CM+

Conventional fire alarm control panel EN54-2 EN54-4

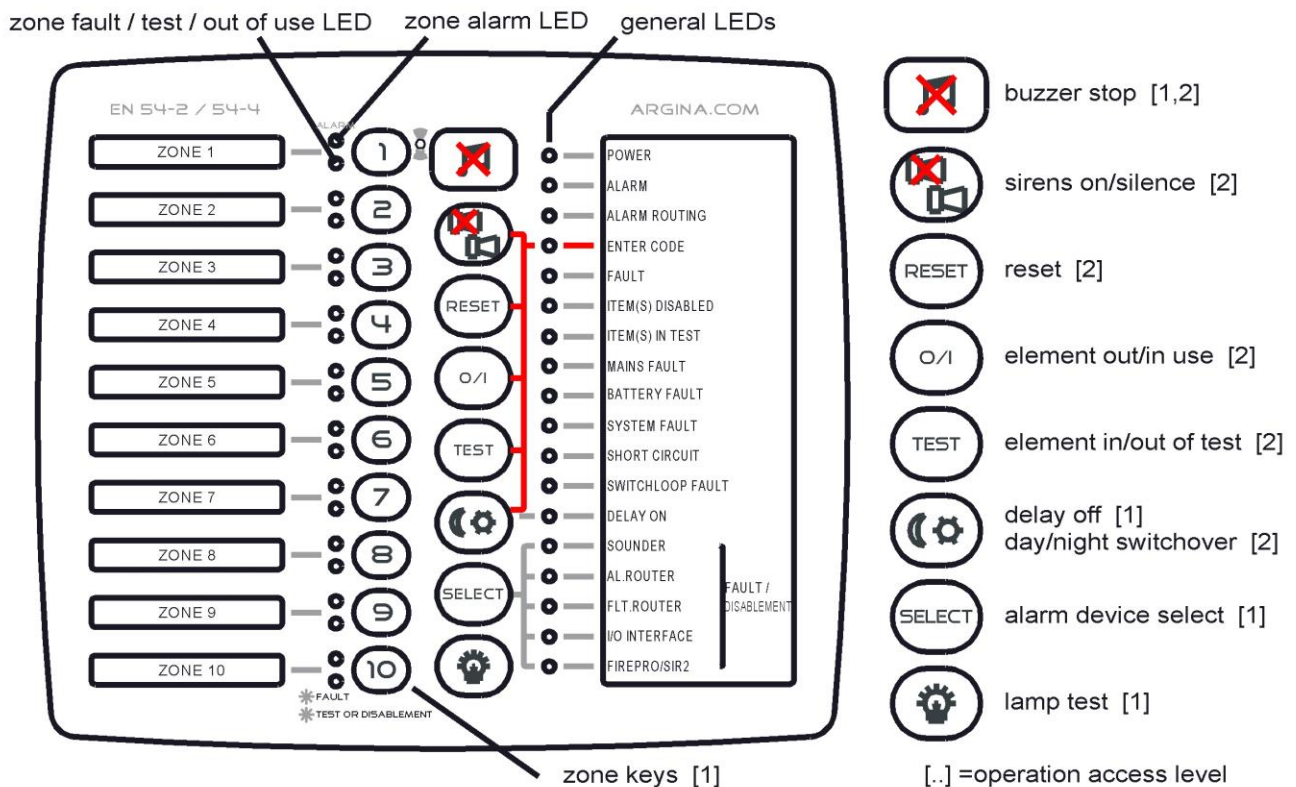## User Manual

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Argina.com

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1 Introduction

This manual contains the user instructions for the CM+ fire alarm control panel. Read the manual carefully before use and keep it where all authorised persons can find it.
The fire alarm installation consists of the fire alarm control panel and the zones with the alarms. By alarms we mean both the manual alarms (pushbuttons) and the automatic alarms (detectors). The alarms are linked to the control panel by a two-core cable to which multiple alarms can be connected. One such two-core cable is called a zone. Up to 10 zones can be connected to a single control panel.
This manual contains the term 'alarm devices'. This 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.
- firefighting elements: door magnets, smoke curtains, extinguishing equipment.
- safety measures: disabling lifts and closing gas valves.

