BMC2 FIRE ALARM CONTROL PANEL USER MANUAL

Version 1.0 (11/2013)

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1 GENERAL

The fire alarm installation consists of two major parts, namely the actual control panel and the loops with the alarms.

Alarms means both manual alarms (pushbuttons) and automatic alarms (detectors).

The alarms are linked to the control panel by a two-core cable to which multiple alarms can be connected. Such a two-core cable is called a loop. Several loops can be connected to a single control panel.

Zones are defined that correspond to the actual layout of the building. These are groups of alarms that belong together geographically but do not have to be connected to the same loop.

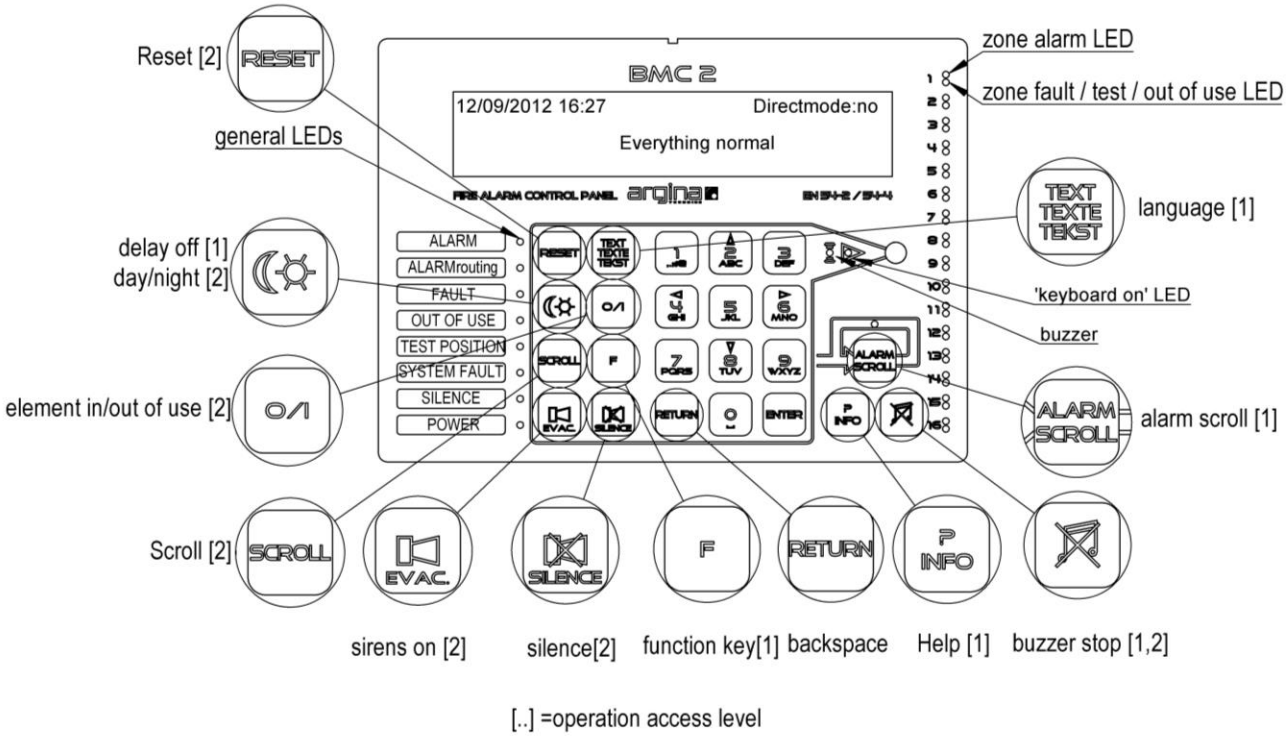
Each alarm has a unique address. Each alarm communicates bi-directionally with the control panel and transmits its sensor levels in that way.

Universal input/output modules, gas detectors and intelligent sirens can also be connected to the fire detection loops. All these devices have an address number. All the detectors, pushbuttons and other addressed modules are also called ‘encoders’ in this manual.

This manual contains the term ’alarm devices’, which means:
- Indicating equipment: sirens, bells, flashing lights, spoken announcements via the PA system, pagers, telephone transmitting equipment with spoken messages or digital reports to a control room.
- Fire retarding equipment: door magnets, smoke curtains, extinguishing equipment.
- Safety measures: disabling lifts and closing gas valves.

2 THE OPERATING PANEL

2.1 The meaning of the various lamps (LEDs)



- POWER LED: green LED is lit while the control panel is working.
- FAULT LED: yellow LED lights when the control panel detects an abnormal situation.
- ALARM LED: red LED that lights when the control panel detects an alarm
- ALARM ROUTING LED: red LED that lights when all alarm devices have been activated.
- OUT OF USE LED: yellow LED that lights when something on the control panel is out of use.
- TEST POSITION LED: yellow LED that lights when one or more items are in the test position.
- SYSTEM FAULT LED: yellow LED that indicates that there is a fault in the control panel itself or that the control panel has been be restarted.
- SILENCE LED: yellow LED that lights when the alarm devices have stopped.
- KEYBOARD ON LED: yellow LED next to the control key that lights when the control key is turned to the correct position. All keys can be operated when this LED is on.
- LEDs for alarm (red) and fault/out of use (yellow) for the first 16 zones. The yellow LED flashes when there is a fault. The yellow LED stays lit when a zone is out of use or is in the test position.

2.2 The display

Every message issued by the control panel is shown on the display.

The LCD display consists of 4 lines, each of which can show 40 characters. The top 3 lines can contain alarm or fault messages. The bottom line is used to show status information.

In the case of fault messages, the latest message is always shown. Massages for which the display has no place (anymore), are held in memory and can be retrieved using the Scroll key. The memory can be retrieved again (see Section 5, OPERATION OF KEYS AND MENUS)

Alarm messages take precedence over fault messages. When alarm messages occur, any fault messages on the display disappear and make way for them. The top line shows the number of alarms present and the second line shows the location of the first one. In the event of multiple alarms, the location of the latest alarm is shown on the third line. The remaining alarms can be called up by using the Alarm Scroll key.

The LCD backlight switches automatically between high, medium and off, according to the importance of the message and the battery autonomy.

2.3 The keyboard

Every keystroke accepted sounds a beep. A rejected keystroke sounds a double beep.

Four keys on the operating panel are always accessible.

BUZZER STOP 

The control panel responds to this key only if the buzzer is sounding. Only the buzzer on the operating panel stops when this key is pressed. The buzzers on all operating panels will stop simultaneously in installations with multiple operating panels.

ALARM SCROLL 

This key works only if the control panel is in an alarm condition. It shows alarms chronologically on the display. If there are multiple alarms, the first and last alarms will be shown on the normal display. The Alarm Scroll LED lights if there are three or more alarms, in order to indicate that the alarms that are not visible can be retrieved using the Alarm Scroll key.

INFO 

This key gives additional information in some submenus.

LANGUAGE 

This key is used to select one of the pre-programmed languages.
The detector texts (location) entered by the user remain in their original language.

All the other keys can only be used when the control key has been turned to the correct position. Turn the control key so that the yellow LED next to it lights.

RESET 

This key resets the control panel. This means:

- the sirens and other alarm devices are switched off
- the buzzer stops and all LEDs, except for the Power LED, are off
- the display is cleared
- the text ‘Reset’ appears on the display for a few seconds
- all detectors are reset
- the status of the detectors is deleted, the detectors that are out of use remain out of use, and the detectors that are in the test position remain in the test position
- any abnormalities after reset are reported.

