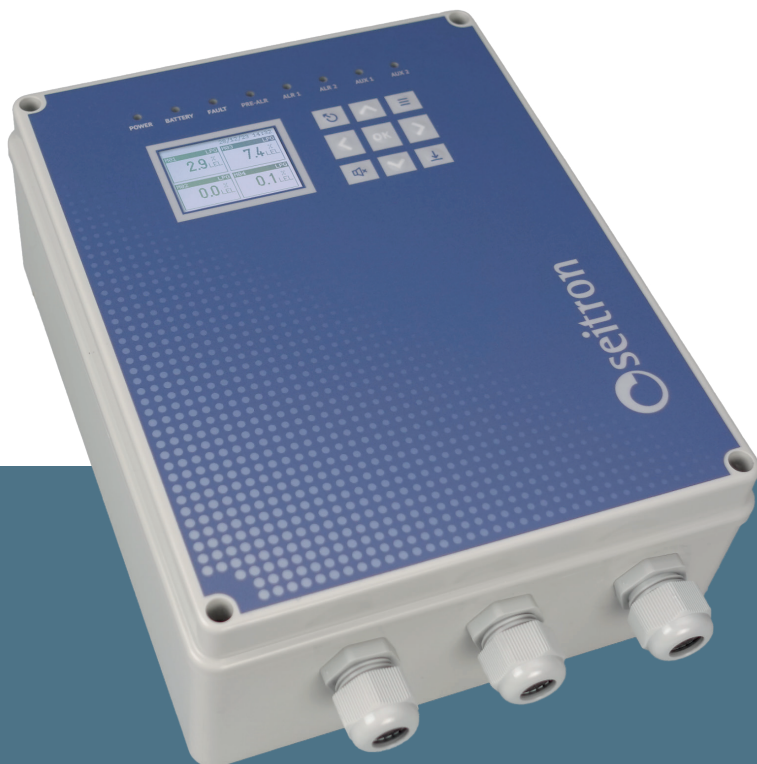


USE AND MAINTENANCE



Gas detection control unit

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1.0 IMPORTANT INFORMATION

1.1 About This Manual

- ◇ This manual describes the features, operation, and maintenance of the gas detection control unit.
- ◇ Read this operation and maintenance manual before using the device. The operator must thoroughly understand the manual and follow its instructions carefully.
- ◇ This use and maintenance manual is subject to changes due to technical improvements - the manufacturer does not assume any responsibility for possible content or printing errors.



Respect the environment, think before printing the entire manual.

1.2 Digital Documentation



To download the quick guide and the MODBUS® register table, scan the QR code or visit the website www.seitron.it

1.3 Safety Warnings



WARNING!

Read the information carefully and take appropriate measures to ensure safety to avoid any danger to people and property.

Failure to follow these instructions may result in danger to individuals, the system, or the environment, and may lead to a loss of liability.



WARNING! Proper Disposal

Ensure the proper disposal of the battery pack at the end of its life using designated containers only.

This device must not be disposed of as household waste. Follow the applicable national legislation.

2.0 SAFETY

2.1 Safety Verification

- Before using the product, it is essential to read and follow the instructions in the manual carefully.
- It is important to use the product only for the purposes specified in this document and in accordance with the indicated conditions.
- Except for the connection and/or maintenance operations described in the quick guide, the product should not be opened or serviced by unauthorized personnel to avoid voiding the warranty.
- It is the operator's responsibility to ensure compliance with laws, regulations, and standards related to the use of the product.

2.2 Permitted Use of the Product

The gas detection control unit is intended to be installed in non-classified and non-hazardous areas for managing safety in industrial and commercial environments.

2.3 Prohibited Use of the Product

Using the gas detection control unit in applications other than those mentioned in section 2.2 "Permitted Use of the Product" is at the operator's risk, and the manufacturer assumes no responsibility for any loss, damage, or costs that may result. The product is not certified or approved for operation in oxygen-enriched atmospheres, as this could cause personal injury or death. The product is not designed to be used in hazardous environments and does not provide intrinsic safety in such situations.

The Gas Master Control should not be used in Ex-classified zones.

2.4 Periodic Inspection

Periodic inspection should include the following checks:

- a. (every 3-6 months): Functional check of the entire detection system by applying gas to each remote sensor and checking the displayed value. See also the transmitter manual for additional information.
- b. (every 12 months): Instrumental check of the control unit's transfer function and proper detection of abnormal conditions. For 4 .. 20 mA transmitters, this can be done by disconnecting the transmitters from the terminals and forcing the input current of each zone to significant values using an appropriate calibrator (e.g., 0mA: loop interrupted, 2mA: fault, 4 .. 20mA: normal operation, >20mA: out of scale).

3.0 PRODUCT DESCRIPTION

3.1 General Information


Gas Master Control is a gas leak detection control unit designed to monitor up to 40 gas concentration transmitters.

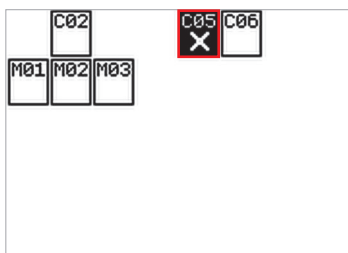
The main features of this product include:

- Multi-gas monitoring: Capability to manage various types of gas, ensuring comprehensive protection.
- Intuitive programming: Simple user interface for easy system configuration and management.
- Compatibility: Supports a wide range of gas transmitters, including Cool Guardian, Safe Guardian, SX, SW, SY series.
- Eight analog outputs: 4 .. 20 mA.
- RS-485 interface: For communication using Modbus® RTU protocol (maximum of 32 connected transmitters).
- Configurable audible alarms: Integrated system for warning signals.
- Integrated visual alarms: For clear, immediate alerting.
- One SPDT relay output: Dedicated to Pre-alarm status.
- One SPDT relay output: Dedicated to Alarm 1 status.
- One SPDT relay output: Dedicated to Alarm 2 status.
- Two auxiliary SPDT relay outputs: Configurable based on logs (Pre-alarm, Alarm 1, Alarm 2, Fault, etc.).

3.2 Storage and Display of Anomalous Events



When an anomalous event occurs, the control unit switches to the event overview screen, where the events and the transmitters involved in the anomaly are displayed.

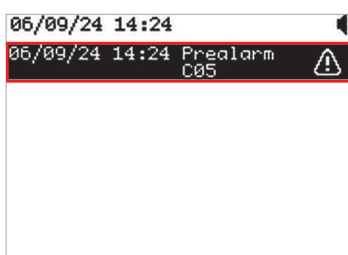
The transmitter that detected the anomaly is identified by an "X" on a flashing black background: , while the other transmitters only show their sensor ID number.





If the anomalous event does not involve the transmitters, the control unit will switch to displaying only the log screen.

The control unit stores all detected anomalous events in its memory.

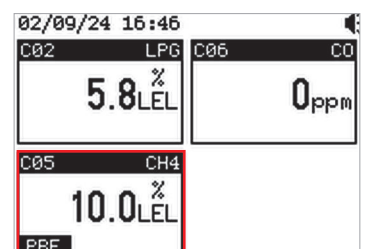
By pressing the button  the control unit displays the log screen, which contains information about the anomalous event(s), marked by the icon .




Each row shows the date and time of the event and the type of anomaly (in this case, Pre-alarm State of Transmitter C05).

- By holding the button  for more than 3 seconds, the control unit resets the alarms, and pressing the button  afterward, it exits the log screen and returns to the main screen.
- Alternatively, pressing the external reset button (eRST) for at least 3 seconds will directly return to the main screen without displaying the log screen.


In both cases, the transmitter that generated one of the anomalous events is identified by the event description in the bottom left corner.

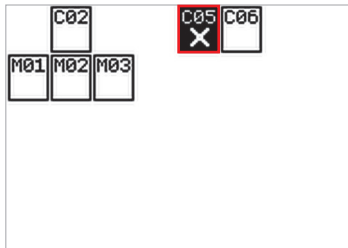


If the anomalous event has been resolved, the control unit, depending on the configuration of the “System => Log => Info event” parameter, may or may not display the log screen with information about the resolution of the previously detected events, marked by the icon .



“Info event” parameter enabled

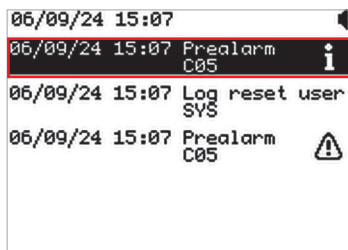
The control unit returns to the event overview screen, showing the transmitters that were previously involved in the anomaly.

The transmitter that detected the anomaly is identified by an “X” on a flashing black background: , while the other transmitters only show their sensor ID numbers.



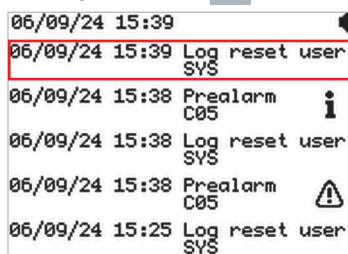
If the anomalous event did not involve the transmitters, the control unit will switch to displaying only the log screen.

- Pressing the button  displays the log screen with information about the resolution of the previously detected events, marked by the icon .



Each row shows the date and time the event was resolved and the type of anomaly (in this case, Pre-alarm State of Transmitter C05).

- Holding the button , for more than 3 seconds resets the user log, and the display shows the reset log.



- Pressing the button , returns the display to the main screen.


Alternatively, from the event overview screen, pressing the external reset button (eRST) for at least 3 seconds will return directly to the main screen without displaying the log screen.

“Info event” parameter disabled

The control unit will not display the screens described in the previous paragraph (“Info event” parameter enabled).

