

Smart Light Controller SmartNodes®

Datasheet

DS_2807_EN_C

SLC - NEMA

SLC-G3-R3_NEMA_P0
Réf. S00034



Solution description

SmartNodes is a Smart StreetLighting solution, future-proof and large-scale deployable.

SmartNodes transforms the street lighting infrastructure into a scalable communication network for other city sensors thanks to its solution of nodes and gateways, while providing a remote web service to control, manage and monitor light points.

The solution is composed of connected nodes (SLC or SLN), a gateway (APS) and a Central Management System (CMS) using the TALQ v2 protocol.

Product description

The SmartNodes SLC - NEMA ("Smart Light Controller, NEMA version") is a standardized connected node compatible with all NEMA luminaires.

The SLC - NEMA controls, monitors and provides luminaires information.

It can come with an active power measurement option and is D4i compatible.

main features



**Direct Light
Point Control**



**Feedback On
Status & Health**



**Automatically
geolocated (GPS)**

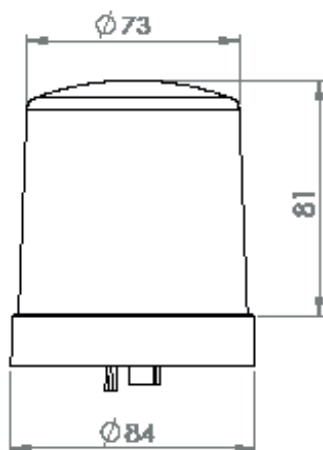


**Scalable Mesh
Network**



Plug & Play

Mechanical drawings

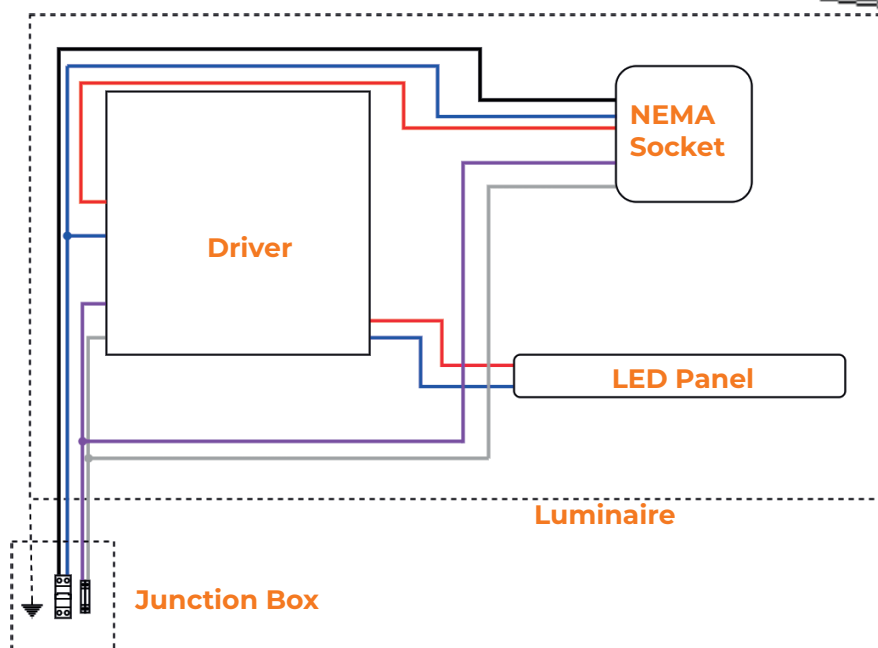
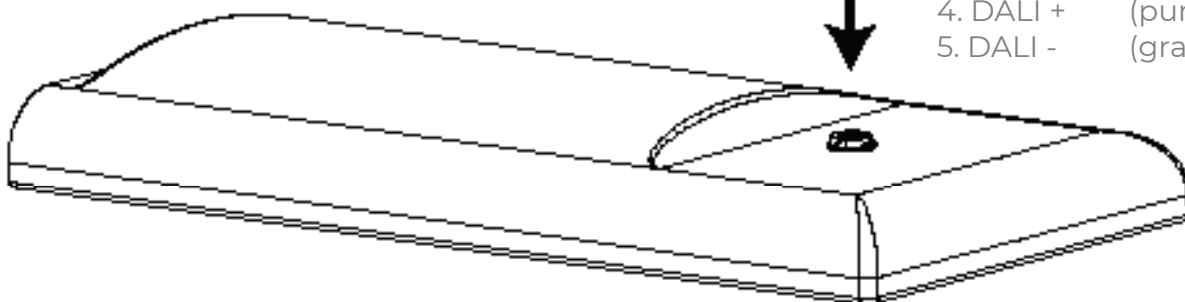


Electrical drawings



"NEMA" connector Terminal connections:

1. Line in (black)
2. Neutral in (white^(*))
3. Load out (red)
4. DALI + (purple)
5. DALI - (gray)



Our SLC products don't require any direct cable connection.

