



Zigbee™ remote control of roller shutters, doors and portals ZSC

User Manual



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S.A. au capital de 167 200 €

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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to the warranty if the product or device has been modified without prior written consent, or if original parts have been replaced by parts which it has not manufactured without prior consent.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 CONTENT

WARRANTY	2
REFERENCE DOCUMENTS	5
I INTRODUCTION	6
I.1 ZSC PRESENTATION	6
I.2 COPYRIGHT	6
II REMOTE CONTROL DESCRIPTION	7
II.1 ZIGBEE PRESENTATION	7
II.2 REMOTE CONTROL	7
II.2.1 REMOTE CONTROL DESCRIPTION.....	7
II.2.2 CLUSTER DESCRIPTION.....	8
II.3 TEMPERATURE SENSOR APPLICATION	9
II.3.1 TEMPERATURE SENSOR APPLICATION DESCRIPTION	9
II.3.2 CLUSTER DESCRIPTION.....	9
III INSTALLATION AND NETWORK ASSOCIATION	11
III.1 INSTALLATION	11
III.1.1 WALL INSTALLATION	11
III.1.1.1 DOUBLE-SIDED TAPE INSTALLATION	11
III.1.1.2 SCREW INSTALLATION	11
III.1.2 CHANGE THE BATTERY	12
III.2 NETWORK ASSOCIATION	13
III.3 RESET DEVICE	13
IV TECHNICAL FEATURES	14
REPAIR AND MAINTENANCE	15

TABLE OF REVISIONS

Version	Authors(s)	Version description	Date
0.1	CLEODE	Initial version	13/09/2011
1.0	CLEODE	Validated document	22/09/2011

REFERENCE DOCUMENTS

N°	Document	Description
[1]	ZigBee_Cluster_Library_Public	Spécification de la Zigbee Cluster Library
[2]	ZigBee_Home_Automation_Profile	Spécification du profile Home Automation
[3]	ZigBee_Specification	Spécification de la norme ZigBee

I INTRODUCTION

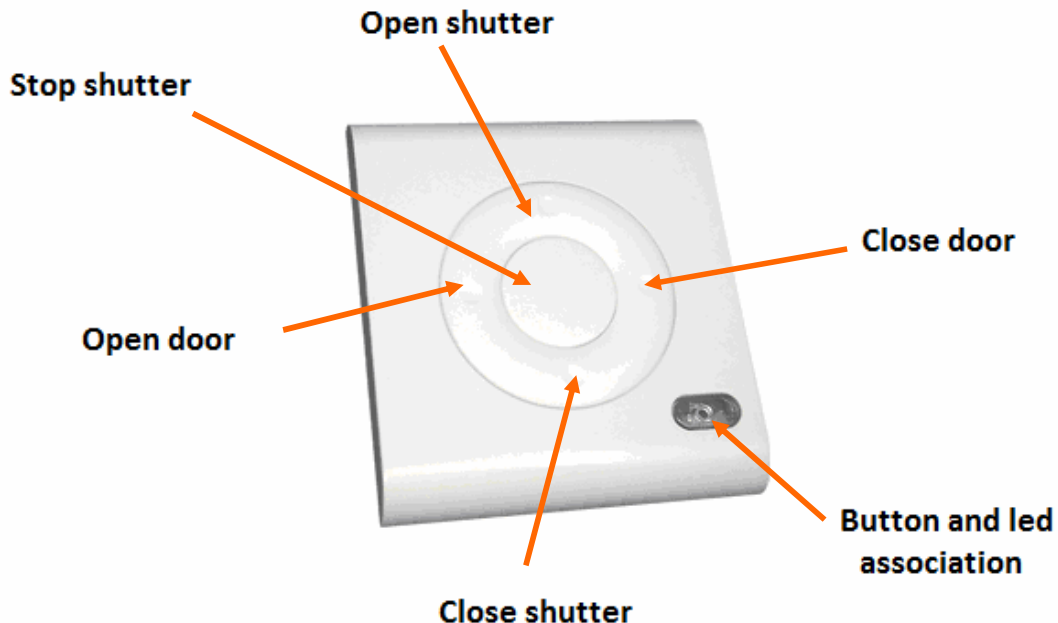
I.1 ZSC PRESENTATION

The remote control ZigBee™ ZSC allows a user to pilot different systems of opening such as:

- a roller shutter by using the cluster Windows Covering
- an electric door by using the cluster Door Lock.
- a portal also by using the cluster Door Lock.