3.3 Alarm Reset

If the conditions that triggered the audible, visual, and relay signals have ceased, the control unit will either return to normal operation or not, depending on how the Latch parameter is configured in the “Relays” and “System => Buzzer” menus.

If the **Latch** parameter is enabled, human intervention is required to restore the system to normal operation: after resolving the cause of the anomalous event, the user must intentionally press for more than 3 seconds the button  or the external reset button (eRST).

If the “Info event” parameter is enabled, resetting the alarms will occur simultaneously with the reset of the user log (see the previous paragraph).

Resettando gli allarmi, gli eventi memorizzati dalla centralina non saranno cancellati.

Al contrario, se non viene richiesto l'intervento umano per ripristinare il normale funzionamento dell'intero sistema, dopo aver risolto la causa che ha generato l'evento anomalo la centralina ritorna automaticamente allo stato di normale funzionamento, displaying or not displaying the log screen depends on the “Info event” parameter setting (see the previous paragraph).

3.4 Backup System

The control unit has input terminals (50 and 51) for an external 12-24 VDC power source. If a system capable of tolerating power outages is required, a 12 VDC backup unit with a battery charging function is necessary, as the control unit does not provide any charging function.

Battery maintenance must follow the recommendations of the backup unit manufacturer.

3.5 Accessories

ACAL10: External power supply 100-264V~ 50/60Hz / 13.8VDC.

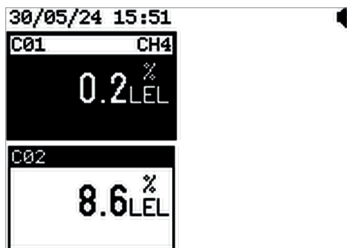
3.6 Spare Parts

This control unit does not have spare parts.

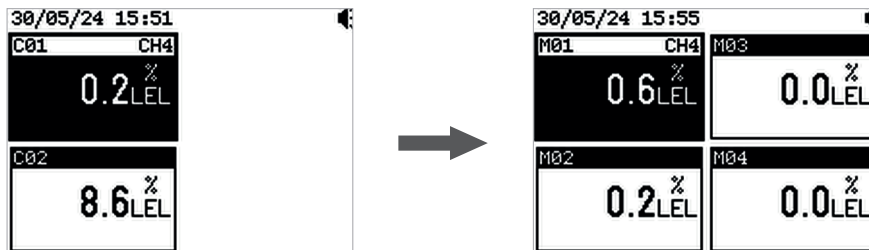
4.0 OPERATION

4.1 Normal Operating State

Once the control unit has been commissioned (following the instructions described in the product quick guide), it enters the normal operating state. In this state, the control unit supervises the system and the connected devices. The display shows the status panels of the transmitters connected to the control unit via the 4 .. 20 mA inputs, distinguished by the prefix C (e.g., C01 and C02 in the example image).



By pressing the arrow buttons, the status panel corresponding to each connected transmitter is selected; first, all transmitters connected to the 4 .. 20 mA inputs (prefix "C") are displayed, followed by all transmitters connected to the RS 485 network (prefix "M").



The selected transmitter displays the status panel with a black background and provides the following information:

Dove:

Number / Name of the Transmitter:

The progressive number indicates the number of the 4 .. 20 mA input to which the transmitter is connected (e.g., C01) or the assigned address for transmitters connected to the RS 485 network (e.g., M01) or the custom name of the transmitter (if set).

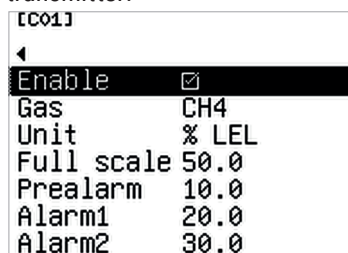


Gas Detected

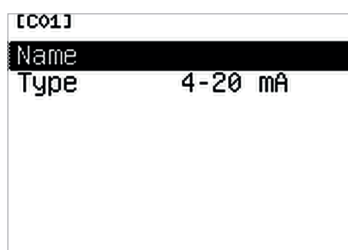
Concentration **value of the detected gas.**

In %LEL (for combustible gas transmitters) or in ppm (for other gas transmitters).

When a transmitter is selected (black background), pressing the button **OK** displays all information related to the transmitter:



- Enable: transmitter enabled (with flag) / disabled.
- Gas: detected gas (to be set during initial commissioning for transmitters connected to the 4 .. 20 mA inputs).
- Unit: unit of measurement for the full scale.
- Full scale: full scale value relative to the transmitter's measurement range.
- Prealarm: pre-alarm threshold.
- Alarm1: low alarm threshold.
- Alarm2: high alarm threshold.



This detailed view applies only to transmitters connected to the 4 .. 20 mA inputs.

Name: Custom name associated with the transmitter (if the field is empty, no name has been associated).

Type: Type of transmitter connected to the 4 .. 20 mA input.

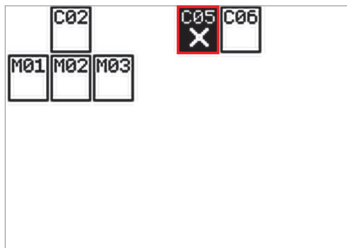
[M01]	
Name	
Type	SY
Life [h]	1512
EOL [h]	43800


Display for Transmitters Connected to the RS 485 Network.

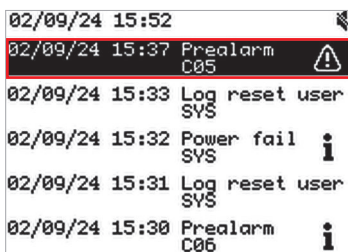
- Name: Custom name associated with the transmitter (if the field is empty, no name has been assigned)
- Type: Series of the connected transmitter.
- Life (h): Operating time of the transmitter (in hours). When this value equals the EOL value, it means the sensor has reached its maximum operating life, and the control unit will display an EOL alarm status instead of the gas concentration value.
- EOL (h): Sensor's lifetime (in hours).



4.2 Pre-Alarm State

The control unit manages pre-alarm events through a **PRE** output relay with changeover contacts (SPDT). If the set pre-alarm threshold is reached, the control unit activates the pre-alarm relay, flashes the red PRE-ALR LED, and displays the event overview screen on the display.



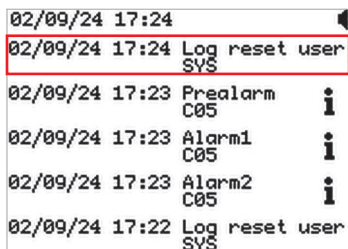
The transmitter that detected an abnormal condition is identified by an "X" on a flashing black background: , while the others only display the sensor's numerical ID. In the following example, the system has 6 connected transmitters, with transmitter C05 generating the event (in this case, indicating that the pre-alarm threshold has been exceeded).




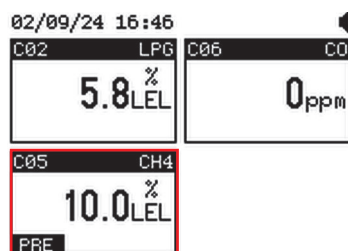
From the event overview screen, pressing the button , switches to the log screen, which contains information about the pre-alarm event, marked by the icon .


The following data is displayed:

- The date and time when the Pre-alarm event occurred.
- The number/name of the transmitter that generated the pre-alarm event (in the example, C05).



From the log screen, holding the button  for more than 3 seconds performs a reset; however, the pre-alarm state remains active.



Then press the  (esc) button to exit the log screen and return to the main screen. The transmitter that generated the pre-alarm event is identified with the label "PRE" in the bottom left corner.

Alternatively, from the event overview screen, by pressing the external reset button (eRST) for 3 seconds, the control unit will go directly to the main screen without displaying the log screen.

- The pre-alarm event can activate one or both auxiliary relays (Aux1, Aux2) depending on how the "Prealarm" parameter is configured in the "Relays => Aux1 / Aux2" menu.
- The auxiliary relay activation marked by the flashing orange LEDs AUX1 and AUX2.
- The buzzer activation depends on the configuration in the "System => Buzzer" menu.

If the conditions that triggered the pre-alarm state are no longer present, the control unit will either deactivate the relays and buzzer or keep them active depending on the configuration of the "Latch" parameter in the "Relays" and "Buzzer" menus for the pre-alarm state. The control unit will also display or not display information about the cessation

of the pre-alarm state based on the setting of the “Info event” parameter in the “System => Log” menu. The pre-alarm event remains stored in the log screen under the “System” menu for future reference.

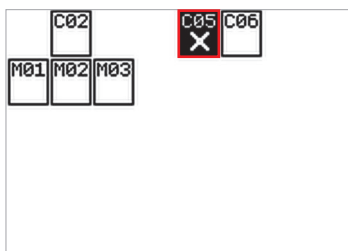
Refer to the sections “3.2 Storage and Display of Anomalous Events” and “3.3 Alarm Reset” for all details on restoring normal operation of the control unit after an anomalous event.


4.3 Alarm State

The control unit manages alarm events through two output relays, **AL1** and/or **AL2**, with SPDT contacts. The **Alarm1** event notification is always preceded by the **Prealarm** event notification, as the set **Prealarm** threshold must always be lower than the set **Alarm1** threshold. Consequently, the **Alarm2** event notification is always preceded by the **Alarm1** event notification, as the set **Alarm1** threshold must always be lower than the set **Alarm2** threshold.

