



Mobeye[®] CM2410
GSM fire alarm communicator

Accessory for Ei Electronics fire detector

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Attention! Very important

This user manual contains important guidelines for the installation and usage of the Mobeye® device as described in this manual. Please read these thoroughly before you start using the Mobeye® device.

In the case of damage caused by disregarding the guidelines and the instructions for use, no liability is accepted and the warranty becomes void. The user must regularly check the proper functioning of the Mobeye® device. The manufacturer cannot be held liable for (direct and indirect) damage as a result of incorrect operation or incorrect functioning of the device, software, internet or telecom connection. The manufacturer is in no way liable for the loss of personal passwords or codes.

Safety guidelines

- The permitted ambient temperature during operation may not be exceeded (not lower than 0 °C and not higher than 40 °C).
- The device is intended for use in dry and clean places with a residential function.
- Protect the device from moisture, heat and water splashing.
- The guidelines for the battery usage must be regarded.
- Do not expose the device to strong vibrations.
- Do not let it fall from height.
- Do not use in an environment where any inflammable gases, vapors or dust are present or could be present.
- Repair of the device may only be carried out by people, trained for Mobeye® repair.
- If the device must be repaired, only original replacement components may be used.

Use in accordance with the regulations

The purpose of this device in accordance with the regulations is sending messages and making telephone calls after an alarm situation. Other uses are not permitted and may invalidate the warranty.

Battery recycling

When disposing of this product, separate the product and the CR123 batteries from other waste streams to ensure that it can be recycled in an environmentally sound manner. For more information on collection and proper disposal, please contact your local government office or the retailer where you purchased this product.

1. GENERAL DESCRIPTION

The Mobeye GSM fire alarm communicator CM2410 is a battery operated monitoring device with GSM module used to send alarm notifications after the input is triggered by a Ei Electronics smoke or heat detector.

The Mobeye Smoke Detector CM2400 is a combination of the Ei605TYC (by Ei Electronics) and the Mobeye CM2410. For other combinations see section 8.1.

Please refer to the manual of the Ei Electronics detector for installation instructions and the description of the behaviour of the fire detector.

In order to activate the device, a few steps are to be followed.

First of all you'll have to choose a SIM card to place in the device. You can use the Mobeye SIM card or your own SIM card. The Mobeye SIM card provides access to the Mobeye Internet Portal. In this management environment the device is given additional functions such as online programming, status and history display, more options for forwarding messages and it will monitor test messages (keep alive). In addition, the Mobeye SIM is a cost-effective M2M roaming SIM card that can use multiple providers per country worldwide and offers more security than a provider-bound SIM card.

When using your own SIM card the most important alarm functions such as calling and/or texting after an alarm will also work.

Where the installation steps differ for both modes of use, this is indicated below. The use of the Mobeye Internet Portal with Mobeye SIM card is also referred to as Mobeye SIM/Portal.

2. STANDARD BEHAVIOUR

2.1 MOBEYE CM2410 WITH MOBEYE SIM AND INTERNET PORTAL

The Mobeye GSM fire alarm communicator CM2410, equipped with a Mobeye SIM card and registered on the Mobeye Internet Portal, has the following standard behaviour as factory settings:

- In case the Ei Electronics fire detector activates the input 1 of the Mobeye CM2410, the alarm module sends an alarm message to the Mobeye Internet Portal and calls the phone numbers programmed in by the user. The Portal forwards the alarm as text message and/or e-mail to the 'alarm contacts'.
- In case the batteries need to be replaced, the Mobeye GSM communicator (CM2410) sends a 'low battery' message to the Mobeye Internet Portal. The portal forwards this to the 'service' contacts.
- The unit will send test messages to the portal as communication check (default: every 7 days). If these are not received in time, the portal sends an exception message to the 'service' contacts.

Chapter 5 describes how to influence the standard behaviour.

