5eş A

EMERGENCY LIGHTING MONITORING SYSTEMS

elco
emergency lighting control

WIRED EMERGENCY LIGTING MONITORING SYSTEM

ELCO – OVERVIEW

Beş A

Beş A and DALI

Digital Addressable Lighting Interface is an open communication protocol developed by leading manufacturers in the lighting industry and is defined by international EN IEC 62386 technical standards. Originally developed for the control of normal lighting, the DALI protocol now covers all requirements for emergency lighting products. In addition to providing flexibility and convenience for system designers, installation companies and end users, it provides a reliable and stable communication platform for the monitoring of emergency lighting products in accordance with "Regulation on Fire Protection of Buildings" and "EN 50172: Emergency escape lighting systems".

Beş A, an active associate member of the DALI organization, designs and produces DALI-compatible emergency lighting products in-house and carries out all approval tests.

In our R&D laboratory, original circuit designs with embedded software have been made for DALI compatible emergency lighting units and emergency lighting luminaires. The DALI product family, which we mass produce in our facilities, is being further expanded using new technologies. Beş A is a associate member of the DiiA organization, which determines and manages DALI standards, and can test and report the DALI compatibility of its designed products with the "ProbitLab2 DALI Tester" device in its own R&D Laboratory. Beş A is a associate member of organization, it applies the DALI logo to its products that have successfully passed all tests.

DALI compatible LED driver, Emergency Lighting Unit, Emergency Lighting Luminaire and Emergency Exit Luminaire products in this category must meet the following international DALI standards.

IEC 62386-102 and IEC 62386-202: Emergency Lighting Products
IEC 62386-102 and IEC 62386-207: LED Drivers

The condition for using the DALI logo on products that meet the DALI standards and pass all tests is;

1. Becoming a member of DiiA (Digital Illumination Interface Alliance) organization, which determines and manages DALI standards.

2. To have the product tested in testing institutions authorized by this organization, or to obtain the **"ProbitLab2 DALI Tester"** device prescribed by this organization and to carry out all relevanttests in their own laboratories.

3. Sending the completed test reports to the relevant organization and having them approved.

4. To publish the approved products on the DiiA website.

ELCO – OVERVIEW

WIRED MONITORING SYSTEM – ELCO

Our company fulfills all these conditions and applies the DALI logo to its products with the approval of the organization.There is a relevant test device (ProbitLab2 DALI Tester) in our R&D and all tests can be performed in-house. Our test device is kept up to date using the latest test series published by DiiA. The circuit design and embedded software used in our products were developed by us, and our relevant DALI products have successfully passed all tests, been approved and published on the DiiA website.

DALI-enabled products can be monitored and managed on a computer with the DALI Router interface software on the established DALI infrastructure. Our products, whose DALI compatibility is ensured according to the above criteria, can work in harmony with all DALI systems on the market and can fully respond to all queries coming through the system.

In addition to the features specified in the product catalogues, the following details can be monitored and managed from the DALI interface software screen with DALI products;

• Each product in the system is shown with a separate symbol according to its type. "Such as Emergency products, LED Driver"

• Each DALI product added to the system is automatically addressed.

• Each product added to the system has a different address, and the location information of the product can be defined manually. "like a 3rd floor, 2nd corridor, 1st room"

• It can be monitored whether the products in the system are accessible and/or inaccessible."Products that removed from the system continues to be displayed in the system with "!" the sign."

• Inquiries can be made to determine location."When an inquiry is made, all our DALI compatible emergency lighting products provide easy location determination by flashing the lighting LEDs."

• Products can be grouped and managed simultaneously with a single defined control device."On-off and DIM for LED Drivers Periodic function and duration tests for emergency lighting luminaires"

• Possible problems in the products, such as load error or battery error, can be detected instantly by the system and shown as a warning on the screen.

• In emergency products, information such as model type "Maintained: Continuous Lighting, Non Maintained: Only Lighting in Emergency" and Emergency duration time "1-hour/3-hour" can be viewed on the screen.

• Instant current status information of DALI products can be viewed on the screen.In emergency products; Messages such as Charging mode, Emergency, Function Testing, Duration Testing can be followed.In LED Drivers; Information such as on-off, light level as a percentage can be followed.

