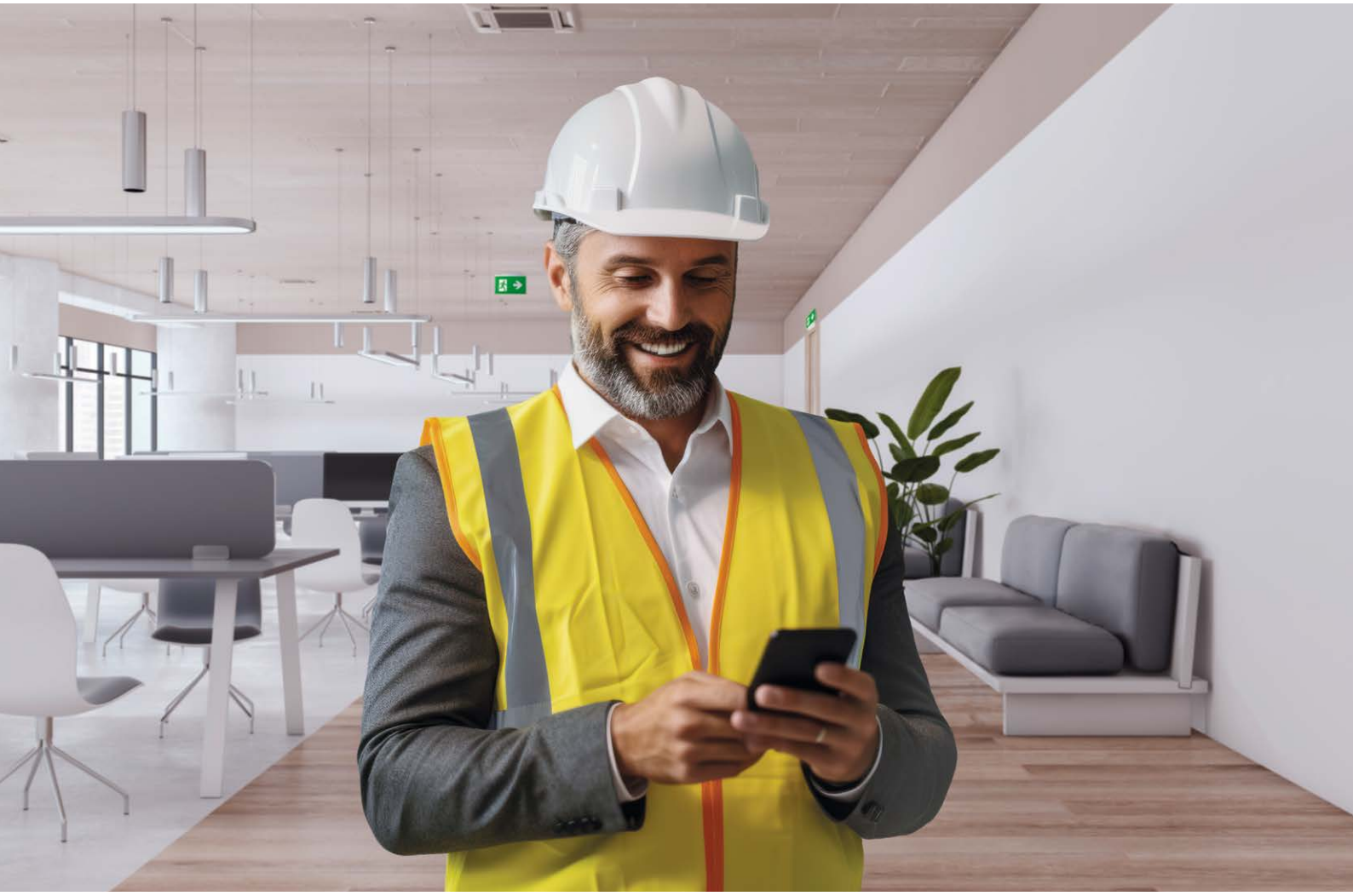
ZEMPER

SmartZ®

Leading monitoring wireless systems



Easy, Powerful, Smart

Unmatched Performance

Peerless Simplicity

Unlimited Capacity

WHY SMARTZ®

Maximum Warranties

WARRANTY 5 YEAR

EVOLO WARRANTY 10 YEAR

The world's most advanced emergency lighting control system

SmartZ® represents our commitment to innovation by simplifying emergency lighting processes, making design, installation, commissioning, testing, and maintenance **quicker and more cost-effective**. As the **second generation of Zemper's wireless systems**, it showcases our leadership in advancing wireless technology within the industry since 2010.

