

User Manual



ZLOCK

ZigBee® device
for door lock

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Warranty

The device supplied to the buyer and/or the recipient is guaranteed by **CLEODE** against any malfunctions originating from a design and/or manufacturing flaw, for a period of twelve (12) months following delivery. The buyer and/or recipient is (are) responsible for proving the existence of the said defects or flaws. This warranty is applicable in accordance with articles 1641 to 1648 of the French Civil Code and in compliance with the French statutory warranty. The warranty covers the replacement free of charge of devices and parts affected by a design and/or manufacturing flaw excluding conspicuous defects in the device that are covered by the buyer and/or the recipient.

In order to invoke the warranty, the buyer must immediately send written notice to **CLEODE** of the flaws that it attributes to the device. It must enable **CLEODE** to have access to the device to observe these defects and repair them. The warranty provided by **CLEODE** is strictly limited to the equipment provided and shall only have for effect the replacement or repair, at **CLEODE's** expense, on its own premises, of all devices or parts that are not functioning as a result of defects or flaws. **CLEODE** reserves the right to modify the devices in order to comply with the warranty.

The warranty does not apply to replacement or repairs that may result from normal wear and tear of devices, systems or products, damage or accidents resulting from negligence, failure to supervise or maintain, or incorrect use of the devices, systems and/or products.

The maintenance service is provided by **CLEODE** with all reasonable care possible and in compliance with the current state of the arts.

The exchange of parts or repairs performed under the warranty cannot result in extending the length of the warranty. In no event can the unavailability of the device due to servicing give rise to compensation for any reason whatsoever. The seller is released from all obligations relating to the warranty if the product or device has been modified without prior written consent, or if original parts have been replaced by parts which it has not manufactured without prior consent. If unforeseen damage is caused by the device, it is expressly agreed that the seller can only be liable for the reimbursement of monies received for the purchase of the device if it has been destroyed. Under no circumstances can the seller be held liable for indirect or contingent damage. The seller is released from any liability and the buyer waives any rights against it if an accident or direct or indirect damage is caused to the buyer following a defect, incorrect usage, incorrect maintenance or normal wear of the device sold.

Table of revision

Version	Author(s)	Version description	Date
0.1	CLEODE	Initial version	09/19/2011
1.0	CLEODE	Document validation	09/22/2011
1.1	CLEODE	Update for new hardware version	05/20/2016
2.0	CLEODE	Document validation	05/26/2016

Reference documents

N°	Document	Description
[1]	ZigBee_Cluster_Library_Public	Specification of the ZigBee® Cluster Library
[2]	ZigBee_Home_Automation	Specification of the Home Automation profile
[3]	ZigBee_Specification	Specification of the ZigBee® standard

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I. Overview et technical characteristics

I.1 Overview

The ZLock is a ZigBee® device for Door Lock. It can be managed in different ways:

- On reception of ZigBee® command (on the DoorLock cluster)
- Or manually by push buttons.

The device is presented as follow:

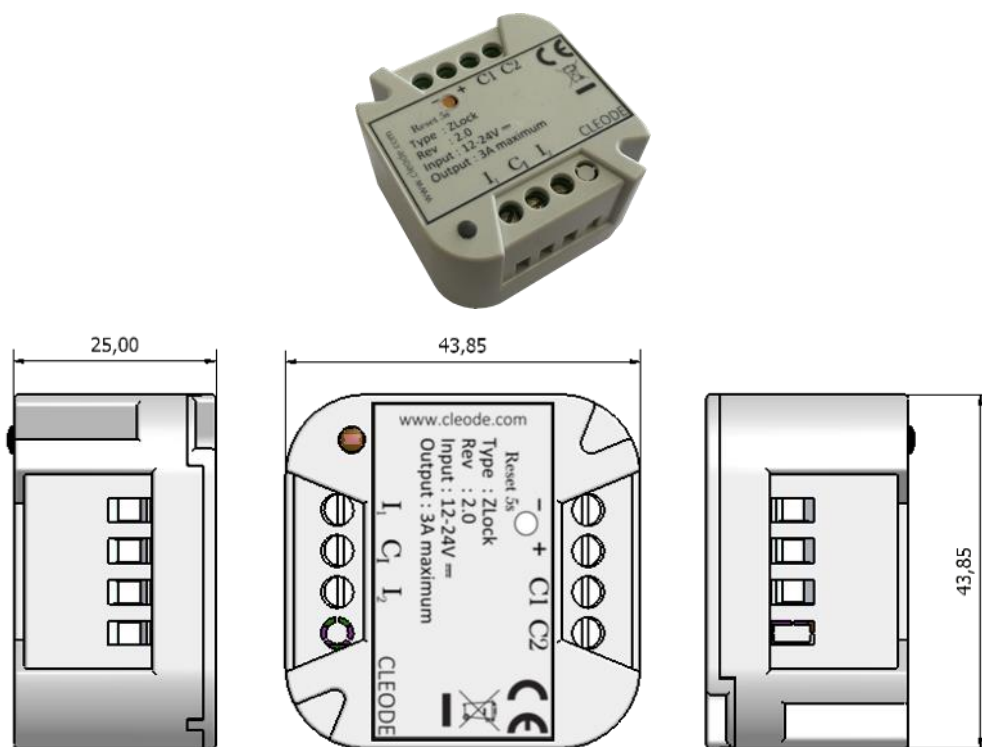


Figure 1 : Global view of the ZLock device

I.2 Red light meanings

The red indicator shows the state of the device.