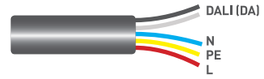
• In emergency products, the battery charge level can be monitored. "Like 75%"

• For emergency products, the last function test, duration test results informations with date and time can be monitored, and all retrospective tests can be reported.

• In LED Drivers, the current light level can be seen and managed.

ELCO system is a wired smart emergency lighting automation system solution that allows the monitoring, regular testing and reporting of Beş A brand DALI compatible emergency lighting products via a router and touch screen developed by Beş A.

- Central monitoring via touch panel
- Addressable emergency lighting system compliant with EN and IEC standards
- Periodic or instantaneous function and duration tests
- Periodic or instantaneous function and duration tests
- Password protected user interface
- Non-directional dual DALI bus cabling



Our ELCO Automatic Test System solution has been tested by BSI (British Standards Institute) under the EN 62034 Automated Test Systems standard and certified with the Kitemark Certificate.

KM 722511

SYSTEM COMPONENTS

ELCO PANEL

It is the management panel of the ELCO emergency lighting monitoring system. All emergency lighting products in the system and their status can be monitored instantly on the panel screen. Periodic test plans are made to ensure that the system tests itself automatically. The results obtained can be saved with USB or sent via e-mail. It can also be managed from a PC via a remote desktop by connecting to the existing network.

ELCO ROUTER

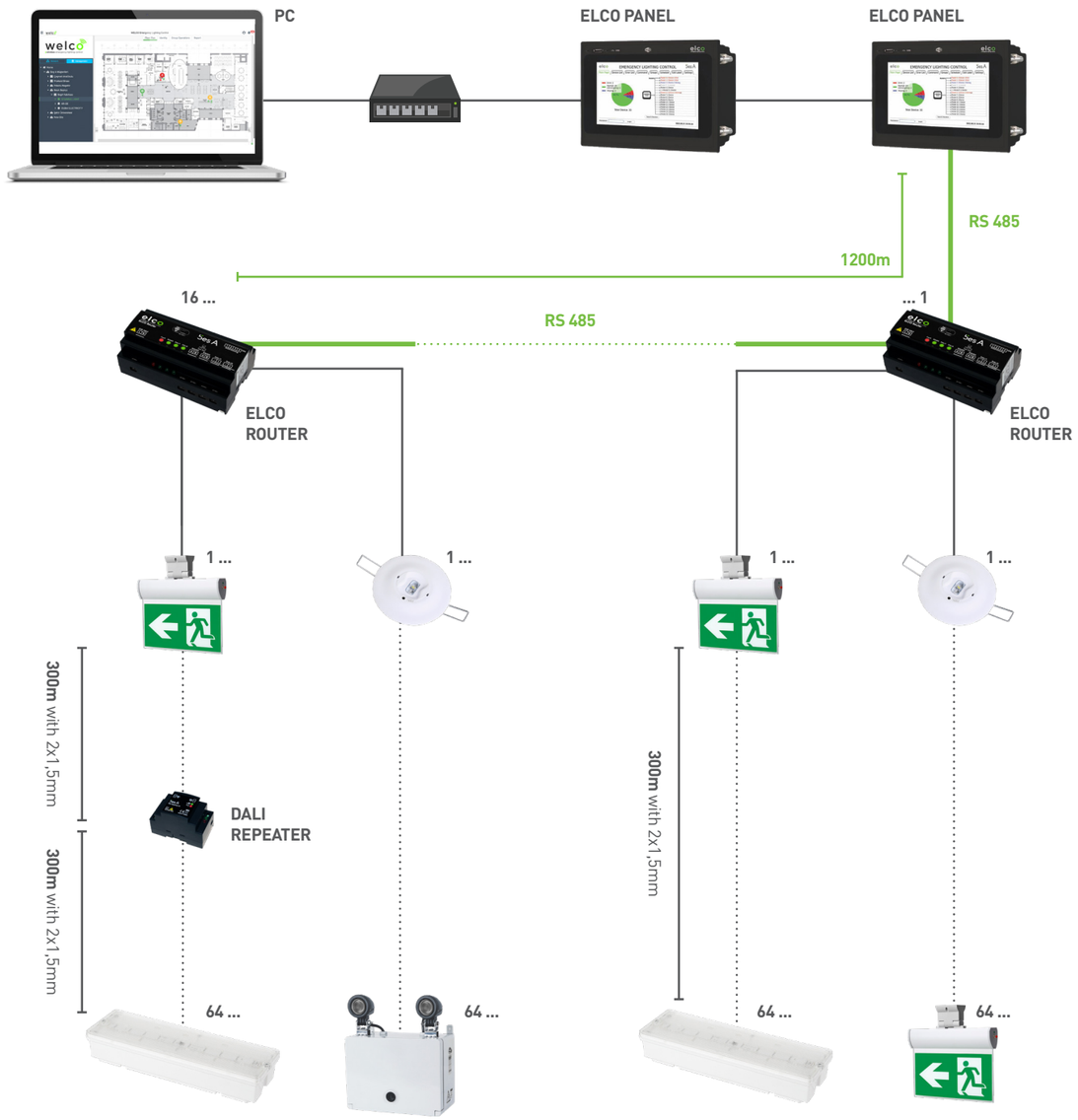
It acts as a bridge between ELCO Panel and emergency lighting products. It performs the function of testing the products according to the commands it receives from the panel. It produces the power supply of the DALI communication line that the products need. It has two channel DALI communication line outputs. Its own addressing is manual and it automatically addresses the emergency lighting products connected to the DALI line.

