

# GR-750x series

## Control panels for addressable emergency luminaires



**Specifications**  
**Installation**  
**Configuration**  
**Operation**

 **READ THIS MANUAL PRIOR TO ANY OPERATION** 

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# 1 Introduction

## 1.1 General description

The **GR-750x** series of **control panels for addressable emergency luminaires** consists of four models: (**GR-7501**, **GR-7502**, **GR-7503** and **GR-7504** with 1, 2, 3 and 4 loop circuits respectively). All share the same interface, functionality, and indicators. Each of the loop circuits can support up to 250 addressable luminaires. Two 12V lead acid (Pb) batteries are required per panel, with at least 7Ah capacity each.

All **GR-750x** models include four programmable inputs, two programmable outputs, two 24V<sub>DC</sub> voltage outputs, four relays and an Ethernet/Wi-Fi card. A thermal printer is available as an optional accessory.

Panels of the GR-750x series can be connected to form a network of panels, referenced as "*Panel network*". The maximum number of connected panels cannot exceed 24.

The GR-750x series provides an ideal solution for medium to large scale facilities such as department stores, hotels, factories.

## 1.2 Safety



### **WARNING**

**To ensure safety and proper use of the device read all accompanying documents carefully and follow the provided information.**

It is recommended that this product is installed, commissioned, and maintained by **trained technician personnel** in accordance with:

- The regional regulations for installation and maintenance of electrical appliances in buildings.
- Manufacturer's instructions.

The device main power supply is rated at 220-240Vac/50-60Hz and is a Class I product (the corresponding terminal contact with the "Protective Earth" marking (⊕), inside the device, must be connected to the building's ground to ensure proper function and safety).

The mains power supply of the device must be connected to the building's electrical installation, with its own separate power line and circuit-breaker rated at 16A, labeled "**Emergency lighting system - Do not switch off**".

## 1.3 Terms and definitions

### 1.3.1 Point

The term “point” refers to any addressable device connected to the panel. For example, an emergency luminaire.

### 1.3.2 Emergency mode/In emergency

When the system or a point is referred as being in emergency or emergency mode, it means that its mains power supply is unavailable, and it is operating on power supplied by its battery.

### 1.3.3 Inhibit mode

A luminaire set in inhibit mode, will not function as an emergency light. If its mains power supply is unavailable, it will switch off its lamp (if it is a continuous operation luminaire) or it will not switch on (if it is a non-continuous operation luminaire). Enabling and disabling the inhibit mode can only be done by the user (manually).

## 1.4 Technical specification

Table 1 - Technical specification table

GR-750x panel series				
Description	GR-7501	GR-7502	GR-7503	GR-7504
<b>Loop circuits</b>	1	2	3	4
	400mA max. current per loop, 250 addresses/addressable points per loop			
<b>Mains power supply voltage</b>	220-240 Vac, 50/60Hz			
<b>Mains maximum current</b>	1.5 A			
<b>Maximum consumption</b>	220 VA			
<b>Fuse types</b>	AC input: 2A/250V (Slow blow) glass 5x20mm			
<b>Controlled inputs*</b>	4 programmable resistance-controlled inputs, open and short circuit protection, Normal/Active detection with 10kΩ termination resistor			
<b>Controlled outputs*</b>	2x 24 V <sub>DC</sub> (± 3 V <sub>DC</sub> ), 300mA max., Basic isolation open and short circuit protection, 10kΩ termination resistor			
<b>Relays</b>	30Vdc, 5A max ( <u>NOT FUSED</u> )			
<b>24V voltage outputs*</b>	1x 24V <sub>DC</sub> (± 3V <sub>DC</sub> ) permanent output, 300mA max., short circuit protection 1x 24V <sub>DC</sub> (± 3V <sub>DC</sub> ) resettable output, 300mA max., short circuit protection			
<b>Battery type</b>	2x Lead-acid batteries (Pb) 12V, 7-15Ah			
<b>Battery charger</b>	Stabilized power supply: 27.6V, 900mA			
<b>Battery autonomy (7AH)</b>	12-24 hours (depending on the number of connected loop cards, points, and inputs/outputs)			
<b>Battery cut-off voltage</b>	20.5V			
<b>Battery discharge current</b>	Nominal: 500mA, 2A max. (while mains power supply is not available)			
<b>USB adapter</b>	Micro USB-B 2.0			
<b>LAN adapter</b>	10 Mbps Ethernet			
<b>Wi-Fi adapter</b>	2.4 GHz, 802.11 b/g/n (802.11n up to 150 Mbps)			
<b>Operating temperature</b>	0°C to 40°C			
<b>Relative humidity</b>	Up to 95% non-condensing			
<b>Case materials</b>	ABS/PC, electrostatic painted iron plate			
<b>Ingress protection (case)</b>	IP 30			
<b>Dimensions</b>	480mm(L) x 145mm(W) x 408mm(H)			
<b>Weight</b>	8kg (without batteries)			
<b>Warranty</b>	2 years			

\* The input/output terminals of the panel are supplied from the 24V power supply unit and have reinforced insulation from the mains power supply.

## 2 System description

### 2.1 Control panel fascia

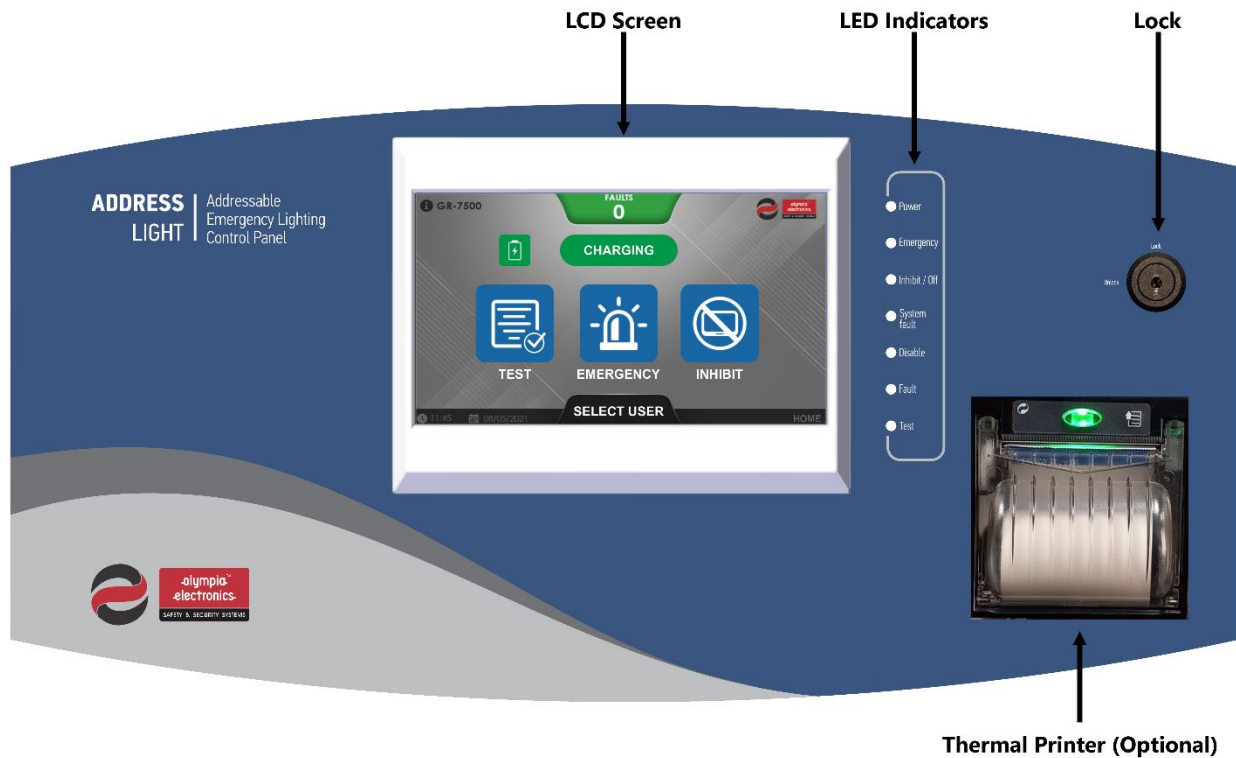


Figure 1

#### 2.1.1 LED indicators

The LEDs indicate when there are certain important statuses active, while more detailed information is displayed on the screen.

Table 2 – LED indicators

LED LABEL	COLOR	FUNCTION
Power	Green	Indicates panel's power supply status: Steady: Panel powered by mains. Blinking: Panel powered by its batteries.
Emergency	Yellow	Indicates that at least one point is in emergency.
Inhibit / Off	Yellow	Indicates that at least one point is in Inhibit mode.
System fault	Yellow	Indicates a system fault.
Disable	Yellow	(Not used.)
Fault	Yellow	Indicates that there is at least one fault.
Test	Yellow	Indicates that at least one point is in test.

## 2.1.2 LCD screen

The panel is equipped with a 7" TFT LCD touch screen display which can be used to control the panel and provide information to the user.

## 2.1.3 Thermal printer (optional)

The thermal printer is an optional accessory it is not included in the panel by default. It can be enabled/disabled from the settings menu as required. When the printer is enabled, every event that is recorded is printed as well.

## 2.2 Loop circuits

All models of the GR-750X series use the same loop boards, they only differ in number. The loop output connection terminals come pre-installed with a short-circuit adapter (it links **+L** to **+LF** and **-L** to **-LF** terminals, to form a closed loop circuit).

A loop circuit can operate with up to 250 addresses and a maximum of 250 points connected to it.



Figure 2

## 2.3 Panel relays

Panel has four relays located on the power management board marked **AUX**, **FAULT**, **SUPPLY** and **OPER**. The behavior of the operation (**OPER**), supply (**SUPPLY**) and fault (**FAULT**) relays is predefined and cannot change. All relays are rated 30Vdc, 5A max. External fuses must be added based on the rated current of the connected circuit.

Operation of each relay is described at the table below.

Table 3 – Panel relays

RELAY	DESCRIPTION
<b>Operation</b>	Relay state depends on system operation.
<b>Supply</b>	Relay state depends on the status of mains power supply.
<b>Fault</b>	Relay state changes if there is one or more faults.
<b>Auxiliary</b>	Operation of this relay is user configurable.

## 2.4 Inputs

The panel has four programmable inputs on the power management board marked as **IN1**, **IN2**, **IN3** and **IN4** on the PCB. Each input can be programmed to perform a specific action on all zones or a certain zone. Activating an input can trigger one of these actions:

Table 4 – Input triggered actions

TRIGGERED ACTION	DESCRIPTION
<b>FUNCTION TEST</b>	Starts a function test on the points of the selected zone.
<b>INHIBIT</b>	Sets all points of the selected zone in <i>inhibit mode</i> .
<b>RESET PANEL FAULTS</b>	Resets the active faults on the panel.

## 2.5 Outputs

The panel has four outputs on the power management board marked as **24VP**, **24VM**, **OUT1** and **OUT2** on the PCB. Two of them are voltage outputs (**24VP** and **24VM**) and the other two are programmable outputs (**OUT1** and **OUT2**).

Table 5 – Panel outputs

NAME	VOLTAGE	RATED CURRENT	LINE MONITORING	DESCRIPTION
<b>24VP</b>	24Vdc	300mA	Short circuit	Output is active while the panel is operating.
<b>24VM</b>	24Vdc	300mA	Short circuit	Output is active while panel is operating. After power-on the output is inactive for ≈10sec.
<b>OUT1</b>	24Vdc ±3V	300mA	Open/Short circuit	Operation of this output is user configurable.
<b>OUT2</b>	24Vdc ±3V	300mA	Open/Short circuit	Operation of this output is user configurable.

## 2.6 Luminaire commands

A list of the commands the panel can send to the luminaires can be found below, along with the description of each command.

Table 6 – Luminaire commands

COMMAND	DESCRIPTION
<b>FUNCTION TEST</b>	Starts a function (operational) test on the specified luminaires.
<b>DURATION TEST</b>	Starts a duration (autonomy) test on the specified luminaires.
<b>STOP TEST</b>	Stops all running tests on the specified luminaires.
<b>IDENTIFY</b>	The LED indicators of the specified luminaire start blinking so it can be visually identified.
<b>INHIBIT MODE</b>	Sets the specified luminaires to <i>inhibit mode</i> .
<b>CLEAR COMMANDS</b>	Resets all commands/modes of the specified luminaires.
<b>RESET FAULTS</b>	Reset the faults of the specified luminaires.

## 2.7 Function test

Function test procedure initiates a self-test (operational test) procedure of the luminaires connected to the panel, to verify their proper operation. No specific equipment is required and can be manually performed at any time or scheduled at specific days of the week at a certain time. During the test, a LED indicator flashes on the luminaire indicating the ongoing operation. For more information about the LED indicators of the luminaire, refer to its manual.

Upon completion of the test, if a problem is detected by the luminaires, the panel will be notified, the corresponding fault will appear in the fault list with detailed information.

## 2.8 Duration test

Duration test procedure initiates a self-test (autonomy test) procedure of the luminaires connected to the panel, to evaluate the endurance of their batteries. No specific equipment is required and can be manually performed at any time or be scheduled up to two times per year. During the test, a LED indicator flashes on the luminaire indicating the ongoing operation. For more information about the LED indicators of the luminaire, refer to its manual.

Upon completion of the test, if a problem is detected by the luminaire, the panel will be notified, the corresponding fault will appear in the fault list with detailed information.

## 2.9 Panel network

The panels of the GR-750x series can be connected and form a network of panels, referenced as “Panel network”, using the **NET-L** and **NET-R** terminals on the power management board. The maximum number of connected panels cannot exceed 24. There is the option to enable/disable the networking capability of each panel as required.

When two or more panels are connected, there is the option to form a *trusted panel network*. Panels in the same trusted network will synchronize events (automatic process), some settings and point commands are applicable to all of them simultaneously.

Each panel has its own name, ID, and MAC address. For panel to form a trusted group, all members must have unique ID. This can be done automatically or be configured manually, depending on what is required (refer to 5.3.9 PANEL NETWORK for group formation).

The panel network line is monitored for open or closed ring topology (refer to 3.4 Panel network wiring). In the case of system failure of the panel network controller (MCU), the board will internally connect the **NET-L** with **NET-R** signals, to preserve the communication between the other panels. This is the reason why a closed ring topology is **strongly recommended**.

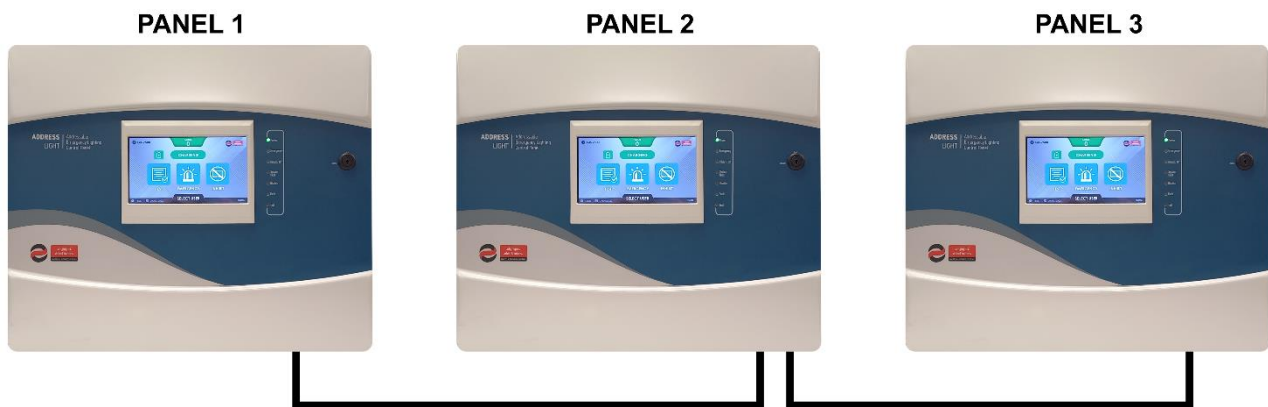


Figure 3

## 2.10 WebUI

The Ethernet/Wi-Fi card provides a website for remote monitoring and configuration of the panel. It is accessible from any device with browser support if it is connected to the same network as the Ethernet/Wi-Fi card of the panel. Two different access levels are available (**User** and **Technician**), each with a separate configurable password (see **5.4.8 REMOTE CONNECTION** screen for more details).

The html link (URL) for the website is the IP address of the Ethernet/Wi-Fi card in the local network (this can be found in the **6.4.9 ETHERNET/WIFI** screen and configured from the **5.4.3 ETHERNET/WIFI** screen).

