

PHILIPS

CT Node



Specification Sheet

LLC7280

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.

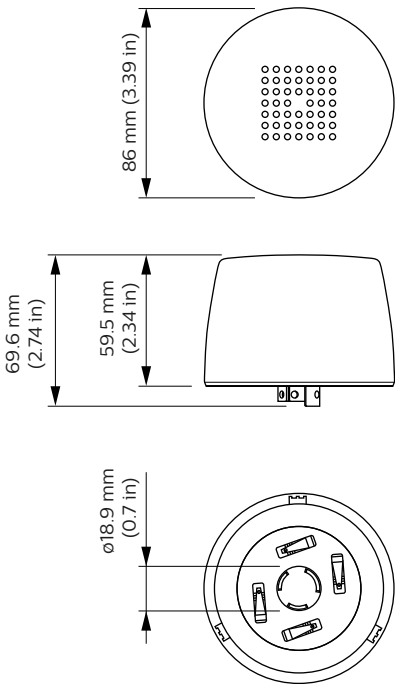
The CT node controls the street light by switching the mains supply and provides dimming by means of a digital (DALI) interface.

The luminaire shall contain a smart (D4i/SR) LED driver for powering the CT node and energy reporting.

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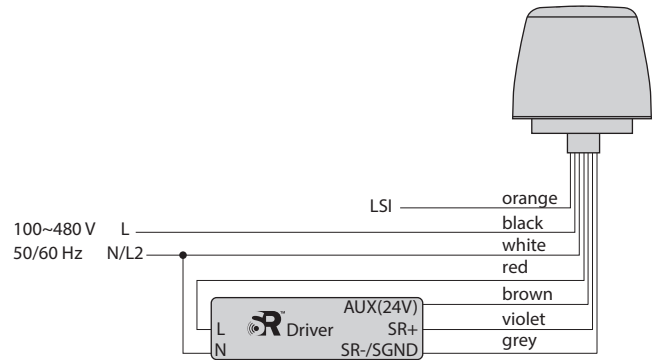
- The CT node is mounted to the luminaire by twist-locking it onto the 7-pin NEMA receptacle.
- The CT node provides true plug and play commissioning: it automatically connects to the mobile network, automatically locates itself with the onboard GPS, and automatically uploads its asset data to the lighting management system.
- The CT Node works with street lights from almost any manufacturer

Dimensional drawings

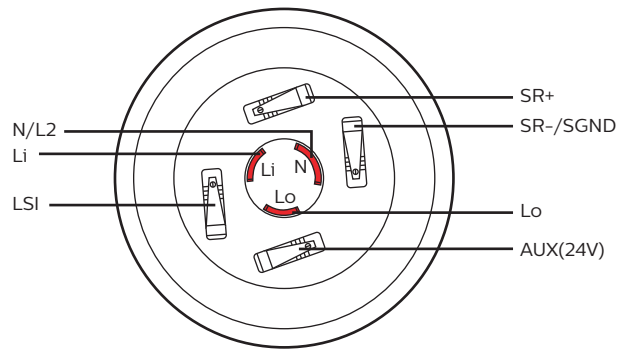


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Wiring diagram



Communication box connected in series with mains Line and a SR driver.



■ Reinforced insulation to housing and control springs.

Specifications

Dimensions

Component height	69.6 mm (2.74 in)
Cover height	59.5 mm (2.34 in)
Diameter	86 mm (3.39 in)
Weight	0.2 kg (7 oz)

Color

Light Grey (RAL 7035)

Supply

Supply voltage	24 Vdc
Mains voltage	100 to 480 Vac
Accuracy on mains voltage	10 to 15%
Mains frequency	50/60 Hz
Accuracy on mains frequency	± 5%
Rated current	N/A

Power Consumption

Standby power	≤ 0.5 W
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Control interface

Control method	DALI
Intra-luminaire DALI bus	"IEC62386-101, Philips SR certified specification v2, DALI Data specifications (DALI part 251, 252, 253)"
Protection	Interface is protected against short circuit
Insulation	Class I, basic insulation
Load capacity	1 to 4 drivers

Mounting

7 pin plug conform ANSI C136.41

Connectivity

Technology	3G (UMTS), 2G (GSM, GPRS) fallback
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Energy metering

Energy metering device	Inside LED driver
Energy meter accuracy	Refer to specification of LED driver

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 35/18 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°

Robust fault detection

Unexpected power outage	Storage capacitor inside CT node
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Surge immunity

Power supply	N/A
Control surge (diff. mode)	0.5 kV acc. IEC61000-4-5. 40 Ohm, 1.2/50 us, 8/20 us
Control surge (comm. mode)	1 kV acc. IEC61000-4-5. 40 Ohm, 1.2/50 us, 8/20 us

Temperature characteristics

Operating temperature	-40 to 70 °C (-40 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, cULus, FCC, ENEC
Operability markings	SR
Ingress protection classification	IP66 The luminaire shall provide sealing of the compatible receptacle.
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

Radio Equipment Directive 2014/53/EU

Safety (lighting equipment)	IEC/EN 61347-1 (2015) IEC/EN 61347-2-11 (2001)
Safety (IT equipment)	IEC/EN 60950-1 (2006+ A11:2009+A12:2011+ A1:2010+AC:2011+A2:2013)
EMC (lighting equipment)	EN 55015 (2013) EN 61547 (2009)
EMC (telecommunication)	EN 300 440-1 (v1.6.1) EN 300 440-2 (v1.4.1) EN 301 489-1 (v1.9.2) EN 301-489-3 (v1.6.1) EN 301 489-7 (v1.3.1)
EMC (harmonic currents)	EN 61000-3-2 (2014)
EMC (voltage fluctuations)	EN 61000-3-3 (2013)
RF (telecommunication)	ETSI EN 301 511 (v9.0.2)
RF exposure	EN 62311 (2008)

FCC

EMC	FCC47 Part 15B Class A
Telecommunication	FCC47 CFR 22H, FCC47 CFR 24E
RF	FCC47 Part 1.1310 / IEEE C95.1



Ordering Data

Type	Order code
LLC7280 CityTouch OLC NEMA SR	9137 003 93303



Note

Check with your Signify representative on the availability of this CT node in your market..

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