

RESIDENTIAL SWIMMING POOLS

ELECTRICAL WIRING REQUIREMENTS

2011 National Electrical Code / 2012 International Pool & Spa Code

1) Pool Pump Receptacle (Outlet) and Wiring Method

- If a pump motor receptacle is located between 6' – 10' from the inside pool wall, the receptacle must be a single twist-lock outlet, grounded, and Ground Fault Circuit Interrupter (GFCI) protected.
 - Receptacle must have a weatherproof cover that can be closed when the cord is attached. (In-use type cover)
 - An Automatic Timer (Time Switch) must be installed on swimming pool pumps.
 - The circuit line for the pump motor must be a continuous line going directly to the panel box, and cannot supply other receptacles.
 - Wire for the pump motor shall not be less than #12 AWG insulated copper grounded wire, and must be in conduit. (except when entering a building the wire can change to NM) (Cannot use NM wire in conduit)
 - Conduit
 - PVC – All PVC conduit* must be buried at least 18" deep (12" if GFCI protected)
 - Metal – All Rigid Metal Conduit* must be at least 6" deep
- * Wires used in conduit must be individual conductors (ex: THWN, etc - NO NM or UF CABLE in Conduit)

2) Convenience Receptacle (Outlet) and Wiring Method

- At least one (1) 15- or 20-ampere convenience receptacle must be located not closer than 6' but not further than 20' from the outside pool wall (Can be existing and/or wired with any approved wiring method)
 - Convenience receptacle must be Ground Fault Circuit Interrupter (GFCI) protected.
 - Must have a weatherproof cover where exposed to the weather (In-use type cover required on used, unattended, receptacles in wet locations)
 - Must be separate from the pool pump receptacle wiring.
 - Wiring
 - UF cable if buried must be at least 24" deep
 - PVC – All PVC conduit* must be buried at least 18" deep (12" if GFCI protected)
 - Metal – All Rigid Metal Conduit* must be at least 6" deep
- * Wires used in conduit must be individual conductors (ex: THWN, etc - NO NM or UF CABLE in Conduit)

3) Bonding The Pool

- All metal parts must be bonded together using a #8 (or larger) solid copper wire.
- Must use non-corrosive clamps.
- Conductive pool shells must be bonded in a minimum of four (4) equal points uniformly spaced around the pool
- Nonconductive pool shells must have a #8 (or larger) solid, bare copper wire 18"-24" from the inside pool wall under the perimeter surface 4"-6" below the final grade.
- A minimum of nine (9) square inches of metal must be in the water to bond the water
- Bond the pump motor.

4) Other

- Building & Electrical Permits are required.
- If a Pool Heater is present, an Automatic Timer (Time Switch) must be installed on the pool heater and must be equipped with a readily accessible on-off switch to shut off the heater without adjusting the thermostat setting.
- A Pool Barrier is required for Outdoor Pools (See Pool Barrier Requirements Handout).

