

x1R Smart – User Manual



Argo 2.7

ISEO[®]

About this manual

Dear customer,

Your door is equipped with an electronic lock with a motor-driven bolt closing mechanism with built-in digital control. ISEO research and experience have led to the development of a product that offers the state of the art in terms of security and reliability. To find out all about this product and make the best use of all it has to offer, read this booklet and keep it handy. It will come useful again whenever you want to reprogram or check your lock, as well as for doing ordinary maintenance and solving any problems.

For commercial documents, technical documents and certifications, refer to the *ISEO Zero1* website at the following link:

<http://gamma.iseozero1.com/en/controllo-accessi/>

Information icons

For an easy reading of the manual, take note of the following icons:



WARNING: situations that could cause injury to yourself or others.



CAUTION: situations that could cause damage to your *Device* or other equipment.



NOTE: notes, suggestions and additional information.

How to use this manual

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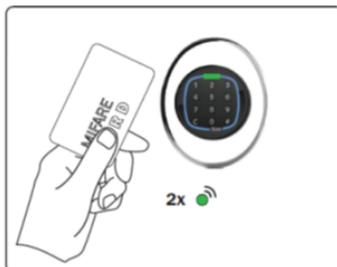
Getting started

Add credentials without Argo App

You can add credentials, such as *Mifare* cards or tags, using the *Master Card* and the *RFID reader* placed in the external control module.



1. Present the *Master Card* 1 to the device to enter in *Programming Mode*.



3. Read the *Cards* to add it to the *User List*.

4. For each added *Card* the device emits

Go back to *Table of Contents* clicking on the chapter small title.

Information on copyright

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Keywords

- **Access:** passage or door which access is electronically controlled by the *Access control device*.
- **Access control device:** electronic and/or mechanical device that allows selective access through a door.
- **Actuator:** device that act an opening or closing action, following an external control signal (i.e. a remote opening command).
- **Argo app:** it is an app for smartphones, *Bluetooth Smart* ready, that allows to manage and program the *Access control device*.
- **Cable gland spring:** it is a concealed lead cover, installed in the hinges side of the door, where inside laying the cables to be connected to the lock (for example the external power supply cables). The spring slides inside the door, so that it can be open and closed without damaging the cables inside.
- **Card/Tag:** electronic card that can be read from the lock by an RFID reader connected to it, simply bringing it closer to the same, without physical contact.
- **Credential:** device that allows to identify the user and authorize or non-authorize access through a door. For example: Smartphone, Tablets, Mifare Cards or Mifare Tags.
- **Door opening time:** it is the time that allows user to open the door following an opening command. If the door is not opened during this time, it will automatically lock.
- **Door close delay time:** it is the elapsing time between the door closing action and the bolts physical movement starts.

Keywords

- **Door sensor contact:** electronic device made of 2 contacts and installed in the door frame, that allows *x1R Smart* to know if door is ajar or open. It is possible to install it in the lock side or in the hinges side of the door.
- **Door status:** it defines the “door condition”, open or closed, which can be as follows.
 - Door closed and safe: latch and bolts fully extended (shot-out).
 - Door closed but not safe: only latch inserted.
 - Door opening or tampering: when bolts are moving backwards.
 - Door fully open: latch and bolts fully backward (withdrawn).
- **Door status relay:** it is a relay, built-in into the *x1R Smart* electronic board, that allows to send outside the *Door status* signal: open or close. It can be used for example in a home automation system, to switch on the light when door opens, or to activate an alarm system when door closes. It needs to operate the DC external power supply by *Cable gland spring*.
- **External control module:** it is an accessory connected by cable to the lock electronic board. It is installed in the external side of the door. It embeds an *RFID module*, for *Cards* reading purpose, and a *Bluetooth module* for the *Argo* app interface. It can be supplied with keyboard, to memorize PIN as *Credential* to open the door.
- **Fingerprint reader:** *x1R Smart* is integrating fingerprint biometric authentication. The biometric template is a very secure and convenient authentication credential: it can't be borrowed, stolen, or forgotten, and forging one is practically impossible.
- **First Person In:** function that, when enabled, allows the first user that enter a door, presenting a valid credential, to activate the *Scheduled Passage Mode*.
- **Free Mode:** setting the *Passage Mode* in Free, the lock withdraws the bolts and holds back the latch. In this mode the door is always opened for any user who wishes to gain access, without the use of authorized credentials.
- **Hidden External Reader:** it's a Bluetooth and RFID reader, like the *External control module* (with no PIN option), that can be fit inside the door in order to have from the outside a clean door surface solution (called in jargon "clean facade door"), so that, from outside, nothing is visible.
- **Internal control module:** it is an accessory connected by cable to the lock electronic board. It is installed in the internal side of the door. By 2 buttons, allows the door opening and closing. It is not required if *x1R Single Action* version.
- **Light Mode:** setting the *Passage Mode* in Light, the lock withdraws the bolts, and keeps closed only by the latch. Opening with authorized credentials withdraws only the latch, allowing energy saving and less mechanical wear.
- **Master Card:** *Cards* used to program and manage the *Access Control Device*.
- **Master Card Level:** it is related to the number printed on each *Master Card*, belonging to the same *System Code*, that can be 1, 2 or 3.
- **Master Card Set:** set of three *Master Cards* numbered from 1 to 3, belonging to the same *System code*. The *Master Card* of higher number disable the *Master Card* of lower number.
- **Optoisolated input:** it is an electrical input made by a component that transfers electrical signals between two circuits, keeping them isolated between each other. In this way issues to one of the circuit, such as electrostatic discharges, voltage spikes or short circuits, does not affect the other one.

Keywords

- **Passage Mode:** function that allows the door to be always open for any user who wishes to gain access, without the use of authorized credentials. On x1R Smart this function can be set in *Free* or *Light Mode*.
- **Programming mode:** software condition, feasible by *Master Card*, that allows software modification to the *Access Control Device*.
- **Remote opening command:** it is an opening command sent to the lock through an optoisolated input. It can be, for example, an intercom push button or a button placed nearby the reception desk.
- **Scheduled Passage Mode:** this function allows you to set 2 schedules, to automatically enable and disable the *Passage Mode* function.
- **Single Action:** x1R Smart version, featuring an advanced and precise mechanical system that allows the internal handle to retract latch and deadbolts in one unique and smooth movement (also called anti-panic function).
- **Smart series:** *Access control device* which embeds a *Bluetooth* radio module, to communicate to the compatible smartphones by the *Argo* app.
- **Standard:** x1R Smart version without the Single Action functionality. To open from the inside it is necessary the *Internal control module*.
- **System Code:** unique number associated to a *Master Card set*.
- **User Card:** *Card* used to open one or more doors
- **User List:** list of users enabled to open an *Access control device*.

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Safety and Environment

Safety information

To prevent damage to your product or injury to yourself or to others, read the following safety precautions in their entirety before using this equipment. Keep this manual in a convenient place so that you can refer to it when necessary.



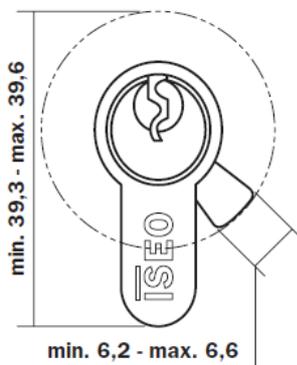
WARNINGS

- Please read carefully all the notices and the warnings of this document because they provide important information about safety of installation, use and maintenance. Preserve this manual as future reference.
- The installation of the device requires the intervention of qualified staff, adequately trained by ISEO. The instructions should be carefully followed during installation. The installer must provide the user with these instructions and / or any other maintenance document.
- The product can be destined only for the use for which it was expressly made and, therefore, as an armored door lock for civil and industrial locations. Any other use is to be considered improper and dangerous.
- Do not work on the door with the lock installed in order to prevent wood or metal residue getting into the lock.
- Distance between striking plate and latch tip, completely in (from both motor or key), must be between 2 and 3mm.
- Handle must not have any friction during the return phase.
- Connecting rods must have a play of at least 1 millimeters so that the deadbolt does not remain subjected to traction in the rest position. This would compromise in fact the latch to be correctly released when recalled by key.
- Connect the *Remote opening command* input to 8÷30Vdc/ac power supply source (optoisolated input).
- To use the internal *Door status relay* (30Vdc/ac - 1A MAX), an external power supply source is mandatory. Fit therefore a cable gland to allow the relay cable to pass through the hinges side of the door.
- Electrical connections must be done according to the manufacturer's instructions and in compliance with the current regulations.
- When using a feeder as a direct power supply source (8÷30Vdc/ 30W MAX), fit a cable gland to allow the cable to pass through the hinge side of the door.
- Do not connect the *Device* to power sources exceeding the indicated ones.



WARNINGS

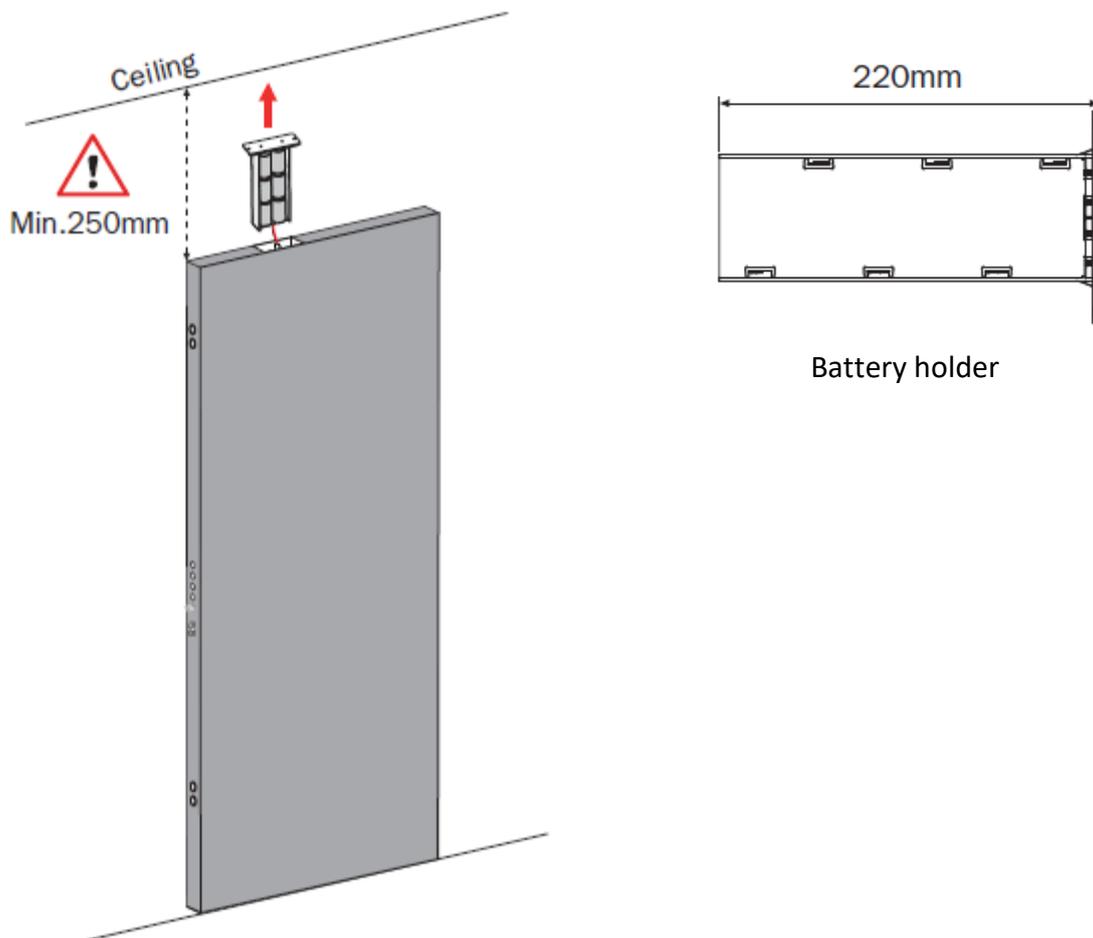
- If the power supply has a power greater than 90W and it's not SELV type (Safety Extra Low Voltage – double insulation, overcurrent and short-circuit protected), it must be provided upstream of the lock power input, an appropriate protection switch (circuit breaker), or delayed fuse with protection value depending on the main voltage used:
 - 8 – 12 Vdc – 5 A fuse
 - 13 – 24 Vdc – 3 A fuse
 - 25 – 30 Vdc – 2,5 A fuse
- RFID External control module: frequency 13,553 - 13,567 MHz, maximum magnetic field: - 13,69 dBµA/m (measured at 3m at the maximum power capacity).
- Hidden RFID reader: frequency 13,553 - 13,567 MHz, maximum magnetic field: - 5,7 dBµA/m (measured at 3m at the maximum power capacity).
- Bluetooth radio module: frequency 2,40 - 2,4835 GHz, maximum power: 5,2 mW.
- All the devices of the system must be intended for the use for which they were designed to. Any other use has to be considered improper and therefore dangerous. The manufacturer can not be held responsible for any damage resulting from improper, erroneous or unreasonable use.
- In case of failure and/or malfunction of the device, switch off the power supply. An authorized technical support center must be contacted in order to repair the device. Failure to comply with the above statement may compromise the safety of the device.
- Do not expose the device to dripping or splashing water.
- *Single Action* version allow to withdraws bolts and latch by handle at the same time. *Standard* version allow to withdraws only the latch by handle.
- The *x1R Smart* lock works correctly when using cylinders with standardised profile cams of the size indicated below:





WARNINGS

- If *x1R Smart* is used with a cylinder with knob, make sure that after the cylinder has been turned the cam does not remain engaged, which will cause the motor to rotate in neutral.
- Make sure that *External control module* is not subject to heavy rain.
- If the door is installed with the *x1R Smart battery holder* placed in the top side of the door, make sure there is enough space from the ceiling to remove *battery holder*, in case of battery replacement needs.