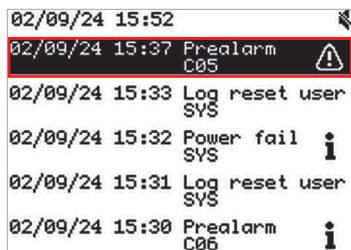
If the threshold for Alarm 1 and/or Alarm 2 is reached, the control unit will activate the Alarm 1 and/or Alarm 2 relay, flash the red ALR1 and/or ALR2 LED, and display the event overview screen, showing the events and the transmitters involved in the anomaly. The following shows the sequence of notifications from Pre-alarm to Alarm 2.



Pre-alarm Condition Detected:



The transmitter that detected the anomaly is identified by an “X” on a flashing black background: , while the others display only the sensor’s numerical ID.

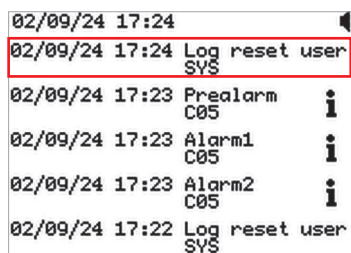
In the following example, the system has 6 connected transmitters, with C05 generating the event (in this case, indicating that the Alarm 1 and/or 2 threshold has been exceeded).




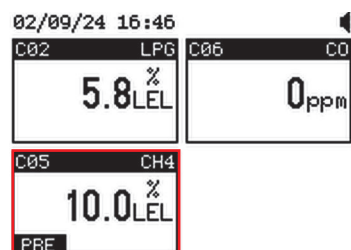
From the event overview screen, pressing the button , switches to the log screen, which contains information about the pre-alarm event, marked by the icon .


The following data is displayed:

- The date and time when the Pre-alarm event occurred.
- The number/name of the transmitter that generated the pre-alarm event (in this example, C05).



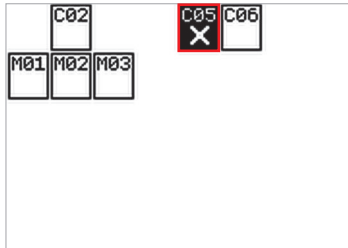
From the log screen, holding the button  for 3 seconds performs a reset; the pre-alarm state remains active.




Press the (esc) button  to exit the log screen and return to the main screen (which shows the transmitter status panels with concentration measurements). The transmitter that generated the pre-alarm event is identified with the label “PRE” in the bottom left corner.

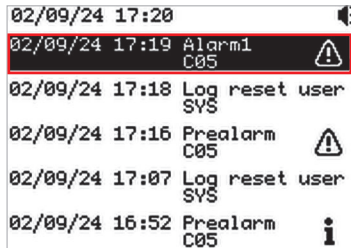
Alternatively, from the event overview screen, pressing the external reset button (eRST) for 3 seconds will directly display the main screen **without passing through the log screen**.



Alarm 1 Condition Detected:



The transmitter that detected the anomaly is identified by an “X” on a flashing black background: , while the others display only the sensor’s numerical ID.

In the following example, the system has 6 connected transmitters, with C05 generating the event (indicating that the Alarm 1 and/or 2 threshold has been exceeded).




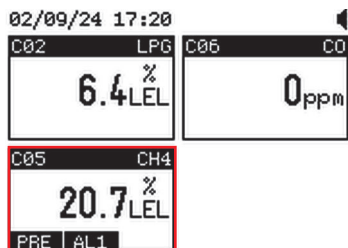
From the event overview screen, pressing the button , switches to the log screen, which contains information about the Alarm 1 event, marked by the icon .


The following data is displayed:

- The date and time when the Alarm 1 event occurred.
- The number/name of the transmitter that generated the Alarm 1 event (in this example, C05).



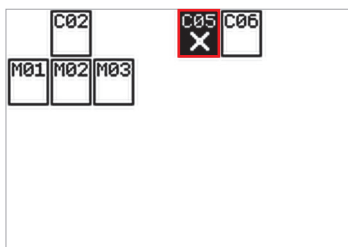
From the log screen, holding the button  for 3 seconds performs a reset; the Alarm 1 state remains active.




Press the (esc) button  to exit the log screen and return to the main screen (which shows the transmitter status panels with concentration measurements). The transmitter that generated the Alarm 1 event is identified with the label “AL1” in the bottom left corner.

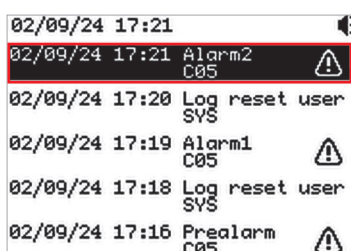
Alternatively, from the event overview screen, pressing the external reset button (eRST) for 3 seconds will directly display the main screen **without passing through the log screen**.



Alarm 2 Condition Detected:



The transmitter that detected the anomaly is identified by an “X” on a flashing black background: , while the others display only the sensor’s numerical ID.

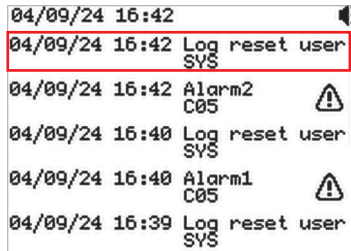
In the following example, the system has 6 connected transmitters, with C05 generating the event (indicating that the Alarm 1 and/or 2 threshold has been exceeded).




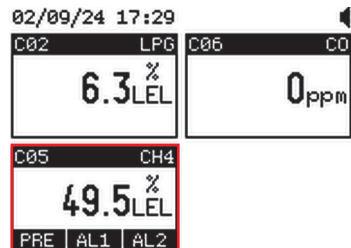
From the event overview screen, pressing the button , switches to the log screen, which contains information about the Alarm 2 event, marked by the icon .


The following data is displayed:

- The date and time when the Alarm 2 event occurred.
- The number/name of the transmitter that generated the Alarm 2 event (in this example, C05).



From the log screen, holding the button  for 3 seconds performs a reset; the Alarm 2 state remains active.



Then press the (esc) button  to exit the log screen and return to the main screen (which shows the transmitter status panels with concentration measurements). The transmitter that generated the Alarm 2 event is identified with the label “AL2” in the bottom left corner.

Alternatively, from the event overview screen, pressing the external reset button (eRST) for 3 seconds will take you directly to the main screen **without passing through the log screen**.

- The prealarm, alarm 1, and alarm 2 events can activate one or both auxiliary relays (Aux1, Aux2), depending on how the “Prealarm,” “Alarm1,” and “Alarm2” parameters are configured in the “Relays => Aux1 / Aux2” menu.
- The activation of the auxiliary output relays Aux1 and/or Aux2 is indicated by the flashing orange AUX1 and AUX2 LEDs.
- The activation of the buzzer depends on the configuration of the “System => Buzzer” menu.

If the conditions that triggered Alarm 1 and Alarm 2 are no longer present, the control unit will deactivate or continue to activate the relays and buzzer based on the “Latch” setting in the “Relays” and “Buzzer” menus for Alarm 1 and Alarm 2. It will also display or not display information about the cessation of Alarm 1 and Alarm 2 depending on the “Info event” setting in the “System => Log” menu. Alarm 1 and Alarm 2 events remain stored in the log screen in the “System” menu for later review.


Refer to sections “3.2 Storage and Display of Anomalous Events” and “3.3 Alarm Reset” for details on restoring normal operation after an anomalous event.

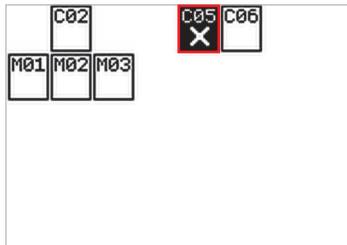
Note: The Pre-alarm indication may remain active if the measured gas concentration does not fall below the set Pre-alarm threshold.



4.4 Overrange condition (Out of range)

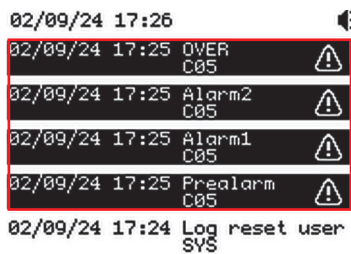
In case the upper limit of the sensor's measurement range is exceeded, the OVER event signal is activated.

This indication is always preceded by the signals for **Prealarm**, **Alarm1**, and **Alarm2** events. Consequently, the overrange event is signaled with the FAULT, PRE-ALR, ALR1, and ALR2 LEDs flashing, activation of the PRE, AL1, and AL2 relays, and the display shows the event overview screen where the events and the involved transmitters are displayed.

The transmitter that detected the anomaly is identified with a flashing X on a black background: , while the others only show the sensor's numeric identifier. In the example below, the system has 6 connected transmitters, with C05 generating the event (in this case, indicating that the Alarm 1 and/or 2 threshold has been exceeded).

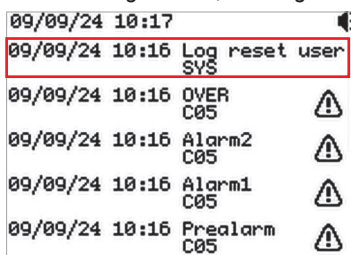



From the events screen, pressing the button , will take you to the log screen containing information related to the overrange event, marked with the icon .

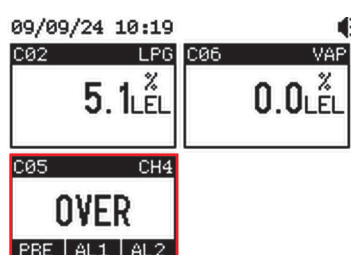


- The overrange, prealarm, alarm 1, and alarm 2 events can activate one or both auxiliary relays (Aux1, Aux2), depending on how the "Fault," "Prealarm," "Alarm1," and "Alarm2" parameters are configured in the "Relays => Aux1 / Aux2" menu.
- The activation of the auxiliary output relays Aux1 and/or Aux2 is indicated by the flashing orange AUX1 and/or AUX2 LEDs.
- The activation of the buzzer depends on the configuration of the "Fault" parameter in the "System => Buzzer" menu.

