# STREETLIGHT CONTROLLERS

## FOR POINT-TO-POINT REMOTE MANAGEMENT OF LED LIGHTING FIXTURES

PLN NODES

The PLN node family allows **remote management, in point-to-point mode,** of LED lighting fixtures with power ratings **up to 400W**.

Used in a remote management system, the PLN node transforms each individual light point into a network node, capable of c**ommunicating its operating status, diagnostic values, consumption and electrical measurements to its control centre**.

Lighting points equipped with PLN nodes are able to operate in accordance with the planned lighting schedule, managing the required light flow by activating pre-set **lighting profiles** (standalone mode) or in 'remote management' mode (PowerLine mode) controlled by the concentration unit in the electrical panel and by the remote control centre using IP protocol. Data communication between the PLN node and the CB200 concentrator takes place in PLC (PowerLineCommunication) mode with an open protocol compliant with the Meters&More standard (metersandmore.com).

The use of 'open' communication protocols in a remote management system for public lighting systems not only guarantees high reliability and operational continuity over time, but also maximum expandability towards 'Smart City' applications. The PLN node is available in **an IP67 version** for pole-mounted installation and in an **IP20 open frame** version for integration into lighting fixtures.

Luminibus®
smart lighting for smart cities

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## ELECTRICAL specs

| | | |
|---|---|---|
| version | IP67 | IP20 |
| input voltage | 220/230 Vac | |
| electrical insulation class | II | II built-in |
| input voltage variation | 160 ÷ 270 Vac | |
| standby power consumption | ≤ 1,5 W | |
| input frequency | 50/60 Hz | |
| dimmable power | 0-150 W or 0-400 W | |
| dimmer outpu | 0-10 Vcc or DALI (10mA) | |
| adjustment range | 0-100%linear @ 5%step | |

## ENVIRONMENTAL AND MECHANICAL specs

| | | |
|---|---|---|
| version | IP67 | IP20 |
| operating temperature | -25 ÷ +65 °C | |
| dimensions (mm) | 156x52x35 | |
| level of protection | IP67 | IP20 |
| weight | 180g | 100g |
| case | self-extinguishing material | |

## CERTIFICATIONS

| | |
|---|---|
| directives under which the product complies | EN55015 • EN55022B • EN61000-3-2 • EN61547 • EN60926 • EN60928 • IEC68-2-6FC • IEC68-2- 29-EB • EN50065-1 • EN50081 • EN50082 • EN 61347-2-11 |
| environmental standard | ISO 14001 |
| mark | CE |
| isolation | II Class (IP67 version) |
| case | LEXAN-940A, IL94 standard |

## DIMENSIONS & CONNECTIONS

### IP67 version


It is connected using single-core silicone cables with double insulation for II class equipment, with the following characteristics:

- conductor type: copper;
- operating voltage: 750V;
- impulse voltage: 5KV;
- operating temperature180°C;
- conductor cross-section and configuration: 1,00 mm², 32x0,20cm, external diameter 3,2 mm
- compliance: 2006/95/CE


### IP20 version


Si collega mediante connessioni con 6 morsetti a molla.


## surge PROTECTION

61000-3-2
SURGE: 6 kV 2 Ω
compliant

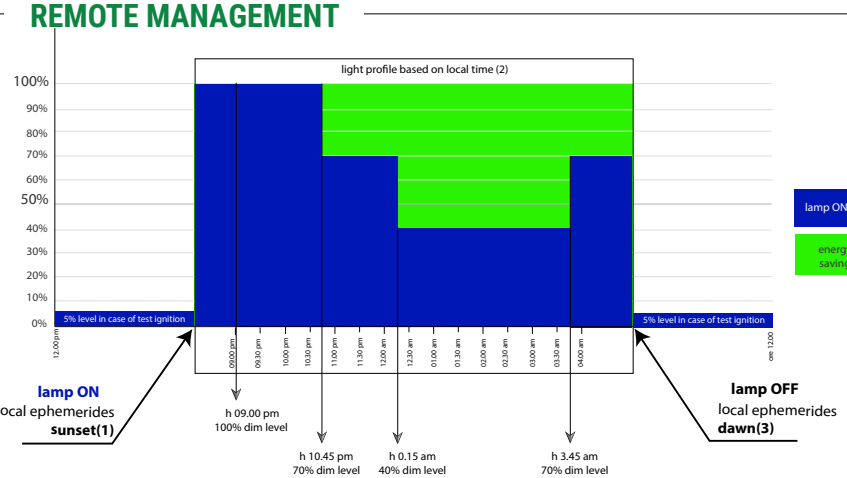
## RELIABILITY @20°C

| | |
|---|---|
| failure rate (FIT) | ≤ 1,5% failures/yr |
| lifetime | ≥ 10 yrs |

## FUNCTIONAL specs

- activate the switch-on, switch-off and light profile commands for the lamp
- retrieve the operating status of the lamp (on, off, temperature, electrical parameters)
- record the lamp's operating hours
- remote upgrade
- time recorder
- incremental consumption
- real time clock

## REMOTE MANAGEMENT




The PLN node can record and execute a lighting profile; it can operate both in standalone mode and in point-to-point remote management mode, based on profiles preloaded in the RTC.

| | |
|---|---|
| data communication | via powerline open protocol CLC/50568 Meters/&More |
| automatic profile management | via internal RTC |
| on/off controls | with internal relay |
| grandezze elettriche | instantaneous voltage |
| | cosϕ |
| | instantaneous active power |
| | 10% precision |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