Disposal and recycling

This product and battery are designated for separate collection at an appropriate collection point. Do not dispose of it as household waste.

For more information, contact the retailer or the local authorities in charge of waste management.



This symbol on the battery indicates that the battery has to be collected separately. Dispose of batteries according to your local environmental laws and guidelines.



This symbol indicates to not dispose of the packaging with household waste, but send it for recycling.

Certifications and compliance

In compliance with the standard:

EN 14846:2008

With classification: 3X9E0P713

And with the standard (only *Single Action* version):

EN 179:2008

With classification: 377B1452AB



DoP & Declaration of conformity available on the web site <http://www.iseo.com>

Classification digits explanation:

EN 14846:2008

Digits	1	2	3	4	5	6	7	8	9
x1R 696 - 699SA	3	X	9	E	0	P	7	1	3

Digits	Description	Classification
1	Category of Use (1-3)	<ul style="list-style-type: none"> 3 = for use by people with a high incentive to exercise care and with a small chance of misuse, e.g. residential doors.
2	Durability (A-Y)	<ul style="list-style-type: none"> X = 200.000 test cycles - 120N load on latch bolt.
3	Door Mass and closing force (1-9)	<ul style="list-style-type: none"> 9 = above 200 kg door mass as specified by the manufacturer – 15N maximum closing force.
4	Suitability on use on fire/smoke doors (0-F)	<ul style="list-style-type: none"> E = suitable for use on smoke and fire door assemblies. With a classification time of 90 min (EI 90).
5	Safety (0)	<ul style="list-style-type: none"> 0 = no safety requirements.
6	Corrosion resistance, temperature, humidity (0-P)	<ul style="list-style-type: none"> P = no defined resistance.
7	Security and drill resistance (1-7)	<ul style="list-style-type: none"> 7 = very high security with drill resistance.
8	Security - electrical function (0-1)	<ul style="list-style-type: none"> 1 = status indication (audio or visual signal from the lock that can be used as an indication that the bolt is fully thrown and deadlocked).
9	Security - electrical manipulation (0-3)	<ul style="list-style-type: none"> 3 = maximum resistance to all tests.

Classification digits explanation:

EN 179:2008

Digits	1	2	3	4	5	6	7	8	9	10
x1R 699SA	3	7	7	B	1	4	5	2	A	B

Digits	Description	Classification
1	Category of Use	<ul style="list-style-type: none"> 3 = for use by the public where there is little incentive to exercise care and where there is a high chance of misuse.
2	Durability	<ul style="list-style-type: none"> 7 = 200.000 test cycles - 120N load on latch bolt.
3	Door Mass	<ul style="list-style-type: none"> 7 = above 200 kg door mass as specified by the manufacturer.
4	Suitability on use on fire/smoke doors	<ul style="list-style-type: none"> B = suitable for use on smoke and fire door assemblies.
5	Safety	<ul style="list-style-type: none"> 1 = all panic exit devices have a critical safety function, only the top grade is identified for the purpose of EN179:08.
6	Corrosion resistance and temperature	<ul style="list-style-type: none"> 4 = very high corrosion resistance (240h); temperature requirement: from -10 °C to +60 °C
7	Security	<ul style="list-style-type: none"> 5 = 5000 N
8	Projection of the operating element	<ul style="list-style-type: none"> 2 = projection up to 100 mm (standard projection).
9	Type of operation	<ul style="list-style-type: none"> A = emergency exit device with "lever handle" operation.
10	Field of door application	<ul style="list-style-type: none"> B = outwardly opening single exit door only.

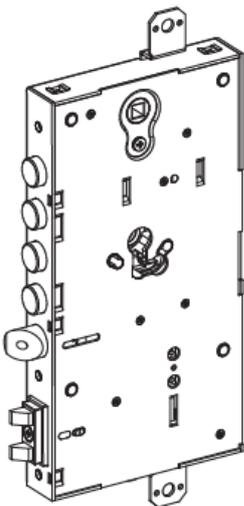
Overview

What is x1R Smart

x1R Smart is the electronic motorized lock for armoured doors, developed and created by ISEO for the electronic access control. *x1R Smart* embeds a *Bluetooth Smart multistandard ISO 14443 A/B* reader, in order to work with *Argo*, the new application suitable for *Android* and *iOS* smartphone.

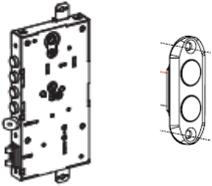
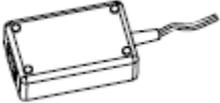
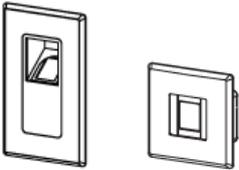
x1R Smart takes also advantage of the next main unique features:

- **Bluetooth Smart Technology:** in order to work with *Argo*, the new application suitable for *iOS* and *Android* smartphone.
- **Multistandard card/tag reader:** 13,56Mhz RFID technology, ISO14443A/ ISO14443B (Mifare Classic/Plus/DesFire).
- **Single Action version (anti-panic version):** the internal handle retracts latch and deadbolts in one unique and smooth movement. In this way the user can always open the door from the inside simply pushing on the handle, even if the deadbolts are out.
- **DC external power supply:** by cable gland spring, placed in the hinges side of the door, or by *door sensor contact*.
- **Output relay built-in on lock:** to get the *door status* signal.
- **Optoisolated input built-in on lock:** to get the *remote opening command*.



x1R Smart

System components

Components	Description	Features
	x1R electronic lock for security doors and door contacts sensor.	<ul style="list-style-type: none"> Application or rim/mortice version <i>Standard or Single Action</i> version Door sensor contact supplied with the lock
	Battery holder complete with power supply cable and set of batteries.	<ul style="list-style-type: none"> 6 x 1,5V Alkaline Batteries “D” Type
	DC Power supply unit	<ul style="list-style-type: none"> Power supply unit 8-30Vdc, P = 30W
	Master Card	<ul style="list-style-type: none"> To configure and manage the system (system’s initialization and plant code assignment)
	RFID credentials	<ul style="list-style-type: none"> Mifare cards/tags ISEO cards/tags Transponder with or without key inside
	Smartphone with Argo app	<ul style="list-style-type: none"> Bluetooth 4.0 ready From iPhone 4s with iOS 7 and above Android phones from ver. 5.0
	External control modules: <ul style="list-style-type: none"> with Keyboard and RFID RFID only Hidden RFID Reader 	<ul style="list-style-type: none"> 13,56Mhz RFID reader Keyboard for PIN codes Bluetooth 4.0 ready (low energy)
	Fingerprints readers: <ul style="list-style-type: none"> Embedded reader Flat Mount reader 	<ul style="list-style-type: none"> Directly connected to x1R Smart electronic board. Fully managed by Argo Powered from x1R by battery and/or external power supply No Bluetooth module inside: requires an External control modules
	Internal control module with open button.	<ul style="list-style-type: none"> Door opening button Not necessary if <i>Single Action</i> Additional button for future developments

Technical data

Features	Description
RFID Reader	<ul style="list-style-type: none"> ▪ Multistandard 13,56 Mhz ▪ ISO14443A/ ISO14443B (Mifare Classic/Plus/DesFire).
Bluetooth 4.0 Module	<ul style="list-style-type: none"> ▪ 2,4GHz Radio Board
Fingerprint reader	<ul style="list-style-type: none"> ▪ FAR and FRR configurable by Argo ▪ Operating temperature: -20°C/+55°C with Relative Humidity Max. 90% without condensing
Power Supply	<ul style="list-style-type: none"> ▪ Power supply unit 8-30Vdc, P = 30W ▪ 6 x 1,5V Alkaline Batteries “D” Type ▪ Door sensor contact
Optoisolated input	<ul style="list-style-type: none"> ▪ 8-30Vdc/ac
Output relay (contact resistive)	<ul style="list-style-type: none"> ▪ Contact rating (resistive): 30Vdc/ac, 1A MAX
Battery life (valid only for battery powered version)	<ul style="list-style-type: none"> ▪ Up to 20.000 opening (*) ▪ 4 levels battery charge detection by the Argo App. <p>(*) Depending on usage, environment, options.</p>
Software	<ul style="list-style-type: none"> ▪ Argo app available for Android and iOS. ▪ Automatic software upgrade: when an update is available your phone notifies you and the new software will be automatically installed in the lock from your phone.
Version	<ul style="list-style-type: none"> ▪ Standard ▪ Single Action
Mechanical dimensions	<ul style="list-style-type: none"> ▪ Handle follower: 8mm ▪ Backset: 63mm ▪ Centre distance: 85mm
Functional modes	<ul style="list-style-type: none"> ▪ 2 functional modes to be set by the end user by the Argo App.
Opening commands	<ul style="list-style-type: none"> ▪ Bluetooth 4.0 by the Argo App ▪ RFID reader ▪ External keyboard ▪ Internal control module ▪ Remote opening command
Finishes (faceplates)	<ul style="list-style-type: none"> ▪ Inox ▪ Polished Inox ▪ Satin brass ▪ Polished brass
Mechanical lock case compatibility	<ul style="list-style-type: none"> ▪ Euro profile cylinder hole (EN1303, DIN18252)
Environmental characteristics	<ul style="list-style-type: none"> ▪ Operating temperature: from -25°C to +70°C ▪ Storage temperature: from -25°C to +70°C ▪ H.R. Max. 95% without condensing.

Options and versions

There are several possible configurations and options available. Each configuration can be *Standard* or *Single Action version*, with battery, DC power or both. DC power can be supply via concealed *cable gland spring* or *door sensor contacts*. You can decide to install only an external *RFID reader* or *keyboard* option too. You can add a *remote opening button* using the *optoisolated* input. Or you can drive a motorized *swing door operator*, or interface to a home automation system, using the *outputs relay** built-in into the lock.



Single Action version does not require the *Internal control module*.

