

Built on the global telecom standard that securely connects billions of devices today, our outdoor IoT lamp controller offers long-range, deep coverage, high availability, high security and managed LPWA network.

IoT communication enables the streetlights to connect directly to the local cellphone tower – thereby eliminating the need for a local Gateway.

Our uniquely designed IoT Pole-Mount Controller ensures universal lamp compatibility – even for traditional streetlights that do not have Nema receptacle. A single Controller can control up to 4 LED luminaires. This is specifically suitable for dual-armed and four-armed street poles.

Luminaires with OpenSky IoT Pole Mount controllers can be remotely monitored, managed and controlled using Twilight CityManager or a third-party open API compliant CMS. The smart controller delivers advanced system health analytics, power metering and asset management support.

It helps cities to easily upgrade their regular streetlights to intelligent streetlights – in turn, creating an ideal foundation for a Smart City.



Features



LTE Cat M1 / NB-IoT (NB2) / Edge (EGPRS) communication



Each IoT Pole Mount Controller can control up to 4 LEDs (total max. up to 480W)



Universal luminaire compatibility via pole mount option



Remote switch on / off / dimming



0-10 V / DALI dimming interface



In-built Ambient light sensor / Photocell



IP66 rated



Accurate energy metering



Mounting on twin / dual-armed / four-armed street poles reduces cost



Autonomous, AstroClock and Calendar-based dimming



In-built GPS



Integrated 5,5 meter Cable for ease of Installation



No Gateway needed



Remote management & control via CityManager and third-party software (open API)

Benefits



Up to 60% energy savings



Up to 50% maintenance cost reduction



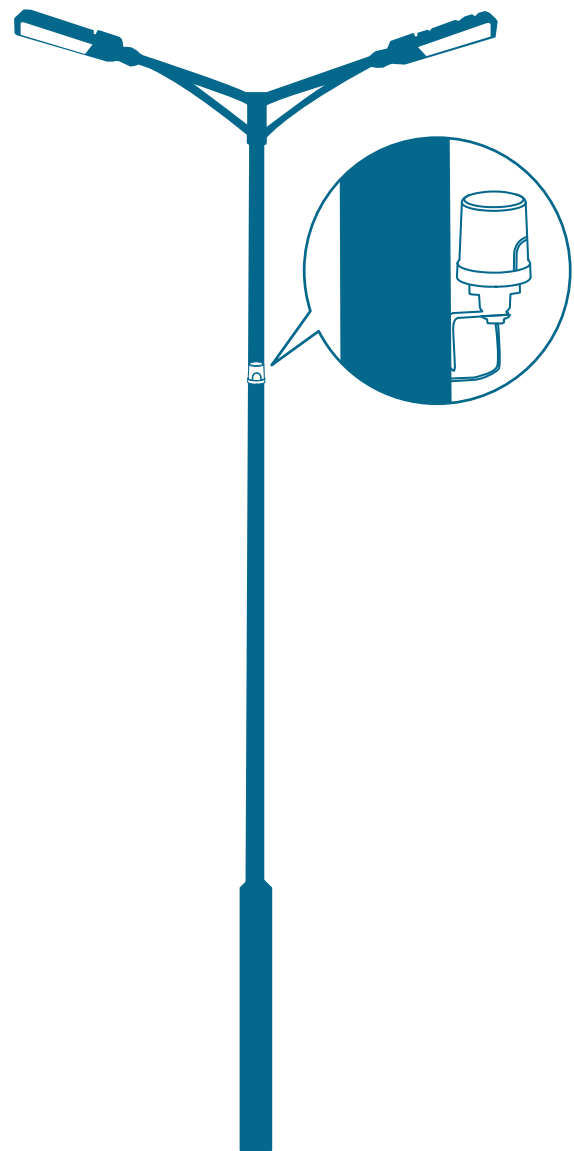
Substantial reduction in light pollution & CO2 emissions