DALI REPEATER

It is used to extend the distance of the DALI line at the output of the ELCO Router. It produces the power supply of the DALI communication line that the products need. It has a single channel DALI communication line output. Each repeater used at the end of the line provides an additional DALI line. The total line length can be quadrupled by connecting up to three repeaters in a row.

ELCO – OVERVIEW

ELCO WIRING DIAGRAM



welco

wireless emergency lighting control

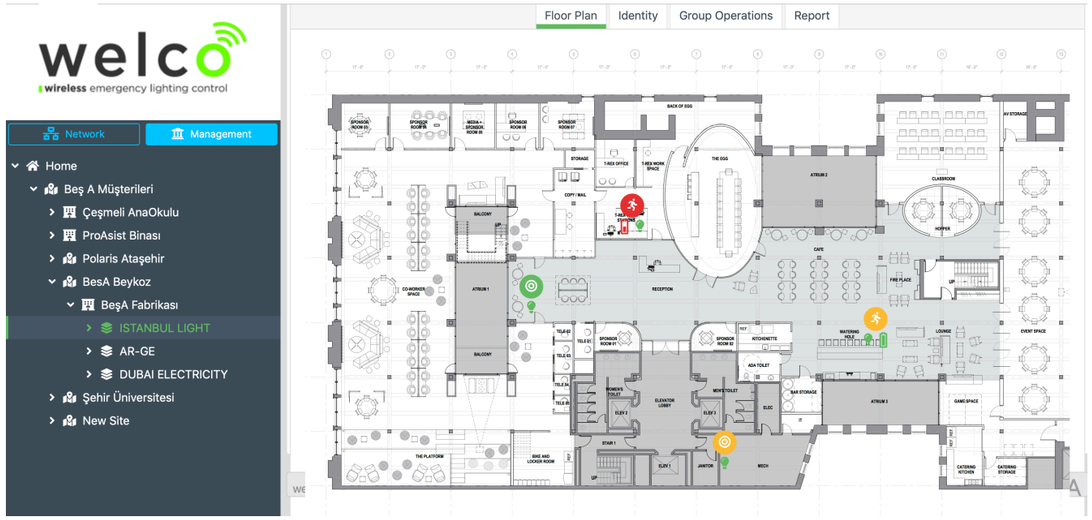
WIRELESS EMERGENCY LIGTING MONITORING SYSTEMS

WELCO – OVERVIEW

WELCO SOFTWARE GRAPHICAL INTERFACE WORKING ON THE CLOUD

Regular system checks should be performed to ensure that any emergency lighting system is fully operational. It is mandatory for building management to routinely test emergency lighting, keep detailed records and present it to the relevant authorities when necessary.

Emergency lighting monitoring systems constantly monitor all products connected to the system from a center, perform periodic tests automatically and report them. Thus, in case of emergency such as possible earthquake or fire, information is sent to the relevant manager to take the necessary precautions to ensure the smooth operation of the products.