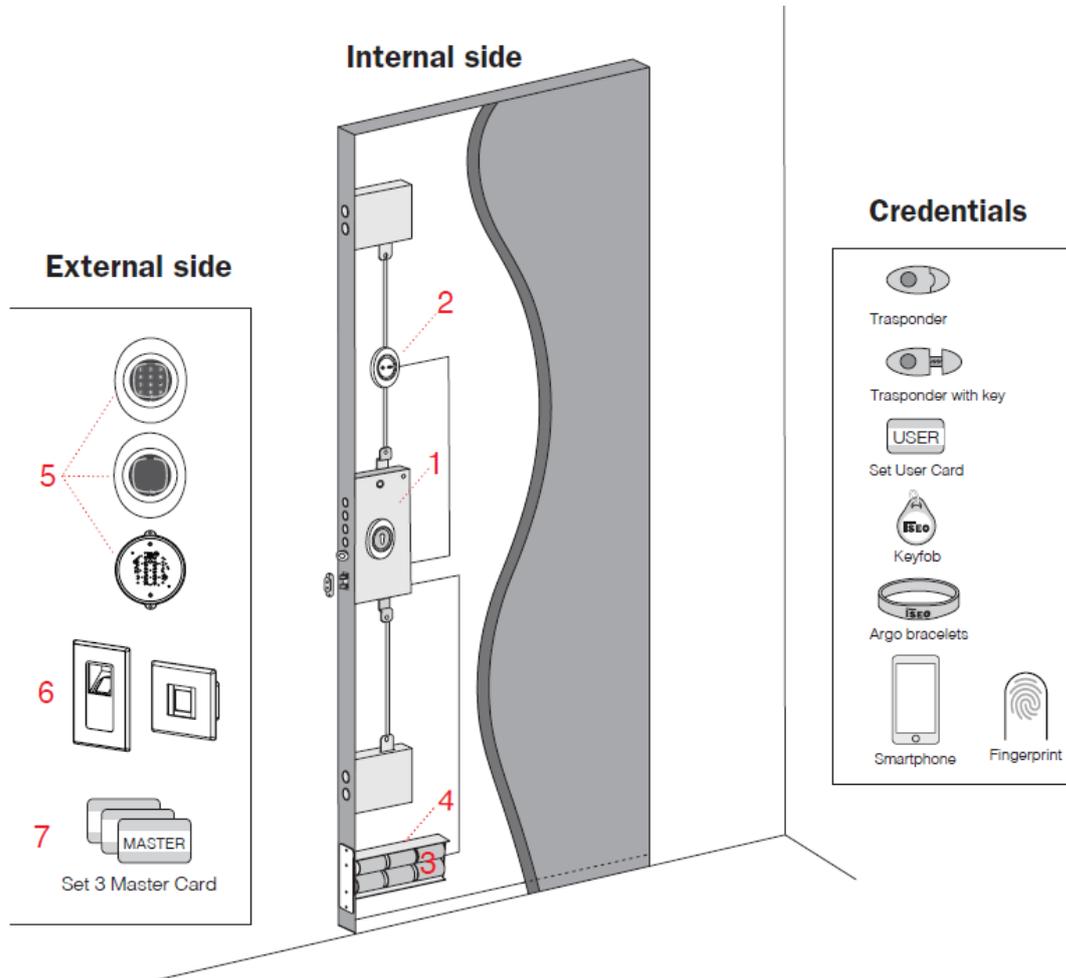
*To use the built-in relay it is necessary to power the lock by external power supply using a *cable gland spring*.

In the next examples you can find the 3 main configurations, named *A*, *B* and *C*:

- A. Alkaline batteries powered.
- B. DC power supply via cable gland spring plus alkaline batteries as back-up (facultative).
- C. DC power supply via door sensor contacts plus alkaline batteries (mandatory).

A. Alkaline batteries powered.

No wiring needed. The lock uniquely works by using the alkaline battery pack.



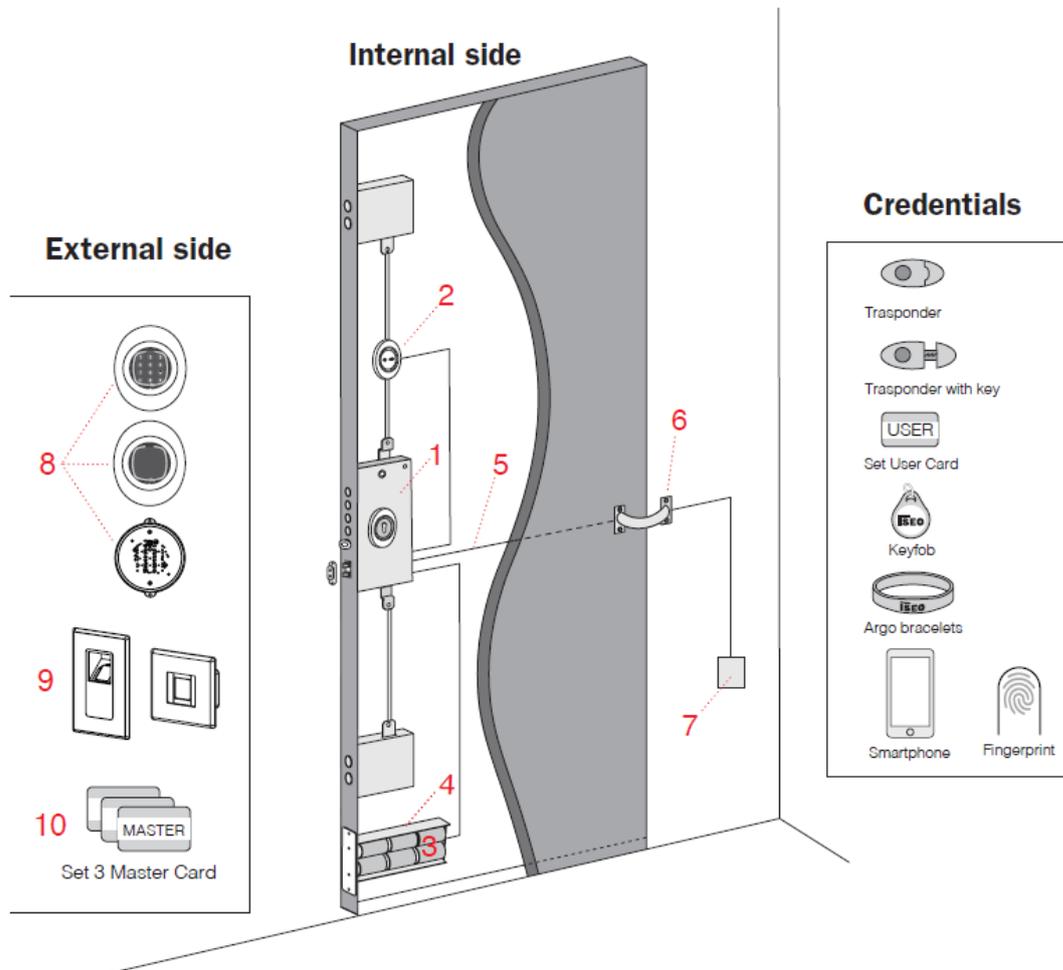
1. *x1R Smart lock.*
2. Internal control module with opening button (not necessary if *Single Action* version).
3. Alkaline batteries (6x1,5V “D” type).
4. Battery holder.
5. External control module: keyboard and RFID reader, only RFID reader without keyboard or Hidden RFID reader. All embeds the *Bluetooth radio module.*
6. Fingerprint readers: Embedded and Flat Mount Reader.
7. *Master Card Set.*



Output relay cannot be used in this configuration since it requires a DC power supply by cable gland spring.

B. DC power supply via cable gland spring plus back-up alkaline batteries

Power is supplied by an external feeder connected to the mains. Power cable reach the lock through the cable gland spring usually placed in the hinges side of the door.



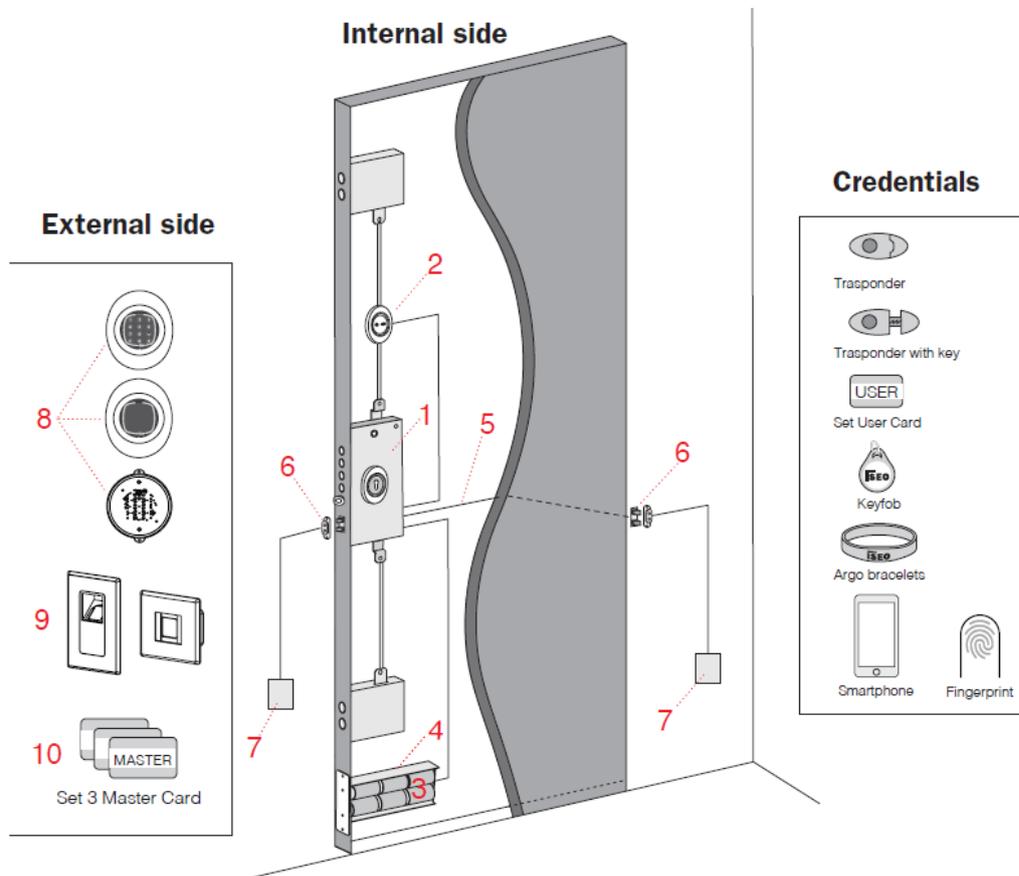
1. x1R Smart lock.
2. Internal control module with opening button (not necessary if *Single Action* version).
3. Alkaline batteries (6x1,5V "D" type).
4. Battery holder.
5. 8 Pins Multifunction cable (power supply, remote opening command and relay output).
6. Cable gland spring.
7. Power supply (8-30Vdc).
8. External control module: keyboard and RFID reader, only RFID reader without keyboard or Hidden RFID reader. All embeds the *Bluetooth radio module*.
9. Fingerprint readers: Embedded and Flat Mount Reader.
10. *Master Card Set*.



In this configuration it is possible and recommended to use in addition the alkaline batteries, that will be used as back-up, in case of power supply failure due to electrical fault or power outage. In this case the batteries life span will probably be the batteries expiration date.

C. DC power supply via door sensor contacts plus alkaline batteries.

When the door is closed power supply is provided from the mains by the *door sensor contacts*. When the door is opened power supply is provided by alkaline batteries, which also act as a back-up in case of power failure.



1. x1R Smart lock.
2. Internal control module with opening button (not necessary if *Single Action* version).
3. Alkaline batteries (6x1,5V “D” type).
4. Battery holder.
5. 8 Pins Multifunction cable (power supply, remote opening command and relay output).
6. Door sensor contact: it can be installed in the lock side or hinges side of the door.
7. Power supply (8-30Vdc).
8. External control module: keyboard and RFID reader, only RFID reader without keyboard or Hidden RFID reader. All embeds the *Bluetooth radio module*.
9. Fingerprint readers: Embedded and Flat Mount Reader.
10. *Master Card Set*.



In this configuration output *relay* cannot be used since it requires DC power supply by *cable gland spring*.



