

One Line

Wire Legend

- ▲ QS Control Link (Connect wires 1, 2, 3 and 4)*
- ▲ QS Control Link (Connect wires 1, 3 and 4. Do not connect wire 2)*
- ▽ Panel Control Link (Connect wires 1, 2, 3, 4 and 5)*
- ▽ Panel Control Link (Connect wires 1, 2, 3 and 4. Do not connect wire 5)*
- ▽ QS Sivoia Shade Control Link*
- Normal Input Power 2 #12 AWG (4 sq mm) + ground
- Normal-Emergency Input Power 2 #12 AWG (4 sq mm) + ground
- ⊕ 3 Phase 4 wire Input Power, 4 #12 AWG (4 sq mm) + ground
- 2 #12 AWG (4 sq mm) + ground
- 3 #12 AWG (4 sq mm) + ground
- ◆ 0-10V Signal: 2#18AWG (1.0 sq mm)
- 2#18 AWG (1.0 sq mm)
- 3#18 AWG (1.0 sq mm)
- ◇ EcoSystem Bus/Loop*
- ◇ DALI Loop
- ✕ Lutron Sensor Cable C-CBL-522S or use #22 AWG (1.0 sq mm)
- ✕ Lutron Sensor Cable C-CBL-522S or use #22 AWG (1.0 sq mm)
- DMX Cable*
- Ethernet cable, CAT5E or better cable for Lutron Network terminated with RJ45 connectors (to be provided by others), 328 ft (100m) maximum run.

Project Name:

Location:

Project Number:

Created by:

File Name:

Document Revision:

*Please refer to Notes on Wiring for more wiring guidelines.

For detailed definition of product capabilities refer to product specification submittal sheets.

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QS Link Power Requirements

Devices : Power Supply	(PDU)
GRAFIK Eye QS	2
ESN (EcoSystem)	30
ESN (Switching)	14
ESN (0-10V)	
ESN (DALI)	3
ESN (Adaptive)	
ESN (Motor Module)	0
Plug-in Power Supply	
J-Box Power Supply	8
DIN Rail power supply	22
Quantum Lighting Hub	33 to each link
Devices : Power Draw	(PDU)
QSM (without wired inputs)	3
QSM (with wired inputs)	3 + add PDUs for each sensor in the PDU column
Wired Occ Sensor on QSM	2
Wired photo sensor, pico, IR reciever and Ecosystem keypad on QSM	0.5 each
Digital IO Control Interface	3
NWK Control Interface	2
DMX-512 Interface	2
ESN Programming Interface	2
seeTouch QS	1

Wire Gauge	Max Loop Length
#18 AWG (1.0 sq mm)	550 ft (167m)
#16 AWG (1.5 sq mm)	900 ft (274m)
#14 AWG (2.5 sq mm)	1,400 ft (426 m)
#12 AWG (4 sq mm)	2,200 ft (670m)

Notes on Wiring

QS Control Link

The QS control link has a free wiring topology (daisy chain, t-tap, etc). The system wiring illustrated by this drawing has been laid out to ensure appropriate power to each device. If, for any reason, the system is to be wired differently than what is shown, please confirm all device power requirements are met (Please refer to "QS Link Power Requirements" for individual device power requirements).

For total QS control wire lengths of less than 500ft (153 m), use Lutron cable GRX-CBL-346S (4 Conductor Non-Plenum) or GRX-PCBL-346S (4 Conductor Plenum). Otherwise use 2#18 AWG (1.0 mm2) and 1 Belden #9461. For total QS control wire lengths of up to 2,000 ft, use GRX-CBL-46L. Total QS control wire length MUST NOT exceed 2,000 ft (600 m).

Panel Link Rules

Panels are daisy chained on one of the configurable links per Lutron's drawing, however they do not have to be in the order shown. DO NOT home-run or t-tap this wiring link. All circuits need to be landed in these panels per Lutron's Panel Schedules. The maximum wire length of a panel link is 2,000 ft (600m). An MX-RPTR is used to extend the length of a link by another 2,000 ft (600m). A maximum of (3) MX-RPTRs may be used per link for maximum length of 8,000 ft (2,430 m) per link. If panel is moved to another link, or the loads are not wired as shown in Lutron's panel schedules, Lutron must be notified. This information is important for programming the system. LT-1 link terminators are needed on each end of the link.

Use Lutron cable GRX-CBL-46L (5 conductor non-plenum) or GRX-PCBL-46L (5 conductor plenum rated). Otherwise use 2#12 AWG (4 sq mm)+ 2 #22 AWG (0.5 sq mm) twisted and shielded and between panels add 1#18 AWG (1.0 sq mm) for emergency sensing cable by others.

