USER MANUAL

Mobeye® PowerGuard

CM2100

CONTENT

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 case of damage caused by disregarding the guidelines, the warranty becomes void.

The user must regularly check the proper functioning of the device. The manufacturer cannot be held liable for any damage or loss caused by any incorrect use or incorrect functioning of the Mobeye® device.

Safety guidelines

- The permitted ambient temperature during operation may not be exceeded (not lower than -10°C and not higher than 50°C).
- The device is intended for use in dry and clean places.
- Protect the device from moisture, heat and water splashing. Not intended for external use.
- 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. The use of different parts may lead to damage of the Mobeye® device.

Use in accordance with the regulations

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

Battery recycling

CR123 batteries, as used in the Mobeye PowerGuard, are classified as non-hazardous waste and can be recycled. Please take empty batteries to a nearest collection point.

1. GENERAL DESCRIPTION

The Mobeye PowerGuard is a battery operated GSM module used to send an alarm notification after power failure or after a triggered input.

The factory settings of the Mobeye PowerGuard cause following reactions:
- When a power failure occurs, the Mobeye PowerGuard sends an alarm SMS text message and calls the phone numbers programmed in by the user.
- When the power is restored, the Mobeye PowerGuard sends a 'power restored' SMS text message.
- When one of the inputs is activated by a sensor, the Mobeye PowerGuard sends an alarm SMS text message and calls the phone numbers programmed in by the user.
- When one of the inputs remain in the alarm status, the Mobeye PowerGuard repeats sending the SMS alarm message every four hours.
- When the batteries need to be replaced, the Mobeye PowerGuard sends a 'low battery' SMS text message to the first telephone number (administrator).

The Mobeye PowerGuard has many options to influence the behaviour, which are described in chapter 4. For additional alarm and monitoring functions the Mobeye PowerGuard can be connected to the Mobeye Internet Portal, which is explained in chapter 7.

2. GETTING STARTED

To get started with the Mobeye PowerGuard, at least the following steps need to be taken in the following order:

1. Insert a SIM card
2. Insert the batteries
3. Connect an external power supply
4. Program at least one telephone number
5. Arming/disarming the system

These steps are further explained in this chapter. After these steps the module will be operational.

2.1 INSERT A SIM CARD

Open the enclosure by removing the 4 screws and insert a SIM card into the module. Push the black cover slightly outward to open the holder. 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 are inserted. 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.

2.2 INSERT THE BATTERIES

Insert the two batteries (CR123) in the module. Use the +/- indication for the correct placement.

2.3 CONNECT AN EXTERNAL POWER SUPPLY

Connect the external power adapter (or any other regulated 12VDC power supply) to the power input of the connector (press on the green pins to connect the wires):

- V+ (black lead with white stripe) to "+"
- Ground (black lead) to "-"
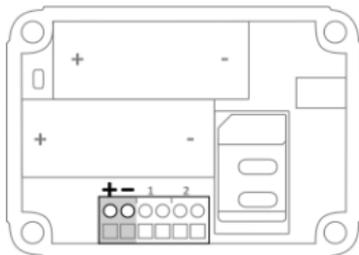
As soon as the batteries are placed and the power source is connected, the Mobeye PowerGuard switches to the program mode. First the GSM module establishes network connection. During this time the LED flashes green and red. Within 10-30 seconds the connection is established and the status LED starts flashing 1 sec. on/1 sec. off (or stays on continuously in case the first telephone number has been configured).

2.4 PROGRAM AT LEAST ONE TELEPHONE NUMBER

The Mobeye PowerGuard 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 administrators' phone number, the Mobeye PowerGuard cannot function.

When the PowerGuard is in initial (factory) status and the batteries are inserted (so the LED is flashing), the administrators' number is programmed by calling the telephone number of the Mobeye PowerGuard using the administrators' 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 administrators' number by SMS command, please refer to 4.2.

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2.5 SWITCHING ON/OFF

After the previous steps, the Mobeye PowerGuard is ready for use. It is armed (switched on) automatically.

In order to switch off (disarm) the Mobeye PowerGuard:
- Press the on/ off button at the upper side for 1 second. The green LED switches off to indicate the disarmed status.

  In the disarmed status the Mobeye PowerGuard will not send alarm notifications. The functions automatic arming and sending a 'low battery' message, are still active.