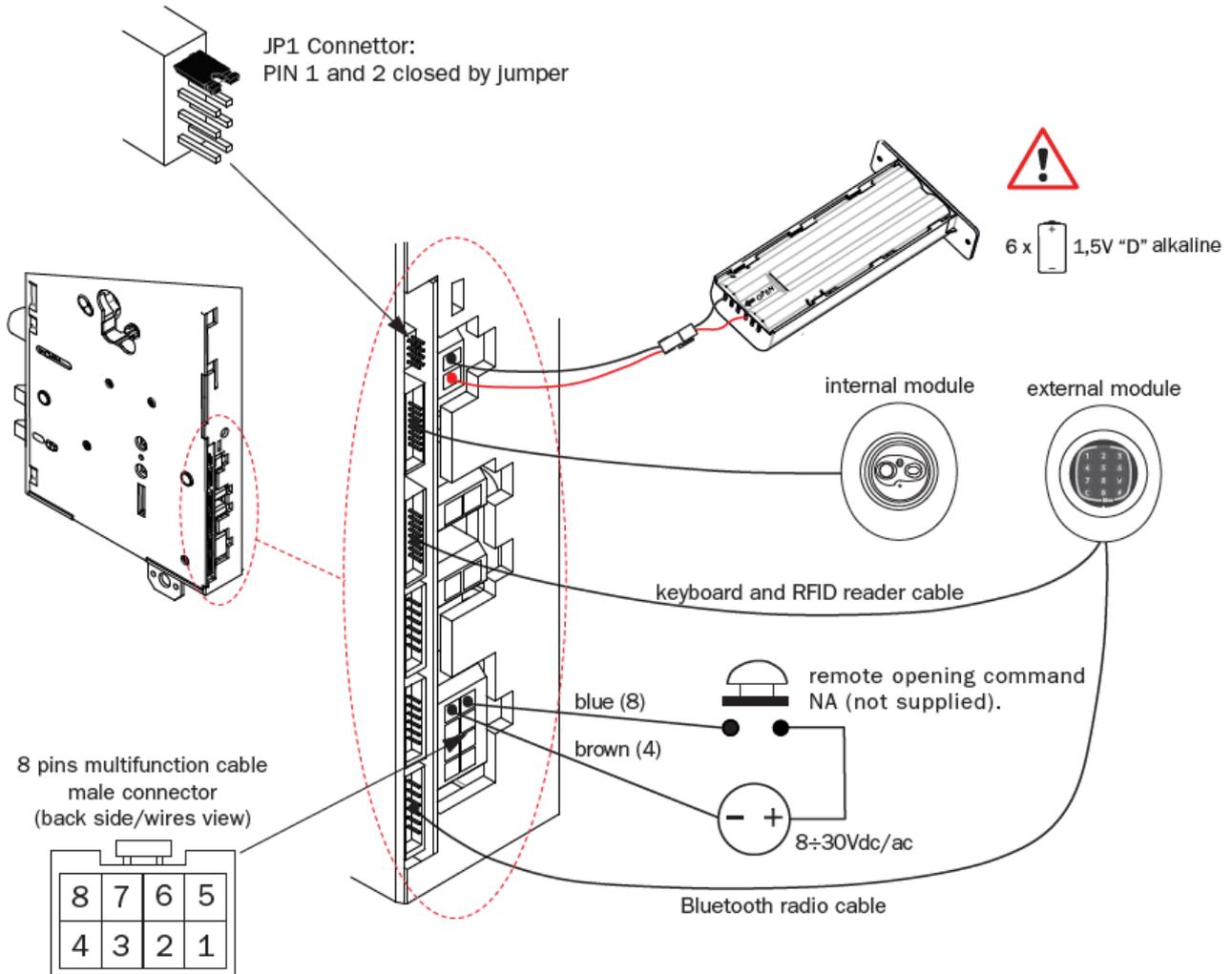
In this configuration it is also possible to install the Door sensor contact (6) in the hinges side of the door. For that an x1R specific code is required (not standard solution).

The higher current request occurs during door opening and closing, when the *door sensor contact* touches the door frame. For this reason the batteries life span will probably be the batteries expiration date.

Electrical connections (standard)



Only to use X1R Smart **without external reader and keyboard** (functioning as an actuator): place the jumper, available in the package, in the PINS 1 and 2 of connector JP1. Take care the jumper is perfectly and securely fitted into the PINS.

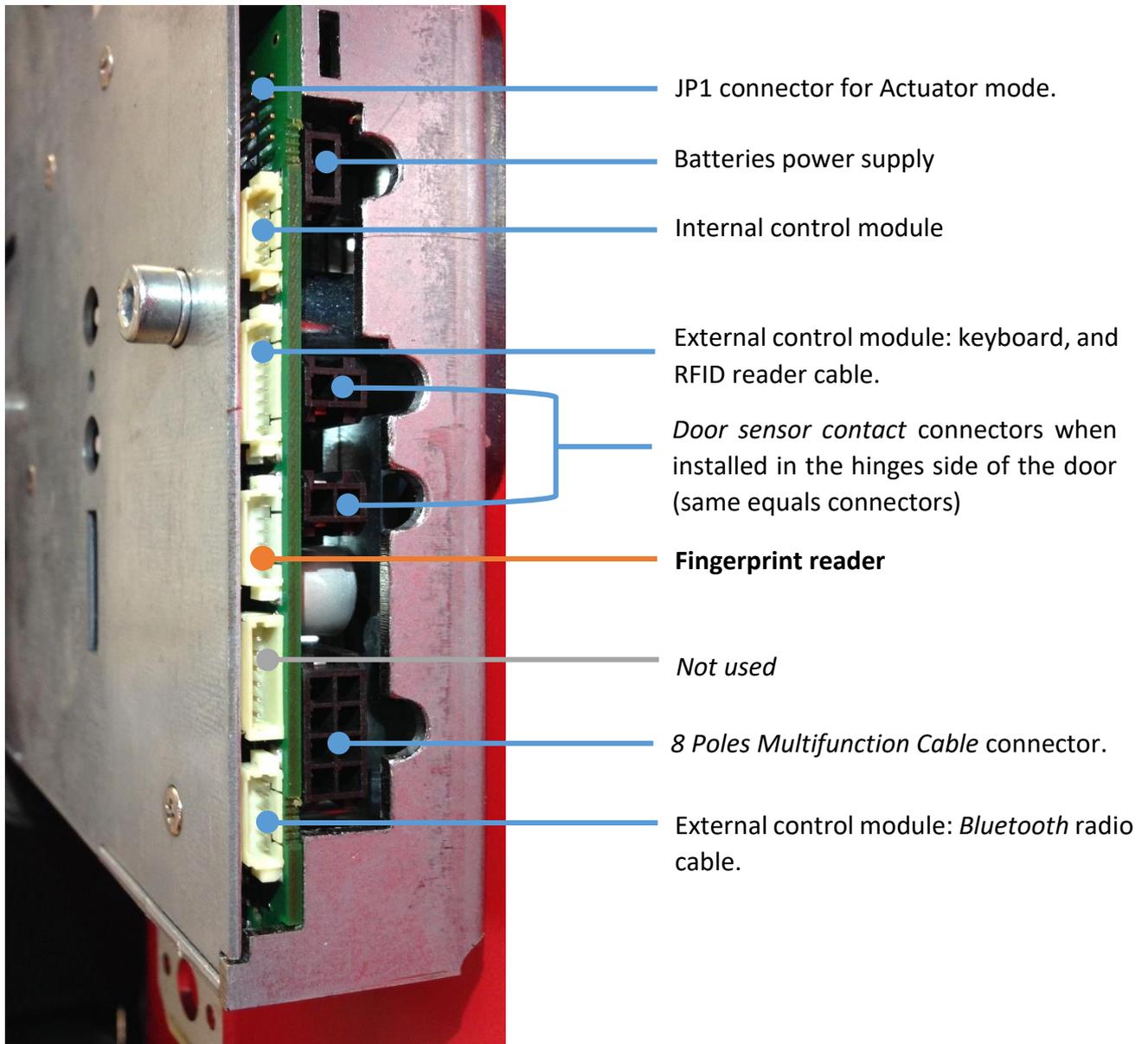


	Color	Description
1	Green	Relay common contact*
2	Orange	Relay normally open contact*
3	Black	- Negative power supply
4	Brown	Opening command 8÷30Vdc/ac
5	Yellow	Relay normally closed contact*
6	White	Not used
7	Red	+ Positive power supply 8÷30Vdc/30W MAX
8	Blue	Opening command 8÷30Vdc/ac

* Relay: 30Vdc/Vac - 1A MAX

Electrical connections (all)

See below a real picture of the lock, with all connectors' description.



“Not use” connectors are for future developments.

To use the *Door sensor contact* in the hinges side of the door, an x1R specific code is required (not standard solution). For more info go to *Door sensor contact* paragraph.

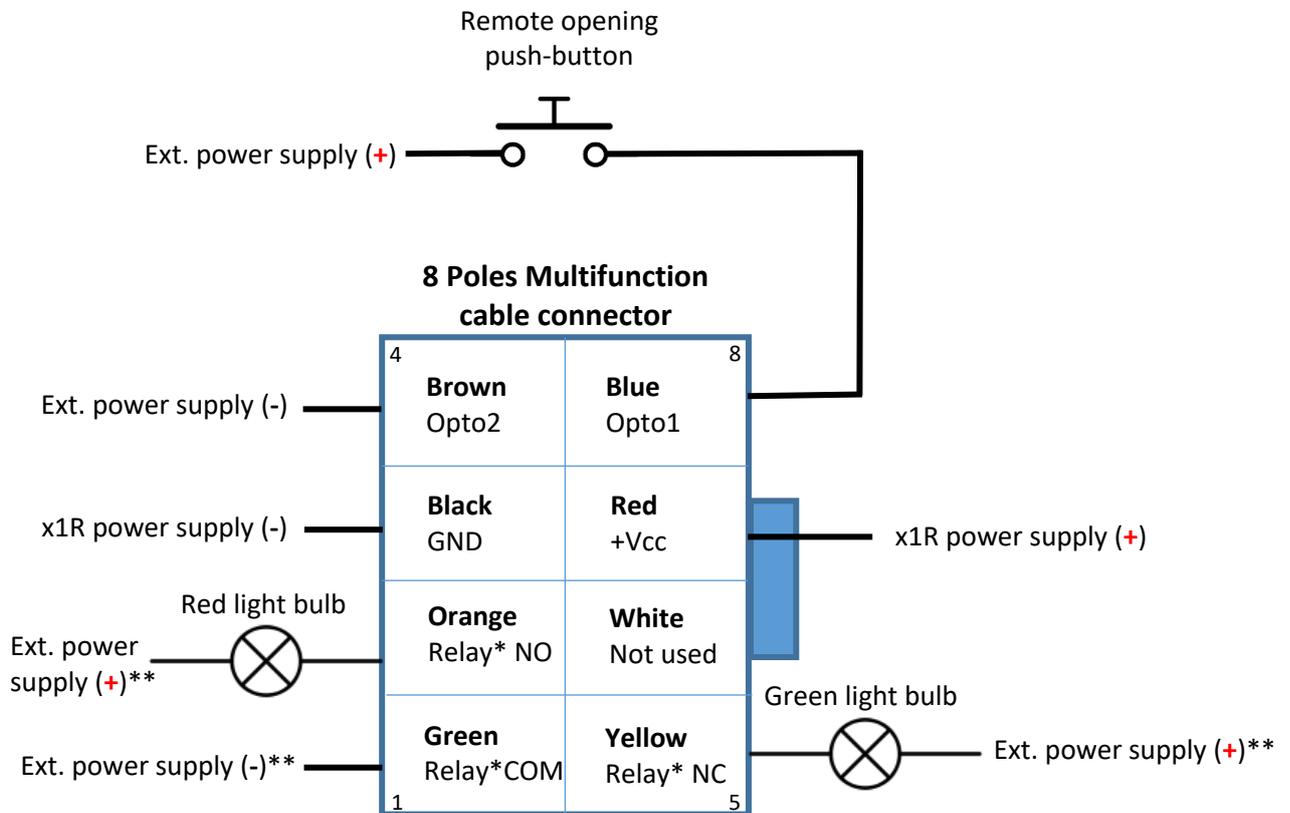
To know more about Actuator mode go to *x1R Smart as Actuator* paragraph.

When the door is closed and safe (bolts fully extended), the relay *normally closed contact* (NC), is closed. When the door opens the NC opens. For more detailed information about the relay behavior go to *Door status relay* paragraph.

Example of 8 poles Multifunction Cable wiring scheme

See below a connection example related to the following specifications:

- External power supply by cable gland spring.
- Relay outputs connected to 2 light bulbs, green and red, to show the door status:
 - NC output connected to green light (door closed and safe);
 - NO output connected to red light (door opening or opened).
- Optoisolated input connected to a remote opening button.



