

Electrical Requirements for Above Ground Pools 2017 NEC

1) Pool Pump Receptacle

- a. The receptacle for the pump cannot be closer than 6' from the pool and needs Ground Fault Circuit Interrupter (GFCI) protection. The receptacle must be a weather resistant type.
- b. The pool pump receptacle must have an in-use cover (plastic bubble type or other) if exposed to weather.
- c. The pool pump receptacle must be on its own circuit if the pump is fixed in place and draws more than 50% of circuit ampacity. If fixed in place and less than 50% of circuit ampacity or not fixed in place it can be combined with the convenience receptacle required in 2(c).
- d. The pool pump circuit wiring must be run in conduit outdoors. Conduits are either PVC or Rigid steel. PVC conduit must be buried at a depth of 18", Rigid steel conduit at a depth of 6". If all the circuits in the PVC conduit are GFCI protected before the conduit enters the ground, the depth may be reduced to 12". This means the GFCI protection would be located in/on the house or other. Don't forget the expansion coupling at the house or other.
- e. The ground wire used in the conduit for the pool pump must not be smaller than #12 AWG and must be an insulated wire. Typically, black-hot, white-neutral, green-ground, individual wires are used and must be labeled for wet locations. You may change over to Romex or UF cable once inside the house or garage using proper splicing methods-wire nuts, crimps, etc. Romex or UF cables are not allowed outdoors for the pool pump receptacle.
- f. The cord on the pool pump must be 3-conductor #12 AWG wire and is not allowed to be longer than 3'.

2) Convenience Receptacle

- a) At least 1 GFCI protected convenience receptacle is required and must be located no closer than 6' and no further than 20' from the pool.
- b) Must have an in-use cover where exposed to weather.
- c) May be required to be on a separate circuit or can be on the same circuit as the pool pump motor depending on 1(c) above.
- d) Wiring can be either UF cable, if on a separate circuit, or the same wiring as the pool pump and utilize the conduit system already in place for the pump receptacle.

3) Bonding the Pool

- a) The bonding of the pool is done by running a solid, bare, #8 wire, all the way around the perimeter of the pool. This wire must be run 18"-24" from the side wall of the pool and be buried 4"-6" down from grade. If the pool is made of any metal this wire must be bonded to the pool in 4 equally spaced locations around the pool. If the only metal used is for the individual support posts then each one would have to be bonded. Bonding is done with approved connectors.

- b) A water bond is also required to be part of the bonding system above. A water bond is 9" square of metal in contact with the water. The water bond device must be bonded to the #8 solid, bare wire used in a) above.
 - c) The lug on the pump motor must also be connected into the bonding system.
 - d) All other metal objects larger than 4" in any direction and penetrating into the pool structure more than 1" must be bonded into the bonding system. All other fixed metal items within 5' of the pool must be bonded, including fences, down spouts or gutters, aluminum siding, decks, etc.
- 4) Timer
- a) All pool pump motors and heaters are required to be on a timer. This will be a time clock mounted either indoors or a weather-proof one mounted outdoors or a device integral to the motor or controller or other.
- 5) Gas-fired water heaters are now required to be GFCI protected.