SILENCE

Pressing this key:

- stops the buzzer on the operating panel
- stops the sirens and lights the Silence LED
- stops the Operator Reaction Time and starts the InspectionWalk Time
- stops the InspectionWalk Time and puts the control panel in monitoring mode
  (See Section 4, General operation of delay times)

DAY/NIGHT

This key is used to switch between day and night schemes.

- If the display shows Directmode:yes, then the delay times are not running and an alarm will operate all alarm devices immediately. (night scheme)
- If the display shows Directmode:no, then the delay times are running and an alarm will operate the sirens after a delay (day scheme).
  (See Section 4. General operation of delay times.)

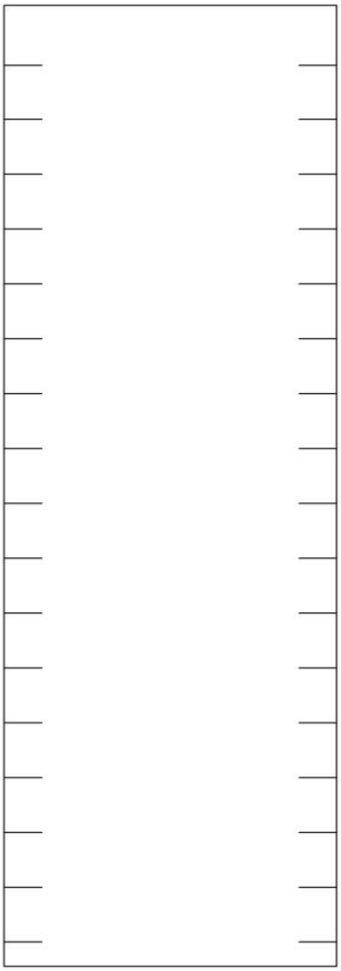
See Section 5, OPERATION OF KEYS AND MENUS, for a comprehensive description of all keys

2.4 The label pocket

The label in the label pocket can be changed, for example for indications in another language. Consult your dealer.

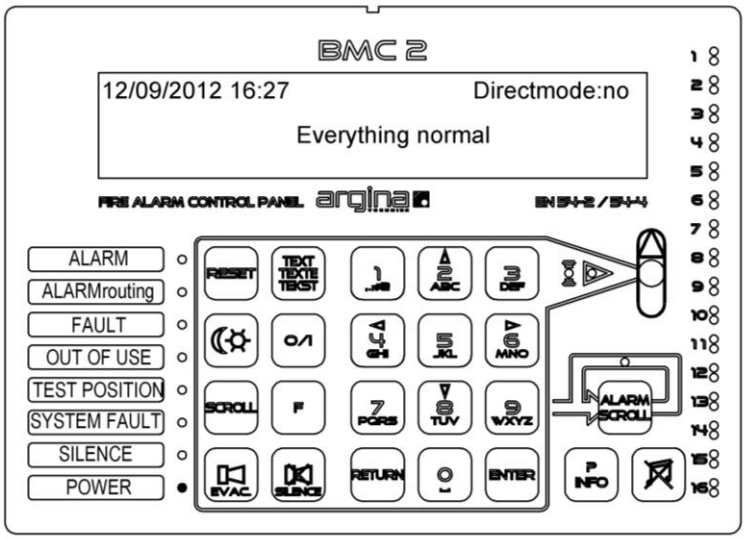
Sample pocket labels:

ALARM	FIRE ALARM
ALARMDOORMELD.	ALARM ROUTING
STORING	FAULT
UIT DIENST	OUT OF USE
PROEFSTAND	TEST POSITION
SYSTEEMFOUT	SYSTEM FAULT
SIRENES STIL	SILENCE
VOEDING	POWER



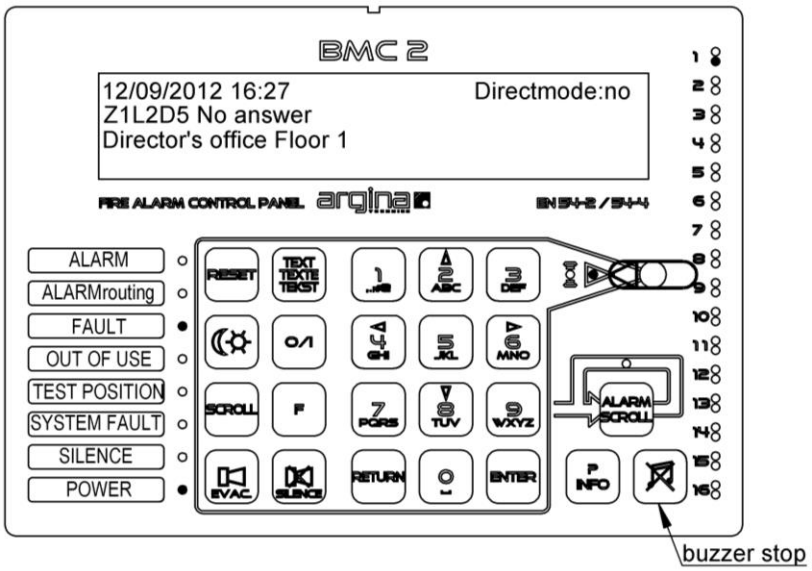
3 MESSAGE ACTIONS

3.1 Normal condition



Normally only the green Power LED will be lit. The top row of the display shows the date and time, together with the day/night operating scheme. ('Directmode:no' or 'Directmode:yes')

3.2 Fault message



In the event of a fault the Fault LED lights and the control panel buzzer sounds a continuous tone. The buzzer can be switched off immediately by pressing the Buzzer Stop key, enabling the message to be examined in peace.

The fault message is shown on the second and third lines of the display; the second line shows the fault and the element and the third line the pre-programmed text for the element. The top row of the display shows the current date and time, together with the day/night operating scheme.
The various fault messages and their possible causes can be found in the table below. The text on the display is shown against a grey background.

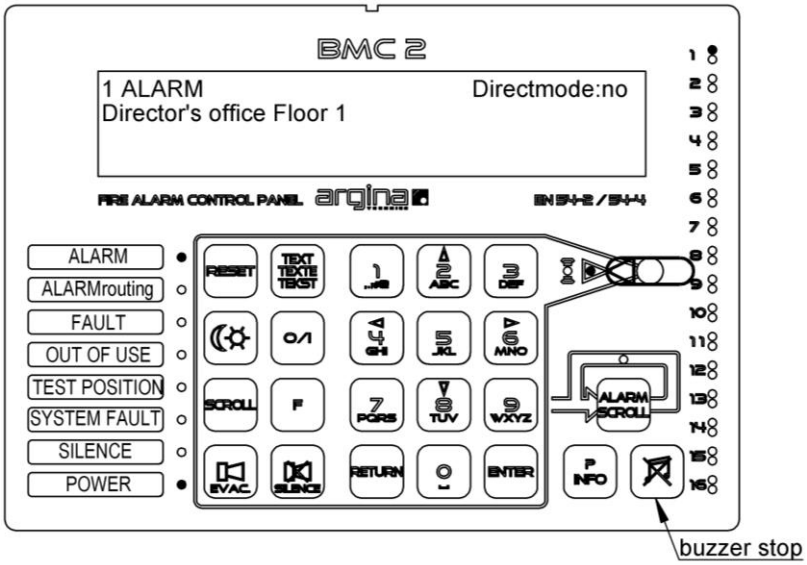
FAULT TABLE
230V fault
The mains power to the control panel has failed. The control panel has switched to batteries automatically.
Blank dark screen
The mains power to the control panel has failed and the batteries are discharged. Only the buzzer and the general fault LED will be working (the buzzer can be switched off with the buzzer stop switch).
Battery voltage low 0.0V
The batteries have been disconnected, the fuse is faulty, or the batteries are faulty.
Battery discharged 8.2 ohm
Either the batteries are discharged (wait one hour and press Reset) or they are too old (consult your dealer).
High battery load current
The batteries are demanding too high a load current. They have possibly been used for a long time (wait one hour and press Reset; if the fault persists, consult your dealer).
One or more items out of use