SmartZ® has been meticulously developed through years of engineering and in collaboration with top expert in IoT and adaptive mesh topology. This innovative solution results from the work of our dedicated team of 20 engineers, who focus exclusively on emergency lighting. Their specialized expertise drives the delivery of unparalleled simplicity and smarter solutions.

Cost-effective

Fast installation, fast commissioning.

Experience matters

2nd generation of Emergency Lighting Wireless Systems.

Secure buildings

Ensuring the highest safety for building occupants while easily guaranteeing legislative requirements.

Simplify the control and maintenance of your emergency lighting

Regular monitoring and testing of emergency lighting are essential to safeguard the lives of building occupants during emergencies.

All industrial, commercial, and public buildings need regular emergency lighting inspections. Meeting legislative requirements can be labor-intensive, especially for multiple facilities. SmartZ® is designed to simplify this process, being the push toward **smarter, more efficient and secure buildings.**

SMARTZ® BENEFITS

Easy installation

Unlimited capacity

Self-healing mesh

No interference

Multi-site management

Real-time status

Robust security

Sustainable

Lighting Smartization

Easy installation

Automatic luminaire recognition and no frecuency arrangement needed: no wires, no couplers, no data point, no additional software, no intermediate routers, no licenses...
Every luminaire is emitting and receiving signals creating a Dynamic mesh. Reduce drastically labor costs for emergency lighting installation.
SmartZ® can be **integrated easily with other** wired and or wireless systems.

Multi-site management

The user-friendly portal simplifies **maintenance across multiple facilities**, allowing you to view each location and inspect individual luminaires or groups.

Unlimited capacity

No limits on the number of total devices since the mesh gets stronger and more resilient the more devices it contains, meaning that you can add as many devices as the project needs.

Real-time status

SmartZ® reports faults in **real-time**, sending **alerts** to the designated person via email or the user portal. Easy access from your mobile, laptop or tablet.

Self-healing mesh

Each luminaire automatically identifies its neighbouring devices to form the network. If a device is removed or malfunctions, the **network will reorganize itself and find the most efficient path.**

Robust security

All messages in the wireless mesh are **encrypted and and authenticated** using the industry-standard AES128, which makes the message only detectable by the Emergency Luminaries.

