Project _____ Type _____

Catalogue n° _____ Date _____

AimLite

NUCLEUS

SMART EMERGENCY LIGHTING

The Nucleus system is an innovative solution to emergency lighting with its advanced features in a simple layout and cost-effective installation. This is an all-in-one solution that handles Normally ON, Normally OFF, and communication with the same pair of wires. Nucleus is connected to the internet via an Ethernet cable and can be controlled through the app or web from anywhere in the world. It is thus possible to control more than one unit within a single building, as well as manage multiple buildings remotely from a single access point. Furthermore, only one point of maintenance is needed since it is now possible to daisy-chain your Running Man signs and remote lights back to your centralized Nucleus battery unit. The auto-test feature allows testing of your emergency system to the fire code of Canada's requirements. All tests and changes to the system are logged. Reports are automatically sent via email for effective maintenance.



FEATURES AND SPECIFICATIONS

CIRCUITRY

- 120/277/347VAC input, field selectable
- A single 2-wire, low voltage (24V) conductor powers the Running Man signs, remotes, and handles communication
- Eliminates the need for additional AC conductors (no hydro required), reducing installation costs
- 24VDC output
- 144 W maximum evenly split across 6 inputs (channels) not exceeding 54 W per input (channel)
- 2 DC terminal blocks per input (channel)
- Wattage capacity of 144 W maximum for 30 and 60 min emergency power duration standard
- Up to 390' or 120m wiring distance thanks to a dedicated step-down driver
- Extra battery pack can be added for more duration
- Fully automatic, current limited charger
- High performance battery
- Programmable auto-test
- Ethernet port
- TFT display
- 4 operations buttons

MECHANICAL

- Steel construction
- Black powder coat finish comes standard
- 3 keyholes for wall mount
- 19 knockouts of 20mm for easy wiring
- Conduit entry knockouts
- Transformer included

COMPATIBLE DEVICES

- Signs: RPST, RPALW, RPWP,
- RPDB, RPVR, RPSP, RPEL, RPN
- Remote: RMSM, RMN, RMMB, RMMD, RMQVD (single or double head) , RMMG, RMMGR (single head)

APPROVALS

- Certified CSA to C22.2 #141-15

OVERVIEW			
LIGHT SOURCE	LED	**MAX. CHANNELS**	6
INPUT VOLTAGE (VAC)	120, 277, 347	**MAX. CONNECTED DEVICES**	120
WATTAGE CAPACITY (W)	144		

ICES 005

Intertek

For complete warranty details, please see our terms and conditions on our website.

Data is based upon tests performed in a controlled environment. Actual performance can vary depending on operating conditions.
All products are subject to change or may be discontinued any time without notice.

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AIMLITE NUCLEUS – TYPICAL SPECIFICATION

All emergency Running Man signs, and remote fixtures shall be connected to a centralized low-voltage DC power and communication system to manage, power, distribute, and monitor emergency lighting loads.

The system shall operate with a universal **120/277/347 VAC input**, field selectable. A single **2-wire low-voltage (24 VDC)** conductor shall be used to power Running Man signs and remote fixtures and provide system communication, eliminating the need for additional AC conductors at the fixture level and reducing installation costs.

The system shall provide a **24 VDC output** with a total capacity of **144 W maximum**, evenly distributed across **six (6) independently protected inputs (channels)**, with a maximum load of 54 W per channel. Each channel shall be equipped with **two (2) DC terminal blocks** for ease of wiring and load distribution.

The emergency lighting system shall be a **centralized, web-connected solution** designed to support precision operation, simplified maintenance, and regulatory compliance. The system shall provide **unit-level monitoring**, allowing identification of specific connected devices (Running Man signs or remote fixtures) that are offline or require maintenance, down to the circuit level.

The system shall provide **remote access**, allowing authorized users to monitor system status, review alarms, and manage emergency lighting operations from any location via a secure web application.

The system shall support **automatic testing** of emergency lighting equipment in accordance with the **National Fire Code of Canada**, ensuring that code required tests are performed at the required intervals and properly recorded.

The system shall provide **reporting functionality**, including detailed maintenance and operational reports, and shall generate **real-time alerts** to identify faults, failures, or required service.

The centralized emergency lighting power, monitoring, and management system shall be **Aimlite Nucleus**.

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NUCLEUS

NUCLEUS SYSTEM FEATURES

Nucleus is a centralized, web-connected emergency lighting system designed for precision, convenience, and compliance. It enables detailed unit-level monitoring, remote management, and automated testing—ensuring safety and code adherence with minimal effort.

MONITORING

Quickly identify which specific unit (sign or remote) is offline or requires maintenance—right down to the circuit level.

REMOTE ACCESS

Control and monitor systems from anywhere in the world using the web app.

