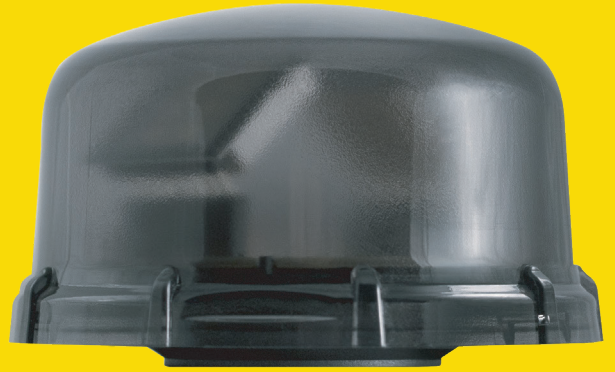


CNODE Zhaga IoT

CNODE Zhaga IoT is the Worlds smartest wireless street light controller equipped with the latest industry standards and provides LTE Cat- 1, and GSM worldwide support. With open payload data and secure IOT industry-standard MQTTS, it ensures easy integration into a wide range of smart city platforms.

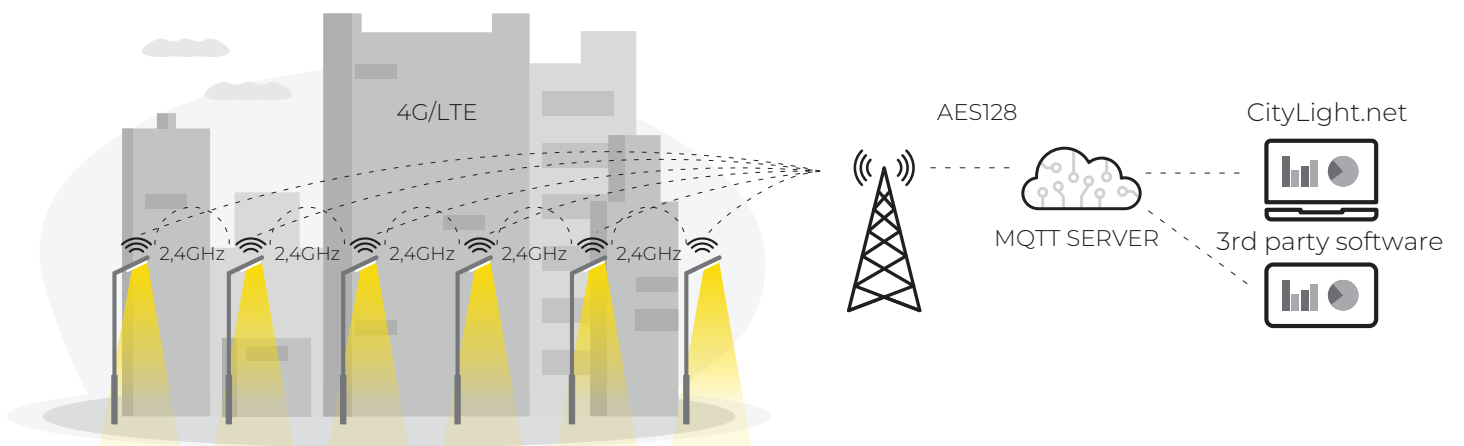


- ✓ NO GATEWAYS
- ✓ ZHAGA BOOK 18
- ✓ METERING & DIAGNOSTIC
- ✓ FLAT RATE DATA PLAN UP TO 10 YEARS
- ✓ SENSOR DATA
- ✓ WORLD WIDE COVERAGE
- ✓ ADAPTIVE LIGHTING
- ✓ MQTTS



HOW IT WORKS

Works with standard 3GPP 4G/LTE cellular networks.
No gateways required – automatic fallback to 2G when needed.



SPECIFICATION

PRODUCT CODE

HLCCZIOT
 HLCCZIOT-E
 HLCCZIOT-I
 HLCCZIOT-I-G
 HLCCZIOT-I-R-G
 HLCCZIOT-R
 HLCCZIOT-R-G
 HLCCZIOT-G

I- Inclination sensor
 R- Radar/Motion sensor
 G- GPS
 E- Extended temperature range

DIMENSIONS AND WEIGHT

Diameter: 80 mm
 Height: 50 mm
 Weight: 88 g

ENCLOSURE

IP class: IP66
 Impact resistance: IK09
 UV resistant
 Material: polycarbonate
 Rubber Isolation class: Class II
 Colour: Black (RAL9004)

MOUNTING

Lamp: ZHAGA Book-18 standard receptacle

COMMUNICATION

4G/LTE Cat- 1
 Frequency Bands:
 LTE-FDD: B1/B3/B7/B8/B20/B28
 GSM: B3/B8
 Protocol: MQTT over SSL/TLS with
 certificate-based authentication
 Data Update Interval: 60 minutes (user-configurable)
 Inter-Node notification on sensor event
 Maintenance interface

