STREETLIGHT CONTROLLERS

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

NB-IoT™ plug&play

M3-NBN/ZHAGA is the **controller for lighting fixtures** that allows them to be **dimmed in both stand-alone and interactive modes**, **monitors their operation and performance**, and provides useful data for organising preventive maintenance activities.

M3-NBN/ZHAGA is the latest addition to the Luminibus family of controllers, equipped with current and innovative technologies such as the ability to connect a street light, located anywhere in the territory, to the management and control centre via the **narrow band Internet of Things (NB-IoT) network.**

With NB-IoT, the data communication network is no longer a drain on investments in infrastructure, resources and maintenance. Furthermore, thanks to its widespread coverage and accessibility, it allows communication even in hostile environmental conditions and, operating on standard protocols and licensed frequencies, always guarantees bandwidth availability.

In addition to the considerable advantage of exploiting the NB-IoT network, M3-NBN/ZHAGA is a **plug-and-play** controller that relieves field staff from spending excessive time and acquiring skills for its installation: a simple twist is all it takes to connect the controller from the outside thanks to the **built-in ZHAGA connector**, and a smartphone is all that is needed to configure it using the Luminibus app, which is also simple and intuitive.

Combined with Luminibus IoT sensors for sampling hourly traffic flow (TAI) and road surface luminance and weather conditions (FAI), it enables the creation of **adaptive lighting solutions**.

Luminibus®
smart lighting for smart cities

APK SMART TECHNOLOGIES
a Maggioli Group company

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INSTALLATION

M³-PLN-NBN is available with a **Zhaga connection** for installation outside the luminaire; it is connected directly to the lamp driver via a **DALI D4i interface** and communicates instantly after the lamp is switched on.

DIMMING

The lighting fixture equipped with the Luminibus controller operates according to the lighting profile, based on absolute time or local ephemeris, assigned to it at the factory (**stand-alone mode**) or **interactively**. In the latter case, the controller can also execute instant commands received from the Luminibus software platform.

SUITABLE FOR HYBRID SYSTEMS'

The Luminibus family of controllers (point-to-point NB-IoT or PLC or remote control panel modules) **allows lighting fixtures of different technologies** to be "smartified" **within the same system**, enabling the operator to control hybrid technology systems.

COMMUNICATION PROTOCOLS

Data communication takes place using **standard, open protocols**; this guarantees a high level of security and protection in communication with controllers, as well as reducing the risk of vendor lock-in.

MAIN TECHNICAL SPECS

Microcontroller
CORTEX-M with RAM & FLASH memory and Real Time Clock

Modem
NB IoT for data communication with management software;

Antenna
omnidirectional multiband antenna

Features
Measurement of electrical parameters (input voltage, energy consumption, switch-on time, etc.); On/Off and dimming control.

Voltage
operating voltage 12 ÷ 24Vcc;

Light lamp control
via DALI D4i interface

Temperature
operating temperature
-40 ÷ + 85 °C

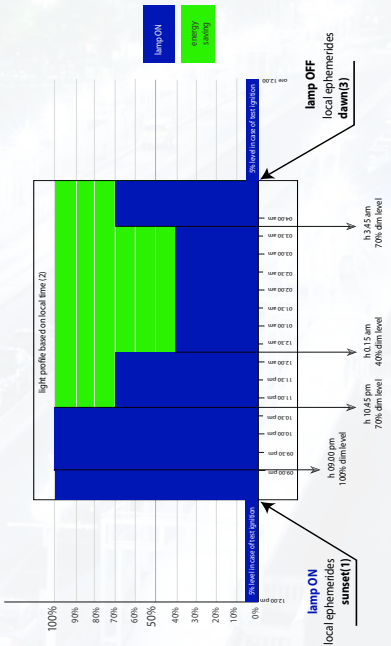
Dimensions
diameter 80m, height 35mm

Protection class
IP67

Case
UL94 V-0 classified plastic casing.

main features

- static dimming: on/off and light flow management according to the assigned light profile
- dynamic dimming according to FAI and TAI criteria (optional)
- information on the operating status of the lamp (operating status, temperature, electrical measurements, diagnostic values, consumption)
- historical data relating to lamp service
- remote software upgrade
- real time clock



Luminibus

it is the complete smart lighting system.

In combination with CB200, the remote management system for electrical panels and street lights, Luminibus controllers provide full control and diagnostics of the entire public lighting system.

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