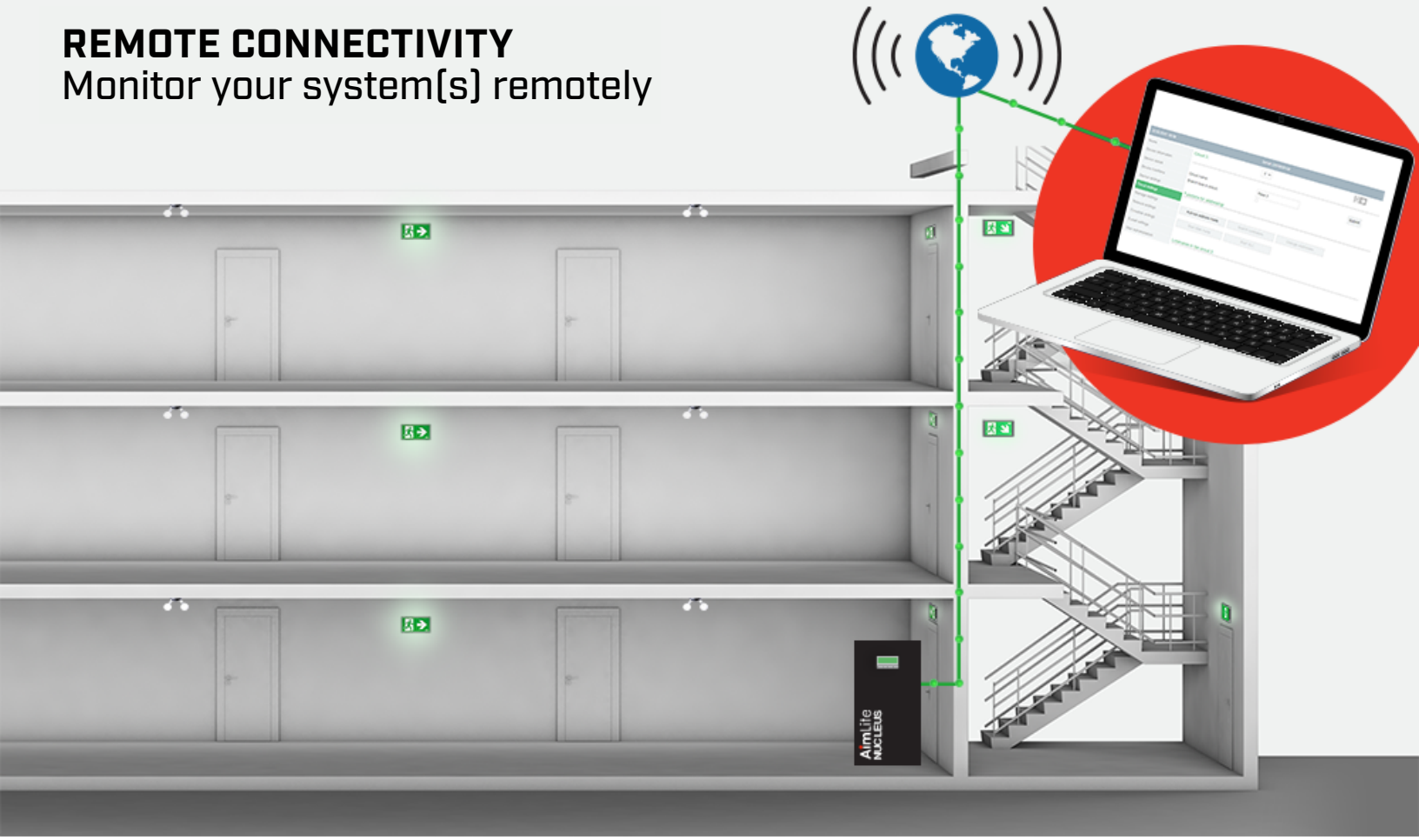
TESTING & COMPLIANCE

Automatically perform code-required emergency lighting tests based on the **National Fire Code of Canada**.

REPORTING

View detailed maintenance reports and receive real-time error alerts.

REMOTE CONNECTIVITY
Monitor your system(s) remotely



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NUCLEUS

ORDERING GUIDE

PART NUMBER	VOLTS (VDC)	WATTS (W)	LIGHT SOURCE	INPUT VOLTS (VAC)	COLOR
NUCLEUS-6	24	144 (1 HOUR)	LED	120/277/347	BLACK

ADD-ON

PART NUMBER	DESCRIPTION
NUC-6-BATT	BATTERY PACK AND CABINET EXTENSION FOR NUCLEUS (ORDER SEPARATELY)

ACCESSORY

PART NUMBER	TYPE
NUC-ZONE6	NUCLEUS ZONE SENSE 6 IN 1 OUT AC GY

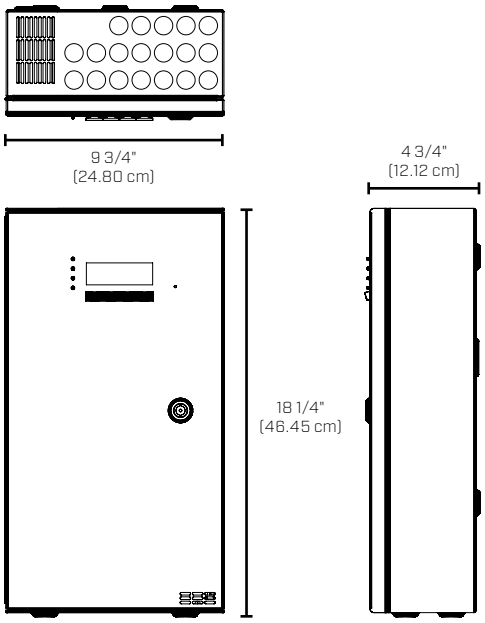
MODEL RATINGS[1]

	60MIN	120MIN	180MIN	720MIN
NUCLEUS-6	144 W	96 W	60 W	24 W
NUCLEUS-6 + NUC-6-BATT[2]	180 W	180 W	180 W	72 W

[1] Consult your representative for more details
[2] Power supply limited to 180 W

DIMENSIONS

NUCLEUS



NUCLEUS TRANSFORMER

