GE current CTRL042 LightGrid Internal Node Outdoor Wireless Control System Installation Guide

Installation Guide
CTRL042

LightGrid Internal Node
Outdoor Wireless Control System
2.x Series

BEFORE YOU BEGIN
Read these instructions completely and carefully.

Contents

FCC Statements:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To satisfy FCC/ISED RF exposure requirements a separation distance of 20 cm or more must be maintained between the antenna of this device and persons during operation. Operation at closer than 20cm is not permitted.

CAN ICES-005 (B)/NMB-005 (B)
This device complies with part 15 of the FCC rules and with Innovation, Science and Economic Development Canada’s license-exempt RSS(s) standards. Operation is subject to the following two conditions:

- This device may not cause interference.
- This device must accept any interference, including interference that may cause undesired operation.

⚠ **WARNING**

RISK OF ELECTRIC SHOCK
Disconnect power before servicing or installing the product.
RISK OF INJURY OR DAMAGE
The unit will fall if not installed properly. Follow installation instructions. Install in accordance with National Electric Code and local codes.
USE NODE ONLY WITH LED AND HID LUMINAIRES
Rated up to 1000VA. Using node with any other device may void the warranty
UNPACKING
Carefully unpack the unit from its packaging. Properly inspect for defects before installing.

⚠ **CAUTION**
RISK OF INJURY
Wear safety glasses and gloves during installation and servicing.
RISK OF CHANGES OR MODIFICATIONS
The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Product Certifications

Internal node:
FCC ID: 2AS3F-90004
ISED ID: 25008 -90004

Before Installation

- **Carefully unpack the unit.** Inspect for defects before installing.
- **Check Electrical parameters.** Ensure that the fixture operating wattage is below 1000W, and the voltage at the fixture is within the allowed range of the Controller. Using a controller outside these parameters will void its warranty.
- **Validate Fixture Approval with Current.** Prior to integrating the Internal Node in any fixture, Current strongly recommends validation testing of the design to ensure LightGrid performance.

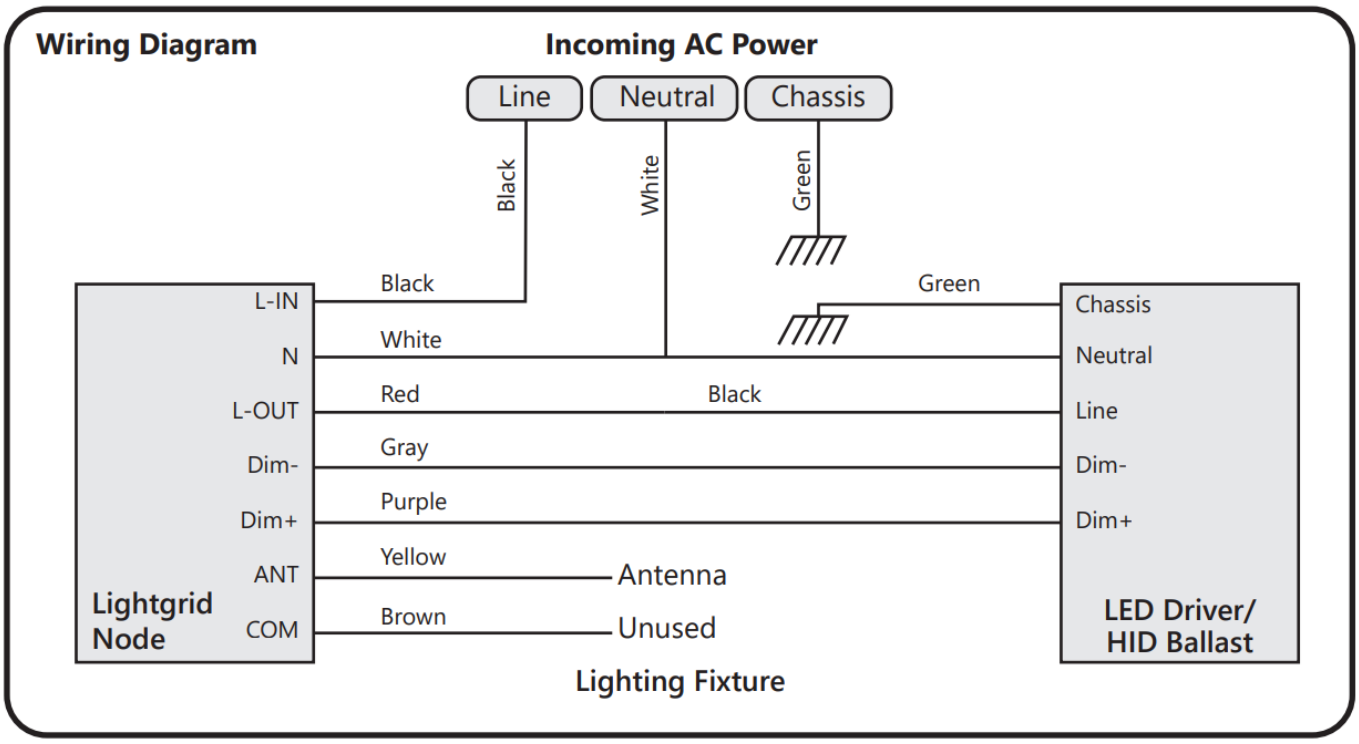
Wiring the Node into a Fixture

1 Required Supplies.

- LightGrid Internal Node
- Luminaire
- #10 mounting Screws of suitable type and length (recommended)