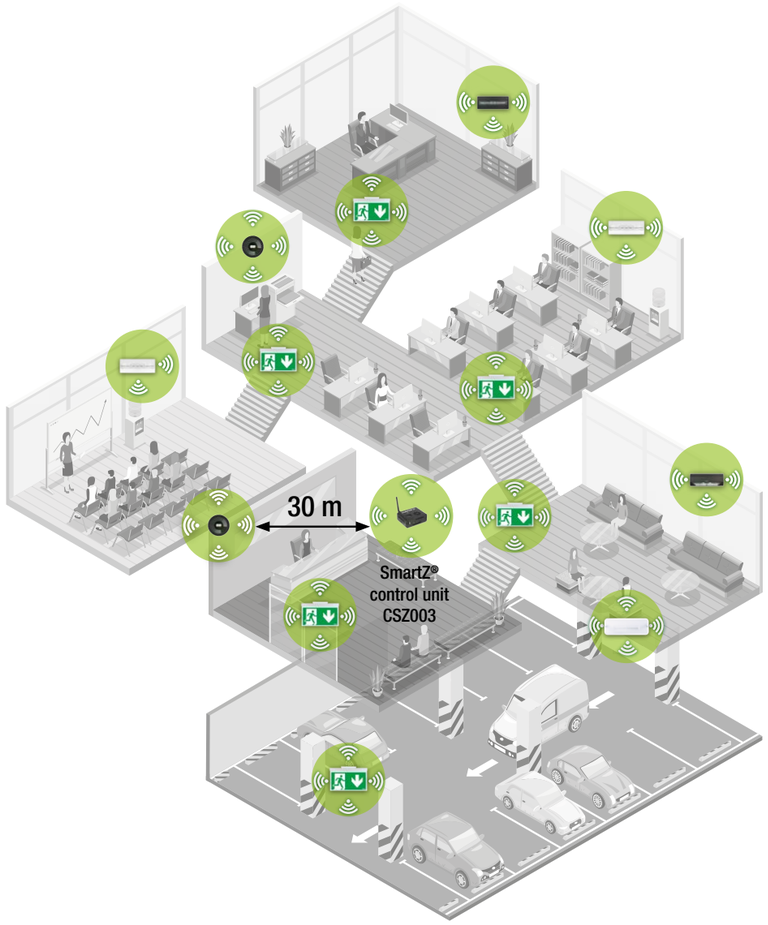
No interference

SmartZ® prevents interference by sensing channels before transmitting to avoid collisions and by **dynamically switching between 40 channels**, guaranteeing no interference with other wireless systems.

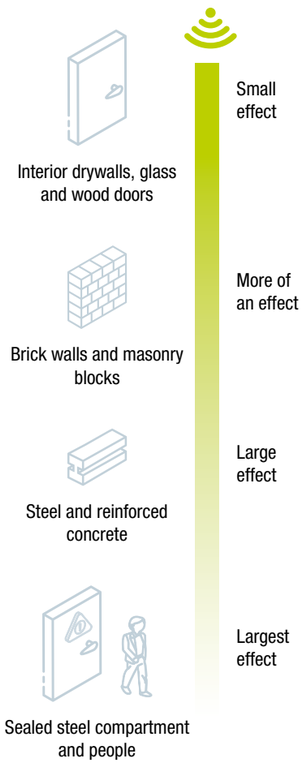
Sustainable

Reduction of installation and maintenance **foot print**. SmartZ® drastically reduces the resources needed.

SMARTZ® CHARACTERISTICS



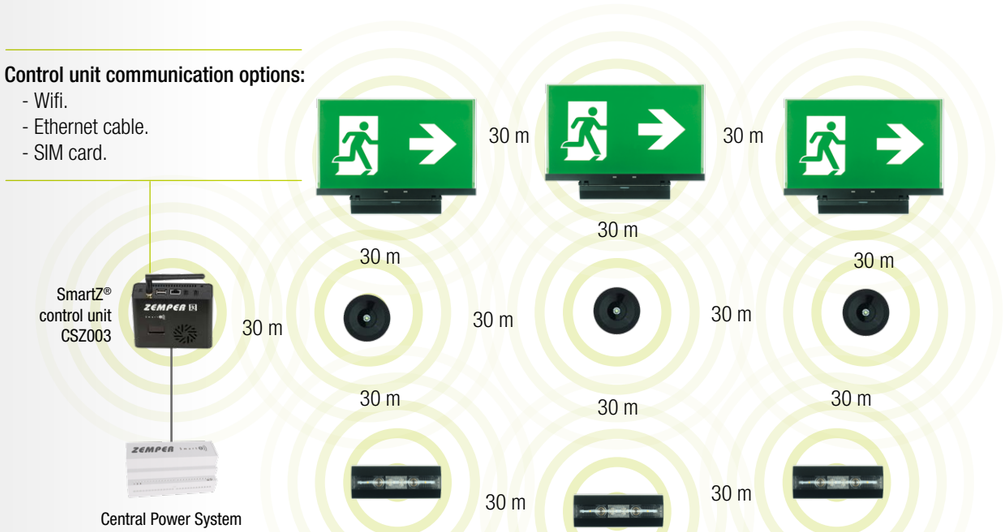
signal behaviour



True Wireless system: Unlimited luminaires per control unit

Maximum performance Unparalleled simplicity

Control unit communication options:
- Wifi.
- Ethernet cable.
- SIM card.



