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DATASHEET

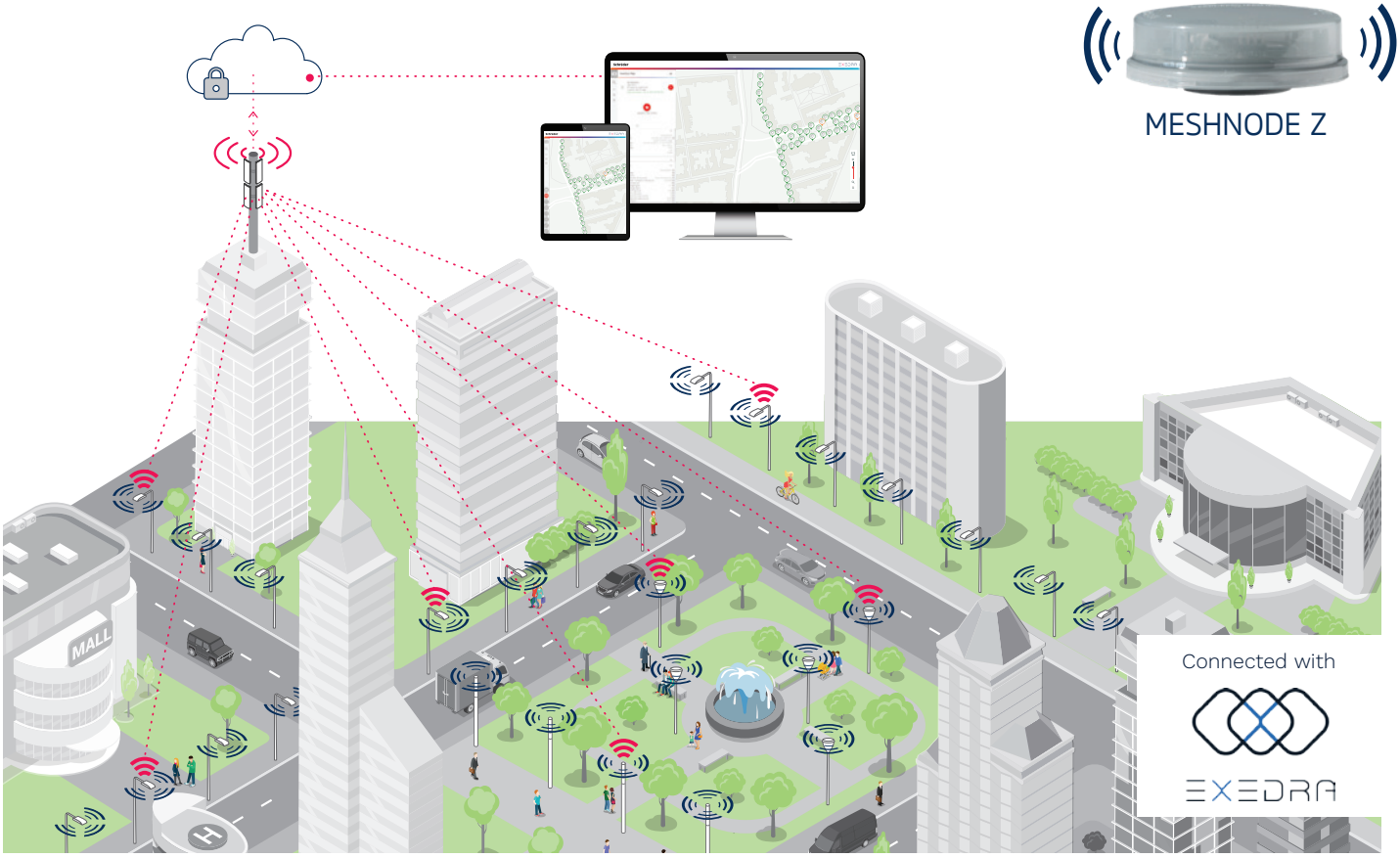
OWLET IV Zhaga luminaire controllers

OWLET IV Zhaga luminaire controllers operate Schréder's luminaires and any Zhaga-D4i luminaires from third-parties through the Zhaga book 18 interface. They offer easy installation and have fast plug-and-play commissioning. OWLET IV controllers use both cellular and mesh radio networks, optimising geographical coverage and redundancy for continuous operation. DATALIFT use mesh network to aggregate information from a cluster of MESHNODEs, and forward this on to the IoT platform using cellular connectivity.

Among other features, OWLET IV controllers use advance cybersecurity mechanisms to protect the deployment in the city and provide accurate power outage information to city's streetlight managers. OWLET IV controllers are managed with Schréder EXEDRA, Schréder's advanced smart lighting management platform.

