NOVALIGHT OLC ZHAGA

NL-OLCZ-XX-010

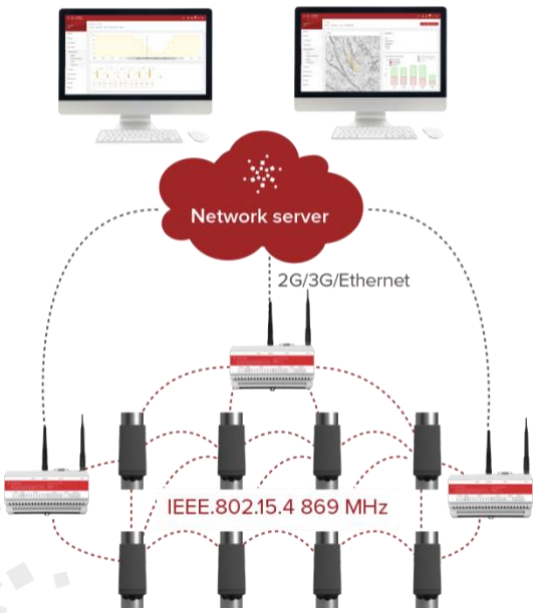
OUTDOOR LIGHT CONTROLLER FOR ZHAGA CONNECTOR

The Zhaga NovaLight OLC controller is easily installed on a luminaire head equipped with a Zhaga connector and allows the luminaire's light intensity to be adjusted and maintenance / consumption data to be collected. It connects to a centralized management software for easy remote configuration of the system.

IN A NUTSHELL

Zhaga's NovaLight OLC controllers offer total control over a luminaire installation through remote control and monitoring capabilities. Substantial energy and operational savings can be realized.

The controller is powered by the lamp driver and communicates with it in D4i: the DALI standard for intelligent luminaires. This standard allows for standardized exchanges between lamp drivers, sensors and luminaire controllers. D4i also enables the retrieval of inventory, consumption and diagnostic data in a standardized format across manufacturers.



The Zhaga® Consortium is a global lighting industry organization that aims to standardize interfaces between lighting components, including connectors, power supplies, lamp drivers, luminaire controllers and sensors.

Complementary to the D4i, Zhaga® is a revolutionary approach on the technical, operational and economic levels.

The controller enables on/off switching, dimming profiles application, fault detection and energy consumption measurement. It communicates via the NovaCom Smart-City wireless mesh network with other nearby controllers.