* Relay contact type (resistive): 30Vdc/ac, 1A MAX

** Remote opening command power supply: 8-30Vdc/ac. Light bulb power supply: refer to its technical data.



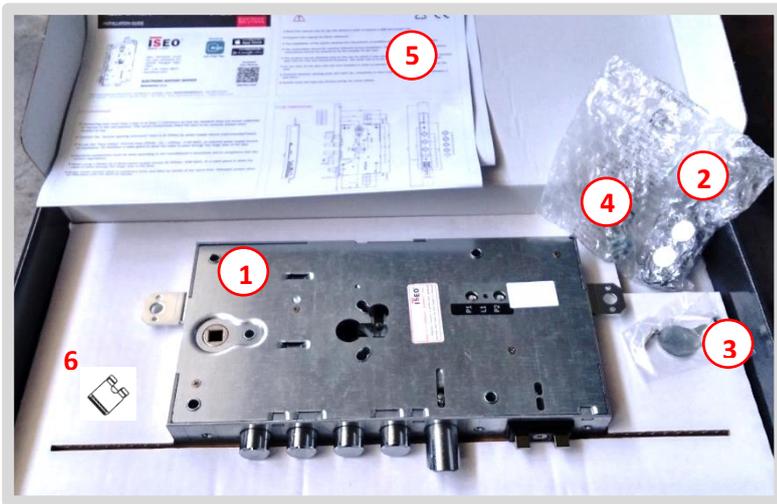
The very first batch of 8 poles Multifunction cables had the next different wires colors:
 Opto1 = Yellow / Opto2 = Green
 Relay COM = Blue / Relay NC = Brown

Getting Started

Package contents

The product box contains the following items:

1. *x1R Smart* electronic motorized lock
2. Door sensor contact
3. Plug for handle follower hole (to be used only for *Single Action* version)
4. Cylinder fixing screws kit (2 different screws)
5. Installation guide (IT/UK)



6. Jumper to use the lock as actuator (for more information go to paragraph *x1R Smart as actuator*).

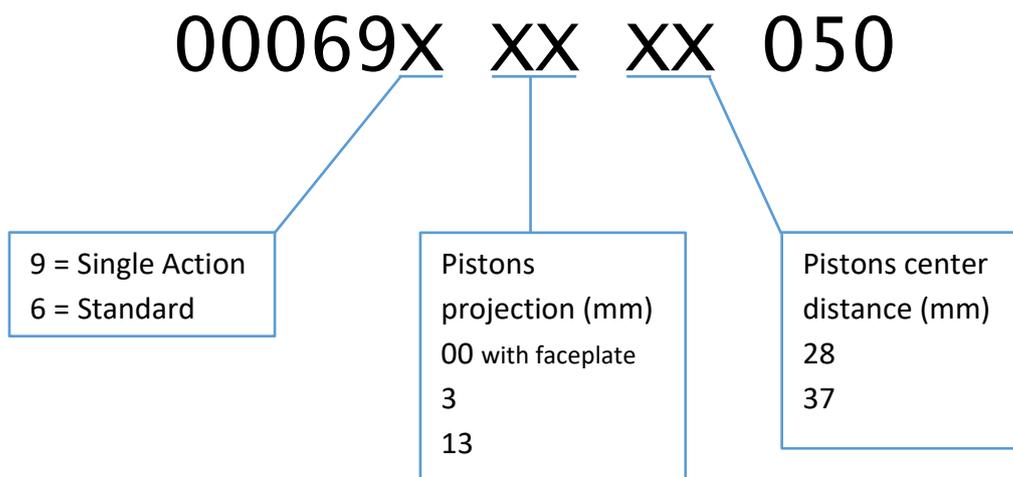
Product identification

Product is identified by a label, in double copy, attached to the box and to the lock case, reporting all the information about product production and traceability.



Product codification

Product code is composed as follows:



Different pistons projection measures can be done on request.

Installing x1R Smart



For this operation refers to the *Installation Guide* included in the product box and available at link:

<https://iseo.com> > Argo > Installation Guides

First switch on

When you switch on *x1R Smart* the first time, the device automatically update, if necessary, connected devices: external and internal control modules and the *Bluetooth* radio module.



This operation, that **keeps about 20 seconds**, is indicated to the user by the orange led, in the external module, continuously flashing.



Do not switch off *x1R Smart* during this operation and do not press any button or disconnect any cable, in order to avoid device malfunctions.

Device Initialization

The new device is in *Factory mode* configuration, meaning with the list of authorized user empty and no system code yet assigned. In this configuration it can be opened by any *Mifare* card or Tag or, if keyboard is present, by any code, with a minimum of 4 and a maximum of 8 digits code, confirmed by number sign “#”.



In *Factory mode* the external control module orange light flashes 2 time, before the standard opening and closing signal, delaying those operations in order to show the device not initialized.

Getting started

The system initialization take place through the programming of the *System Code*, using the *Master Card 1*.



1. Bring *MASTER Card 1* closer to the device.

2. The device emits 4 acoustic signals together with 3 orange light signals.



For the system's initialization, use exclusively *Master card 1*, and put cards 2 and 3 in a safe place. The use of *Master cards 2* and 3 will be required only if *Master Card 1* is lost or damaged.

All *x1R Smart* belonging to the same plant must be initialized or updated with the same *Master Card*.



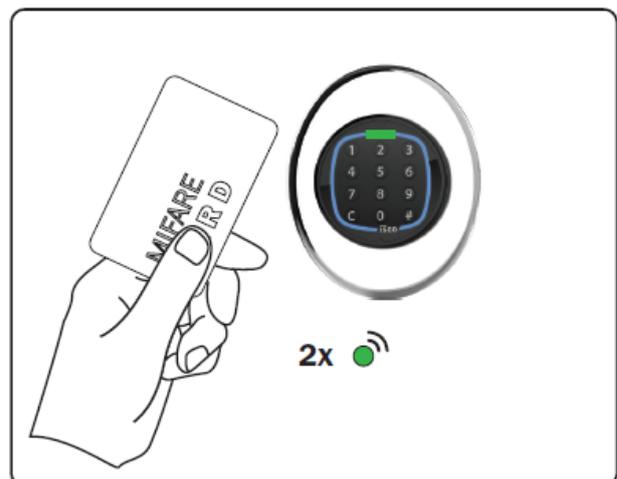
To know more about *Master Card*, read the *Argo User Manual* available at link: <https://iseo.com>

Add credentials without Argo App

You can add credentials, such as *Mifare* cards or tags, using the *Master Card* and the *RFID reader* placed in the external control module.



1. Present the *Master Card 1* to the device to enter *Programming Mode*.
2. The device emits 3 acoustic signals together with 2 green light signals.



3. Read the *Cards* to add it to the *User List*.
4. For each added *Card* the device emits 2 acoustic signals together with 2 green light signals, to confirm the operation.



5. At the end of the operation present again the *Master Cards 1* to exit *Programming Mode*.



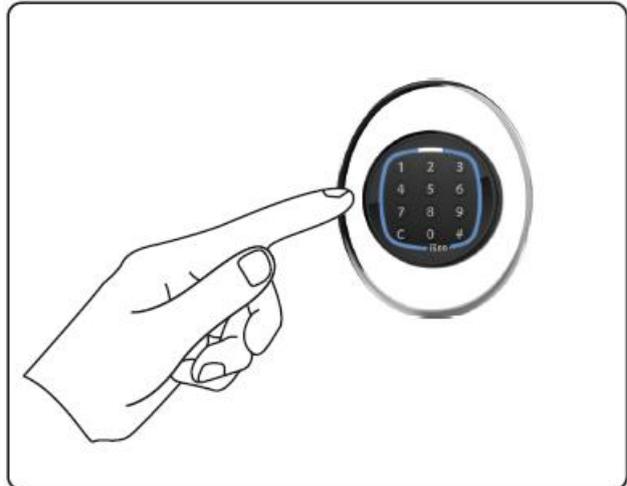
The device goes automatically out of *Programming Mode* after 3 min. of inactivity.

Add a PIN code without Argo app

You can add one or more codes to open, using the *Master Card* and the external keyboard.



1. Present the *Master Card 1* to the device to enter *Programming Mode*.
2. The device emits 3 acoustic signals together with 2 green light signals.



3. Enter your PIN code, from 4 to 14 characters, and confirm by # key.
4. For each added code the device emits 2 acoustic signals together with 2 green light signals, to confirm the operation.



5. At the end of the operation present again the *Master Card 1* to exit *Programming Mode*.



The *PIN code* must be minimum 4 characters to maximum of 14 characters.

The device goes automatically out of *Programming Mode* after 3 min. of inactivity.

Adding credential by Argo app

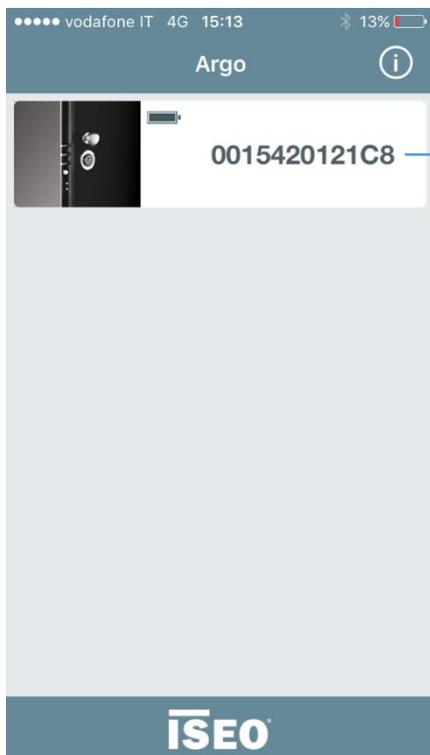


You can add credential such as phones, PIN codes, *Mifare* cards or tags, simply using your smartphone and the *Argo app*, by the *Bluetooth 4.0* technology.

1. Download the free *ISEO Argo* application from the *APP Store* (iOS) or *Google Play* (Android).



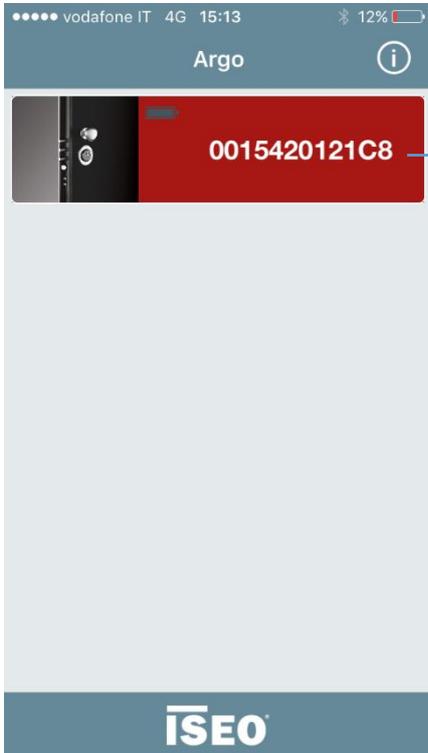
2. Enable *Bluetooth* communication on your smartphone.
3. Open the *Argo* app. You will see in the smartphone display, into a ray of 10mt, the *x1R Smart* icon/button, identified by its serial number.



x1R Smart serial number

Getting started

4. Present the *Master Card 1* to the reader to enter *Programming Mode*.

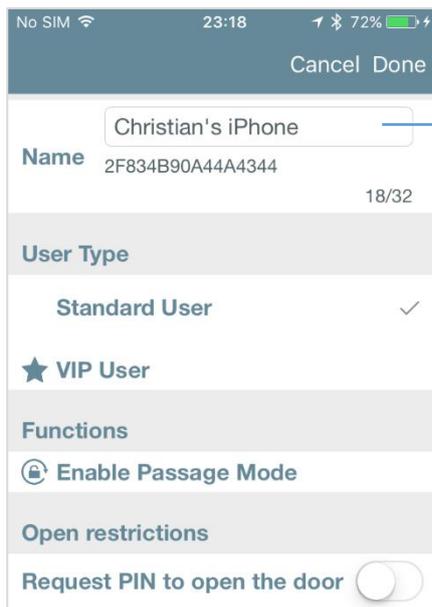


The icon in the app become red. Press it.