In the event of an alarm the Mobeye CM2410 will, in addition to calling, send messages to the Mobeye Internet Portal. This is done via data traffic where possible. As a fallback, text messages are sent to the portal. Both methods of communication are included in the flat fee of the SIM card. Messages can be forwarded from the portal to contacts such as SMS and/or free e-mail. If the SMS credits run out, the account holder automatically receives a message to upgrade them online.

2.2 MOBEYE CM2410 WITH OWN SIM CARD

The Mobeye GSM fire alarm communicator CM2410, equipped with your own SIM card, has the following standard behavior as a factory setting:

- In case the Ei Electronics fire detector activates the input 1 of the Mobeye GSM communicator (CM2410), the alarm module sends an alarm SMS text message and calls the phone numbers as programmed in by the user.
- In case the batteries need to be replaced, the Mobeye GSM communicator sends a 'battery low' SMS text message to the administrator (first telephone number).

Chapter 5 describes how to influence the standard behaviour.

3. GETTING STARTED

To get started with the Mobeye GSM fire alarm communicator CM2410, at least the following steps need to be taken in the following order:

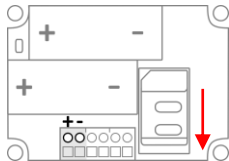
1. Insert the SIM card
2. Insert the batteries
3. Programming when using the Mobeye SIM/Portal
 - a. Sign up in the Mobeye Internet Portal
 - b. Activate the SIM card
 - c. Enter the program mode
 - d. Activate the device in the Mobeye Internet Portal
 - e. Program the options and synchronise
4. Programming when using your own SIM card
 - a. Enter the program mode
 - b. Program the settings
5. Mount the GSM module housing to the ceiling
6. Connect the Ei Electronics detector and close the cover
7. Perform a test

Steps 1 and 2 are described in sections 3.1 and 3.2

Step 3 is described in chapter 3, step 4 in chapter 7, steps 5 to 7 in chapter 6.

3.1 INSERT THE SIM CARD

Insert the SIM card into the module. Push the black cover slightly outward to open the holder and close it afterwards.



When using the Mobeye SIM card:

The supplied SIM card has a PIN code protection, which means that it can only be used in the Mobeye device. **Note:** do not place it in another device.

When using your own SIM card:

Before installing the SIM card should have PIN code "0000", or PIN code removed. (A PIN code can be changed or removed by putting the SIM card in to any mobile phone and entering the 'security' menu.)

NB: Make sure the SIM card is inserted before the batteries. If you replace a SIM card, first remove the batteries (and remove any other external power supply). The settings are stored in the device memory. The SIM card shall have the "normal" size and be suitable for 2G. It is advised to use an M2M SIM card.

3.2 INSERT THE BATTERIES

Insert the two batteries (CR123) in the module. Use the +/- indication for the correct placement. If you replace batteries the settings will not be deleted, since they are stored in the device memory.

4. PROGRAMMING WHEN USING THE MOBEYE SIM AND PORTAL

The method of programming when using your own SIM card is described in chapter 7.

4.1 SIGN UP IN THE MOBEYE INTERNET PORTAL

Go to www.mymobeye.com and sign up for a new account. Follow the instructions on the screen.



You will receive an e-mail to confirm the new account. After confirmation login on the portal.

If you do not receive this e-mail, please check your spam box or ask Mobeye (info@mobeye.com).

4.2 REGISTER THE MOBEYE SIM CARD

To activate the Mobeye SIM card in the Mobeye Internet Portal, choose 'activate SIM card' on the 'Add Device' screen.

A rectangular button with a thin black border and the text "Add Device" centered inside.

Fill in the SIM card number. This is the number written on the plastic SIM card below the barcode. You can take the entire number or only the last 8 digits.

A rectangular button with a thin black border and the text "Activate SIM card" centered inside.

The screen leads you through several pop-ups. If asked, choose the device type (search for "CM2410") and select the type of contract ("CM2410 SIM + Portal Monitoring").

At the moment you accept the price and terms, you confirm the subscription. You will receive an invoice for the mentioned amount.

Before activating the device in the Mobeye Internet Portal, first prepare the unit. See next paragraphs to learn how to do this.