One or more items are out of use. These elements can be called up using the Scroll key.
One or more items in test position
One or more items are in test position These elements can be called up using the Scroll key.
Z1L2D5 out of use
Detector D5 in Zone 1 has been set out of use.
Z1 in test position
Zone 1 has been put in the test position.
Z1L2 D5 Backup cable activated
There is a line break in Zone 1 before detector 5. The return loop has been switched in to keep all detectors operating. If detectors nevertheless lose power as a result of the line break, they will be reported individually as 'No answer'. The number of detectors that are not operating and therefore cannot give an alarm will also be shown.
Z1L2 D5 Line interrupted from
For a loop without a return loop: there is a line break before detector 5 and all detectors further along the loop are not operating. It can also be that detector 5 has failed, or detector 5 has the wrong number, or detector 5 is faulty. The number of detectors that are not operating and therefore cannot give an alarm will also be shown.
L2 Open line return loop
The return loop has been interrupted (this is the cabling from the last detector on the loop returning to the control panel).
Z1L2 D5 No answer
Detector number 5 in Zone 1 has been removed from its base or there is a line break in Zone 1 before Detector 5, or there is poor contact in the wiring in the base of that detector.
Z1L2D5 Wrong type (TVC v1)
The control panel expects a different type of detector at this location. It sees a thermal detector (TVC v1) instead of an optical one, for example. The problem can be resolved by installing the correct type of detector or by changing the set-up using the BMC2 program.
Z1L2D5 Double answer
The control panel has detected that there are two encoders that respond with number D5. A second detector has probably been set up incorrectly with number 5.
Z1L2D5 Sensor fault X
A sensor in a detector is not functioning properly.
Z1L2D5 No answer optional PCB
SLIM detectors can have an optional PCB in their base: siren, relay, repeater lamp driver. If an optional PCB has been set up with the BMC2 program but the option is not present or no longer responds to the detector, then this fault is indicated.
Z1L2D5 Wrong type option PCB
The optional PCB in a SLIM base is of the wrong type.
Z1L2D9 Short circuit
A short circuit has been detected in a part of the loop. The short circuit is after detector D9 in the loop. If the loop has been configured with a return loop, then all detectors will remain in use To determine the exact location: use Scroll to show which two detectors are indicating a short circuit. The short circuit will be between these two detectors. If the loop does not have a return loop, all the detectors after the short circuit will no longer operate. The number of detectors that are not operating and therefore cannot give an alarm will also be shown.

L1 Short circuit
There is a short circuit in Loop 1. If the control panel does not indicate the exact location a little later (e.g. short circuit Z1L2D9), then the short circuit is between the control panel and the first detector.
Z1L2D8 Open line slave loop
A (traditional) detector is removed from its base or there is a line break in the (traditional) slave loop connected to encoder 8.
Z1L2D8 Short circuit in slave loop
There is a short circuit in the (traditional) slave loop connected to encoder 8.
Short circuit (*line open*) switch loop
There is a short circuit (*line open*) in the switch loop (external evacuation, reset or silence switches).
Repeater panel 1 Short circuit (*line break*) in switch loop
There is a short circuit (*line open*) in the switch loop (external evacuation, reset or silence switches) of repeater panel no. 1.
EXT short circuit
The power output for external devices has detected a short circuit and has switched itself off.
Siren 1 line break
The wiring for the 1st siren circuit is open.
Siren 2 short circuit
The wiring for the 2nd siren circuit has a short circuit.
Repeater panel 1 No answer
The repeater panel is no longer answering. The wiring is broken or the repeater panel incorrectly has address 2.
Repeater panel loop short circuit
There is a short circuit in the wiring to the repeater panels.
Fault in power supply
An irregular voltage has been measured in the power supply of control panel 1. Consult your dealer.
Fault in battery charger
An irregular voltage has been measured in the battery charger of control panel 1. Consult your dealer.
Battery empty: switch off
The battery of control panel 1 is fully discharged and the mains voltage is not present. The control panel has switched itself off and the batteries have been disconnected.
Control panel has booted
The control panel has booted after a total power failure.
Configuration data corrupt
The configuration data (site-specific data) was corrupt. The control panel has provisionally restarted with minimal operation. Consult your dealer as soon as possible.
System fault 11,0,1687
Note the system fault numbers and consult your dealer.

If it is known or suspected that the cause of the fault no longer exists, Reset can be used (see Section 5, OPERATION OF KEYS AND MENUS). If the cause has not gone away, the control panel will show a fault message again within anything from a few seconds to ten minutes after a reset, depending on the fault message.
If this happens, the Buzzer Stop key can be used to stop the buzzer from sounding and the fault message can be left on the display. Contact your dealer to have the problem resolved.
In the case of some faults, it can be desirable to set the device that caused the fault out of use (see Section 5, OPERATION OF KEYS AND MENUS).

3.3 Alarm messages



In the event of an alarm the red Alarm LED lights and the control panel buzzer sounds a continuous tone.
The buzzer can be switched off by pressing the Buzzer Stop key.

The following message appears on the display

1 ALARM	Directmode:no/yes
Director's office Floor 1	

'1 ALARM' shows the number of alarm events that are on the control panel at the moment.

'Director's office Floor 1' shows the location: there is an alarm event in the director's office on the first floor.

If the display shows 'Directmode:yes':

The alarm devices were all activated automatically. To stop the alarm devices: turn the control key until the yellow LED next to it lights and then press Silence.

If the display shows 'Directmode:no':

The operator reaction time of ... minutes … seconds is running. If no action is carried out on the control panel, all alarm devices will be activated after a delay of this length. Turn the control key until the yellow LED next to it lights. Press the Silence key within this initial delay time to start the InspectionWalk time of ... minutes … seconds. The InspectionWalk time allows time for investigating whether evacuation is necessary.

The following message appears on the display:

1 ALARM	InspectionWalk	Directmode:no
Director's office Floor 1		

If evacuation is necessary it can be signalled by pressing the Evac key on the operating panel or by pressing one of the alarm pushbuttons (which are distributed throughout the building).

If the operating panel is not operated within the InspectionWalk time, the alarm devices will be activated automatically.

If evacuation is not necessary, press the Silence key on the operating panel again. The alarm devices will not be activated (if they have been activated they will switch off).
The control panel will now be in a monitoring mode and a choice can be made from the following actions

- Do nothing and leave the control panel in monitoring mode. The disadvantage of this is that if a new alarm event occurs, the alarm devices will be activated immediately because in this case the delay times will not be used. Another possible disadvantage is that the door magnets remain unpowered in this mode.

