nLight AIR® 2.0 Technical Reference Guide

This nLight technical reference guide provides frequently asked questions for Peerless® and Mark Architectual Lighting™ linear fixtures. This guide also features nLight AIR installation and line drawings for common installations. For specific questions please refer to individual specification sheets.

What components are included with nLTAIR2?

- Individual fixtures and runs include:
  - One wireless occupancy sensor (rES7) or one wireless receiver (rIO, non-occupancy)

- Longer fixtures and runs include:
  - One wireless occupancy sensor (rES7) or one wireless receiver (rIO, non-occupancy)
  - One DALI power supply to propagate the control signal to a control zone

- All fixture runs can support additional sensors or control modules for multi-zone operation when needed.

Will any of these components require external installation?

- External installation is not required. All components (sensors, control modules, DALI power supply) are mounted internally to the fixtures.

What are the options for sensors for nLTAIR2?

- There are two options for sensors compatible with the nLTAIR2. The first option is an API, providing a PIR occupancy sensor combined with daylighting photocell operation. The second option is an APD, providing a dual-technology (PDT) occupancy sensor with daylighting photocell operation.

Is there a limit to the number of sensors or rIO's?

- Yes, standard ordering allows for a max of two sensor zones and one non-sensor zone in a single run. Only one nLTAIR2 sensor or module is provided per fixture section per zone.

Is there a limit for zone length per nLTAIR2 sensor or control module?

- The DALI power supply propagates the control signal from the nLTAIR2 device to other drivers in the zone. The supply can accommodate up to thirty drivers. For multiple zones, each zone will have its own nLTAIR2 sensor or rIO and DALI power supply.

Will a continuous emergency section (8' EMG - 8' EMG) need one power pack and non-continuous sections (8' EMG - 8' Normal - 8' EMG) need two?

- No, an additional power pack is not needed. The emergency driver will share the on/off and dimming control function via DALI protocol through the normal power pack.

What is the breakout nomenclature for nLTAIR2?

- nLTAIR2 - indicates each fixture section of a run that is controlled wirelessly

- API/L or APD/L – indicates far-left sensor locations

- API/R or APD/R – indicates far-right sensor locations

- rIO/L or rIO/R will breakout to section when no sensor callout on order line

Can nLTAIR2 be used with 347V?

- Yes, but keep in mind when using it in this capacity, a step-down transformer is required.

Can a zone be split in the middle of a fixture section?

- Yes, but it will likely require additional drivers and wiring and is not a standard option. Most customer needs should be met by keeping zones to full section lengths. The suggested solution is to use two fixture sections, you can consult the factory for specifics.

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Frequently asked questions (con't)

How do emergency options work with nLTAIR2?

- Emergency Circuit (EC) power cannot be used with drivers directly connected to a nLTAIR2 sensor or control modules. The sensor or module that is wirelessly controlling the dimming function of the fixture is powered by the driver that would be on EC power, but it is not able to tell the difference between normal and EC power, so the fixture cannot be guaranteed to go to full brightness when EC power is being provided. EC power in fixture sections marked NLTAIR2 are acceptable as these sections are getting their control over the bus provided by the DALI power supply that will lose power when normal power is removed. These sections will go to full brightness when powered by EC power.

- The E10WLCP/E10WCP option provides battery power directly to the LED's during the loss of normal power. Since this is applied after the driver and the driver will not be powered, the sensor will not be able to limit the output, so the fixture section will go to full battery output.

Spec sheet indicates that DALI control input not available with sensors, but it seems that DALI communication is being used to carry control signals between drivers in combination with nLTAIR2 sensors. Please explain.

- For internal communication, DALI protocol is being used between the drivers. Occupancy detection and wireless control are both provided via the nLTAIR2 sensors.

- To ensure the correct system components are built into the fixtures and to successfully provide wireless sensor control, the nLTAIR2 must be selected for the control input sensors, and not DALI control input.

Lightedge Specific: What length fixtures can support nLTAIR2?

- At this time, only 8ft fixture sections support nLTAIR2 in Lightedge.

Why is DCT not allowed with nLTAIR2?

- Due to space constraints within the fixture DCT is not allowed with nLTAIR2.

