

# PERMANENTLY INSTALLED SWIMMING POOLS ELECTRICAL WIRING REQUIREMENTS

2008 National Electrical Code / 2010 Residential Code of New York State

**PERMANENTLY INSTALLED SWIMMING POOLS ARE THOSE THAT ARE CONSTRUCTED IN THE GROUND OR PARTIALLY IN THE GROUND, AND ALL OTHERS CAPABLE OF HOLDING WATER WITH A DEPTH GREATER THAN 42 INCHES (1067 MM)**

**1) Pool Pump Receptacle (Outlet) and Wiring Method**

- a. 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.
  - b. Receptacle must have a weatherproof cover that can be closed when the cord is plugged in. (In-use type cover)
  - c. The circuit line for the pump motor must be a continuous line going directly to the panel box, and is to be isolated from all other receptacles.
  - d. 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)
  - e. Conduit
    - i. PVC - All PVC conduit\* must be buried at least 18" deep (12" if GFCI protected)
    - ii. Metal - All Rigid Metal Conduit\* must be at least 6" deep
- \* Wires used in conduit must be single strand wires (ex: THWN, etc - NO NM or UF CABLE in Conduit)

**2) Convenience Receptacle (Outlet) and Wiring Method**

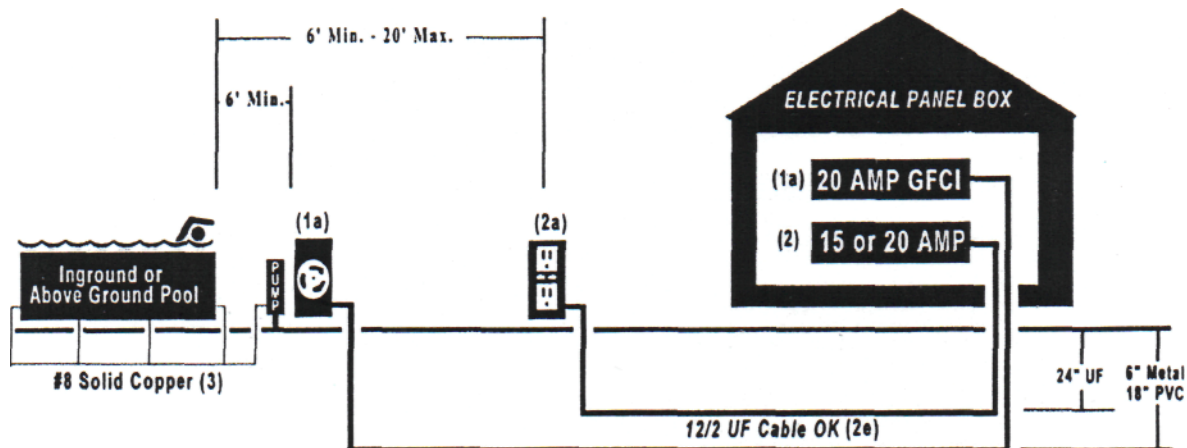
- a. At least one (1) 15- or 20-ampere convenience receptacle must be located not closer than 6' but not further than 20' from the outside pool wall (Can be existing and/or wired with any approved wiring method)
  - b. Convenience receptacle must be Ground Fault Circuit Interrupter (GFCI) protected.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

**3) Bonding The Pool**

- a. All metal parts must be bonded together using a #8 (or larger) solid copper wire.
- b. Must use non-corrosive clamps.
- c. Conductive pool shells must be bonded in a minimum of four (4) equal points uniformly spaced around the pool
- d. 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.
- e. A minimum of nine (9) square inches of metal must be in the water to bond the water

**4) Other**

- a. Building Permits are required. Secure a Building Permit prior to beginning work from your municipality
- b. Pool Alarms are required (Check with your local Building Department for additional information)
- c. Pool Pump Timers (Check with your local Building Department for additional information)



*MUST BE THWN, etc #12 WIRE IN CONDUIT (no UF cable) (1d)*

**PLEASE CONTACT YOUR LOCAL INSPECTOR IF YOU HAVE ANY QUESTIONS**