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LCCB

Lighting Control Unit with Custom Box

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The Zenosmart LCCB Control Device is a state-of-the-art wireless remote control unit specially designed for street and avenue lighting, park and garden lighting, as well as indoor and outdoor building lighting. Its compact body allows easy installation on any fixture or pole, providing maximum mounting flexibility.

Custom Boxed Lighting Control Device

You can easily connect this device to your fixtures using the 5-pin IP67 connector. It is highly durable for both indoor and outdoor environments. With LoRaWAN® and NB-IoT options, it provides seamless integration with your existing lighting system and third-party solutions. For easy system optimization, we offer open communication protocols, an open-source JavaScript codec, and our dedicated Zenosmart Connect application.

The control device can connect to your system via LoRaWAN® and NB-IoT networks. Fixtures can be easily controlled through DALI, DALI-2, DALI-D4i, and 0–10 V analog interfaces. An optional comprehensive GPS module is available to provide mapping data and precise time synchronization.

Measured and Monitored Parameters

- Lamp Operating Time
- Ambient Light
- Control Device Temperature
- Advanced D4i Energy Records per Driver

Internal measurement for A, V, W, Wh, WB, W Fund, and PF; lamp operating time, voltage drop, and voltage rise

- Lamp/Driver Faults
- Control Unit Faults
- Control Device Tilt Movement, Collision Event
- GPS Location (Optional)

Control Device Features

- Independently manages up to 4 DALI / DALI-2 drivers or 0–10V analog control
- Power measurement is performed via the DALI driver or the internal circuit
- D4i energy records are reported for each driver (D4i drivers only)
- Versatile astronomical calendar-based dimming
- Time-based dimming profiles
- Automatic device time synchronization
- Light intensity sensor
- Remote control and configuration
- Multicast control and configuration
- Automatic reset internal overcurrent protection circuit
- Configuration via Zenosmart app (iOS and Android)
- GPS positioning (Optional)
- Autonomous and adaptive operation (set and forget)
- Real-time control and feedback
- RTC to preserve time during power loss
- Built-in tilt sensor
- Surge protection
- Digital input for external events (motion sensor, switch, photocell, etc.)
- Fully documented open communication protocol

Power Supply	
Power Source	24 VDC or 100-240 VAC
Peak Power Consumption	3 W (Maximum)
Surge Protection	Built-in Surge Protection Circuit
Current Protection	Automatic Reset Built-in Overcurrent Protection Circuit

Contact	LoRaWAN®	NB-IoT
Network Interface	LoRaWAN® 1.0.4 Class C	3GPP LTE Release 14 Cat-NB1 and Cat-NB2 compatible
RF Frequency	868 / 915 / 923MHz	Cat-NB1/NB2: B3, B8, B20 1710-1880, 880-960, 791-862MHz
Receiver Sensitivity	-137 dBm @ 125 kHz BW SF12	-108 dBm sensitivity for low band (Cat-M1), -107 dBm for mid band
Transmitter Power	Up to +22 dBm depending on the region	up to +23 dBm
Network Security	Encrypted communication based on security keys (AES128-bit)	APN / VPN
	GPS/GLONASS/BeiDou/QZSS (Optional)	GPS/GLONASS/BeiDou/QZSS
Firmware Update	OTA via Bluetooth and LoRaWAN®	
Bluetooth	Optional	

Interfaces	
DALI Control and Power Supply	Controls up to 4 DALI ballasts with built-in 15V power supply
Analog Output	0–10V or 1–10V analog output
Logical Signal Input (LSI)	2 x 0–24V Logical Signal Input, configurable alerts, dimming levels (analog/digital), etc.

Sensors	
Light Sensor	Integrated, Configurable Threshold
Tilt Sensor	2-Axis Tilt Sensor

Lamp Control	
Dimming Range	0%–100% (linear or logarithmic, depending on the control device settings)
Control Interface	DALI-2 / DiiA (IEC 62386) / D4i / 0–10 V / 1–10 V Analog

Measurement	
Internal Parameters	A, V, W, Wh, WB, W Fund, and PF, lamp-on time, sag and swell, (Non D4i Drivers)
D4i Reported Parameters	V, W, Wh, and PF, lamp operating time, and many other parameters (For D4i Drivers only)
Measurement Accuracy	For internal measurement circuit: ±0.5%

Output Switch	Mechanical Contact Relay	Solid-State Relay	Without Switched Output
Switching Type	5A (100,000 Operations)	2A (with Zero-Cross Detection)	No Switched Output

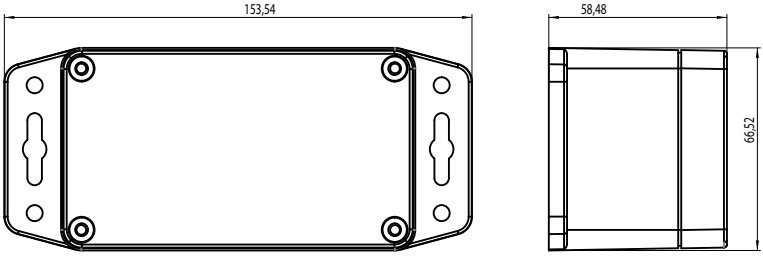
Timing	
Real-Time Clock (RTC)	Yes, supercapacitor backup (up to 15 days)

Environmental	
Input Protection	IP67 (IEC 60529)
Operating Temperature	-20 °C ... +60 °C

Mechanical	
Weigh	150 gr
Dimensions	154 x 65 x 59 mm (6.06 x 2.56 x 2.32 in)
Housing Material	ABS

Compatibility	
Standards	EN 61347-1, EN 61347-2-11, EN 300220, EN 62368, EN3 01489, EN 62479, EN 50581
Certificates	CE

Mechanical Dimensions



Cable Connection Guide

The Zenosmart LCCB Control Device is offered with various connection options. Options include direct PCB soldering with IP67 glands and 5-pin IP67 connector sets. For more information, please contact our sales or customer service team.

5-Pin IP67 Socket

Connection Elements of Different Diameters

All dimensions are in millimeters (mm)

Order Code	LCCB	1	L	01	1	A	B	A	X	R	00
Housing Type and Size											
Custom Enclosure (SF212)		1									
Communication Type											
LoRaWAN			L								
Nb-IoT			N								
Bluetooth			B								
Zigbee			Z								
Hardware Version (1~n)											
Supply Voltage Type											
110-220VAC					1						
24VDC					2						
LoRaWAN Frequency											
Not Available						X					
LoRaWAN EU 868						A					
LoRaWAN AU 915						B					
LoRaWAN US 915						C					
LoRaWAN AS 923-1						D					
LoRaWAN AS 923-2						P					
LoRaWAN AS 923-3						Q					
LoRaWAN AS 923-4						R					
LoRaWAN 868 Multi-Region (configurable via software)						T					
LoRaWAN 915 Multi-Region (configurable via software)						U					
Additional Bluetooth Option											
Not Available							X				
Bluetooth for Quick Configuration and OTA							B				
Control Option											
DALI-2 / DiiA (IEC 62386) / D4i								D			
0-10V Analog								A			
GPS Option											
Not Available									X		
GPS (NB-IoT ile dahil)									G		
Relay Option											
Not Available										X	
Solid-State Relay										S	
Mechanical Contact Relay										R	
Sensor Option											
Not Available											00
DIM											01
Light Sensor											02
PIR Sensor											03
Radar Sensor											04

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Zenosmart intelligently enhances energy efficiency and sustainability with innovative, AI-powered, IoT-based solutions, making life easier.

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