

PHILIPS

CT Node



Specification Sheet

LLC7870, LLC7871 LLC7240

The CT node is a luminaire-based control device that connects your street light to the CityTouch and Interact City lighting management system.

The CT node uses cellular communication to remotely manage, monitor and control each street light individually. The CT node controls the street light by switching the main supply and provides dimming by means of a digital (DALI) interface.



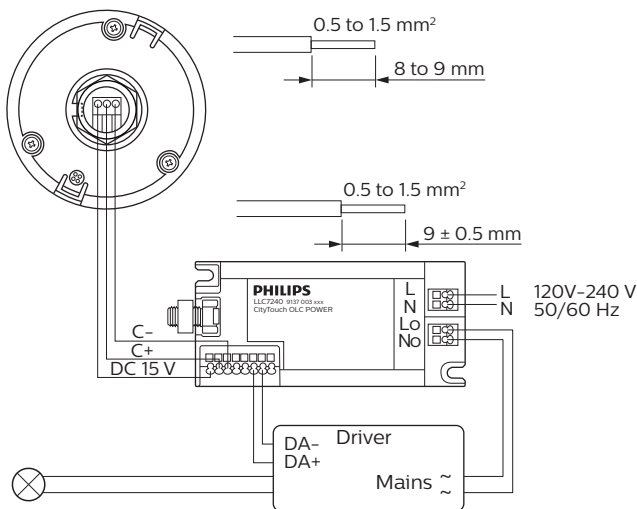
LLC7871/00



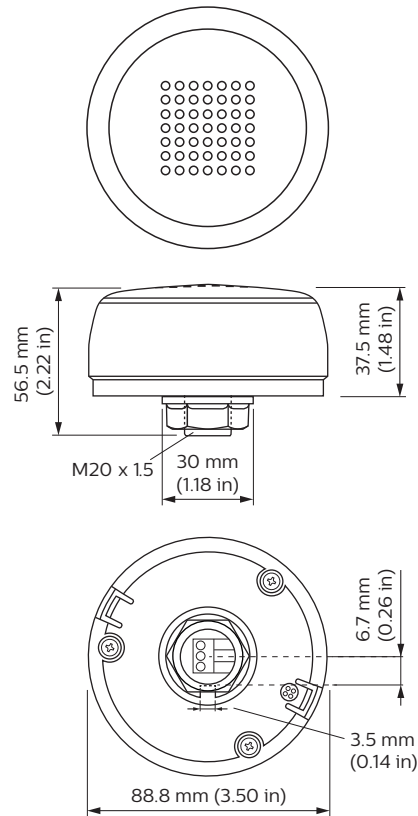
LLC7870, LLC7871, LLC7240

- The CT node is mounted to the luminaire through a 20 mm hole inside the luminaire and fixed by the screw thread and the provided nut.
- The CT node provides true plug and play commissioning: it automatically connects to the mobile network, automatically locates itself with the onboard GPS, and automatically uploads its asset data to the lighting management system.
- The CT Node works with street lights from almost any manufacturer.
- The CT Node is available in different colors to match the color of the luminaire.

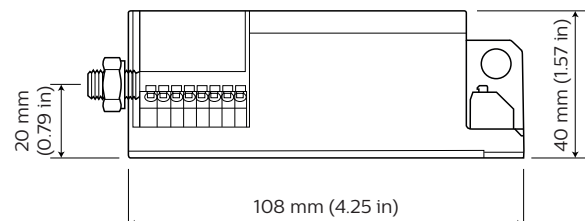
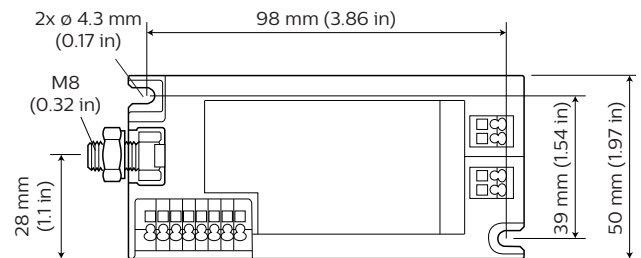
Wiring diagram