From the log screen, holding the button  for 3 seconds performs a reset; the Overrange state remains active.



Then press the button  (esc) to exit the log screen and return to the main screen (the one displaying the transmitter status panels with concentration measurements). The transmitter that generated the Overrange event is identified with the labels **PRE**, **AL1**, and **AL2** in the lower left corner, and instead of the measurement, the flashing text "OVER" appears.



Alternatively, from the events overview screen, pressing the external reset button (eRST) for 3 seconds will take you directly to the main screen **without going through the log screen**.

If the conditions that caused the Overrange state are no longer present, the central unit will deactivate the relays and buzzer depending on the configuration of the “Latch” parameter in the “Relays” and “Buzzer” menus for prealarm, alarm 1, alarm 2, and fault states. It will also display information on the cessation of the Overrange state based on the “Info event” parameter setting in the “System => Log” menu. The Overrange event remains recorded in the log screen under the “System” menu for later review.

Refer to sections “3.2 Storage and Display of Anomalous Events” and “3.3 Alarm Reset” for all details on restoring normal operation of the central unit after an anomalous event.


Note:

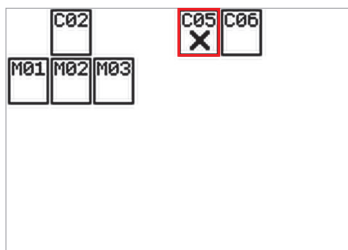
The Prealarm, Alarm 1, and Alarm 2 indicators might remain active if the measured gas concentration does not fall below the set thresholds.



4.5 Fault state (Transmitter fault)

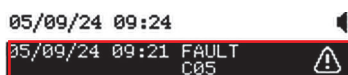
If the control unit detects an internal fault within the transmitter, it activates the “Fault” state.

If a **FAULT** event is generated, the control unit will activate the flashing orange FAULT LED and display the event overview screen showing the events and the associated transmitters involved in the anomaly.

The transmitter that detected the fault condition is identified with a flashing black background X: , while the others display only the sensor’s numeric identifier. In the following example, the system has 6 connected transmitters, of which C05 has generated the event (in this case indicating a transmitter fault).



From the event overview screen, pressing the button , will switch to the log screen containing information related to the fault event, marked by the icon .

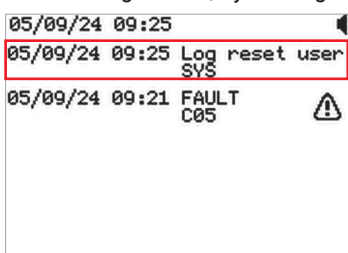


The following data is displayed:

- The date and time when the FAULT event occurred.
- The name of the transmitter that generated the fault event (in this example, C05).

- The fault event can activate one or both auxiliary relays (Aux1, Aux2), depending on how the “Fault” parameter is configured in the “Relays => Aux1 / Aux2” menu.
- The activation of the auxiliary output relays Aux1 and/or Aux2 is indicated by the flashing orange AUX1 and/or AUX2 LEDs.
- The activation of the buzzer depends on the configuration of the “Fault” parameter in the “System => Buzzer” menu.

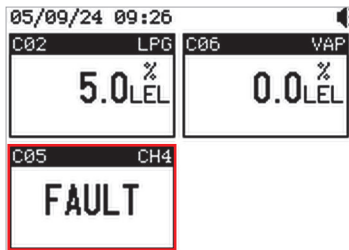
From the log screen, by holding down the button  for 3 seconds, a reset is performed; the FAULT status remains active.



Press the button (esc)  to exit the log screen and return to the main screen.

The transmitter that generated the fault event is identified with a flashing **FAULT** message instead of the measured gas concentration value.

Alternatively, from the event overview screen, pressing the external reset button (eRST) for 3 seconds will make the controller display the main screen directly **without going through the log screen**.



If the conditions that caused the Fault status are no longer present, the controller will turn off the orange FAULT LED and will activate or deactivate the relays and the buzzer depending on how the 'Latch' parameter is configured in the 'Relays' and 'Buzzer' menus for the Fault status. It will also display or not display information on the cessation of the Fault status based on the 'Info event' parameter setting in the 'System => Log' menu.


The Fault event remains recorded in the log screen available in the 'System' menu for later review.

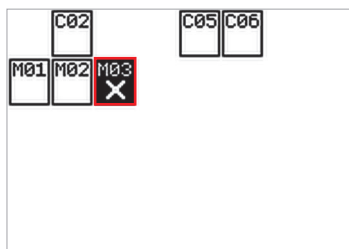
Refer to sections '3.2 Storage and Display of Anomalous Events' and '3.3 Alarm Reset' for all details on restoring normal operation of the controller after an abnormal event.



4.6 Modbus RTU Communication Error

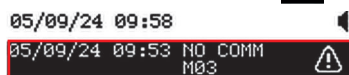
This state is activated when a communication error occurs between the control unit and a transmitter connected to the RS485 network.

In the event that a **NO COMM** event occurs, the controller activates the flashing orange FAULT LED, and the display shows the event overview screen, where the events and the associated transmitters involved in the anomaly are displayed.

The transmitter that detected the abnormal condition is identified with a flashing black background X: , while the others show only the sensor's numerical identifier. In the following example, the system has 6 connected transmitters, with transmitter M03 generating an event (in this case indicating that the transmitter is NOT communicating with the controller).




From the event screen, by pressing , you will switch to the log screen containing information related to the NO COMM event, marked by the icon .

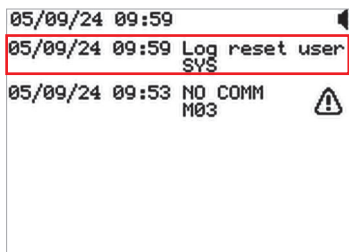



The following data is reported:

- The date and time when the NO COMM event occurred.
- The name of the transmitter that generated the communication error event (in this example, M04).

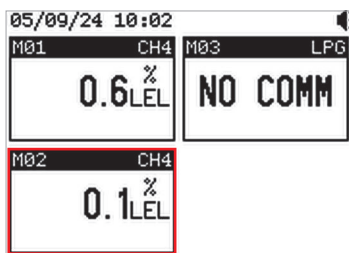
- The communication error event can activate one or both auxiliary relays (Aux1, Aux2), depending on how the "Fault" parameter is configured in the "Relays => Aux1 / Aux2" menu.
- The activation of the auxiliary output relays Aux1 and/or Aux2 is indicated by the flashing orange AUX1 and/or AUX2 LEDs.
- The activation of the buzzer depends on the configuration of the "Fault" parameter in the "System => Buzzer" menu.

From the log screen, by holding down the button  for 3 seconds, a reset is performed; the NO COMM status remains active.



Press the button (esc)  to exit the log screen and return to the main screen. The transmitter that generated the fault event is identified with the **NO COMM** message instead of the measured gas concentration value.

Alternatively, from the event overview screen, pressing the external reset button (eRST) for 3 seconds will make the controller display the main screen directly **without going through the log screen**.



If communication between the transmitter and the controller is restored, the controller will turn off the orange FAULT LED and will activate or deactivate the relays and the buzzer depending on how the 'Latch' parameter is configured in the 'Relays' and 'Buzzer' menus for the Fault status. It will also display or not display information on the cessation of the NO COMM status based on the 'Info event' parameter setting in the 'System => Log' menu.


The NO COMM event remains recorded in the log screen available in the 'System' menu for later review.

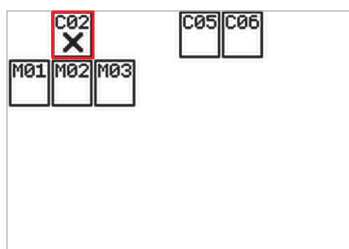
Refer to sections '3.2 Storage and Display of Anomalous Events' and '3.3 Alarm Reset' for all details on restoring normal operation of the controller after an abnormal event.



4.7 Open loop state (Open Current Loop)

This state is activated when there is a lack of communication between the control unit and a transmitter connected to one of the 4 .. 20 mA inputs.

In the event that a LOOP event occurs, the flashing orange FAULT LED is activated and the display shows the event overview screen, where the events and the associated transmitters involved in the anomaly are displayed.

The transmitter that detected the abnormal condition is identified with a flashing black background X: , while the others show only the sensor's numerical identifier. In the following example, the system has 6 connected transmitters, with transmitter C05 generating the event (in this case indicating a communication issue with the controller).




From the event screen, by pressing , you will switch to the log screen containing information related to the LOOP event, marked by the icon .




The following data is reported:

- The date and time when the LOOP event occurred.
- The name of the transmitter that generated the communication error event (in this example, C05).

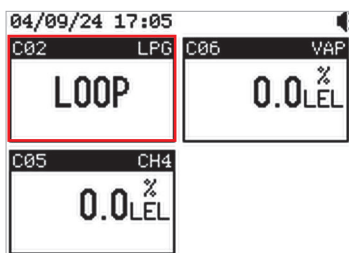
- The open current loop event can activate one or both auxiliary relays (Aux1, Aux2), depending on how the “Fault” parameter is configured in the “Relays => Aux1 / Aux2” menu.
- The activation of the auxiliary output relays Aux1 and/or Aux2 is indicated by the flashing orange AUX1 and/or AUX2 LEDs.
- The activation of the buzzer depends on the configuration of the “Fault” parameter in the “System => Buzzer” menu.

From the log screen, by holding down the button  for 3 seconds, a reset is performed; the LOOP status remains active.



