Wireless Street Light Control Unit

AXESS-RF

INTERNAL

networking
your city

COMPATIBLE WITH
Silver Spring NETWORKS

Lumnex

MAIN FEATURES

LIGHT CONTROL UNIT (LCU)

- Excellent connectivity to the SSN RF network mesh (rarely needs an external antenna, even when mounted inside a luminary or inside the base of a streetlight pole)
- Configurable RF bands to comply with the national requirements of the local available RF bands (ISM autorisation)
- Extensive reporting: lamp burning hours, failure to ignite, lamp voltage and current, ballast/driver temperature, RF transmission status...
- 15A Triac assisted relay for load ON/OFF switching
  - Zero Voltage Switch-On (low inrush current)
  - Zero Current Switch-Off (no inductive arcing)
- Low standby power: less than 1.5W on average
- Light control interface: DALI or 0/10V
- Dry contact input for additional sensors
- Energy Meter Accuracy 0.5% @ Imax 5A also providing readings of Power Factor, RMS Voltage, Current...
- LED impulse power metering mode (imp/kWh)
- Robust: IP54, Class II, surge protection up to 10kV/5kA
  - DALI, 0/10V, dry contact input Din and External antenna connector with 4kVac isolation
- Life span of over 10 years @ Tc = 70°C operating temperature

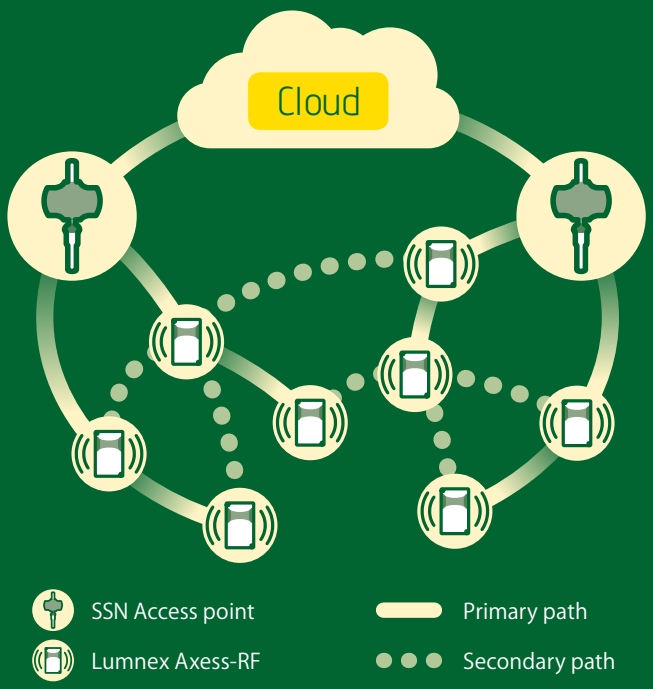
AND MORE...

- Dynamic Lighting and presence detection
- Multiballast Driver: can control multiple ballasts / LED drivers
- Over The Air (OTA) software updates
- External antenna (not included) for severe radio environments
- Standard warranty: 5 years (conditions apply)

SILVER SPRING® NETWORKS

- SSN is the world leader for multi-application standards-based outdoor networks for critical infrastructure with more than 25 Million devices deployed
- The SSN RF meshed network provides the future-proof RF network for connected city services:
  - application and link security (AES encription, full PKI etc.)
  - self configuring, auto-healing data routing with redundant paths and uplinks
  - multitude of network protocols implemented and supported
- The Applicable RF band depends on the national authorities' frequency allocation policy:

Frequency	max Emission	Sensitivity	Baud rate
868 MHz	27 dBmW	-102 dBmW	100 kb/s
2,4 GHz	24 dBmW	-98 dBmW	500 kb/s
870-876 MHz	27 dBmW	-102 dBmW	100 kb/s



- Network protocols : IPv4, IPv6, DTLS, UDP, TCP, SNMPv3, IPSEC, PKI norme X.509, L3/L4 firewall

FUNCTIONAL OPTIONS

DYNAMIC LIGHTING

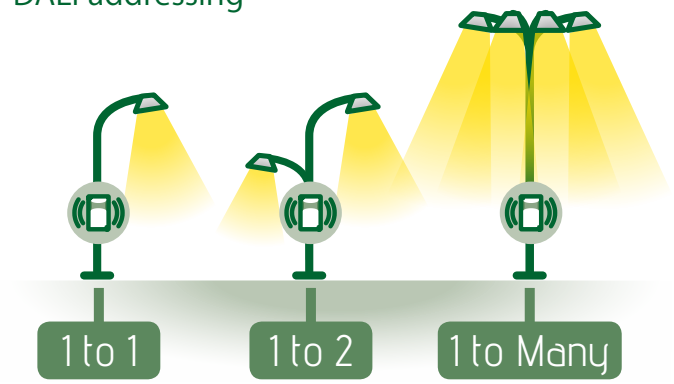
«Follow-me» system

Best compromise between energy savings and lighting comfort. Detection of a pedestrian, cyclist or car by a sensor (IR, Radar) connected to the Axess-RF triggers a temporary increment of the lighting level of a group of lamps.

The Axess-RF addresses the concerned remote lamps in the meshed network in a direct manner and without having to pass through a central control server, thus ensuring a quick and appropriate reaction of the lamps.

