



SWIMMING POOLS ELECTRICAL INFORMATION

Based on the 2017 NEC
One-Family Residential

General

Electrical permit and inspection required.

Contact Diggers Hotline (1-800-242-8511) to have the underground utilities located. No underground wiring is permitted directly below or within five (5) feet of the inside wall of the pool

Overhead power wiring and Network powered broadband communication wiring located directly over and within ten (10) feet horizontally of the inside wall of the pool will need a vertical clearance of twenty-two and a half (22 ½') feet above the highest water level. Communication wiring needs to have a ten (10) foot vertical clearance.

STORABLE POOLS

All electrical equipment, including power supply cords, used with storable pools shall be protected by a ground fault circuit interrupter (GFCI).

All 125 volt receptacles located within twenty (20) feet of the inside wall of a storable pool shall be protected by a ground fault circuit interrupter (GFCI).

No receptacle shall be closer than six (6) feet to the inside wall of a storable pool.

PERMANENT POOLS

Pumps:

Pump motor must be labeled “swimming pool pump” or “swimming pool pump or spa pump.”

Pump motor cord shall not exceed three (3) feet in length and contain a copper grounding wire sized per NEC 250.122 table but not smaller than a #12 awg wire.

Pump motors, 120 or 240 volt and 15 or 20 amp, whether by receptacle or direct connection, must be provided with ground fault circuit interrupter (GFCI) protection.

Wiring Methods:

Non-metallic sheathed cable may be used for the interior portion of the wiring.

The exterior wiring must be installed in a raceway system including but not limited to rigid metal conduit, intermediate metal conduit, and rigid non-metallic conduit (PVC).

All conduits installed underground must contain an insulated copper equipment grounding conductor sized per NEC 250.122 table but not smaller than #12 awg wire.

Wiring in areas where pool sanitation chemicals are stored or areas where pool equipment is present are considered corrosive environments. The wiring methods in these areas are limited to rigid metal conduit, intermediate metal conduit, rigid polyvinyl chloride (PVC) conduit, or reinforced thermosetting resin conduit.

Switching devices:

Switching devices shall not be closer than five (5) feet from the inside wall of the pool.

Receptacles:

No receptacle is allowed closer than six (6) feet from the inside wall of the pool.

Receptacles that supply power to pump motors and sanitation systems associated with the pool will need to be installed between six (6) feet and ten (10) feet from the inside wall of the pool.

These receptacles must meet the following requirements:

Consist of a single receptacle / Be a twist lock design / Be a grounding type / Be GFCI protected

At least one (1) 125 volt, 15 or 20 amp receptacle must be installed between six (6) and twenty (20) feet from the inside wall of the pool.

All receptacles within twenty (20) feet of the inside wall of the pool must be ground fault circuit interrupter (GFCI) protected.

All receptacles installed in a wet location (outdoors) require a cover to keep the enclosure weatherproof whether or not the attachment plug is inserted into the receptacle.

Lighting:

Lighting fixtures and ceiling fans located directly over or within five (5) feet from the inside wall of the pool must not be installed lower than twelve (12) feet above the highest water level.

Bonding:

All items listed below must be bonded together with a solid #8 copper wire.

1. The conductive pool shell.
2. Paved or unpaved perimeter surface within three (3) feet of the pool.
3. All metallic parts of the pool structure.
4. All metallic forming shells for the underwater lighting.
5. Metal fittings larger than four (4) inches.
6. Electrical equipment for the pool.
7. All metal raceways, piping and metal parts within five (5) feet horizontally and twelve (12) feet vertically of the pool. This includes all metal objects including but not limited to gutters, door frames, window frames, awnings and fences.
8. Pool water shall be intentionally bonded by a minimum conductive surface of nine (9) square inches and in constant contact with pool water.

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