



CUSTOMER NAME	
PROJECT NAME	
DATE	TYPE
CATALOG NUMBER	

## LightGRID+ SERIES

### LightGRID+ Wireless Internal Fixture Module

- On/Off lighting control with 0-10V full-range dimming
- 5 Digital / Analog inputs for low voltage switches, motion sensors, photocells, lux meters and other sensors
- Military grade AES-128 (or AES-256) communication encryption
- Programmable state after blackout, with peak shaving options
- Revenue-grade metering (+/- 0.5% accuracy) with multiple user-configurable alarms
- Complete integration with LightGRID+ software

## SPECIFICATIONS

### CONSTRUCTION

- Black
- UL94V-0 Flame retardant ABS with epoxy molding

### MOUNTING

- Optional Mounting Enclosure: NEMA 4: 6.25" (158.75mm) H x 3.125" (79.38mm) W x 3.375" (85.73mm) D

### ELECTRICAL

- Voltage:
  - 110-480VAC; 50/60Hz (+/- 10%)
  - Less than 1 watt consumption at 120V
  - Auto-calibrated for more precise metering and fewer false alarms
- Maximum Load Amperage:
  - 110-240VAC: 7 Amps
  - 277-347VAC: 5 Amps
  - 480VAC: 2 Amps
- Surge Protection
- Protects against surges and transients per ANSI 62.41-2002 category C low (6kV, 1.2/50µs & 3kA, 8/20µs) standard Combo waves and (6kV, 100kHz) Ring wave
- Power Metering:
  - Amperage, Voltage, Power (+/- 0.5% accuracy)
  - Power Factor, Cumulative Energy, Burn-time and cycles counters
  - ANSI C12.20 metering protocol compliance
- Meets standards IEC61000-4-3 and EN61000-4-3 - Immunity to radiated electromagnetic fields

### ELECTRICAL (CONTINUED)

- 0-10V dimming: For all types of 0-10V drivers and ballasts using a source or collector-type power supply up to 10mA
- 5 Digital / Analog low voltage inputs: 0-30VDC (3mA max at 30VDC), e.g. photocell, motion sensor, switches, lux meter and generic sensor
- 2 Digital outputs: Sink (Max: 50mA total) or Source 2.4mA (10k pull-up)
- Aux power supply: 24VDC, 50mA

### RADIO COMMUNICATIONS

- Radio Frequency Options: 2.4GHz ISM Band and 900MHz ISM Band
- Recommended Range: Up to 300m / 1,000 ft between modules.<sup>1</sup>
- Communication range based on clear line of site. Range may vary widely depending on environmental factors.
- Transmit Power:
  - 2.4GHz: +18 dBm
  - 900MHz: +24 dBm
- Receiver Sensitivity:
  - 2.4GHz: -103 dBm
  - 900MHz: -103 dBm
- Antenna Cable Length: 30cm / 11.8in

### NETWORK AND SECURITY

- Secure Encrypted Communications: Military Grade AES-128 encryption (AES-256 encryption also supported)

### OPERATION

- On/Off switching and flexible dimming, adjustable minimum and maximum levels with 1% steps

### OPERATION (CONTINUED)

- Manual-On/Auto-Off, Auto-On/Auto-Off and grace period compliant (Complies with N.Y. LL48 and many other energy regulations)
- Real-Time Operating System (RTOS) that can run multiple simultaneous tasks with minimal latency
- Tilt sensor measuring the earth's gravity angle changes
- Dynamic level adjustment for daylight harvesting, RP-8 optimal roadway lighting design and similar applications
- Programmable delay and dimming level when power is restored following a power outage for peak shaving
- Built-in demand response (load shedding) feature
- Lumen depreciation compensation over time
- Compatible with low-voltage occupancy and lux sensors (daylight harvesting), photocells and switches enabling energy conservation
- Any node with a sensor can be set as a master and control several nodes
- Each node can be part of 14 different groups and 30 separate scenarios
- Generic timers enable execution of a series of instructions at set intervals
- Energy consumption data collection
- Multiple Configurable Alarms/Alerts: Overload, Over Voltage, Under Voltage, Power Factor, Temperature, 0-10V, Fault When On, Fault When Off, Last Gasp, Restore Power On

CUSTOMER NAME	
PROJECT NAME	
DATE	TYPE
CATALOG NUMBER	

## SPECIFICATIONS (CONTINUED)

### OPERATION (CONTINUED)

- Mobile Scanning App:
  - Enables quick, simple and economical commissioning
  - Upon installation, performs both an instant function test and geolocation

### OPERATING ENVIRONMENT

- Relative humidity: 0-99% non-condensing
- Ambient Temperature Range: -40°C to +70°C