To know more about the in-app pairing technology, read the *Argo User Manual* available at: <https://iseo.com>

5. Add your smartphone as credential to open.

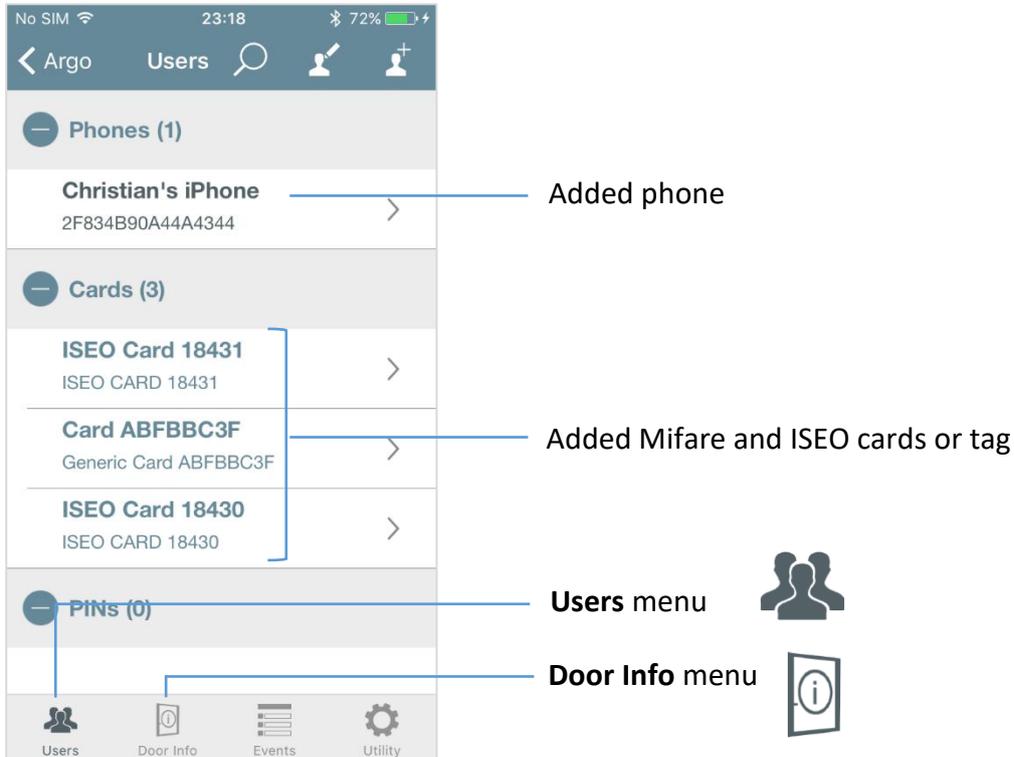


1. Change the name of your phone.

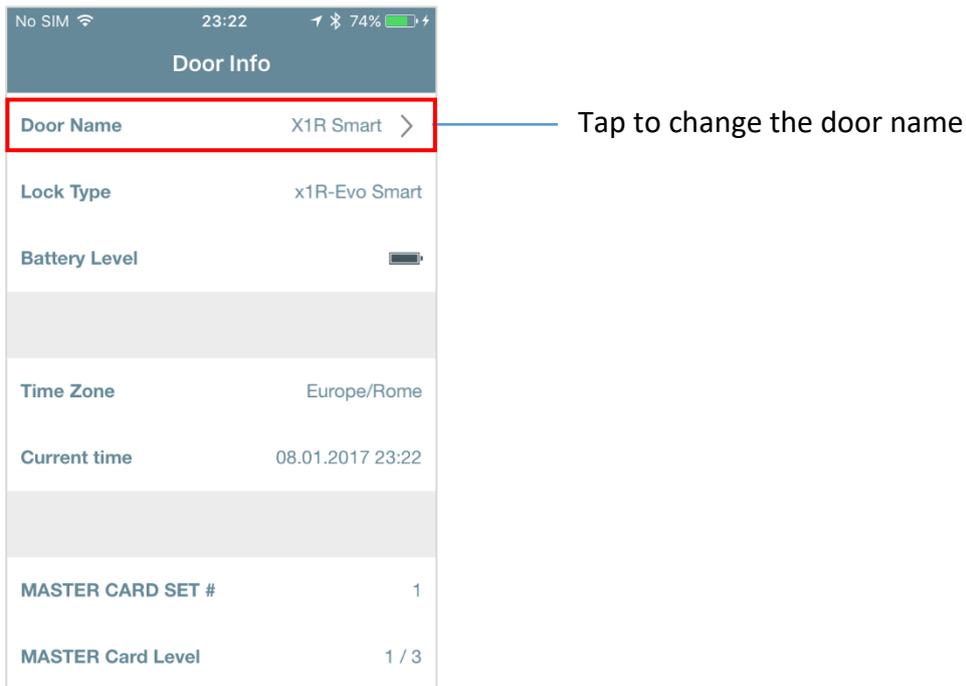
2. Tap **Done** to memorize your phone as opening Credential.

Getting started

- You can simply add users presenting the *Mifare* cards or tag to the reader, and those ones are displayed into the *User List* on your smartphone. The last memorized credential is displayed on the top of the list.

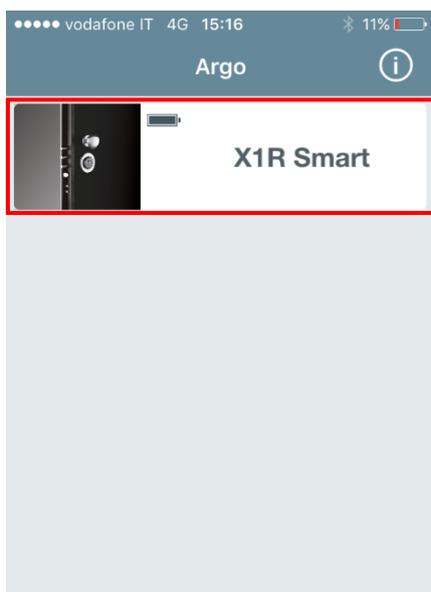


- Press **Door Info** and then **Door Name**, to change the device serial number into a real door name.

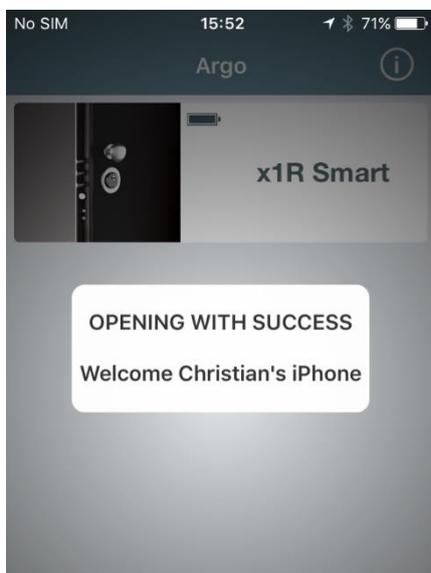


Getting started

8. Go back to *Users menu* and then tap “< **Argo**” icon on the top left corner, to exit *Programming Mode*.
9. Press the *x1R Smart* icon button to open by your phone. Alternatively, read the cards or tags previously memorized.



Press the icon button to open the door

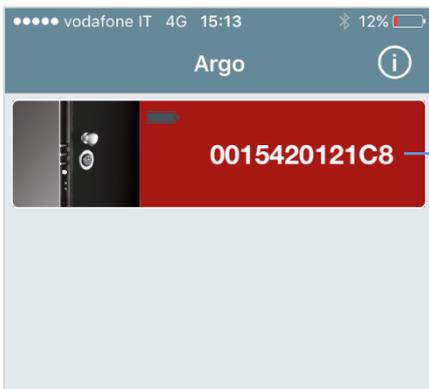


To know more about the *Argo app*, read the *Argo User Manual* available at iseo.com

Adding a PIN code by Argo app

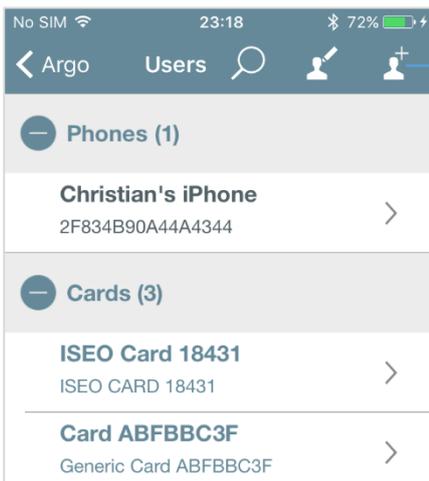


You can memorize one or more PIN code to open, by using the Argo app and the external numeric keypad.

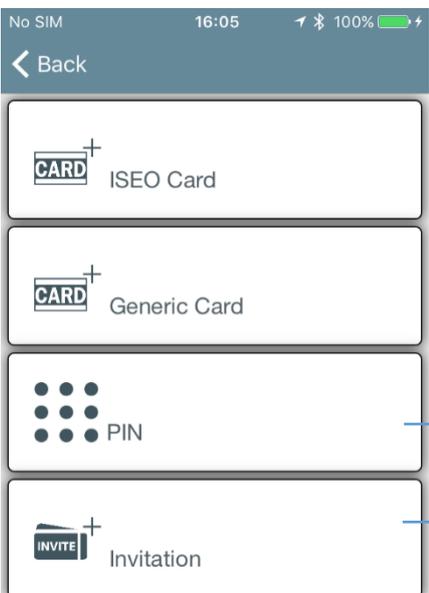


1. Present *Master Card 1* to the reader to enter *Programming Mode*.

The icon in the app become red. Press it.



2. In the Use menu touch the *add user* icon



3. Touch **PIN** button



To know more about *Invitation* refer to the *Argo User Manual* at iseo.com.

Getting started

No SIM 23:22 74%

Cancel Done

Name Christian PIN 13/32

PIN 4/14

PIN Verify 4/14

User Type

Standard User ✓

★ VIP User

Open restrictions

Enable Time Control

4. Write the name related to the PIN code.

5. Touch the PIN field and write the secret PIN code by the phone pop-up keyboard. Confirm the code in the *PIN Verify* field.

6. Select if VIP user. In other words a user that can access with *Block Standard User* function enabled.

7. Touch **Done** to confirm the operation.

No SIM 23:22 74%

< Argo Users

Phones (1)

★ Christian's iPhone
2F834B90A44A4344

Cards (2)

ISEO Card 18431
ISEO CARD 18431

Card ABFBBC3F
Generic Card ABFBBC3F

PINs (1)

Christian PIN

Users Door Info Events Utility

The *PIN code* appears in the *User list*, in the PIN list, with the assigned name.



For security reasons, the PIN code is never visible, neither in the *Users list*, nor in the historical *Events*, nor in the *Dump Information*.

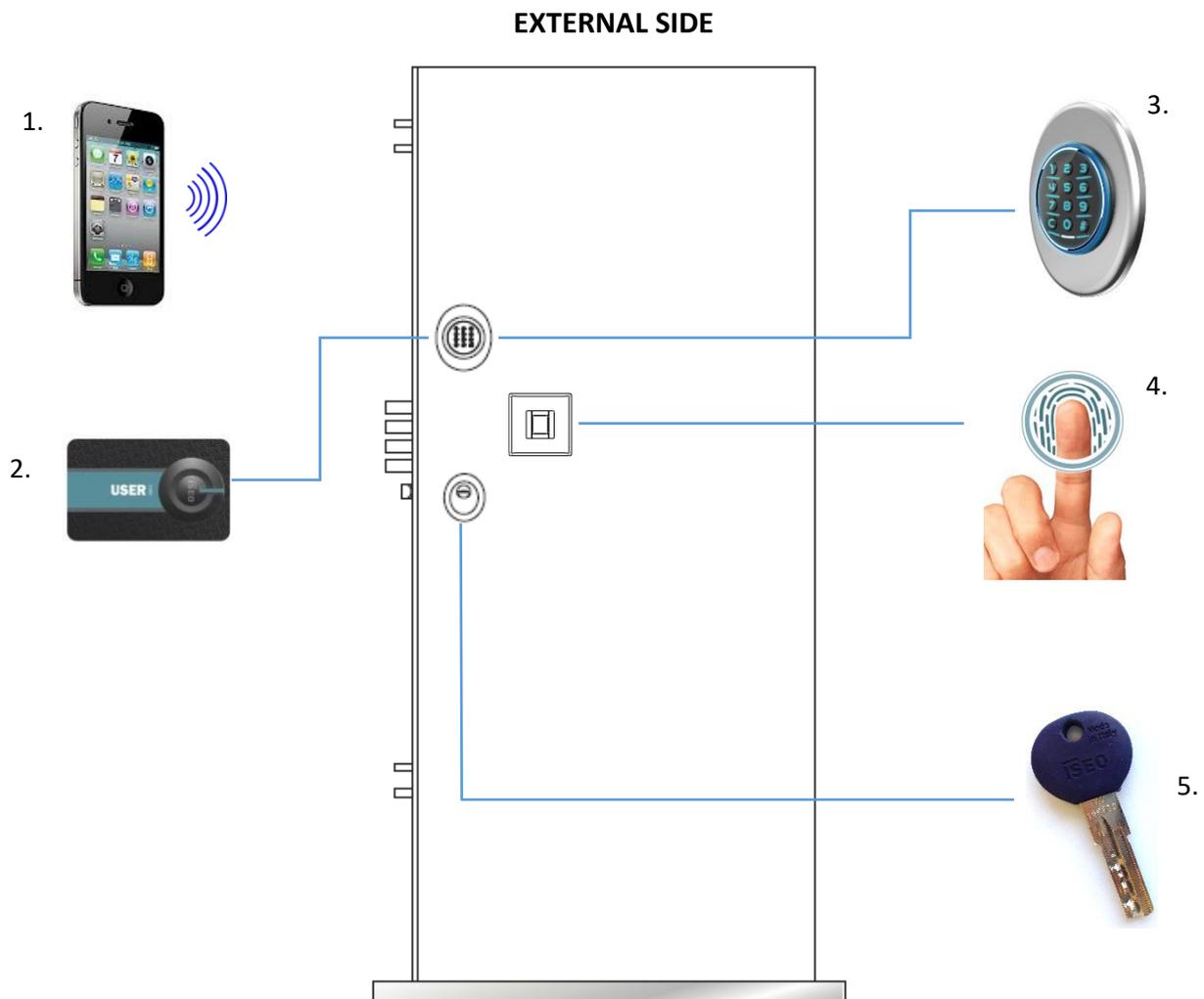
To know more about *VIP* and *Block Standard User* function and *Dump Information*, refer to *Argo User Manual*, available at link: <https://iseo.com>