- Try a reset. See the description of the Reset key below. This action is indicated if the cause of the alarm (or false alarm) is known and has been resolved. Example: the detector in the kitchen set off the alarm because too much smoke came out of an oven. The Reset key can be pressed without problems after the kitchen has been sufficiently cleared of smoke.
  If the Reset key has been pressed more than once and the same detector still indicates an alarm without a discernible reason, there is no point in trying again, and it would be better to try one of the other two actions.

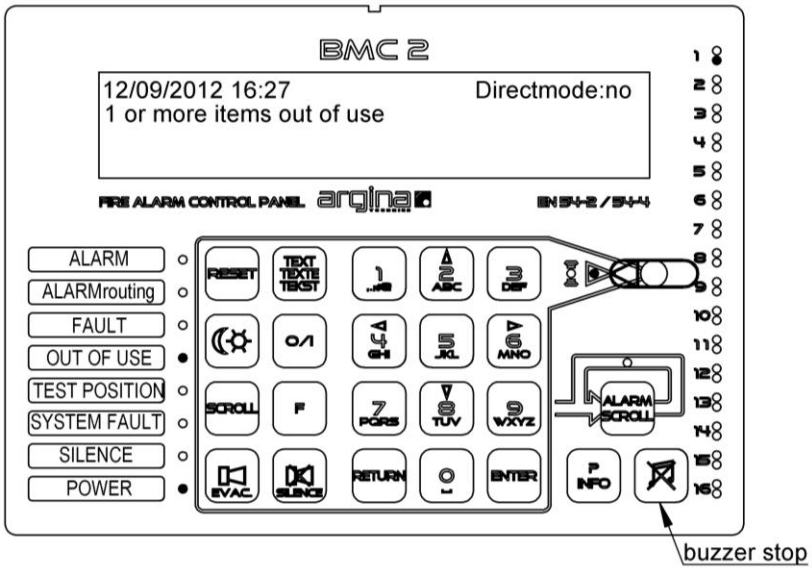
- Set the element out of use. See the description of the key below.

Note: if 0 minutes 0 seconds has been set in the system for:

- T1: there is no Operator Response Time. All alarm devices will always be activated immediately in this case. If that is what is actually wanted, it is better to place the control panel in the ’Directmode:yes’ operating mode.
- T2: there is no InspectionWalk Time. If in the case of an alarm the Silence key on the operating panel is pressed within the Operator Response Time, the InspectionWalk Time will NOT be started. The message ’InspectionWalk’ will then not appear on the display and the Silence LED will light. This means that the alarm devices will no longer be activated automatically as a result of an alarm condition. The fire alarm control panel will be in monitoring mode, however. If a new alarm condition occurs, the control panel will activate all alarm devices immediately.
- T3: the alarm devices will not be switched off automatically. All alarm devices will then continue to operate until they are stopped from the operating panel.

Note: See also Section 4. GENERAL OPERATION OF DELAY TIMES.

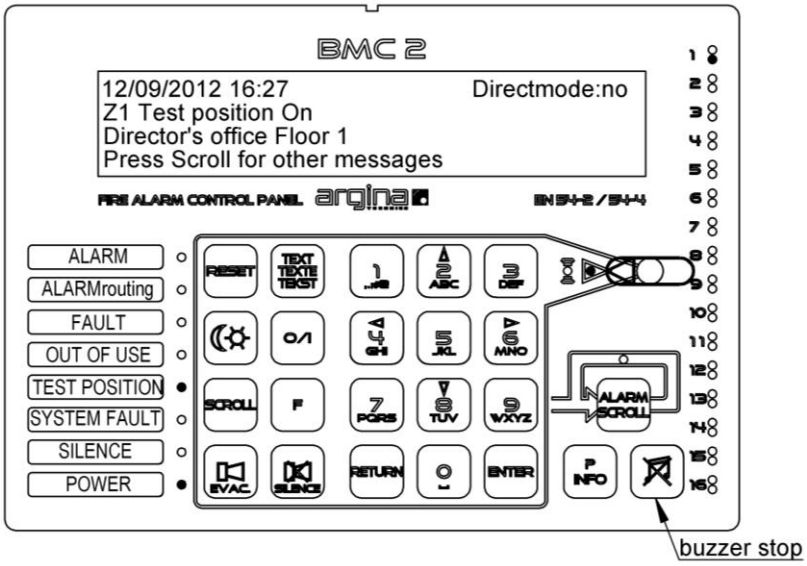
3.4 Out of use message



In the event of one or more elements being set out of use, the Out of Use LED lights and the control panel buzzer sounds an intermittent tone. The buzzer can be switched off by pressing the Buzzer Stop key.

For setting elements in and out of use, see Section 5, OPERATION OF KEYS AND MENUS.

3.5 Test position



The test position function is used to test the proper operation of the detectors and the pushbuttons in a simple way without activating the alarm devices (sirens, etc.).
The zones that are in the test position will not issue a genuine alarm. Neither the buzzer nor the sirens will work when an alarm is issued by a zone in the test position.

The detectors that are tested in this way will still show a message on the display, for example:

12/9/2012 14:57	Directmode:no
Z1L2D5 Test position Alarm (Optical)	
Technical Area cellar	
Press Scroll for other messages	

A detector in the Technical Area in the cellar is being tested here. The alarm comes from an optical sensor.

If the Reset key is pressed while elements are in the test position, the control panel will be reset and the test position will remain in effect. The buzzer will sound an intermittent tone and the following message will appear on the display:

12/9/2012	Directmode:no
One or more items in test position	

Press Buzzer Stop to stop the sound.

For setting the test position function on and off, see Section 5, OPERATION OF KEYS AND MENUS.

4 GENERAL OPERATION OF DELAY TIMES

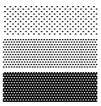
4.1 Normal control unit operating mode in day scheme **Directmode:no**

This operating mode is shown on the display as: Directmode:no

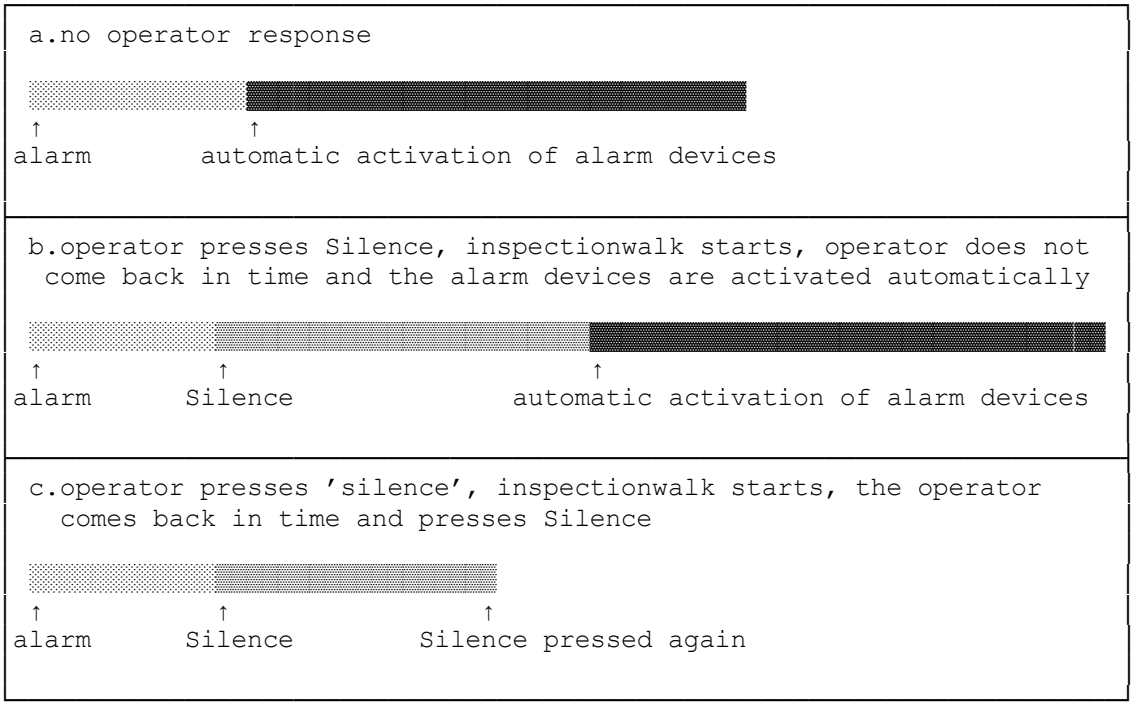
Three general delay times have been set up in your fire alarm system. These are designated T1, T2 and T3:

