

**USER MANUAL: LF-PROG SYSTEM ENCODER**
**Model:** LF-PROG

**Version:** 2.0

**Document Type:** Technical & Operational Guide

## 1. PRODUCT OVERVIEW

The **LF-PROG System Encoder** is a high-performance, handheld digital interface designed for the precise addressing and configuration of intelligent lighting networks. Engineered for reliability in industrial environments, the LF-PROG supports a wide range of fixture profiles and features a robust, non-polarized communication protocol for error-free installation.

## 2. TECHNICAL SPECIFICATIONS

Specification	Details
Model Number	LF-PROG
Communication Port	Two-wire Interface (L1 / L2)
Wiring Protocol	Power & Data Integrated, Non-Polarized
Addressing Range	001 — 255 (Supports 3-digit manual entry)
Floor Mapping	-127 to +127
Session Tracking	0 — 16,383 Units (Internal Counter)
Energy Management	Auto-Shutdown (Main: 30s / Active Menu: 120s)

## 3. HARDWARE INTERFACE DESCRIPTION

### 3.1 Control Panel

- **POWER:** System initialization and activation.
- **CONFIRM:** Menu entry and data transmission execution.
- **BACK:** Navigation exit and command cancellation.
- **UP / DOWN:** Selection scrolling and profile navigation.
- **NUMERIC KEYPAD:** High-speed data entry for ID, Floor, and Date parameters.

### 3.2 Connectivity

- **L1 / L2 Terminals:** The encoder utilizes a non-polarity terminal block. Physical connection between the encoder and the fixture is orientation-independent, eliminating the risk of reverse-polarity failure.

## 4. OPERATIONAL PROCEDURES

### 4.1 Device Initialization & Connection

1. **Wiring:** Connect the fixture's primary communication leads to terminals **L1** and **L2**.
2. **Power:** Press the **POWER** key. The system will load the main interface.

### 4.2 Configuration Parameters (SET ID Menu)

Access this menu to define the target parameters before transmission:

- **ID Entry:** Input a 3-digit numerical value (e.g., 015 for Address 15).

- **Type Selection:** Assign a fixture profile (Code 0-7) as defined in Section 5.
- **Counter:** Configure or reset the daily session counter for workflow tracking.

#### 4.3 Data Transmission (SEND DATA Menu)

- **High-Volume Mode (SEND AND +1):** Press and hold the **CONFIRM** key. The system transmits current parameters and automatically increments the ID value by 1 upon a successful handshake.
- **Manual Mode (SEND):** Transmits static parameters for individual fixture servicing.
- **Verification:** The interface will display **SUCCESS** upon confirmed transmission or **FAULT** if communication is interrupted.

#### 4.4 Advanced Management (READ & SET FLOOR)

1. **Audit (READ DATA):** Select this to extract current internal registry data from a connected fixture.
2. **Floor Assignment:** After performing a "READ" operation, enter the **SET FLOOR** menu to assign physical location mapping (Range: -127 to +127). Press **CONFIRM** to save.

## 5. FIXTURE PROFILE DIRECTORY

Code	Profile Category	Application
0	Indicator	Status and Pilot Signaling
1	Downlight	General Architectural Lighting
2	Emergency Lamp	Life Safety & Backup Systems
3	Induction Lamp	Motion-Activated Fixtures
4	Double Head Lamp	High-Lumen Safety Spotlights
5	Signal Lamp	Navigational & Warning Systems
6	Streetlight	Infrastructure & Outdoor Lighting
7	AC Detector	Current Sensing & Monitoring Units

## 6. TROUBLESHOOTING & MAINTENANCE

- **Communication Fault:** Ensure terminal leads are stripped correctly and secured in L1/L2. Verify the fixture is in a programmable state.
- **Data Desync:** If the auto-increment fails, reset the ID manually in the **SET ID** menu.
- **System Timeout:** The device is programmed to shut down automatically to preserve battery. Resume work by pressing the **POWER** button.

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