Wireless platform for Smart City

Electrical Data

Input voltage	96V - 264V AC
Frequency range	50 - 60Hz
Static power consumption	<2W (Typical)
Electrical protection	Class II
Electrical safety	Galvanic isolation between high-voltage and low-voltage terminals
Surge protection	4kV, 2kA (L-N)
Output voltage	Same as AC input voltage
Maximum output current	2A
Output power	480W max
Relay	Single pole (Default: Light On)
Dimming control	0-10VDC (IEC60929) / DALI / DALI 2.0
DALI supply bus voltage	20V DC
DALI supply current	60 mA
Logical system input (LSI)	0 - 30VDC
LSI logical low	0 - 6VDC or open
LSI logical high	7 - 30VDC or closed
LSI max current draw	10mA
Auxiliary supply output	18 - 20VDC*, 50mA



Communication Data

Wireless communication	LTE Cat M1/Cat NB2/EGPRS
Frequency bands	GSM/ EDGE: 850/900/1800/1900 MHz Cat M1: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 Cat NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85
Sim	Micro-SIM or MFF2 eSIM
Product compatibility	Direct wireless communication with CityManager via local cell phone/telecom tower
Network security	128 AES multi-layer security configuration, TLS/ SSL based PKI method with asymmetric encryption for secure authentication and data encryption
Over-the-air update	Yes, ensuring up-to-date secure software

Power Metering Data

Voltage range	96V-264V AC
Current range	0-2A
Accuracy	Class 1 as per IEC62053-21:2003*

Compliance

Operating temperature	-40~+70°C
Relative humidity	<95%
IP rating	IP66
Impact rating	IK09
Manufacturing	ISO 9001:2008
Compliance/ Certification	CE, CB, EN 301 489-1, EN 301 489-19, EN 301 489-52, EN 301 511, EN 301 908-1, EN 301 908-13, EN 303 413, EN 50665, EN 55032, EN 55035, EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2: 2013, EN 62311, EN 61547:2009, EN 61347-2-11:2001, EN 61347-1:2015, EN 62493:2015 LPWA RF module regulatory compliance: GCF, CE, FCC, IC, PTCRB, Anatel, IFETEL*, SRRC*, NAL*, CCC*, KC*, NCC*, JATE*, TELEC*, RCM, NBTC*, IMDA*

Mechanical Data

Dimension	Ø84mm x 98mm with 550cm External Cable
Weight	1,2 kg* (incl. cable)
Enclosure color	Controller: RAL 7035 Light Gray Cable: Black Sheath with colour coded 5-core or 7-core wires
Product mounting	Pole mount at 5 – 6m height from ground
Antenna	Integrated inside product
Enclosure material	Polycarbonate, UL 94V0 compliant

Other Functionalities

Location	GPS, GLONASS, Galileo, QZSS
Accuracy (GNSS)	<2.5m @open sky
RTC and AstroClock	24 hours battery backup for real-time clock; Astro-clock feature is able to switch on/off the lamps at sunset/sunrise and adjust them seasonally (summer-winter time)
Last Gasp	Ability to store data at power failure
Other inbuilt sensors	Ambient light sensor (photocell), Pole tilt sensor, Temperature sensor
Remote Monitoring	Via CityManager or similar third-party management software (Open API). CityManager enables remote management, monitoring, control, and configuration of lamps on individual and group level

* In-progress/ subject to change

Warranty Information

Warranty	Standard 2 years limited warranty. Extended warranty available. Warranty subject to proper use of installation and application manuals and Tvilight standard warranty terms. Use of over-voltage protector (OVP) is advised for locations experiencing unstable input voltage (>265V)
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Logistics Information

Order Code	Product Description	Multipack / MOQ	Package Size	Approx. Weight
	OpenSky IoT Pole-Mount Controller	1		

In-Built 3, 5 or 10 years SIM card with free 50 MB / year data connectivity *

* Please contact Sales for details

Associated Products

PR000000	Over-Voltage Protector. Power cut-off >270 VAC // <170 VAC
PR161436	CityManager Software License - Annual Fee per Light-Point
PR172281	CityManager Software License - Lifetime Usage per Light-Point