Basics

How to use x1R Smart

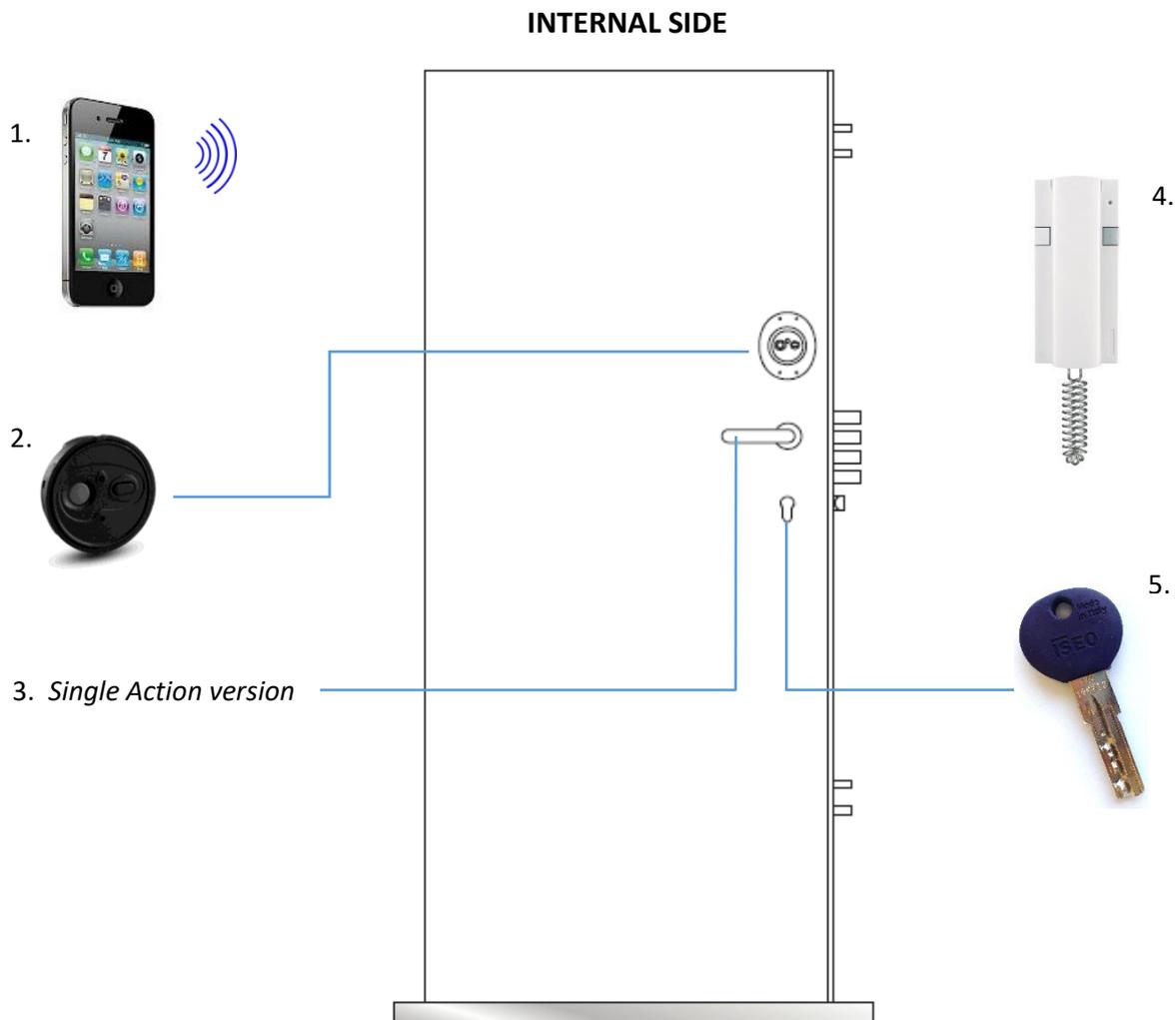
From the door *external side*, in the standard configuration, you can open the door in multiple ways:

1. Using your smartphone and the *Argo* app.
2. Using an authorized *ISEO* or *Mifare* card/tag, reading it by means of the external control module (with keyboard or RFID reader only), or by the hidden external reader.
3. Using a PIN code, previously stored in the *User list*, by means of the external keyboard.
4. Using your fingerprint.
5. Using the mechanical key.



Form the door *internal side*, to open the door, you can:

1. Use your smartphone, by means of the *Argo* app.
2. Press the green key of the internal control module, if present.
3. Open by the internal handle, if *Single Action* version.
4. Use a remote opening command, for example the intercom button, by the *optoisolated* input.
5. Use your finger by x1RSmart fingerprint readers: Embedded or Flat Mount Reader
6. Use the mechanical key.

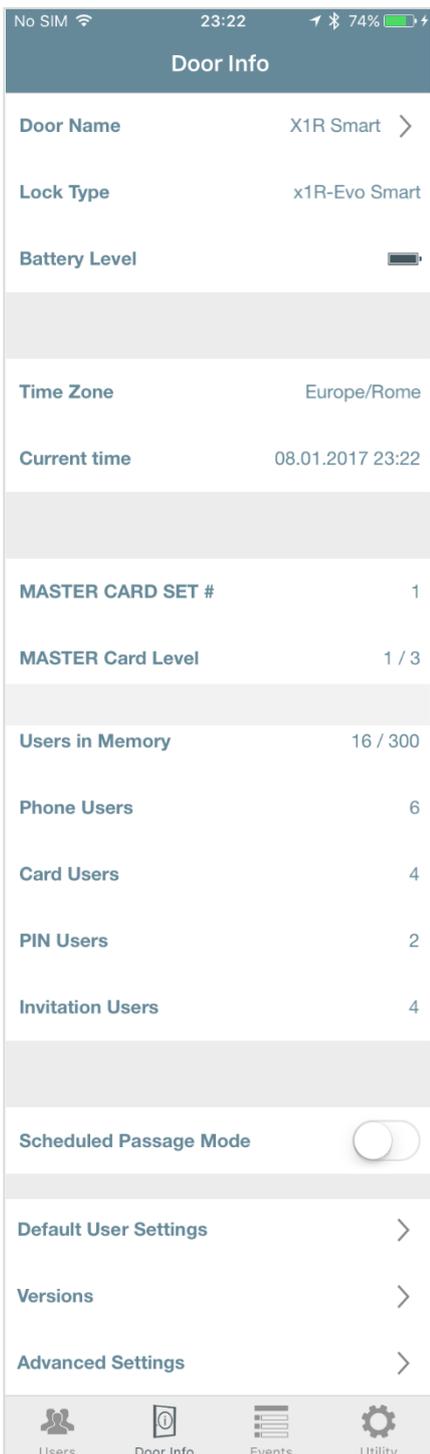


In case of electronic or power supply issues, *x1R Smart* can always be opened, from the internal and the external side, by the mechanical key.

Door Info menu



Open the *Argo* app and then present the *Master Card* to the reader, to enter *Programming Mode*. Then press **Door Info** icon in the bottom bar. In this menu, you can change the door name as previously seen, and you can see some more information about *x1R Smart*.



It shows the battery charge status or, in case of external power supply, the ⚡ icon.

Device date, time and timezone. Everytime you enter *Programming Mode* the phone send time and date to the x1R Smart.

Master Card set and *Master Card* level in use.

It shows the total number of users stored as phone, card/tag, PIN or Invitations. Up to a maximum of 300 users can be stored.

For more information about **Invitation** see the *Argo User Manual* at link: <https://iseo.com>.

Enable the automatic *Passage Mode*. To know more about this function go to *Argo User Manual* available at web link: iseo.com

See *Argo User Manual* on iseo.com

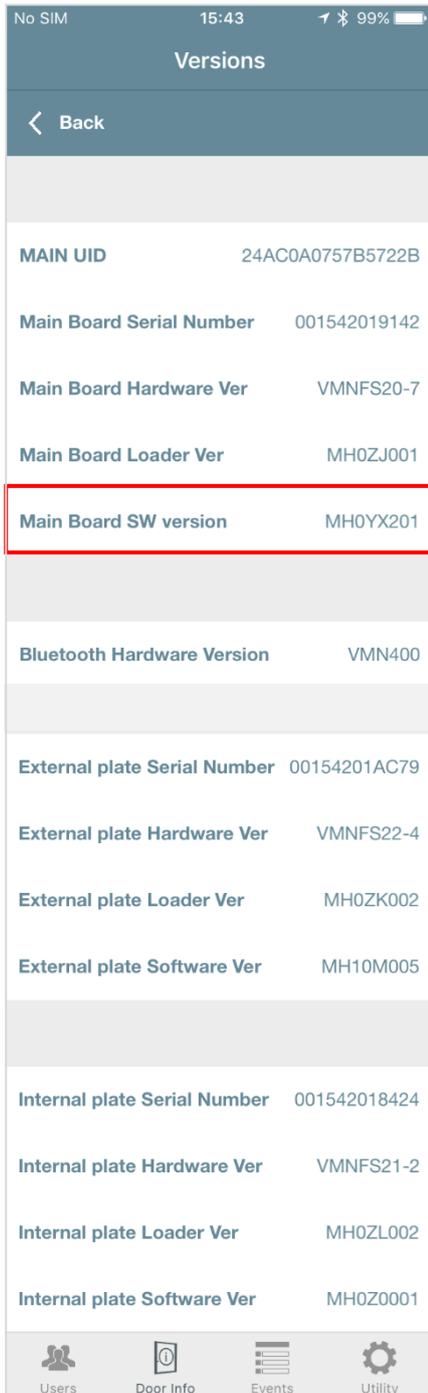
See *Advanced Function* chapter.

Advanced

Versions



Versions menu shows the serial numbers and the software versions of all the electronic boards composing *x1R Smart*.



Main electronic board *Serial number*.

x1R Smart main board software. This is the most important software version, upgradeable via *Argo* app.

Bluetooth radio module software version.