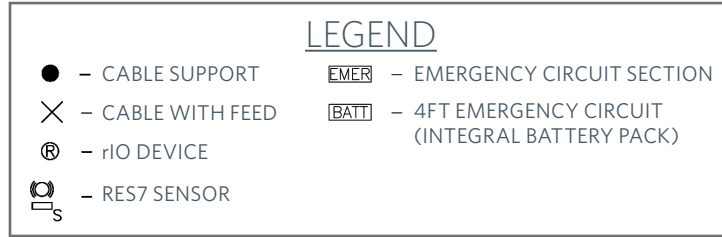**Can fixture run be used with a single feed for multiple zones?**

- Yes. A single power feed can supply power for multiple zones. Bi-direct; a single feed can power up to 40'. Single direction; a single feed can power up to 80'. An emergency sections will need its own separate feed.

Slot Specific: Will DCT be the same as SCT?

- nLTAIR2 will not be available with DCT fixtures.

What sensors can be used with nLight AIR 2.0?

- API or APD (using the rES7) for sensor controlled fixtures.

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│                          LEGEND                              │
│   ● – CABLE SUPPORT          [EMER] – EMERGENCY CIRCUIT SECTION│
│   ✕ – CABLE WITH FEED        [BATT] – 4FT EMERGENCY CIRCUIT   │
│   ® – rIO DEVICE                     (INTEGRAL BATTERY PACK)  │
│   ⬚S – RES7 SENSOR                                           │
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*For specific sensor/rIO locations please refer to individual specification sheet

SINGLE ZONE RUNS

® = (1) rIO DEVICE TO CONTROL ENTIRE RUN. POWER PACK CAN HANDLE UP TO 30 DRIVERS

40FT MSL8, NO SENSOR

——40' NOMINAL——
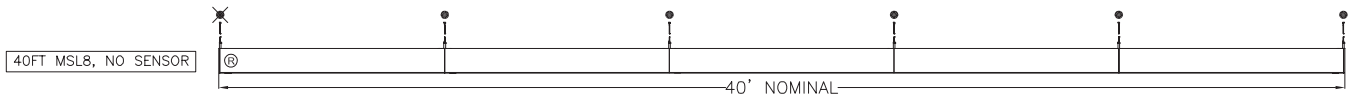
⬚S = (1) RES7 SENSOR TO CONTROL ENTIRE RUN. POWER PACK CAN HANDLE UP TO 30 DRIVERS
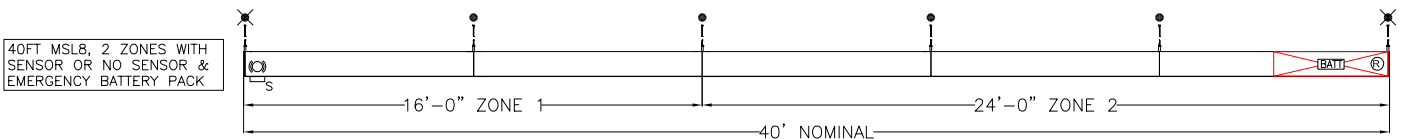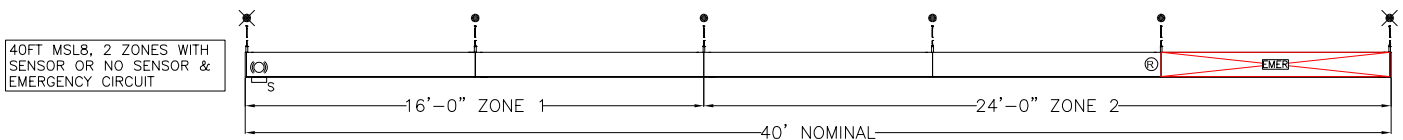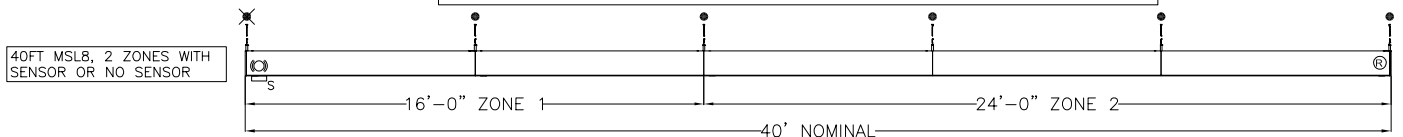
40FT MSL8, WITH SENSOR

——40' NOMINAL——
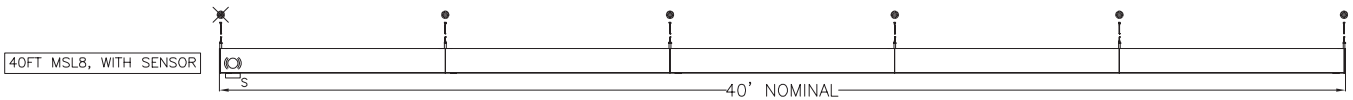
– (1) rIO DEVICE OR RES7 DEVICE TO CONTROL ENTIRE RUN. POWER PACK CAN HANDLE UP TO 30 DRIVERS
– NLTAIR2/PP IS NOT ALLOWED IN THE SAME FIXTURE SECTION WITH EMERGENCY CIRCUIT