You can fill in the times set up below and in Sections 3.3 and 5 so that you can find them immediately in your user manual in the event of an alarm.

T1: operator response time … minuten … seconden
T2: inspectionwalk time … minuten … seconden
T3: siren operating time … minuten … seconden



Time diagram



When an alarm comes in from an automatic detector, the buzzer on the operating panel starts immediately. The red general alarm LED lights and the location of the alarm can be read on the display. Operator response time T1 starts at this point.

If no action is carried out on the operating panel, all alarm devices will be activated after a delay time of T1. The siren operating time T3 starts at this point. This condition is shown on the operating panel by the Alarm Routing LED lighting. The alarm devices stop automatically when this delay time T3 has elapsed (see timing diagram a. no operator response).

If in the case of an alarm the Silence key on the operating panel is pressed within the Operator Response Time, the InspectionWalk Time T2 will be started. The InspectionWalk time allows time to investigate whether evacuation is necessary. The display then shows the text 'InspectionWalk'.

If evacuation is necessary, it can be signalled by pressing the Evac key on the operating panel or by pressing one of the alarm pushbuttons (which are distributed throughout the building).

If the operating panel is not operated within this time (T2), the alarm devices will be activated automatically. The alarm devices will remain activated for the siren operating time, T3 (see timing diagram b. operator presses Silence, inspectionwalk starts, the operator does not come back in time and the alarm devices are activated automatically).
>If evacuation is not necessary but the alarms that are already on the operating panel remain there (optical indications), press the Silence key again (see timing diagram c. operator presses Silence, InspectionWalk starts, the operator comes back in time and presses Silence). The alarm devices will not be activated and all messages that were on the operating panel will stay there. The fire alarm control panel will be in monitoring mode, however. If a new alarm condition occurs, the control panel will activate all alarm devices immediately.

If evacuation is found not to be necessary because the cause of the alarm is known but has gone away in the meantime, the Reset key on the operating panel can be pressed a second time. The control panel will return to its normal state. If an alarm button is pressed again or a fire detector remains in an alarm state, the control panel will return to the alarm state within a few seconds.

Note: if 0 minutes 0 seconds has been set in the system for:

- T1: then there is no Operator Response Time. All alarm devices will always be activated immediately in this case. The control panel operating mode will then still be Directmode:yes.
- T2: there is no InspectionWalk Time. If in the case of an alarm the Silence key on the operating panel is pressed within the Operator Response Time, the InspectionWalk Time will NOT be started. This means that the alarm devices will no longer be activated automatically as a result of an alarm condition. The fire alarm control panel will be in monitoring mode, however. If a new alarm condition occurs, the control panel will activate all alarm devices immediately.
- T3: the alarm devices will not be switched off automatically. All alarm devices will then continue to operate until they are stopped from the operating panel.

Times T1 and T2 can be set to a maximum of 10 minutes, in accordance with EN54-2.
In order to comply with EN54-2 Item 7.11.d it is necessary to install at least one warning pushbutton that can activate the alarm devices without delay, even if delays are active at the time.

4.2 Control panel operating mode in night scheme: **Directmode:yes**

This operating mode is shown on the display as: Directmode:yes
In this mode the delay times are NOT active and all alarms will operate immediately.

4.3 Changing the day/night operating mode

The operating mode of the control panel can be changed using the Day/Night key. The switchover can also occur at pre-programmed times. Consult your dealer.

5 OPERATION OF KEYS AND MENUS

Every keystroke accepted sounds a beep. A rejected keystroke sounds a double beep.

There are 4 keys that are accessible at all times. All the other keys can only be used when the control key has been turned to the correct position. Turn the control key so that the yellow LED next to it lights.

5.1 Keys for which no control key is required:

BUZZER STOP 

The control panel responds to this key only if the buzzer is sounding. Only the buzzer on the operating panel stops when this key is pressed. The buzzers on all operating panels will stop simultaneously in installations with multiple operating panels.

ALARM SCROLL 

This key works only if the control panel is in an alarm condition. It shows alarms chronologically on the display.
If there are multiple alarms, the first and last alarms will be shown on the normal display. The Alarm Scroll LED lights if there are three or more alarms, in order to indicate that the alarms that are not visible can be retrieved using the Alarm Scroll key.

INFO 

This key gives additional information in some submenus.

LANGUAGE 

The language the control panel uses for messages can be changed at any time by using this key. The location texts entered by the user remain in their original language.

5.2 Keys for which the control key must be in the correct position

The correct position of the control key is that in which the yellow LED next to it lights.

SILENCE 

Pressing this key:

- stops the buzzer on the operating panel
- stops the sirens and lights the Silence LED
- stops the Operator Reaction Time and starts the InspectionWalk Time
- stops the InspectionWalk Time and puts the control panel in monitoring mode
  See Section 4. General operation of delay times.

The Silence key is only used in the case of alarm messages. There is a difference in what this key does according to whether Directmode:yes or Directmode:no is shown at the top right of the display.

If the display shows 'Directmode:no':

When an alarm notification is received, the Operator Response Time of ... minutes … seconds starts to run. If no action is carried out on the operating panel, all alarm devices will be activated after a delay of this length. If the Silence key is pressed within this initial delay time, the InspectionWalk time of ... minutes … seconds starts. The InspectionWalk time allows time for investigating whether evacuation is necessary.

The following message appears on the display:

1 ALARM	InspectionWalk	Directmode:no
Director's office Floor 1		

If evacuation is necessary, it can be signalled by pressing the Evac key on the operating panel or by pressing one of the alarm pushbuttons (which are distributed throughout the building).
If one doesn't reach the operating panel again within the InspectionWalk time, the alarm devices will be activated automatically.
If evacuation is not necessary, press the Silence key on the operating panel again. The alarm devices will not be activated (if they have been activated they will switch off). The control unit will now be in monitoring mode and a choice can be made from the following actions

- Do nothing and leave the control panel in monitoring mode. The disadvantage of this is that if a new alarm event occurs, the alarm devices will be activated immediately because the delay times will not be used in this case. Another possible disadvantage is that the door magnets remain unpowered in this mode.

