Product Overview

The **LF-PROG** is a professional-grade handheld configuration tool designed for the digital addressing and parameter management of intelligent lighting networks. It utilizes a proprietary two-wire protocol that integrates power delivery and bi-directional data communication over a non-polarized physical layer, ensuring high reliability and ease of use in the field.

1. Technical Specifications

Category	Parameter	Specification
Identification	**Model Number**	**LF-PROG**
Physical Interface	Connection Terminals	Dual-channel L1 / L2
	Wiring Type	Two-wire, Non-polarized (Bi-directional)
Logic & Control	Addressable ID Range	001 — 255
	Floor Mapping Range	-127 to +127
	Internal Session Counter	0 — 16,383 Units
	Data Verification	Visual Feedback (SUCCESS / FAULT)
Power Management	Interface Voltage	Integrated Power/Communication Line
	Idle Timeout (Main)	30 Seconds (Auto-Shutdown)
	Idle Timeout (Menu)	120 Seconds (Auto-Shutdown)
Mechanical	Form Factor	Handheld with Integrated Numeric Keypad

2. Parameter Configurations (Lamp Types)

The LF-PROG supports eight distinct lighting fixture profiles. Each profile assigns a specific logic type to the target hardware:

Code	Profile Category	Application Description
0	Indicator	Low-power status indicators and pilot signals.
1	Downlight	Standard recessed commercial/residential lighting.
2	Emergency Lamp	Specialized safety and battery-backup fixtures.
3	Induction Lamp	Motion or sensor-triggered lighting units.
4	Double Head Lamp	Dual-beam / multi-directional safety fixtures.
5	Signal Lamp	Warning, navigational, or strobe lighting.
6	Streetlight	High-output infrastructure/outdoor lighting.
7	AC Detector	Current-sensing and voltage detection modules.

3. Communication Features

3.1 Data Modes

- **Incremental Addressing:** Automated ID+1 logic for rapid sequential batch programming.
- **Static Addressing:** Individual fixed-ID programming for single-unit maintenance or replacement.
- **Bi-directional Registry:** Capability to read current internal fixture settings (ID, Type, Floor) directly from the communication bus.

3.2 Error Handling

The device performs real-time CRC-style verification of data packets. Failures in the physical layer (wiring) or logical layer (handshake) trigger a FAULT status, while verified writes trigger SUCCESS.

4. Hardware Interface Summary

- **Display:** Monochrome high-contrast LCD with real-time status icons.
- **Input:** 20-button tactile interface including full numeric keypad (0-9) and functional navigation (Power, Back, Confirm, Up, Down).
- **Port Compatibility:** Universal A/B lead connection for field-flexible wiring; indifferent to polarity.

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