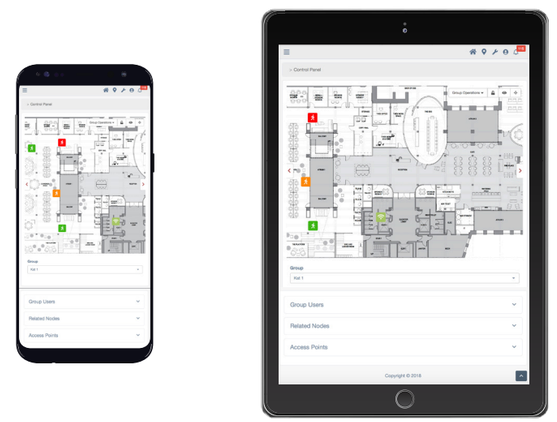
WIRELESS MONITORING SYSTEM – WELCO

WELCO is our wireless system solution that allows the status of our emergency lighting products to be monitored over the internet or intranet.

Each emergency lighting product contains a wireless communication module with Wi-Fi technology, which has proven itself in wireless communication. It is sufficient to simply connect emergency lighting to the mains.

- It is wireless, Wi-Fi (802.11 b/g/n) and cloud-based.
- It does not require extra wiring costs and labor for installation.
- Testing and reporting can be done and reported at any time from anywhere in the world.
- Effective use of resources is ensured by evaluating the existing Wi-Fi infrastructure.
- Function and duration tests of the products are carried out periodically.
- It is possible to offer testing and reporting as a service.

- Ease of control via a single software
- Possibility of remote testing with one click
- Ability to display and monitor fields on the map base
- Ability to divide fields into buildings and floors
- Ability to monitor emergency lighting products via floor plan
- Ability to monitor different fields and components as a tree branch structure in the same interface
- Displaying battery, LED and test status of emergency lighting products with user-friendly icons
- Scheduling and automatic execution of periodic function and duration tests
- Create test report with date and time stamp
- Obtaining detailed test reports

