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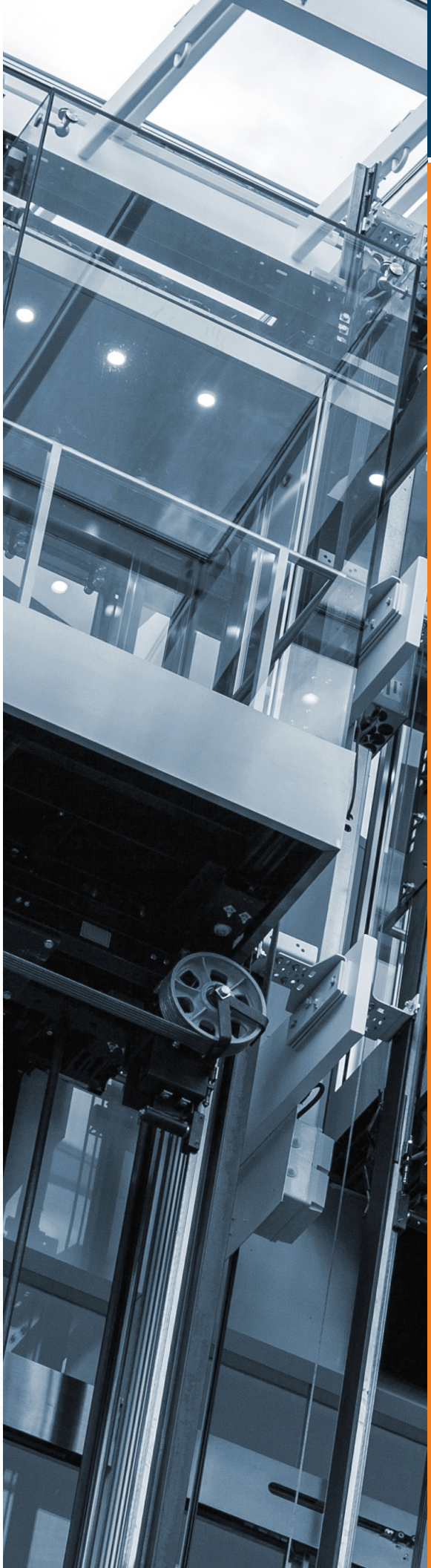
Elevator Communications Regulatory Compliance

When considering solutions to replace legacy POTS lines connected to elevator emergency phones, it's important the replacements comply with elevator safety code regulations. Ooma AirDial™ is built with the applicable guidelines of the American Society of Mechanical Engineers (ASME) in mind.



Introduction

Ooma AirDial is a full-feature drop-in POTS line replacement solution for providing phone service to elevator phones, alarm panels, PBXs, and other types of communications systems that rely on the public switched telephone network (PSTN). It's a turnkey solution that is easy to install, remotely managed, and compatible with legacy line requirements from Competitive Local Exchange Carriers (CLECs) or Incumbent Local Exchange Carriers (ILECs).

For this specific use case, Ooma AirDial is built with the applicable guidelines from ASME's A17.1 code for communications equipment and services used with elevators in mind. Ooma AirDial is well-suited for use with elevator call boxes. Dual Ethernet WAN and 4G LTE wireless network connectivity operates in active-active redundant configurations with automatic failover to help ensure highly reliable and secure communications. Ports have the capacity to power elevator call boxes as a primary or secondary power source that significantly improves the reliability of elevator communications during power outages. The internal battery powers the Ooma AirDial device and elevator call boxes for at least 8 hours during a power outage. The Remote Device Management (RDM) cloud-based portal is easy to use and provides role-based access capabilities while empowering account owners to delegate monitoring responsibilities. Users access the Remote Device Management portal using a web browser and a simple URL without the need for specialized network settings. From the Remote Device Management portal, users can easily arrange to receive automated notification emails and text alerts for key events.

Ooma AirDial removes all guesswork of blinking LEDs by keeping users and administrators informed of operational status on the unit's LCD display.