40FT MSL8, NO SENSOR & EMERGENCY CIRCUIT

[EMER]

——40' NOMINAL——

40FT MSL8, WITH SENSOR & EMERGENCY BATTERY PACK

[BATT]

——40' NOMINAL——

DUAL ZONE RUNS

– (1) rIO DEVICE OR RES7 SENSOR NEEDED PER ZONE.
– (1) POWER PACK NEEDED PER ZONE. CAN HANDLE UP TO 30 DRIVERS
– NLTAIR2/PP IS NOT ALLOWED IN THE SAME FIXTURE SECTION WITH EMERGENCY CIRCUIT

40FT MSL8, 2 ZONES WITH SENSOR OR NO SENSOR

——16'-0" ZONE 1—— ——24'-0" ZONE 2——
——40' NOMINAL——

40FT MSL8, 2 ZONES WITH SENSOR OR NO SENSOR & EMERGENCY CIRCUIT

[EMER]

——16'-0" ZONE 1—— ——24'-0" ZONE 2——
——40' NOMINAL——

40FT MSL8, 2 ZONES WITH SENSOR OR NO SENSOR & EMERGENCY BATTERY PACK

[BATT]

——16'-0" ZONE 1—— ——24'-0" ZONE 2——
——40' NOMINAL——

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LEGEND

● – CABLE SUPPORT   EMER – EMERGENCY CIRCUIT SECTION

✕ – CABLE WITH FEED   BATT – 4FT EMERGENCY CIRCUIT
(INTEGRAL BATTERY PACK)
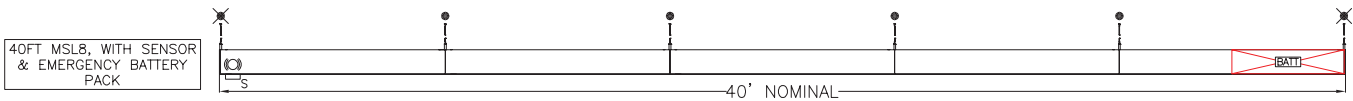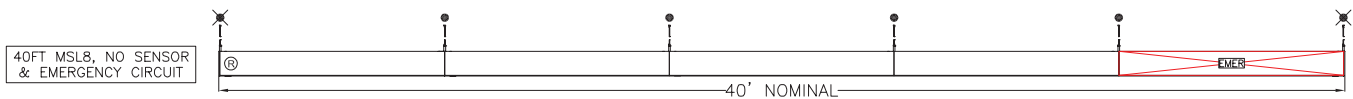
® – rIO DEVICE
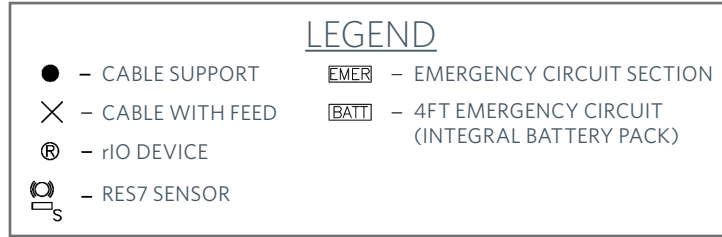
⊚ S – RES7 SENSOR

*For specific sensor/rIO locations please refer to individual specification sheet

3 ZONE RUNS

– (1) rIO DEVICE OR RES7 SENSOR NEEDED PER ZONE.
– (1) POWER PACK NEEDED PER ZONE. CAN HANDLE UP TO 30 DRIVERS
– NLTAIR2/PP IS NOT ALLOWED IN THE SAME FIXTURE SECTION WITH EMERGENCY CIRCUIT

40FT MSL8, 3 ZONES WITH SENSOR OR NO SENSOR

8'−0" ZONE 1   16'−0" ZONE 2   16'−0" ZONE 3
40' NOMINAL

40FT MSL8, 3 ZONES WITH SENSOR OR NO SENSOR & EMERGENCY CIRCUIT

8'−0" ZONE 1   16'−0" ZONE 2   16'−0" ZONE 3
40' NOMINAL

40FT MSL8, 3 ZONES WITH SENSOR OR NO SENSOR & EMERGENCY BATTERY PACK

8'−0" ZONE 1   16'−0" ZONE 2   16'−0" ZONE 3
40' NOMINAL

AcuityBrands.