In order to switch on (arm) the Mobeye PowerGuard:
- Press the on/ off button at the upper side for 1 second. The green LED blinks once every 3 seconds (battery-powered) or stays 'on' continuously (in case of an external power supply).

If powered externally (GSM is open), switching can be done via SMS commands:

SMS-command to switch on: CODE ARM
SMS-command to switch off: CODE DISARM
          example: 1111 ARM

The status can be requested via SMS command CODE STATUS? (see chapter 6).

2.6 CONFIRMATION OF THE ALARM MESSAGE

When the system is triggered it will send alarm notifications. First an SMS text message is sent to all programmed alarm numbers, 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.

By switching off the 'SMS' function, the system will only call. This prevents the other numbers being notified by SMS.

3. CONNECT SENSORS TO THE INPUTS

Two external sensors can be connected to the inputs. As a standard reaction after a triggered input, the Mobeye PowerGuard sends an SMS text message to the preset numbers and calls these numbers.

Insert the 2 wires of an external sensor through the hole in the enclosure and insert them in the two connectors of input 1 (press on the green pins for connecting the wires). It does not matter which wire is connected to which connector.

A second sensor can be connected to input 2.
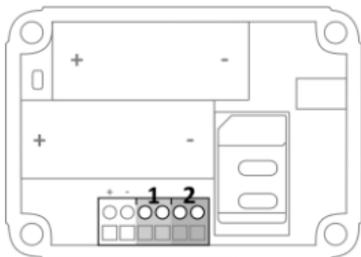
As default the inputs are programmed as Normally Open (NO) contacts. This means the inputs are triggered if the input is closed for at least 1 second. In case the contact is Normally Closed (NC), please refer to paragraph 5.4. If you require the sensor to be activated for a shorter or longer period before triggering an alarm, please refer to 5.7.

4. CONFIGURATION

To program the Mobeye PowerGuard, the GSM module must have network connection. In case only batteries are used, first switch the unit to the program mode. Next send SMS commands for the configuration. All settings are stored and will be kept in the unit, even in case the power supplies are removed.

4.1 PROGRAM MODE

If the unit is connected to an external power supply, the PowerGuard has continuous network connection and the unit is permanently in program mode.
If the unit is battery-powered the program mode can be achieved by pressing the on/off button for 5 seconds, until the LED starts flashing red and green. Alternatively, the program mode can be accessed by (re) inserting the batteries.

First the GSM module establishes network connection. During this time the LED flashes green/red. Normally this takes 10-30 seconds. Once the connection is established the status LED starts flashing 1 sec. on/1 sec. off (or stays on continuously in case the first telephone number has been configured).

In program mode, the device is ready to receive SMS commands. If no correct command is received for 3 minutes, the GSM module switches off in order to save the batteries. The unit returns to the low power operational mode.

The program mode is interrupted by pressing the on/off button for one second until the LED switches off. The unit is switched off completely (disarmed).

4.2 THE (SECURITY) CODE

For configuration activities the (security) code of the Mobeye PowerGuard must be used. The initial (security) code is '1111'. You can change the (security) code to your own code. See section 4.4.

4.3 PROGRAMMING THE SETTINGS BY SMS

To program the settings by SMS text message:

1. Make sure the PowerGuard is in program mode (please refer to 4.1).
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**

- 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

See section 4.4 for a full list of SMS commands.

4.4 LIST OF SMS COMMANDS FOR CONFIGURATION

The setting options for the PowerGuard. 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
Input type input 1	TYPEIN1:	NO, NC	NO
Input type input 2	TYPEIN2:	NO, NC	NO
Exit delay	DELAYEXIT:	0···999 (sec)	0
Delay on input 1	DELAY1:	0···999 (sec)	1
Delay on input 2	DELAY2:	0···999 (sec)	1
Inactive time input 1	INACTIVEIN1:	0···60 (min)	0
Inactive time input 2	INACTIVEIN2:	0···60 (min)	0
Alarm repeat time	REPEAT:	0···24 (hrs)	4
Alarm text input 1	TEXT1:	20 characters	Alarm 1
Alarm text input 2	TEXT2:	20 characters	Alarm 2
Alarm text power failure	TEXT3:	20 characters	Power failure
Alarm text power failure	TEXT4:	20 characters	Power restored
Power failure delay time	DELAYPOW:	0···999 (min)	0
Power message	POWERMESSAGE:	OFF,ALERT,ALARM	ALARM
Actual time	TIME:	hhmm	Empty
Actual date	DATE:	yyyymmdd	Empty
Arming time	TIMEARM1:	hhmm	Empty
Disarming time	TIMEDISARM1:	hhmm	Empty
2nd arming time	TIMEARM2:	hhmm	Empty
2nd disarming time	TIMEDISARM2:	hhmm	Empty