Technical Insight*

Fittings per system	Unlimited.
Fittings per control unit	Unlimited.
Spacing	Up to 30 m between luminaires and with control unit.*
Concrete penetration	SmartZ® penetrates vertical and horizontal concrete structures.
Decentralised operation	Luminaires are smart to make decisions. Each fitting has the capability to act as a router as required, facilitating data transmission and reception within the network without centralized control. Multiple connection options ensure uninterrupted operation, no single device failure disrupts the network, making it entirely versatile for future needs.
Network commissioning	The RF network autonomously self-configures, significantly cutting down site commissioning time - Zemper ensures rapid deployment of a fully operational network.
No interference	Automatic and dinamyc interchange between the 40 channels guarantee no collisions in the communication.
Self-healing mesh	Each luminaire automatically identifies its neighbouring devices to form the network. If a device is removed or malfunctions, the network will reorganize itself and find the most efficient path. This dynamic self-managed mesh minimizes commissioning and system time while maximizing efficiency of the overall network.
Ultra fast data	High-speed data network enabling real-time analytics and response.
Security	SmartZ® sets the gold standard in security ensuring three levels of RF network security (Integrity, Confidentiality and Authenticity). SmartZ® fittings employ the most advanced network security protocols to ensure they communicate exclusively within their designated site, without interacting with any devices outside the authorized group. All messages in the wireless mesh are encrypted and and authenticated using the industry-standard AES128, which makes the message only detectable by the Emergency Luminaries.
Compatibility	Supports wired and wireless' Zemper previous systems
Integration with BMS	The control unit allows simple communication with other system hubs and integration into BMS (Building Management Systems). Communication with MODBUS and BACnet protocols are supported.

* The system has been validated in various environments where the average connectivity range is 30 metres. In buildings with minimal attenuation, the range is greater, and a reduction in range has also been observed when there is a significant presence of metallic elements. The connectivity range should be addressed for each project to determine the appropriate distance.

SMARTZ® INTERFACE

Designed for simplicity

Intuitive, clean and simple web-based interface.

SmartZ® Portal can be easily accessed online **from any device** (mobile, tablet & laptop,…) with any browser.

Easy to manage multiple facilities, areas and/or groups. SmartZ® fully adjusts to the specific needs of your building, enabling the creation of independent groups as required. With SmartZ®, there are no fixed zones or circuits; it's entirely flexible and versatile, and easily managed through the portal.

Interactive 2D floor plan layout showing emergency lighting positioning.

Users can **schedule functional and duration test**. All information is accessible in real-time through the portal and user can create custom reports or alerts to be automatically emailed.

Test reports provide compliance with legal requirements. **Maintenance logbook**.

Easily updated or expanded. OTA software update. OTA (On The Air) technology allows firmware upgrades without the need of physical connections. Excellent for devices that are in remote or hard-to-reach locations.

Tests happening in the following days.

Next programmed test:
· Autonomy:
12 / 02 / 2024
· Functional:
25 / 12 / 2023

Last carried out maintenance.

Last maintenance:
·25 / 01 /24 >
Luminaire 0206 new installation.
· 26 / 01 / 24 >
Luminaire 0112: battery change.
· 26 / 01 / 24 >
Luminaire 0315 replaced

Luminaires status

	Description	Quantity
●	Communication OK Light OFF NO ERROR	900
●	Communication OK Light ON NO ERROR	0
●	Communication NO OK	0

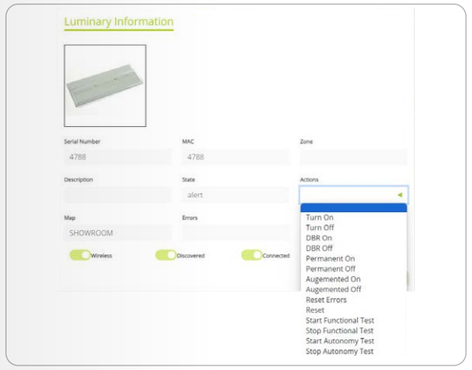
Luminaires status

	Description	Quantity
●	Communication OK Light OFF WITH ERROR	50
●	Communication OK Light ON WITH ERROR	50