MULTIBALLAST DRIVER

Individual and broadcast
DALI addressing



Default 1 to 1 mode: Axess-RF forwards DALI commands to one single lamp and transmits its reports back into the network (e.g. "this lamp doesn't ignite well")

Prepared for 1 to 2 mode: Axess-RF forwards DALI commands to each lamp individually (e.g. "extinction of lamp X") and transmits individual status reports back into the network (e.g. "lamp Y don't ignite well")

Configurable 1 to Many mode (up to 8): AXESS-RF broadcasts collective commands to all lamps (e.g. "all lamps dim 50%") and transmits collective status reports back into the network (e.g. "at least one of all lamps doesn't ignite well")

LUMNEX LIGHT CONTROL™

Powered by Streetlight.Vision (SL.V)

Lumnex Light Control™ software suite provides a management and control platform that integrates a comprehensive set of software modules for lamp commissioning, programming, data collection, alarm analysis, computer aided maintenance, real-time status lecture and command as well as many more support functions.

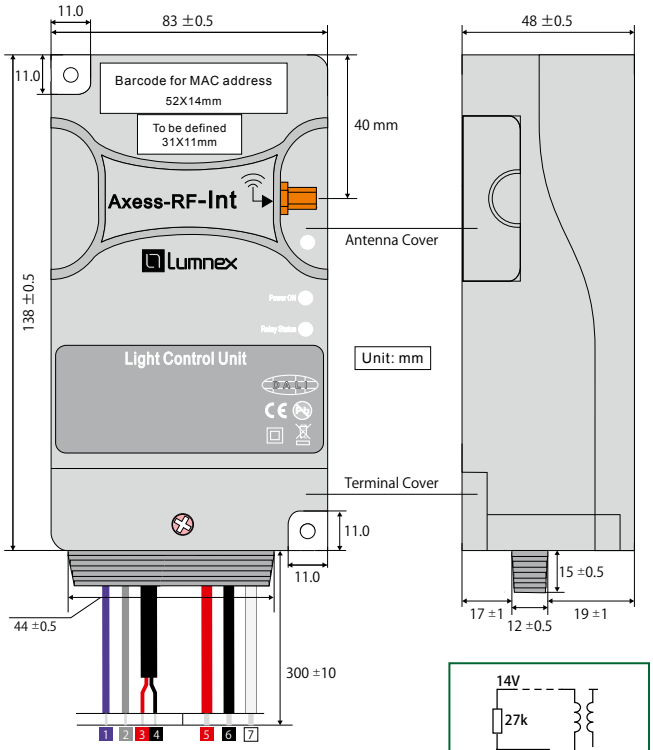
The software package is hosted on Lumnex' servers ("cloud" version) or on customer's server ("local" version). It comprises software modules for a flawless integration on Lumnex' RF-connected products and in combination with the SSN RF network it features functions like "over the Air" software updates for the LCUs.

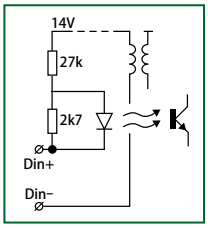
Lumnex Light Control™ also accepts Lumnex' PLC technology products and other manufacturers' qualified objects ("open system") as to present a single platform for all of your central lighting management requirements.

Lumnex Light control

TECHNICAL SPECIFICATIONS

DIMENSIONS





AC isolated dry contact

CONNECTIONS

1 (purple), 2 (grey): 0/10V or DALI interface*
3 (red), 4 (black): Dry contact input
5 (red), 6 (black): Lout to ballast / driver, Lin mains**
7 (white): Nout , Nin: common Neutral from mains**

NOTE :
- 0V, DALI- & Din- all three are interconnected (common return)
- Double isolated wires 300mm
- *AWG18 (0.823mm^2), **AWG16 (1.3mm^2)

BASIC CHARACTERISTICS

Input Voltage	120 ~ 277Vac (105-305Vac)
Frequency	50 ~ 60Hz (47-63Hz)
Type of Communication with ballast / LED driver	Bidirectional DALI™ or unidirectional 0/10V
Operating Temperature Range	-40°C to +55°C
Storage Temperature range	-40°C to +85°C
Humidity	0% to 98%
Weight	0.3 kg

STANDARDS

DALI™ COMMUNICATION
- IEC/EN 62386-101/102/203

EMC / EMI
- EN55022A (CISPR 22)
- EN55015 (CISPR 15)

EMC IMMUNITY
- IEC/EN 61547
- EN 55024 (CISPR 24)

ENVIRONMENTAL
- RoHS, WEEE

SAFETY
- IEC/EN 60950-1 (2nd edition)
- IEC/EN 61347-2-11
- UL773

RF COMMUNICATION
- ETSI EN 301-489
- ETSI EN 302-208
- IEC/EN 62311

CE MARKING

FCC / UL (E501181)

ORDERING INFORMATION

CODE	DESCRIPTION
300_520	DALI, 5A, Class 0.5%, No static Relay
300_521	DALI, 5A, Class 0.5%, With static Relay
300_522	0/10V, 5A, Class 0.5%, No static Relay
300_523	0/10V, 5A, Class 0.5%, With static Relay
300_525	0/10V, 8A, Class 2%, With static Relay
300_528	0/10V, 8A, Class 2%, No static Relay

ALSO IN OUR WIRELESS NETWORKING FAMILY

AXESS-RF External
with NEMA socket
and photocell

BCEP-RF
Street Cabinet
Controller

BCSLT-RF
Traffic Light
Synchronizer

Silver Spring NETWORKS

NaaS
for SilverSpring®
Networks

Lumnex Light Control
Powered by
StreetLight. Vision

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