- Try a reset. See the description of the Reset key below. This action is indicated if the cause of the alarm (or false alarm) is known and has been resolved. Example: the detector in the kitchen set off the alarm because too much smoke came out of an oven. The Reset key can be pressed without problems after the kitchen has been sufficiently cleared of smoke.
  If the Reset key has been pressed more than once and the same detector still indicates an alarm without a discernible reason, there is no point in trying again, and it would be better to try one of the other actions.

- Set the element out of use. See the description of the key below.

If the display shows Directmode:yes:

When an alarm notification is received, the alarm devices start immediately.
Press the Silence key to stop them. The control panel will now be in monitoring mode and a choice can be made from the three actions above.

RESET 

This key resets the control panel. This means:

- the sirens and other alarm devices are switched off
- the buzzer stops and all LEDs, except for the Power LED, are off
- the display is cleared
- the text ‘Reset’ appears on the display for a few seconds
- all detectors are reset
- the status of the detectors is deleted, and the detectors that are out of use remain out of use

If it is known or suspected that the cause of a fault or an alarm no longer exists, Reset can be used. If the cause has not gone away, the control panel will show a message again within anything from a few seconds to thirty minutes after a reset, depending on the message.
It can be desirable for some events that the element that originated the event be set out of use. See the description of O/I below (in/out of use).

DAY/NIGHT 

This key is used to switch between day and night schemes:

- If the display shows Directmode:yes, then the delay times will not be used and an alarm will operate all alarm devices immediately (night scheme).
- If the display shows Directmode:no, then the delay times will be used and an alarm will operate the sirens after a delay (day scheme).

For the operation of the delay times. see Section 4, General operation of delay times.

The switchover can happen partially or entirely automatically at the times and the days of the week, set up with the BMC2 program. Consult your dealer.

It is also possible that pressing the key:
- has no effect
- can only switch from the day scheme to the night scheme
- can only switch from the night scheme to the day scheme.

This depends on the settings in the BMC2 program.

The Day/Night key has no effect if T1 Operator Response Time has been set to 0 minutes 0 seconds: the control panel operating mode will then still be Directmode:yes.

EVAC (evacuation) 

Pressing the key activates all alarm devices immediately. The alarm devices can be stopped using the Silence or Reset keys. See the descriptions of the keys above.

The general alarm indications will appear and the alarm transmission will also be activated.

If the Evac key is pressed accidentally, use the ‘reset’ key.

O/I (in/out of use) □/I

This key is used to set elements in and out of use. The way this happens can be selected using the ↑ and ↓ keys (confirm by pressing Enter). There are 5 possible actions:

- Set complete control panel in use: all elements that are out of use are set in use again.
  Press Reset to put the control panel in normal mode.

- Set all encoders in alarm or fault out of use: all encoders that are in alarm or fault condition are set out of use.

- Set a zone or detector in/out of use: Used to set one or more zones or detectors in/out of use.

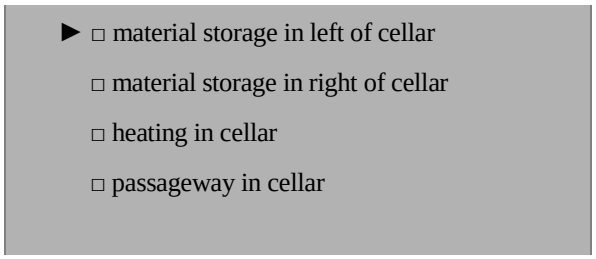
Press Enter to set a specific detector whose number is known in or out of use. A list of zones present will now be shown. Select one using the up/down keys and press O/I to change its status (press INFO for more information if required). Press Enter. A list of the detectors in this zone will now be shown. Individual detectors can be set in/out of use by pressing O/I. Press Enter when finished.

- Set a loop or detector in/out of use: Used to set one or more loops or detectors in/out of use.

- Other items in/out of use: Used to set sirens, transmissions, door magnets, etc. in/out of use.

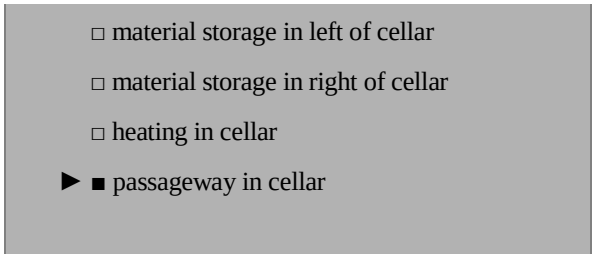
Example of how 'Set a zone or detector in/out of use' works:
The display shows the following, for example:

('Zone 1' is the zone text)
The ↑ and ↓ keys can be used to scroll through the zones.
Press O/I to set Zone 1 out of use.
To set a detector in Zone 2 out of use as well, press the ↓ key once and then press Enter. A list of the detectors in Zone 2 will now be shown

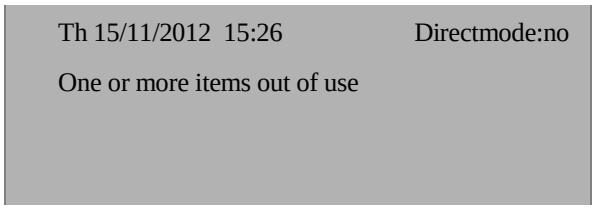


To set the detector in the passageway out of use, press the ↓ key four times and then press O/I.
Zones (or detectors) that are fully in use are shown by □.
Zones in which one or a number of detectors are out of use are shown by a half-filled square.
Zones or items that are fully out of use are shown by ■.

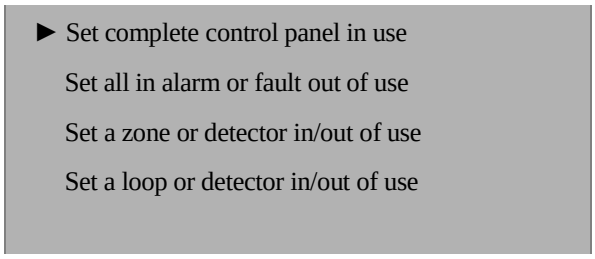
The display will now show:



Confirm your settings by using the Enter key. Next press Reset to see the following screen:



To set **everything back in use** afterwards, do the following:
Press O/I. The display will now show:



Press Enter. The complete installation is now in use.
Press Reset again to see the normal text on the display.

To set other elements in/out of use, choose one of the other options after pressing O/I. Use the ↑ or ↓ keys to select an element, press O/I to change its status and Enter to confirm.

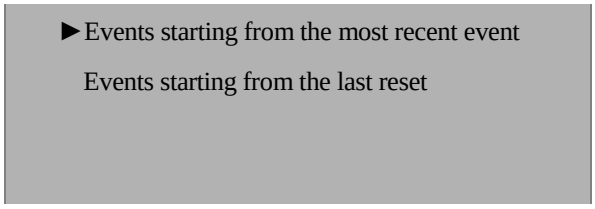
RETURN 

This key acts as a backspace during entry.
It can also be used to exit most menus.

SCROLL 

The control panel holds a history of 200 messages and events. And also all current messages that are now present on the control panel but are not displayed individually (because of the limited space on the display). These messages can be retrieved by using the Scroll key.

This can be done in various ways. The following options are shown after Scroll is pressed:



Select using the ↑ or ↓ keys and press Enter.

- Events starting from the most recent event: selecting this function retrieves the events from the control panel memory chronologically. The ↓ key is used to show the older events, and the ↑ key the more recent.