It also integrates a sensor of digital temperature allowing measuring the ambient temperature and sending on the network.

The ZSC has this form:



The switch module Zigbee™ works in conjunction with a Zigbee coordinator™ compatible stack pro 2007.

CLEODE also markets Coordinators Zigbee™.

Contact : support@cleode.com ou Web : www.cleode.fr for more information

I.2 COPYRIGHT

The CLEODE trademark and the CLEODE logo are properties of CLEODE SA, France. This document also refers to trademarks and other product names that are registered trademarks of their respective owners.

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II REMOTE CONTROL DESCRIPTION

II.1 ZIGBEE PRESENTATION

The remote control ZigBee™ contains three applications defined in the standard Home Automation (Cf. document [2]):

- An application of command of engine of roller shutters from type Windows Covering Controller
- An application of locking door of type : Door lock
- An application of measure of temperature of type : Temperature Sensor

This node is fully compliant with the ZigBee PRO 2007 and Home Automation profile. For more detail on the data exchange between device and network, see documents [1], [2] and [3].

II.2 REMOTE CONTROL

Several commands can be sent to actuators such as: opening, closure and stop.

II.2.1 REMOTE CONTROL DESCRIPTION

- Device ID : Remote Control
- Endpoint number: 1
- Clusters :

Server	Client
Basic (0x0000)	Door Lock (0x0101)
Power_Configuration (0x0001)	Window Covering (0x0102)
Identify (0x0003)	/
Alarms (0x0009)	/

II.2.2 CLUSTER DESCRIPTION

This is a brief description of clusters and attributes which are implemented in the ZSC. For more detail on these, see document [1].

- Basic cluster :

This cluster is used to determine basic information about the device.

Attribute	Attribute 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

- Power Configuration cluster:

This cluster is used to specify the min threshold of battery level by setting the *BatteryVoltageMinThreshold* attribute value.

Attribute	Attribute ID
BatteryAlarmMask	0x0035
BatteryVoltageMinThreshold	0x0036

- Identify cluster :

This cluster is used to put a device into an Identification mode. By writing the *IdentifyTime* attribute value, the user asks the device to blink the light, during a number of seconds specified by this value.

Attribute	Attribute ID
IdentifyTime	0x0000

- Alarms clusters:

This cluster is used to signal an alarm. In the case of ZSC, only the low battery power level is processed. If the battery power level is too low (under 2,4V) the *AlarmCount* value changes to 1 and a command message is send to coordinator.

Attribute	Attribute ID
AlarmCount	0x0000

II.3 TEMPERATURE SENSOR APPLICATION

The temperature measurement is made by an embedded sensor. The accuracy is +/- 0,5°C.

II.3.1 TEMPERATURE SENSOR APPLICATION DESCRIPTION

- Device ID : Temperature Sensor
- Endpoint : 6
- Clusters :

Côté serveur	Côté client
Basic (0x00)	/
Identify (0x03)	/
Temperature Measurement (0x0402)	/

II.3.2 CLUSTER DESCRIPTION

- Basic cluster :

This cluster is described in the § II.2.2.

- Identify cluster :

This cluster is described in the § II.2.2.

- Cluster Temperature Measurement:

This cluster is used to configure the measurement of temperature, and reporting temperature measurements

Attribut	Identifiant de l'attribut
MeasuredValue	0x0000
MinMeasuredValue	0x0001
MaxMeasuredValue	0x0002
Tolerance	0x0003

Among the attributes of the cluster `TemperatureMeasurement`, the attribute `MeasuredValue` sends its value in a following way:

- Every hour if the temperature does not evolve furthermore of 1°C
- At the end of 2 minutes if the temperature changed furthermore of 1°C

In these above attributes, the *MeasuredValue* attribute send his value periodically (each 2 minutes by default):

MeasuredValue: measured value in °C * 100.