## 3 INSTALLATION

### 3.1 Installation/Maintenance



#### **WARNING**

**All installation operations must be done while the panel is disconnected from mains power supply and batteries.** Only trained personnel should carry out operations inside the panel and only after taking all the precautionary measures.

Prior to installing/maintaining the panel, read the manual and have knowledge of the system capabilities, functionality, and design to ensure proper operation of system.

Do not connect or disconnect system components while mains power supply or batteries are connected.

Prior to any operation inside the enclosure of the panel, ESD prevention measures should be taken.



Figure 4

## 3.2 Control panel installation

### 3.2.1 Interior of the panel

To access the interior of the panel, first unlock the key lock on the front of the panel with the key included in the panel's package.

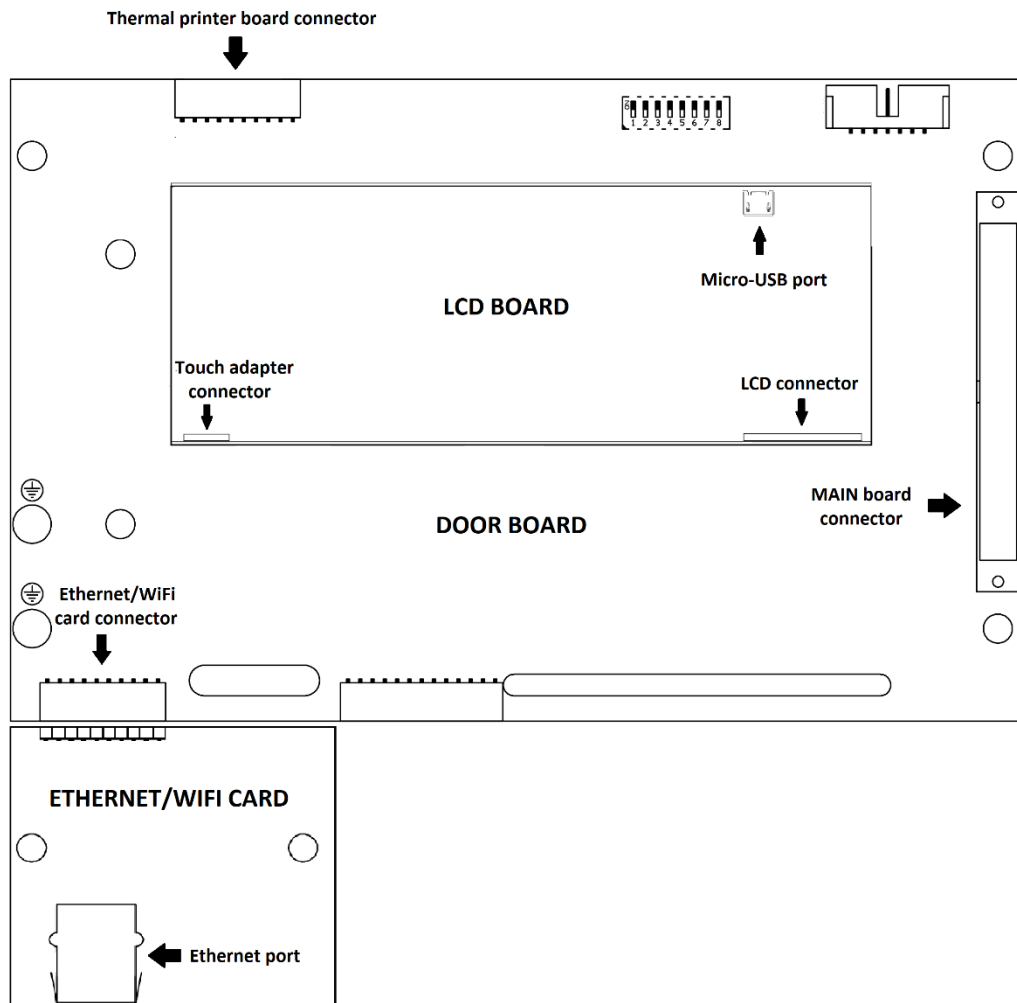


Figure 5

On the inner side of the panel's door is mounted the TFT-LCD touch screen display and the DOOR board (Figure 5). Connected to the DOOR board are the LCD CPU board, the ETHERNET/WIFI board and the PRINTER board (if the optional printer accessory is installed).

Inside the main body of the metal housing (Figure 6) are located the power supply unit (left), the power management board (**MAIN** board), the loop boards (center), the battery area for the two batteries (bottom), the earth bar terminal (left), the panel mounting holes and the cable openings.

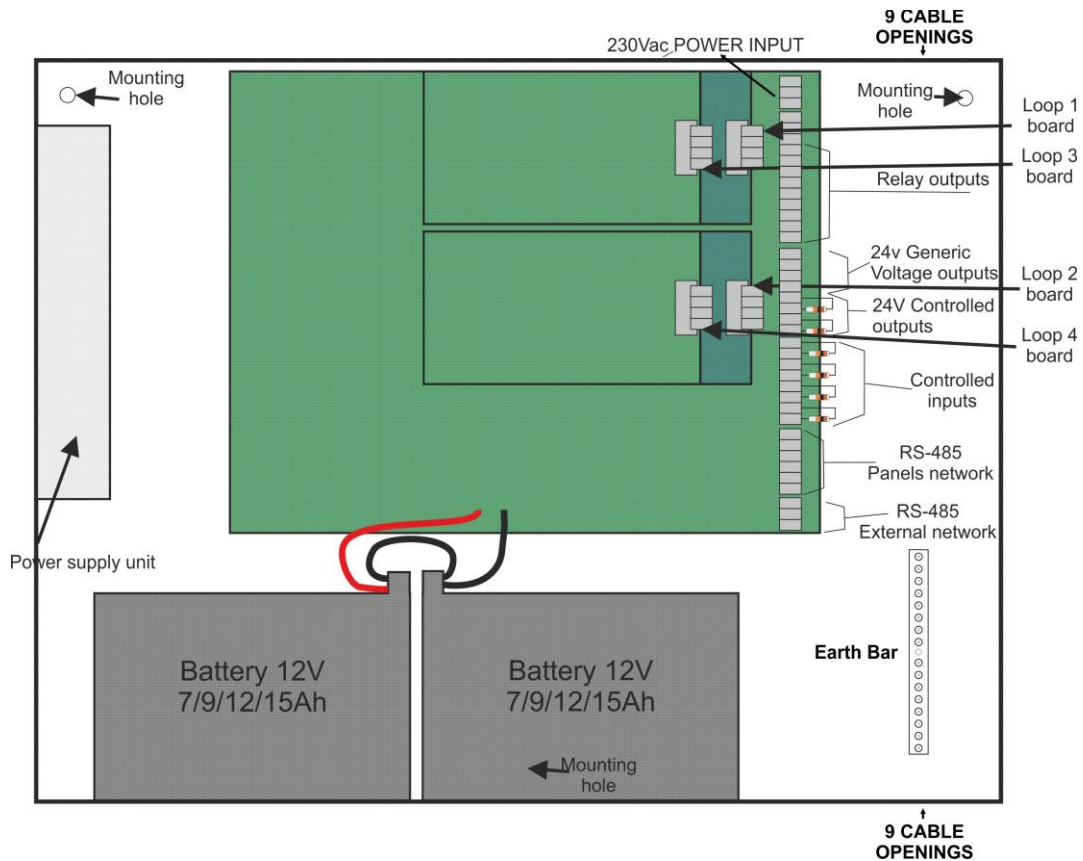


Figure 6


### 3.2.2 Mounting the panel

The panel mounting area must be clean, dry, and free of collisions and vibrations. The panel must be permanently installed on a fixed position and indoors only. In Figure 6, the interior mounting holes of the panel are marked. Use all three mounting holes with the included wall mounting accessories of the package for proper installation (plugs and screws).

The panel should be placed at least 1m above floor level, 1m below roof level and at a minimum distance of 30cm from other electronic devices. No other lines should cross the wall behind the panel except the panels own power supply. The panel should be placed in a visible and accessible area to the building's staff, fire, and lighting safety personnel.

### 3.2.3 Connecting the mains power supply cables (220-240V<sub>AC</sub>)

**IMPORTANT**



1. Any installation, repair or electrical equipment maintenance operation must be executed with both mains power supply and batteries disconnected.
2. All mains power cables must be connected before connecting the batteries and powering up the system.
3. The mains power fuse is located on the power management board and is rated T2A/250V (slow blow).
4. The battery protection fuse is self-resettable, rated 900mA and is soldered on the power management.

The power supply cable must be a 3-core double insulated wire that meets the voltage and current requirements of the panel (Table 1 - Technical specification table). The ground terminal (marked with ⊕ on the power management board) **must be** connected to the installation's ground (protective earth) to ensure proper and safe operation of the system.

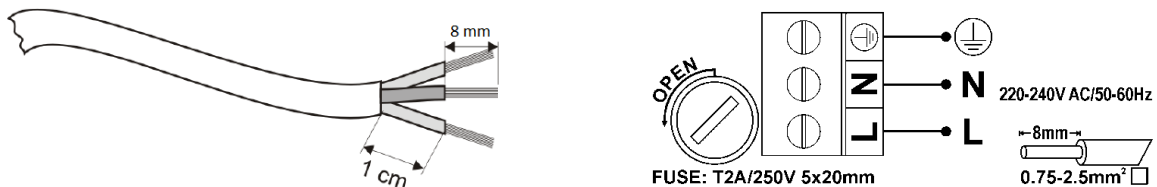


Figure 7

### 3.2.4 Connecting/Replacing the batteries

The interior of the control panel has space suitable to hold two 12V lead-acid batteries (Pb) with nominal capacity of 7Ah, 9Ah, 12Ah or 15Ah. Both batteries must be the same model, type and have the same nominal capacity.

The two batteries must be connected in series. Three wires are provided to connect them, two of them are pre-installed on the power management board's battery terminals. The red wire must be connected to the positive terminal (+) of the first battery. The black wire must be connected to the negative terminal (-) of the second battery. A jumper cable is included in the accessories bag, to connect the two other terminals (negative terminal (-) of the first battery to the positive terminal (+) of the second battery), like it is shown in the figure below:

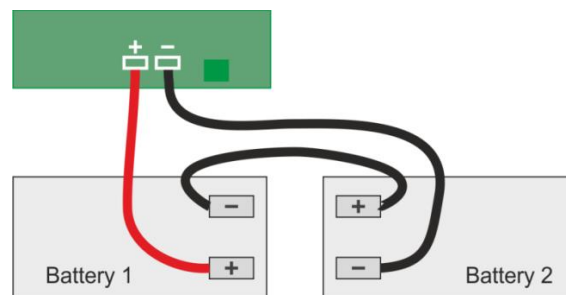


Figure 8

In case of battery replacement, both batteries must be changed with two new identical batteries. Do not discard the old batteries in common waste bins. The batteries must only be disposed of in accordance with the WEEE directive.

### 3.3 Point wiring

Use a cable that meets these specifications, to connect the loop board with the points:

1. Two-core shielded twisted pair cable. If the cable is unshielded, the communication between the loop and the points is susceptible to electromagnetic interferences.
2. No more than 2 cores.
3. Low resistance, less than 25 Ohm/km. The total impedance of each core of the cable should not be more than 20 Ohm.
4. Wire cross section should be between 0,7mm<sup>2</sup> and 2,5mm<sup>2</sup>.
5. Low capacitance, less than 200pF/m. The total capacitance of a single cable should not exceed 800nF.

Table 7 – Recommended cable cross section

		Loop cable length				
		200m	500m	1000m	1500m	2000m
Point number	50	0.75 mm <sup>2</sup>	1 mm <sup>2</sup>	1 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
	100	1 mm <sup>2</sup>	1 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
	150	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
	200	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
	250	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>

We recommend LiYCY (TP) type cables with cross section from 0.75mm<sup>2</sup> to 1.5mm<sup>2</sup> or YSLYCY-JZ with cross section from 1mm<sup>2</sup> to 2.5mm<sup>2</sup>, depending on the number of connected points, topology of the installation and cable length.



#### **WARNING**

The maximum length of a single loop cable should not exceed 2000m. The maximum connected points per loop are 250.

The upper and lower cable openings of the metallic enclosure of the panel can be used to drive the cables through. The rubber plugs should not be removed from the openings, so the ingress protection IP30 remains unchanged. Instead pierce a hole on the rubber plug, big enough to barely fit the cable and drive the cable through it. To connect one or more points to the loop output terminals, remove the short-circuit adapter.



#### **IMPORTANT**

1. The cable's shield must be reconnected in every cut throughout the length of the loop and must be connected to the earth bar of the panel.
2. The positive and negative polarity must be maintained throughout the length of the loop.
3. All points must be connected in parallel with the output.
4. If the number of installed points in on a loop circuit exceeds 50, or if the length of its cable exceeds 500m, then a closed loop connection topology is always recommended, to minimize communication issues.

Figure 9 describe the parallel connection of addressable points, which use a 2-way terminal, with the loop board:

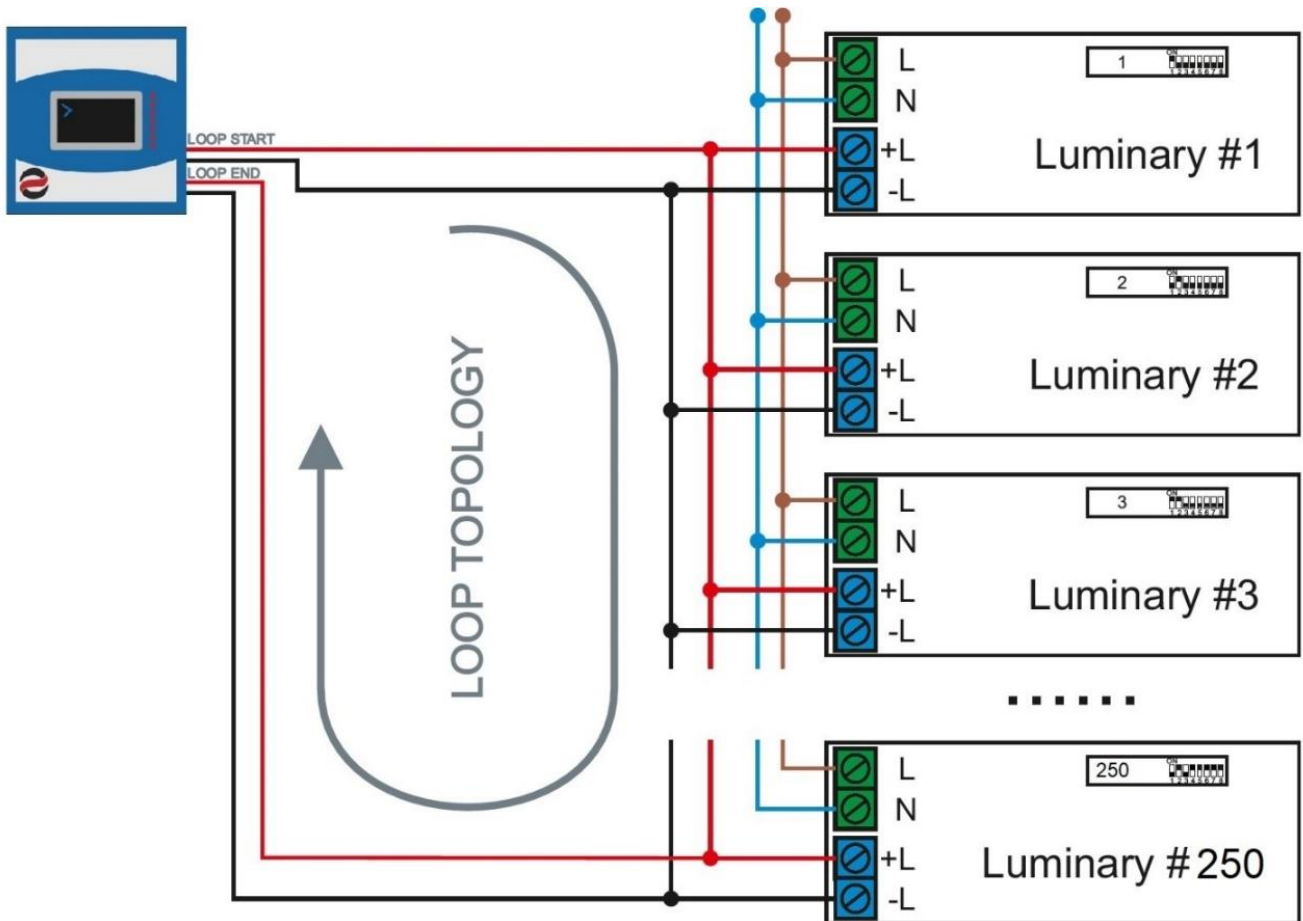


Figure 9

Figure 10 describe the parallel connection of addressable points, which use a 4-way terminal, with the loop board:

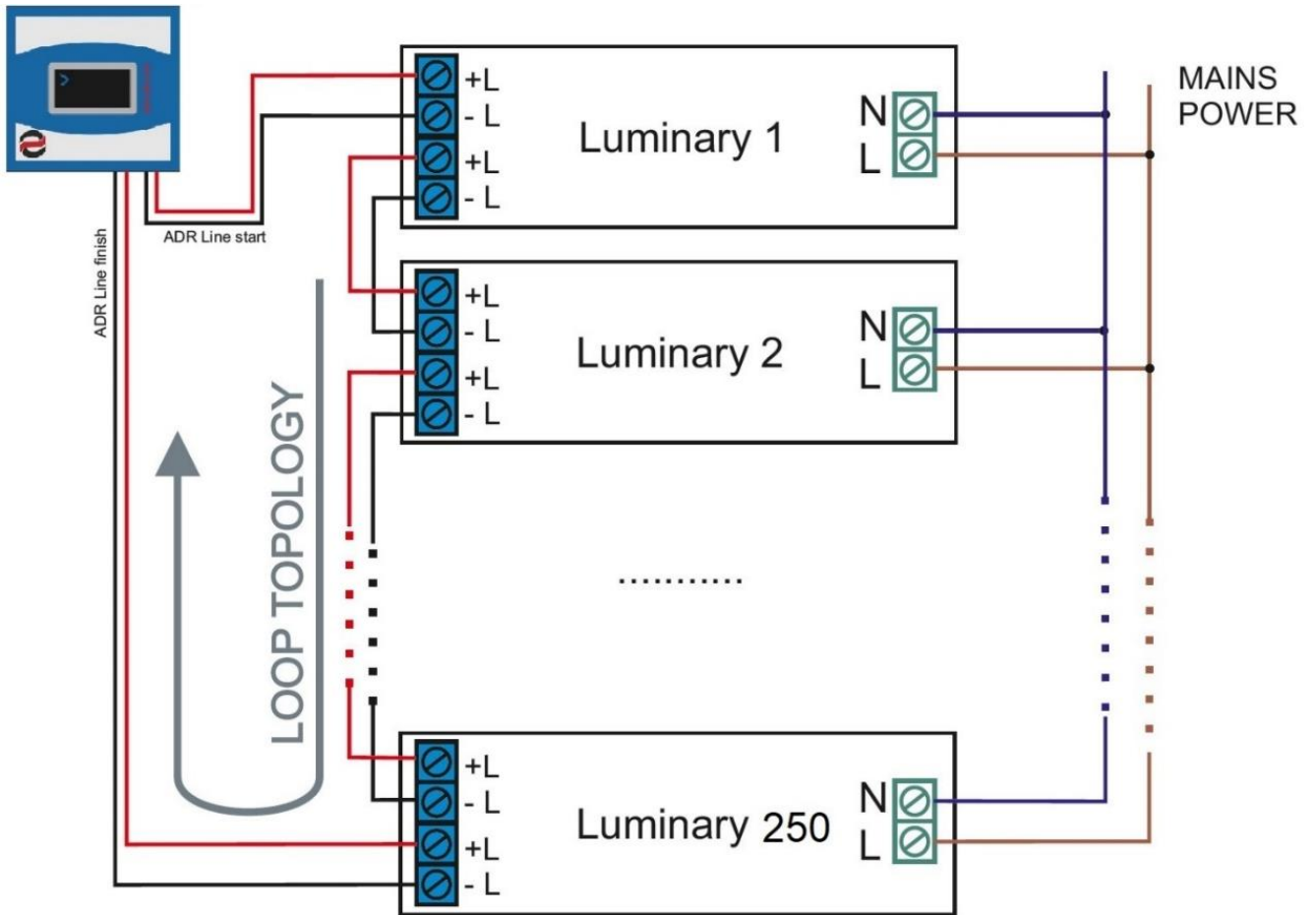


Figure 10

### 3.4 Panel network wiring


Table 8 – Panel network specifications

Panel network specifications	
Maximum number of panels	24
Maximum cable length*1	800 meters *1
Recommended cable type	2-core shielded twisted pair cable with stranded wires
Communication protocol	RS-485
Network Isolation	YES
Fault tolerance	YES (single wiring fault)
Electrical protection	YES

\*1Maximum length of a single cable connecting two panels.

To connect the panels and form a network either of the **NET-L** or **NET-R** terminals, located on the power management board, can be used. The **NET-L** terminal must be connected to the **NET-R** of the other panel and the **NET-R** terminal to the **NET-L** of the other panel. Connecting **NET-L** terminal of one panel with the **NET-L** of another panel, will not work. The same is true for the **NET-R** terminal.

IMPORTANT



- If two panels need more than 800m cable to be connected, a RS-485 repeater must be used.
- The shield of the cable must be connected to the earth bar of one of the panels it is connecting, not on both sides.

To be operational, only one side of the panel network is required to be connected (**NET-L** or **NET-R**), not both. That is the **open ring** panel network topology (Figure 11). If both sides are used (both **NET-L** and **NET-R**) then the resulting network is a **closed ring** topology (Figure 12). The advantage of the closed ring is that a single fault along the communication lines is not enough to disrupt the communication between the panels on the network. That is not true for an open ring topology.

The panel network ring is monitored for open/closed status and a fault can be produced when it is open (configurable from the panel network parameters menu). Using a **closed ring** is not mandatory but **highly recommended** for the reliability of the panel network.

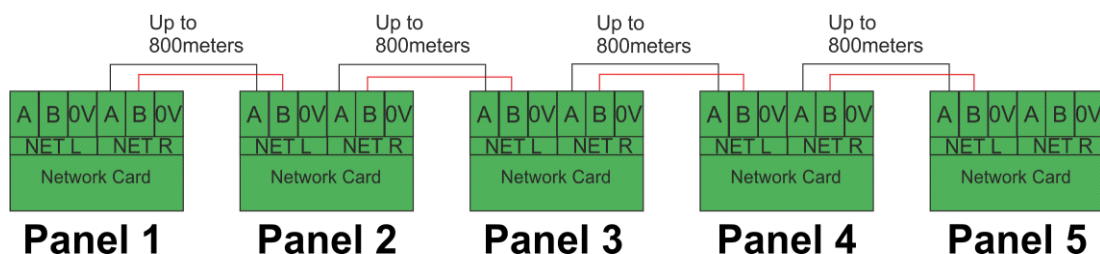


Figure 11

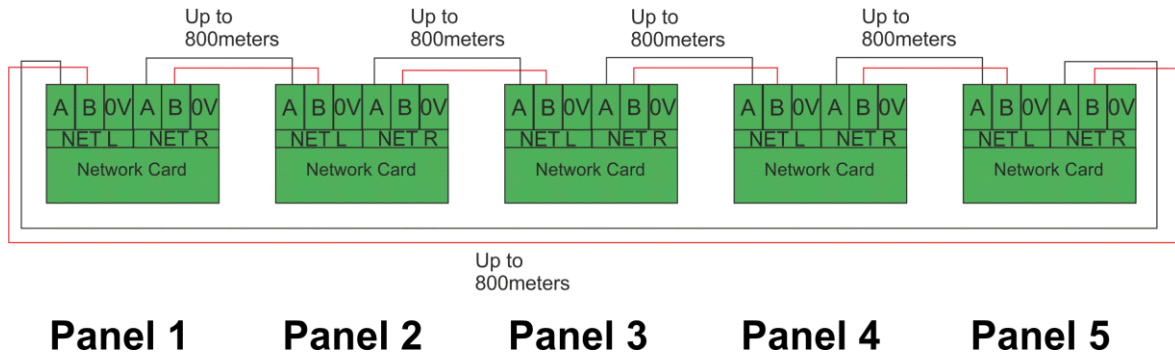


Figure 12

### 3.4.1 Panel network fault examples

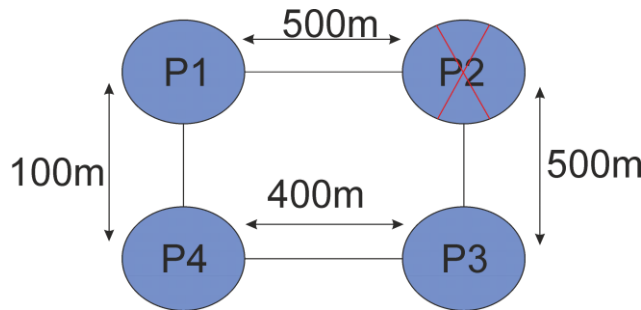


Figure 13

**Case 1 (Figure 13):** In this case we have 4 panels connected as shown above, using a closed ring topology. If panel **P2** stops operating (goes to cut off, unexpected crash or some other fault) then **P1**, **P3** and **P4** panels will continue to communicate with each other. The **P4** will become the connecting node between the **P1** and **P3**. **P1** and **P3** are physically connected because the **P2** does not operate, and it is bypassed by the panel network safety hardware. In this case the cumulative cable length between **P1** and **P3** is 1000m (500m+500m) and it exceeds the nominal cable length of 800m. **The panel network communication from this side of the ring cannot be reliable.** In any case, the communication between **P1** and **P3** will not be interrupted because there is **P4** that is connected to them and in turn connecting them together.

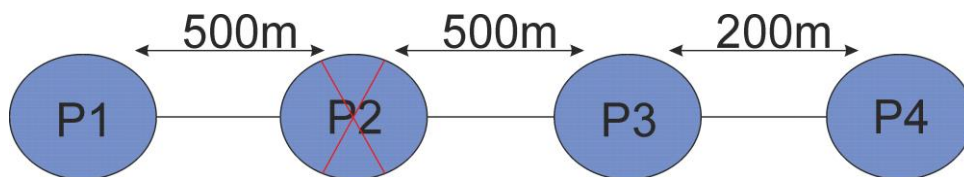


Figure 14

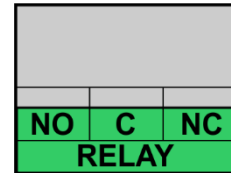
**Case 2 (Figure 14):** In this case we have 4 panels connected as shown above, using an open ring topology. If panel **P2** stops operating (goes to cut off, unexpected crash or some other fault) then **P3** and **P4** panels will continue to communicate with each other. **P1** and **P3** are physically connected because the **P2** does not operate, and it is bypassed by the panel network safety hardware. In this case the cumulative cable length between **P1** and **P3** is 1000m (500m+500m) and it exceeds the nominal cable length of 800m. **The panel network communication from this side of the ring cannot be reliable.** The communication between **P1** and **P3** cannot be guaranteed. The resulting sub network (**P3** & **P4**) will continue normal operation and the user will be notified for the relative faults. After the problem with **P2** is resolved, the panel network will return to its initial state.

### 3.5 Relays

There are 4 relays in total, 3 relays for different states of the panel and 1 programmable auxiliary relay. All relays are rated 30Vdc, 5A max. External fuses must be added according to the connected circuit. The terminal connections of each relay are described in the table below:

Table 9 – Relay terminal connections

RELAY	CONNECTED TERMINALS
<b>Operation</b>	<b>C-NC:</b> While panel's application is not operating. <b>C-NO:</b> While panel's application is operating nominally.
<b>Supply</b>	<b>C-NC:</b> While panel is powered from its batteries. <b>C-NO:</b> While panel is powered by mains power supply.
<b>Fault</b>	<b>C-NC:</b> While there are one or more faults. <b>C-NO:</b> While there are no faults.
<b>Auxiliary</b>	<b>C-NC:</b> While the user selected trigger is not active. <b>C-NO:</b> While the user selected trigger is active.



The auxiliary (**AUX**) relay's operation is configurable for a specific panel event and its logic can be either positive or negative. The panel events that can be associated with the auxiliary relay are described at the table below.

Table 10 – Relay trigger conditions

PANEL EVENT	DESCRIPTION
<b>IN EMERGENCY</b>	Triggered when one or more points are in emergency mode.
<b>IN FAULT</b>	Triggered when there are one or more faults.
<b>ON TEST</b>	Triggered when one or more points are in test.
<b>IN INHIBIT MODE</b>	Triggered when one or more points are in <i>inhibit mode</i> .

### 3.6 Inputs

Use a separate cable to connect each input. It is recommended to use 2-core shielded cables, not multicore cables. If a shielded cable is used, the cable's shield must be connected only to the earth bar terminal inside the panel.

Table 11 – Input triggered actions

TRIGGERED ACTION	DESCRIPTION
<b>FUNCTION TEST</b>	Starts a function test on the points of the selected zone.
<b>INHIBIT</b>	Sets all points of the selected zone in <i>inhibit mode</i> .
<b>RESET PANEL FAULTS</b>	Resets the active faults on the panel.

All input terminal connections come preinstalled with a 10kΩ resistor, between **INx** and its corresponding negative terminal (marked **(-)** on the board). This is done for continuous line monitoring and detection of open and short circuit line problems. If an input is unused, the resistor must remain connected to the corresponding terminals. The input is detected as active when the resistance between its terminals is 1kΩ. There are four 1kΩ value resistor supplied with the panel and can be used to achieve the input activation.

The panel can detect the following input conditions:

Table 12 – Input states

STATE	DESCRIPTION
<b>NORMAL</b>	Closed circuit. The resistance between the terminals is about 10kΩ.
<b>OPEN CIRCUIT</b>	Problem with the line continuity between the input terminals.
<b>SHORT CIRCUIT</b>	Short circuit between the input terminals.
<b>ACTIVE</b>	The resistance between the terminals is 1kΩ.

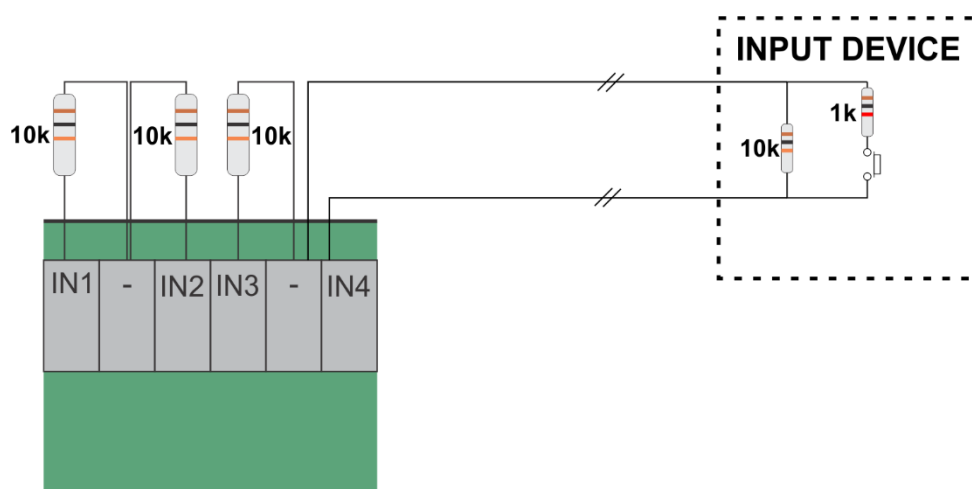


Figure 15

### 3.7 Outputs

Use a separate cable to connect each output. It is recommended to use 2-core shielded cables, not multicore cables. If a shielded cable is used, the cable's shield must be connected only to the earth bar terminal inside the panel.

The outputs of the panel are (as labeled on the PCB):

- **OUT1 & OUT2:** Two programmable resistance-controlled outputs.
- **24VM:** One 24 V<sub>DC</sub> (300mA max.) voltage output, used to power devices that must be interrupted via panel's reset. Output is disabled for about 10 seconds after the reset.
- **24VP:** One 24 V<sub>DC</sub> (300mA max.) voltage output, used to power devices that must not be interrupted via panel's reset.

The programmable output terminal connections come preinstalled with a 10kΩ resistor, between **OUTx** and its corresponding negative terminal (marked **(-)** on the board). This is done for continuous line monitoring and detection of open and short circuit line problems. If a programmable output is unused, the resistor must remain connected to the corresponding terminals.

Programmable output activation can be triggered by one of these actions:

Table 13 – Programmable output trigger conditions

TRIGGER ACTION	DESCRIPTION
IN EMERGENCY	Triggered when one or more points are in emergency mode.
IN FAULT	Triggered when there are one or more faults.
ON TEST	Triggered when one or more points are in test.
IN INHIBIT MODE	Triggered when one or more points are in <i>inhibit mode</i> .