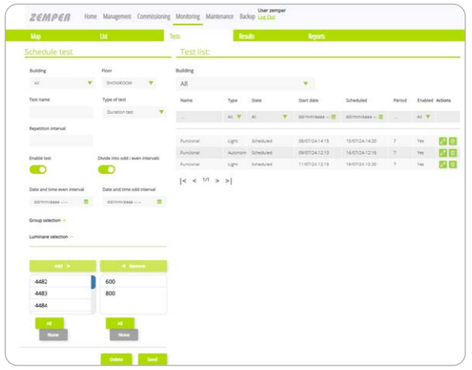
Facility plans.

A user-friendly dashboard is provided for each building, presenting a luminaires status at a glance, where for more detail, just need to hover over.

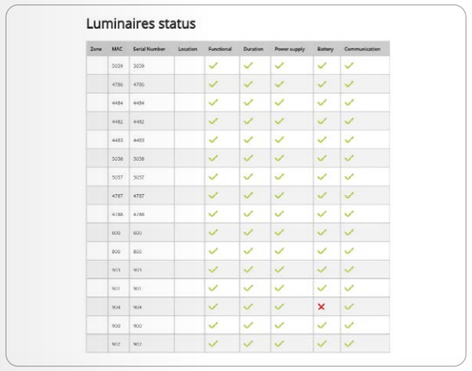
Issue commands to the luminaires individually or collectively.



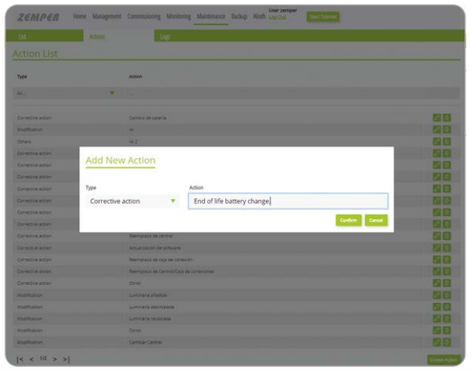
Scheduling of functional and duration test.



Status report.



Maintenance log.



Easy way to find the luminaires on the map by pressing a button.

SMARTZ®: GOLD STANDARD SECURITY

Integrity (untouched)

Each message includes an Integrity Code, ensuring that the message was not interfered during transmission.

Confidentiality (unlistenable)

Each message is encrypted using AES128 CTR standard with a unique message-specific nonce, ensuring that intercepted messages cannot be deciphered.

Authenticity (unbreachable access)

Network signalling messages are encrypted and augmented with a code. Nodes lacking the correct encryption and key pair are unable to join the network, ensuring the integrity of received data. Additionally, there is a pairing bottom to open and close the mesh avoiding exterior connections.

Security at the Control Unit and Web Server

Industry standards:
· VPN access
· SSH for file transfer. The Secure Shell network protocol provides a secure way to access and manage remote computers.
· Secure Socket Layer encryption for MQTT (Message Queuing Telemetry Transport protocol), ensuring data privacy and integrity over the network.

SMARTZ® ULTRA-RELIABLE

No single point of failure

Any device can act as a router, enabling multiple potential connections. Gateways are fully shared-if one fails, another maintains the connection.

Adaptive frequency agility

SmartZ® ensures uninterrupted performance by automatically switching channels as required. It provides **frequency agility across 40 channels** with short on-air times. System communication uses ultra reinforced radio frequency band.
· Listen Before Talk (LBT)
· Adaptive transmit power
· Localized multi-channel interference avoidance

Unrivalled expertise

SmartZ® is the culmination of years of engineering development, being our **2nd wireless generation system** and including collaboration with a **global leader in IoT and adaptive multi-hop mesh topology**, trusted across many industries.