4.3 ENTER THE PROGRAM MODE

To activate the unit in the portal, the GSM module needs to be open and connected to the network.

A battery-operated Mobeye GSM fire alarm communicator CM2410 switches to the program mode after placing the batteries. First the GSM module establishes network connection. During this time the LED flashes green and red. Within 10-30 seconds the connection is established. The LED starts blinking very fast followed by flashing 1 sec. on/1 sec. off (or stays on continuously in case the unit has been configured yet).

During the first 3 minutes the GSM module remains active, ready to be activated in the portal. After 3 minutes a time-out occurs and the GSM module switches off in order to save the batteries. It returns to the program mode by re-inserting the batteries.

Using external power, the unit is always in program mode.

4.4 ACTIVATE THE DEVICE IN THE PORTAL

If the LED on the outside flashes once per second, you activate the device in the Mobeye Internet Portal by clicking 'Activate device', which is written behind the registered SIM card.



On the pop-up screen, enter the security code "1111" (factory code). The unit will receive a message from the portal and the data exchange is started. The next screen asks for a name and location for your device. These fields can be changed later.

Once the activation is completed, the new device is visible on the dashboard.



A screenshot of a table on a dashboard. The table has four columns: 'Name', 'Location', 'Status', and 'Communication'. The first row contains the text 'Mobeye Alarm Unit Main Street 1, London', a checkmark, and a gear icon.

Name	Location	Status	Communication
Mobeye Alarm Unit	Main Street 1, London	✓	

By clicking the name, the detail page will be opened.

4.5 CONFIGURATION AND SYNCHRONISATION

The device settings can be programmed in the Mobeye Internet Portal. In this way you prepare the settings, to be picked up by the device. Since the Mobeye device is leading in the communication between the portal and the device, the data synchronisation is done after:

- 1) any message to the portal (e.g. the regular test message, alarm, low batteries).
- 2) reinserting batteries.

4.6 BASICS OF THE MOBEYE INTERNET PORTAL

Dashboard

With multiple devices, the dashboard shows all devices, with the (alarm) messages in the last 24 hours, (missed) test messages and low battery status. Select a device to go to the details of a specific device.

Status & History

The status block shows values that provide information about the status of the unit.

If the "Synchronized" status is set to "No", there are new settings or alarm numbers that still need to be transferred to the device.

The GSM status shows the network strength at the last communication session. If the value is lower than -95dB, consider another location for the device.

Click on the position icon to see the geographical location during the last report.

Note: this is an indication based on "cell-id".

The history displays all historical events. Click on "all events" to see the overview.

Device Settings

The device settings can be changed via the Mobeye Internet Portal. To do this, click on the "edit" icon and type in the security code (factory setting is "1111"). See chapter 5 for the description per setting.


After saving the new settings, they must be retrieved by the device (synchronized). See 4.5 for more information about synchronizing.

The device data contain the name and location of the device and can be changed here. These texts are mentioned in every text message and e-mail message to

indicate the device. A free text is available as an internal comment field. This is not included in reports.

Alarm dispatch

In the block "Contacts for text and e-mail messages" you link the contact persons who receive alarm and service messages via text message and / or e-mail. Service messages can be warnings about missed test messages and low battery voltage.

To add a contact person, first create it as a contact. This can be done via the  or in the main menu under the blue Contacts tab.

in the block "Alarm calls from device" the (max. 5) alarm numbers that are called directly from the unit are set. After saving, the alarm numbers must be retrieved by the device, i.e. synchronized. See 4.5 for more information about synchronizing.

Tips:

- Always insert a contact to receive service messages by e-mail.
- Allow text messages only after the test phase in order to save the SMS credits.

Message texts

The message texts are the event texts which are, in addition to the name and location, included in the SMS text messages and e-mails. These texts can be customized.

5. POSSIBLE SETTINGS

The Mobeye GSM fire alarm communicator CM2410 has many setting options that influence the behaviour of the module. If connected on the Mobeye Internet Portal, the settings are prepared in the portal (see chapter 4). If your own SIM card is used, programming is done via SMS commands (see chapter 4).

