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**IGEW 5700
IGEW 5700S
IGEW 5700CS**

A : Introduction

The iGEW 5700 magnetic lock is part of the **Cybermag®** range of intelligent magnetic locks, which has been developed specifically for autonomous control of emergency exits or security doors.

Cybermag® magnetic locks are capable of operation in two different modes, which can easily be programmed simply by resetting the internal dip-switches.

Protected by multiple patents, the on-board intelligence of **Cybermag®** magnetic locks means that they can trigger an alarm before forced entry takes place in situations where a conventional system would not trigger an alarm until the intruders had actually gained access.

B : Operating modes

The **Cybermag®** iGEW 5700 magnetic lock can be set to operate in two different modes:

- a) Automatic differentiated unlocking of the door
- b) Locking and door control

C: Versions

There are three versions of the **Cybermag®** iGEW 5700 magnetic lock

1. iGEW 5700

Basic version equipped with GigaLed indicator lights and relay contacts

2. iGEW 5700S

Version that includes a buzzer, equipped with GigaLed indicator lights and relay contacts

3. iGEW 5700CS

Version that includes a buzzer and a CCTV color camera, equipped with GigaLed indicator lights and relay contacts

D: Standard functionality

Normal holding force	5300 N (equivalent to 530 Kgf, 1200 lbf)
Supply voltage	12 or 24 VDC – (automatic selection) (norm NF S 61937 > 24 VDC only)
Nominal power requirement	• 250 mA / 24 VDC – 500 mA / 12 VDC (without options) • 300 mA / 24 VDC – 600 mA / 12 VDC (with camera and buzzer)
Optical signal lights: • GigaLED, two color • Relay ○ Advance warning alarm ○ Signal/Alarm	○ Magnetic lock status ○ 1 x NO/C/NC – Breaking current: 2A – 30 VDC ○ 2 x NO/C/NC – Breaking current: 2A – 30 VDC
Input/Output (I/O) : • Input for exit push-button • Input for passive IR (presence detection) • Input for Reset • Output, camera power supply	• NO (triggers 5 second speed) • NC • NO • 9 VDC (CS model)
Time settings: • Automatic mode, differentiated exit ○ Advance warning alarm ○ Alarm • Unlocking and door control mode ○ Advance warning alarm ○ Alarm	○ 0, 1, 2 or 3 seconds ○ 15 or 30 seconds ○ 0, 2, 4 or 6 seconds ○ 0, 15, 30 seconds or infinite
Special functions • 9 VDC output on the advance warning alarm relay ○ Via Jumper JP1 • Low voltage detection ○ Via Jumper JP2	○ Bridged = 9 VDC on C at HD2 (See diagram) ○ Bridged = No low voltage detection ○ Open = Detection active, the door is unlocked if the voltage at the magnetic lock falls below 10 VDC.

D1 : Model iGEW 5700S

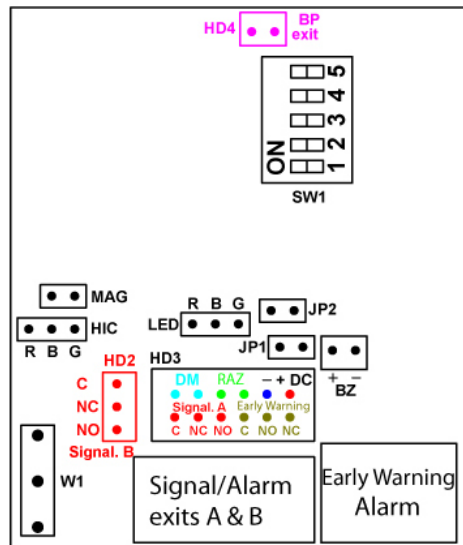
- Built-in buzzer
 - Intermittent audible signal : Advance warning alarm
 - Continuous audible signal : Alarm

D2 : Model iGEW 5700CS

- Built-in buzzer
 - Intermittent audible signal : Advance warning alarm
 - Continuous audible signal : Alarm
- Built-in color camera
 - Automatic switch-on in the event of an alarm
 - Video output, composite PAL 75 ohms

Power supply via the magnetic lock (Contact HD2 + bridge via JP1)

E : Connections



BZ: Exit 9 VDC Buzzer.
MAG: Magnet.
HIC: Hall sensor IC.
LED: Connector GigaLeD.
W1: Connector micro switch.
JP1: Short = connect 9 VDC to C on remote B.
JP2: Open = enable low voltage detection.
 Short = disable low voltage detection.
DM: Yellow wires - Motion detection (ex: IR Passive)
 If no motion detection is connected you need to short the yellow wire.

