

GDS NEMA CAT 1 LTE Node

The node is a point-to-point remote control device designed to make public lighting fixtures smart, featuring an extremely compact size.

It is capable of communicating directly via an integrated CAT 1 SIM card for the monitoring and management of the lighting fixture to which it is connected.



18-27 Vdc



DALI2



4G CAT1



Monitoring



IP65

KEY POINTS

1

DALI 2 interface (DALI 1 LED driver control) and compliance with ANSI C136.41-2013 (twist-lock NEMA socket), EN61347, EN301489, EN55015 Class B standards

2

Energy consumption statistics and operating hours

3

Power Supply <3W

4

Network: 4G CAT 1 SMD SIM integrated

5

The communication fault protection mechanism operates according to the configured dimming schedule and illumination levels after the fault

6

GNSS: accuracy ± 5 m (no obstacles), UTC synchronization

7

Compliant with the ZHAGA BOOK 18 interface standard

8

Standard 5-year warranty

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Switching up to 5 A (250 VAC)

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10-10 V analog dimming channel

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Monitoring of voltage, current, power, $\cos \varphi$ and internal temperature

12

Power failure alarm sent after fault

MAIN FEATURES

Net weight	250 g (with housing)
Height	111 mm
Base diameter	Ø83 mm
Input voltage	100 - 277 VAC (wide range)
Surge protection	10 kV / 5 kA
Operating temperature	from -40°C to +60°C
IP Rating	IP65 (With gasket installed)
Self-extinguishing	UL94-V0
Dimming accuracy	±1 %
Failure mode	Fail-on (relay energized)
Interface	Optional 2,4 GHz (IEEE 802.15.4) for field debugging
Photocell	ANSI C136.10 compliant, spectral sensitivity 350-970 nm

ELECTRICAL CHARACTERISTICS
Absolute maximum ratings

Input voltage range	90-305 VAC
Peak output current (100 ms)	100 A
Max dimming current	10 mA
AC/Dimming isolation voltage	3 kVAC, 10 mA, 1 min
AC/Dimming insulation resistance	≥10 MΩ a 1 kVDC (normal conditions); ≥2 MΩ a 1 kVDC (wet conditions)

ELECTRICAL CHARACTERISTICS
(220 VAC, 20°C, 50% UR)

Parameter	Min	Typical	Max	Unit
AC input voltage	100	-	277	VAC
AC output current (RMS)	0	-	5	A
Self-consumption	0,6	-	3	W
Dimming voltage	0	-	11	V
Dimming current (@ 10 V)	0	1	5	mA
Dimming accuracy	-1	-	+1	%
Voltage measurement range	0	-	300	VAC
Current measurement range	0	-	5	A
Voltage measurement accuracy	-2	-	+2	%
Current measurement accuracy	-2	-	+2	%

RF CHARACTERISTICS

RF Parameter	Min	Typical	Max	Unit
CAT1 - Reception frequency	869	-	2655	MHz
CAT1 - Transmission frequency	824	-	2655	MHz
CAT1 - RX Sensitivity	-96	-	-	dBm
CAT1 - TX Power	23	-	25	dBm
2,4 GHz - Operating frequency	2405	-	2480	MHz
2,4 GHz - RX Sensitivity (OQPSK)	-99	-	-	dBm
2,4 GHz - TX Power (OQPSK)	-	-	+10	dBm
GPS - Tracking sensitivity	-	-160	-	dBm

BANDE LTE-CAT1

Banda 3GPP	Transmission (MHz)	Reception (MHz)	Type
LTE-FDD B1	1920 - 1980	2110 - 2170	FDD
LTE-FDD B3	1710 - 1785	1805 - 1880	FDD
LTE-FDD B5	824 - 849	869 - 894	FDD
LTE-FDD B7	2500 - 2570	2620 - 2690	FDD
LTE-FDD B8	880 - 915	925 - 960	FDD
LTE-FDD B20	832 - 861,9	791 - 820,9	FDD
LTE-FDD B28	703 - 747,9	758 - 802,9	FDD
LTE-TDD B38	2570 - 2620	2570 - 2620	TDD
LTE-TDD B40	2300 - 2400	2300 - 2400	TDD
LTE-TDD B41	2555 - 2655	2555 - 2655	TDD

CONNECTIONS
 (NEMA ANSI C136.41)

PIN	Name	Function
Li	Input phase	Input phase line (Live in)
Lo	Output phase	Output phase line to LED driver (Live out)
N	Neutral	Input neutral line
1	Dim+	0-10 V dimming output, positive pole
2	Dim-	0-10 V dimming output, negative pole

Bottom-facing NEMA twist-lock connector; the rubber gasket ensures IP65 protection once installed.

ELECTROMAGNETIC COMPATIBILITY (EMC)

EMC Test	Norm	Level
Electrostatic discharge (ESD) immunity	GB/T17626-2	Level 4
Radiated RF and electromagnetic field immunity	GB/T17626-3	Level 2
Electrical fast transient (EFT) / Burst immunity	GB/T17626-4	Level 4
Surge immunity	GB/T17626-5	10 kV / 5 kA
Conducted RF immunity	GB/T17626-6	Level 2
Power frequency magnetic field immunity	GB/T17626-8	Level 3
Voltage dips and interruptions	GB/T17626.11	0% 10ms; 70% 200ms
Radiated electromagnetic emissions	EN55015	Class B
Certifications	EN61347, EN301489	-

ORDERING CODES

Description	Order code	Note
MSWN8Y1314 - Node Controller 4G-CAT1	4696355000088	Main product
Socket NEMA (from LONGJOIN)	4718405007127	JL-240XA1412R7P-N1 - optional
Socket NEMA rotary (from LONGJOIN)	4718405007917	JL-240TL-XA-1412R7P - optional