INTEGRATION WITH OTHER SYSTEMS

DALI-2 system

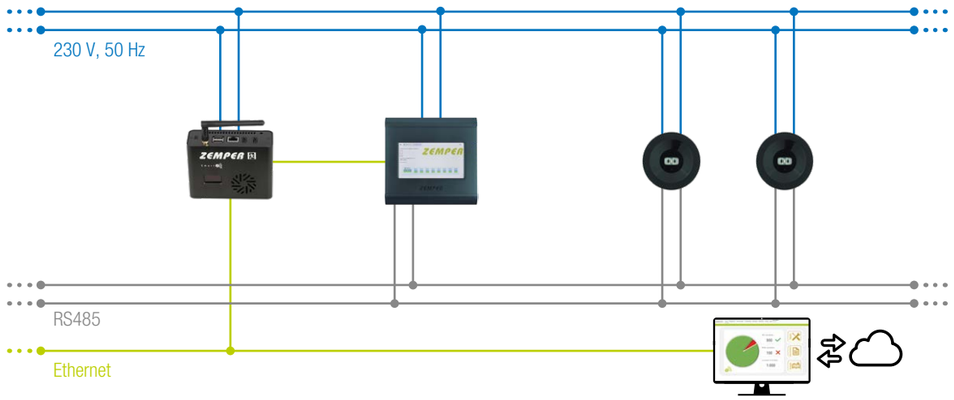
SmartZ® cable & previous Zemper's wireless systems

Alioth adaptative & dynamic emergency lighting system

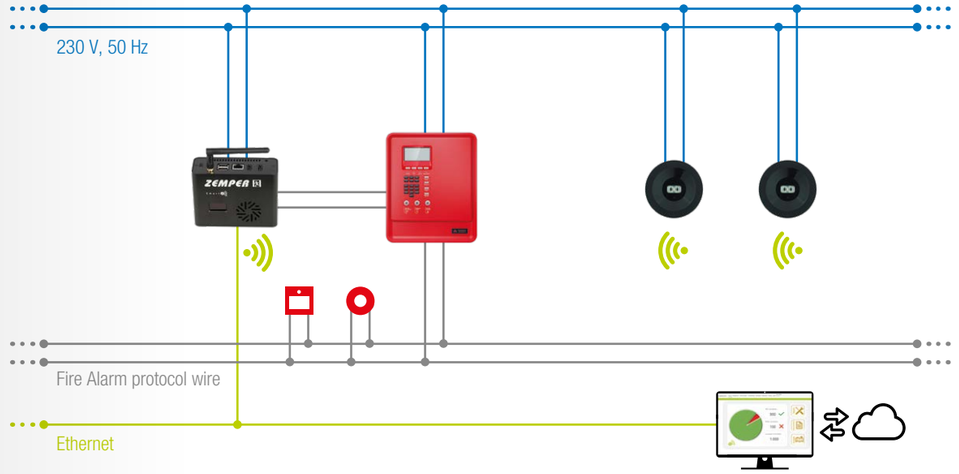
Fire protection system

SmartZ® cable for protected environments where wireless solutions cannot be deployed

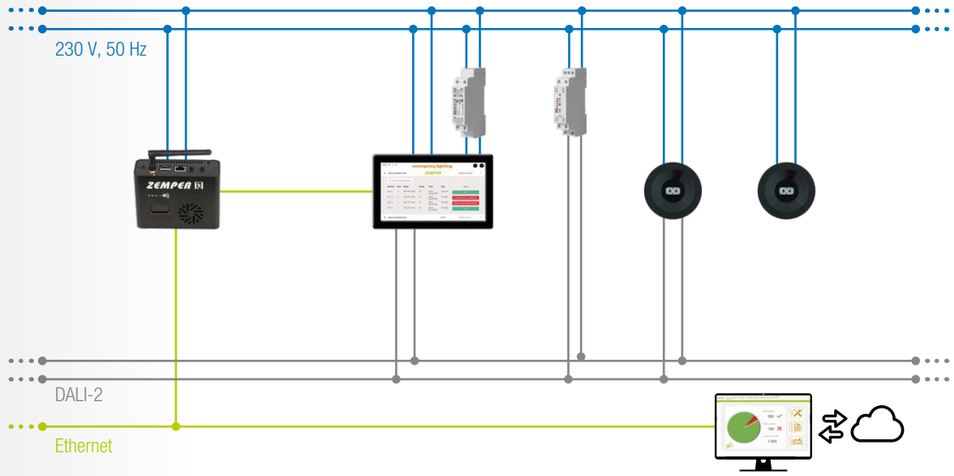
SmartZ® cable provides the solution for rooms or areas that cannot use an RF network due to their need for shielding from RF interference or a requirement for specific luminaires. Examples include hospital MRI rooms, high-security facilities, emergency services control rooms, and hazardous area lighting.