Setting	SMS Command	Options	Default value
Assigning times 1	DAYS1:	1234567	Empty
Assigning times 2	DAYS2:	1234567	Empty
Use of on/off button	BUTTONLOCK:	ON (button locked) OFF (unlocked)	OFF
Low power status	LOWPOWER:	ON, OFF	OFF
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.

5. POSSIBLE SETTINGS

5.1 PHONE NUMBERS

The Mobeye PowerGuard is able to send alarm messages to up to 5 phone numbers. The first telephone number (TEL1) belongs to the administrator. Only this number receives all system messages. The other phone numbers (including the administrator) only get the alarm messages.

To set or change telephone numbers:
SMS command 1st telephone number: **TEL1:**
        example: 1111 TEL1:07123456789

... similar for TEL2:, TEL3:,TEL4: and TEL5:
For foreign numbers, start with + followed by the country code (depending on the country leave out the zero for the local area code).
        example: 1111 TEL1:+447123456789

To delete telephone numbers:
SMS command delete 1st telephone number: **DEL1**
        example: 1111 DEL1
... similar for DEL2, DEL3, DEL4 and DEL5

5.2 IDENTIFICATION TEXT

It is possible to add a standard identification text (NAME) to all messages sent out by the Mobeye PowerGuard. The alarm messages are a combination of the name and the alarm text. A user defined identification has a length of maximum 20 characters. The default identification text is 'Mobeye'.

SMS command identification text: **NAME:**
        example: 1111 NAME:my Mobeye device

5.3 ALARM TEXTS

Unique alarm texts can be programmed into the Mobeye PowerGuard. User defined texts have a maximum length of 20 characters.

Following default texts are programmed:

Text 1 (input 1):	Alarm 1
Text 2 (input 2):	Alarm 2
Text 3 (power failure):	Power failure
Text 4 (power restored):	Power restored

NB: text 3 and 4 are only valid at POWERMESSAGE set to 'ALARM'.

SMS command text input 1	**TEXT1:**
....	
SMS command text input 4:	**TEXT4:**
example:	1111 TEXT2:garage door open

5.4 SMS ON/OFF

By default, the Mobeye PowerGuard sends alarm notifications via text message and calls (you will hear a beep signal) to the preset contact persons. By turning off the SMS, the unit will only call after a triggered input.

SMS command enable / disable SMS:	**SMS:ON** or **SMS:OFF**
example:	1111 SMS:OFF

5.5 CALL ON/OFF

By default, the Mobeye PowerGuard sends alarm notifications via text message and calls the preset contact persons. By turning off the CALL, the unit will only send an SMS text message as alarm notification. It is not possible to switch off both the SMS and the call.

SMS command enable / disable call:	**CALL:ON** or **CALL:OFF**
example:	1111 CALL:ON

5.6 INPUT TYPE

The input type defines the character of the inputs IN1 and IN2. This can be Normally Open (NO) or Normally Closed (NC). If an input is set to NO, the alarm will be triggered as soon as the terminals of the input are closed. If the input is set to NC, the alarm is triggered when the connection between the input terminals is broken. The default input type is set to NO.

SMS command input type input 1: **TYPEIN1:NO** or **TYPEIN1:NC**
SMS command input type input 2: **TYPEIN2:NO** or **TYPEIN2:NC**
         example: 1111 TYPEIN1:NC

5.7 EXIT DELAY TIME

The exit delay time defines the time between the moment of switching on the module – while the input is active – and the moment the module starts sending the first alarm message. Example: the module has been installed in a cabinet where a door magnet contact is connected to the input. The exit delay time is the time between switching on the module and closing the cabinet's door. Only after this time has exceeded, alarm messages will be sent. The time can be set between 0 and 999 seconds. As default, the exit delay time is set to 0 second.