Application Areas



Roadways



Area Lighting



Residential



Urban



Industrial



Parking



Ports



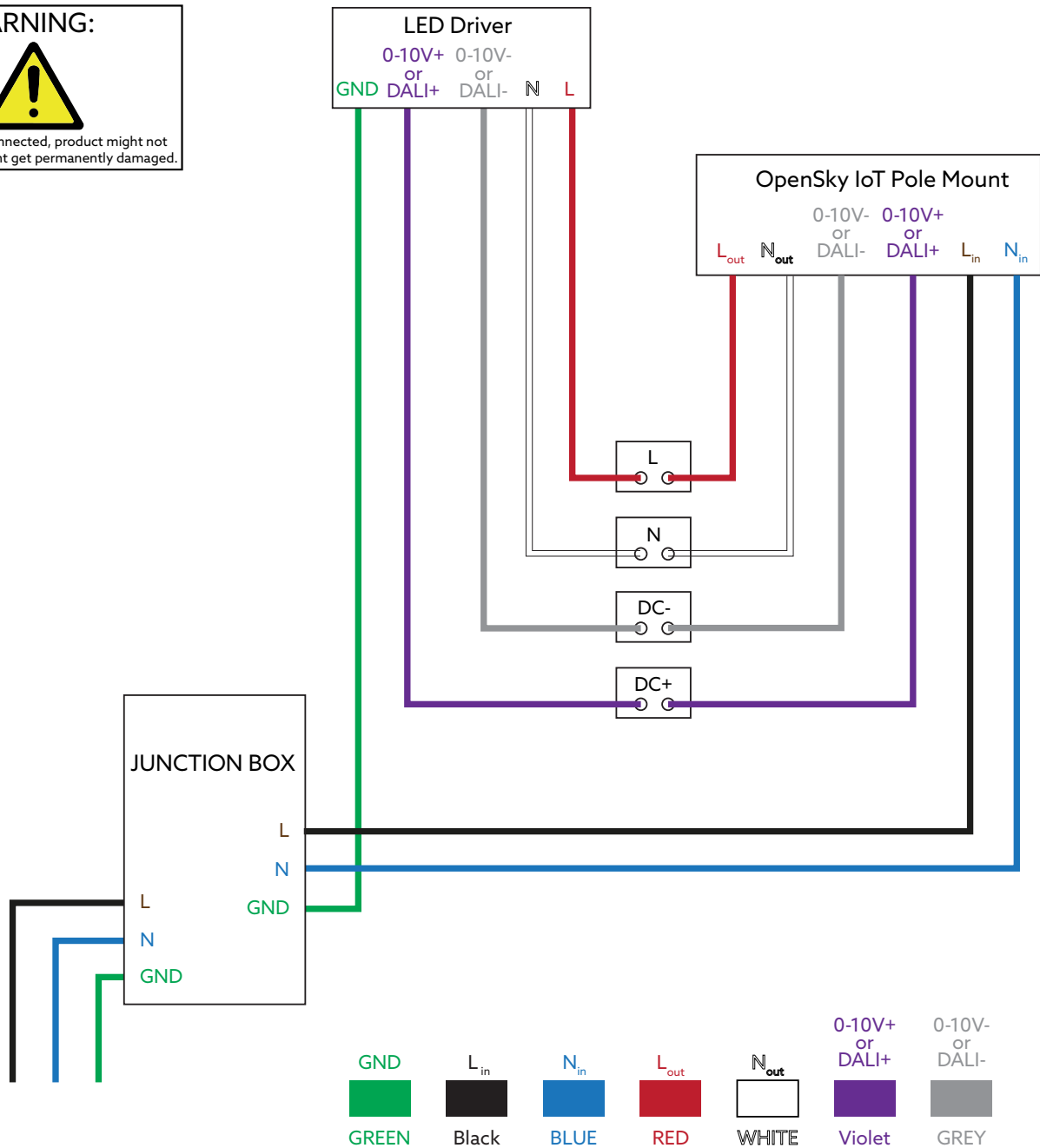
Rail Stations

Wiring Information for Single-armed Pole

WARNING:

