



UPB Reliability Made Easy

'7 Rules of Reliability'

1) **Electrical Panels:** PCS suggests quoting one Phase Coupler for each panel. This will dramatically improve communication.

Note: Systems with more than 3 electrical panels, we suggest adding an SPR (Refer to Rule 2).

Part#: PPC-1, PPC-3, PPC-4

2) **Size:** For locations of 5K square ft. and larger, we suggest quoting a Split Phase Repeater (SPR). The SPR is a UPB bi-directional repeater, not an amplifier. No noise is added or increased. The SPR is the only device available that will help you defeat Ohms Law.

Do Not install the SPR while the power is on.

Part#: SPR-1, SPR-3, SPR-4

3) **Signal Strength:** When measuring the signal strength, you will want a minimum of '10-13 Lesters' from each Keypad or Controller. This is dependant on the amount of noise measured on the system.

For testing using UPStart: go to 'Network' then 'Device to Device Comm Test'. There are also advanced noise meters, contact PCS for information on running these tests or refer to our training videos.

4) **Phase:** Two of Three or Three Phase systems will need a Three Phase Repeater.

If you are not sure of which Phase you are working with, measure the voltage between any two phases. If your voltage is 240V, you have a standard Split Phase System. If your voltage is 208V or 277V, you have a Three Phase System. On a Three Phase System, the sine waves are 120 degrees off-set, instead of the 180 degrees as in a Single Phase System. Do Not install the TPR-120 while the power is on.

Part#: TPR-120

5) **Lighting Loads:** To compute lighting loads: Count the number of bulbs; multiply the number of bulbs by the number of watts per bulb. This will give you the total load the switch must control.

Switches come in 600W, 1000W, 1500W and 2400W. If your load is within 10% of the specification, use the next larger wattage switch. If switches will be in a multi-gang box, you must de-rate the switch. See spec sheet for instructions.

Part #: WS1D-6, WS1D-10, WS1D-15, WS1D-24

6) **Non-Dimmable Loads:** Florescent Ballasts and Compact Florescent Bulbs may not be dimmable. These items will still use our standard switch. The WS1D is both a Dimmer and a Switch in one.

Do not install a WS1D Switch while the power is on.

7) **Track/Canned Lights:** Standard Track and Canned lights use our standard WS1D, FMD2 or FMR-1 devices. Some special systems need an Electronic Low Voltage Switch. These devices are powered by a capacitance based transformer. Physically, these items will have one transformer per light source. In this case, you will need to use our WS1E, Electronic Low Voltage Switch. Available in 300VA or 500VA (VA=Volt Amps)

Do not install a WS1E Switch while the power is on.

Part#: WS1E-3, WS1E-5

For any further questions, Contact Powerline Control Systems, Inc., at the numbers below.



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