SMS command exit delay: **DELAYEXIT:**
         example: 1111 DELAYEXIT:806

5.8 ALARM DELAY TIME

The input delay time defines the time that the input is triggered before an alarm is initiated. If the input returns to the non-alarm status within the delay time, no alarm is sent. The time can be set between 0 and 999 seconds. As default, the input delay time is set to 1 second.

SMS command alarm delay input 1: **DELAY1:**
SMS command alarm delay input 2: **DELAY2:**
         example: 1111 DELAY1:999

5.9 INACTIVE TIME

The "inactive time" defines the time an input is not active after an activation. During the inactive time, no new alarm message will be sent. Only when the input returned to the non-alarm status, gets activated again and remains active, an alarm will be sent after the inactive time. If the time is set to "0" (minutes), the input will be active again immediately after returning to the non-alarm status. The time can be set between 0 and 60 minutes. As default, the inactive time is set to "0".

SMS command inactive time input 1:   **INACTIVEIN1:**
SMS command inactive time input 2:   **INACTIVEIN2:**
            example: 1111 INACTIVEIN2:45

5.10 ALARM REPEAT TIME

In order to emphasize the urgency of the alarm messages, all alarms can be repeated. As long as the input has not returned to the inactive status, the SMS alarm will be repeated after the 'alarm repeat time'. The time can be set between 0 and 24 hours. As default the alarm repeat time is set to 4 hours.

SMS command alarm repeat time: **REPEAT:**
            example: 1111 REPEAT:20

5.11 POWER FAILURE DELAY TIME

If the Mobeye PowerGuard is powered externally and the power fails it can notify the contact person(s). The power failure delay time defines the time between the initial power failure and the alarm notification. If the power is restored within the delay time, no alarm is sent. The time can be set between 0 and 999 minutes. As default, the delay time is set to 0.

SMS command power failure delay time: **DELAYPOW:**
            example: 1111 DELAYPOW:15

5.12 POWER FAILURE MESSAGE

I If the Mobeye PowerGuard is powered externally and the power fails it sends an SMS text message to the programmed telephone numbers followed by a call (setting 'ALARM'), following the on/off settings of 'CALL' and 'SMS'. Power restore results in an SMS alert to all numbers. This setting can be set to 'ALERT' or 'OFF'. If the setting is 'ALERT' the power failure message and restore will be sent as SMS to the TEL1 (administrator). The setting 'OFF' means that no power failure message is sent. The default setting for the 'power failure message' is set to "ALARM".

SMS command power failure message: **POWERMESSAGE:ALARM**
(or **ALERT** or **OFF**)
example: 1111 POWERMESSAGE:ALERT

5.13 AUTOMATIC ARMING / DISARMING

The Mobeye PowerGuard only works if the unit is armed, which is done via the on/off button. It is possible to automatically arm and disarm the unit, based on an arming and/or disarming time scheme . Two schemes can be entered, which can be assigned to the days in the week (e.g. to have a different weekend scheme).
For arming/disarming automatically, the internal clock time needs to be correct. Some telecom providers offer this in the network, which the Mobeye PowerGuard synchronizes during start-up and after sending test messages. It is possible to set the time manually. To view the clock time, request a list of the settings by sending the command 1111 SET?.

To set the actual date:
SMS command actual date: **DATE:**

To set the actual time:
SMS command actual time: **TIME:**

To set a daily arming scheme:
SMS command arming scheme 1:   **TIMEARM1:**

To set a daily disarming scheme:
SMS command disarming scheme 1: **TIMEDISARM1:**

To set a second daily arming scheme:
SMS command arming scheme 2: **TIMEARM2:**

To set a second daily disarming scheme:
SMS command disarming scheme 2: **TIMEDISARM2:**
<div style="text-align:center">example: TIMEDISARM2:1455</div>

As default the automatic (dis) arming times are valid for all days. It is possible to assign them to a few days in the week. In this way it is possible to have two different schemes, which are valid on different days.

To assign TIMEARM and/or TIMEDISARM to weekdays:
SMS command to assign 'scheme 1': **DAYS1:**
SMS command to assign 'scheme 2': **DAYS2:**

As value the weekdays can be entered. Monday is 1, Tuesday is 2, etc. If the scheme is valid for several days, the days can be entered in one command (e.g. 12345 means Monday till Friday).