5.1 ALARM PHONE NUMBERS

In the event of an alarm, the Mobeye GSM fire alarm communicator CM2410 can call 5 telephone numbers (TEL1... TEL5). It is possible to confirm a call by picking up the telephone and pressing any key. The following numbers will not be called. When using your own SIM card, it is mandatory to set at least one number (on TEL1). The TEL1 ... TEL5 are then used for telephone calls and / or text messages from the unit.

This is not mandatory when using the Mobeye Internet Portal. If no telephone numbers have been entered, the notifications will only be sent to the portal and forwarded by SMS and / or e-mail from there.

Note: the (unlimited number of) contacts who receive SMS / e-mail may be different from the numbers programmed on TEL1 ... TEL5.

5.2 CALL ON/OFF

Even if the alarm telephone numbers are set in the options, the calling process can be suppressed. By turning off the CALL, the unit will only send the notification via textual messages. The default value is set to "ON".

5.3 SMS ON/OFF

This setting is only relevant when using your own SIM card: the Mobeye GSM fire alarm communicator CM2410 alerts after an alarm on the inputs with a call and an SMS. It is possible to turn off the SMS (OFF). As a factory setting, the SMS is set to "ON".

5.4 TEST MESSAGE

When using the Mobeye Internet Portal: The Mobeye GSM fire alarm communicator CM2410 can send regular test messages (*keep alive*) to the Mobeye Internet Portal, to ensure the proper functioning of the unit. The test message will also be sent if the unit is disarmed. The Mobeye Internet Portal expects the test message and checks the timely receipt. The monitoring of the test messages follows the 'management by exception' rule: only if the message was not received, the 'service' contacts will receive a notification.

The timing of the test message can be programmed. Since new settings (options) will be synchronised after the test message, setting a specific time of the test message can help the process of remote programming. Example: if you force a daily test message at 17.30 hrs, you can prepare new settings and be sure they are loaded into the device before the evening.

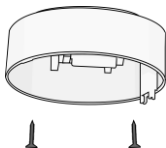
The interval between the test messages can be set between 0 days (no test message) and 30 days. The default test interval is set to "7" (weekly test message).

When using your own SIM card: The Mobeye GSM fire alarm communicator CM2410 can send regular test SMS messages (*keep alive*) to the first phone number (TEL1), to ensure the proper functioning of the unit. The test message function is only active if the unit is armed. The timing of the test message is determined by the time of programming. The test time can also be programmed. The interval between the test messages can be set between 0 days (no test message) and 30 days. The default test interval is set to "0" (no test message).

6. MOUNT THE GSM MODULE HOUSING AND PERFORM A TEST

6.1 MOUNT THE GSM MODULE HOUSING TO THE CEILING

Mount the housing in which the module is fixed to the desired place to the ceiling, using the plugs and screws which can be found inside the Ei Electronics box. Please refer to the manual of the Ei Electronics detector for the ideal location and installation method.



6.2 CONNECT THE EI DETECTOR AND CLOSE THE COVER



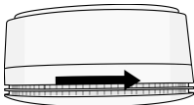
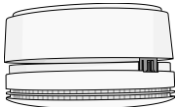
Remove the back cover from the Ei Electronics detector. The GSM communicator will be used as back cover.

Press the green cabled connector to the pins of the Ei Electronics detector. Next to the pins the text 1 2 is written.

Be sure that the (in most situations) grey connector in the Ei Electronics detector was removed.

Hold the EI detector to prevent tension on the wires!

Bring the Ei Electronics detector and the back cover with GSM module to each other at the correct position and turn the detector gently clockwise until it is closed and locked. In the Ei detector a red light will flash regularly.



6.3 PERFORM A TEST

After the previous steps, the GSM fire detector is operational.

In order to execute a test, press the TEST & HUSH (or TEST & STUMM) button of the EI detector during a few seconds (this can take up to 5 seconds). Hold it for another two seconds after the siren starts sounding. Now the GSM module will establish network connection in order to send the notification to the contact persons.

