Wireless DALI

Last information update: March 2025

Product code
X676: Citygrid Zhaga Controller with motion sensor

Technical description
All-in-one device that transforms a luminaire fitted with a Zhaga attachment into a smart, adjustable, motion-controlled device. Thanks to detection algorithms and the fact the sensor is tilted slightly towards the direction of the traffic, the device reliably detects pedestrians, cyclists and vehicles.
The Citygrid Zhaga Controller with sensor is equipped with a 868 MHz mesh wireless communication system that uses the 6LoWPAN protocol and a high security encryption system. Thanks to a Dongle X678 (accessory) device, the sensor parameters can be read and changed using the "Citygrid" app on an Android device with Bluetooth.
A Citygrid installation can consist of any combination of Citygrid Controllers, including the Citygrid Zhaga controller, the Citygrid Zhaga controller with sensor, the Citygrid On Pole controller, and any "Citygrid enabled" or Gateway device. The system can operate:
- independently, with Plug&Play (non connected), with default parameters that can be changed using the app + Dongle.
- by interconnecting luminaires, Plug&Play with default parameters that can be changed using the app + Dongle.
- by interconnecting luminaires and connecting to the cloud with a XA68 gateway, with initial commissioning from app + Dongle. If the cloud-connected system is used, monitoring and remote management can be exploited thanks to the Dashboard Citygrid with analytics functions, reporting and email alerts in case of malfunctioning. Third party systems can also be integrated thanks to the APIs available (e.g. GIS system and software interfaces for Smart City).
Features:
- Integrated PIR motion sensor.
- D4i and DALI-2, compatible with iGuzzini luminaires.
- Mesh communication through IEEE 802.15.4 standard 6LoWPAN wireless protocol.
- AES-128 encrypted wireless communication.
- LED driver temperature measurement (in D4i-enabled luminaires).
- LED driver power measurement (in D4i-enabled luminaires).
- Malfunction detection (in D4i-enabled luminaires).
- Integrated RTC and astronomic clock.
- Non-volatile data, saved on an internal memory.
- FOTA (firmware over-the-air) update.

Installation
The luminaire must be equipped with a Zhaga Book 18 socket that points downward, parallel to the road.
Recommended installation height: between 4 and 8 m.
Detection range at a height of 6 m: 8 m transversal, 14.3 m longitudinal with slight asymmetry. Values are indicative, consult the images in the instruction sheet.
Maximum distance for radio communication between controllers: < 50 m (in a straight line with no obstacles).
For eventual clarifications regarding the system configuration, contact iGuzzini.

Colour	Weight (Kg)
Grey (15)	0.07

Wiring
The Citygrid Zhaga controller with sensor does not require wiring.

Notes
"Plug&Play" sensor operation with default values:
- With presence detected or a wireless command received from the same luminaire group: light level at 100%.
- Remain time after absence: 3 minutes.
- With no motion detected: 25% of maximum light level.
- Dim up time 25%-100%: 3 seconds.
- Dim down time 100%-25%: 10 seconds.
- "green" is the default luminaire group (*).
(*) All the luminaires that belong to the same colour group, within a radius of 80 m of each other, will respond in a coordinated way. This facilitates the "Plug&Play" installation without requiring commissioning for small residential areas, car parks and cycle paths.

operates at temperatures from -30°C a +60°C.
Can be used at up to 2000 m a.s.l.
Available, at the moment, for the European market only.

Complies with EN60598-1 and pertinent regulations

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