Press the button (esc)  to exit the log screen and return to the main screen. The transmitter that generated the event is identified with the LOOP message instead of the measured gas concentration value.

Alternatively, from the event overview screen, pressing the external reset button (eRST) for 3 seconds will make the controller display the main screen directly **without going through the log screen**.



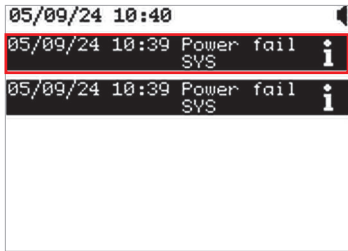
If communication between the transmitter and the controller is restored, the controller will turn off the orange FAULT LED and will activate or deactivate the relays and the buzzer depending on how the ‘Latch’ parameter is configured in the ‘Relays’ and ‘Buzzer’ menus for the Fault status. It will also display or not display information on the cessation of the LOOP status based on the ‘Info event’ parameter setting in the ‘System => Log’ menu.

The LOOP event remains recorded in the log screen available in the ‘System’ menu for later review.


Refer to sections ‘3.2 Storage and Display of Anomalous Events’ and ‘3.3 Alarm Reset’ for all details on restoring normal operation of the controller after an abnormal event.

4.8 Power Fail State (Power Failure)

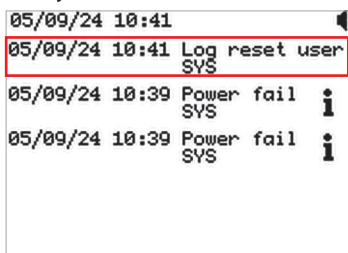
This state is activated if there is a loss of power supply voltage to the control unit (the control unit turns off). Upon power restoration, the display shows the following screen, indicating the date and time when the Power Fail event occurred.



- The power failure event can activate one or both auxiliary relays (Aux1, Aux2) depending on how the “Power fail” parameter in the “Relays => Aux1 / Aux2” menu is configured.
- The activation of the auxiliary output relays Aux1 and/or Aux2 is indicated by the flashing orange LEDs AUX1 and/or AUX2.
- The activation of the buzzer depends on the configuration of the “Power fail” parameter in the “System => Buzzer” menu.

From the log screen, by holding down the button  for 3 seconds, a reset is performed; the relays and buzzer will be deactivated.


In any case, the events remain recorded in the log screen available in the ‘System’ menu for later review.

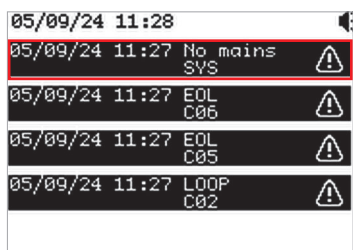


Press the button (esc)  to exit the log screen and return to the main screen.

Alternatively, from the log screen, pressing the external reset button (eRST) for 3 seconds will make the controller display the main screen directly.

4.9 No Mains State (Mains Power Failure)

This state is activated if the control unit is simultaneously powered by AC mains (from the electrical grid) and DC power supply (from adapter), and only the AC mains power supply is lost. When the No Mains event occurs, the control unit activates the flashing green POWER LED and displays the log screen containing information about the AC mains power failure event, marked by the icon .

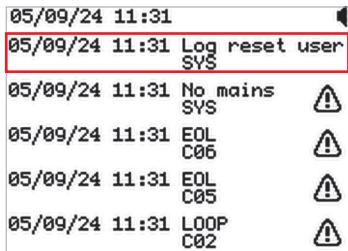



The following data is displayed:

- The date and time when the No Mains event was recorded.


- The AC mains power failure event can activate one or both auxiliary relays (Aux1, Aux2) depending on how the “No mains” parameter in the “Relays => Aux1 / Aux2” menu is configured.
- The activation of the auxiliary output relays Aux1 and/or Aux2 is indicated by the flashing orange LEDs AUX1 and/or AUX2.
- The activation of the buzzer depends on the configuration of the “No mains” parameter in the “System => Buzzer” menu.

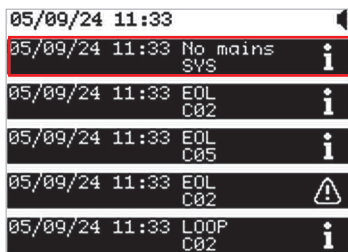
If the loss of mains power persists, holding down the button  for 3 seconds will perform a reset while keeping the No mains status active.





Press the button (esc)  to exit the log screen and return to the main screen.

Alternatively, from the event overview screen, pressing the external reset button (eRST) for 3 seconds will make the controller display the main screen directly without going through the log screen.

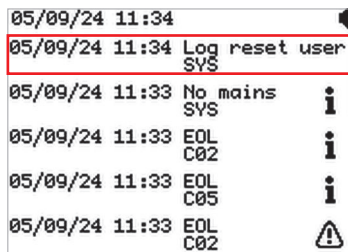
If mains power is restored, the controller will activate the fixed green POWER LED, and the display will show the log screen containing information related to the loss of AC power event, marked by the icon .



Holding down the button  for 3 seconds will perform a reset; the controller will return to its normal operating state depending on how the 'Latch' parameter is configured in the 'Relays' and 'Buzzer' menus.

If the relays and buzzer are configured with the 'Latch' parameter enabled, pressing the button  will deactivate the relays and buzzer.


The No mains event remains recorded in the log screen available in the 'System' menu for later review.



Press the button (esc)  to exit the log screen and return to the main screen.

Alternatively, from the event overview screen, pressing the external reset button (eRST) for 3 seconds will make the controller display the main screen directly

5.0 CONFIGURATION PARAMETERS

Pressing the button  accesses the parameters configurable by the control unit, allowing modification of settings for the correct operation of the detection system.

To access the parameter configuration, a password is required, with a factory-set value of 1234. It is mandatory to change the password to prevent unauthorized access, as required by current regulations.

ATTENTION!

- Parameter modification should be performed by qualified personnel.
- All displayed screens are examples and may vary depending on the firmware installed on the control unit.
- Proper navigation through the menus requires understanding the functions of the buttons described in the quick guide.

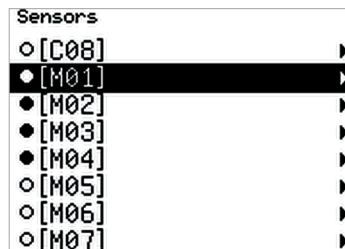
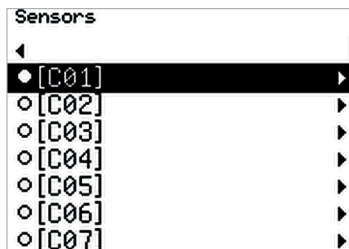




Enter the password 1234



5.1 Sensors

The "Sensors" menu groups the characteristic parameters of each individual transmitter connected to the control unit. Parameters vary depending on the type of transmitter connected to the control unit: either 4..20 mA or MODBUS®. 4..20 mA transmitters can be connected to inputs labeled from "SENS1" to "SENS8", corresponding to the transmitter status boxes displayed on the screen from "C01" to "C08".

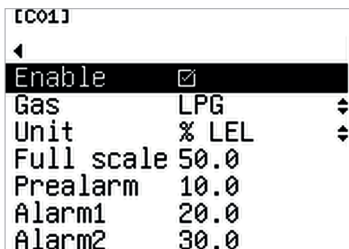


-  Transmitter detected
-  Transmitter not detected

Parameters related to a 4..20 mA transmitter

All parameters listed can be modified, except for the Type parameter which indicates the type of connected transmitter.

Example referring to a transmitter connected to input "SENS1" displayed on the screen as "C01".



- Enable: enable / Disable the connected transmitter.
 - Selected flag: transmitter enabled ()
 - Flag NOT inserted: transmitter disabled ()
 note: If a transmitter is not enabled, its status box will not be displayed on the screen.

Gas: selection of the type of gas detected by the transmitter. set the corresponding data for the connected transmitter.

Unit: selection of the measurement unit.

Full scale ¹: setting the full scale of the transmitter.

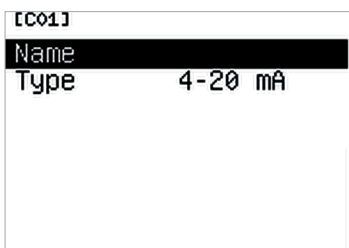
Prealarm ²: setting the pre-alarm threshold of the transmitter.

Alarm1 ³: setting the alarm 1 threshold of the transmitter.

Alarm2 ⁴: setting the alarm 2 threshold of the transmitter.

Name: setting a customized name for the transmitter.

Type: unmodifiable data; transmitters displayed as "C" are of 4 .. 20 mA type.



Parameters related to a transmitter connected to the RS485 network with MODBUS® RTU communication protocol

Specific parameters of transmitters connected to the RS485 network cannot be modified as they are automatically received by the control unit. However, other parameters related to unit of measurement, pre-alarm and alarm thresholds can be adjusted.

Here's an example referring to a transmitter connected to RS485 with address 01, displayed as "M01" on the screen:

[M01]	
Enable	<input checked="" type="checkbox"/>
Gas	CH4
Unit	% LEL
Full scale	50.0
Prealarm	10.0
Alarm1	10.0
Alarm2	30.0

Enable: enable / Disable the connected transmitter.
 - Selected flag: transmitter enabled ()
 - Flag NOT selected: transmitter disabled ()
 note: If a transmitter is not enabled, its status box will not be displayed on the screen.

Gas: gas detected by the transmitter. This data cannot be modified.

Unit: selection of the unit of measurement.

Full scale ¹: full scale of the transmitter. This data cannot be modified.

Prealarm ²: setting the pre-alarm threshold of the transmitter.