Note: make sure the cover is closed, so that the fire detector and the GSM module are locked.

6.4 CONFIRMATION OF THE ALARM MESSAGE

When the system is triggered it will send alarm notifications. First the text messages are sent to all programmed contacts, followed by a phone call. When you pick up the phone, you will hear beeps. It is possible to confirm the phone call by answering the phone and pressing any key. The other alarm numbers will not be called afterwards.

7. PROGRAMMING WHEN USING OWN SIM CARD

If you use your own SIM card, programming is done by SMS commands. In next sections it is explained how to get in the programming mode and to program by sending simple SMS text commands to the unit. To learn about the options, please refer to chapter 5. After programming the units needs to be mounted and tested as described in chapter 6.

7.1 PROGRAM MODE

A battery-operated Mobeye GSM fire alarm communicator CM2410 switches to the program mode after placing the batteries. First the GSM module establishes network connection. During this time the LED flashes green and red. Next it will shortly flash very fast. Within 10-30 seconds the connection is established and the status LED starts flashing 1 sec. on/1 sec. off (or stays on continuously in case the first telephone number has been configured).

During the first 3 minutes, the GSM module remains active, ready to receive SMS commands. After 3 minutes a time-out occurs and the GSM module switches off in order to save the batteries. It returns to the program mode by re-inserting the batteries.

Using external power, the unit is always in program mode.

7.2 PROGRAM AT LEAST ONE TELEPHONE NUMBER

The Mobeye GSM fire alarm communicator CM2410 is able to send messages up to 5 telephone numbers. The first telephone number (TEL1) belongs to the administrator. Technical messages (such as *battery low*) are sent to the administrator only. Without the administrator's phone number, the Mobeye GSM fire alarm communicator CM2410 cannot function.

When the GSM fire alarm communicator CM2410 is in initial (factory) status and the batteries are inserted (so the LED is flashing), the administrator's number is programmed by calling the telephone number of the Mobeye GSM fire alarm communicator CM2410 using the administrator's phone. The unit will recognize this number and store it as administrator (TEL1). The administrator will receive a confirmation SMS text message including the security code. This code is needed to program the other settings in the unit.

NB: For this way of programming the number recognition in the administrator's phone must be 'on'. To program or change the administrator's number by SMS command, please refer to the next section.

7.3 PROGRAMMING THE SETTINGS BY SMS

When using your own SIM card, all settings are programmed in by SMS text messages:

1. Make sure the GSM fire alarm communicator CM2410 is in program mode (please refer to 7.1).
2. Send an SMS text message with the (security) code and the command.
3. The green LED blinks 3 times to indicate the successful configuration. In case of an incorrect command, the red LED flashes 5 times.

SMS messages have the following content: **CODE COMMAND:OPTION**

Example: **1111 TEL1:+44772345678**

- CODE stands for the security code, factory setting is 1111.
- Do not forget the space character between (security) code and command.
- The commands are case insensitive.
- Several commands may be combined in one SMS message (with a maximum of 160 characters) by placing a # between the commands.

CODE COMMAND:OPTION#COMMAND:OPTION#COMMAND:OPTION

- All settings are saved and remain saved, even when the unit has no power or the batteries are removed.

In chapter 5 the options are explained.

In chapter 7.4 all possible SMS commands are listed.

7.4 LIST OF SMS COMMANDS

When using your own SIM card, the settings are programmed via SMS commands. See chapter 7 for the programming method and chapter 5 for an explanation per setting. The commands are case insensitive.

Setting	SMS Command	Options	Default value
Change security code	INSTCODE:	0000...9999	1111
Set telephone number for alarm messages	TEL1: ... TEL5:		Empty
Delete telephone number	DEL1 ... DEL5		
Identification text	NAME:	20 characters	Mobeye
Call on/off	CALL:	ON, OFF	ON
SMS on/off	SMS:	ON, OFF	ON
Alarm text input 1	TEXT1:	20 characters	Fire alarm!
Actual time	TIME:	hhmm	Empty
Actual date	DATE:	yyyymmdd	Empty
Interval 'test SMS'	TEST:	0...30 (days)	0
Time test message	TESTTIME:	hhmm	

Examples:

Set phone number 1: 1111 TEL1:0712345678

Delete phone number 1: 1111 del1

Be aware of the space between "1111" and the command.