This indicator takes the following states depending on the modes described in the table below:

Legends :



Off





Slow flash






On with steady light for 2s



Rapid flash

Mode	Etat		Description
Default			Without special announcement, the association led remains off.
On starting		2 time	To start the device announces its State by 2 slow flashes

Identification		The given time in the frame Identify	During the identification period, the device is identified via slow flashes as long as the duration of identification is not exceeded.
Manual starting of pairing process		20 seconds max	The device reports by quick flashes that it is in coordinator research stage.
Pairing OK		2 seconds	Once paired, the device announces its state with steady light for 2s.

I.3 Technical characteristics

Stack ZigBee®	ZigBee® Pro 2007 16 channels
Radio range	About 150 m (indoor)
Operating temperature	+5 à +45 °C
Electrical supply	110-230V / 50-60Hz
Maximum current capability	3A max
Dimension	44 x 44 x 25 mm


II. 'Quick Start'

Rapid implementation procedure:

- 1) Install the **ZLock** product (For more details, refer to chapter III.1).
- 2) Pair the **ZLock** product in the ZigBee® network (For more details, refer to chapter III.2).
- 3) The product is operational in your ZigBee® network.
- 4) Test the operation of the **ZLock** product.

III. Procedures

III.1 Installation

 **IMPORTANT:** This product permits a maximum current of 3A, it should not be used to power a shutter motor greater than 3A.

III.1.1 Power wiring

The ZLock must be supplied with a DC supply voltage between 12 and 24V. The wiring should be done as shown in the image below:

- The mass is represented by letter - (Black wire)
- The main voltage is represented by letter + (Red wire)

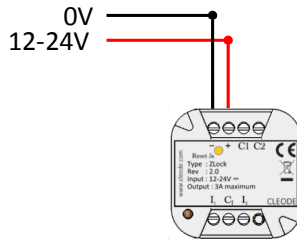



Figure 2 : Power wiring

 **Never use an AC 110-220V power supply on the ZLock.**
For a AC supply of 110-220V, contact CLEODE who will propose you other products.
Switch off the power supply before any intervention until the end of the manipulation.

III.1.2 Wiring of the Door Lock

The door lock should be wired as below:

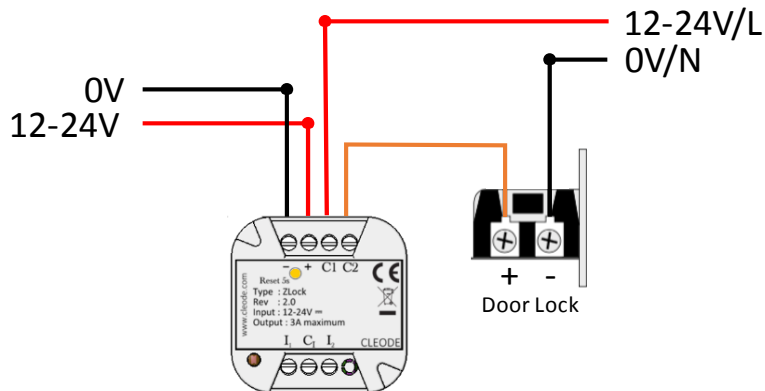


Figure 3 : wiring of the Door Lock



The ZLOCK product manages a dry contact relay. You can use a DC or AC power supply for your door lock (only between C1 and C2), depending on your needs.

III.1.3 Wiring of the switch

It is possible to manage the ZLock product by a push button switch for door lock as for example those pictured below:



Figure 4 : Push button Golmar



Figure 5 : Push button BT-Security

The Zlock device can manage 2 push buttons to manually operate the door opening.

To use push buttons, you must connect it as shown below:

- Push button 1 between the entries C₁ and I₁
- Push button 2 between the entries C₁ and I₂



It's not necessary to wire the two push buttons. Use the entries depending to your need.