Dimensional drawings



LLC7870, LLC7871



LLC7240

Specifications

Product Dimensions

Component height	56.5 mm (2.22 in)
Cover height	37.5 mm (1.48 in)
Diameter	88.8 mm (3.50 in)
Weight	0.13 kg (0.29 lb)

Color

LLC7870	Dark Grey (RAL 7043)
LLC7871	Light Grey (RAL 7035)

Supply

Supply voltage	120 to 240 Vac
Mains voltage	120 to 240 Vac
Accuracy on mains voltage	± 10%
Mains frequency	50/60 Hz
Accuracy on mains frequency	± 5%
Rated current	4 A

Power Consumption

Standby power	≤ 1 W
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Control interface

Control method	DALI
Intra-luminaire DALI bus	IEC62386-101,
Protection	Interface is protected against short circuit
Insulation	Class I, basic insulation
Load capacity	1 to 3 drivers

Mounting

Fix to luminaire with screw thread through 20 mm hole and provided nut

Connectivity

Technology	2G (GPRS, EDGE) 4G (LTE Cat M1 bands 3, 8 and 20) will be enabled remotely in future
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Energy metering

Energy metering device	Inside auxiliary power unit
Energy meter accuracy	2% according EN50470-3 Class A

Auto location

Positioning device	Inside CT node
Positioning accuracy	CEP50 ≤ 2.5 m

Light control

Light sensing device	Inside CT node
Measurement range	Between 5 and 400 lux
Configurable range	Remote configurable light level between 15 and 200 lux
Default settings	Default dusk/dawn level 20/20 lux

Astronomical clock control

Configurable range	Remote configurable time offset range -120 to 120 minutes, sun elevation angle range -25 to 25°
Default settings	Default dusk/dawn angle 0°/0°

Surge immunity

Power supply	6 kV Common Mode acc. IEC61000-4-5. 2 Ohm, 1.2/50 us, 8/20 us
Control surge (diff. mode)	0.5 kV acc. IEC61000-4-5. 40 Ohm, 1.2/50us, 8/20us

Temperature characteristics

Operating temperature	-40 °C to 70 °C (-40 °F to 158 °F)
Tcase max	70 °C measured at Tcase point
Tcase life	45 °C measured at Tcase point
Storage temperature	-40 to 80 °C (-40 to 176 °F)
Relative humidity	5 to 95% non-condensing

Lifetime

90% survivals after 15 years continuous operation (125,000 hours) at Tcase-life.

Certificates and Standards

Approval markings	CE, ENEC
Ingress protection classification	IP66 Refer to design-in guide for CT node.
Impact resistance classification	IK08

Sustainability

RoHS directive	2011/65/EU
Hazardous substances	Directive 2011/65/EU, as amended by Directive (EU) 2015/863 of March 2015
Chemical substances	REACH Directive 2006/1907/EC
Electronic waste	WEEE Directive 2002/96/EC05

Radio Equipment Directive 2014/53/EU

Safety (lighting equipment)	IEC/EN 61347-1 IEC/EN 61347-2-11
Safety (IT equipment)	IEC/EN 62368-1
EMC (lighting equipment)	EN 55015 EN 61547
EMC (IT equipment)	EN 55032 EN 55024
EMC (telecommunication)	ETSI EN 301 489-1 ETSI EN 301 489-52
EMC (GPS)	ETSI EN 301 489-1 ETSI EN 301 489-19
RF (telecommunication)	ETSI EN 301 511 ETSI EN 301 908-1 ETSI EN 301 908-13
RF (GPS)	EN 303 413
RF exposure	This device meets the EU requirements (2014/53/EU) on the limitation of exposure of the general public to electromagnetic fields by way of health protection. The device complies with RF specifications when the device used is at 321 mm from your body.



Ordering Data

Type	Order code
LLC7870/00 CT NODE 20MM3 DC EU4VF LG	9137 010 43503
LLC7871/00 CT NODE 20MM3 DC EU4VF DG	9137 010 43603
LLC7240 CityTouch OLC POWER	9137 003 60803

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