Integration with fire protection systems



Integration with DALI-2 system



REDUCTION OF CARBON FOOTPRINT

Reduction of installation and maintenance footprint.

SmartZ® contributes to lowering greenhouse gases emissions and developing environments that enhance the well-being of people in both the short and long terms:

- The simple and fast installation, commissioning and maintenance ensure less people are required on site, lower energy consumption and less transport pollution.
- Eliminating the need for additional devices or cables helps conserve natural resources by reducing material consumption and minimising waste at the end of their lifecycle.
- Reports are easy to understand and share, no need for printing.
- The housing of SmartZ® control unit is made of aluminium. 100% recyclable.
- Ecodesign and energy consumption are always in our R&D team's minds. SmartZ® control unit has been designed as small and compact as possible.
- SmartZ® product identification has been printed using a laser on the control unit itself to avoid paper or plastic stickers.
- 100% recycled and recyclable packing.
- SmartZ® makes your building safer, saving lives in case of an emergency, creating a better world. Corporate Social Responsibility is also a big pillar of our Sustainability commitment with society.
- Our EVO10 range, our most endurable and sustainable range, with 10 year warranty is also available with SmartZ®.

Download the EVO10 range brochure

Sustainability is more than just a buzzword for Zemper.
It's leading our entire business strategy.

SMARTZ®: THE BEST CHOICE

Profound expertise in wireless emergency lighting systems

Experience matters. We pioneers 15 years ago and SmarZ® is the 2nd generation of Zemper Wireless systems. Based on this bagage we offer advanced wireless solutions. Commitment to excellence ensure superior performance and reliability.

Investment for life with the smartest system

An investment for life, SmartZ® system is designed to be compatible with previous generations, ensuring **easy adaptability for future requirements** such as building expansions and refurbishments.

Unlimited capacity

Unlimited fittings per system.

Unbreakable Communication

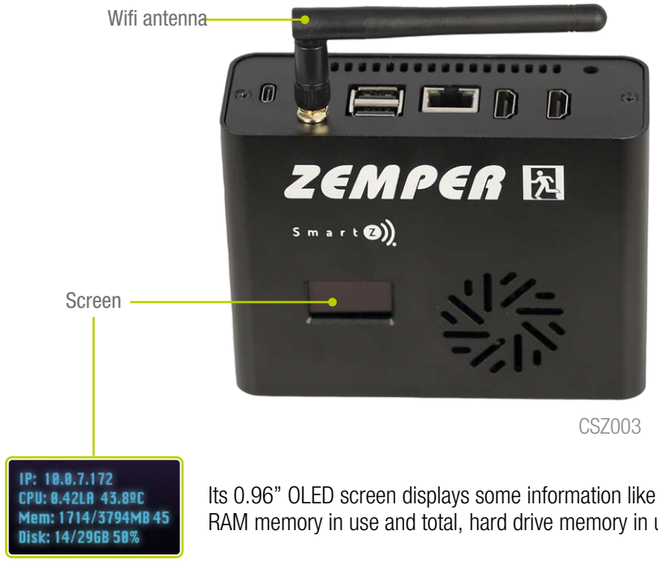
The most robust **communication technology** and the most reliable dynamic **mesh on the market.**

Unmatched simplicity

An exceptionally easy-to-use system that **simplifies the lives of installers and maintainers,** while ensuring the safety of building occupants during emergencies.

