munisense

LC4 Light controller

The LC4 is a multifunctional wireless (ZigBee) INSIGHTNOW™ light controller, that can control any ballast/driver based on 0-10V, DALI, PWM, DMX and/or RELAY.

The LC4 detects error situations, measure energy consumption, optional earth leakage, and controls the (dynamic) lighting autonomously or in combination with the INSIGHTNOW™ platform. The LC4 is fully remote controllable through the platform or the ALIS interface.

Sensor inputs

The LC4 has several direct sensor inputs. The sensor may consist of a switching contact, direct-coupled PIR or the advanced INSIGHTNOW™ TR4 motion detector.

The LC4 can be equipped with an optional backup battery that covers 48 hours, so the measurement data is also available during the day (when no power is available).

The ZigBee protocol allows connecting multiple external sensors. The sensor information can be shared with other LC4's, wirelessly configuring any type of dynamic lighting.

Self-forming wireless network INSIGHTNOW™

The LC4 units implemented in the lighting network automatically create a secure wireless network. The light controllers can be hundreds of meters apart, consequently covering kilometers. A gateway provides communication between the LC4 units and the INSIGHTNOW™ platform. A single gateway can connect up to 250 LC4 units.

Ready for smart city

The Munisense INSIGHTNOW™ light engine is part of our Smart City vision, where light management is not a separate application, but an integral part of smart cities.

After all, our INSIGHTNOW™ platform is the basis for insight in and management of noise levels, air quality, water levels, traffic, energy, indoor climate, security, etc.
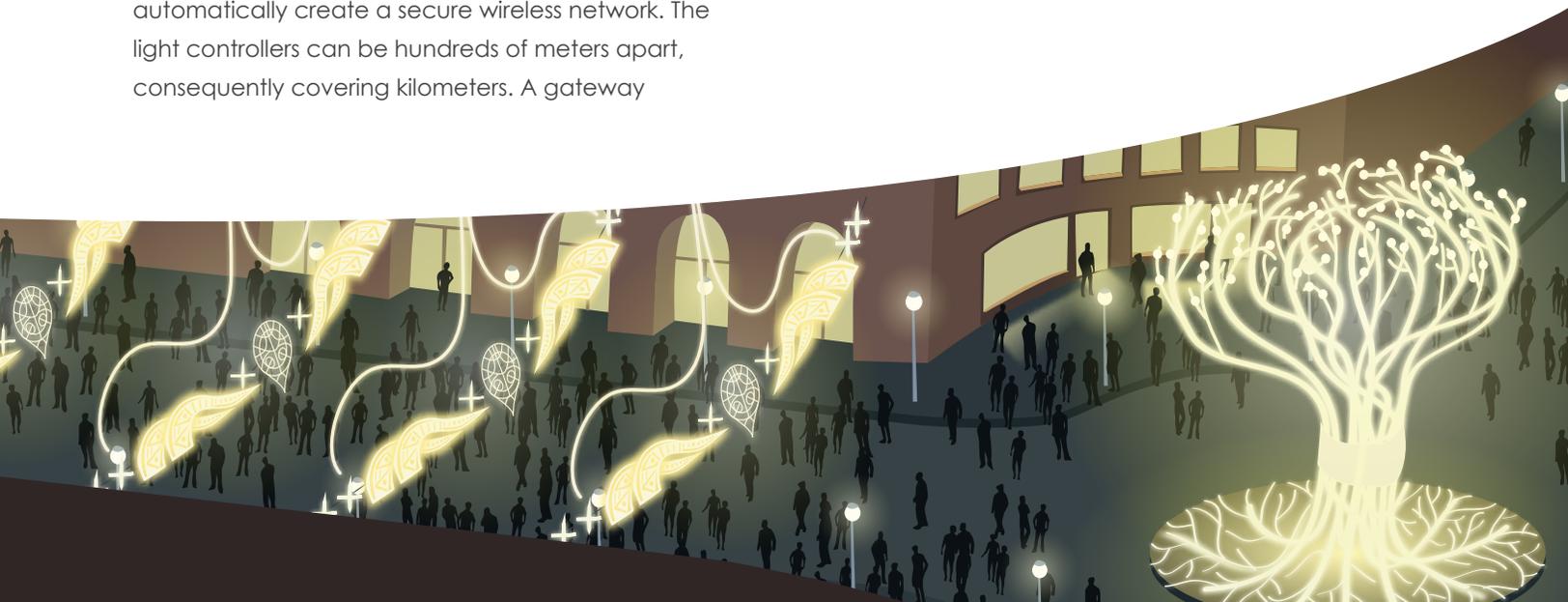
0-10V, DALI, PWM, DMX, RELAIS

Full remote control

Direct and wireless sensor support

ZigBee standard

Multiple security

ALiS standard

INSIGHTNOW™ light controller, IP67 housing		LC4A-SHKO
Controller interfaces		
0 / 1..10V	Active and passive control	Yes
DALI	Active power	12 Volt
	Maximum supply current	100 mA
	Max. number of DALI slave devices	4
PWM	Tension *	12 Volt
	Frequency *	100..1000 Hz
	Resolution steps *	10.000
DMX	Standard *	DMX512
	Channels *	8
	Remote Device Management *	Yes
Relay	Type Solid State power *	350 W
	Type Electro Mechanical *	1500 W
Dimmer control		
	Settlement	Linear/Logarithmic
	Configurable dimming	100 ms .. 6000 s
Ballast	Min-Max adjustment	Yes
	Constant lumen output	Yes
	Registration operation hours	Yes
Calendar	1 day, 8 times a day	Yes
	Calendar override option	2
Energy Measurement		
	Accuracy	2%
	Energy	Kjoules
	Power	Watt
Sensor inputs		
	Direct PIR sensors (3 V type)	2
	External trigger contact	2
	Munisense PD1 (via RS485) *	Yes
	Via ZigBee network *	Yes
Time synchronization		
	Via ZigBee network	Yes
	Astronomical time *	Yes
	Retention time after power loss	62 hours
Power Fail Detection		
	Detection	Yes
	Registration time power on/off	Yes
Environmental conditions		
	Temperature	-20 °C - 70 °C
	Humidity	0 - 100%
Input Characteristics		
	Input AC	180 - 250 V
	Input current	0,01A max
	Security	2 kV DM, 2Kv CM
	Energy	800 mW max
Wire Specification		
	Strong Flow **	0,4 .. 4 mm²
	Low-voltage **	0,25 .. 1 mm²
Network		
Zigbee	See: ***	Yes
	Maximum distance between nodes in "line-of-sight" conditions (meters)	100
	LC4 in network	250
Standards and certificates		
	AND	55015,55022,61000-3-2,61547
	RoHS	RoHS2
Dimensions and weight		
Dimensions (LxWxH)	Housing	120 x 65 x 42 mm
	Housing with attachment points	150 x 65 x 42 mm
Weight		250 grams
Backup power *		
Li-ion accu (backup time)		48 hours
Earth leakage measurement and protection *		
Measurement range		0..100 mA****
Resolution		100 µA
Protection (reduce power)		yes

LC4A-SHKO

* Optional
** High voltage: 5 clamps (1-L, 2-L, 3-N, 4-Lout, 5-Lrelais)
** Low voltage: 8 clamps (1-010V + 2 DALI 3-GND, 4-PIR1, 5-PIR0, 6-3Volt, 7-RS485B, 8 RS48A)
*** ZR (router function), supported clusters (Basic, Power, Device Temperature, Commissioning, Group Level Control, On/Off, Lighting Ballast, Scenes)
**** Other ranges on request

v 0.2

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