This device plugs in to the "NEMA" Socket, which is integrated in the luminaire.

An example^(**) of the possible connections is shown here.

^(*): Blue in schematic

^(**): Indicative only

Technical Information

Mechanical

Housing Material - Base	Polybutylene Terephthalate
Colour - Base	Gray
Housing Material - Dome	Polycarbonate
Colour - Dome	Transparant Gray
Protection Class	IP66 (IEC 60529) IK09 (IEC 62262) UL94-V0
Connection Type	ANSI C136.41 base. & ANSI C136.10 receptacle. ("NEMA" 7-pins connector)
Weight	600g

Environmental

Ambient Temperature	-30°C to +70°C
Ambient Humidity	0% to 100% RH
Storage Temperature	-40°C to +80°C

Compliance - Safety - Reliability

CE Certification	Yes	
Safety Standard*	IEC 62368-1:2014 + A1:2015 + A2: 2015	
EMC Standard	Emission : • EN 55015 • EN 55032 • EN 61000-3-2	Immunity : • EN 61000-4-2 • EN 61000-4-3 • EN 61000-4-4 • EN 61000-4-5 • EN 61000-4-6 • EN 61000-4-11 • EN 301 489-1 V2.1.1 • EN 301 489-17 V3.1.1
Radio Spectrum Efficiency	• EN 300 328 V2.1.1 • EN 300 330 V2.1.1	
DALI Standard	IEC 62386	
Mains Input Protection	Surge protection : • EN61000-4-5 criteria B	

(*) : Pending certification for new product release

Approvals

EMC Directive 2014/30/EU

RED Directive 2014/53/EU

LVD Directive 2014/35/EU

RoHS Directive 2011/65/EU

CE Certification

Mains Input

Nominal voltage	110V - 240V AC
Frequency	50-60Hz
Maximum Load	1,2kVA @ 240V
Maximum Current	5A
Electrical protection	Class II
Safety	Double galvanic isolation

DALI

Bus voltage	22,5VDC
Rated current	1,5mA
DALI Supply Current	5mA
Capacity	Up to 4 DALI drivers with DALI bus power supplied by the SLC - NEMA More are possible if the DALI bus is powered by the drivers alongside the SLC - NEMA Currently commands in broadcast only.
Norm	DALI 2 Compliant - IEC 62386
Electrical protection	Double insulated to input power

Features

Processor	• ARM Cortex M4F 32bits • RAM - 256kB • Flash - 1024kB
RGB LED	• Status indication
GPS	• Positioning & Time Retrieval • Built-in astronomical calendar
Temperature Sensor	• Internal temperature measurement • Range from -30°C to +70°C • Accuracy: ± 2 °C from -25 °C to +70 °C
Power Measurement	Available only with the 'PM' option. • Integrated active power measurement. • Up to 1.2 kW

Local Communication	• Radio mesh-network powered by Wirepas. • Range : Up to 175m in open air. • Modulation : GFSK • Data rate : 1Mb/s • Over The Air Programmable (OTAP) • Self-Forming & Self-Healing • Network security : AES 128 bits encryption
Relay	• Switching output to driver • Maximum load : 1,2kVA • Maximum current : 5A

Frequency Bands & Power

WIREPAS COMMUNICATION	• Wirepas Com card : 2Mbs/1Mbs – 2.4GHz proprietary (Wirepas) <8dBm • Frequency : 2.4GHz • Rated Output power : +7.5dBm
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Product versions

SLC-G3-R3-SP0B-P0	SLC - NEMA without Power Measurement
SLC-G3-R3-SP0B-PM	SLC - NEMA with Power Measurement
SLC-G3-R3_NEMA_	Réf. S00034

CONNECTED
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FOR **SMARTER**
MOBILITY



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