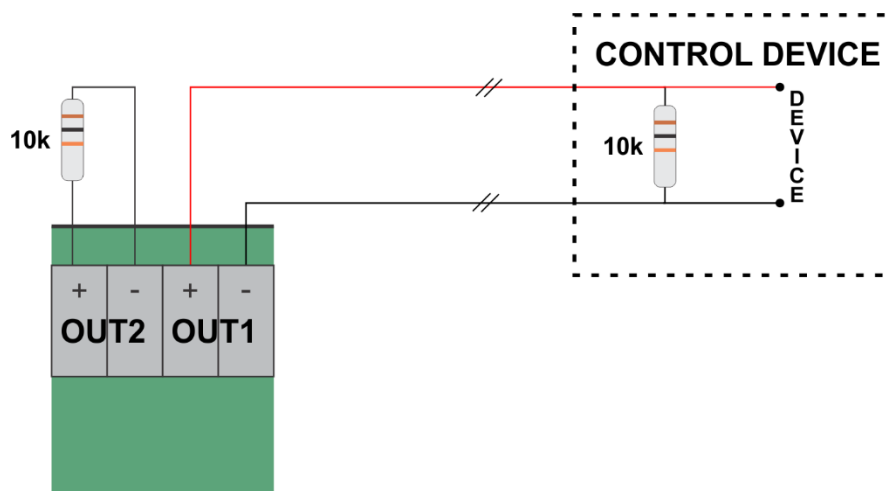


Figure 16

### 3.8 Configuration software (PC-7500)

The GR750x panel series is supported by the “PC-7500” PC software. It provides a user-friendly graphical interface for configuring and managing all the panel’s settings (download/upload/backup).

Software download available at: <https://www.olympia-electronics.com/en/support/software>

PC-7500 requirements:

- Operating system: Windows 10 64bit or higher.
- USB port: USB 2.0 or higher (for connection with the panel).

Panel’s communication with the PC software can be enabled from the **5.4.9 PC COMMUNICATION (USB)** menu. The connection credentials can be found in the **5.4.8 REMOTE CONNECTION** menu.

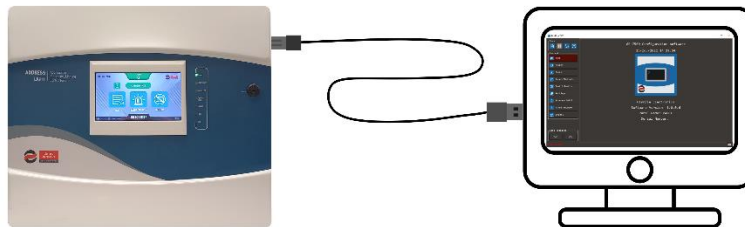


Figure 17

Panel/PC connection steps:

1. Unlock the panel’s door with it’s key to access the interior.
2. Connect the USB cable to the micro-USB port on the inner side of the panel (Figure 5) and to a USB port on the PC.
3. Go to the **5.4.9 PC COMMUNICATION (USB)** menu of the panel and remain there to keep the communication active.
4. On the PC, run the PC-7500 software.
5. If the connection is successful, the connection status on the software (Figure 18, “Panel connection status”) will change from “Disconnected” and display the name of the panel and its serial number.

Export/Download the configuration of the panel:

1. Press the download button (Figure 20, “Download from panel”), found in the “Data transfer” menu.
2. A login popup will appear. Enter the remote login credentials (for the “Technician” user) and press the login button. The credentials can be found in the **5.4.8 REMOTE CONNECTION** menu of the panel.

Import/Upload configuration to the panel:

1. Press the upload button (Figure 20, “Upload to panel”), found in the “Data transfer” menu.
2. When the upload is completed, the message on the panel should change to *“Configuration file ready to be applied”*.
3. Press the “APPLY” button on the panel menu, to apply the new configuration. A popup will ask for confirmation of the process.
4. **WARNING:** By pressing the “CONFIRM” button, the current panel configuration will be overwritten by the configuration file that was uploaded and the panel will restart with the new settings.

Figure 20 shows the application with the descriptions of the contents.

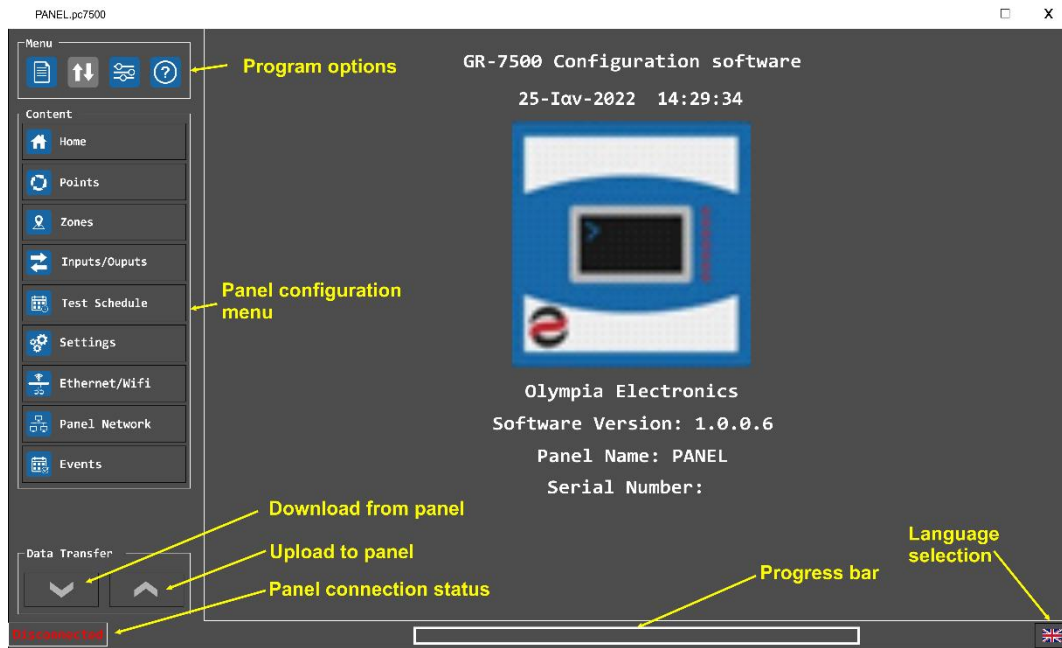


Figure 18

### 3.9 Printer paper replace

The paper type used by the printer is specified in Table 14. The procedure to replace the thermal paper roll is:

1. While pressing the open button (middle button with LED) on the thermal printer, pull its cover from the top right or top left side.
2. Remove the previous paper roll (if any).
3. Unroll the new paper roll a few centimeters and place it inside the printer, as shown in Figure 19.
4. Close the cover and tear any excess paper by pulling it upwards left or right.



Figure 19

Table 14 – Thermal printer paper specifications

Printer paper specifications	
Paper width	58 mm
Paper weight	from 55 to 70 g/m <sup>2</sup>
Maximum roll diameter	Ø 50mm

## 4 HOME SCREEN

The home screen is the default screen that displays when the panel powers up.



Figure 20

Description for each reference:

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| 1. Panel information                | 6. Points in inhibit mode list     |
| 2. Current fault counter/Fault list | 7. System date and time            |
| 3. Point status                     | 8. Enter MAIN/TECHNICIAN user menu |
| 4. Points in test list              | 9. Name of the current screen/menu |
| 5. Points in emergency list         |                                    |

## 4.1 Panel information

Pressing the panel information icon (Figure 21, ref 1) will open a popup with some basic panel information.

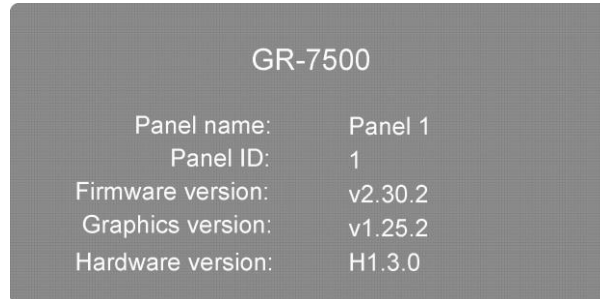


Figure 21

If there is a firmware update available for any of the panel subsystems, the icon and text color change to indicate it, as shown in the picture below:

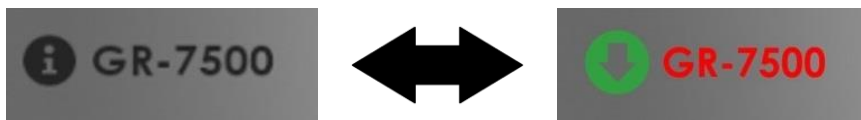


Figure 22

## 4.2 Current fault counter/Fault list

Shows the number of faults currently active on the panel (Figure 20, ref 2). If any fault is detected, the color of the fault indicator (“**FAULTS**” on the screen), changes from green to red and the number indicates how many faults are active/detected by the panel. By pressing the fault indicator at any time, a complete list of all faults is displayed (**6.2 CURRENT FAULTS**).

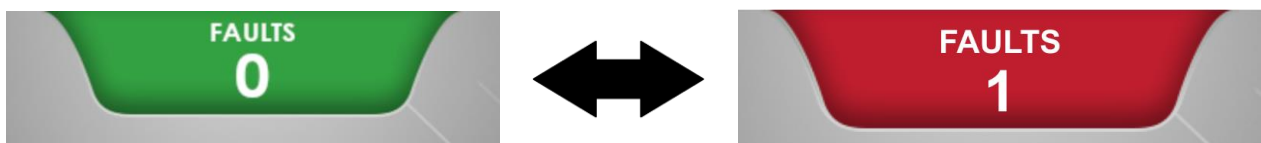


Figure 23

### 4.3 Point status

The status of the connected and registered points is displayed here (Figure 20, ref 3). If multiple points are in a different status, the most important/serious one is displayed. The possible statuses are described below.

#### 4.3.1 Charging/Fully charged status

Charging message means that at least one points in charging mode. Fully charged message means that all points connected to the panel are fully charged. While the system is not in test, emergency, inhibit, off command or cut off mode, the message “**CHARGING**” or “**FULLY CHARGED**” should be displayed on the screen (Figure 20, ref 3).

#### 4.3.2 Emergency status

The “**EMERGENCY**” message on the home screen (Figure 24, ref 1) indicates that at least one point is in emergency mode and the exact number is displayed in the upper right corner of the relevant icon (Figure 24, ref 2).

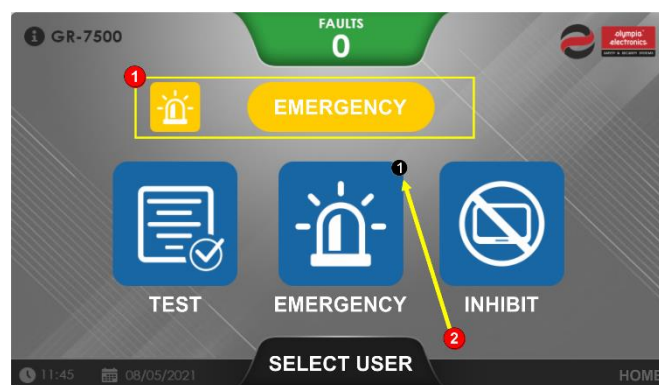


Figure 24

#### 4.3.3 Function/Duration test status

The “**DURATION/FUNCTION TEST**” message on the home screen (Figure 25, ref 1) indicates that at least one point is in function/duration test and the exact number is displayed in the upper right corner of the relevant icon (Figure 25, ref 2).

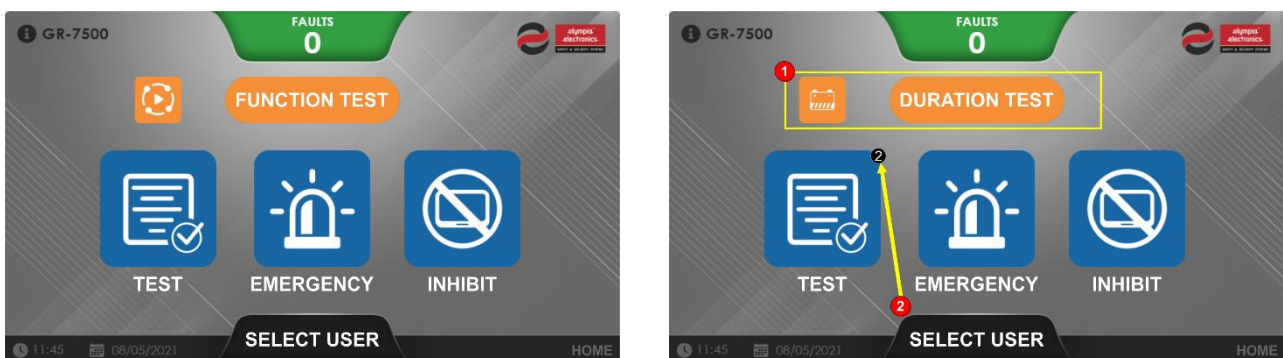


Figure 25

#### 4.3.4 Inhibit status

The **“INHIBIT MODE”** message on the home screen (Figure 26) indicates that at least one point is in inhibit mode.

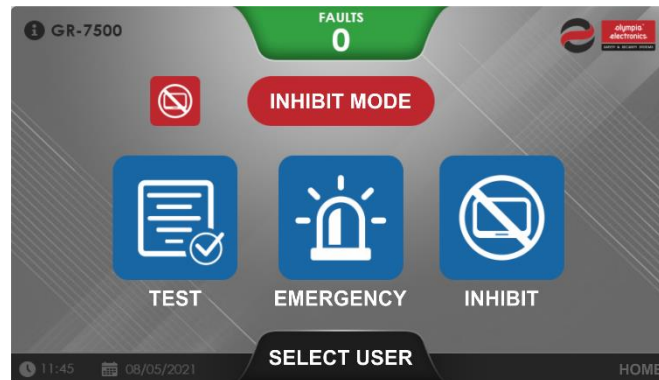


Figure 26

#### 4.3.5 Cut off Status

The **“CUT OFF”** message on the screen (Figure 27) indicate that the panel’s battery voltage dropped below of certain safety threshold, and it is starting its shutdown sequence, to avoid problematic and unintended behavior. The panel will power up again when the mains supply is restored.

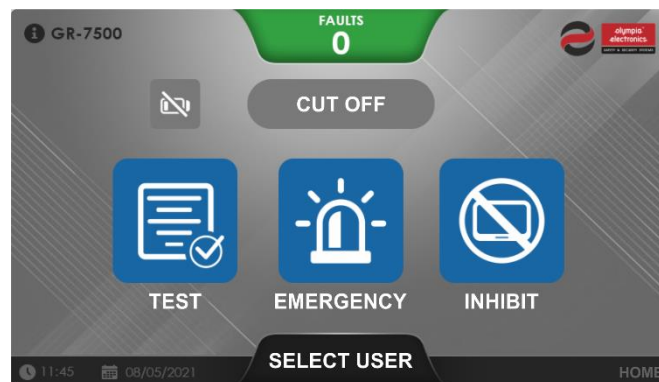


Figure 27

#### 4.4 Points in test

By selecting the **“IN TEST”** icon (Figure 20, ref 4), a list of all the points being tested is displayed.

#### 4.5 Points in emergency

By selecting the **“IN EMERGENCY”** icon (Figure 20, ref 5), a list of all the points that are in emergency mode is displayed.

## 4.6 Points in inhibit mode

By selecting the “**INHIBIT**” icon (Figure 20, ref 6) a list of all points that are in *inhibit mode* is displayed.

## 4.7 Select MAIN/TECHNICIAN user menu

By selecting the “**SELECT USER**” icon (Figure 20, ref 8), you have the options to choose between **MAIN** or **TECHNICIAN** user (Figure 28). Selecting either of them will open a menu with all the available options for that user. Please note that to access the technician menu, the tech code must be entered (ref. to chapter 5 **TECHNICIAN MENU**).

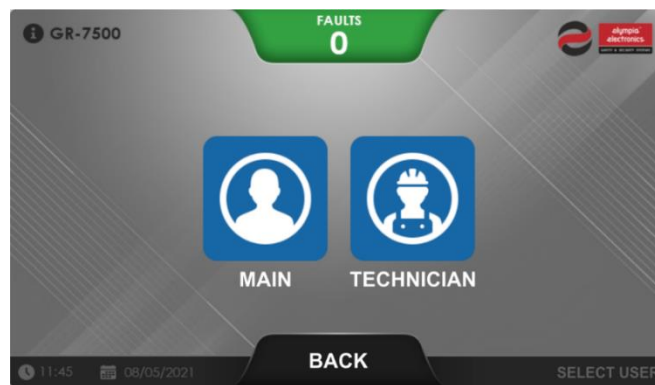


Figure 28

## 4.8 Duration test postpone indicator

The indicator appears when there was a scheduled duration test, but it could not be completed. In that case the test is postponed until the required conditions are met and the indicator (Figure 29, ref 1) appears to inform the user.

