



## FRE-220-NEMA-S Sigfox COMPATIBLE LUMINAIRE CONTROLLER

- › **NEMA socket** connected (ANSI C136.41).
- › Enables **individual remote management** of streetlight lamps with electronic driver up to 400W (ON/ OFF/ Dimming).
- › Specially designed and optimized **for LPWA networks**.
- › **Autonomous operation** based on predefined schedules, light level sensor and adaptive lighting.
- › **Adaptive lighting** capabilities based on digital input for motion sensing.
- › **Bandwidth efficient** with minimal communication requirements.
- › **Dedicated high-security memory** for encryption keys storage.
- › Wide range of **electrical parameters monitoring**: V, W, A, VAR, Wh, VARh, PF and frequency.
- › **Advanced data synchronization** and notification mechanism.
- › **Battery operated RTC**, protected against unforeseen communication failure.
- › **External infrared interface** for local configuration.
- › Integrated **light level sensor**.
- › Designed **lifetime: 10+** years.

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**PLUG & PLAY**  
ADAPTABLE  
to EXISTING  
STREET LIGHTING  
INFRASTRUCTURE

SCALABLE &  
IMMEDIATELY  
OPERABLE



up to  
**35%**  
ENERGY  
SAVINGS



up to  
**42%**  
MAINTENANCE  
COST REDUCTION

## FRE-220S-NEMA-S

Lamp Type	LED, CF, HID with electronic driver
Connection	7pin NEMA socket (ANSI C136.41)
Maximum lamp power	400W
Functions / Operation mode	ON/ OFF / Dimming
Dimming range	30%-100%
Dimming steps	stepless
Control interface	0-10V/ 1-10V, DALI
External interface	infrared
Network interface	Sigfox
Supported frequencies	RCZ1 Europe , RCZ2 US, RCZ4 AU/NZ/Taiwan/Singapore
Firmware update	IR (infrared)
GPS	optional
Security	encrypted communication based on security keys
Power supply	85 - 260VAC / 50Hz-60Hz
Surge protection	10kA
Internal scheduling memory	16 events / day
Power consumption	1W
Precision Real Time Clock (RTC)	Battery operated
IP rating	IP66
Operating temperature range	-25°C to +65°C
Dimensions (length x width x height)	76 x 96 mm
Compliant standards	RoHS, EN 61000-3-2(2014), EN 61547(2009), EN 60068-2-1(2007), EN 60068-2-2(2007), Prequalified according to ETSI EN 300 220
Certifications	CE FCC ( in progress)

### MEASURED PARAMETERS:

- › Lamp power
- › Line voltage
- › Current
- › Active power
- › Reactive power
- › Apparent power
- › Power factor
- › Energy consumption (active/ reactive)
- › Lamp / controller - running hours counter
- › Lamp On / Off cycles counter

### CONFIGURABLE PARAMETERS:

- › Astronomical calendar scheduler
- › Predefined scheduler
- › Start state ( Photocell / Schedule / Manual)
- › ON/OFF power threshold
- › Over/ under voltage threshold
- › Over/ under current threshold
- › Strike retry count
- › Fade time
- › Lamp warming time
- › Lamp cooldown time
- › Light level threshold
- › Data transmission setup
- › Alert priority setup

### ALARMS MONITORED:

- › Over/ under voltage detection
- › Over/ under current detection
- › Lamp or driver fault detection
- › Device failure