2 LEDs, buzzer & operation

2.1 LEDs

The LEDs on the operating panel show the fire alarm control panel status:

Zone LEDs

Alarm zone (10x)	fire alarm in this zone
Fault in zone (10x)	zone status is fault, test or out of use *

General LEDs

Power	voltage present: mains voltage and/or battery voltage
Alarm	flashes when counting down delay time, then on continuously
Alarm messages	alarm devices are activated
Enter code	flashes when access code is required
Fault	abnormal condition in the fire alarm control panel **
Item(s) out of use	Item(s) out of use**
Item(s) in test	Item(s) in test**
Mains fault	mains voltage has failed – working on batteries***
Battery fault	batteries in poor condition or disconnected***
System fault	a fault in the fire alarm control panel has been detected
Short circuit	short circuit detected**
Switch loop fault	external switch loop status is fault or out of use *
Delayed activation	sirens start after a delay in the event of an alarm.
Siren circuit	siren circuit 1 status is fault or out of use *
Alarm detector	alarm detector status is fault or out of use *
Fault detector	fault detector status is fault or out of use *
External panel	external operating panel status is fault or out of use *
Firefighting element / siren 2	Firefighting element status or siren circuit 2 status is fault or out of use *

* flashes if short circuit or line break, on continuously if out of use
**indication according to other LEDs; for example a short circuit fault in the siren circuit = fault LED + siren circuit LED + short circuit LED
***LEDs are on continuously if the batteries are discharged: control panel switches off (= 3rd power supply)

LED colours: power LED – green; alarm LEDs – red; others – yellow

2.2 Buzzer

The buzzer sounds in the event of an alarm or a fault. A continuous tone indicates an alarm and takes priority over the intermittent tone that indicates a fault.
The buzzer sounds briefly whenever a key is pressed. A double tone indicates that the function has been refused.
A warbling tone indicates that a code should be entered.

2.3 Operation

Functions that are always accessible (Access level 1)

Buzzer Stop

- Stops the buzzer on the operating panel The buzzers on all operating panels will stop simultaneously in installations with multiple operating panels.
- In the event of an alarm, this key also stops:
  - delay time T1 Operator Response Time (after which delay time T2 starts)
  - delay time T2 Inspection Walk Time (and puts the control panel in monitoring mode) The key's exact function depends on which delay time is counting down at that moment; see Help in the event of an alarm.
- The key can also be used to exit a selected item or menu.

Lamp Test

Test function for the LEDs and buzzer on the operating panel.

Zone keys (10x)

These keys are used to select a single zone. The LED for the selected zone flashes together with a LED that indicates the zone's status. The Test key sets the selected zone in and out of test. The O/I key is used to set the selected zone in and out of use. (see Test/Out of use function).

Select

This key is used to select the alarm devices: siren, alarm detector, fault detector, external operating panel and firefighting elements.
The LED for the selected element flashes together with a LED that indicates the element's status.
The O/I key is used to set the selected element in and out of use
(see Test/Out of use function).

Access level 2 functions

The User Code has to be entered after the desired function has been selected (the Enter code LED flashes). The function becomes active only when the correct code has been entered.
The Level 2 functions can be accessed for 2 minutes after the code has been entered.

Sirens On/Off

Pressing the key activates all alarm devices immediately. Press the key again to stop the sirens.

Reset

This key resets the control panel, which means that:
- the sirens and other alarm devices are switched off
- the buzzer stops and all LEDs, except for the Power LED, are turned off

- all detectors are reset: the status of each detector 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.

O/I

This key is used to set a selected element in and out of use.
It works with the Zone and Select keys. See [Test/Out of use function](#).

Test

Key for setting a selected zone in and out of use. The test function is used to test the proper operation of the detectors and the pushbuttons in a simple way without activating the alarm devices. Zones in test do 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.
See also [Test/Out of use function](#).

Day/Night

This key is used to switch between day and night schemes; the yellow LED next to the key shows the status:
- LED off: night scheme: no delay, all alarms operate immediately in the event of an alarm.
- LED on: day scheme: delay times in effect, sirens start after a delay in the event of an alarm.
See also [Help in the event of an alarm](#).

