LightGrid Wireless Control System
Internal Mesh Node

System Architecture

Designed for Post Tops and other luminaires where no external ANSI socket is available. Similar to the standard Lightgrid Mesh Node the internal node operates in a mesh network, communicating to each other as well as the gateway. The gateway connects nodes to the Central Management System through a standard TCP-IP interface.

Why Mesh?

Mesh systems provide a cost-effective lighting controls solution in urban environments that typically have dense pole locations, because each gateway can support hundreds of nodes.

Product Features

- 120-277V Only
- Enhanced Surge Protection 10kV/5kA per ANSI C136.2-2015
- 0-10V (Analog) and DALI (Digital) Dimming Interfaces
- Connects through ANSI 7-Pin
- Integrated GPS and Tilt Sensor for Impacts > 3g
- Max Load 1,000 Watts/ 1,500VA

Optimized Energy Usage: On/Off & Dimming
Query by Location: Available Every 15 Minutes
Reduce and Streamline Repair Calls: Day Burner/Dark Night Alerts
Accurate Energy Usage Measurement: +/- 0.5% Accuracy
Product Specifications

Node Specifications:

- Input Voltage: 120-277V
- Both 0-10V and DALI Dimming Supported per ANSI C136.41-2013
- Operating Temp: -40° to +70°C
- Surge Protection: 6kV/3kA Standard, per ANSI C136.2-2015
- Typical Power Consumption: 1.5W @ 120V, 2W @ 277-347V, 2.4W @ 480V
- Photocell: Complies with ANSI C136.10-2006
- GPS Accuracy: +/- 3m in clear open sky
- Max Load Capacity: 1,000 Watt / 1,500VA Load
- Inrush Current Limiting at Turn On
- Utility Grade Energy Measurement per ANSI C12.20
- IR Output for Utility Meter Calibration Validation
- Ingress Protection: Class IP65
- Digital In/Out and Analog Inputs
- Configurable Serial In/Out Communication
- Weight: 0.52 lbs
- Warranty: 5 Years Standard, 10 Year Extended Available

Network, Compliance & Security:

- Radio Frequency: 915 MHz ISM Band, FCC CFR 47 15.247 Intentional Radiators, ICES-005
- Network Communication: IEEE 802.15.4, 6LoWPAN 50 Channel FHSS
- EMI: Complies with FCC CFR 47 15.208, 15,209 and ICES-005 (B) / NMB-005 (B)
- Security: AES Encryption and "End to End" Certificate Based Authentication

Ordering Number Logic

<table>
<thead>
<tr>
<th>ID</th>
<th>Voltage</th>
<th>Configuration</th>
<th>Metering Type</th>
<th>GPS</th>
<th>Antenna</th>
<th>Network</th>
<th>Options</th>
<th>Dimming</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELWN</td>
<td>120-277V</td>
<td>Internal Node</td>
<td>Load + Node</td>
<td>U</td>
<td>X</td>
<td>X</td>
<td>XX = North America</td>
<td>AD = 0-10V/DALI</td>
<td>None = Default</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5% Utility Grade</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>S</td>
<td>B</td>
<td>2 = 5.16.8 Firmware Update</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examples

ELWN01XUXXXXXAD: 120-277V, Internal Node, Load and Node Metering, Utility Grade, Direct Connected Antenna, 1000W Load, Network A, DALI/0-10V Dimming
ELWN01XUXBXXAD2: 120-277V, Internal Node, Load and Node Metering, Utility Grade, SMA Connector for Antenna, 1000W Load, Network A, DALI/0-10V Dimming, 5.16.8 Firmware Update.

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CTRL018 - 8/07/20