III INSTALLATION AND NETWORK ASSOCIATION

III.1 INSTALLATION

III.1.1 WALL INSTALLATION

ZSC can be installed on a wall with two ways:

- 1) With a double-sided tape (not provided)
- 2) With two M3 screws (not provided)

III.1.1.1. DOUBLE-SIDED TAPE INSTALLATION

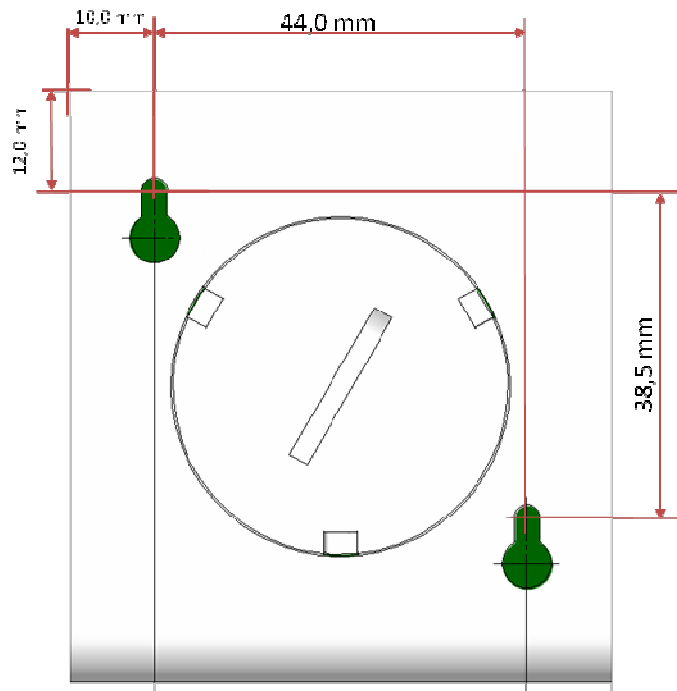
To mount the ZSC with a double-sided tape, follow this:

- 1) **Stick** a double-sided tape on the ZSC bottom
- 2) **Dust** the wall
- 3) **Mount** the ZSC on the wall

III.1.1.2. SCREW INSTALLATION

To mount the ZSC on a wall with screws, follow this:

- 1) **Put** ZSC at a correct location and **note** the position of the top/left angle
- 2) **Put** the drilling template like the following figure



- 3) **Drill two holes** in the wall according screws and dowels
- 4) **Screw** the screws with a 3mm space between the screw head and the wall

- 5) **Put** ZSC on the wall by aligning the holes on the bottom to the screws
- 6) **Push** ❶ ZSC to the wall and **move** it to the bottom ❷ to finish the installation.