Note:
- The Day/Night key has no effect if T1 Operator Response Time has been set to 0 minutes 0 seconds: alarm reporting still occurs with no delay.
- The switchover can also be done by an external time switch. Consult your installer.

2.4 Pocket labels

The labels in the label pockets can be changed, for example for indications in another language. Labels can be found at the back of this manual. Consult your maintenance company if necessary.

Zoneteksten label L	text algemene led's NL rechts etiket	text general led's EN label right
	VOEDING	POWER
	ALARM	ALARM
	ALARMDOORMELDING	ALARM ROUTING
	VOER CODE IN	ENTER CODE
	STORING	FAULT
	ITEM(S) UIT DIENST	ITEM(S) DISABLED
	ITEM(S) IN TEST	ITEM(S) IN TEST
	NETSTORING	MAINS FAULT
	BATTERIJSTORING	BATTERY FAULT
	SYSTEEMFOUT	SYSTEM FAULT
	KORTSLUITING	SHORT CIRCUIT
	STORING SCHAKELLUS	SWITCHLOOP FAULT
	VERTRAAGDE WERKING	DELAY ON
	SIRENE	SOUNDER
	AL.DOORMELDER	AL.ROUTER
	STO.DOORMELDER — STORING / UIT DIENST	FLT.ROUTER — FAULT / DISABLEMENT
	EXTERN PANEEL	I/O INTERFACE
	BRANDBESTR/SIR2	FIREPRO/SIR2

3 Help in the event of an alarm

In the event of an alarm, the general alarm LED and the red LED for the zone in which the alarm was detected come on. The control panel buzzer sounds a continuous tone.

3.1 Without delay (night scheme)

The alarm devices are all activated automatically.
Press the Sirens On/Off key (Access level 2) to stop the alarm devices.
Press the Sirens On/Off key once more to start the sirens again.

3.2 With delay (day scheme)

delay time T1= …min = Operator Response Time
delay time T2= …min = Inspection Walk Time

Delay time T1 is counting down at this moment.
If no action is carried out on the operating panel, all alarm devices will be activated after time T1 has elapsed.
Press the Buzzer Stop key within time T1 to start delay time T2.
Time T2 allows time for investigating whether evacuation is necessary.
If the operator is not back at the operating panel within time T2, the alarm devices will be activated automatically.

If evacuation is necessary, this can be signalled either by pressing the Sirens On/Off key (Access level 2) or by pressing a manual alarm in the building.

If evacuation is not necessary, press the Buzzer Stop key on the operating panel again. The alarm devices will not be activated. (If they have already been activated, they can only be switched off with the Sirens On/Off key)

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 the delay times will not be used. Another possible disadvantage is that the door magnets remain unpowered in this mode.
- Try a reset. This action is preferred 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 also Test/Out of use function.

!!   **Record every alarm in as much detail as possible in the log at the back of this manual, and if necessary contact your maintenance company to have the problem resolved.**

4 Help in the event of a fault

Yellow LEDs come on and the buzzer sounds an intermittent tone in the event of a fault.
The buzzer can be switched off by pressing the Buzzer Stop key.

Which fault has been detected can be established from the zone Fault LEDs and the general
LEDs.

General fault LED   abnormal condition in the fire alarm control panel **
Fault in Zone LED (10x)zone status is fault, test or out of use *
Item(s) out of use   Item(s) out of use**
Item(s) in test   Item(s) in test**
Mains fault   mains voltage has failed – working on batteries***
Battery fault   batteries in poor condition or disconnected***
System fault   a fault in the fire alarm control panel has been detected
Short circuit   short circuit detected**
Switch loop fault   external switch loop status is fault or out of use *
Delayed activation   sirens start after a delay in the event of an alarm.
Siren circuit   siren circuit 1 status is fault or out of use *
Alarm detector   alarm detector status is fault or out of use *
Fault detector   fault detector status is fault, test or out of use *
External panel   external operating panel status is fault or out of use *
Firefighting element / siren 2 Firefighting element status or siren circuit 2 status is fault or out
of use *

* flashes if short circuit or line break, lit continuously if out of use
** indication according to other LEDs; for example a short circuit fault in the siren circuit = fault
    LED + siren circuit LED + short circuit LED
***LEDs are lit continuously if the batteries are discharged: control panel switches off (= 3rd
    power supply)

If it is known or suspected that the cause of the fault no longer exists, Reset can be used. If the
cause has not gone away, the control panel will show a fault message again within anything
from a few seconds to a few minutes after a reset, depending on the fault message.