### CERTIFICATIONS

- ANSI/UL 8750, CSA 22.2 No. 250.13-14
- IP66

### CERTIFICATIONS (CONTINUED)

- 2.4GHz Version: U.S. FCC (Digi XBee PRO 2.4GHz) Part 15.247 Class A: MCQ-PS2CTH, Canada IC: 1846A-PS2CTH, Europe CE: ETSI, Australia: C-TICK, Japan: TELEC
- 900MHz Version: U.S. FCC (Digi XBee PRO 900MHz) Part 15.247 Class A: MCQ-XB900HP
- UL94V-0 Flame retardant ABS with epoxy molding
- DLC and RoHS compliant
- This product qualifies as "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 5/27/2020

### WARRANTY

- 5 year limited (Up to 10 year extended available)

Notes:

- 1 Antenna must be mounted vertically up or down.

## ORDERING GUIDE

Example: WIR-RMI-IO

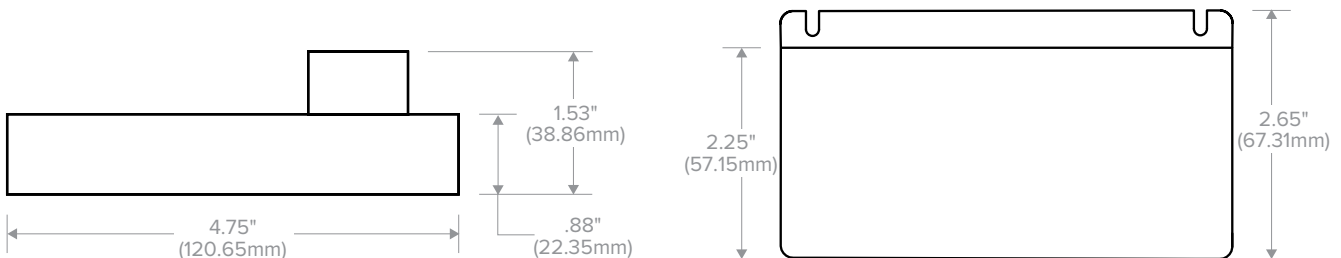
CATALOG #

Model	Enclosure
<b>WIR-RMI-IO</b> LightGRID+ Internal Fixture Module with Metering, 2.4GHz - 1000' Range, 120-480VAC, Input/Output	<b>Blank</b> None
<b>WIR-RMI9-IO<sup>1</sup></b> LightGRID+ Internal Fixture Module with Metering, 900MHz - 1000' Range, 120-480VAC, Input/Output	<b>N4</b> NEMA 4 Enclosure

Notes:

- 1 900 MHz Devices are MTO (Made-To-Order) - Contact Customer Service for Availability

## DIMENSIONS



CUSTOMER NAME \_\_\_\_\_

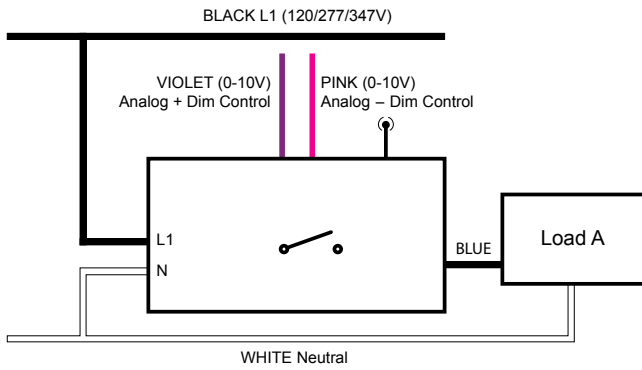
PROJECT NAME \_\_\_\_\_

DATE \_\_\_\_\_

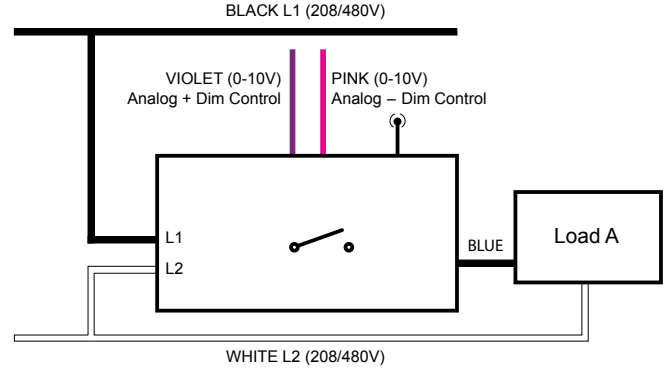
TYPE \_\_\_\_\_

CATALOG NUMBER \_\_\_\_\_

### WIRING DIAGRAMS



120/277/347V



208/480V

Pink wire replaces previous gray wire. Units with a gray instead of pink wire should be wired as the pink wire shown in the diagram.