KEY ELEMENTS

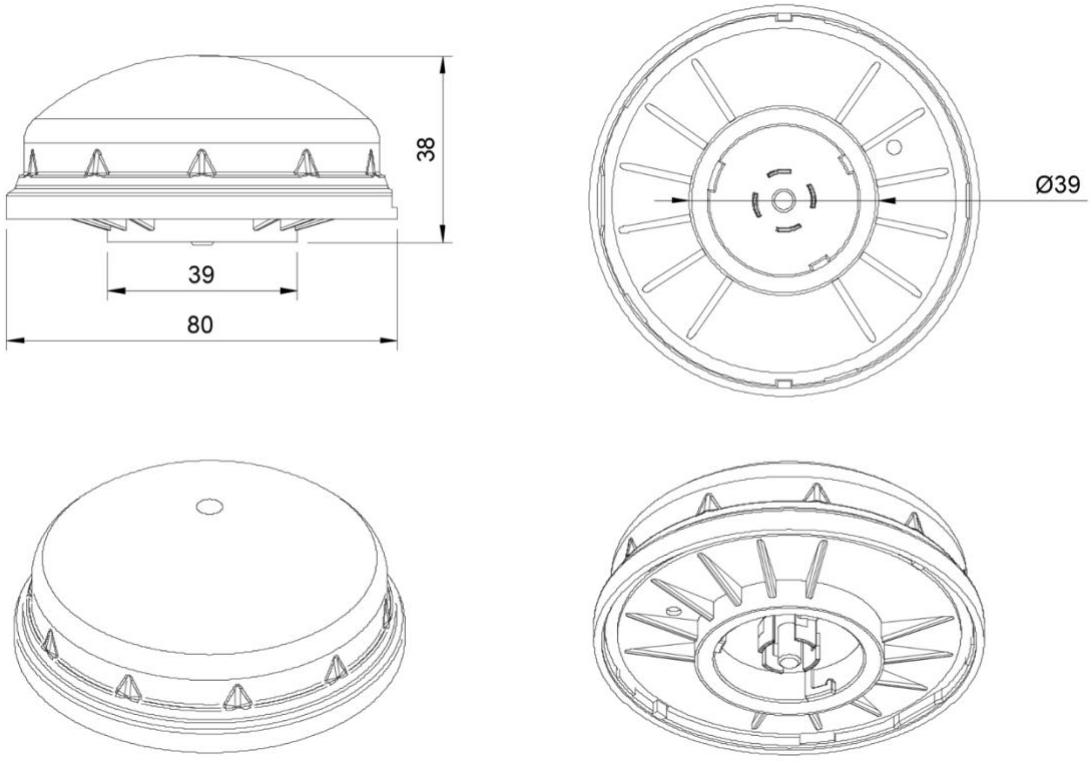
- Remote control and monitoring of the luminaire with DALI2, SR, D4i and Z4i
- Integrated astronomical clock
- Energy consumption and electrical measurements (voltage, current, power factor, frequency and active power) via the lamp driver
- Malfunction detection (network, ballast/driver, luminaire, electrical)
- Mounting on Zhaga connector
- 24VDC power supply
- Wireless IIoT 802.15.4 869MHz mesh network
- AES-128 encryption for the mesh network and AES-256 for the data with dynamic session keys
- Remote reprogramming

TECHNICAL CHARACTERISTICS

MECHANICAL

EXTERNAL DIMENSIONS	VALUE	*UNIT*
Height	38	*[mm]*
Diameter	80	*[mm]*
Weight	72	*[gr]*

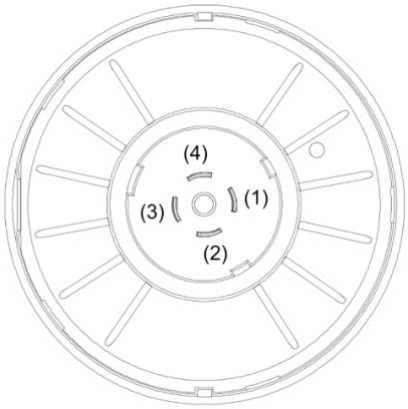
The controller is made of UV resistant plastic. The base is made of polybutylene terephthalate PBT and the translucent dome of smoky grey color is made of polycarbonate PC.



ENVIRONMENTAL PARAMETERS	MIN	TYP.	MAX	*UNIT*
Operating temperature	-20		+75	*[°C]*
Humidity in operation	10		90	*[%RH]*
Protection of the case		IP66		
Shock protection		IK09		

ELECTRICAL

The controller is powered through the Zhaga connector by the D4i/SR driver of the lamp. The driver also provides power to the DALI bus. The distribution of the signals on the Zhaga connector complies with the standard.



1 : +24 VDC power supply

2 : DALI- and power supply ground

3 : DALI+

4 : Not used.

Luminaires that come with one or two Zhaga ZD4i-certified connectors including a driver with 24VDC auxiliary power are pre-wired from the factory so that installation of the Zhaga controller is a snap.

