



LLC7852, LLC7854, LLC7856, LLC7858

Specification Sheet

LLC7852, LLC7853, LLC7854, LLC7855, LLC7856, LLC7857, LLC7858, LLC7859 CT node

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) interface.

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

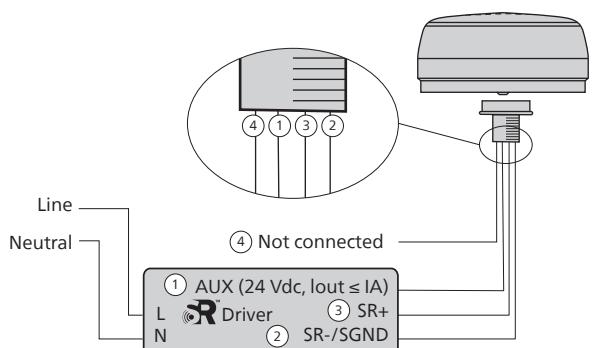


LLC7853, LLC7855, LLC7857, LLC7859

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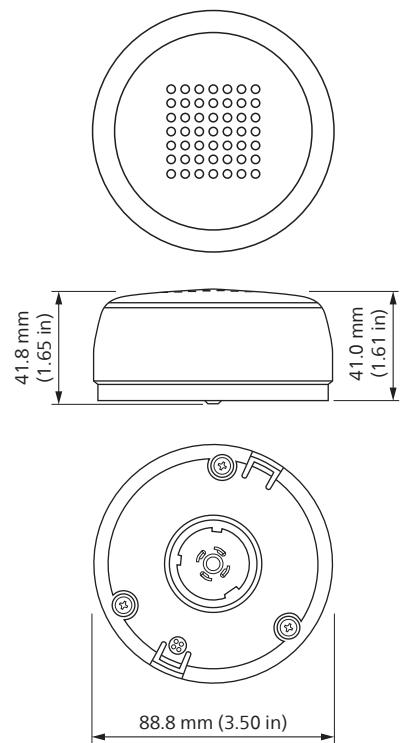
- The CT node is mounted to the luminaire by twist-locking it onto the 4-pin Zhaga receptacle.
- The CT node provides true plug and play commissioning: it automatically connects to the mobile network, automatically locates itself with the onboard GPS, and automatically uploads its asset data to the lighting management system.
- The CT node 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.

Wiring diagram



The driver must have short protection, and at least basic insulation circuit from mains power supply.

Dimensional drawings



*Luminaire tilt notification is only applicable to LLC7858 and LLC7859

Specifications

Product Dimensions

Component height	41.8 mm (1.65 in)
Cover height	41.0 mm (1.61 in)
Diameter	88.8 mm (3.50 in)
Weight	0.13 kg (0.29 lb)

Color

LLC7852, LLC7854, LLC7856, LLC7858	Light Grey (RAL 7035)
LLC7853, LLC7855, LLC7857, LLC7859	Dark Grey (RAL 7043)

Supply

Supply voltage	24 Vdc
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Power Consumption

Standby power	≤ 0.5 W
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Control interface

Control method	DALI
Protection	Interface is protected against short circuit
Insulation	Class I, basic insulation
Load capacity	1 to 4 drivers

DALI SR interface

Performance requirements DALI	IEC 62386-101 edition 2.0 IEC 62386-103 edition 2.0 IEC 62386-351 edition 1.0 SRS ed.2 DALI Interoperability
DALI input current (PSU off)	Max. 2 mA
D4i device type	Type A

Mounting

4-pin plug conform Zhaga book 18

Connectivity

Technology	2G (GPRS) 4G (LTE Cat M1 bands 3, 8 and 20)
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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 20/20 lux

Luminaire tilt specifications*

Tilt sensor	Inside the CT node
Tilt threshold sensitivity	$\pm 5^\circ$
Configuration range	Between 20 and 45°
Default setting	30°

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°

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Lighting management systems

CityTouch,
Interact City

Surge immunity

Power supply	6 kV Common Mode acc. IEC61000-4-5. 2 Ω, 1.2/50 μs, 8/20 μs
Control surge (diff. mode)	0.5 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)
Tcase max	78 °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, UKCA, ENEC, Zhaga-D4i
Ingress protection classification	IP66 The luminaire shall provide sealing of the compatible receptacle
Breather	Yes, the in-built breather allows airflow while preventing moisture and dust from entering the enclosure.
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 55035
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. EN 62311



Ordering Data

Type	Switch type	Order code
LLC7852/00 CT NODE ZHAGA DC EU4VF LG	Photocell	9137 010 57603
LLC7853/00 CT NODE ZHAGA DC EU4VF DG	Photocell	9137 010 57703
LLC7854/00 CT NODE ZHAGA DC AS EU4VF LG	Astronomical Clock	9137 010 59203
LLC7855/00 CT NODE ZHAGA DC AS EU4VF DG	Astronomical Clock	9137 010 59303
LLC7856/00 CT NODE ZHAGA DC MS EU4VF LG	Mains Switched	9137 010 59403
LLC7857/00 CT NODE ZHAGA DC MS EU4VF DG	Mains Switched	9137 010 59503
LLC7858/00 CT NODE ZHAGA DC MS EU4VF LG	Mains Switched	9137 010 73603
LLC7859/00 CT NODE ZHAGA DC MS EU4VF DG	Mains Switched	9137 010 73703

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