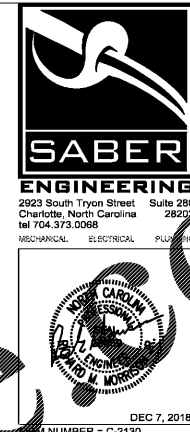
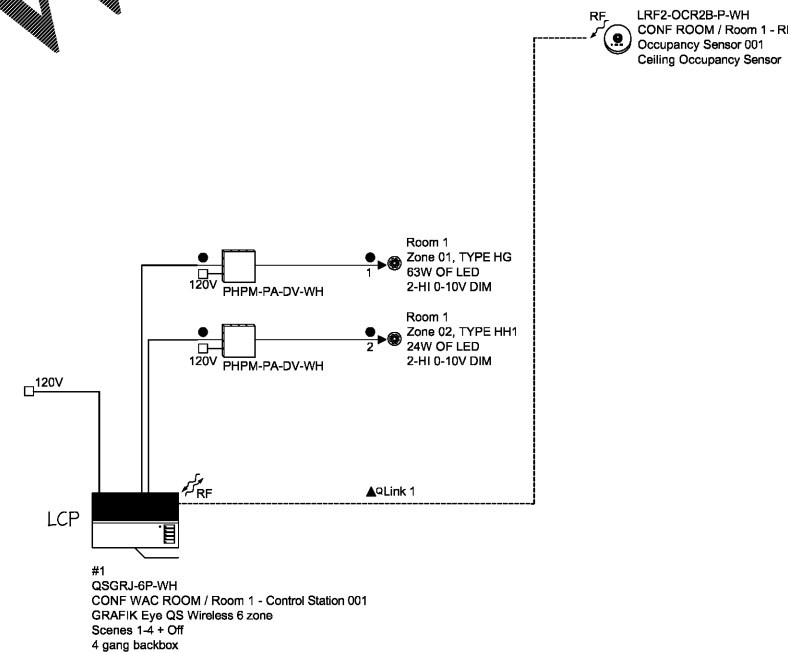
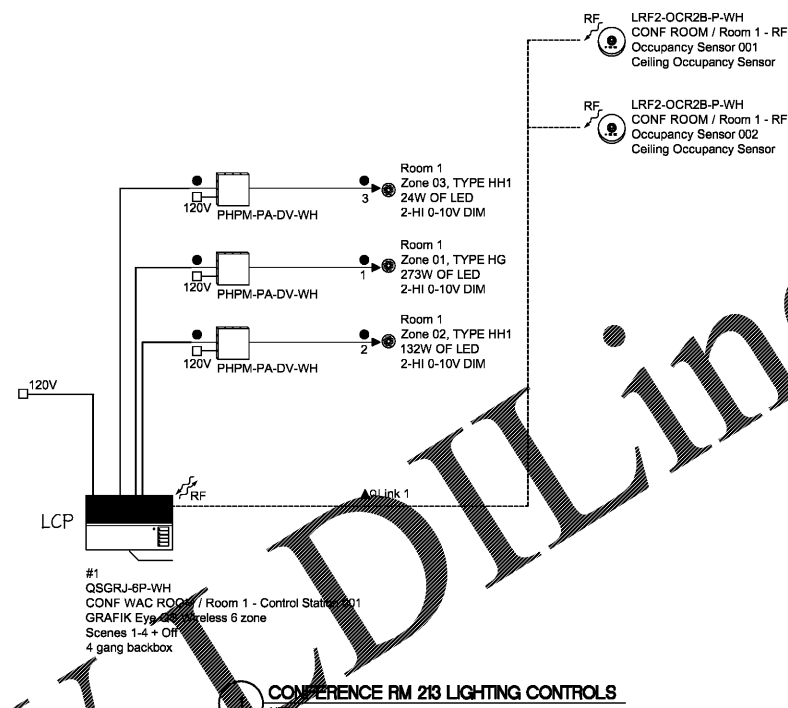
DMX Cable

DMX Link wiring requires one Belden #9729 (Non-Plenum) or one Belden #89729 (Plenum) or Dura Flex 22/4 WA cable.

EcoSystem Bus/Loop*

This is a topology free and polarity free wiring (daisy-chain, t-tap, home-run etc.). Keep all the ballasts/modules in one room on the same loop whenever possible. EcoSystem loops are shown on the lighting plans. If there is a discrepancy, and if rooms are wired on a different loop than the one shown, Lutron needs to be notified. This information is important for programming the system. Use Lutron cable C-CBL-216-GR1 (#216 Conductor Non-Plenum) or C-PCBL-216-GR1 (#216 Conductor Plenum Rated). Otherwise use 2#18 AWG (1.5 sq mm) by others. Loop length is limited by wire gauge used for E1 and E2 as follows:

WILSON AIR		DESCRIPTION:	
DESIGN BY:	DAVID FEUS	PERMISSIONS/STARTUP OPTION:	
COMPANY:	CAROLINA CONTROL GROUP,	LUTRON SYSTEMS, SOFTSWITCH28 SYSTEMS, AND GRAFIK EYE 4000 SYSTEMS CONTAINING LP, XP, OR GP POWER PANELS INCLUDE FACTORY COMMISSIONING. FACTORY COMMISSIONING IS OPTIONAL FOR GRAFIK EYE 3000 AND RADIOTOUCH SYSTEMS.	
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REVISIONS

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SHEET NUMBER: E-207L

COORDINATE EXACT LUTRON EQUIPMENT AND WIRING REQUIREMENTS WITH MANUFACTURER PRIOR TO PRICING.

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