7.5 SMS REPORTS WHEN USING YOUR OWN SIM CARD

Several lists and status reports can be retrieved by sending an SMS text message to the Mobeye GSM fire alarm communicator CM2410, from any telephone number. Before sending the request, make sure the unit is in the program mode (please refer to 7.1).

Upon sending the command, the Mobeye GSM fire alarm communicator CM2410 returns an SMS text message to the originator of the request. The commands are case insensitive.

STATUS REQUEST

The status can be requested by sending following SMS text message. The status includes the status of the input, power and batteries.

SMS command status request: **STATUS?**
 example: 1111 STATUS?

LIST OF SETTINGS

The settings can be requested by sending following SMS text message:

SMS command list basic settings: **SET?**
 example: 1111 SET?

LIST OF PHONE NUMBERS

The list of telephone numbers can be requested by sending following SMS text message:

SMS command list of phone numbers: **CALL?**
 example: 1111 CALL?

GSM SIGNAL STRENGTH

The signal strength of the used mobile network can be requested. If the network is weak, it is advised to use a SIM card of another network provider or an external GSM antenna (a Mobeye accessory). The GSM signal strength can be requested by sending following SMS text message:

SMS command request GSM signal: **NETWORK?**
 example: 1111 NETWORK?

8. COMBINE OTHER EI DETECTORS AND A WIRELESS NETWORK

8.1 COMBINATIONS OF EI ELECTRONICS DETECTORS

The CM2410 can be applied in various combinations:

- A stand-alone GSM smoke or heat detector can be the combination of the Mobeys CM2410 and the Ei605C, Ei605TYC, Ei603C or Ei603TYC (smoke or heat) detector, or any other detector in the Ei600 and Ei650-series.
- If applied in a network of several detectors (cabled or using RF modules), the detector with the CM2410 GSM module must be of the type Ei605C, Ei605TYC, Ei603C or Ei603TYC. The other detectors in the network can be any detector in the 600- and 650-series.

8.2 SEVERAL DETECTORS IN A WIRELESS NETWORK

Although the Ei Electronics fire detector is a stand-alone unit, it is also possible to form a wireless network with several smoke and heat detectors. For this purpose each Ei Electronics detector needs to be equipped with an RF module. This module can be integrated in the Ei Electronics detector. Before the detectors are operational, the detectors need to be enrolled, in order to know each other.

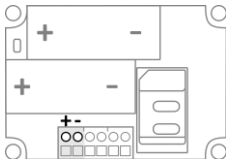
Please refer to the Ei Electronics manuals for the steps to follow.

9. USE OF EXTERNAL POWER SUPPLY

Although the Mobeye CM2410 is designed to run on batteries, it is possible to use an external power supply. In this mode the module is always in connection with the GSM network and therefore always in program mode. In case the power fails, the batteries take over the functioning. The module continues operating albeit in the low power mode. This means the GSM module switches off and only establishes network connection in case it needs to send out an alarm, test message or low battery alert.

Connect the external power adapter (12VDC) to the power input of the connector (press on the green pins for connecting the wires):

- V+ to “+”
- Ground (black lead) to “-”



10. SYSTEM RESET AND SYSTEM FEEDBACK

10.1 SYSTEM RESET

To reset a Mobeye CM2410 two steps are necessary, in following sequence:

1. Delete the Mobeye CM2410 from the Mobeye Internet Portal (if relevant)
2. Reset the Mobeye GSM fire alarm communicator CM2410

1. To delete the Mobeye CM2410 from the Mobeye Internet Portal

If connected to the Mobeye Internet Portal, first delete the device from the Portal. The SIM card could be then reused for another Mobeye device, or the same device can be connected again.

In the device list, click the name of the device to go to the details screen. Next choose 'Device'. Click 'delete' to delete the device and confirm the option. The SIM card will be disconnected from the device and visible on the first screen.

