QC Electrical Low-Voltage Electrical Checklist

Section 26.05.19

Conductor ampacity and wire size correspond to circuit load calculations and NEC Article 310 tables as indicated on approved drawings for each run.

QC | OPN | NA

Observations

Installed conductor material (copper or aluminum) and stranding type match approved submittal data and circuit schedule for every feeder and branch circuit.

FTQ | OPN | NA

Observations

Conductor insulation type and temperature rating (e.g., THHN/THWN-2 90 °C) match environmental conditions and specification requirements along the entire route.

FTQ | OPN | NA

Observations

Voltage rating of installed conductors is minimum 600 V for low-voltage power circuits; no class-2 or communication cables present in power raceways.

QC | OPN | NA

Observations

Equipment grounding conductors are installed with each feeder and branch circuit, sized per NEC 250 and project specifications, and terminated on listed grounding lugs.

QC | OPN | NA

Observations

Minimum bend radius maintained at all raceway exits, panels, and pull points in accordance with manufacturer's data (≥ 10 × cable outside diameter for non-shielded conductors).

QC | OPN | NA

Observations

Maximum pulling tension during cable installation did not exceed manufacturer's rated limit; pulling log or dynamometer record available for inspector review.

FTQ | QC | NA

Observations

Conductor insulation and jacketing are free of nicks, abrasions, heat bubbles, or deformation along accessible lengths and at terminations; damaged sections have been removed and re-pulled.

QC | OPN | NA

Observations

Compression lugs, mechanical lugs, and crimp sleeves are listed for conductor material and size, installed with manufacturer-specified crimp tooling, and torqued to published values; torque readings recorded.

QC | OPN | NA

Observations

Splices and taps are made only in listed splice kits or junction boxes with volume adequate for conductor fill; no in-raceway splicing observed.

FTQ | OPN | NA

Observations

Parallel feeder conductors are of equal length, routed together in common raceway or tray, and landed on terminals in correct phase sequence to maintain impedance balance.

FTQ | OPN | NA

Observations

Phase, neutral, and grounding conductors are permanently identified with color coding or markers consistent with project color scheme at all termination points and pull boxes.

QC | OPN | NA

Observations

Insulation resistance test (megger) performed on each feeder and branch circuit after installation shows ≥ 100 MΩ at 500 VDC (or project-specified value); results documented and dated.

QC | OPN | NA

Observations

No more than 25 % of conductor strands removed during stripping; terminations show full strand engagement with no stray strands protruding outside lugs or terminals.

QC | OPN | NA

Observations

Derating factors applied where more than three current-carrying conductors share a raceway or cable tray layer; updated ampacity calculations available for inspector review.

QC | OPN | NA

Observations