E1 : Terminal block HD3: wire identification:

- Power supply, 12/24 VDC : **Red (+) – Black (-)** (norm NF S 61937 > 24 VDC only)
- External Reset : **Brown – Brown**
- External presence detector : **Yellow – Yellow**
- Alarm contact – Signal A : **Blue (NO) – Orange (NF) – Violet (C)**
- Advance warning alarm contact: **Green (NO) – Pink (NF) – Grey (C)**

E2 : Important note – Optional camera connections (Model iGEW 5700CS)

Please note that the iGEW 5700CS is equipped with a camera which is powered by the magnetic lock's internal system. In this arrangement, the JP1 bridge is closed and a 9 VDC power supply is available on the "signal B" contacts on HD2. This contact cannot therefore be used for an external signal; the only remaining available contact for this is "signal A" on HD3.

F : Operational logic configuration

F1 : Automatic differentiated door unlocking (dip-switch 5 in the off position)

Normal operation:

When the **Cybermag®** iGEW 5700 magnetic lock is connected to a power supply and in stand-by mode, the GigaLed slowly flashes green. The buzzer is silent, the advance warning alarm relay is inactive and there is a voltage supply to the signaling and alarm relay (fail-safe).

If the door is unlocked normally, (exit push-button, keypad, reader, remote control, etc...), the GigaLed lights up in red, the buzzer is silent, the advance warning alarm is inactive but the signaling and/or alarm relay inverts in order to remotely signal that the door has been unlocked.

Operation in the event of an emergency or an attempt to gain unauthorized entry:

If pressure is applied to the door (or it is pulled from the other side), the **Cybermag®** iGEW 5700's built-in pressure detector automatically initiates the following process:

1. An advance warning alarm is triggered, configurable to between 0 and 3 seconds
2. The GigaLed flashes red at high frequency
3. The buzzer emits an intermittent audible signal
4. The advance warning alarm relay switches

If the pressure (or pulling force) disappears, the system returns to the normal operating mode if the door remains locked. (The purpose of this first alarm is to dissuade possibly ill-intentioned people from attempting to exit/enter through this door.)

If the pressure continues to be applied, for example in an emergency situation, the automatic differentiated unlocking process is initiated. i.e. the door will unlock automatically after a configurable period of 15 or 30 seconds, ***regardless of whether or not pressure continues to be applied***.

The sequence then continues chronologically as follows:

5. Initiation of a countdown timer, configurable to 15 or 30 seconds
6. The GigaLed flashes red at slow frequency
7. The buzzer emits a continuous audible signal
8. The advance warning alarm relay remains switched
9. The signaling and/or alarm relay inverts

After the differentiated unlocking time has elapsed, the magnetic lock releases the door, the buzzer stops, the GigaLed flashes slowly red/green, the advance warning alarm returns to stand-by but the signaling and/or remote alarm relay remains voltage-free in order to continue to signal the door's unlocked state.

The magnetic lock remains voltage-free until it is reset, either by a local switch (e.g. by turning a key) connected to the Reset input or by a single electrical supply on/off cycle

Summary of lock operation in the automatic differentiated unlocking mode

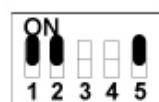
System status	GigaLed	Buzzer (option)	Advanced warning relay	Signaling and alarm relay
Door unlocked	Red	OFF	OFF	OFF
Door locked	Flashes green every 5 seconds	OFF	OFF	ON
Advance warning alarm	Flashes red (high frequency)	Intermittent audible signal	ON	ON
Differentiated unlocking	Flashes red (low frequency)	Continuous audible signal	ON	OFF
Uninhibited access	Flashes red/green alternately	OFF	OFF	OFF
Pressure on the door	Flashes red (high frequency)	Intermittent audible signal	ON	ON
Exit button (Unlocked)	Red	OFF	OFF	OFF

