

Electrician Calculator NEC Pro

Offline NEC Field Toolkit • OCR Scanner • BLE Meter • PDF Reports

100% Offline • Zero Ads • Imperial & Metric • Instant PDF Reports

6 Core NEC Calculators

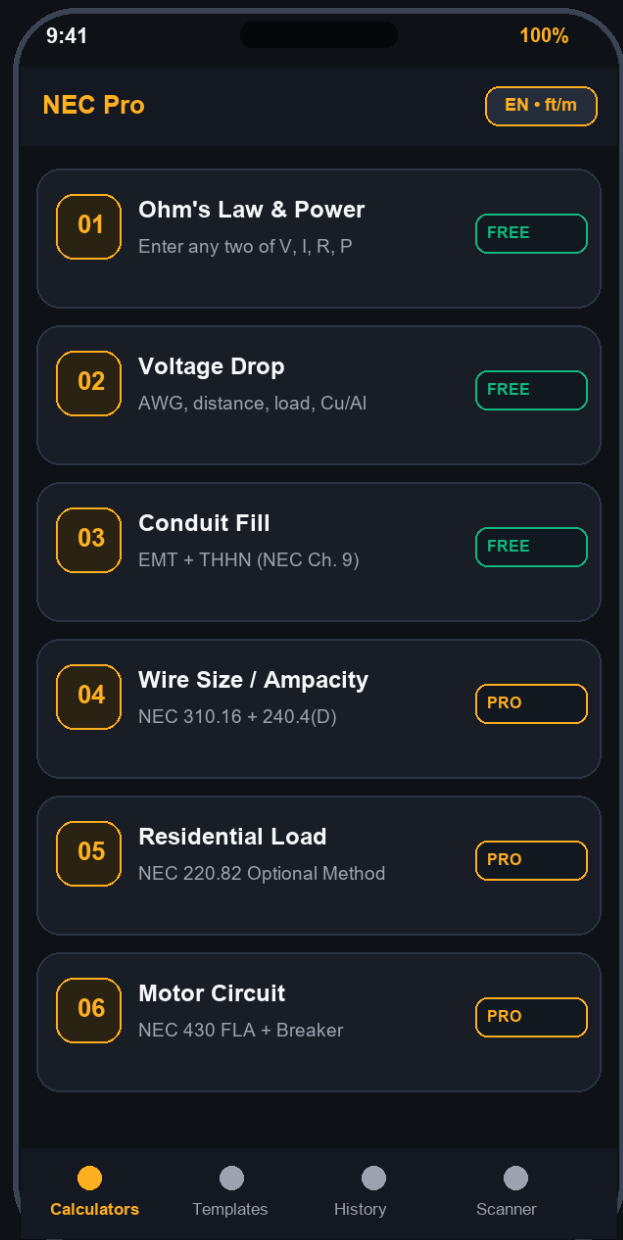
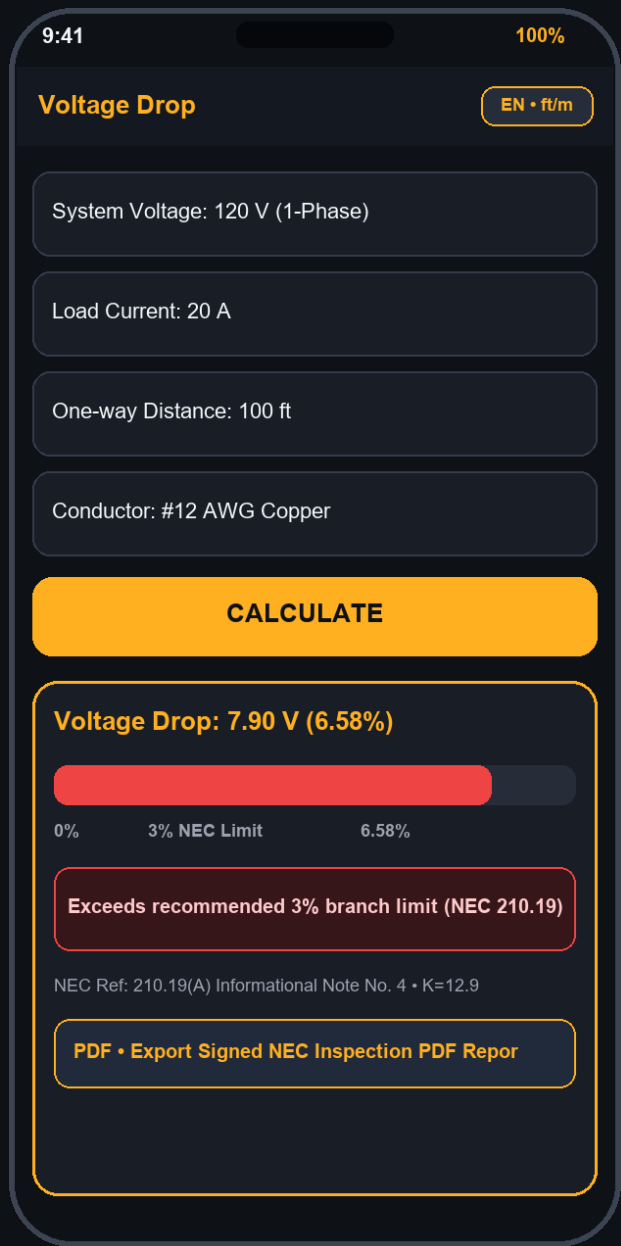
Ohm's Law & Power • Voltage Drop • Conduit Fill