2. To reset the Mobeye CM2410

To reset the Mobeye CM2410 to its factory settings:

1. Be sure the GSM module is in program mode.
2. Send following SMS text message to the telephone number in the unit (without CODE)

SMS command Reset: **RESET**

3. The green LED blinks 3x to indicate a successful command. In case of an incorrect command the LED flashes 5x green.

After a successful reset, the LED will blink green to indicate that the module is not configured. The security code is back to factory settings as well.

10.2 TECHNICAL MESSAGES

In the event of technical issues the administrator receives an SMS message. Possible technical messages are:

Message	Reason
Low batteries, external power supply OK	Power is available, batteries need to be replaced.
No external power supply, batteries OK	No external power supply, batteries are able to take over operation in low power mode.
Low batteries, no external power supply	No external power supply, batteries need to be replaced.
External power supply OK, batteries OK	The external power is restored (or the adapter is plugged in a socket), batteries do not need to be replaced.
(delayed message)	If (delayed message) is added to the SMS text messages, the message couldn't be sent earlier, due to a SIM card failure or GSM network failure.
Batteries too low. Module shutting down.	The module has shut down due to low voltage. Replace the batteries or connect the power supply to restart the unit.
Module restarted. Power supply [status]. Batteries [status].	The module has been able to restart after a shutdown.

When receiving one of the above mentioned technical messages, please take appropriate action as soon as possible. During the battery replacement, the SIM card does not have to be removed.

10.3 STATUS FEEDBACK

LED pattern	Status	Required action
Blinking green, 1 second on / 1 second off	Module not configured	Configure at least one telephone number.
1 green flash every 3 seconds	Module is switched on, powered by batteries	No action required.
Green LED stays on continuously	Module is switched on, powered by an external source	No action required.
Flashing red/ green every second	Module establishes network connection	Wait until the network connection is established.
2 flashes red, every 3 seconds	No GSM connection	Try the SIM card in any mobile telephone; replace SIM card using other telecom provider; try the module at another location.
3 flashes red, every 3 seconds	No valid SIM card or wrong PIN	Try the SIM card in any mobile telephone; remove PIN code; check credit; replace SIM card.
Blinking 3 times green	Successful programming action	No action required.
Blinking 5 times red	Faulty programming action	Check SMS command.
4 red flashes every 3 seconds	Low batteries	Replace both batteries.
Quickly flashing green	Module exchanges data with portal	No action required

Technical specifications

GSM	: Quad band EGSM, 850/900/1800/1900 MHz
Batteries	: 2* CR123 (lithium) recommended: Varta, Panasonic and Energizer (please do not use Duracell or Philips)
Battery life in normal mode	: > 1 year (battery operated) > 3 years (external power supply)
Ext. power connection	: 12 VDC (+/- 2 VDC) / min. 500 mA (optional)
Power consumption low power	: ca. 50 μ A stand-by / max. ca. 500 mA
Power consumption 12V	: ca. 50 mA stand-by / max. ca. 500 mA
Ambient temperature	: 0 °C until +40 °C

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Declaration of Conformity

Herewith we, Mobeye, declare that the

Mobeye CM21 telemetry module

And the derived products

CM2000, CM2100, CM2200, CM2300, CM2300-FS, CM2410, CM2500, CM2600,
CML2015, CML2025, CML2055, CML2255, CML2275, CML2285, CMVXI-R

are in compliance with the essential requirements of the following European standards / EU Directives:

Directive 73/23/EEC (low voltage directive)

Directive IEC/EN 50130 (Electromagnetic compatibility)

Directive 2014/53/EU (RED)

The conformity with the essential requirements set out in Art.3 of the 2014/53/EU has been demonstrated against the following harmonized standards:

EN 60950-1: 2006 + A11 : 2009 + A1: 2010 + A12: 2011 + A2: 2013
EN 62311 :2008
EN 301 489-1 V2.1.1, Draft EN 301 489-52 V1.1.0
EN 301 511 V12.5.1

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