Adjusting the operational parameters (dip-switches) for mode F1

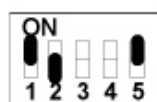
Functions:

- Dip-switch 1 : Alarm duration
- Dip-switches 2 and 3 : Advance warning alarm duration
- Dip-switch 4 : BOCA function— Automatic relocking (see below)
- Dip-switch 5 : Operating mode
 - Automatic differentiated door unlocking **Dip-switch to OFF**
 - Locking and door control – Dip-switch to ON

Early warning alarm Dip Switch 1&2



0 Sec.



2 Sec.

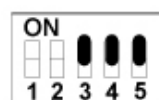


4 Sec.

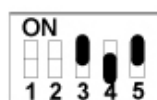


6 Sec.

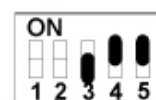
Alarm Dip Switch 3&4



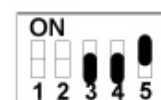
0 Sec.



15 Sec.



30 Sec.



Infinite

Factory settings:

- Advance warning alarm set to 3 seconds. (Dip-switch 2 OFF and dip-switch 3 OFF).
- Release delay set to 15 seconds. (Dip-switch 1 ON).
- Non-BOCA. (Dip-switch 4 ON).

Note on the BOCA function– Automatic relocking

1. In the normal configuration (factory setting – dip-switch 4 to ON), the **Cybermag®** iGEW 5700 magnetic lock is programmed to leave the door unlocked after the automatic differentiated door unlocking sequence has been completed. This type of operation satisfies the requirements of the most current norms, which specify that the door must remain unlocked in order to ensure complete evacuation of the premises. Door relocking is only possible in response to a signal (e.g. push-button) to the Reset input or a brief interruption in the power supply to the magnetic lock.
2. However, automatic relocking may be accepted in certain situations. In this case, an additional door position contact (NO) is required, which is connected to the Reset input, and dip-switch 4 must be set to OFF. (NB! This function is not permitted by the following norms: NF S 61937, prEN 13633 and prEN 13637.)
- 3.

F2: Locking and door control – (dip-switch 5 set to ON)

Normal operation:

When the **Cybermag®** iGEW 5700 magnetic lock is connected to a power supply and in stand-by mode, the GigaLed slowly flashes green. The buzzer is silent, the advance warning alarm relay is inactive and there is a voltage supply to the alarm signal relay (fail-safe).

If the door is unlocked normally, (exit push-button, keypad, reader, remote control, etc...), the GigaLed lights up in red, the buzzer is silent, the advance warning alarm is inactive but the signaling and/or alarm relay inverts in order to remotely signal that the door has been unlocked.

Operation in the event of an attempt to gain unauthorized entry:

If pressure is applied to the door (or it is pulled from the other side), the **Cybermag®** iGEW 5700's built-in pressure detector automatically initiates the following process:

1. An advance warning alarm is triggered, configurable to between 0 and 6 seconds
2. The GigaLed flashes red at high frequency
3. The buzzer emits an intermittent audible signal
4. The advance warning alarm relay switches

If the pressure (or pulling force) disappears, the system returns to the normal operating mode if the door remains locked. (The purpose of this first alarm is to dissuade the attempt to force the door.)

If the pressure is maintained, the process initiates the full alarm mode:

The sequence then continues chronologically as follows:

5. An alarm is triggered for a time that can be set to between 0 and 30 seconds or to infinity
6. The GigaLed flashes red at slow frequency
7. The buzzer emits a continuous audible signal
8. The advance warning alarm relay remains switched
9. The signaling and/or alarm relay inverts

After the alarm time has elapsed, the magnetic lock returns to stand-by, the buzzer stops, the GigaLed slowly flashes red/green and continues therefore to signal that the door is unlocked.

The system can only be reset after the alarm time has elapsed. Resetting either takes place via a local switch (e.g. by turning a key) connected to the Reset input or by a single electrical supply on/off cycle. After the reset, the GigaLed slowly flashes green again.

If the alarm time has been set to infinite, resetting can only take place after a period of 90 seconds.

