posted inside gear or uploaded to commissioning records.	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							
Current transformer and control wiring landed on correct terminals with polarity observed; secondary circuits are shorted or connected to burden before energization.		FTQ	QC	<input checked="" type="checkbox"/>	NA		
Observations							
Internal barriers, covers, and arc-flash containment panels supplied by the manufacturer are installed and latched with no missing fasteners.	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							
Arc-flash warning and equipment identification labels are affixed in clearly visible locations and reflect the latest arc-flash analysis results (incident energy, PPE level).	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							
Enclosure/frame bonding continuity between shipping sections measures less than $25 \mu\Omega$ per section joint using a digital low-resistance ohmmeter.	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							
Insulation resistance test results for bus and cable terminations exceed $100 \text{ M}\Omega$ at 1000 VDC (or manufacturer minimum) phase-to-phase and phase-to-ground.	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							
Primary current injection testing confirms each power circuit breaker trips within $\pm 15\%$ of calculated settings for long-time, short-time, and instantaneous functions.		FTQ	QC	<input checked="" type="checkbox"/>	NA		
Observations							
Control power circuits, including closing coils, tripping coils, and undervoltage releases, operate correctly on simulated loss and restoration of control voltage.	<input checked="" type="checkbox"/>	QC	OPN	NA			
Observations							