<div style="text-align:center">examples: 1111 DAYS1:12345
1111 DAYS2:67</div>

5.14 BUTTONLOCK

It can be useful to lock the on/off button to prevent the unit from being switched off unintentionally. As default the buttonlock is unlocked (so, the button is enabled). To disable the button, the buttonlock needs to be switched to on.

SMS command buttonlock: **BUTTTONLOCK:**
<div style="text-align:center">example: 1111 BUTTONLOCK:ON</div>

5.15 LOW POWER MODE

A battery-powered Mobeye PowerGuard has the GSM module switched off in stand-by mode. It only switches on if it has to send a message. An externally powered unit always keeps the GSM module open (as factory default). When using the "low power mode" an externally powered unit will also keep the GSM module closed as much as possible, to minimize the power consumption. To achieve this, the LOWPOWER shall be set to ON. In the low power mode, the presence of the external power source will still be monitored.

SMS command low power mode: **LOWPOWER:**
            example: 1111 LOWPOWER:ON

5.16 TEST MESSAGE

The Mobeye PowerGuard can send regular test SMS messages (*keep alive*) to the administrator (first phone number), 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).

SMS command interval test message: **TEST:**
            example: 1111 TEST:21

5.17 SYSTEM RESET

To reset the Mobeye PowerGuard to its factory settings:

1. Remove the batteries (and external power supply).
2. Press the outside button while reinserting the batteries. Keep it pressed for (about) another 5 seconds.
3. Release the button immediately after the LED starts to flash.
4. If relevant, connect the external power supply.

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

6. REQUEST LIST OF THE STATUS, SETTINGS AND SIGNAL STRENGTH

Several lists and status reports can be retrieved by sending an SMS text message to the Mobeye PowerGuard, from any telephone. Before sending the request, make sure the unit is in the program mode (please refer to 4.1).
Upon sending the command, the Mobeye PowerGuard 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 armed/disarmed status, status of the inputs, 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?**
SMS command list advanced settings: **SETA?**
SMS command list of texts: **TEXT?**
         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?

7. MOBEYE INTERNET PORTAL

The Mobeye PowerGuard sends GSM messages to the preset contact persons. It is also possible to connect the system to the Mobeye Internet Portal. In this secured internet environment the Mobeye PowerGuard system(s) can be administered.

The portal offers various functions:

1) the portal forwards alarm messages to contact persons (SMS and/or mail), which are set in the portal. The receivers of alarm messages may be different from the receivers of technical messages. Alarm phone calls will still be done directly from the Mobeye PowerGuard.
2) the name and location can be set in the portal. This name is used in SMS and mail messages.
3) the device settings can be programmed through the internet portal or via SMS command.
4) once connected to the internet portal, test messages *('keep alive')* will be sent regardless the armed or disarmed state. The portal will check the receipt of test messages ('keep alive'); when the message was not received on time, it sends an exception message.

Look at www.mobeye.eu/portal for more information.

8. TECHNICAL MESSAGES AND STATUS FEEDBACK

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.

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.

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.

Technical specifications

GSM	: Quad band EGSM, 850/900/1800/1900 MHz
Batteries	: 2* CR123 (lithium)
Battery life in normal mode	: >1 year (battery operated)
	: >2 years (external power supply)
Ext. power connection	: 12 VDC (+/- 2 VDC) / min. 500 mA (optional)
Power consumption low power	: ca. 50 μA stand-by / max. ca. 500 mA
Power consumption 12V	: ca. 50 mA stand-by / max. ca. 500 mA
Dimensions	: 80 x 60 x 40 mm
Ambient temperature	: -10 °C until +50 °C

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Declaration of Conformity

Herewith we, Mobeye, declare that the products

Mobeye CM21 telemetry module

And the derived products
**CM2000, CM2100, CM2200, CM2300, CM2300-FS, CM2400, CM2410, CM2500
CM2600, CML2015, CML2025, CML2055, CML2255, CML2275, CML2285**

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 1995/5/EC R&TTE (Radio & Telecommunications Terminal Equipment)

The conformity with the essential requirements of 1995/5/EC has been verified against:

**ETSI EN 301 489-1 V1.5.1
ETSI EN 301 489-7 V1.2.1
ETSI EN 301 511 V9.0.2
CENELEC EN 60950:2001**

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