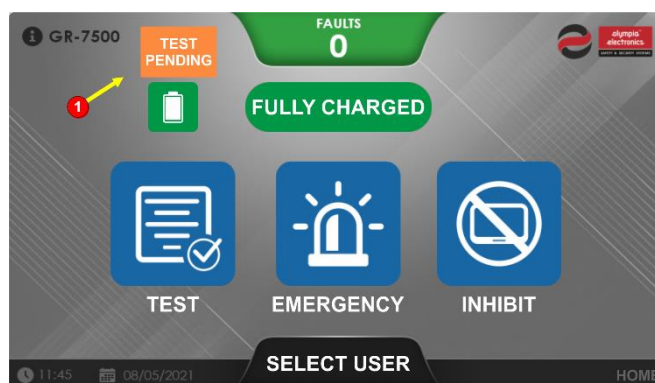


Figure 29

## 4.9 Annual check pending indicator

The indicator appears (Figure 32, ref 1) when the scheduled annual check of the panel, has not been performed on the due date. This option can be enabled/disabled and configured in the **5.4.4 ANNUAL CHECK WARNING** menu.

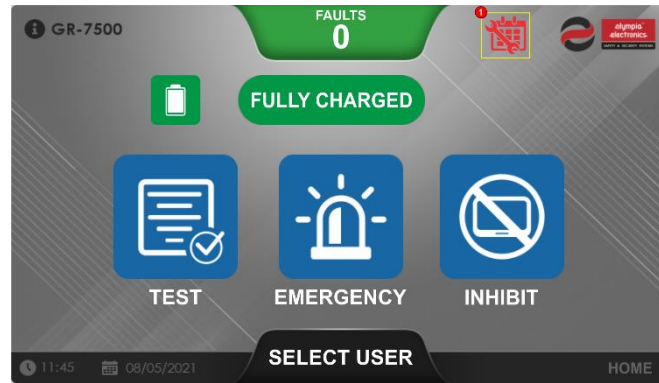


Figure 30

## 5 TECHNICIAN MENU

The technician menu contains a set of setup/configuration functions, system settings and is password protected, to prevent access to unauthorized personnel. To enter the technician menu, while on the home screen press “**SELECT USER**” and then “**TECHNICIAN**”.

The default technician code is “**111111**” and can be changed from the relevant menu.

All the available options of the menu are listed below:

### TECHNICIAN USER

- **CLEAR EVENT LOG**

- **CLEAR FAULTS**

- ↳ **TEST**

- SET FUNCTION TEST
- SET DURATION TEST
- START FUNCTION TEST
- START DURATION TEST
- STOP TEST
- TEST PRINTER
- TEST LED INDICATORS

- ↳ **CHECK**

- LOOP
- POINT
- PANELS NETWORK
- POWER MANAGEMENT
- INPUTS
- OUTPUTS
- PANEL RELAYS
- PRINTER
- ANNUAL CHECK







- ↳ **SETUP**

- CONFIGURE POINT
- FIND ALL POINTS
- CHANGE POINT ADDRESS
- INSTALLED LOOPS
- OUTPUTS/AUX RELAY
- INPUTS
- DELETE ALL POINTS
- INHIBIT LOCK
- ↳ **PANEL NETWORK**
  - PANEL NETWORK CONFIGURATION
  - PANEL NETWORK PARAMETERS
  - GROUP FORMATION

- ↳ **SETTINGS**

- LANGUAGE
- TIME AND DATE
- ETHERNET/WIFI
- ANNUAL CHECK WARNING
- PRINTER
- CHANGE TECH. CODE
- TECHNICIAN INFORMATION
- REMOTE CONNECTION
- PC COMM.
- FACTORY RESET
- MANUFACTURER MENU
- FIRMWARE UPDATE








Table 15 – Technician menu options

MENU NAME	DESCRIPTION	ICON
<b>TEST</b>	Includes submenus with all the test that the panel can do automatically or manually, and their settings.	
<b>CHECK</b>	Includes submenus to check the panel and its connected devices.	
<b>SETUP</b>	Includes submenus to configure the panel.	
<b>SETTINGS</b>	Includes submenus with system settings.	
<b>CLEAR EVENT LOG</b>	Clears the event log of the system.	
<b>CLEAR FAULTS</b>	Resets the faults and status of the panel.	

## 5.1 TEST

The following options are available when entering the main **TEST** menu (table 16). You can navigate the menu by swiping on the screen left or right and selecting the option in the middle. All available test procedures and their configuration can be found in this menu. The panel can perform them automatically or manually.

Table 16 – Test menu options

MENU OPTION	DESCRIPTION	ICON
<b>SET FUNCTION TEST</b>	Configuration of the automatic function test of the connected points.	
<b>SET DURATION TEST</b>	Configuration of the automatic duration test of the connected points.	
<b>START FUNCTION TEST</b>	Sends the command to start a function test at the points of the selected zone.	
<b>START DURATION TEST</b>	Sends the command to start a duration test at the points of the selected zone.	
<b>STOP TEST</b>	Sends the command to stop all running tests on all connected points.	
<b>TEST PRINTER</b>	Sends a test print page to the thermal printer (if it is available).	
<b>TEST LED INDICATORS</b>	Lights up all front panel LED indicators for about 5 seconds.	

### 5.1.1 SET FUNCTION TEST

Configuration screen for the automatic function test of the connected points. Frequency and time of the test can be adjusted. There is the option to apply this setting to all panels of the *panel network* or to the current panel only. The test is performed on the selected time for the selected days of the week. At least one day must be selected.

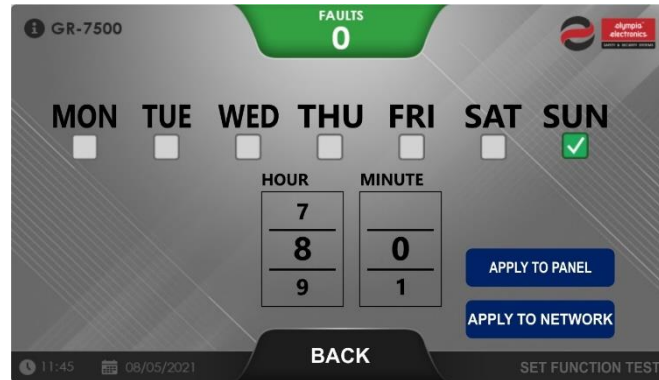


Figure 31

### 5.1.2 SET DURATION TEST

Configuration screen for the two automatic duration tests of the connected points. Each test can be enabled/disabled and its date and time can be configured. There is the option to apply this setting to all panels of the *panel network* or to the current panel only. It is recommended to perform the test twice a year, once every 6 months and not at the same time with a function test.

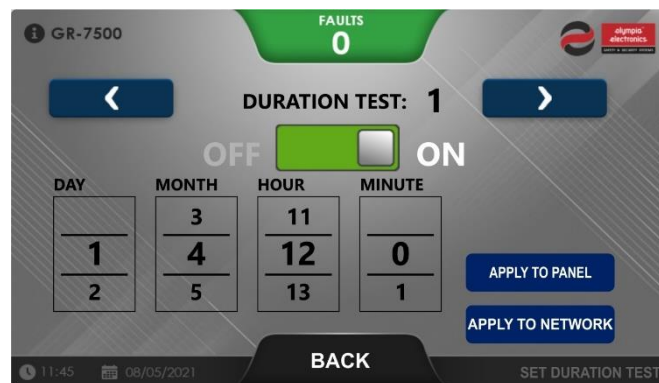


Figure 32

### 5.1.3 START FUNCTION TEST

Menu to start a manual function test for all zones or a specific one. There is the option to send this command to all panels of the *panel network* or to the current panel only.



#### **5.1.4 START DURATION TEST**

Menu to start a manual duration test for all zones or a specific one. There is the option to send this command to all panels of the *panel network* or to the current panel only.

#### **5.1.5 STOP TEST**

Menu to stop all running tests on all connected points.

#### **5.1.6 TEST PRINTER**

Prints a test page from the thermal printer (if it is available) to verify its proper operation.






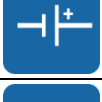
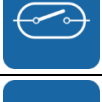


#### **5.1.7 TEST INDICATORS**

Lights up all front panel LED indicators for about 5 seconds, to verify that all are operational.

## 5.2 CHECK

This menu includes a set of screens to get detailed info for the panel and its connected devices. To navigate the menu, swipe to the left or to the right and select the option in the middle.

Table 17 – Check menu options

MENU NAME	DESCRIPTION	ICON
<b>LOOP</b>	Displays information about the connected loop circuits.	
<b>POINT</b>	Displays information about the connected points.	
<b>PANEL NETWORK</b>	Displays information about the connected panels.	
<b>POWER MANAGEMENT</b>	Displays information about the power management board of the system.	
<b>INPUTS</b>	Displays information about the inputs of the panel.	
<b>OUTPUTS</b>	Displays information about the outputs of the panel.	
<b>RELAYS</b>	Displays information about the relays of the panel.	
<b>PRINTER</b>	Displays information about the thermal printer (if it is available).	
<b>ANNUAL CHECK</b>	Information about the annual technician maintenance check.	

### 5.2.1 LOOP

This menu displays information about the loop circuits of the panel. Press the left (<) or right (>) arrow buttons to change the selected loop.

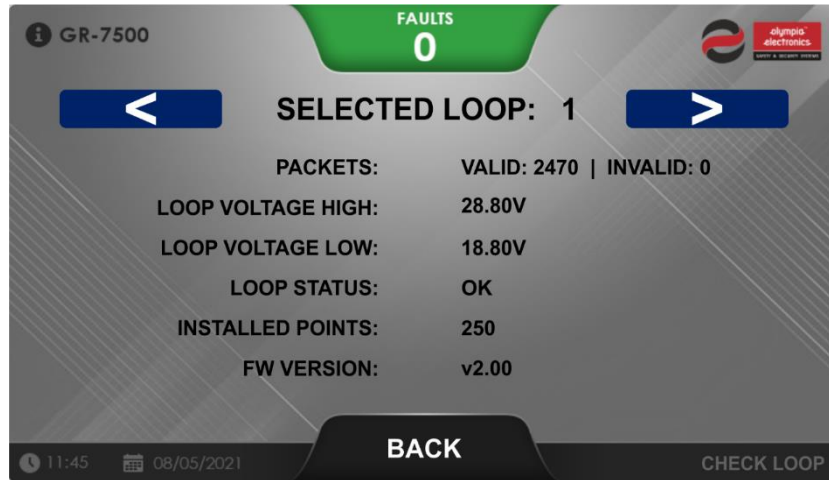


Figure 33

### 5.2.2 POINTS

This menu displays information about the points connected to the panel. Press the left (<) or right (>) arrow buttons to change the selected loop and/or point. There is the option to send commands to the selected point, by pressing the "SEND COMMAND" button at the bottom right of the screen.

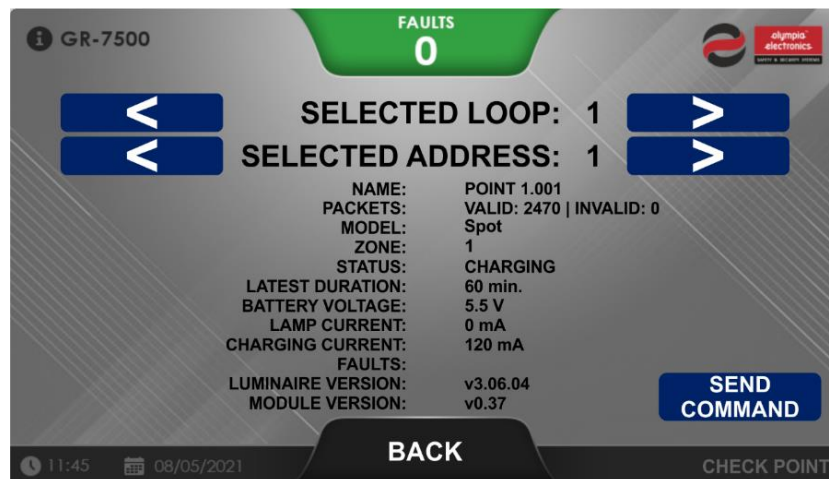


Figure 34

### 5.2.3 PANEL NETWORK

This menu displays information about the panel network that is connected to the current panel. Press the left (<) or right (>) arrow buttons to change the selected panel.

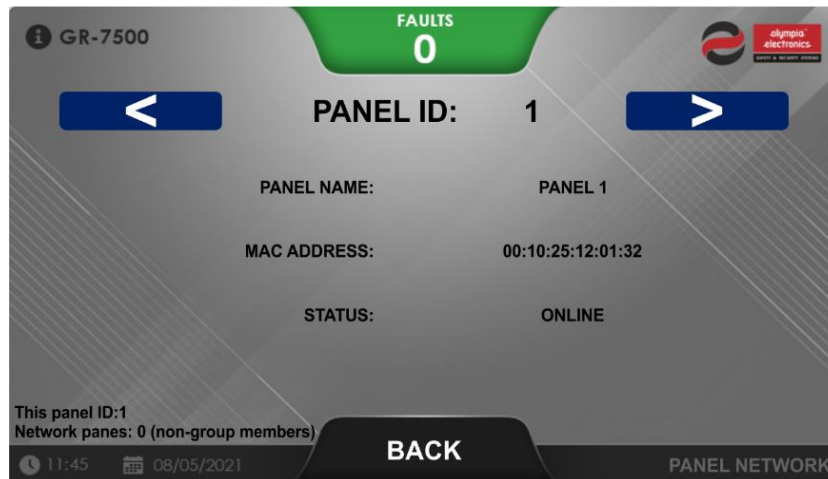


Figure 35

### 5.2.4 POWER MANAGEMENT

This menu displays information about the power management board of the system.

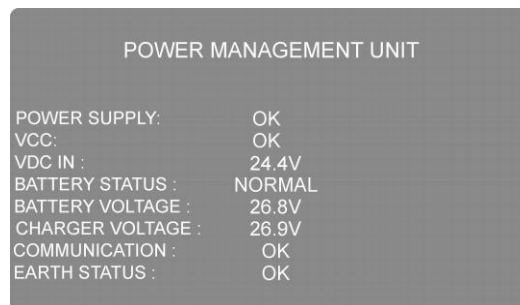


Figure 36

## 5.2.5 INPUTS

This menu displays information about the inputs of the panel.

INPUTS			
INPUTS	STATUS	TRIGGER ACTION	ZONE
INPUT 1:	NORMAL	FUNCTION TEST	ALL
INPUT 2:	NORMAL	INHIBIT	ALL
INPUT 3:	NORMAL	OFF COMMAND	ALL
INPUT 4:	NORMAL	RESET	ALL

Figure 37

## 5.2.6 OUTPUTS

This menu displays information about the outputs of the panel.

VOLTAGE OUTPUTS				
OUTPUT	STATUS:	ENABLED:	TRIGGER:	ZONE:
24VP :	NORMAL	YES		
24VM :	NORMAL	YES		
OUTPUT 1 :	NORMAL	NO	INHIBIT	ALL
OUTPUT 2 :	NORMAL	NO	TEST	ALL

Figure 38

## 5.2.7 RELAYS

This menu displays information about the relays of the panel. Pressing the "**CHECK**" button the system activates the relay to confirm its functionality.

PANEL RELAY OUTPUTS				
RELAY:	ACTIVATED:	LOGIC:	STATUS:	ZONE:
OPERATION	ALWAYS ON	POSITIVE	ACTIVE	ALL
SUPPLY	EMERGENCY	POSITIVE	INACTIVE	ALL
FAULT	FAULT	NEGATIVE	ACTIVE	ALL
AUX	FAULT	POSITIVE	ACTIVE	ALL

**CHECK**

Figure 39

## 5.2.8 PRINTER

This menu displays information about the thermal printer if it is installed (optional accessory).

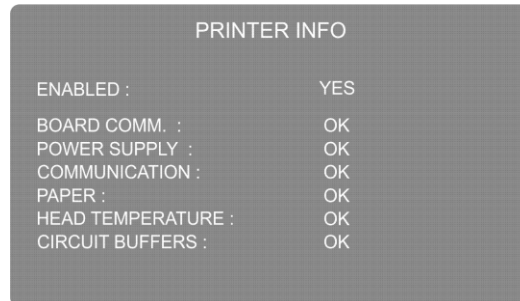


Figure 40

## 5.2.9 ANNUAL CHECK DONE

Menu to confirm that the annual maintenance inspection has been completed. The system will automatically set the date of the next check.

