

PHILIPS

CT node



Specification Sheet

LLC7811, LLC7812, LLC7814, LLC7815

The CT node is a luminaire-based control device that connects your street light to Signify-supported lighting management systems, such as Interact City.

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) or analog (1-10 V) interface.

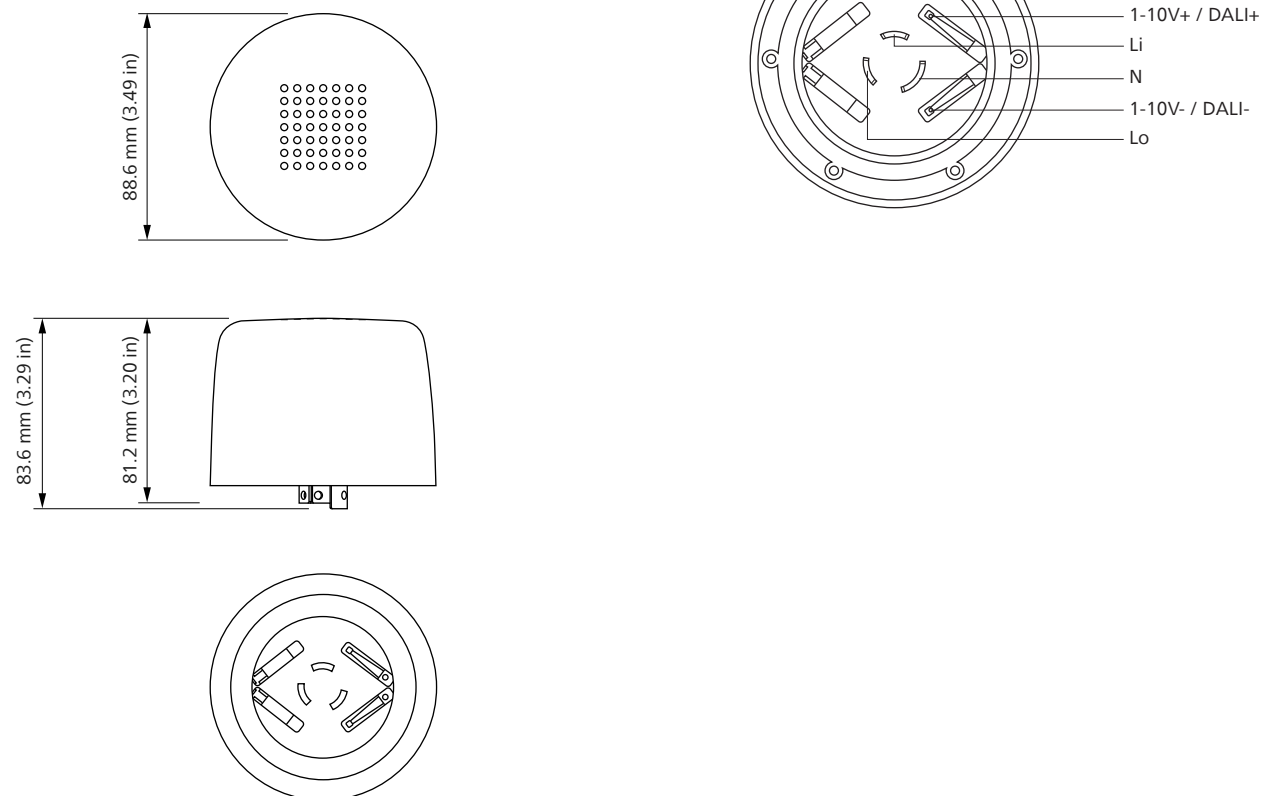


LLC7811

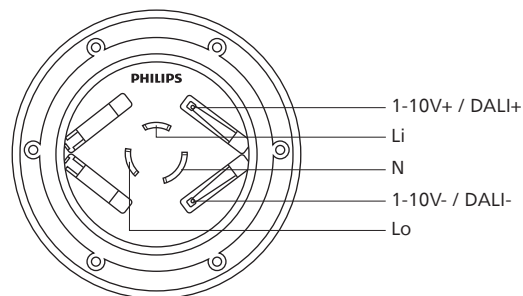
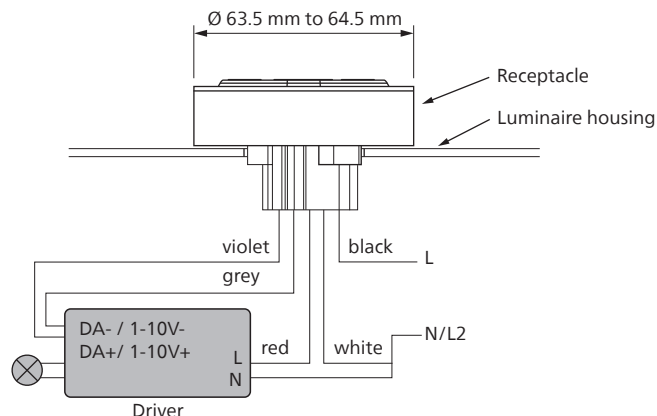
LLC7811, LLC7812, LLC7814, LLC7815

- The CT node is mounted to the luminaire by twist-locking it onto the 3, 5 or 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 together with any certified D4i motion sensor *
- The CT node includes a tilt sensor to get instant notification in case the orientation of the luminaire and/or pole changes significantly.
- 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.

