

Control Panel for Addressable MOEFA and Fire Emergency lighting System

Model-AL-PATBLG-CP-101L

Features:

- ✓ Interactive 7" inch display with touch screen control
- ✓ Two-wire system for power, data, forward and reverse audio signaling.
- ✓ Power supply management system.
- ✓ Automated text to speech for voice messaging without use of pre-recorded voice file.
- ✓ Real time indication on smoke and temperature on protected area.
- ✓ Digital audio communication without use of conventional audio amplifier.
- ✓ Automated Integrity check on wiring, individual devices each and every devices used in a system.
- ✓ Minimal hardware, to reduce failure rate, and plugin modules for easy service.
- ✓ Onsite configuration can be done directly through panel display.
- ✓ Networking features.
- ✓ Password security.
- ✓ Event logging system.
- ✓ Short circuit Protection.



Overview:

This control panel serves as a centralized unit, providing a wide range of functionalities as required to meet NBC 2016 including :

1. Addressable Manually Operated Electronic Fire Alarm System (MOEFA) which includes Public Address system and Talkback system.
2. Automatic Fire Emergency Lighting system.
3. Voice Messaging system for Fire alarm, Fire drill and Fire evacuation system.

The Integrated system comprises a panel that efficiently monitors connected devices and provides clear information via a user-friendly touch screen. It provides clear information and indication via speakers, facilitating appropriate actions. Notably, the control panels innovative design allows it to connect and to control all external devices, using just two wires for Power, data, Forward and Reverse Audio signaling. This ground-breaking feature significantly reduces cable requirements.

The control panel features a dedicated lighting control page, empowering users to activate individual lights, lights within specific zones, or all lights seamlessly. This enhances adaptability and ease of use during emergency situations. Each light is uniquely addressed and operates via a loop-powered system, ensuring precise control. These lights can be configured to activate automatically in response to fire alarm triggers. Customization options accommodate site-specific needs, including fire zones and designated escape routes.

To enhance reliability, the control panel incorporates minimal electronic hardware, hence minimizing the chances of failure.

Additionally, the electronic boards are plug-in type, ensuring easy replacement if needed.

A remarkable feature of this control panel is its automatic generation of voice alarms based on device and zone locations entered. This eliminates the need for prerecording and storing audio files, streamlining the system's efficiency.

Regarding power supply, the control panel operates on 24 volts DC. It also includes a built-in 230 volts to 24 volts SMPS (Switched-Mode Power Supply) and a battery charger provision for batteries. Users have the flexibility to choose between the built-in power supply or connect it to an external 24-volt supply, as required.

Loop current capacity: Each loop can output up to 1.2 amps and comprises both low-power and high-power devices. The User shall calculate and limit device based on this power limit.

Limitations of Loop addressing: Devices come with factory-set software addresses based on the order specifications. If there is a need for address modifications, this can be done using the control panel.

The control panel has the capability to detect addresses up to 999.

However, it's important to note that this control panel uses high current and power devices like speakers and lights. Therefore, careful consideration must be given to power requirements.

The loop scanning speed of this system is ten devices per second. According to industry standards, alarms should be triggered within ten seconds.

Consequently, the number of input devices should be limited to a maximum of 100 to ensure timely response and compliance with this standard.

Expanding Loop Capability:

Initially, the primary control panel is equipped with a single loop.

Incorporating Loop Cards:

When the system necessitates a greater number of devices, exceeding 80 units, we have the option to introduce loop expansion boards.

Each loop expansion board can accommodate up to 3 loops. These loop cards are plug-and-play modules, and depending on the specific site requirements, multiple loop cards can be added to extend the panel's capacity, allowing for a maximum of 4 loops.

For scenarios requiring more than 4 loops, adjustments to the enclosure size and power supply unit become necessary. This

will expand the panel's capacity to support up to 7 loops.

Integrating Power Booster Cards:

All our system devices operate on loop power, and it's crucial to account for substantial power requirements. The primary control panel features a single loop and a single power booster module capable of supplying 1.2 Amps on the loop.

If the loop demands more than 1.2 amps, additional power booster modules can be integrated based on site conditions.

Mechanical Specifications:

Enclosure Dimensions (H x W x D)	550x380x125 mm
Front door Dimensions (H x W x D)	560x393x11 mm
Housing Material	16 Gauge Cold Rolled sheet
Black box	Black Matte
Front door	Texture Red

Electrical Specifications:

Primary Power	220V±10 % AC
Standby Power	This control panel has provision to place 12Volts , 18Ah Battery - 2nos, with built-in charger for backup. The user shall calculate backup Power requirement and choose suitable capacity Battery.
No. of Loop	1
Maximum Signal Loop Current	1.2 Ampere
Loop Resistance	40 ohms
Wiring	2 core cable
Wiring Type	Class A / Class B Style