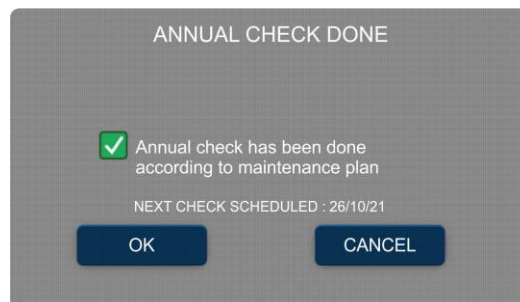











Figure 41

### 5.3 SETUP

This menu includes a set of screens to setup/configure the panel and its connected devices. To navigate the menu, swipe to the left or to the right and select the option in the middle.

Table 18 – Setup menu options

MENU NAME	DESCRIPTION	ICON
<b>CONFIGURE POINT</b>	Point configuration screen.	
<b>FIND ALL POINTS</b>	Automatic detection and registration of the connected points.	
<b>CHANGE POINT ADDRESS</b>	Screen to change the address of a point.	
<b>INSTALLED LOOPS</b>	Loop circuit setup screen.	
<b>OUTPUTS/AUX RELAY</b>	Output configuration screen.	
<b>INPUTS</b>	Input configuration screen.	
<b>DELETE ALL POINTS</b>	Menu to delete all registered points.	
<b>INHIBIT LOCK</b>	Menu to enable/disable the inhibit mode option.	
<b>PANEL NETWORK</b>	Menu with panel network configuration and group formation options.	

### 5.3.1 CONFIGURE POINT

Points and all their parameters can be configured in this screen. To register a point or change its parameters, after making all the desired changes, press the **“SAVE”** button. The **“DEFAULT”** button sets some parameters a standard value.

To select the point you want to edit/register, first select the panel it belongs to from the **PANEL** dropdown list. Then do the same with the **LOOP** dropdown list and type the desired point address in the **ADDRESS** field.

The configurable parameters of the points are:

- **Name:** The name of the point
- **Type:** The type of the point.
- **Zone:** The zone the point belongs to.
- **Model:** Model of the luminaire type point.

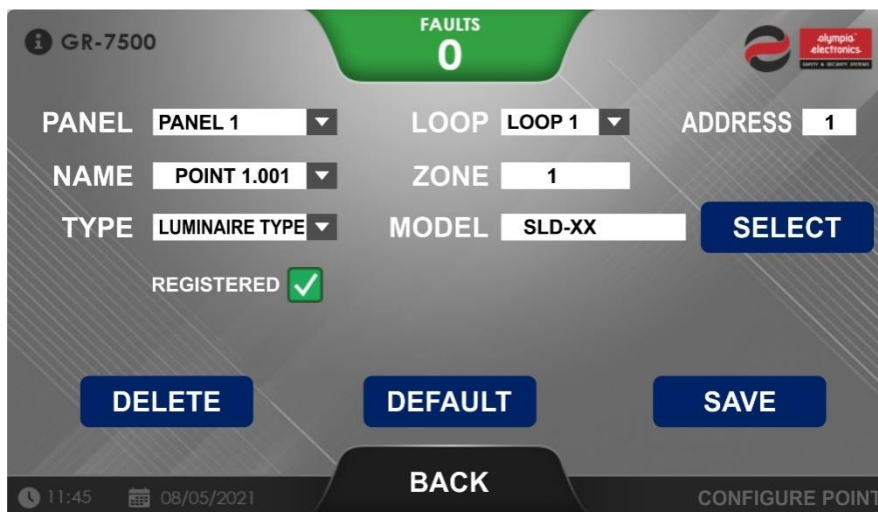


Figure 42

If the registered check box is green (like in the image above), it indicates that the point is registered.



**IMPORTANT**

No change is saved/takes effect until the **“SAVE”** button is pressed.

### 5.3.2 FIND ALL POINTS

This screen handles the procedure for automatic detection and registration of all connected points. There is the option to scan all loop circuits for points or a specific one. Pressing the **“START”** button, initiates the procedure for the selected loop. When the process completes the panel will clear all current faults and return to the home screen. The found points will be registered and belong to the zone corresponding to the loop they are connected to (LOOP 1 = ZONE 1 etc.). Pressing **“STOP”** the procedure terminates, the points found so far are registered, all current faults are cleared, and the panel returns to the home screen.



### **IMPORTANT**

When the **“FIND ALL POINTS”** procedure starts, **ALL** previous point configuration is lost. All connected points must have a unique address, per loop circuit.

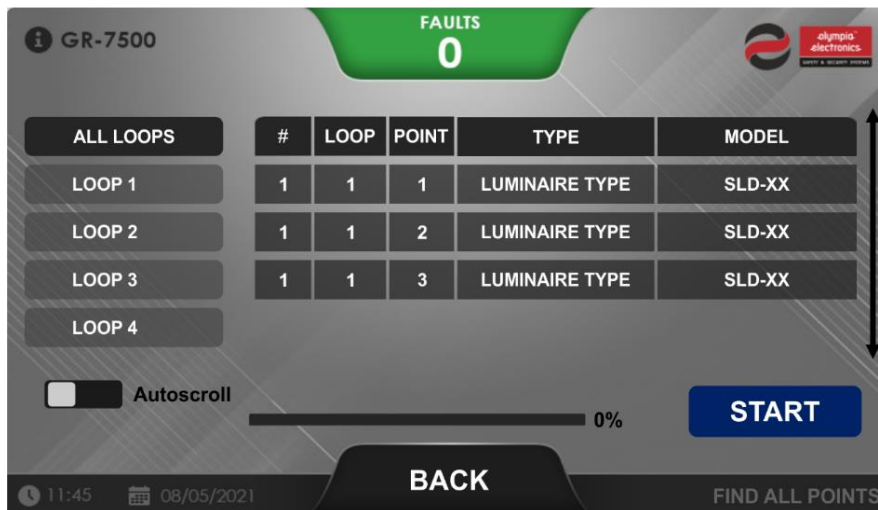


Figure 43

### 5.3.3 CHANGE POINT ADDRESS

This screen is used to change the address of the luminaires that do not use the DIP switch address selection method. First select the loop of the point whose address you want to change, by using the left and right arrow buttons. Then type the desired point address and press the “**CHANGE ADDRESS**” button. A command will be broadcasted to change the address of all points connected to the selected loop to the entered value.

Perform this operation with only one point connected to the loop you are operating on. A short 2-core cable can be used to connect the –L/+L contacts of the loop circuit, directly to the point. There is no need for loop return (closed loop topology) while configuring the point.



#### **IMPORTANT**

This option can only be used with points that **do not** use the DIP switch address selection method, such as ZLD-xx, GR-29x etc.

Do not use this function while more than one points are connected to the selected loop.

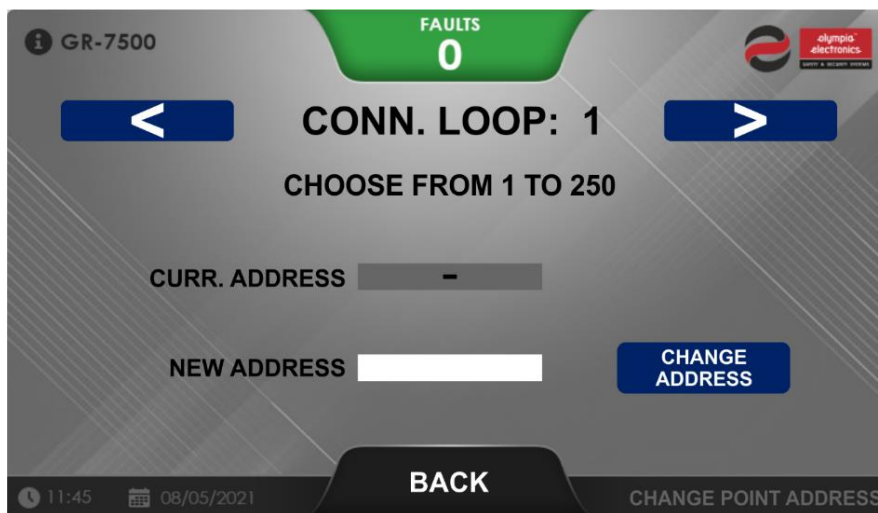



Figure 44

### 5.3.4 INSTALLED LOOPS

In this screen the loop circuits can be enabled/disabled. After the desired changes are made, the “**SAVE**” button must be pressed for them to take effect.



**IMPORTANT**

Do not enable a loop circuit that is not present on the system. Relevant faults will appear if the loops are not correctly selected (enabled).

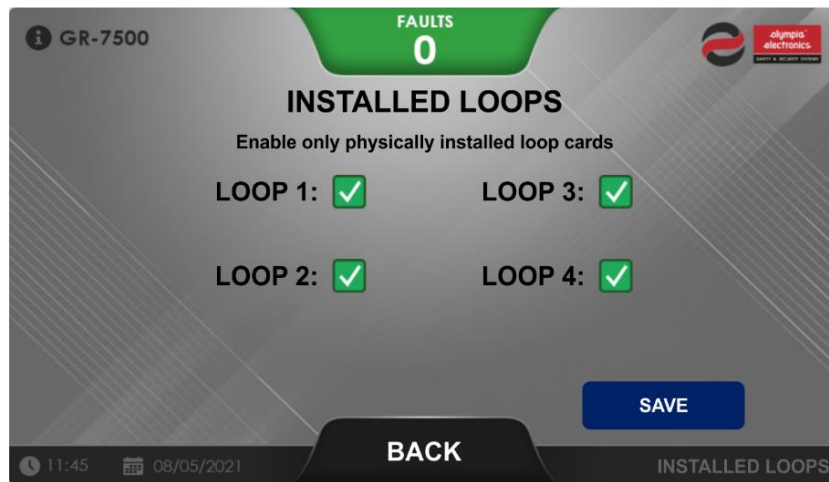


Figure 45

### 5.3.5 OUTPUTS/AUX RELAY

Configuration screen for the two programmable outputs and the auxiliary (AUX) relay of the panel. Refer to 2.3 *Panel relays* and 2.5 *Outputs* for more information about the available options.



Figure 46

### 5.3.6 INPUTS

Configuration screen for the inputs of the panel. Refer to 2.4 *Inputs* for more information about the available options.

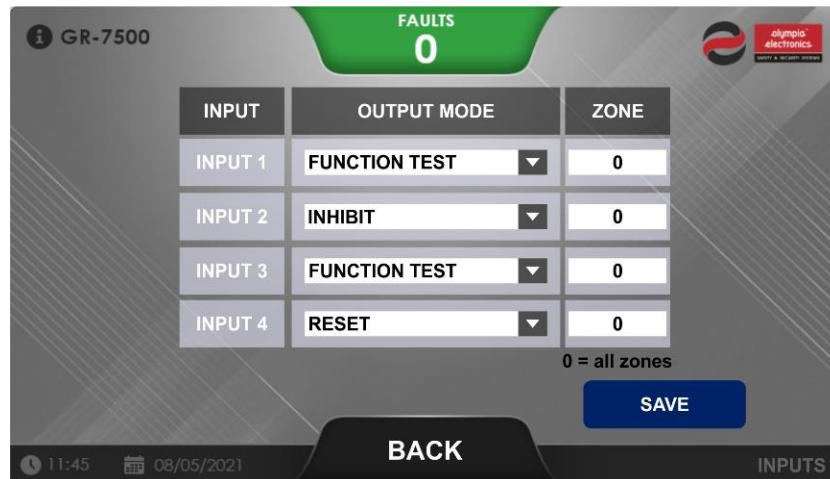


Figure 47

### 5.3.7 DELETE ALL POINTS

“**DELETE ALL POINTS**” option erases all registered points from the panel. The connected points will have to be registered again after this process, either manually (5.3.1 *CONFIGURE POINT*) or automatically (5.3.2 *FIND ALL POINTS*).

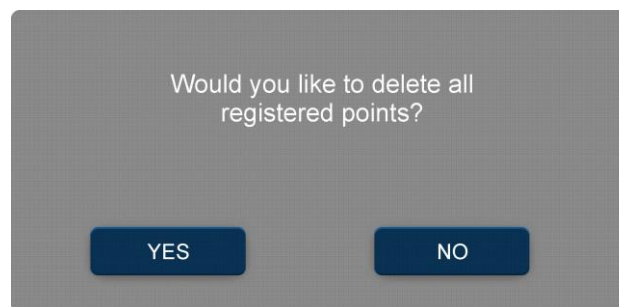


Figure 48

### 5.3.8 INHIBIT LOCK

Menu to enable/disable the inhibit command and the relevant options. The default configuration is “**UNLOCKED**” and the inhibit command can be send to the connected points.






Figure 49

### 5.3.9 PANEL NETWORK

Contains options related to the *panel network* configuration and formation.

Table 19 – Panel network menu options

MENU NAME	DESCRIPTION	ICON
<b>PANEL NETWORK CONFIGURATION</b>	Menu to enable/disable the panel network option the current panel.	
<b>PANEL NETWORK PARAMETERS</b>	Menu to edit the name and ID of the panel.	
<b>GROUP FORMATION</b>	Menu to start the <i>panel network</i> group formation process.	

#### 5.3.9.1 PANEL NETWORK CONFIGURATION

Menu to enable/disable the panel network. If it is disabled, no communication is possible with any of the connected panels, and it will not be included in any group formation.



Figure 50

### 5.3.9.2 PANEL NETWORK PARAMETERS

The name of the panel and its ID can be configured here and are used for easier identification of the panel in the *panel network*, from the other connected panels.

Another setting that can be configured, is the detection of faulty connections in case of a closed ring panel network topology. The option is applied to all panels in the network by pressing the “APPLY TO NETWORK” button (pressing the “SAVE” button, only panel name and ID are saved).

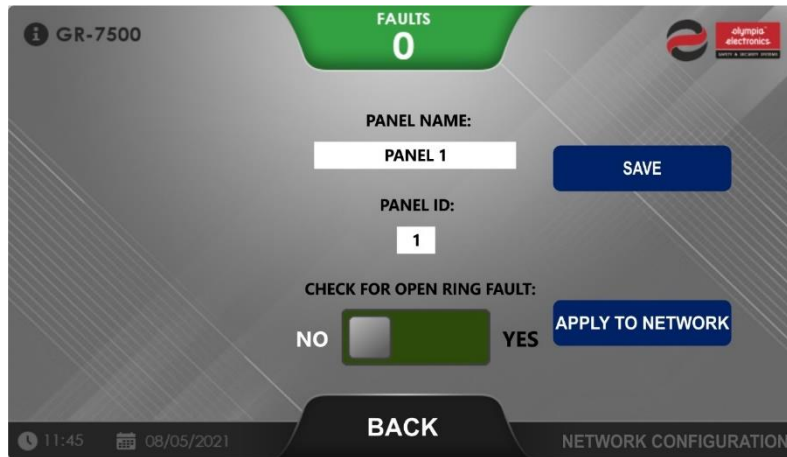


Figure 51

### 5.3.9.3 GROUP FORMATION

The formation of a network of panels, with all the connected panels, can be started here using the “**START**” button. When the “AUTO ID” option is enabled (automatic ID), the IDs of the panels are automatically adjusted starting from 1 and incrementing by one for each panel in the group. If the “AUTO ID” option is disabled (manual ID), the IDs of the panels won’t be changed during the procedure. If two or more panels have the same ID, the group formation will fail, and the ID conflict must be manually handled. It is recommended to use the automatic ID assignment.

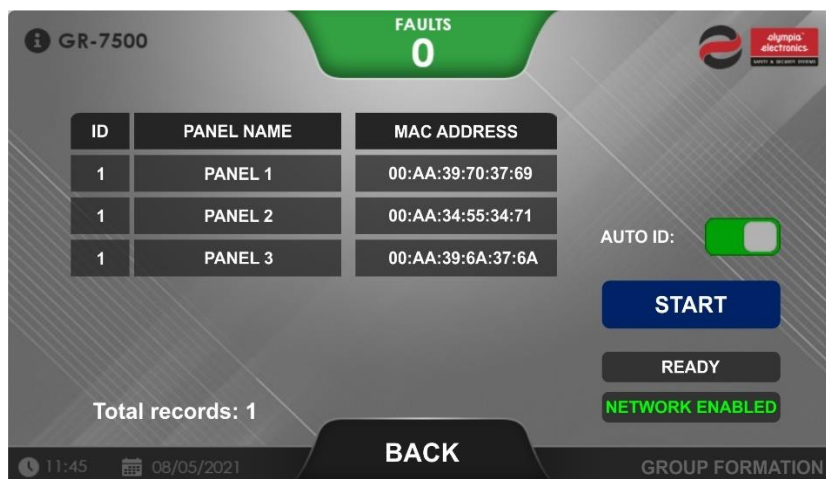













Figure 52

## 5.4 SETTINGS

System related options and configuration. To navigate the menu, swipe to the left or to the right and select the option in the middle.