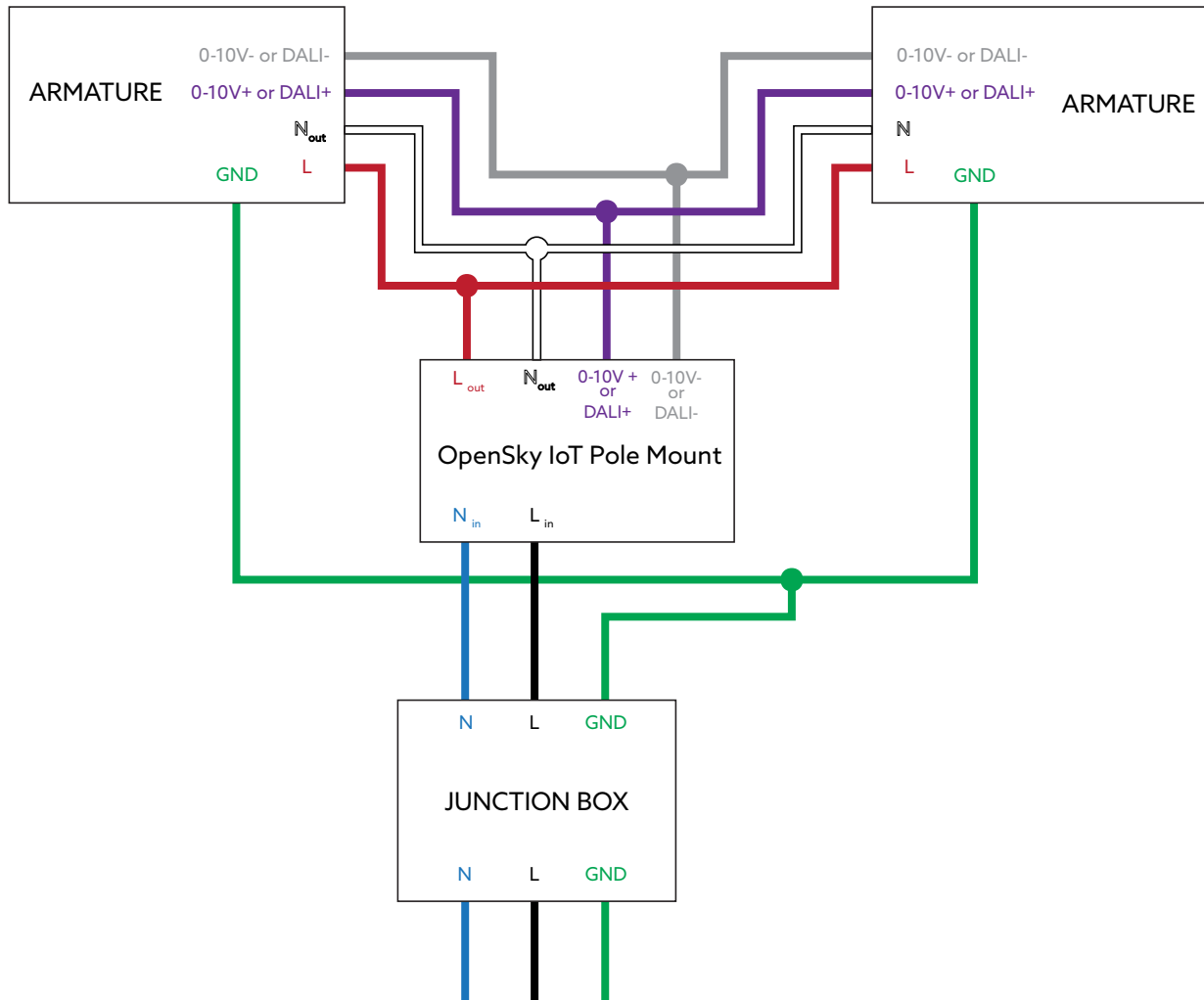


If not correctly connected, product might not function or it might get permanently damaged.



Note: For added protection, it is recommended to add an external circuit breaker at the power input of the product. Circuit breakers such as the ELeQ LS-94 5L2408 or similar rated products could be used for the same. For wiring connections the Wago 221-413 is recommended.

Wiring Information for Dual-armed Pole



WARNING:

If not correctly connected, product might not function or it might get permanently damaged.

GND	L _{in}	N _{in}	L _{out}	N _{out}	0-10V+ or DALI+	0-10V- or DALI-
GREEN	Black	BLUE	RED	WHITE	Violet	GREY

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