Electrical Safety Clearance Distances

NFPA 70E-2024 Approach Boundaries and PPE Categories

Limited Approach Boundary (exposed fixed circuit part)

Voltage Range	Min. Distance
50V - 150V	**3 ft 6 in**
151V - 750V	**3 ft 6 in**
751V - 15kV	**5 ft 0 in**
15.1kV - 36kV	**6 ft 0 in**
36.1kV - 46kV	**8 ft 0 in**
46.1kV - 72.5kV	**8 ft 0 in**

Boundaries

- **Arc flash boundary:** distance where incident energy reaches 1.2 cal/cm²
- **Limited approach:** unqualified persons may cross only when advised of the hazards and continuously escorted by a qualified person
- **Restricted approach:** qualified persons only, using shock protection techniques and PPE

PPE Categories (NFPA 70E-2024)

Cat	Min. arc rating	Required PPE
1	4 cal/cm²	AR shirt and pants or AR coverall, AR face shield, hard hat, safety glasses, hearing protection, heavy-duty leather gloves
2	8 cal/cm²	As Cat 1, plus an AR balaclava (or AR flash suit hood) and leather footwear
3	25 cal/cm²	AR flash suit jacket, pants and hood; AR gloves; hard hat, safety glasses, hearing protection, leather footwear
4	40 cal/cm²	As Cat 3, rated 40 cal/cm²

LOTO Reminder: Always apply Lockout/Tagout before servicing. Verify zero energy state. Test before touch.