POWER SUPPLY

Voltage: 12-24 VDC
 Backup power supply: 0,5F (Super capacitor)
 Power consumption: <1,5W
 Idle power consumption: <0.5W

ENVIRONMENTAL REQUIREMENTS

Operating temperature: from -25 to +65 C (Extended -40 to +70 C)
 Storage temperature: from -25 to +65 C (Extended -40 to +75 C)
 Relative humidity: <95% non-condensing

INTERFACES

DALI Interface
 Version: 2/ D4i/ SR
 Max current: 50 mA
 Supports up to 4 D4i or 4 Philips SR drivers.
 DALI BUS Power/ Master / Main voltage shall
 not exceed 1 driver.
 Additionally supports 4 DALI 1.0 devices
 Fade time: 0-90sec.
 Dimming range: 10 - 100%
 Dimming step: 1%
 External motion sensor data

Dali DT8:
 Colour temperature (CW/WW)
 RGB / RGBWAF
 X/Y

INCLINATION SENSOR (OPTIONAL)

Axis Count: 3-Axis (X,Y,Z)
 Resolution: 8 bit

MICROWAVE RADAR (OPTIONAL)

Frequency: 24 GHz
 Detection distance: 15m (human) / 30m (cars)
 Beam aperture: 80° / 34°

FEATURES

Real time clock with backup power supply
 Built-in memory
 Astronomical clock for dimming profiles up to 365 days
 Stand alone operation

GPS (Optional)

167 Channel GNSS C/A Code
 GPS / QZSS / SBAS / BDS
 Accuracy 2.5m CEP
 Tracking sensitivity

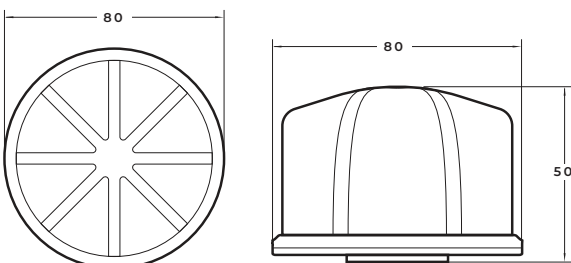
STANDARDS

Directive 2014/35/EU Low Voltage Direc -
 tive (LVD)
 EN 62311: 2008
 EN 61347-1:2015 (IEC 61347-1)
 EN 61347-2-11
 EN 62368-1:2014/AC:2015
 EN 61984:2009
 EN 60529
 EN 62262

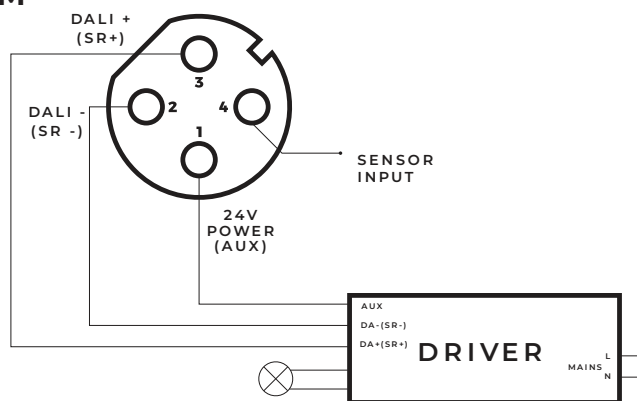
Directive 2014/30/EU Electromagnetic
 compatibility (EMC)
 EN 301 489-1 V2.1.1
 EN 61000-3-2:2014
 EN 61000-3-3:2013
 EN 301 489-3 V2.1.1
 EN 301-489-52 V1.1.0
 EN 55015:2013+A1:2015
 EN 61547:2009

Directive 2014/53/EU Radio Equipment
 (RED)
 EN 300 440 V2.1.1
 EN 301 511 V12.5.1
 EN 300 328 V2.1.1
 EN 300 220-2 V3.1.1
 Directive 2011/65/EU RoHS directive
 Directive 2012/19/EU WEEE directive