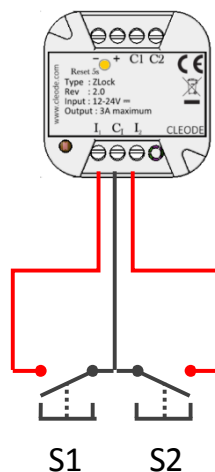


Figure 6 : wiring of push buttons for door lock manual command



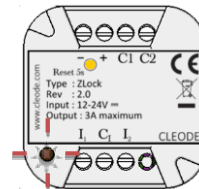
Do not use an external power supply on the push buttons for door lock or on door lock inputs of the ZLock product, at the risk of damaging the product ZLock.

The ZLock product itself supplied the voltage to operate press buttons.

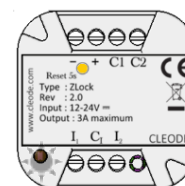
III.2 Pairing of the product for the first time

To integrate the ZLock into a ZigBee® network, proceed with pairing as follows:

- 1) Allow the addition of a ZigBee® device in your network (see the user manual of your coordinator).
- 2) At power on, the ZLock product tries to associate and blinks twice.



- 1) If a coordinator is present and allows the ZLock to join, the ZLock indicator will light for 2 seconds then turns off.

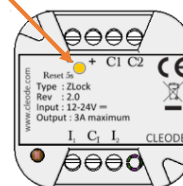


III.3 Reset of the product

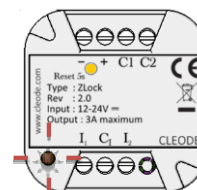
To clear the ZLock network settings, proceed as follows:

- 1) Press the pairing button 5 seconds.

Appui long



- 2) When the ZLock is reset, the indicator flashes 2 times and shuts off.



IV. Software interface

IV.1 Overview

The ZLock contains a Windows Covering application defined in the Home Automation standard (See document [2]).

This device conforms to the standard ZigBee[®] PRO 2007 and the Home Automation 1.2 profile. For more details on the data exchanged, please refer to the documents [1], [2] and [3].

IV.2 Application

IV.2.1 Description of the application

- Device ID: Door Lock
- EndPoint number: 1
- Clusters:

Server	Client
Basic (0x0000)	/
Identify (0x0003)	/
Groups (0x0004)	/
Scenes (0x0005)	/
DoorLock (0x0101)	/

IV.2.2 Description of clusters

Here is a brief description of the clusters and the attributes implemented in the ZLock product. For more precision on the functioning thereof, please refer to the document [1].

IV.2.2.1 Cluster Basic

This cluster hosts the version information, name of manufacturer, model of the object, etc.

Attribut	Attribut ID
ZCLVersion	0x0000
ApplicationVersion	0x0001
StackVersion	0x0002
HWVersion	0x0003
ManufacturerName	0x0004
ModelIdentifier	0x0005
DateCode	0x0006
PowerSource	0x0007
LocationDescription	0x0010
PhysicalEnvironment	0x0011
DeviceEnabled	0x0012
AlarmMask	0x0013

IV.2.2.2 Cluster Identify

This cluster is used to physically identify the object in the network. On writing the value of the *IdentifyTime* attribute, the object light will blink during the time specified by this value.

Attribut	Attribut ID
IdentifyTime	0x0000

IV.2.2.3 Cluster Group

This cluster is used to manage scenes incorporating the ZLock product.

Attribut	Attribut ID
NameSupport	0x0000

IV.2.2.4 Cluster Scenes

This cluster is used to memorize the names of the groups to which the ZLock product belongs.

Attribut	Attribut ID
SceneCount	0x0000
CurrentScene	0x0001
CurrentGroup	0x0002
SceneValid	0x0003
NameSupport	0x0004

IV.2.2.5 Cluster Door Lock

This cluster is used to:

- Read the status of the product ZLock (Locked/unlocked)

Attribut	Attribut ID
LockState	0x0000
LockType	0x0001
Actuator Enable	0x0002

The *LockState* attribute is a 8-bit enumeration. This attribute has the following possible values :

Value	Definition
0x00	Not fully locked
0x01	Locked
0x02	Unlocked
0xFF	Undefined

The ZLock product is a Door lock control system for dead bolt, so the *LockType* is DEAD BOLT (0x00).

V. Technical Issues

Description of the problem	Verifications to be done
I can't associate the ZLock product in my ZigBee® network.	Verify that your coordinator accepts the associations and the ZLock is located in radio range of the other ZigBee® network elements (Coordinator, routers).
The ZLock device no longer meets ZigBee® commands or commands to the switch.	Check that the ZLock is always powered (12-24V DC).

Repair and maintenance

Defective hardware will be returned to the premises of CLEODE accompanied by:

- A copy of the delivery,
- A detailed description of its appearance dysfunction observed.

The average maintenance time is four (4) weeks from the back to the factory.

The information provided on the label are as follows:

- Model,
- Year of production,
- Reference and Version,
- Serial Number.

This information may you be requested by the company CLEODE to identify your hardware.

Requests for support should be addressed to:



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End of User manual