Making lives easier and safer
with lighting smartization.

CONTROL UNIT



Its 0.96” OLED screen displays some information like IP address, CPU temperature, RAM memory in use and total, hard drive memory in use and total.

SPECIFICATION

Power supply: 5 Vdc - USB power unit (supplied)

Consumption: 3 W

Battery backup

Interfaces: 1 x RJ45 (Ethernet)
3 x USB 2.0
2 x HDMI
1 x USB C Power

Working temperature: 0 ºC - 40 ºC

Protection class: III

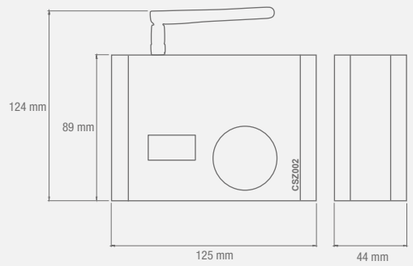
Dimensions (mm):
89 (without antenna) x 125 x 44

Weight: 400 g

Mounting: Wall / DIN Rail

Accessories: · Repeaters

DIMENSIONS (mm)



Description	Part number
SmartZ® control unit	CSZ003

ONGOING CERTIFICATIONS

CENTRAL POWER SYSTEM
(included with control unit)

6.4V 1.5Ah LFP battery maintains the power supply to the control unit for 2 hours in the absence of mains power.

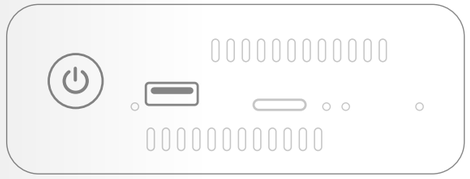
SIGNAL BOOSTER BSZ01
IP42 / IK 04

6.4V 1.5Ah LFP battery maintains the power supply to the control unit for 2 hours in the absence of mains power. Installation with mounting plate.

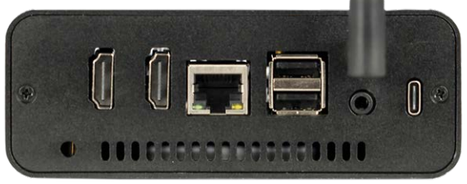
Possibility of installation in:
Ceiling/Wall surface.
Recessed ceiling (with installation accessory)

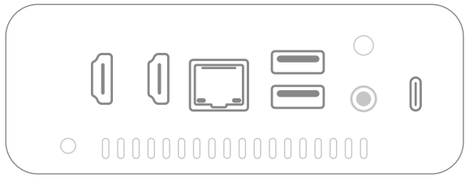
Possibility of connection with:
Recessed wiring.
Surface tube wiring (max. M20)

- Connectivity via Ethernet, Wifi or SIM card.
- Installation plans can be uploaded.
- Testing sequences, for example annual duration tests, are fully configurable.
- Graphical user interface shows real time status of devices.
- Log of events and exportable test results.
- Email sending of configurable fault list.
- Multiple language options.
- Operating frequency: 2.4 GHz.



Power button 1 x USB2.0





Ethernet 2 x USB2.0 USB-C 5V Power In

WiFi Installation

Ethernet Installation

UPS Ethernet Installation

SIM Card Installation


Smart

Made in EU

Entirely designed and manufactured in **Spain**

The Zemper Way to a Better World

We use recycled paper in the production of our catalogues, thus contributing to the conservation of forests and biodiversity. This paper requires up to 50% less energy and 90% less water, which significantly reduces environmental impact, reduces carbon dioxide emissions and promotes the circular economy. The ink we use is free of mineral oils, cobalt salts and VOCs (volatile organic compounds) so we contribute to limiting the environmental impact. We make more sustainable decisions and help protect our Planet.

CSZEN00-1224-04

ZEMPER

THE EMERGENCY LIGHTING SPECIALIST

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