- Events starting from the last reset: this function reads the memory chronologically from the last reset. The ↓ key is used to show the older events, and the ↑ key the more recent.

F (functions) F

This key is used to access the following functions:

- Adjust clock
- Set test position
- LED flash mode, buzzer mute (C)
- Show measurements
- Control panel identification
- Set delay times C
- Lamp test
- Show alarm counter
- Reboot the control panel C
- Restore factory settings C

The following appears when the F key is pressed:

```
►Adjust clock
 Set test position
 LED flash mode, buzzer mute
 Show measurements
```

If the function shown is the one wanted, press Enter. If a different function is wanted, press the ↑ key or the ↓ key until the desired function is shown. Press Enter to go to the function.

Return acts as a backspace key. Pressing this deletes the previous digit or returns to the previous screen..

Press F to exit the function.

Code: Some functions alter the operating mode of the control panel and are protected by a code (C in the above table). 'Enter your code' appears on the display when one of these functions is invoked. Consult your dealer.

F Adjust clock

```
Enter date and time:
12■/9/2012 16:27:45
Correct with Return key, input with number keys,
confirm with Enter key
```

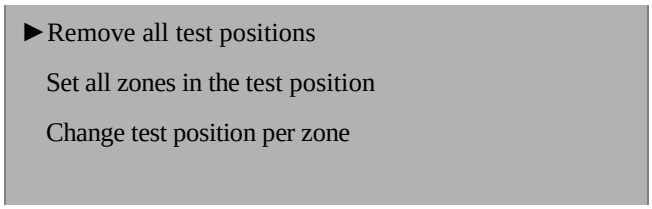
First enter the day of the month. For example, for the twelfth press 1 then 2, followed by Enter. If 122 is pressed by accident, it can be corrected by pressing Return once. If 13 is pressed by accident and Enter has been pressed, correction is no longer possible. The F key should be pressed to return to the main menu, then once more to select the Adjust clock function again.
Next enter the month number. For example, for September press 9 then Enter.
Next enter the year number, for example 2012, followed by Enter.
Next enter the hour, for example 16, followed by Enter.
Next enter the minutes, for example 27, followed by Enter.
Next enter the seconds, for example 45, followed by Enter.

F Set test position

The test position function is used to test the proper operation of the detectors and the pushbuttons in a simple way without activating the alarm devices (sirens, etc.).

Caution The zones that are in the test position will not issue a genuine alarm. Neither the buzzer nor the sirens will work when an alarm is issued by a zone in the test position.

If the Test position function has been selected, a code has to be entered and the following screen will appear:



To choose one of the three options, use the ↑ key or the ↓ key and press Enter.

'Change test position per zone': To put only a few zones in the test position. If this option is chosen, the following screen will appear:

(the pre-programmed text is shown instead of 'Zone x')

For example, if Zone 3 is to be put in the test position, press the ↓ key twice.
Next press O/I to toggle the zone between test position and no test position. (Use the INFO key to see information.)

Press Enter when all zones have been put in the desired position
The display will now show:

The yellow LED for Zone 3 and the general Out of Use LED will light.

The same zones will remain in the test position when Reset is pressed. The display will now show:

12/9/2012 14:57	Directmode:no
One or more items in test position	

The buzzer will sound an intermittent tone. Press Buzzer Stop to stop the buzzer.

(If all test positions are to be removed, press F, select 'Remove all test positions', then press Enter. Then press Reset.)

If an alarm in a zone in the test position is activated, it will be shown as follows:

12/9/2012 14:57	Directmode:no
Z1L2D5 Test position Alarm (Optical)	
Technical Area cellar	
Press Scroll for other messages	

A detector in the Technical Area cellar has just been tested. The alarm comes from an optical sensor.
The following LEDs will light:
General alarm LED
Zone alarm LED
Alarm LED on the detector itself. The Alarm LED on the detector will be extinguished ten seconds after the detector's sensor level has fallen below the alarm level.
All incoming test position alarms can be verified afterwards by using the Alarm scroll key.

To **remove** all **test positions**: press F, select 'Remove all test positions' and press Enter. Then press Reset.

F LED flash mode, buzzer mute

This function puts all encoders (detectors, pushbuttons, etc.) in a special service mode in which the encoders' red LEDs begin to flash. Only once the LEDs are flashing can the LaserBox be used to read and program the detectors locally.
If the 'LED flash mode, buzzer mute' function is selected, the following screen will appear

►No flash on encoders
Flash on encoders, no programming
Flash on encoders, programming enabled

Select using the ↑ key or the ↓ key and press Enter.

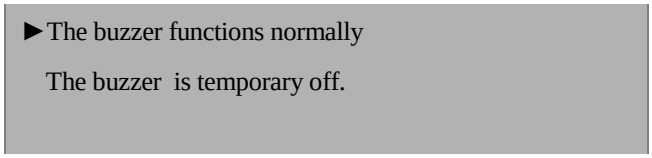
- Flash on detectors, no programming:
  The LaserBox can now be used only to retrieve data such as the encoder number and to simulate an alarm condition, but not to change the encoder number.

- Flash on detectors, programming:
  In this mode the LaserBox can be used to retrieve data as well as to program or reprogram detector numbers. This function is protected by a code.

- No flash on encoders: normal operating mode.

The control panel will automatically exit the flash mode after 2 hours. The flash mode can be exited manually, of course, by selecting 'No flash on encoders'.

The buzzer operation can be set after one of these flash modes has been selected.



Select using the ↑ key or the ↓ key and press Enter.

- The buzzer functions normally:
  The buzzer sounds a short beep when a keystroke is made, to show that it has been accepted. A rejected keystroke sounds a double beep.
  The buzzer sounds a continuous tone in the event of an alarm.
  The buzzer sounds an intermittent tone in the event of a fault or out of use.
  EN54-2 requires normal operation of the buzzer.

- The buzzer will be off temporarily:
  The buzzer can be put in a special service mode with this function, so that work on the fire alarm system can be carried out without it sounding. Neither an alarm nor a fault will sound the buzzer.
  The buzzer will sound a short beep only when a keystroke is made, to show that it has been accepted. The buzzer will revert to normal operation after 2 hours. The buzzer can be returned to normal operation, of course, by selecting the 'Buzzer functions normally' function.

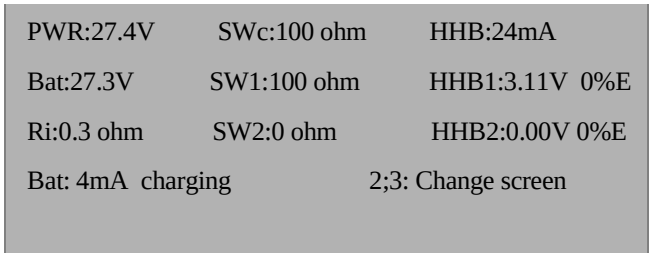
The display will show:

The number keys (plus Return) can be used to set how long the control panel will remain in the flash and buzzer (or buzzer mute) mode. Press Enter when finished..

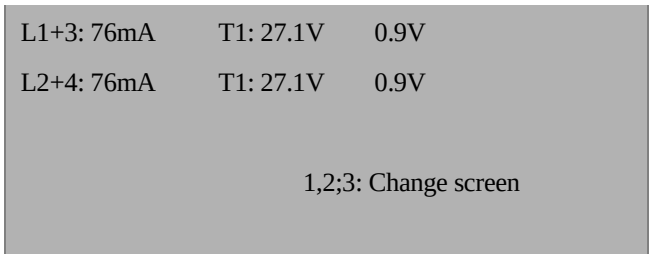
F Show values

The control panel can show 30 values from all connections. To be used as an aid during commissioning and later during maintenance. This function is intended for use only by technically-skilled.