Summary of lock function in the locking and door control mode

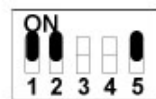
System status	GigaLed	Buzzer (option)		Advanced warning relay	Signaling and alarm relay
Door open	Illuminated, red	OFF		OFF	OFF
Access inhibited	Flashes green every 5 seconds	OFF		OFF	ON
Advance warning alarm duration	Flashes red (high frequency)	Intermittent audible signal		ON	ON
Remote alarm time	Flashes red (low frequency)	Continuous audible signal		ON	OFF
Remote alarm time elapsed	Flashes red/green alternately	OFF		OFF	ON
Forced entry	Flashes red (high frequency)	Intermittent audible signal		ON	OFF
Exit button to open	Illuminated, red	OFF		OFF	OFF

Adjusting the operational parameters (dip-switches) for mode F2

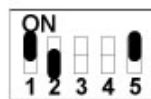
Functions:

- Dip-switches 1 and 2 : Advance warning alarm duration
- Dip-switches 3 and 4 : Alarm duration
- Dip-switch 5 : Operating mode
 - a) Automatic differentiated door unlocking - Dip-switch to OFF
 - b) Locking and door control – **Dip-switch to ON**

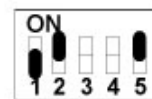
Early warning alarm Dip Switch 1&2



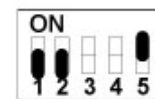
0 Sec.



2 Sec.

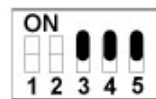


4 Sec.

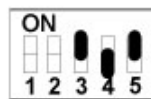


6 Sec.

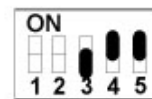
Alarm Dip Switch 3&4



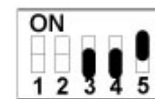
0 Sec.



15 Sec.



30 Sec.



Infinite

NOTE:

The factory setting is the automatic differentiated exit mode (F1), and therefore differs from the above

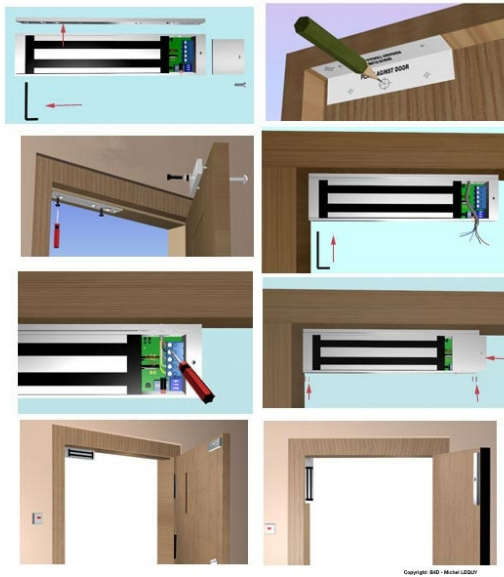
G: Important instructions

The **Cybermag®** iGEW 5700 magnetic lock must be installed in accordance with the normal regulations that apply for all magnetic locks.

Mechanical installation:

A template is supplied with each magnetic lock. Position the template on the door and the jamb and mark where the holes are to be drilled.

The counter plate must be fastened in place using the screw/sleeve that is provided along with the two metal washers and the rubber spacer. Ensure that the rubber spacer is not crushed when tightening the screw, **as there must be a degree of movement at the counter plate**. This point is crucial as otherwise the magnetic lock's holding force will be significantly compromised.



Electrical installation:

The **Cybermag**® iGEW 5700 magnetic lock requires a nominal power supply of 12 or 24 VDC. *(In the case of emergency exits that must comply with the NF S 61937/prEN 13633 and prEN 13637 norms, only a voltage of 24 VDC is permissible).*

This nominal voltage is the **minimum** voltage that must be present at the magnetic valve's connection terminals when the power is on and all the options (buzzer, camera, etc.) are working.

A lower voltage than the nominal value is the main cause of poor magnetic valve operation.

Ensure that the supply cable is not too long and of a sufficiently large diameter. It is preferable to use cables with cores made of flexible multi-strand wire and install a 13.6 VDC (or 27.2 VDC) power supply, which will compensate for voltage losses in the wiring. Its current is the continuous current value and not the peak value.