Alarm1 ³: setting alarm threshold 1 of the transmitter.

Alarm2 ⁴: setting alarm threshold 2 of the transmitter.

[M01]	
Name	
Type	SY
Life [h]	1512
EOL [h]	43800

Name: setting a customized name for the transmitter.

Type: series of the connected transmitter. This data cannot be modified.

Life (h): operating time of the transmitter (in hours). When this value equals the EOL value, it indicates that the sensor has reached its maximum operating life, and the control unit displays the EOL alarm status instead of the gas concentration value.

EOL (h): sensor life span (in hours).

- The value to be entered is the full-scale value (in % L.E.L. for combustible gases, in ppm for all others) which the 4..20 mA transmitter measures when it is applying its maximum current value, that is, 20 mA. This ensures the correct indication on the control unit display. The control unit will proportionally convert all values between 4 and 20 mA to the correct value from 0% L.E.L. (or 0 ppm) up to the full scale.



CAUTION!

- The value to set for this parameter depends on the characteristics of the gas transmitter, specifically what concentration value was set during the project phase as the full-scale (20 mA) of the transmitter.
- If a zone with a CO (carbon monoxide) transmitter is selected, the control unit will not display any value within 2.5% of the full scale to compensate for small zero drifts.

- Set the pre-alarm threshold, according to the selected unit of measurement. This is the gas concentration at which initial attention should be paid because the environment is starting to become dangerous.



CAUTION!

- The settable pre-alarm threshold should not exceed the set alarm 1 and alarm 2 thresholds.

- Set alarm threshold 1, according to the selected unit of measurement.



CAUTION!

- The settable alarm 1 threshold should not be lower than the pre-alarm threshold and higher than the set alarm 2 threshold.

- Set alarm threshold 2, according to the selected unit of measurement.



CAUTION!

- The settable alarm 2 threshold should not be lower than the pre-alarm threshold and alarm 1 threshold.

5.2 Relays

The "Relays" menu allows you to define the operating mode for each output relay of the control unit.




For each output relay, it is possible to enable/disable the operating modes listed below.

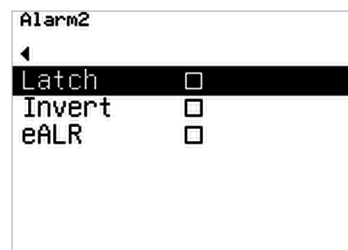
- Selected flag: mode enabled
- Unselected flag: mode disabled

Latch (Relay Reset Mode Setting)

This parameter allows you to set the reset mode of the relays in case an abnormal condition is detected.

Enabled: if the relay is activated, it remains activated even if the triggering event has been removed, meaning the relay is 'latched'. To reset the relay, press the button .

Disabled: if the relay is activated and the triggering event subsequently disappears, the relay automatically returns to its previous state.



ATTENTION!

- The "Latch" parameter, present on each output relay, is disabled by default; however, this setting can be changed.

Invert (Relay Operating Logic)

This parameter allows you to set the operating logic of the relays.

Enabled: the relay is normally energized. In case of an abnormal event, the relay is de-energized. Use this mode when a positive logic is required, so that even in the event of a power failure, the relay de-energizes to ensure a higher level of safety.

Disabled: the relay is energized in case of an abnormal event.



ATTENTION!

- The "Invert" parameter, present on each output relay, is disabled by default; however, this setting can be changed.

eALR (External Alarm Notification)

If the control unit receives an alarm signal from an external alarm system, it is possible to enable/disable the selected relay output.

Enabled: in case of an external alarm notification, the selected relay activates.

Disabled: in case of an external alarm notification, the selected relay does not activate.



ATTENTION!

- The "eALR" parameter, present on each output relay, is disabled by default; however, this setting can be changed.


These parameters are specific to the auxiliary output relays Aux1 and Aux2 and are used to configure their operation in case of abnormal conditions such as:

- eRST** Reset from external button
- Power fail** Power failure
- No mains** Absence of power supply 85 .. 264 Vac when the control unit is powered by 85 .. 264 Vac and simultaneously by 12 .. 24 Vdc (regardless of the presence of a backup system)
- Fault** Control unit and/or connected transmitter fault
- Prealarm** Preallarme
- Alarm1** Alarm 1
- Alarm2** Alarm 2

eRST (External Alarm Reset)

If the alarm reset comes from an external button to the control unit, you have the option to enable/disable the selected auxiliary relay output.

- Enabled: In case of reset from external button, the selected auxiliary relay activates.
- Disabled: In case of reset from external button, the selected auxiliary relay does not activate.



WARNING!

- The control unit is defaulted with "eRST" parameters deactivated; non the less this setting is editable.

Aux1

←

Latch

Invert

eALR

eRST

No mains

Power fail

Fault

Aux1

Prealarm


Alarm1

Alarm2

No mains (Lack of 85 .. 264 Vac mains power)

If the unit is powered at 85 .. 264 Vac and at the same time at 12 .. 24 Vdc (regardless of the presence of a backup system), In case of power supply voltage failure 85 ... 264 Vac depending on how this parameter is configured the auxiliary relay is enabled or not.

- Enabled: When power is restored, the auxiliary relay is activated.
- Disabled: When power is restored, the auxiliary relay does NOT activate.



WARNING!

- The control unit is defaulted with the "No mains" parameters disabled; however, this setting can be changed.

Aux2

←

Latch

Invert

eALR

eRST

No mains

Power fail

Fault

Aux2

Prealarm


Alarm1

Alarm2

Power fail (Lack of power supply - Control unit turned off)

In case of power failure, when power is restored depending on how this parameter is configured the auxiliary relay is enabled or not.

- Enabled: When power is restored, the auxiliary relay is activated.
- Disabled: When power is restored, the auxiliary relay does NOT activate.



WARNING!

- The control unit is defaulted with the "Power fail" parameters disabled; however, this setting can be changed.

Fault (Control unit and/or connected transmitters failure)

In the event that faults occur that can be attributed to the control unit or the connected transmitters, depending on how this parameter is configured, the auxiliary relay is enabled or not.

Enabled: When the fault signal occurs, the auxiliary relay is activated.

Disabled: When the fault signal occurs, the auxiliary relay does NOT activate.



WARNING!

- The control unit is defaulted with the "Fault" parameters disabled; however, this setting can be changed.

Prealarm (Auxiliary output configuration when the Pre-alarm threshold is exceeded)

In case the set Prealarm threshold is exceeded, depending on how this parameter has been configured, the auxiliary relay is enabled or not.

Enabled: Upon the occurrence of Pre-alarm signaling, the auxiliary relay is activated.

Disabled: Upon the occurrence of Pre-alarm signaling, the auxiliary relay will NOT activate.



WARNING!

- The control unit is defaulted with the "Prealarm" parameters disabled; however, this setting can be changed.

Alarm1 (Auxiliary output configuration when Alarm1 threshold is exceeded)

In case the set Alarm1 threshold is exceeded, depending on how this parameter has been configured, the auxiliary relay is enabled or not.

Enabled: Upon the occurrence of Alarm1 signaling, the auxiliary relay will activate.

Disabled: Upon the occurrence of Alarm1 signaling, the auxiliary relay will NOT activate.



WARNING!

- The control unit is defaulted with the "Alarm1" parameters disabled; however, this setting can be changed.

Alarm2 (Auxiliary output configuration when Alarm2 threshold is exceeded)

In case the set Alarm2 threshold is exceeded, depending on how this parameter has been configured, the auxiliary relay is enabled or not.

Enabled: Upon the occurrence of Alarm2 signaling, the auxiliary relay is activated.

Disabled: Upon the occurrence of Alarm2 signaling, the auxiliary relay will NOT activate.



WARNING!

- The control unit is defaulted with the "Alarm1" parameters disabled; however, this setting can be changed.

5.3 System

The “System” menu allows you not only to configure the main parameters of the gas control unit, but also to view information and scan connected transmitters.



5.3.1 Scan

This menu allows scanning the transmitters connected to the control unit, overwriting previously acquired data if an initial scan has already been performed.

Following the directions on the screen will scan the connected devices.



WARNING!

- Before proceeding with the scanning of connected devices, verify the communication speed of the connected transmitters and, if necessary, correctly set the “Speed” installer parameter in the “Serial port” menu. The connected transmitters must have the same communication speed.
- The control unit does not accept more than 32 transmitters connected to the network.
- Once the self-learning procedure has started, it CANNOT be interrupted.
- If a setting is changed on any connected transmitter, or if the transmitter itself is replaced, the scan must be repeated to detect the changes.

Here is the sequence to follow for scanning the transmitters connected to the control unit.



**Are you sure?
Press < and >
to proceed.**

C01	C02	C03	C04	C05	C06	C07	C08
✓
M01	M02	M03	M04	M05	M06	M07	M08
✓	✓
M09	M10	M11	M12	M13	M14	M15	M16
...
M17	M18	M19	M20	M21	M22	M23	M24
...
M25	M26	M27	M28	M29	M30	M31	M32
...

Each square corresponds to a transmitter; the first 8 identified with C correspond to the transmitters potentially connected to the 4..20 mA inputs of the control unit, while the next 32 identified with M are the transmitters potentially connected to the RS485 network with MODBUS® RTU communication protocol.

The symbols inside the squares identify the status of the respective transmitter:

- ... : scanning in progress;
- x : transmitter not detected;
- v : transmitter detected.

**Scan completed.
Press OK**

After the scanning of the transmitters is completed, for the 4 .. 20 mA transmitters connected and identified with C--, it is necessary to proceed with the configuration of the main parameters.

