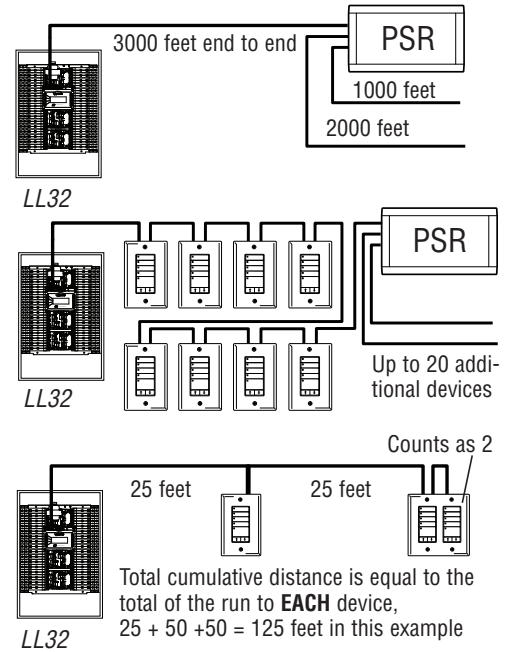


# LightSync™ Network Cable Run Distance Details

Devices that operate on ILC's LightSync CAT-5 data line include LightSync switches, photocells, and interfaces like the LSOSI and LSDM. A standard 24 gauge CAT-5 cable is used for the data line and provides both data and power to these devices. There are limitations to the distance data can travel over CAT-5 cable without loss, and distance limitations due to voltage drop associated with cable length and number of devices on the LightSync data line. These limitations are addressed by the addition of a Power Supply Repeater, Power Supply Repeater 6 or LightSync Hub (see chart), depending on the application. The specific use of these devices depends on the project layout.

There are four main areas of limitation to be addressed:

- 1. Total Data Line Overall Distance:** The total data line end to end distance may not exceed 3000 feet without the addition of a PSR to the data line. Only a PSR or PSR-6 will extend the data line.
- 2. Total number devices (LL or AP3 panels and LightSync devices):** Total number of devices without a PSR is 32. A PSR will add 31 more devices (PSRs are counted as a device).
- 3. Total number of LightSync devices powered:** No LL or AP3 controller panel can power more than eight (8) LightSync devices on the data line without a PSR-6, PSR or LightSync Hub (each can power up to 20 additional LightSync devices).
- 4. Total Power Cumulative Distance:** The cumulative distance from each device to its power supply may not exceed 2000 feet if powered by a LightLEEDer or AP3 panel, or 3000 feet if powered by a PSR-6, PSR or LightSync Hub.



ILC Power and Data Repeating Device	Total Data (end to end) Distance	No. of LightSync Devices Powered	Cumulative Power Distance
LL or AP3 Panel	3000 feet	8	2000 feet
Power Supply 6 (PSR-6)	3000 feet per branch	20 Total per PSR-6	3000 feet
Power Supply Repeater (PSR)	3000 feet (combined)	20	3000 feet
LightSync Hub (HUB)	1500 feet per port	20 total	1500 feet per port

## ILC Power and Data Repeating Devices

A **Power Supply Repeater** (LSPSR) is both a power supply and data repeater and its primary purpose is to repeat data and provide a bridge to another data line capable of 3000 feet end to end. This device also has one incoming and two outgoing RJ45 ports to split the line into two different directions. The PSR also adds power to LightSync devices for an additional 3000 cumulative feet.

A **Power Supply Repeater 6** (LSPSR-6) is a LSPSR with 3 paired branch outputs repeating data and a total power output for 20 devices for the 3 combined. The LSPSR6 also has a main in port and a pass through out port.

A **LightSync Hub** (LSHUB) is a device that allows a home run configuration by providing RJ45 ports for up to 20 LightSync devices, supplying power and data up to 1500 feet.