Dimensional drawing

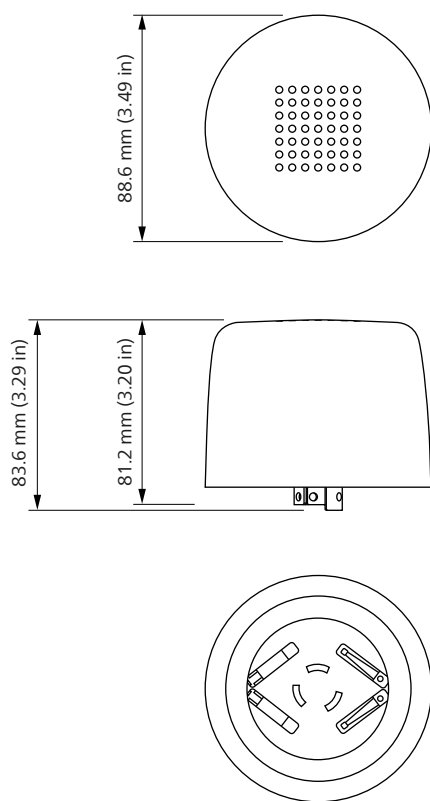


Wiring diagrams



*Third-party D4i certified sensor shall be qualified by Signify, prior to use with Interact City light management system.

Specifications



Dimensions ¹

Component height	83.6 mm (3.29 in)
Cover height	74.4 mm (2.93 in)
Diameter	88.6 mm (3.49 in)
Weight	
LLC7811, LLC7812, LLC7814	0.27 kg (0.60 lbs)
LLC7815	0.29 kg (0.64 lbs)

Color

LLC7812, LLC7814, LLC7815	Light Grey (RAL 7035)
LLC7811	Black

Supply

Mains voltage	
LLC7811, LLC7812, LLC7814	120 to 277 Vac -15%/+10%
LLC7815	347 to 480 Vac -15%/+10%
Mains frequency	50/60 Hz -5%/+5%
Rated current	
LLC7811, LLC7812, LLC7814	4A at 120 Vac or 3A at 277 Vac
LLC7815	3.7A at 347 Vac or 2.7A at 480 Vac

Power Consumption

Standby power	
LLC7811, LLC7812, LLC7814	≤ 1.5 W @ 277V
LLC7815	≤ 2.0 W @ 480V

Control interface

Control method	ON/OFF, 1-10 V, DALI
Protection	Interface is protected against short circuit
Insulation	UL Class 2, Basic insulation
Load capacity	Up to 3 LED drivers. 4A at 120 Vac or 3A at 277 Vac (LLC7811, LLC7812, and LLC7814) 3.7A at 347 Vac or 2.7A at 480 Vac (LLC7815)

DALI SR interface

Performance requirements	IEC 62386-101 edition 2.0
DALI	IEC 62386-103 edition 2.0 IEC 62386-351 edition 1.0
D4i device type	Type A (The D4i specification-Part 351 ensures the Type A device can be used together with Type B device, such as D4i sensor, in a D4i luminaire)
DALI supply	<ul style="list-style-type: none"> DALI master with integrated DALI power supply Suitable for multiple power supplies on a DALI bus
Supply voltage	Min. 11.5 V, Max. 22 V
Guaranteed supply current	Min. 10 mA
Max. supply current	Max. 30 mA

Mounting

5-pin plug conform ANSI C136.41

Connectivity

Technology	4G/5G (LTE Cat M1 bands 2, 4, 5, 12 and 13)
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¹ Conform ANSI C136.48

Energy metering device	Inside CT node
Energy meter accuracy	0.5% class conform ANSI C136.50

Auto location

Positioning device	Inside CT node
Positioning accuracy	CEP50 ≤ 2.5 m

Luminaire tilt notification

Tilt sensor	Inside CT node
Tilt threshold accuracy	± 5°
Configurable range	Between 20 and 45°
Default setting	30°

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/3kA acc. ANSI C136.10
Control surge (diff. mode)	0.5 kV acc. IEC61000-4-5. 40 Ω, 1.2/50 μs, 8/20 μs
Control surge (comm. mode)	1 kV acc. IEC61000-4-5. 40 Ω, 1.2/50 μs, 8/20 μs

Temperature characteristics

Operating temperature	-40 to 70 °C (-40 to 158 °F)
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Tcase max	<ul style="list-style-type: none"> • 80 °C measured at Tcase point (LLC7811, LLC7812, LLC7814) • 86 °C measured at Tcase point
Tcase life	38 °C measured at Tcase point
Storage temperature	-40 to 85 °C (-40 to 185 °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	cULus, FCC, ISED, D4i
Operability markings	D4i
Ingress protection classification	IP66 (installed condition for CT node only in combination with NEMA 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

FCC

EMC	FCC47 Part 15B Class A, ICES-003, Issue 6 class A
Telecommunication	FCC47 CFR 22H, FCC47 CFR 24E, FCC47 CFR 27C RSS-130, RSS-132, RSS-133, RSS-139
RF Exposure	FCC47 part1.1307 & 2.1091, RSS-102
Safety	UL773, CSA C22.2 No. 182.2

PTCRB certified

Ordering Data

Type	Order code	Country of Origin
LLC7811/00 CT NODE NEMA5 ACLV P US4VF BK	9137 010 58113	Poland
LLC7812/00 CT NODE NEMA5 ACLV P US4VF LG	9137 010 58213	Poland
LLC7814/00 CT NODE NEMA5 ACLV A US4VF LG	9137 010 58313	Poland
LLC7815/00 CT NODE NEMA5 ACHV P US4VF LG	9137 010 66413	Poland

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