

## Electrical licensing and inspections for radon fan installations

**Q:** Are radon mitigation fans required to be installed by licensed electrical contractors?

**A:** Minnesota's electrical licensing laws and inspection requirements would apply in certain installations. As it pertains to low-voltage radon fan (RF) installations, various RF products have factory-installed cable or cord options up to 40' in length. In some cases, this may be in violation of the National Electrical Code (NEC). The licensing laws are clear that routing cable or cord through a building or structure or terminating the cable or cord is considered electrical work. The business entity performing the installation would minimally be required to possess a Technology System Contractor license, and the employee performing the installation would need to be registered as an unlicensed technician. In both the low-voltage and 120-volt RF installations, electrical licensing would not be required to install RF equipment as long as it is listed by a Nationally Recognized Testing Laboratory (NRTL), have factory-installed terminations, and the low-voltage cable length is limited to not more than 6-feet, similar to other types of portable, fixed or stationary cord and plug connected equipment.

In every installation, if there is a need to install, alter, extend or modify wiring, such as adding a receptacle outlet or lighting outlet as required by NEC 210.70, then a properly licensed electrical contractor must perform this portion of the electrical work. However, if the receptacle outlet is within proximity to the RF location, and no additional lighting is required, then the entire installation could potentially be installed by an unlicensed individual.

- Summary for 120-volt radon fans: licensing and inspection would not be required if:
  - The RF is completely preassembled (factory terminations) and listed by an NRTL
  - The RF appliance cord is of a limited length (6-feet or less), and the instructions allow the RF cable to penetrate the wall surface and is approved for the environment
  - The RF power supply cord plugs directly into an existing receptacle outlet and does not penetrate a wall, ceiling or floor; no extension of any premises wiring
  - Note: Any installation, extension, alteration or modification of premises wiring would require a Minnesota Electrical Contractor license
  
- Summary for low-voltage radon fans: licensing and inspection would not be required if:
  - The RF is a completely preassembled (factory terminations) and listed by an NRTL
  - The RF low-voltage cable assembly (between the outdoor junction box to the power supply) is of a limited length (6-feet or less)
  - The RF power supply cord plugs directly into an existing receptacle outlet and does not penetrate a wall, ceiling or floor; no extension of any premises wiring
  - Note: Any installation, extension, alteration or modification of premises wiring would require a Minnesota Electrical Contractor license
  - Note: Extensions of low-voltage cables over 6-feet in length would require either a licensed Minnesota Electrical Contractor or a Technology System Contractor