Pro Engineering Modules

Wire Size / Ampacity • Residential Load • Motor Circuit

Smart Field Hardware & PDF

AI Nameplate Scanner & PDF Report • Live Bluetooth Clamp Meter & Voice Input



Why Field Electricians Switch to NEC Pro

❑ FIELD PROBLEM #1

Manual NEC book lookups in dark panels or rain waste 15+ mins per job.

❑ NEC PRO SOLUTION #1

Works 100% Offline in basements, trenches, and remote job sites.

❑ FIELD PROBLEM #2

Ad-heavy calculator apps fail in basements & switchgear rooms with out signal.

❑ NEC PRO SOLUTION #2

Every calculation cites exact NEC articles (310.16, 240.4(D), 220.82, 430).

❑ FIELD PROBLEM #3

Inspectors & clients demand documented NEC code citations on reports.

❑ NEC PRO SOLUTION #3

One-tap PDF Job Report with your company name ready for inspectors

Voltage Drop & Conduit Fill — NEC Code Verified

9:41

100%

Voltage Drop

EN • ft/m

System Voltage: 120 V (1-Phase)

Load Current: 20 A

One-way Distance: 100 ft

Conductor: #12 AWG Copper

CALCULATE

Voltage Drop: 7.90 V (6.58%)

0%3% NEC Limit6.58%

Exceeds recommended 3% branch limit (NEC 210.19)

NEC Ref: 210.19(A) Informational Note No. 4 • K=12.9

PDF • Export Signed NEC Inspection PDF Repor

9:41

100%

Conduit Fill

EN • ft/m

Conduit: 1/2" EMT

Conductor: #12 THHN × 9 wires

Area: 0.1197 in² / Allowed: 0.1216 in²



PASS — 39.4% Fill (Max 40% NEC Ch. 9)

NEC Chapter 9, Table 1 & Table 4 (EMT) + Table 5 (THHN)

Voltage Drop

Voltage Drop: 7.90 V (6.58%)

Exceeds recommended 3% branch limit (NEC 210.19)

Conduit Fill

PASS — 39.4% Fill (Max 40% NEC Ch. 9)

Area: 0.1197 in² / Allowed: 0.1216 in²

Wire Size / Ampacity & Residential Load

NEC 310.16 + 240.4(D) + 220.82

NEC 310.16 + 240.4(D) • NEC 220.82 Optional Method

AI Nameplate Scanner & PDF Report

1. On-Device Camera Nameplate OCR Scanner

Detected: 5 HP • 460V • 3Φ • FLA 7.6A

Point camera at any motor nameplate offline — pre-fills FLA, HP & Volts.

2. Branded PDF & CSV Inspection Reports

Export Signed NEC Inspection PDF Report

Share NEC-cited PDF calculation sheets with inspectors & project managers.

3. Bluetooth Clamp Meter & Voice Input

Live Bluetooth Clamp Meter & Voice Input

Stream live current/voltage readings via BLE or speak numbers hands-free.



Official Branded PDF Calculation Report (Real Output)

Every calculation exports as a clean A4 inspection sheet with your company name

Branded with Your Electrical Company Name

Apex Electrical Contractors LLC

Add your company name once in Settings; every PDF header carries your brand.

Complete Inputs, Results & Visual Warnings

Inputs & Results • Voltage Drop: 7.90 V (6.58%)

Clearly tabulates all parameters, calculated values, and code compliance status.

Exact NEC Article Citations for AHJ / Inspectors

Reference: NEC 210.19(A) Informational Note No. 4 — $V_d =$

Automatically prints the governing NEC section & formula at the bottom.

NEC Pro

2026-10-31

Apex Electrical Contractors LLC

Voltage Drop Calculation Report

Inputs

Parameter	Value
System voltage	120 V
Phase	Single-phase (1Φ)
Conductor	Copper (Cu)
Size (AWG/kmil)	12 AWG
Load current	20 A
One-way distance	100 ft

Results

Result	Value
Voltage drop	7.90 V
Percent	6.58 %
Voltage at load	112.10 V

☐ Exceeds recommended 3% branch limit (NEC 210.19)

Reference: NEC 210.19(A) Informational Note No. 4 — $V_d = 2 \times K \times I \times L / \text{cmil}$

Generated by NEC Pro. Verify all calculations against current NEC & local AHJ codes.

Page 1 of 1

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Equip your field vans with uniform NEC compliance and branded PDF job reports.

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