How Ooma AirDial Functions

Ooma AirDial is a direct Telecommunications Network Customer Premises Equipment (CPE) device that functions similarly to a Local Exchange Carrier Central Office (LEC) line provisioned as a dial tone pathway (POTS line). Ooma AirDial is network equipment that acts as a pathway for accessing the PSTN. Ooma AirDial is wired on the network side of the Standard Network Interface (SNI) and is considered network equipment. Ooma AirDial provides an alternative to copper wiring between the customer location and the LEC central office. Ooma AirDial provides an electrical signature to the LEC central office dial tone. Ooma AirDial can use internet, wide area network (WAN), and cellular (LTE) data network routing options.

Elevator Car Emergency Signaling and Communications

Ooma AirDial is a direct Telecommunications Network Customer Premises Equipment (CPE) device that functions similarly to a Local Exchange Carrier Central Office (LEC) line provisioned as a dial tone pathway (POTS line). Ooma AirDial is network equipment that acts as a pathway for accessing the PSTN. Ooma AirDial is wired on the network side of the Standard Network Interface (SNI) and is considered network equipment. Ooma AirDial provides an alternative to copper wiring between the customer location and the LEC central office. Ooma AirDial provides an electrical signature to the LEC central office dial tone. Ooma AirDial can use internet, wide area network (WAN), and cellular (LTE) data network routing options.

Compliance Checklist

Two-Way Voice Communication

ASME Section A17.1, 2.27.1.1.3 dictates two-way voice communication must provide authorized personnel with building location, the elevator number (or location) and a request for assistance.

Ooma AirDial provides physical address information as required by National E-911 alerting requirements. Each Ooma AirDial unit is provisioned at installation and can be reprogrammed if the unit is relocated. Any movement of the device requires notification to Ooma prior to the move. Customers are solely responsible for ensuring address accuracy and Ooma shall not be liable for any action or inaction arising out of customers' failure to update their physical location.

ASME Section A17.1, 2.27.1.1.3 also requires that after the call is established and the acknowledgement is sent to the elevator, two-way voice communication must be initiated between the elevator and authorized personnel. Ooma AirDial maintains clear and persistent two-way voice communications in all operable conditions for the duration of calls.

AMSE Section A17.1, 2.17.1.1.4 prescribes that, for elevators traveling 60 feet or more, two-way voice communication must be provided for emergency personnel within the building to communicate with each elevator. Ooma AirDial enables emergency personnel to initiate calls to individual elevators by dialing the appropriate 10-digit telephone number from any PSTN accessible device or an exterior ring-down circuit connected to an emergency call box.

Line Power

Ooma AirDial supplies power to equipment that rely on phone lines as their primary or secondary power source including elevator call boxes. Ooma AirDial supplies up to 28mA of current while maintaining the necessary 5-7 voltage on the line when off-hook.

Backup Power Supply

ASME Section A17.1, 2.27.1.1.5. requires two-way voice communication, when not powered by telephone line power, must transfer to an alternate power supply after normal power fails. Alternate power must operate the visual indicator and two-way voice communication for at least 4 hours.

Ooma AirDial includes an integrated backup battery that supplies more than eight hours of both standby and active device usage. Users and administrators can monitor realtime battery status through the Remote Device Management (RDM) portal, including charge level and whether the battery is in use or not. Users can receive automatic alerts, via email or SMS text message, for events related to the battery. These events include when the Ooma AirDial device switches from AC to battery power and when the battery charge level drops below 10%.

Ooma AirDial fulfills UL 2054 requirements for portable primary (non-rechargeable) and secondary (rechargeable) batteries for use as power sources in products. These requirements are intended to reduce the risk of fire or explosion when batteries are used in a product.

Ooma AirDial backup batteries are certified to comply with UN 38.3 requirements. The UN 38.3 certification tests include environmental, mechanical and electrical stresses to ensure lithium batteries are durable and reliable to be transported via air, sea or road.

Ooma AirDial also conforms to UL 62368-1 which is applicable to the safety of electrical and electronic equipment with a rated voltage not exceeding 600 volts.

Conclusion

In its design of Ooma AirDial, Ooma has considered applicable regulations related to POTS line replacement in elevator communications, including two-way communications, line power and backup power.

The Ooma team and its partners look forward to helping organizations to replace expensive legacy POTS lines with Ooma AirDial to enhance the value of systems that require analog phone connections.

Learn more at zayo.com

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