

Lighting Controls

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

LightGRID+ SERIES

LightGRID+ WIRELESS INTERNAL FIXTURE MODULE

FEATURES

- 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
- Secondary low-voltage outputs for driving additional external loads (e.g. contactors)
- Military grade AES-128 (or AES-256) communication encryption
- Multi-level grouping and multiple scenarios
- Programmable state after blackout, with peak shaving options
- Revenue-grade metering (+/- 0.5% accuracy) with multiple user-configurable alarms
- Complete integration with LightGRID+ software



LIGHT GRID+



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
- Recommended Range: Up to 300m / 1,000 ft between modules.¹
- Communication range based on clear line of site. Range may vary widely depending on environmental factors.
- Transmit Power:
 - 2.4GHz: +18 dBm
- Receiver Sensitivity:
 - 2.4GHz: -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
- Manual-On/Auto-Off, Auto-On/Auto-Off and grace period compliant (Complies with N.Y. LL48 and many other energy regulations)

OPERATION (CONTINUED)

- 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

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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
- 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 #

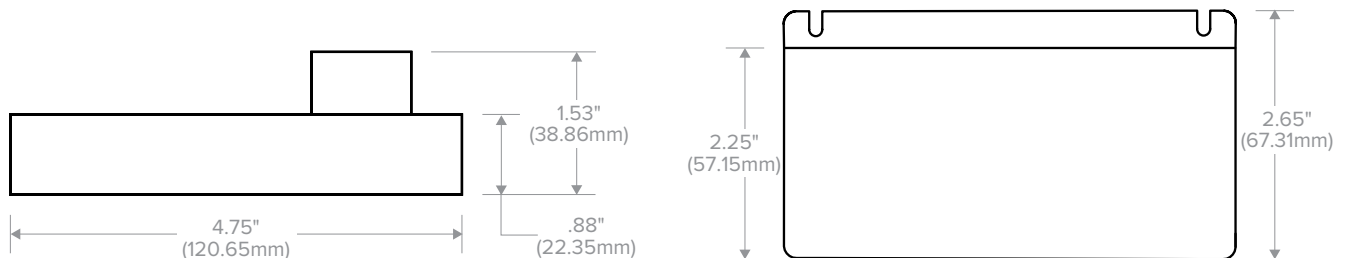
Model

WIR-RMI-IO LightGRID+ Internal Fixture Module with Metering, 2.4GHz - 1000' Range, 120-480VAC, Input/Output

Enclosure

Blank None

DIMENSIONS

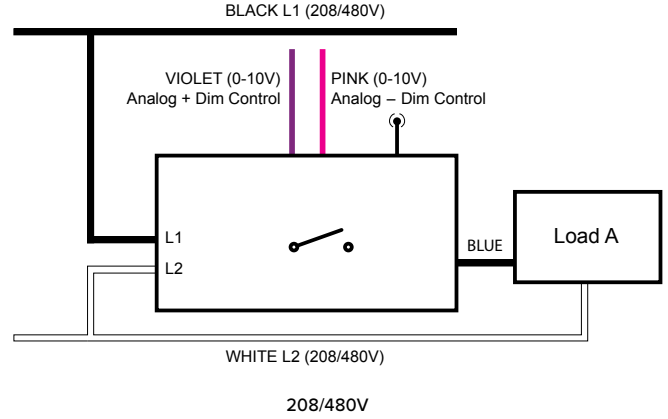
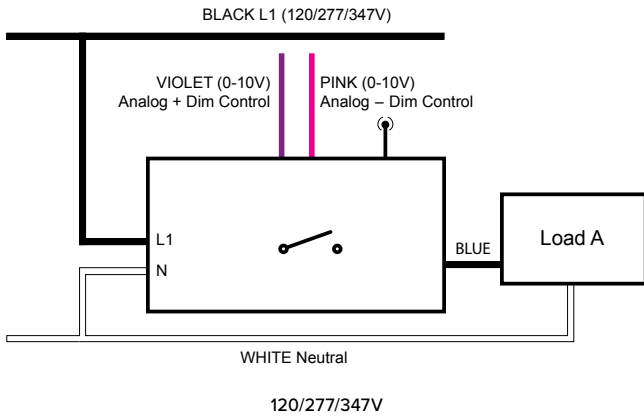


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WIRING DIAGRAMS



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.