By repeatedly pressing the button the control unit will not allow exiting the configuration parameters until each connected 4 .. 20 mA transmitter has been configured.

Alternatively, the configuration of the main parameters of the 4 .. 20 mA transmitters can be carried out through the "Sensors" menu.

```
[C01]
<
Enable 
Gas
Unit      ppm
Full scale 22000
Prealarm  4400
Alarm1    8800
Alarm2    13200
```

```
[C01]
<
Enable 
Gas
Unit      ppm
Full scale 22000
Prealarm  4400
Alarm1    8800
Alarm2    13200
```

```
[C01]
<
Enable 
Gas
Unit      ppm
Full scale 22000
Prealarm  4400
Alarm1    8800
Alarm2    13200
```

```
[C01]
<
Enable 
Gas      CO2
Unit      ppm
Full scale 22000
Prealarm  4400
Alarm1    8800
Alarm2    13200
```

```
[C01]
<
Enable 
Gas      CO2
Unit      ppm
Full scale 10000
Prealarm  2000
Alarm1    3000
Alarm2    5000
```

5.3.2 Clock

Allows you to set the current date and time and set the format (EU/US).



WARNING!

- The correct setting of date and time is crucial for meaningful recording of alarm events. This setting must be done at the first activation of the control unit: from this point on, the control unit will maintain the correct date and time even in case of power failure.

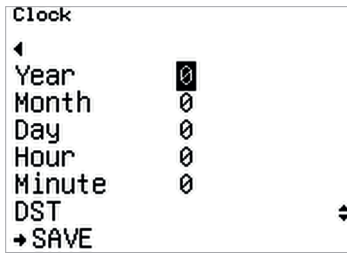
```
System
<
Scan
Clock
Buzzer
Log
Change password
Serial port
Info
```



```
Clock
<
Year      0
Month     0
Day       0
Hour      0
Minute    0
DST
→SAVE
```

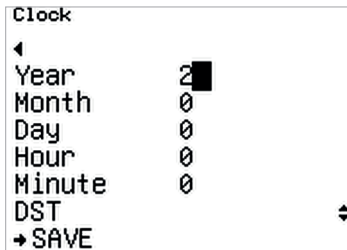
Below is a brief guide for setting the year. The same procedure is to be used for setting the other clock parameters.


```
Clock
<
Year      0
Month     0
Day       0
Hour      0
Minute    0
DST
→SAVE
```

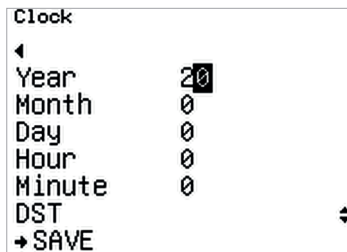
Press the button.





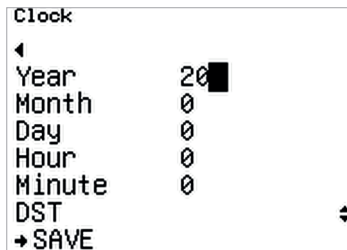
Use the buttons   to set the first digit of the year.




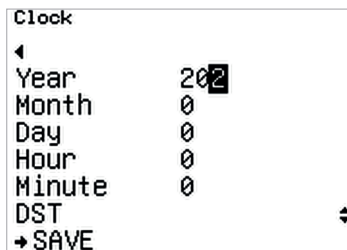
Use the button  to move the cursor to the second digit of the year.





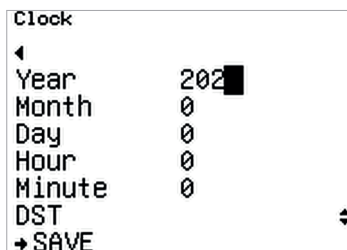
Use the buttons   to set the second digit of the year.




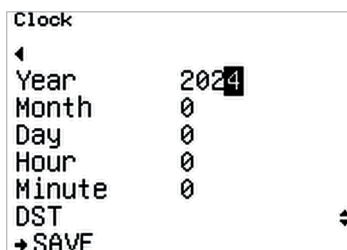
Use the button  to move the cursor to the third digit of the year.





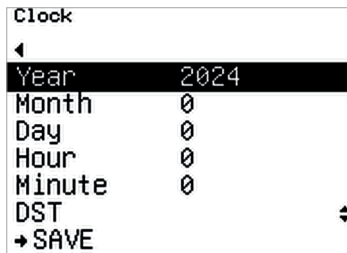
Use the buttons   to set the third digit of the year.




Use the button  to move the cursor to the fourth digit of the year.



Use the buttons   to set the fourth digit of the year.




Press the button .

Continue with the setting of the other values as described in the example for setting the year.



WARNING!

- To finalize the configuration of the parameters in the Clock menu, select the SAVE row and press the button ; otherwise, if you exit the menu without doing so, the settings made will not be saved.

5.3.3 Buzzer

In this menu, you configure the activation / deactivation of the buzzer along with alarm indications. For each alarm indication, you can enable/disable the buzzer functionality.

- Flag inserted: Buzzer enabled
- Flag NOT inserted: Buzzer disabled

Tone (Buzzer Tone)

This parameter allows setting the tone of the buzzer, selecting from:

Slow - Medium - Fast - Continuous.




Buttons (Button Tone Setting)

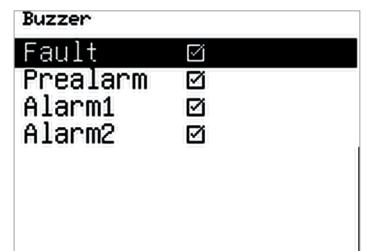
Enabled: Each button press activates a beep from the buzzer.

Disabled: Each button press does not activate the buzzer.

Latch (Buzzer Reset Setting)

Enabled: If the buzzer is activated, it remains activated even after the triggering event is removed. Press the button  to reset the buzzer.

Disabled: If the buzzer is activated due to an abnormal event and the triggering event is removed, the buzzer automatically turns off.



eALR (External Alarm Notification)

Enabled: When an external alarm signal occurs, the buzzer is activated.

Disabled: When an external alarm signal occurs, the buzzer is not activated.

eRST (Reset Alarms from External Button)

Enabled: If alarms are reset from an external button connected to the control unit, the buzzer is activated.

Disabled: If alarms are reset from an external button connected to the control unit, the buzzer is not activated.

No mains (Power Failure 85 .. 264 Vdc)

Enabled: When power is restored after a power failure, the buzzer is activated.

Disabled: When power is restored after a power failure, the buzzer is not activated.

Power fail (Power Failure - Control Unit Off)

Enabled: When power is restored after the control unit was turned off due to power failure, the buzzer is activated.

Disabled: When power is restored after the control unit was turned off due to power failure, the buzzer is not activated.

Fault (Control Unit and/or Connected Transmitters Fault)

Enabled: When a fault indication occurs in the control unit or connected transmitters, the buzzer is activated.

Disabled: When a fault indication occurs in the control unit or connected transmitters, the buzzer is not activated.

Prealarm (Pre-alarm Threshold Exceeded)

Enabled: When a Prealarm indication occurs, the buzzer is activated.

Disabled: When a Prealarm indication occurs, the buzzer is not activated.

Alarm1 (Alarm 1 Threshold Exceeded)

Enabled: When an Alarm1 indication occurs, the buzzer is activated.

Disabled: When an Alarm1 indication occurs, the buzzer is not activated.

Alarm2 (Alarm 2 Threshold Exceeded)

Enabled: When an Alarm2 indication occurs, the buzzer is activated.

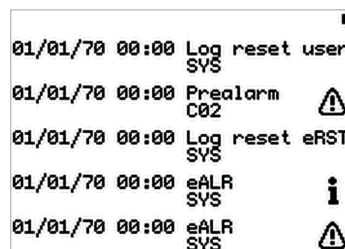
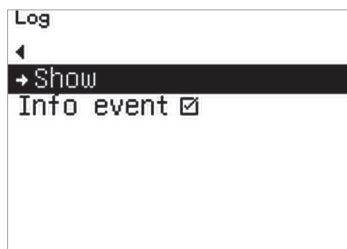
Disabled: When an Alarm2 indication occurs, the buzzer is not activated.

5.3.4 Log

In this menu, you can access the history of abnormal events detected by the controller, with the option to configure the notification of the resolution of the abnormal event that occurred.

Show




The parameter allows you to view the history of abnormal events that have occurred and their resolution if the 'Info event' parameter has been enabled:




Info event



- Flag inserted: Enabled
- Flag NOT inserted: Disabled

If "Info event" is enabled (flag inserted), when the abnormal event ends, the controller will display information on the log screen about the resolution of the previously detected abnormal event, marked by the icon . To exit the log screen and return to the main screen, the operator must reset the events by holding down the button  for 3 seconds and then pressing the button (esc) . In any case, the events remain recorded in the "Show" parameter for later review.

If "Info event" is NOT enabled (flag NOT inserted), when the abnormal event ends, the controller will not display the events with the symbol , except for the power fail recovery, which, while informative, is always reported.

5.3.5 Change password

The device leaves the factory with the password set to **1234**.

In this menu, you can change the password for accessing the configuration parameters:

- The password must consist of 4 digits (no letters), each between 0 and 9.

```
System
<
Scan >
Clock >
Buzzer >
Log >
Change password >
Serial port >
Info >
```

```
Change password
<
Password 1234
```

```
Change password
<
Password 1234
```

```
Change password
<
Password 4444
```

```
Change password
<
Password 4444
```

5.3.6 Serial port

Through this parameter, you can set the communication parameters for the transmitters connected to the RS485 network using the MODBUS® RTU communication protocol.

This information can be found in the technical documentation of the transmitters.



WARNING!