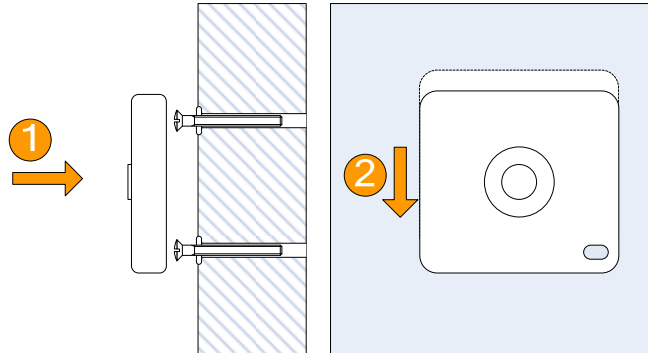
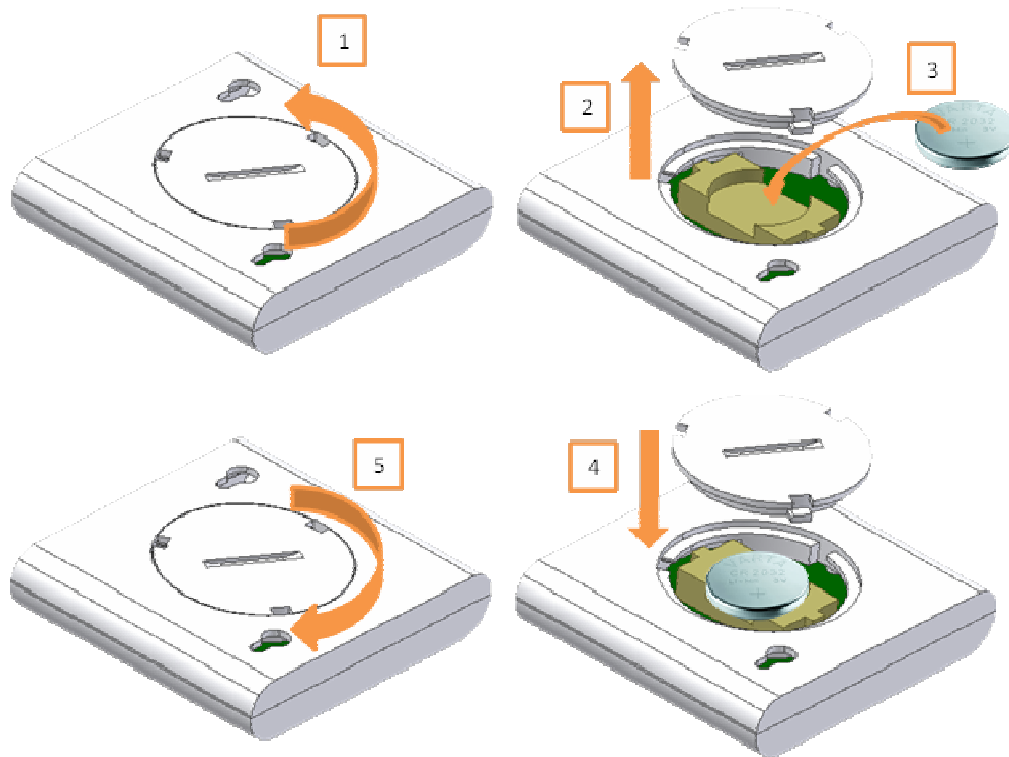


Figure 1 : Wall installation

III.1.2 CHANGE THE BATTERY

To change the batteries in ZSC, follow this:

- 1) **Open** the box
- 2) **Place the battery** in the battery holder with careful with battery polarity.
- 3) **Close** the box



III.2 NETWORK ASSOCIATION

At power supply, ZSC tries to connect to a coordinator or a router. This process takes few seconds if a coordinator or a router is joinable. In the case of not, ZSC goes to sleep and retries every fifteen minutes.

Otherwise, the user can press the transparent switch during 3s to initiate a new association process. When the user does this, the red light is flashing during the process.

If ZSC is associated, the red light stays on during 2 seconds.

III.3 RESET DEVICE

If necessary, the user can reset the device by press the transparent switch for 5 seconds. The red light flashes 2 times and turns off. Then, ZSC reset and tries to join a network.

IV TECHNICAL FEATURES

Weight	40 g (without battery)
Power Supply	1 battery : CR2032
Battery Life	> 1 year
Measurement range temperature	-20 °C +60 °C
Transmission range	100 m outdoor 30 m indoor
Managed channels (frequency)	16 ZigBee™ channels (2.405 to 2.480 GHz)

REPAIR AND MAINTENANCE

Defective equipments shall be first reported to the CLEODE support team in order to be assigned an RMA number. Be prepared to state your name, company and the serial number of the defective item to the support personnel.

The item shall then be returned to CLEODE with the following documents:

- The RMA number
- A copy of the delivery slip
- A detailed description of the default and the test context

The maintenance period is typically four (4) weeks starting from the date of reception of the equipment at the CLEODE headquarters.



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