

ACobi-WSNM

AC Smart Photocell Itron CityEdge Mesh outdoor lighting controller

Product description

The obiWAN® ACobi-WSNM Smart Photocell Itron Mesh outdoor lighting controller works with the Itron CityEdge platform, managing over 90 million connected devices in more than 500 cities worldwide, enabling an easy and fast deployment of individually managed light points on street lighting networks,

Main Features

- The obiWAN® ACobi-WSNM is an external wireless module that plugs in standard 3-pin, 5-pin and 7-pin NEMA twist-lock sockets (ANSI C136.10 and C136.41)
- Enables remote control and monitoring at every light point, for all lamp technologies
- It provides a robust and secure full, two-way wireless communication in the open IPv6 Itron RF mesh network, between all compatible Smart City Devices and the open CityEdge management platform
- Low power consumption
- Dual-dimming node with 1-10V (analog) and DALI (digital) dimming auto-detect function
- Optional analog and digital inputs, with motion detection ready for Dynamic Lighting Scenario
- Asset management oriented, extended control and data exchange with DALI 2.0 LED Drivers, supporting ANSI C137.4
- Over-the-air firmware upgrades
- Automatic identification of all lamp failures reducing on-site activities
- It runs onboard astronomical clock and lighting schedules with dimming profiles
- Default Auto-photocell mode prevents day burning
- ANSI C12.20 accurate energy and electrical parameters metering supporting utility billing
- Designed for the most demanding outdoor conditions with IP66 and -40 °C to +70 °C operating temperature range
- ANSI C12.20 accurate energy and electrical parameters metering supporting utility billing
- ANSI C136.10 20kV/10kA extended surge protection and robust inrush protection
- Very high reliability, with 10 years warranty from factory
- Also suitable for luminaire bottom installation



Typical applications

Outdoor installations: streets, roads and highways, residential areas, road intersections, plazas, parks, outdoor industrial and logistics areas, parking lots, bridges, etc.

Technical Data

Input	
Supply voltage range:	100-277VAC, 50/60Hz (85-305VAC operational range)
Power consumption:	Average <1.5W
Surge protection:	ANSI C136.10 high peak surge current rating and high-energy absorption MOV
Output Control	Switched internal power relay with rated load current 10A @ 277VAC
Interfaces	
Luminaire:	Dimming auto-detect 1-10VDC and DALI-2 according to IEC 62386 standard, up to 4 drivers
(Optional) Digital input:	Max. 24VDC, 20mA
(Optional) Analog input:	0-10VDC
Metering	0.5% accuracy as per ANSI C12.20
	Metered parameters: Voltage, Current, Power, Frequency, Energy, Power Factor, Lamp Burning Hours, Device Up Time, Enclosure Temperature, Lamp Brightness Level, Device Boot Counter, Lamp On Cycles
Failures identification	Open Circuit, Relay Failure, Lamp Failure, Communication Failure, Cycling Lamp, High/Low Current, High/Low Voltage, High/Low Power, Low Power Factor, High Temperature, Mains Power Failure
Environmental	
Operating temperature range:	-40 °C to +70 °C
Humidity:	95% RH, non-condensing
Storage temperature:	-40 °C to +85 °C
Mechanical	
Dimensions:	H102.19mm (4.02") x D86.7mm (3.41")
Weight:	205g
Degree of protection:	IK09, IP66, when fitted
Housing	
Base:	PBT, black
Cap:	PC, transparent smoke grey
Thermoplastic rating:	UL 94V-0 and UL UV-f1
Mounting type	ANSI C136.10 and ANSI C136.41 NEMA twist-lock receptacles
Warranty⁽¹⁾	10 years
Reliability data	>1900 FIT (@25°C, FIDES 2022)
Itron CityEdge Network	
Radio Frequency:	865-880 MHz – Europe, 902-928 MHz - North America, 902-907 MHz / 915-928 MHz – Brazil, 915-928 MHz – Australia, 921.5-928 MHz - New Zealand. Approvals: ETSI EN 300 220-1, FCC 15.247, Industry Canada RSS-210, ANATEL, AS 4268/ ACMA, NZS 4268/GURL
RF Communications:	Data Rate: up to 300kbps mesh networking, Automatic data routing with self-configuration, auto- healing & redundant uplinks, Spreading Technique: FHSS (Frequency Hopping), GFSK, Transmit Power: up to 1 W, Emission Designator: 250KF1D, Receiver Sensitivity: -98 dBm for 10% PER
Protocols/Security:	Addressing: IPv6, Protocol: IEEE 802.15.4g (WI-SUN Certified), Security: Secure Hash Algorithm 256-bit (SHA-256) and RAS-1024 or ECC-256, Encryption: Advanced, Encryption Standard (AES-128 or AES-256), Authentication: ECDSA & RSA Signatures, Key Storage: Secure NVRAM with tamper detection and key erasure
Certifications	DALI-2, TALQ
Approval marks	    
Installation	Can be installed on the top or bottom of a lighting fixture. It supports 3-pin, 5-pin and 7-pin NEMA Twist-Lock sockets based on ANSI C136.10 and ANSI C136.41 standards

(1) Warranty subject to obiWAN Terms & Conditions