



SPAS AND HOT TUBS

ELECTRICAL INFORMATION

Based on the 2017 NEC

One-Family Residential

General

Electrical permit and inspection is required.

Fully read the installation manual that is supplied with the spa or hot tub.

Ground Fault Circuit Interrupter (GFCI) protection is required for the branch circuit feeding the spa or hot tub, either by a receptacle or hardwired.

Outdoor Installations

Call Diggers Hotline (1-800-242-8511) to have the underground utilities located.

Conductors:

Underground wiring is not permitted directly below or within five (5) feet of the spa or hot tub location unless associated with the wiring to this unit.

Overhead power conductors and network-powered broadband communication wires located directly over or within ten (10) feet horizontally of the spa or hot tub inside wall must be twenty-two and a half (22 ½') feet above the highest water level. Overhead communication wires must be located ten (10) feet above the highest water level.

The interior wiring to an outdoor installation of a spa or hot tub may be performed by the use of a non-metallic sheathed (NM) cable. NM cable with a number eight (#8) American wire gauge (awg) copper wire is rated to be installed on a forty (40) amp breaker and a number six (#6) awg copper wire is rated to be installed on a sixty (60) amp breaker.

The wire size may not be smaller than a #12 awg copper wire.

The exterior wiring will need to be installed in a raceway system. Single conductor, installed in the raceway system, has a rating of fifty (50) amps for a number eight (#8) awg copper wire and sixty-five (65) amps for a number (#6) awg copper wire. Liquid tight flexible nonmetallic or liquid tight flexible metallic conduit may be used inside the hot tub and within six (6) feet of the hot tub. Nonflexible conduit must be used after the six (6) foot boundary from the hot tub. Wires installed in the exterior conduit must be rated for a wet location. NM cable is not rated for exterior use even if it is installed in a conduit.

Receptacles:

All receptacles within twenty (20) feet of the spa or hot tub location must be protected by a ground fault circuit interrupter (GFCI).

One receptacle must be located no closer than six (6) feet or more than twenty (20) feet from the inside wall of the spa or hot tub.

Switches:

Switching devices must be at least five (5) feet away from the inside wall of the spa or hot tub.

Maintenance disconnect:

A disconnect, located at least five (5) feet from the inside wall of a spa or hot tub, must be provided to simultaneously remove all sources of power to the unit. This disconnect must be readily accessible and within sight of the equipment.

Bonding:

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

1. Conductive spa or hot tub shell.
2. Paved or unpaved perimeter surfaces within three (3) feet of the spa or hot tub. This requirement does not apply to a listed self contained spa or hot tub.
3. All metallic components of the site built spa or hot tub structure.
4. Underwater lighting for a site built spa or hot tub.
5. Metal fittings larger than four (4) inches.
6. Electrical equipment for the spa or hot tub.
7. All metal raceways, piping and metal parts within five (5) feet horizontally and twelve (12) feet vertically of the spa or hot tub. This includes all metal objects including but not limited to gutters, door frames, window frames, awnings and fences.

Lights:

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

Indoor Installation

Conductors:

Non-metallic sheathed (NM) cable may be used as the wiring method to the indoor spa or hot tub. NM cable with a #8 awg copper wire is rated to be installed on a forty (40) amp breaker and a #6 awg copper wire is rated to be installed on a sixty (60) amp breaker.

Receptacles:

All receptacles within ten (10) feet of the inside walls of the spa or hot tub must be protected by a ground fault circuit interrupter.

Receptacles are to be located no closer than six (6) feet from the inside wall of a spa or hot tub.

A spa or hot tub must have at least one (1) receptacle installed between six (6) feet and ten (10) feet from the inside wall of the unit.

Switches:

Wall switches are not to be located within five (5) feet horizontally of the inside wall of a spa or hot tub.

Maintenance disconnect:

A disconnect, located at least five (5) feet from the inside wall of a spa or hot tub, must be provided to simultaneously remove all sources of power to the unit. This disconnect must be readily accessible and within sight of the equipment.

Bonding:

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

1. All metal fittings within or attached to the spa or hot tub.
2. Metal parts of electrical equipment associated to water circulation.
3. Metal raceways and metal piping within five (5) feet of the inside wall.
4. All metal surfaces within five (5) feet of the inside wall that is not separated by a permanent barrier.
5. Electrical devices and controls not associated with the spa or hot tub and within five (5) feet of the inside wall.

Lights:

Lighting fixtures and ceiling fans located directly over or within five (5) feet from the inside wall shall be a minimum seven feet six inches (7'6") above the maximum water level and protected by a ground fault circuit interrupter (GFCI).

Recessed and surface mounted luminaires with a glass or plastic lens, non-metallic body, or a metallic body isolated from contact and suitable for a damp location may be mounted below seven (7) feet six (6) inches as long as it is protected by a ground fault circuit interrupter (GFCI).

Revised 09/13/2019