



Important Motor Information:

The 110 volt AC motors used in Insolroll Window Shading Systems are unique in some aspects and have wiring requirements that differ from many household devices.

1. Motors are directional to run shades up and down and have four electrical wires :

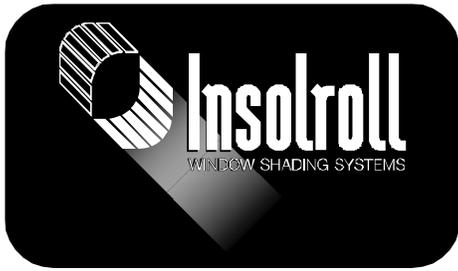
Green - ground
White - common
Red - directional hot
Black - directional hot



2. **110-volt AC motors cannot be wired in parallel** and multiple motors cannot be wired to a single pole switch. Directional leads must be isolated from one another. Failure to isolate the directional leads will burn out the motor.
3. Motors require 110-volt AC power.
4. Motors draw up to a maximum of 1 amps at start up.
5. Motors require a double throw switch - (up - off -down).
6. Motors are not designed for continuous operation and have built -in thermal cut-offs.
7. Motors have built-in limit switches to stop accurately when shades reach desired up and down positions.
8. Motors can be operated by wall switches, remote controls, automatic controls or interfaced with home automation systems.

Additional Project Considerations:

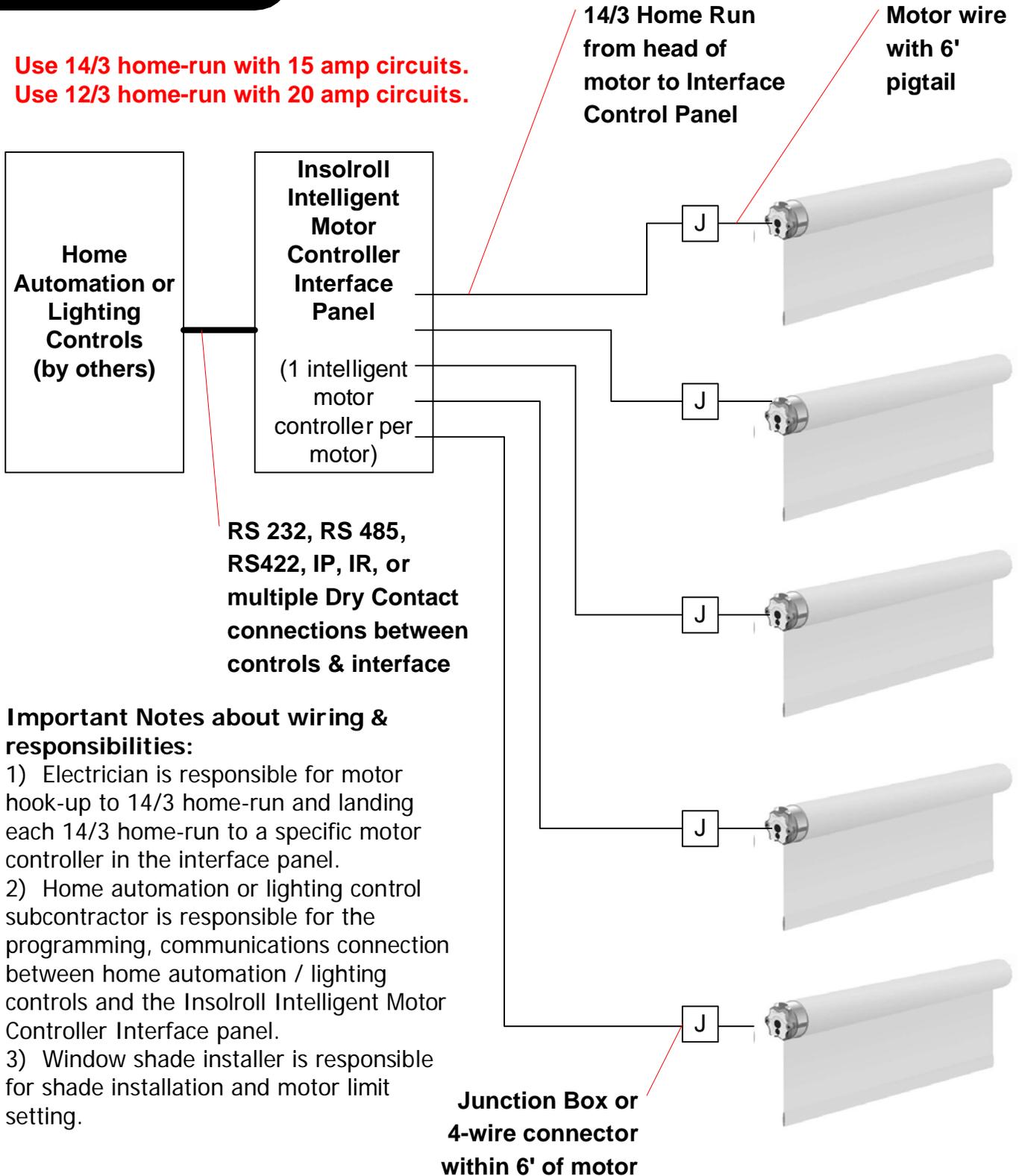
9. The typical wiring layout for Insolroll Window Shading Systems requires that a single gang junction box or 4-wire connector be located within reach of the six foot motor pigtail. Check local building codes for specific details on 110 V AC wire connections.
10. Install junction boxes in locations that do not interfere with the operation of the shade, allows for the motor hookup and is aesthetically acceptable. Motors for Insolroll Window Shading Systems can be located on either the left or right side. For Pre-wire, leave 3-4 feet of extra wire near head of window. Check with window treatment installer for help with J-box locations.
11. On exterior installations, always install the motor wire with a drip loop to prevent water penetration.



PRE-WIRE FOR 110 V AC MOTORS

14/3 Home Run to Home Automation/Lighting Controls (2 of 2)

**Use 14/3 home-run with 15 amp circuits.
Use 12/3 home-run with 20 amp circuits.**



**RS 232, RS 485,
RS422, IP, IR, or
multiple Dry Contact
connections between
controls & interface**

Important Notes about wiring & responsibilities:

- 1) Electrician is responsible for motor hook-up to 14/3 home-run and landing each 14/3 home-run to a specific motor controller in the interface panel.
- 2) Home automation or lighting control subcontractor is responsible for the programming, communications connection between home automation / lighting controls and the Insolroll Intelligent Motor Controller Interface panel.
- 3) Window shade installer is responsible for shade installation and motor limit setting.

**Junction Box or
4-wire connector
within 6' of motor**