- Control unit and transmitters connected to the RS485 network must have the same communication speed set.

```
System
<
Scan >
Clock >
Buzzer >
Log >
Change password >
Serial port >
Info >
```

```
Serial port
<
Speed 9600
Parity No
```

Speed: Communication speed

Parity: Parity check

5.3.7 Info

All information regarding the control unit is reported.

```
System
<
Scan >
Clock >
Buzzer >
Log >
Change password >
Serial port >
Info >
```

```
Gas Master Control
<
FW version 1.0.5
C sensors 3
M sensors 4
Speed 9600
Parity No
```

FW version: installed firmware version.

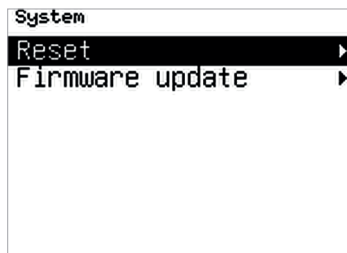
C sensor: sensors connected to the 4 .. 20 mA inputs.

M sensor: sensors connected to the RS485 network.

Speed: Set communication speed.

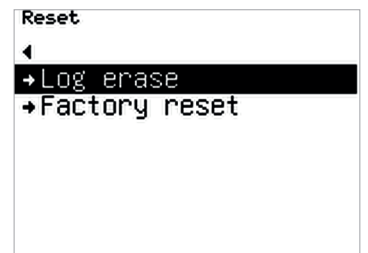
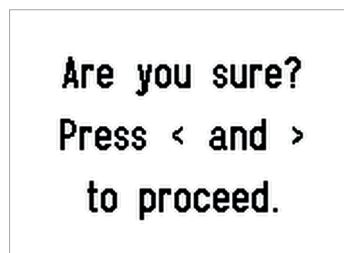
Parity: Parity check set.

5.3.8 Reset

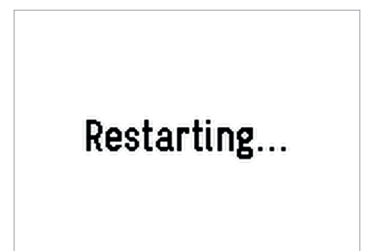
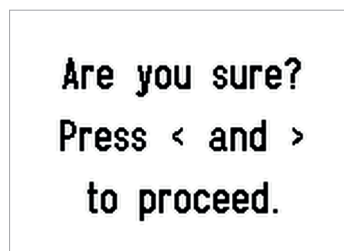
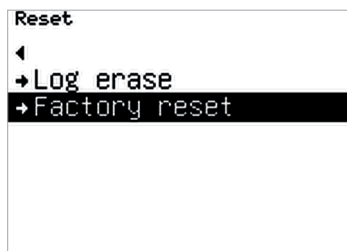


It is possible to act on two reset modes:

Log erase: Only the events stored and present in the **Log** menu are deleted.



Factory reset: Using this parameter, the control unit is restored to factory settings.












5.3.9 Firmware upgrade

The manufacturer periodically updates the firmware aiming to correct or improve the unit's performance or else to add more functions.

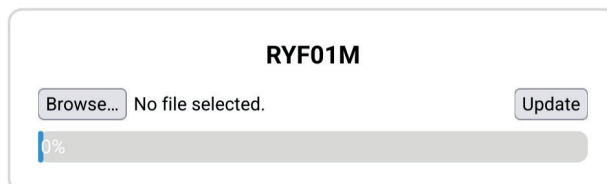
The update can be carried out by the user following the simple instructions in the following, using a Smartphone / tablet / PC featured with WiFi.

To update the firmware of the control unit, proceed as follows:

1. Check the version of the firmware loaded on the control unit:
 - a. Press the button 
 - b. Enter the password (default "1919") and press 
 - c. Select the "System" menu and press 
 - d. Select the "Info" menu and press 
 - e. Read and note the firmware version indicated after "FW version" is written.
2. Connect to the web site www.seitron.com and check the availability of a new firmware version updated regarding the one installed on the device, which can be found at the product page at "Download" section.
3. If a new firmware version is available, download the firmware file. This file is in a zipped format with .zip extension.
4. Open the compressed folder with .zip extension and copy the .bin file on the smartphone / tablet / PC featured with WiFi.
5. Enable the firmware update feature on the control unit:
 - a. Press the button 
 - b. Enter the password (default "1919") and press 
 - c. Select the "System" menu and press 
 - d. Select the "Firmware update" menu and press 
 - e. "Firmware update" is selected; press 
 - f. The following screen is shown:



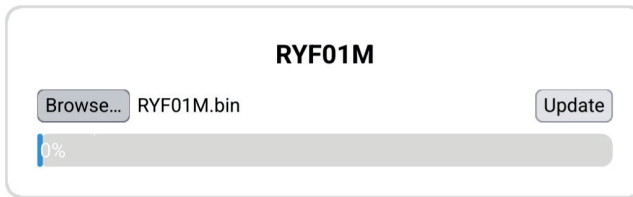
6. Connect from your device to the Wi-Fi network identified by the following SSID: **RYF01M_OTA**
7. Open a browser and type the following URL into the address bar: **ryf01m.local**
8. The following screen appears:



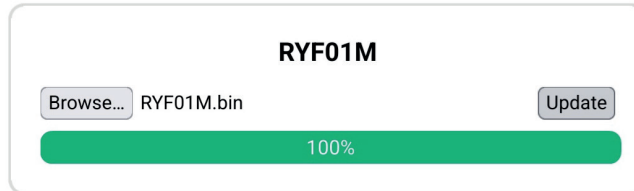
9. Press the Browse button (Choose File) and select the .bin file received from Seitron.



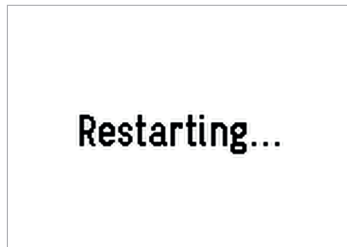
10. Press the Update button.



11. When the progress bar reaches 100%, the firmware update is complete.



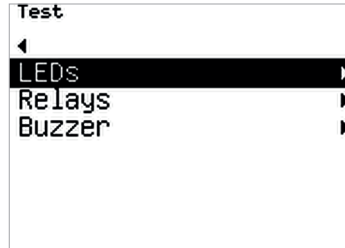
12. The display of the control unit shows the message "RESTARTING" and all the LEDs blink.



13. The firmware update procedure has been completed. The unit reboots showing on the first screen the installed firmware version.

5.4 Test

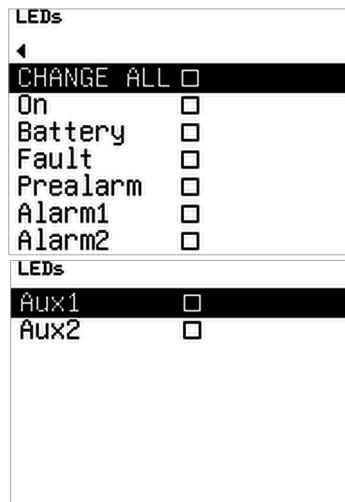
The "Test" menu allows you to turn on/off all outputs, buzzer and LEDs of the control unit in order to check its proper operation.



You can enable/disable the corresponding output for each signaling

- Flag inserted: Output enabled
- Flag NOT inserted: Output disabled

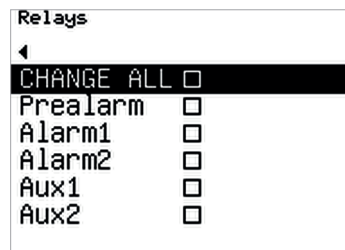
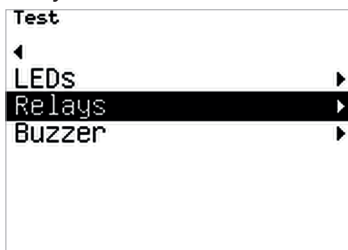
Funzionalità dei led



CHANGE ALL: enables all LEDs.

At each subsequent line, the LEDs corresponding to the indicated signaling can be tested individually.

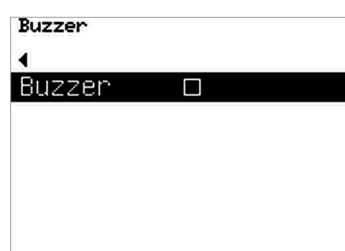
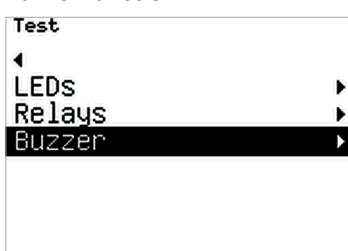
Relay functions



CHANGE ALL: enable all relays simultaneously

At each successive row, you can individually test the relay outputs corresponding to the indicated signal.

Buzzer function



Enable the buzzer.

6.0 FAULT SEARCH

Problem:

The password has been forgotten.

Solution:

Enter the system password 3553

Problem:

A status box displays the message LOOP.

Possible Cause:

The current loop input is interrupted or the transmitter is not properly powered. This issue can occur for transmitters connected to one of the 4..20 mA inputs of the control unit.

Solution:

Check for interruptions in the connections between the transmitter and the control unit. Use a multimeter to verify the presence of approximately 12Vdc between the transmitter's power terminals.

Problem:

A status box displays the message NO COMM.

Possible Cause:

There is a communication error with the transmitters connected to the RS485 network, or the transmitter is not properly powered. This issue can occur for transmitters connected to the RS485 network.

Solution:

Check for interruptions in the connections between the transmitter and the control unit. Use a multimeter to verify the presence of approximately 12Vdc between the transmitter's power terminals.

7.0 SERVICE CENTERS

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