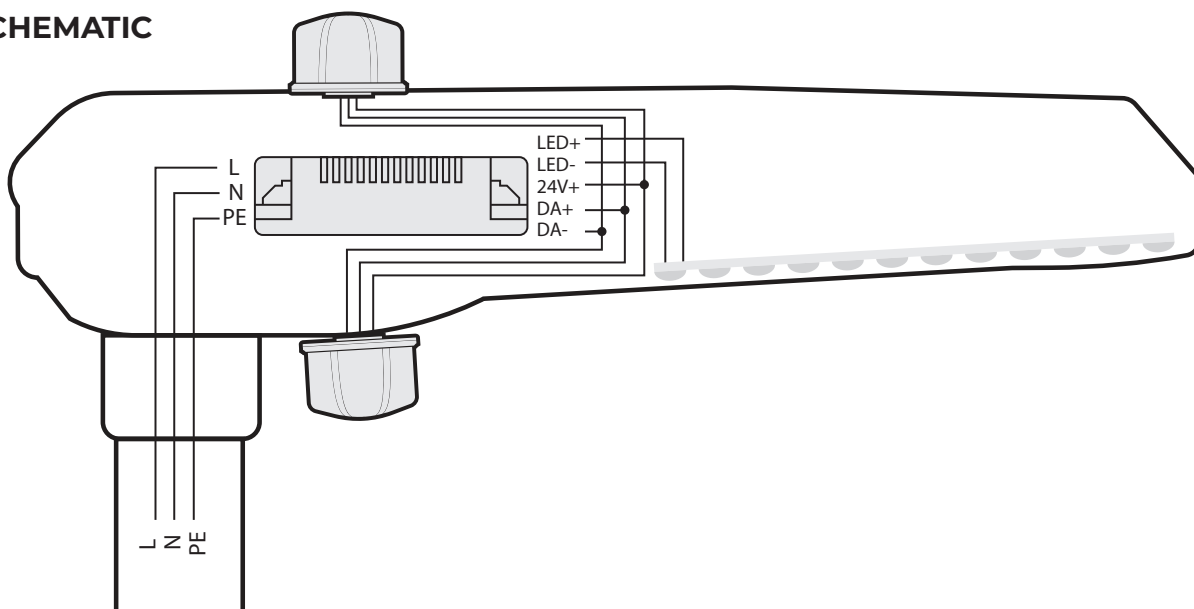
DIMENSIONS



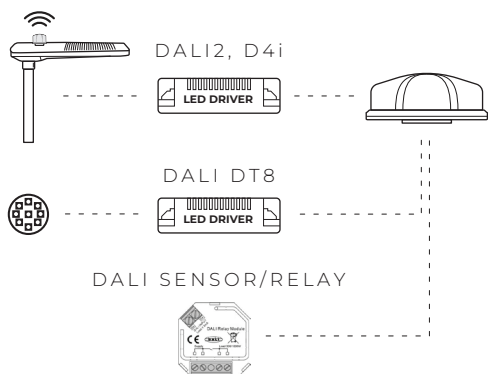
WIRING DIAGRAM



SCHEMATIC



LUMINAIRE DATA



DATA:

- Dimming level/status (%)
- Mains Voltage (V)
- Mains Current (mA)
- Power (W)
- LED voltage (V)
- LED current (mA)
- LED temperature (C)
- Driver working hours (h)
- Driver temperature (C)
- Day Energy Consumption
- Active (Wh)
- Total consumption (kWh)
- Digital count (No.)
- Day Sensor worktime (min)
- Day Sensor worktime (min)
- Fade time

CONTROL:

- DALI2
- Dimming level 0-100%
- Dimming step: 1%
- Dali DT8:
- Colour
- temperature(CW/WW)
- RGB / RGBWAF
- X/Y

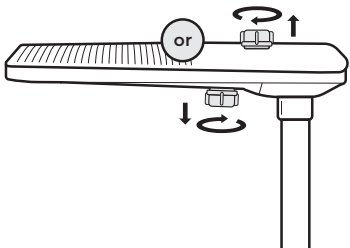
ALERTS:

- Power failure
- Power level below set threshold
- Luminaire Inclined failure
- Luminaire working hours overreached
- Dimming profile difference between node and driver.

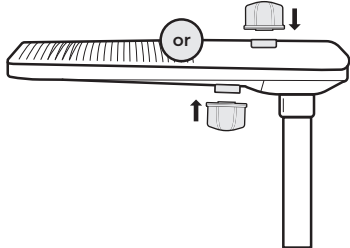
INSTALLATION INSTRUCTIONS

FIELD INSTALLATION

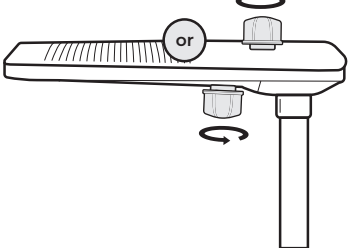
1 Remove protective cover





2


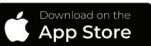


3

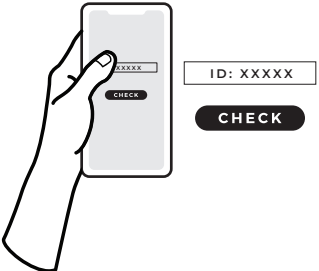


4 Download APP






5



6




7



Enter e-mail and click send.

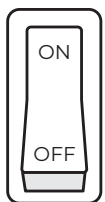
SEND

8



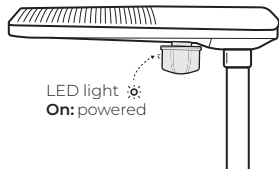
Upload device ID numbers from file


9



Power ON

10



LED light  On: powered