2 Following the Wiring Diagram, perform the following steps:

- Connect the L-In (black) of the node to the line (black) of the fixture.
- Connect L-Out (Red) of the node to Line of the driver
- Connect the neutral (white) of the node to the neutral (white) of the fixture
- Connect the neutral (white) of the LED Driver/HID Ballast to the neutral (white) of the fixture



3 **For dimmable fixture, please perform the following extra steps:**

- Connect the Dim- (grey) of the node to the negative dimming wire of the LED Driver/HID Ballast.
- Connect the Dim+ (violet) of the node to the positive dimming wire of the LED Driver/HID Ballast.

⚠**WARNING**

RISK OF DAMAGE TO NODE
Risk of damage on the node or fixture if all wiring instructions are not respected.
WIRING SET UP
All wiring setup should conform to NFPA70: National Electrical code and CSA-22.

Physical Integration within a Lighting Fixture

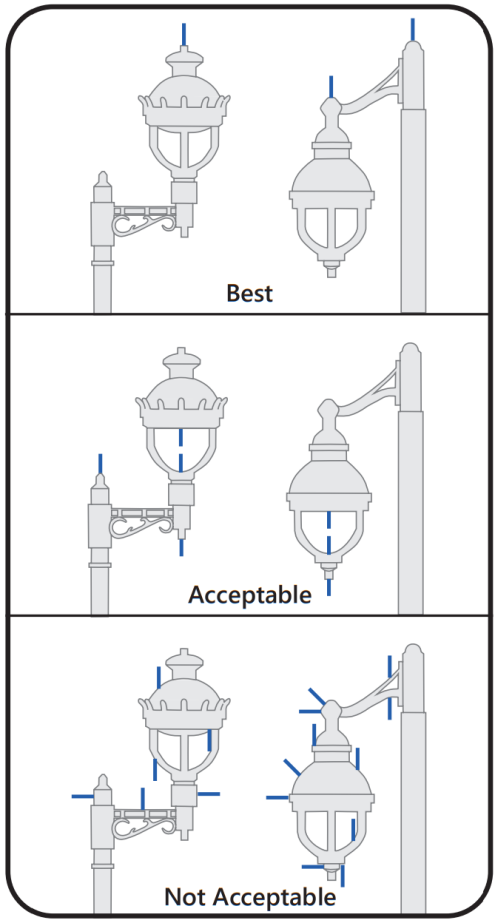
Node Location & Installation

- The location of the node inside the fixture must be selected to keep the node as far away as possible from sources of heat or electrical interference, such as the lamp ballast/driver/power supply, or the light bulb or LED panel, and its heatsink. Never install the node directly above these; The preferred location is in the lower part of the fixture
  below any source of heat.
- Record the location the Internal Node is installed (since it doesn't have GPS), this can be done by either manually recording it or using the Current commissioning app that is available on iOS to ensure the node is positioned in its current location on the map view.
- Ensure the node location provides a secure and robust mounting support surface with 2 appropriately positioned screw hole locations.
- Attach the node into the fixture using 2 screws using both holes provided on opposite sides of the node.
  Important Notes:

- All unused wires must be removed (cut flush with the housing) or isolated electrically (using a wire nut and/or electrical tape or heat-shrink tubing).
- Do not attempt to open the node housing or alter any part of the node.
- It is the integrator’s responsibility to ensure the temperature rating of the node is never exceeded; Make certain that the ambient temperature around the node in its selected location can never exceed 50 degrees Celsius.
- The node by default will be ON until the schedule is downloaded to the node from the CMS.

RF Antenna Location & Installation

- To select the optimum antenna mounting point, read the following and refer to the illustrations (right) showing examples of the best, acceptable, and unacceptable locations and orientations.
- The antenna must be mounted on a conductive (metal) surface. If the fixture is of non-conductive construction (such as plastic), the inner surface where the antenna is to be installed should be lined with a thin metal sheet or foil (such as copper foil tape) approximately 6” to 12” diameter, with the antenna installed through the center of this metalized area.
- The antenna is to be installed through a 12mm diameter hole drilled through the outer surface of the lamp fixture housing. The mounting surface around this hole must be perfectly smooth, flat, and free of any burrs to ensure a watertight seal when installed.
- The antenna mounting surface thickness should be from 1mm to 6mm thick at the point where the hole is drilled.
- The antenna is not detachable from the node; A suitable location for both the node and antenna must be found which allows the antenna and its wire to be routed from the node installation point, to where it can be passed through the antenna mounting hole from the inside of the fixture.
- When installing the antenna, make sure the supplied O-ring is retained in the groove in the base flange of the antenna (on the inner surface of the lamp housing). The plastic nut is then threaded onto the antenna shaft on the outside of the fixture and tightened, being very careful not to overtighten. Ensure the O-ring is compressed but not displaced from its groove to prevent water ingress.
- The antenna must be installed vertically with respect to the ground. Therefore, the surface it is mounted to must be horizontal. If the most suitable location is not perfectly horizontal at the point where the antenna is mounted, bevel washers may be used on either side of the mounting hole to ensure the antenna will be perfectly vertical when installed.