ELECTRICAL PARAMETERS	MIN	TYP.	MAX	*UNIT*
Input voltage	21.6	24.0	30.0	*[VDC]*
Average consumption		0.55		*[W]*

DALI COMPATIBILITY

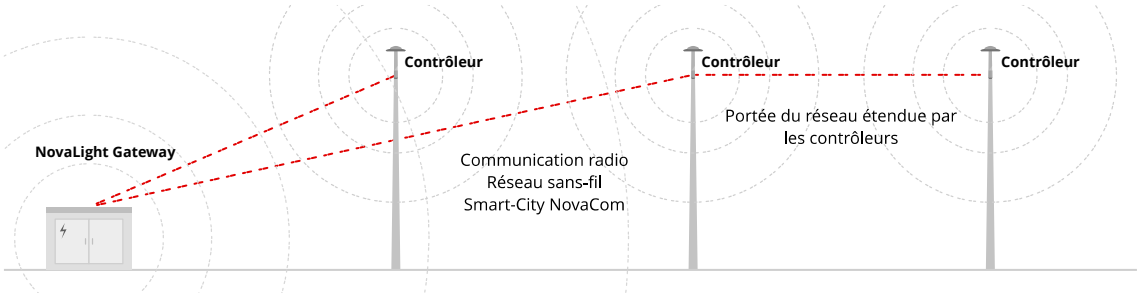
The Zhaga NovaLight OLC can control Philips SR drivers as well as all D4i certified drivers (part 207, 252 and 253). The controller automatically detects the correct protocol to apply.

COMMUNICATION

SMART-CITY WIRELESS NETWORK NOVACOM

PARAMETERS	MIN	TYP.	MAX	*UNIT*
Frequency	-	869.525	-	*[MHz]*
Bitrate	-	38.4	-	*[kbps]*
Power	-	100	-	*[mW]*
Sensitivity	-	-104	-	*[dBm]*
Range	-	150	600	*[m]*

This product communicates with IT systems via a wireless network with a mesh topology, low data rate and low power consumption. This network can be reused for other Smart City applications. A mesh topology means that the communication network initially generated by a NovaLight Gateway access point/router/gateway can be extended by all the controllers connected to it (signals relayed by the controllers). The controllers can also exchange messages directly between themselves. This mechanism is used in particular for the creation of light paths with dynamic lighting.



A communication between controllers usually takes place in a few tens of milliseconds. The depth of the network - i.e. the number of intermediate controllers allowing the network to be extended - is limited to 15 hops, which means that a single NovaLight Gateway could cover more than 2.5km of distance with its network for a longitudinal route.

CONNECTION PROCESS

At first startup, the controller will search for available networks in its neighborhood. The networks are announced either directly by the NovaLight Gateway, or by the controllers already connected to a network. The controllers will then attempt to connect to the discovered networks.

In order for a controller to associate itself with a network, it must first be registered in the remote management software, typically via the NovaLight mobile application. On subsequent start-ups, the controller will remember its network and will therefore not restart the connection procedure. The controllers are therefore immediately accessible via the network, even if the connectivity status has not yet been updated.

COMMISSIONING

The commissioning of this product requires access on the remote management software or on the NovaLight mobile application, available for iOS and Android. For this controller to connect to the wireless network, it must be linked to a streetlight in the remote management software, located in an area equipped with a NovaLight Gateway, and be in radio proximity to the network.

Télécharger dans l'App Store

Application « novalightapp »

Google Play

Application « novalight »

GENERAL INFORMATION

PRODUCT REFERENCES

REFERENCES	SMOKED GREY
NovaLight OLC Zhaga	NL-OLCZ-SG-010

CONFORMITY

Mark	CE (RED)
EMC	EN 301 489-3
SRD	EN 300 220-1/-2
Security	EN 60950-1
DALI	D4i DiiA -351 (pending certification) IEC 62386 -101 -103 (pending certification)
Zhaga®	Zhaga Book 18 Ed2.0 Z4i (pending certification)

CHANGE LOG

RÉVISION	DATE	DESCRITION
R01	July 18, 2022	Initial publication
R02	February 27, 2023	Edition of the working temperature specification

CONDITIONS