DATALIFT Z

MESHNODE Z



Key advantages

- **Auto-commissioning**
  Easy installation and plug-and-play
- **Auto-geolocation**
  GPS-location detection and time synchronisation
- **Real time dynamic lighting**
  Mesh technology to broadcast sensor triggering event locally within a cluster of luminaire controllers
- **Last gasp messaging**
  Power outage detection allowing a last message when power cuts off
- **Asset management**
  Imports luminaire asset data according to DALI Part 251
- **Tunable white**
  Ability to control luminaires with variable colour temperature (DT8)

Features

- Gateway less hybrid network architecture using self-healing 6LowPAN Mesh network & cellular connectivity
- Built-in GPS
- Built-in photocell to control each luminaire based on local ambient light level
- Embedded self-test capability to check proper installation
- Supporting D4i internal bus
- Offering responsive light-on-demand use cases triggered by local sensors
- End-to-end encrypted communication
- Over-the-Air firmware update
- Built-in tilt sensor for luminaire inclination monitoring
- Compatible with Photinus Schréder solar luminaires

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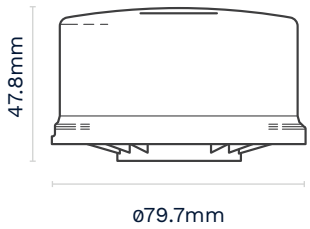
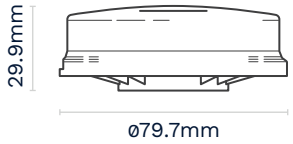
TECHNICAL INFORMATION - DATALIFT Z & MESHNODE Z



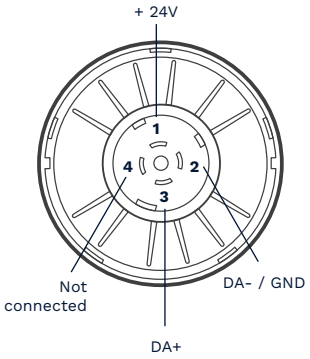
DATALIFT Z



MESHNODE Z

Electrical connections

ZHAGA TWIST LOCK (bottom view)
ZHAGA BOOK 18



Metering and accuracy

Measured parameters	Power, Voltage, Power Factor, Energy
Fault monitoring	Abnormal power consumption, Under/over input voltage, Low-power factor, Driver/light source failure, Temperature, Tilt

Electrical & Power

Operating voltage	24VDC ±10%
Average Power Consumption	Datalift: 0.58 W Meshnode: 0.41 W
Maximum Power Consumption	Datalift: 2.00 W Meshnode: 1.60 W

Housing

Material	Makrolon 6557 Transparent, UV stable, Flame retardant
Colour	RAL 7042 traffic grey
Protection class	Ingress protection rating IP 66 / DIN EN 60529
Impact protection	IK 08

Operating conditions

Ambient temperature (ta)	-40°C to +65°C -40°F to 149°F
Relative humidity	5% to 90%

Standards & certificates

Approvals	CE / UKCA / D4i / RCM
Standards	RE Directive (2014/53/EU) 2011/65/EU (RoHS) and its amendments (EU) 2015/863, (EU) 2017/2102.
DALI	IEC62386-101/103 and DiiA Part 351
Human exposure	EN 62311
Connector	Zhaga book 18
Electrical safety	EN 61347-1:2015 (Part 1) EN 61347-2-11:2001 (Part 2-11)

Radio communications

Low-power mesh	IPv6, RPL, 6LowPAN, MAC - IEEE 802.15.4e, PHY – IEEE 802.15.4.g, 2400MHz @ +10dBm
Cellular modem (DATALIFT only)	**GSM/EDGE**: 900MHz & 850MHz / 1800MHz & 1900MHz **LTE-M & NB-IoT** (Cat-NB2): B1, B3, B8, B5, B20

DALI interface

Protocol	D4i (IEC62386 + DiiA Part 351)
Load capacity	Up to 4 devices
Device type	MESHNODE: Type A DATALIFT: Type A
ESD rating	4kV (according to EN61000-4-2)
Protection	Short circuit protected

GNSS (Global Navigation Satellite System)

Supports	GPS system (L1C/A signals), Glonass system (L1OF signal), and SBAS (Satellite Based Augmentation System)
Position accuracy	Up to 2.5m/8ft (with > 6 satellites)

Security features

Authentication	Based on unique X.509v3 device certificates Mesh Access Control using IEEE802.1x and EAP-TLS
Encryption	ECC P256 used in TLS X509v3 AES-CCM-128 based Mesh Frame Security RSA-2048 used for firmware signing
Cipher suites	TLS_ECDHE_ECDSA_WITH_AES_128_CCM

Ordering information

Model	Part number	Description
DATALIFT Z	03-95-729	2.4GHz Mesh, Cellular LPWA
MESHNODE Z	03-95-732	2.4GHz Mesh

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