

# PERMANENTLY INSTALLED SWIMMING POOLS

## ELECTRICAL WIRING REQUIREMENTS

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

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**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. An Automatic Timer (Time Switch) must be installed on swimming pool pumps.
  - d. 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.
  - e. 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)
  - f. 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

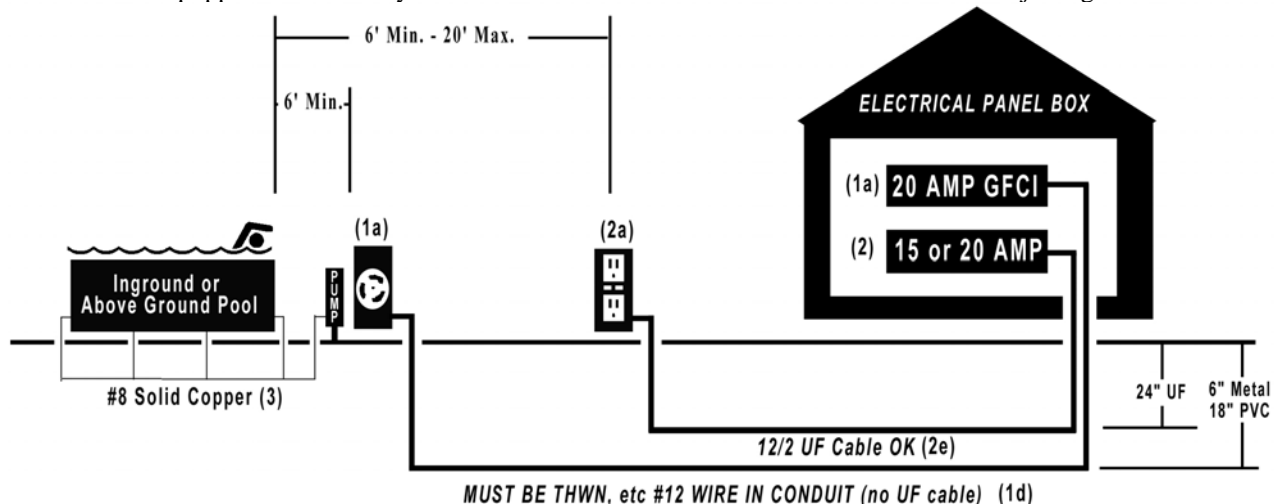
- a. At least one (1) 15- or 20-ampere convenience receptacle must be located not closer than 6' but not further than 20' from the outside pool wall (Can be existing and/or wired with any approved wiring method)
  - b. Convenience receptacle must be Ground Fault Circuit Interrupter (GFCI) protected.
  - 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. 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.



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

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~ 2011 ~