It can be desirable for some faults to have the element that caused the fault taken out of use.
See also Test/Out of use function.

!!   **Caution: it is possible that part of the detection system is not working: contact your
    maintenance company to have the problem resolved.
    Record every message in as much detail as possible in the log at the back of this manual.**

5 Test/Out of use function

Select the desired element: a zone, using the Select key for that zone, or one of the alarm devices, using the Select key.
The LED for the selected element flashes together with a LED that indicates the element's status.

Power   element in normal use
Fault   abnormal condition for the element
Item(s) out of use   element out of use
Item(s) in test element in test
Short circuit   element has a short circuit

The O/I key (Access level 2) is used to set the selected element in and out of use.
The Test key (Access level 2) is used to set the selected zone in test position or out of testposition.
The normal indications reappear after 20 seconds.

If Reset is pressed while the Test/Out of use function is active, the control panel will be reset, but the function will remain active. The buzzer will sound an intermittent tone and the Test/Out of use LED will stay on. The buzzer can be switched off by pressing the Buzzer Stop key.

!!   **Caution: a zone that is in Test/Out of use cannot give a genuine alarm: neither the buzzer nor the sirens will sound.**

6 Maintenance

Your fire alarm installation should be fully inspected at least once a year.
This maintenance task can only be carried out by specialist technicians, and covers:
- testing the detectors / pushbuttons and sirens
- preventive measures based on the reports in the logbook
- inspecting and possibly tightening the connections in the fire alarm control panel
- checking the batteries and charging voltage
- checking the fire alarm control panel's internal messages

Argina 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.

Cleaning

The operating panel may be cleaned with a slightly damp cloth. Ensure that no water gets into the buzzer opening (between the '1' key and the Buzzer Stop key).

7 Technical data

Connections
Zones (max. 10 x): end of line 4k7; alarm resistor 1k; maximum 0.1 A
External operating panel (max. 2): 3-wire, maximum length 150 m for 1.5 mm²
Siren circuit (2 x): end of line 1k; maximum 0.65 A
Aux. output (1 x): 18.5 V - 28.5 V; maximum 0.5 A
Relay contact (3 x): switch-over contact, maximum 30 V DC / 1 A

Power
Fuse: T1A 250 V
Voltage: 18.5 V - 28.5 V
Current: 2 A including battery charging current – charging current is interrupted if the control panel is in alarm state
Battery capacity: 1.2 Ah to 7.2 Ah

General
Power supply: 230 V~ ±10% 50 / 60 Hz
Power consumption: 7 W to 60 W
Dimensions: 340 x 266 x 93 mm (width/height/depth) including protruding parts
Housing: ABS V0
Protection rating: IP30
Colour: RAL 7004
Operating temperature: -5 °C to 40 °C
Relative humidity during operation: 0% to 95%

1134-CPD-095 Type: CM+ Brand:Argina Anthonis De Jonghestraat 50 B9100 Sint-Niklaas
see also Technische fiche CM+ V1.0 @ www.argina.com   year: 2010
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) (*with integral modem board)
Automatic fire protection equipment (7.10.1)
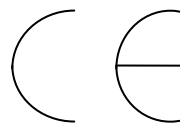Delayed activation of outputs (7.11)
Recording the number of entries into fire alarm condition (7.13)
Total loss of power supply (8.4)
Fault warning routing equipment (8.9) (*with integral modem board)
Test condition (10)
Standardised I/O interface (11)

8 Logbook

Name & address ....

Person responsible .... Tel no. ....

Installer ....

Maintained by.. Tel no.

Date	Time	alarm / fault / out of use /maintenance (Record which detector in which zone)	Notes	Name

9 Pocket labels

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