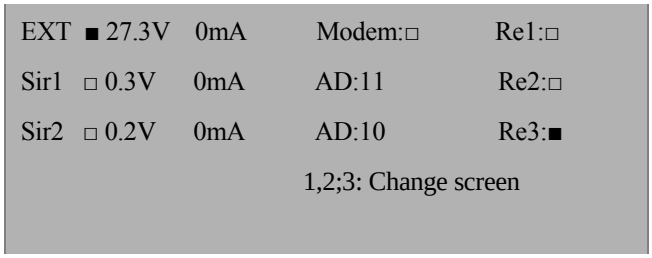
Values are shown on three measurement screens. Use the 1, 2 and 3 keys to move from one screen to another. The measurement screen will be exited automatically after a while.



PWR= power supply voltage
Bat = battery voltage, measured internal resistance of battery, battery current (charging, discharging) (a battery discharge current greater than 800 mA will be shown as approx. 800mA).
SWc= switch loop control panel (monitored loop for reading three external switches: Silence, Reset, Evacuation)
SW1= switch loop on Repeater Panel1 (HHB1)
SW2= switch loop on HHB2
HHB= current supplied by control panel to the Repeater Boards.
HHB1= voltage measured by Repeater1 itself 0%E= percentage of actual data errors on the Repeater data line
HHB2= voltage measured by Repeater2 itself 0%E= percentage of actual data errors on the Repeater data line



L1+3= for loop 1 plus loop 3: current, L3 positive terminal voltage, L3 negative terminal voltage
L2+4= for loop 2 plus loop 4: current, L4 positive terminal voltage, L4 negative terminal voltage



Whether an item is active (=provides a voltage) is shown by □ or ■ (Active = ■)
EXT= power output for external devices Output voltage and current.
Sir1= siren output 1. Output voltage and current. Internal AD value.
Sir2= siren output 2. Output voltage and current. Internal AD value.
Modem, Re*lay*1, Re*lay*2, Re*lay*3: the boxes show whether they are active.
(Relay 3 is usually programmed as a fault relay and works in the opposite sense: the relay drops out if a fault occurs).

F Control panel identification

This function shows the identification text and the serial number on the display. This might be asked for in the event of telephone intervention by your dealer.

F Set delay times

The three general delay times can be set with this function. These are designated T1, T2 and T3:

T1: operator response time … minutes … seconds
T2: inspectionwalk time … minutes … seconds
T3: siren operating time … minutes … seconds

You can fill in the times set up above and in Sections 3.3 and 5 so that you can find them immediately in your user manual in the event of an alarm.

These delay times have a function only in the Directmode:no operating mode of the control panel (day scheme). See Section 4. General operation of delay times.

Caution	**The necessary care must be taken when using this function because it can affect the proper operation of the control panel.**

This function is protected by a code.
If the 'Set delay times' function is selected, the following screen will appear, for example

Delay times: (min:sec)

T1=3:0 T2=5:0 T3=0:0

Correct with Return key, input with number keys,

confirm with Enter key

Note: the values of T1 and T2 are limited to 9 minutes 59 seconds.

To change the delay times, first enter the minutes value of T1 Example: for three press the 3 key, followed by Enter. If 33 is pressed by accident, it can be corrected by pressing Return once. If 7 is pressed by accident and Enter has been pressed, correction is no longer possible. The F key should be pressed to return to the main menu, then once more to select the 'Set delay times' function again. Enter the correct value and press Enter.
Next enter the seconds value. For example, for thirty press 3, then 0, then Enter.
Next enter the minutes for T2, for example 5, followed by Enter.
Next enter the seconds for T2, for example 0, followed by Enter.
Next enter the minutes value for T3, for example 9, followed by Enter.
Next enter the seconds value for T3, for example 59, followed by Enter.

Note: if 0 minutes 0 seconds is entered for:

- T1: there is no Operator Response Time. All alarm devices will always be activated immediately in this case. If that is what is actually wanted, it is better to place the control panel in the 'Directmode:yes' operating mode.
- T2: there is no InspectionWalk Time. If in the case of an alarm the Silence key on the operating panel is pressed within the Operator Response Time, the InspectionWalk Time will NOT be started. This means that the alarm devices will no longer be activated automatically as a result of an alarm condition. The fire alarm control panel will be in monitoring mode, however. If a new alarm condition occurs, the control panel will activate all alarm devices immediately.
- T3: the alarm devices will not be switched off automatically. All alarm devices will then continue to operate until they are stopped from the operating panel.

F Lamp test

By using this function you can check the proper working of the LEDs and the buzzer.
Select the function and press Enter. All LEDs will light and the buzzer will sound a continuous tone.
Press Enter to stop the test.

F Show alarm counter

The alarm counter shows the number of times the control panel has entered the alarm condition. Alarm test positions are not counted.

F Reboot the control panel

This function reboots the control panel (exactly the same as cutting power to the control panel and restoring it). All settings will be retained.
This function is necessary only in exceptional circumstances. Consult your dealer in the event of a problem. If the F key is protected by a code number, the correct code must be entered, followed by Enter.

F Restore factory settings

This function restores the control panel to the default factory settings. All site-specific data will be lost, so after invoking this function a PC with BMC2 setting software will have to be connected in order to reload that data. This function is necessary only in the most exceptional circumstances. Consult your dealer in the event of a problem. If the F key is protected by a code number, the correct code must be entered, followed by Enter.

6 MAINTENANCE

Cleaning the operating panel

Only the keyboard may be cleaned, with a slightly damp cloth. Ensure that no water or cleaning products get into the control key slot or the buzzer opening (between the 3 key and the control key).

Annual maintenance

Your fire alarm installation should be inspected at least once a year. Its maintenance can only be carried out by specialist technicians who are authorised to work with the BMC2 program.
Maintenance will include, for example

- Testing the detectors and sirens
- Checking the condition and date stamps of the batteries
- Inspecting and tightening the connections for 240VAC and earthing
- Retrieving the internal maintenance warnings in regard to the stability and contamination of the detectors and taking the necessary action
- Retrieving and inspecting the control panel log

Argina Technics can provide you with a maintenance contract, so that your installation will remain in optimal condition, thus enabling you to continue to comply with all standards.

7 LEGAL DETAILS

1134-CPR-123 Type: BMC2 Brand:Argina Anthonis De Jonghestraat 50 B9100 Sint-Niklaas
see also Technische fiche BMC2 @ www.argina.com yr: 2013
EN54-2:1997/A1:2006 EN54-4:1997/A1:2002/A2:2006 Control & indicating equipment for fire detection and fire alarm systems for buildings, with integrated power supply.

Optional functions present:

Fire alarm device output (7.8)
Fire alarm routing equipment output (7.9.1)
Automatic fire protection equipment (7.10.1)
Delay of the actioning of outputs (7.11)
Recording of the numbers of entries into fire alarm condition (7.13)
Total loss of power supply (8.4)
Fault warning routing equipment (8.9)
Disablement of each address point (9.5)
Test condition (10)
Standardised I/O interface (11)