Table 20 – Settings menu options

MENU NAME	DESCRIPTION	ICON
<b>LANGUAGE</b>	System language settings.	
<b>TIME AND DATE</b>	System time and date settings.	
<b>ETHERNET/WIFI</b>	ETHERNET/WIFI card settings.	
<b>ANNUAL CHECK WARNING</b>	Annual check warning message settings.	
<b>PRINTER</b>	Thermal printer settings.	
<b>CHANGE TECH. CODE</b>	Technician code change menu.	
<b>TECHNICAL INFORMATION</b>	Technician information edit menu.	
<b>REMOTE CONNECTION</b>	Remote connection credentials menu	
<b>PC COMM.</b>	PC communication menu	
<b>FACTORY RESET</b>	Reset system settings to the factory defaults values.	
<b>FIRMWARE UPDATE</b>	Firmware update menu.	

### 5.4.1 LANGUAGE

Configuration screen for the language of the system's graphical interface. There is the option to apply this setting to all panels of the *panel network* or to the current panel only.

## 5.4.2 TIME AND DATE

Configuration screen for the system time and date. There is the option to apply this setting to all panels of the *panel network* or to the current panel only.

## 5.4.3 ETHERNET/WIFI

Configuration screen for the Ethernet and Wi-Fi adapters available on the ETHERNET/WIFI card.

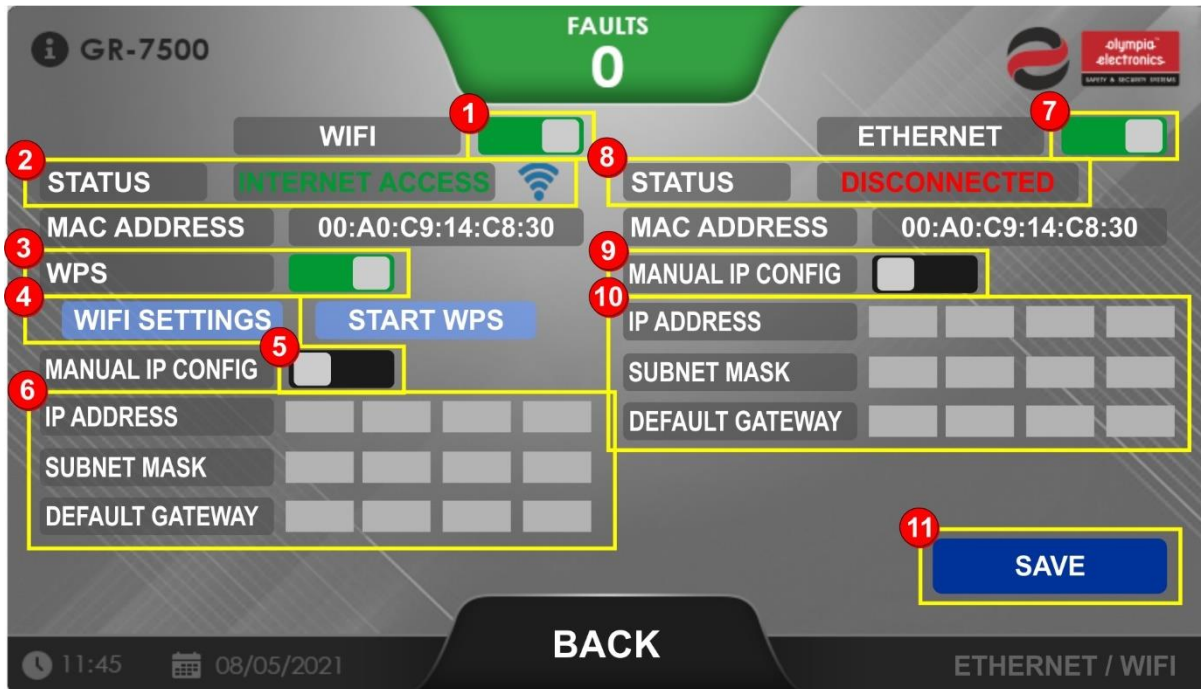
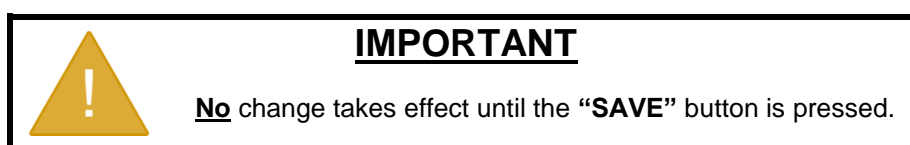


Figure 53

Description of each reference:

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. Wi-Fi adapter setting (Enable/Disable).</li> <li>2. Wi-Fi connection status.</li> <li>3. WPS setting (Enable/Disable).</li> <li>4. Wi-Fi credentials edit and WPS start button (<u>must save the settings first</u>).</li> <li>5. Wi-Fi manual IP configuration.</li> <li>6. Wi-Fi IP settings/status. If manual Wi-Fi IP configuration is active, the fields become editable.</li> </ol> | <ol style="list-style-type: none"> <li>7. Ethernet adapter setting (Enable/Disable).</li> <li>8. Ethernet connection status.</li> <li>9. Ethernet manual IP configuration.</li> <li>10. Ethernet IP settings/status. If manual Ethernet IP configuration is active, the fields become editable.</li> <li>11. Save settings button.</li> </ol> |
|---|---|





#### 5.4.4 ANNUAL CHECK WARNING

Enable/Disable the annual check warning message and configure the date of the next panel maintenance inspection.

#### 5.4.5 PRINTER

Enable/Disable the thermal printer. The thermal printer is an optional accessory, and it is not installed on all panels of the series. If the panel does not have a thermal printer installed, this option should be set to disabled.

#### 5.4.6 CHANGE TECH. CODE

In this screen, it is possible to change the current technician code. The length of the code must be 6 digits. For safety reasons the current code must be entered, and the desired code must be entered two times for confirmation.

The default technician code of the panel is “111111”.



### **WARNING**

If the technician code is changed, make sure to write the new code down and keep it somewhere safe.

#### 5.4.7 TECHNICIAN INFORMATION

Configuration screen for technician contact information (name, address, phone).

### 5.4.8 REMOTE CONNECTION

This menu handles the remote connection credentials (PC communication and WebUI). The usernames are predefined, but the passwords can be configured separately for each access level (**User** or **Technician**).

The default password for the “**user**” is “**0000**” and the “**tech**” is “**1111**”.

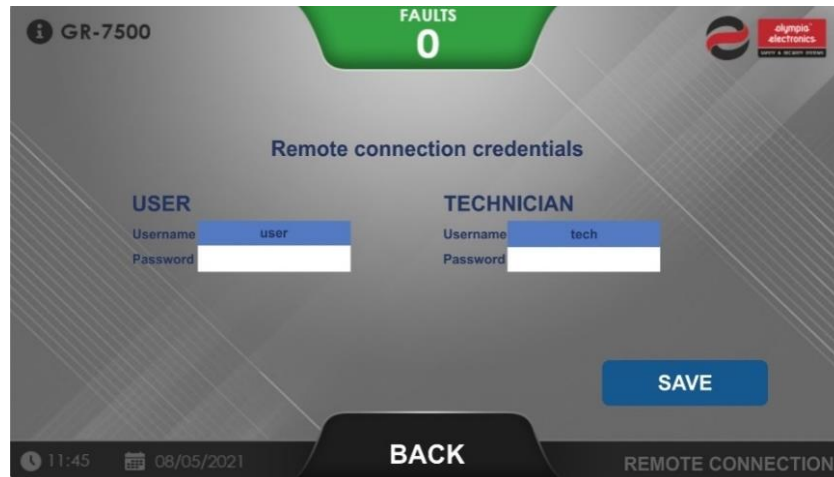


Figure 54

### 5.4.9 PC COMMUNICATION (USB)

This menu enables the PC communication through the mini-USB port on the panel. The connection is active, only while the panel remains in this screen. Leaving it for any reason terminates the connection between the PC and the panel.

Connect the panel with a USB cable to the PC and perform the desired actions from the PC-7500 software. If a configuration file is successfully downloaded and ready to be applied, a relevant message will be displayed, and the button “APPLY” will become active. By pressing it and confirming the action, the new settings are saved. The panel may restart, depending on the changes made.

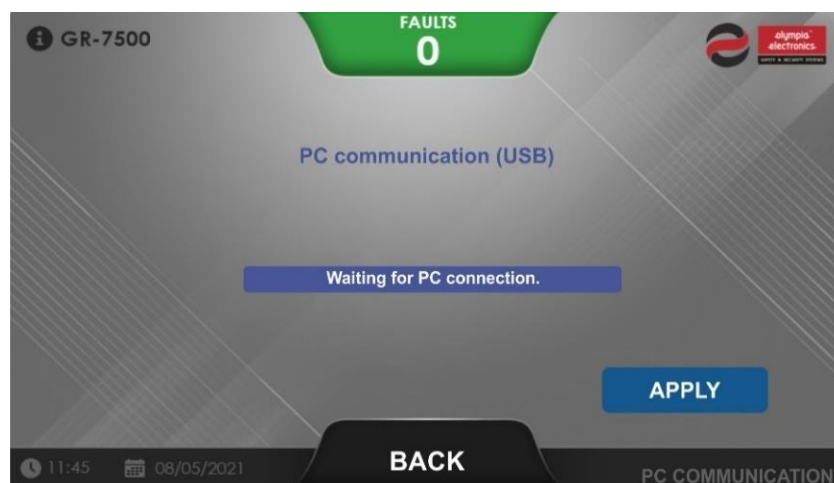


Figure 55

#### 5.4.10 FACTORY RESET

Option to reset system settings to the factory default values.

#### 5.4.11 FIRMWARE UPDATE

Firmware update menu using any available internet connection. If there is an available update for the firmware of the panel or the ETHERNET/WIFI card, the update process can be started, after the user confirms it. The typical update time is around 12-15 minutes for the panel and 5 minutes for the ETHERNET/WIFI card.



### **WARNING**

During the update process the panel will NOT operate as expected from a control panel for emergency luminaires (it will be running the update process). Perform the update only if certain that during the update process no safety issues will arise.

#### 5.5 CLEAR EVENT LOG

Option to clear the current event log and erase all events logged so far.

#### 5.6 CLEAR FAULTS

Option to clear all currently active faults and reset the panel status.







## 6 MAIN USER

To access the **main user** menu, while on the home screen, select “**SELECT USER**” and then press the “**MAIN**” icon. All the available options of the menu are listed below:

### MAIN USER

- TEST LED INDICATORS
- CLEAR FAULTS
- CURRENT FAULTS
- EVENT LOG
- ↳ INFORMATION
  - ↳ ZONES
    - ZONES IN TEST
    - ZONES IN EMERGENCY
    - ZONES IN FAULT
    - POINTS PER ZONE
  - POINTS
  - LOOPS
  - PANEL RELAYS
  - INPUTS
  - OUTPUTS
  - PANEL NETWORK
  - POWER MANAGEMENT
  - ETHERNET/WIFI
  - ANNUAL CHECK DATE
  - SYSTEM VERSION
  - TECHNICIAN INFORMATION
- ↳ LUMINAIRE COMMANDS
  - INHIBIT MODE
  - CLEAR COMMANDS
  - RESET FAULTS
  - RESET SOFTWARE
  - FUNCTION TEST

Table 21 – Main user menu options

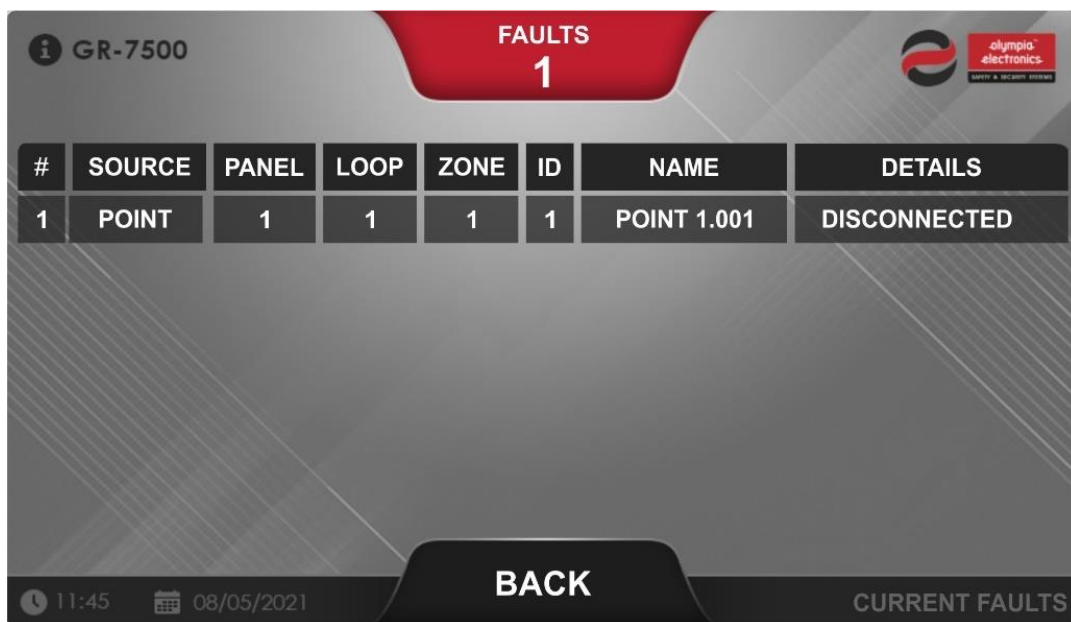
MENU NAME	DESCRIPTION	ICON
<b>CLEAR FAULTS</b>	Resets the faults and status of the panel.	
<b>CURRENT FAULT</b>	Displays a list of the current faults	
<b>EVENT LOG</b>	Displays the event log of the panel.	
<b>INFORMATION</b>	Options that provide detailed information about the system	
<b>LUMINAIRE COMMANDS</b>	Options to broadcast commands to the connected points	
<b>TEST LED INDICATORS</b>	Temporarily turn on all LED indicators (~5s), at the front of the panel, to confirm functionality.	

## 6.1 CLEAR FAULTS

Option to clear all currently active faults and reset the panel status.

## 6.2 CURRENT FAULTS

A list with all active system faults is displayed on the screen.



#	SOURCE	PANEL	LOOP	ZONE	ID	NAME	DETAILS
1	POINT	1	1	1	1	POINT 1.001	DISCONNECTED

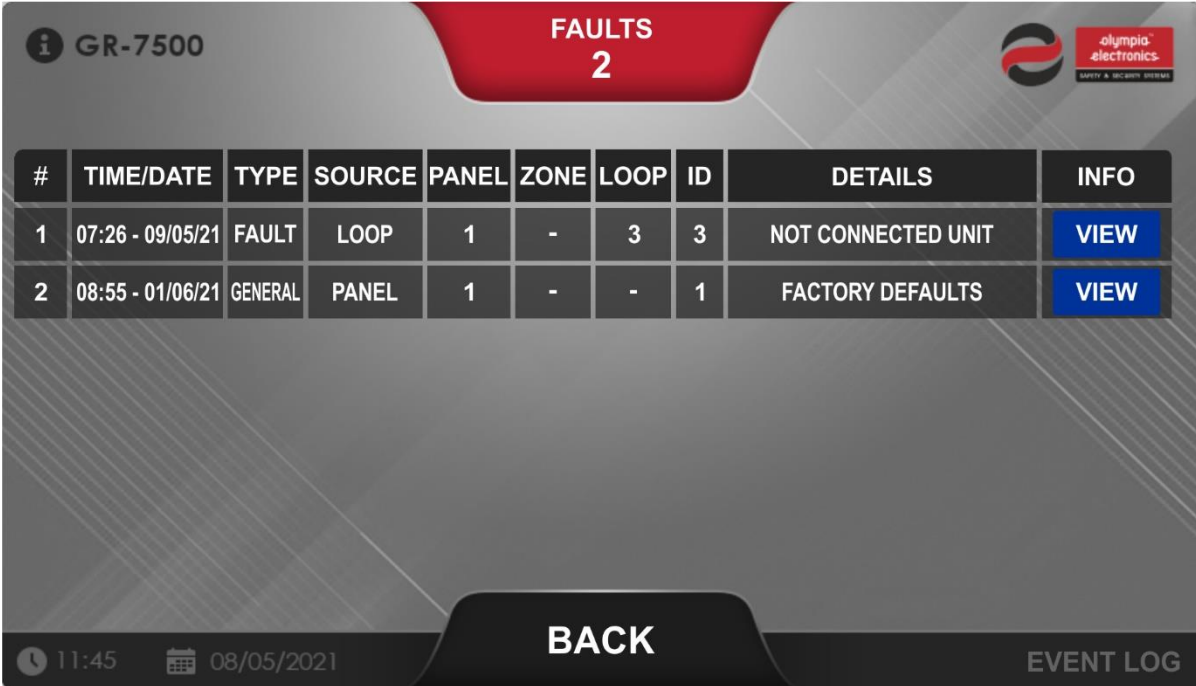
Figure 56

Description of each column:

- **SOURCE:** Origin of the fault, what part of the system the fault corresponds to. For example, if the fault originates from a point, the source is “**POINT**”.
- **PANEL:** ID of the panel the fault corresponds.
- **LOOP:** Number of the loop card the fault corresponds (if it is relevant to a loop circuit).
- **ZONE:** Number of the zone the fault corresponds (if it is relevant to a zone).
- **ID:** ID/Address of the component/point (if applicable).
- **NAME:** Name of the component/point (if applicable).
- **DETAILS:** Brief description of the fault.