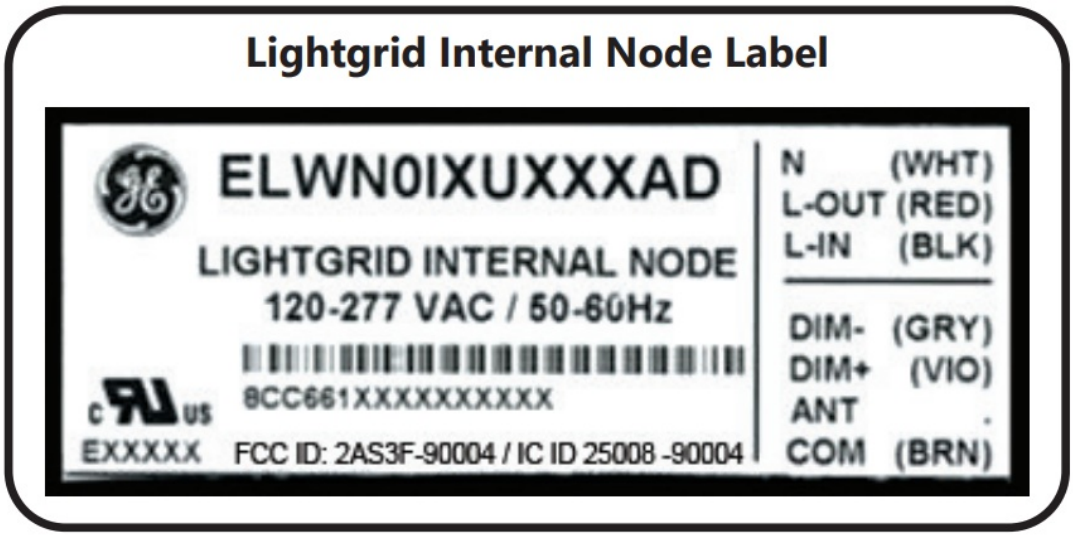


RF Antenna Location & Installation

- The selected location of the antenna on the outside of the fixture must be free of any significant conductive (metal) obstruction horizontally, 360 degrees around it, measured from the base of the antenna where it meets the lamp fixture surface, to at least 12” above this surface. Plastic or glass features will not affect the antenna if they are at least 1-2cm away from it.
- The preferred location for the antenna on the fixture is generally the highest point on the upper surface of the fixture, centered on this mounting surface.
- On hanging fixtures supported from above, the antenna may be mounted pointed downward, at a suitable location on the lower surface of the fixture housing.

Labels

- The Internal Node is supplied with 3 identical labels. One label is affixed on the node housing. The other two labels packaged with each node are to be affixed on a visible location on the exterior of the fixture and/or the base of the pole, for commissioning purposes.
- The MAC address of each node is printed on the label both as a barcode & plain text.



Validation Testing

Non-Dimmable Fixture: To verify the installation of Light grid Internal Node, please follow these steps:

- Apply AC power to the fixture (120- 277V, 50/60 Hz)
- If the installation has been done as per instructions in section Wiring, the light will turn off briefly during the first 60 seconds after power is applied.

Dimmable Fixture: To verify the installation of the Light grid Internal Node, please follow these steps:

- Apply AC power to the fixture (120- 277V, 50/60 Hz)
- If the dimming wires are installed as per instructions in section Wiring, the light level will visibly dim within the first 60 seconds after power is applied and then return to full brightness.

Questions

• Email: lightgridsupport@gecurrent.com
• Leave a Voicemail: 1-877-843-5590

GE current
a Daintree company

www.gecurrent.com

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Documents / Resources

	GE current CTRL042 LightGrid Internal Node Outdoor Wireless Control System [pdf] Installation Guide 90004, 2AS3F-90004, 2AS3F90004, CTRL042 LightGrid Internal Node Outdoor Wireless Control System, CTRL042, LightGrid Internal Node Outdoor Wireless Control System
	GE current CTRL042 LightGrid Internal Node Outdoor Wireless Control System [pdf] Installation Guide CTRL042 LightGrid Internal Node Outdoor Wireless Control System, CTRL042, LightGrid Internal Node Outdoor Wireless Control System, Internal Node Outdoor Wireless Control System, Outdoor Wireless Control System, Wireless Control System, Control System

References

- Commercial Lighting and Lighting Controls | Current - GLI Brands

Manuals+,