NEC Code for EV Chargers: Article 625 Cheat Sheet

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1. Core requirements

Section	Rule in brief
625.40	Individual branch circuit for each charger, no other outlets
625.41, 625.42	Continuous load: size breaker and wire at 125%. Load management can limit the service load
625.43	Over 60 A or over 150 V to ground: readily accessible, lockable disconnect
625.44	Connection methods for portable, fastened-in-place and fixed chargers
625.50	Coupling means at least 18 in. indoors, 24 in. outdoors
625.52	Ventilation only if the charger listing requires it
625.54	GFCI protection for every receptacle that connects a charger
625.56	Weatherproof enclosure for receptacles in wet locations

2. Breaker and wire (guide only)

Charger	Breaker (125%)	Copper wire	NM-B (60 C column)
16 A	20 A	12 AWG	OK
24 A	30 A	10 AWG	OK
32 A	40 A	8 AWG	OK (40 A)
40 A	50 A	6 AWG	OK (55 A)
48 A	60 A	6 AWG THHN in conduit (75 C)	Needs 4 AWG NM-B

Check terminal ratings (110.14), conduit fill, temperature and voltage drop. NM-B is limited to the 60 C column (334.80).

3. Editions

Edition	Notes
2020	GFCI for all EV charger receptacles; article retitled for power transfer. There is no 2021 or 2022 NEC
2023	Load management (625.42), bidirectional rules (625.48)
2026	Reported: multiple chargers on one circuit with energy management; new Article 624 for non-road EVs

4. Quick answers

- Which article? Article 625 (Electric Vehicle Power Transfer System).
- Romex? Often yes up to a 50 A circuit; use conduit or heavier wire for 60 A.
- NEMA 14-50? Needs GFCI protection, usually a 2-pole GFCI breaker.
- California: California Electrical Code (NEC with amendments). Tesla: follow the manual and the NEC.

Educational summary, not the NEC text. Verify against the edition and local amendments your inspector enforces. Read the NEC free on NFPA's website. *© Azad Circuit Hub.*