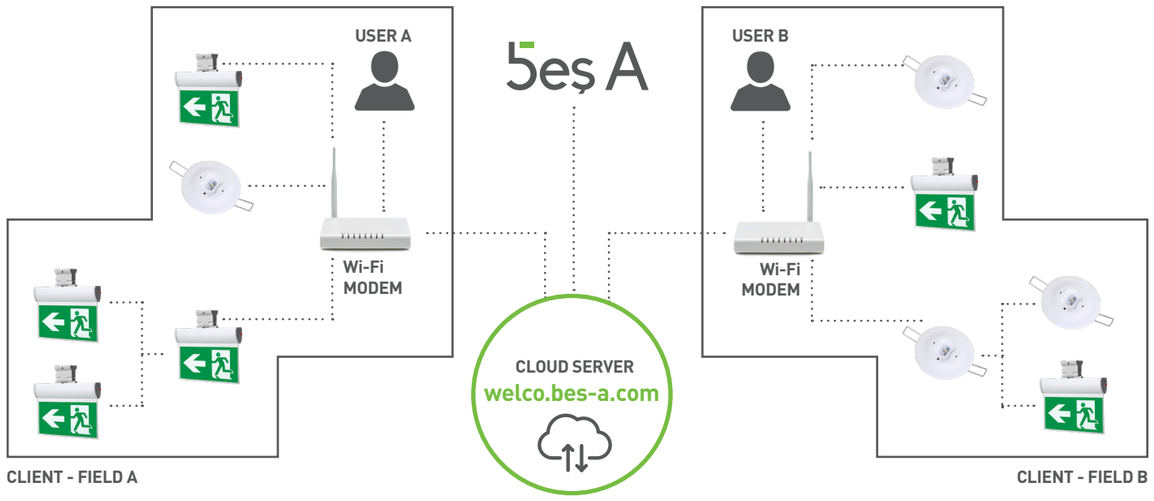


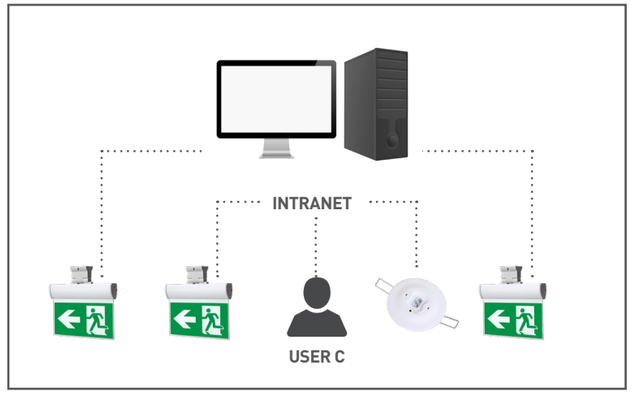
WELCO – OVERVIEW

WHY CLOUD TECHNOLOGY?

Thanks to the WELCO system developed by Beş A, you can access many information such as fault status and test history of the products using cloud technology by entering your username and password from your computer, tablet or smartphone's web browsers and anywhere you have an internet connection.

- The status and test history of emergency lighting products can be accessed via the internet without having to go near a fixed panel.
- Even if the products are in different geographical locations, it is possible to monitor and manage them from a single point.
- Warning situations, such as not passing the test, are automatically sent to the e-mail address you specify.
- Real-time status of products is monitored in groups or individually.
- Test reports are downloaded in Excel format, where the products can be easily grouped according to the type of fault or location information, and shared with the technical service.





CLIENT - FIELD C

WELCO MESH – OVERVIEW

Regular system checks should be performed to ensure that the emergency lighting system is fully operational. It is mandatory for building management to routinely test emergency lighting, keep detailed records and present it to the relevant authorities when necessary.

Emergency lighting monitoring systems constantly monitor all products connected to the system from a center, perform periodic tests automatically and report them. Thus, in case of emergency such as possible earthquake or fire, information is sent to the relevant manager to take the necessary precautions to ensure the smooth operation of the products.

WIRELESS MONITORING SYSTEM - WELCO MESH

WELCO Mesh is our wireless system solution that allows the status of our emergency lighting products to be monitored via the panel.

Each emergency lighting contains a wireless communication module. For installation, it is sufficient to simply connect the emergency lighting to the mains. Products configured during production will automatically communicate with the panel via the router after being energized after installation.

- Wireless is based on mesh topology.
- It does not require extra wiring costs and labor for installation.
- Testing can be done and reported at any time.
- With mesh topology, effective use of resources is ensured without the need for additional hardware.
- Function and duration tests of the products are carried out periodically.
- Testing and reporting are carried out automatically and notifications can be made by e-mail.

WELCO MESH SOFTWARE WORKING ON THE PANEL

- Ease of controlling all system details on a single screen
- Possibility of testing individually or in groups
- Ability to display and monitor products based on router
- Ease of dividing products into groups and including them in an automatic test plan
- Ability to track faulty products with all their details on a single tab
- Ability to monitor all system details as a colorful graphical interface on the main screen
- Showing the battery, LED and test status of emergency lighting products in a list
- Scheduling and automatic execution of periodic function and duration tests
- Create test report with date and time stamp
- Obtaining detailed test reports

GRAPHICAL INTERFACE OF WELCO MESH SOFTWARE WORKING VIA BROWSER

- Ability to display and monitor fields on the map base (reguired internet)
- Ability to divide fields into buildings and floors
- Ability to monitor emergency lighting products via floor plan
- Ability to monitor different fields and components as a tree branch structure in the same interface
- Displaying battery, LED and test status of emergency lighting products with user-friendly icons
- Scheduling periodic function and duration tests
- Possibility of remote testing with one click
- Create test report with date and time stamp
- Obtaining detailed test reports