## 6.3 EVENT LOG

Shows the recorded events of the panel in chronological order, based on the time they were recorded by the panel (from the most recent to the oldest). The system can store up to 6000 events. If this limit is reached, the oldest event is overwritten by the new one and so on.



The screenshot shows a mobile interface for the GR-7500 control panel. At the top, it displays 'GR-7500' and 'FAULTS 2'. Below this is a table with the following data:

#	TIME/DATE	TYPE	SOURCE	PANEL	ZONE	LOOP	ID	DETAILS	INFO
1	07:26 - 09/05/21	FAULT	LOOP	1	-	3	3	NOT CONNECTED UNIT	<a href="#">VIEW</a>
2	08:55 - 01/06/21	GENERAL	PANEL	1	-	-	1	FACTORY DEFAULTS	<a href="#">VIEW</a>

At the bottom of the screen, there is a 'BACK' button and an 'EVENT LOG' label. The status bar at the very bottom shows the time '11:45' and the date '08/05/2021'.

Figure 57













Description of each column:

- **TIME/DATE:** System time and date the event was recorded.
- **TYPE:** The type of the event (info, fault, general etc.).
- **SOURCE:** The source of the event. For example, if a fault occurs to a point, "POINT" will be displayed as the source of the fault, if a fault occurs to the panel, "PANEL" will be displayed as the fault source, etc.
- **PANEL:** The ID of the panel where the event was recorded.
- **LOOP:** Loop number, if the event is relevant to loop.
- **ZONE:** Zone number if the event is relevant to zone.
- **ID:** ID/Address of the component/point.
- **DETAILS:** Brief descriptions of the event.
- **VIEW:** Pressing this button opens a popup window with more detailed event information.

## 6.4 INFORMATION

The following options are available when entering the information menu (Table 22). To navigate the menu, swipe to the left or to the right and select the option by touching in the middle.





Table 22 – Information menu options

MENU NAME	DESCRIPTION	ICON
<b>ZONES</b>	Zone menu includes information about the zones of the panel, such as ZONES IN TEST, ZONES IN FAULT etc.	
<b>POINTS</b>	List of all registered points with detailed information.	
<b>LOOPS</b>	Information about the loop circuits of the panel.	
<b>PANEL RELAYS</b>	Information about the relays of the panel.	
<b>INPUTS</b>	Information about the inputs of the panel.	
<b>OUTPUTS</b>	Information about the outputs of the panel.	
<b>PANEL NETWORK</b>	Information about the connected panels (panel network).	
<b>POWER MANAGEMENT</b>	Information about mains power supply, battery status etc.	
<b>ETHERNET / WIFI</b>	Information about the Ethernet/Wi-Fi card and the internet status.	
<b>ANNUAL CHECK DATE</b>	Date of the last maintenance check and when the next one is scheduled.	
<b>VERSION INFORMATION</b>	Version information for the components of the system.	
<b>TECHNICIAN INFO</b>	Technician contact information such as telephone number, name, address.	

## 6.4.1 ZONES

Menu with information for the zones of the panel. To navigate the menu, swipe to the left or to the right and select the option by touching in the middle.

Table 23 – Zone menu options

MENU NAME	DESCRIPTION	ICON
<b>ZONES IN TEST</b>	List of zones with points in test.	
<b>ZONES IN EMERGENCY:</b>	List of zones with points in emergency.	
<b>ZONES IN FAULT:</b>	List of zones with faults.	
<b>POINTS PER ZONE:</b>	Number of points per zone.	

## 6.4.2 POINTS

Displays a list of all the registered points.



Figure 58

Description for each column:

- **ADDRESS:** ID of the point.
- **LOOP:** Loop number.
- **ZONE:** Zone number.
- **POINT TYPE:** Displays the type of the device (point, address module).
- **MODEL:** The model of the point.
- **NAME:** The name of the point.
- **INFO:** By pressing **VIEW** (Figure 58, ref 1), a pop-up window appears with detailed information about the selected point.
- **COMMAND:** By pressing **SEND** (Figure 58, ref 2), a pop-up window with the available commands for the selected point is displayed (Figure 59). Description for each command can be found in Table 6 – Luminaire commands



Figure 59

### 6.4.3 LOOPS

Displays information about the connected loop circuits (Figure 60).

LOOP INFORMATION				
	LOOP1	LOOP2	LOOP3	LOOP4
STATUS :	OK	OK	OK	OK
COMMUNICATION :	OK	OK	OK	OK
POINTS :	50	120	150	100
TOTAL LOOPS :	4			
TOTAL POINTS :	420			

Figure 60

### 6.4.4 PANEL RELAYS

Displays information about the relays (Figure 61).

PANEL RELAY OUTPUTS				
RELAY:	ACTIVATED:	LOGIC:	STATUS:	ZONE:
OPERATION	ALWAYS ON	POSITIVE	ACTIVE	ALL
SUPPLY	EMERGENCY	POSITIVE	INACTIVE	ALL
FAULT	FAULT	NEGATIVE	ACTIVE	ALL
AUX	DISABLED	POSITIVE	INACTIVE	ALL

Figure 61

### 6.4.5 INPUTS

Displays information about the inputs (Figure 62).

INPUTS			
INPUTS	STATUS	TRIGGER ACTION	ZONE
IN1:	NORMAL	FUNCTION TEST	ALL
IN2:	NORMAL	INHIBIT	ALL
IN3:	NORMAL	FUNCTION TEST	ALL
IN4:	NORMAL	INHIBIT	ALL

Figure 62

## 6.4.6 OUTPUTS

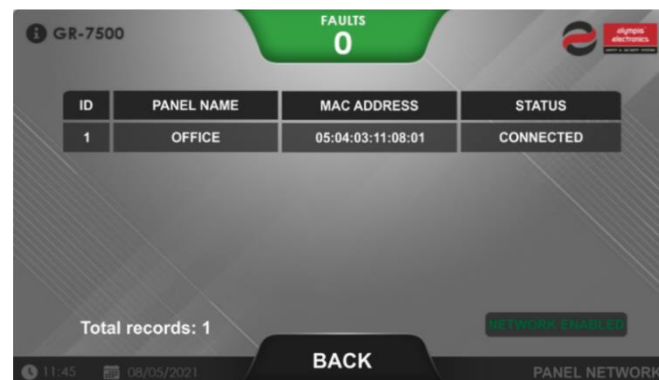
Displays information about the outputs (Figure 63).

VOLTAGE OUTPUTS				
OUTPUT	STATUS:	ENABLED:	TRIGGER:	ZONE:
24VP :	NORMAL	YES		
24VM :	NORMAL	YES		
OUTPUT 1 :	NORMAL	NO	INHIBIT	ALL
OUTPUT 2 :	NORMAL	NO	TEST	ALL

Figure 63

## 6.4.7 PANEL NETWORK

Displays a list of all the panels in network, along with the name, MAC address and connection status of each panel.



ID	PANEL NAME	MAC ADDRESS	STATUS
1	OFFICE	05:04:03:11:08:01	CONNECTED

Total records: 1

BACK

PANEL NETWORK

Figure 64

## 6.4.8 POWER MANAGEMENT

Displays information about the power management board (Figure 65).

POWER MANAGEMENT UNIT	
POWER SUPPLY:	OK
VCC:	OK
VDC IN :	24.4V
BATTERY STATUS :	NORMAL
BATTERY VOLTAGE :	26.8V
CHARGER VOLTAGE :	26.9V
COMMUNICATION :	OK
EARTH STATUS :	OK

Figure 65

## 6.4.9 ETHERNET/WIFI

Displays information about the status and configuration of the Ethernet/Wi-Fi card. Options cannot be changed in this screen. For configuration options go to chapter **5.4.3 ETHERNET/WIFI**.

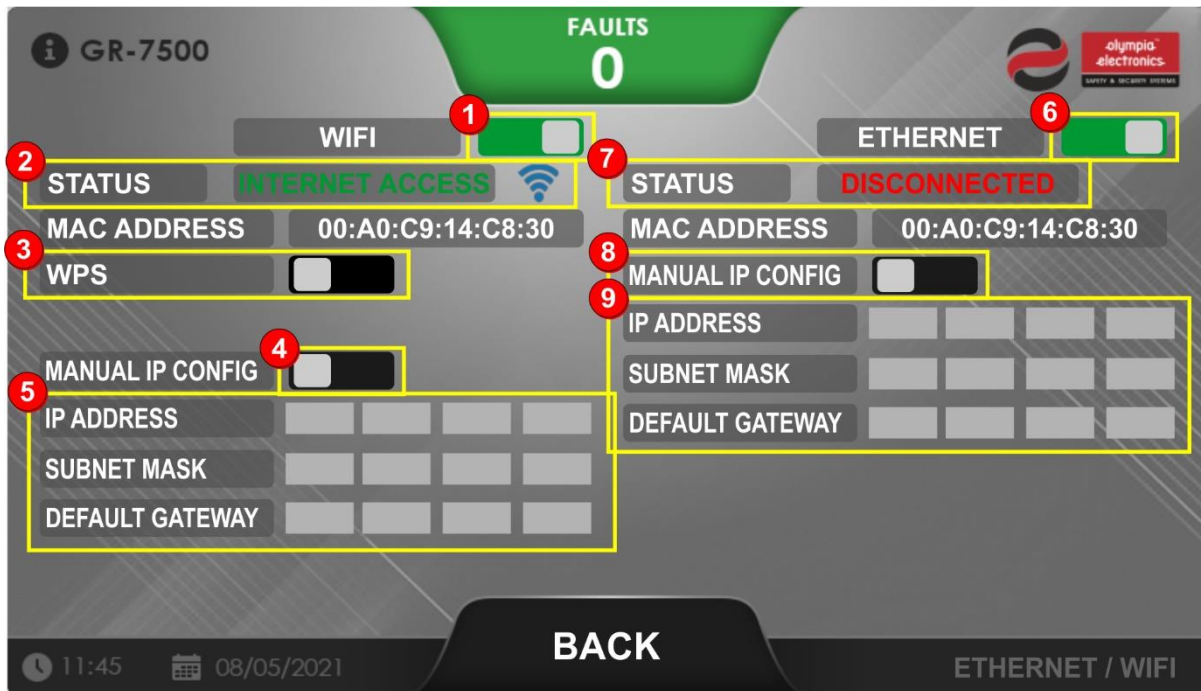


Figure 66

Description of each reference:

- |  |   |
|--|---|
| 1. Wi-Fi adapter setting (Enabled/Disabled). | 6. Ethernet adapter setting (Enabled/Disabled). |
| 2. Wi-Fi connection status.                  | 7. Ethernet connection status.                  |
| 3. WPS setting (Enabled/Disabled).           | 8. Ethernet manual IP configuration.            |
| 4. Wi-Fi manual IP configuration.            | 9. Ethernet IP settings/status.                 |
| 5. Wi-Fi IP settings/status.                 |   |

### 6.4.10 ANNUAL CHECK DATE

Displays the date of the previous maintenance check and when the next one is scheduled.



Figure 67

### 6.4.11 SYSTEM INFORMATION

Displays version information about the system components.

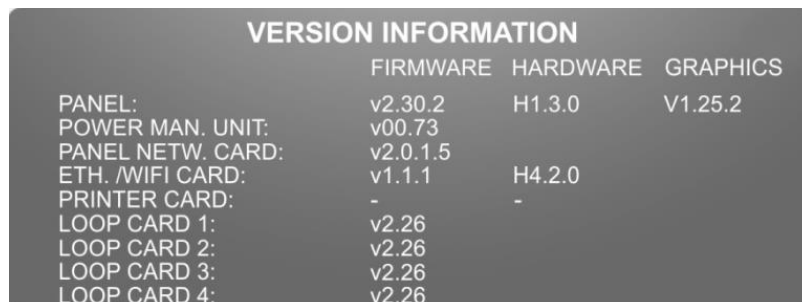


Figure 68

### 6.4.12 TECHNICIAN INFORMATION

Displays technician contact information such as telephone number, name, address. The panel's serial number is also displayed at the lower area.

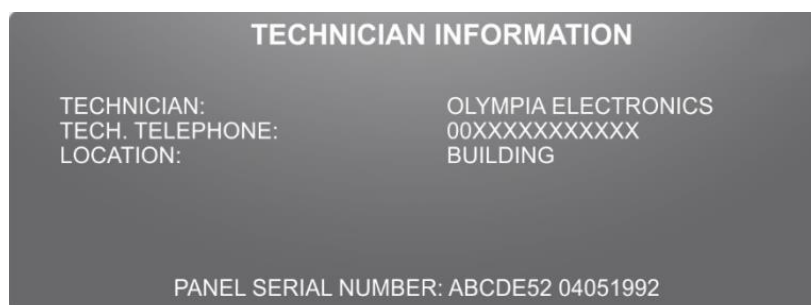







Figure 69

### 6.4.13 LUMINAIRE COMMANDS

Menu with the commands that can be send to the connected luminaires. To navigate the menu, swipe to the left or to the right and select the option in the middle. Selecting an icon displays a pop-up window to asking for options/confirmation to send the corresponding command.

Table 24 – Luminaire commands menu options

MENU NAME	DESCRIPTION	ICON
<b>INHIBIT MODE</b>	Sends the <i>inhibit mode</i> command to the points of the selected zone.	
<b>CLEAR COMMANDS</b>	Clears previously send commands.	
<b>RESET FAULTS</b>	Sends the <i>reset faults</i> command to all registered points.	
<b>RESET SOFTWARE</b>	Sends the <i>reset software</i> command to all registered points.	
<b>FUNCTION TEST</b>	Sends the command to start a function test to the points of the selected zone.	

### 6.5 TEST LED INDICATORS

Lights up all front panel LED indicators for about 5 seconds, to verify that all are functional.

## 7 Appendix

### 7.1 List of compatible luminaire models

Table 25 – List of compatible luminaire models


Compatible luminaire models			
GR-315/15L/ADR/A	GR-290/ADR	SLL-503/WP/ADR	SLL-1013/ADR
GR-316/15L/ADR/A	GR-291/ADR	SLL-1001/WP/ADR	SLL-1021/ADR
GR-315/30L/ADR/A	GR-292/ADR	SLL-1003/WP/ADR	SLL-1023/ADR
GR-316/30L/ADR/A	GR-293/ADR	SLL-1011/WP/ADR	GR-290/M/ADR
GR-1939/30L/ADR	ZLD-28/EM/ADR	SLL-1013/WP/ADR	GR-291/M/ADR
GR-1938/30L/ADR	ZLD-34/EM/ADR	SLL-1021/WP/ADR	GR-292/M/ADR
GR-1939/15L/ADR	GRL-37/90/ADR	SLL-1023/WP/ADR	GR-293/M/ADR
GR-1938/15L/ADR	GRL-37/180/ADR	SLL-501/ADR	GR-290/WP/M/ADR
GR-1316/30L/ADR	GRL-37/90/WP/ADR	SLL-503/ADR	GR-291/WP/M/ADR
GR-1316/15L/ADR	GRL-37/180/WP/ADR	SLL-1001/ADR	GR-292/WP/M/ADR
GR-1315/30L/ADR	GRL-29/WP/ADR	SLL-1003/ADR	GR-293/WP/M/ADR
GR-1315/15L/ADR	SLL-501/WP/ADR	SLL-1011/ADR	GR-292/M/HL/ADR

### **Waste from Electrical and Electronic Equipment (WEEE) directive**

This product must be disposed of in accordance with the WEEE directive. Electrical and electronic equipment should not be mixed with general waste.



### **Declaration of Conformity**

Olympia Electronics N. Lakasas - P. Arvanitidis S.A. hereby declares that this product complies with the radio equipment directive 2014/53/EU (RED) and therefore has been marked with the symbol . The full text of the Declaration of Conformity has been issued and is available on the manufacturer's website: [www.olympia-electronics.com](http://www.olympia-electronics.com).