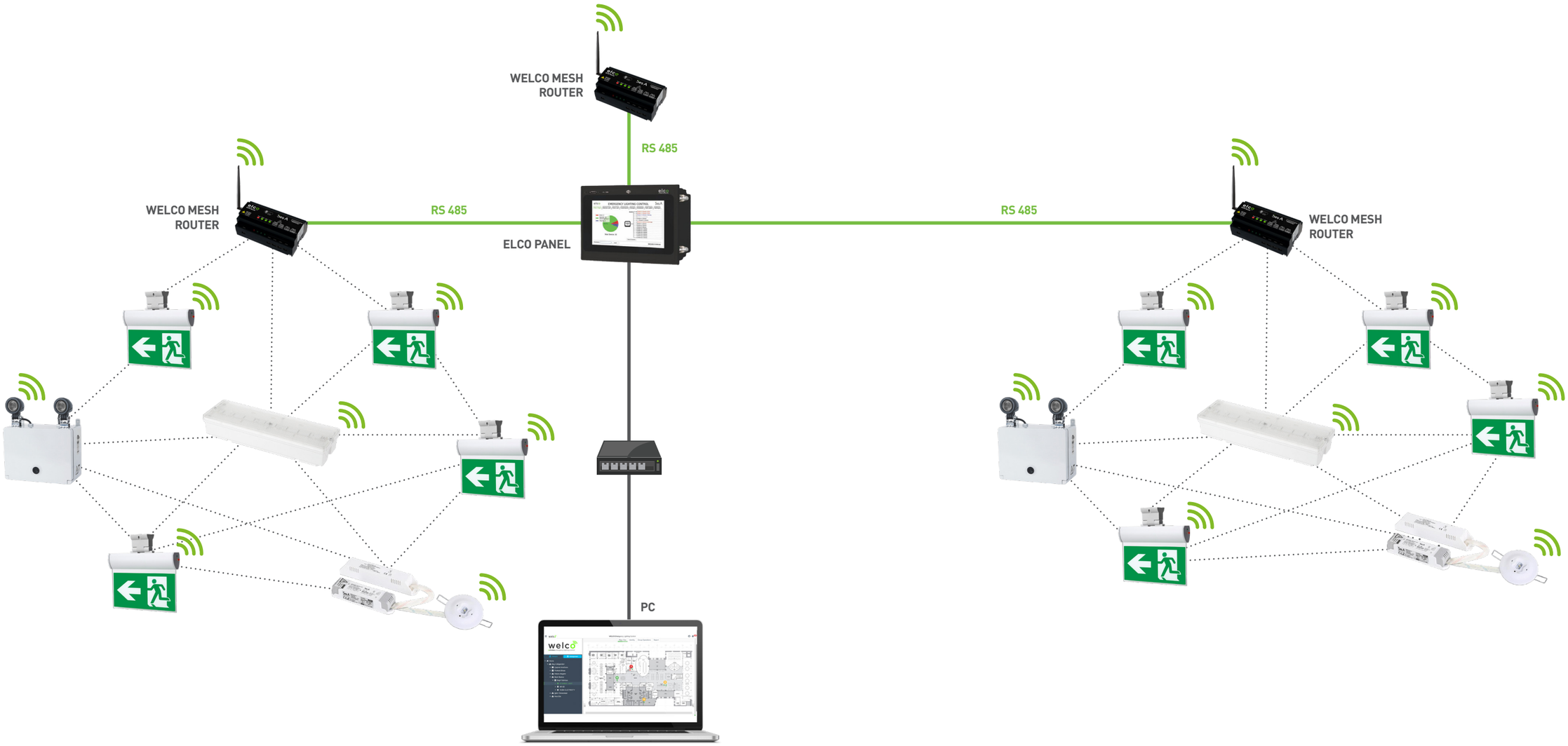
WELCO – OVERVIEW

WHY MESH TECHNOLOGY?

Thanks to the WELCO Mesh system developed by Beş A, you can easily install the system without the need for extra cabling or external hardware. Thanks to mesh technology, it becomes very easy to establish wireless networks and expand networks. Since there is no need for additional cabling, the conversion of old systems to automation becomes very easy.

With the WELCO Mesh system, you can also access many information about the products, such as fault status and test history, by entering your username and password via the web browsers of your computer, tablet or smartphone, over the same network or remotely.

- The status and test history of emergency lighting products can be accessed from the Management Panel.
- The network can be expanded by providing data transfer through products mesh.
- Test results are automatically sent to the e-mail address you specify by the panel.
- The real-time status of the products is monitored in full detail.
- Test reports can be easily tracked according to the product's fault type or location information.
- The system is designed to manage wireless emergency lighting products via wireless Mesh Router products connected to a panel.
- Communication between the Panel and the Router takes place via RS485. A maximum of 16 router connections can be made to one panel.



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