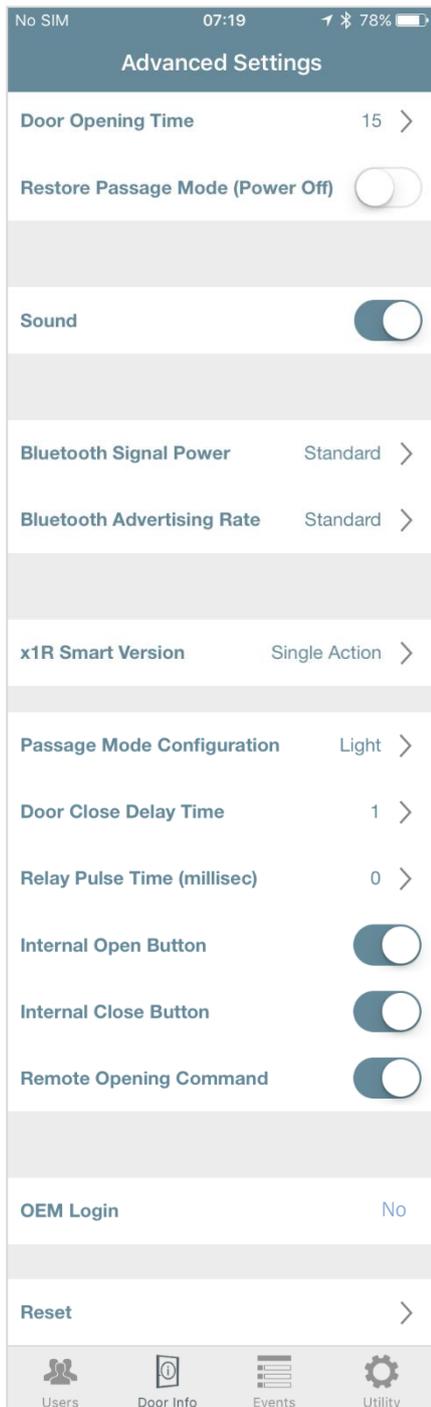
External control module software version.

Internal control module software version.

Advanced settings menu



Inside the *Door Info* menu, tap *Advanced Settings*. You will see the following editable parameters.



It is the time that allows user to open the door following an opening command. If the door is not opened during this time, it will automatically lock.

If this function is enabled, a lock already set in *Passage Mode*, following a power OFF, will restore automatically the *Passage Mode* function when ON again.

You can disable or enable all *x1R Smart* sounds. If disabled the lock will not emit any sound.

For more information, refer to the *Argo User Manual* at link: <https://iseo.com>

This parameter shows the type of lock: *Single Action* or *Standard*. See detailed information in the related paragraph.

You can set the *Passage Mode* in *Light* or *Free*. See detailed information in the related paragraph.

It is the elapsing time between the door closing action and the bolts physical movement starts.

It allows you to differently configure the internal relay behavior. To know more about this function go to *Door status relay* paragraph.

It allows you to enable or disable the internal control module opening and closing buttons and the remote opening command, if present.

It's **Yes** when the lock is used with a 3rd party app (OEM = Original Equipment Manufacturer).

You can choose if restore the default doorlock settings or make a total reset of the lock as received from the factory.

x1R Smart Version

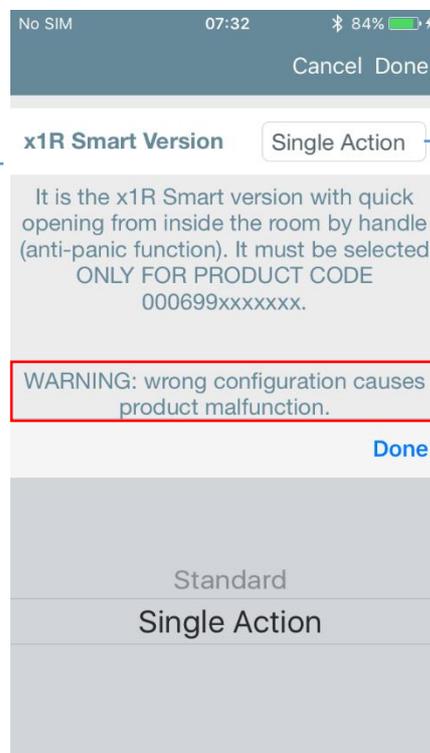
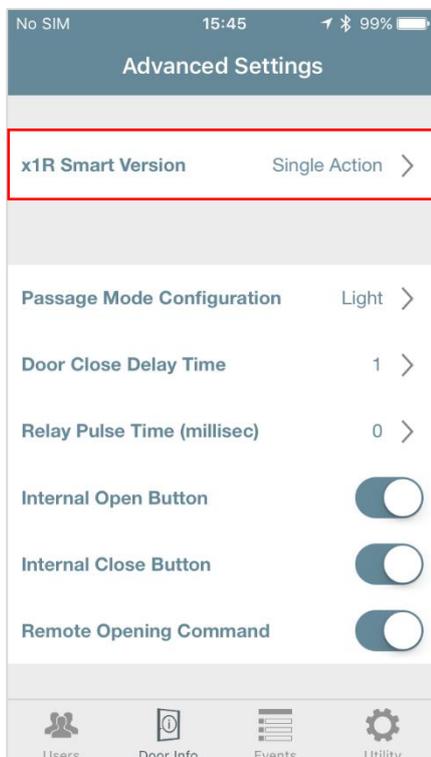
There are two main *x1R Smart* models.

- **Single Action:** that allows the internal handle to retract latch and deadbolts in one unique and fluid movement (also called anti-panic function).
- **Standard:** it's the version without the *Single Action* functionality. To open from the inside it is always necessary the *Internal control module* (opening button).

The *x1R Smart version* is defined also in the *Argo app* by a parameter that must always correspond to the lock code:

- 000699xxxxxxx = Single Action
- 000696xxxxxxx = Standard

This parameter is set from the factory, but there is the possibility to change it, only in the *Advanced Setting menu*, just in case of needs. For example: spare part management, troubleshooting, test.



x1R Smart version must always corresponds to the code reported in the lock case label.

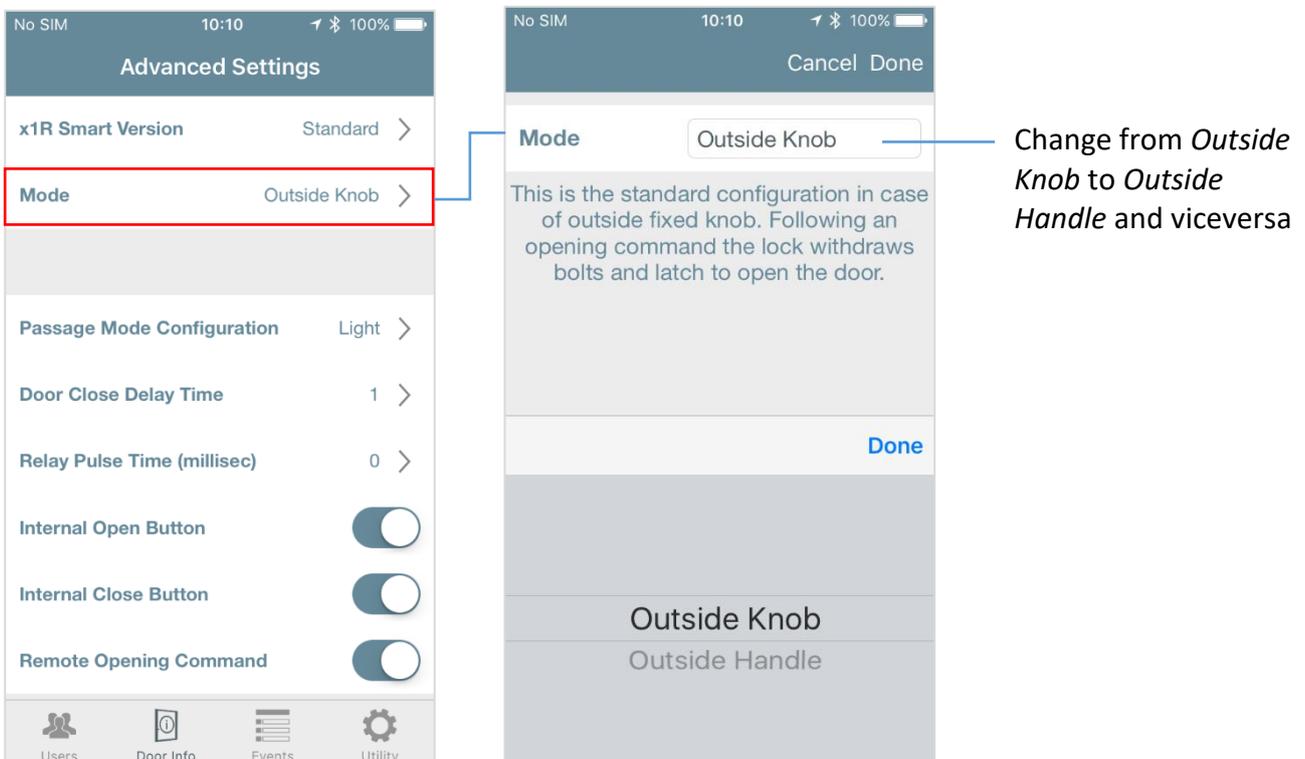


The *x1R Smart Version* setting must always correspond to the *x1R Smart product code* reported in the lock case label.

x1R Standard

If x1R Smart is set in *Standard* version, there is an additional menu, not visible if *Single Action*, that allows to set 2 important options:

- **Outside Knob:** following an opening command the lock withdraws bolts and latch to open the door. This is set as default from the factory.
- **Outside Handle:** following an opening command, the lock withdraws the bolts but not the latch. Lower the outside handle to manually withdraw the latch to fully open the door.



Outside Knob and *Outside Handle* respectively corresponds to the previous Argo *Functional Modes 1* and *2*.

Passage Mode configuration

x1R Smart Passage Mode (also called Office Mode), can be set in 2 different ways:

- **Light:** the lock withdraws the bolts, and keeps closed only by the latch. Opening with authorized credentials withdraws only the latch, allowing energy saving and less mechanical wear. This is set as default from the factory.
- **Free:** the lock withdraws the bolts and holds back the latch. In this mode the door is always opened for any user who wishes to gain access, without the use of authorized credentials.

Light mode (set as default from the factory).

In the electronic motorized locks for armoured doors market, used in offices applications (common doors with high transit of people), the door should not be always opened (*Free*), but closed only with the latch. This state is called “Light”, just because the lock, not closing the bolts, is not completely secure. This solution is however very useful and effective in these contexts since it has the following advantages:

- high battery saving;
- reduced mechanical wear of lock, bolts, rods and deviators;
- higher opening speed;
- less noise during opening and closing movement.

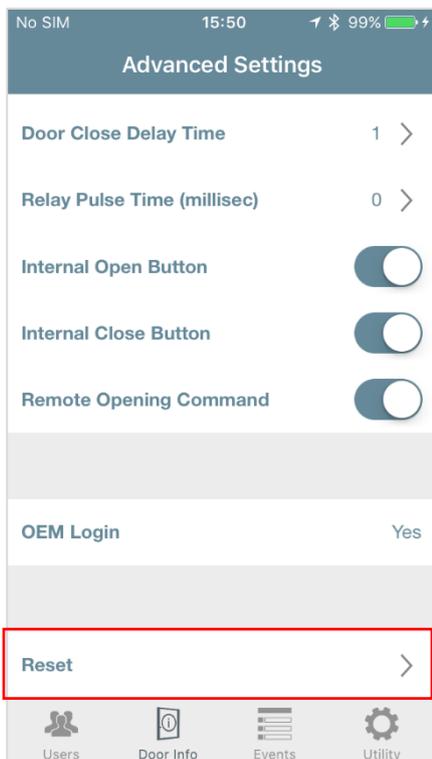
The image displays two screenshots of a mobile application interface. The left screenshot shows the 'Advanced Settings' screen with the 'Passage Mode Configuration' option highlighted in a red box. The right screenshot shows the 'Passage Mode Configuration' screen, where the mode is currently set to 'Light'. A text box on the right side of the right screenshot explains that the mode can be changed from 'Light' to 'Free' and vice versa. The 'Done' button is visible at the bottom of the right screenshot.



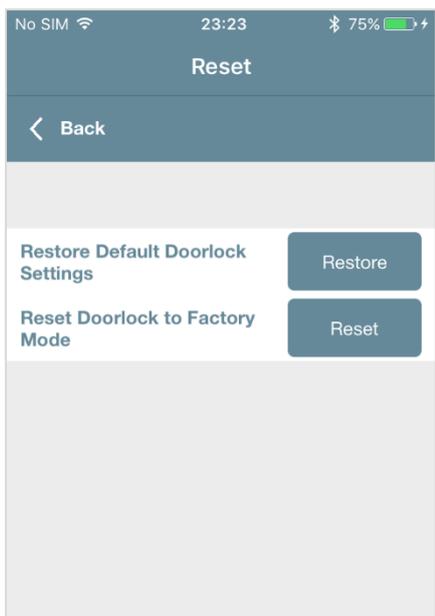
To know more about *Light Mode* and to see some configuration examples, refer to the *Argo User Manual* at paragraph *x1R Smart: Light Mode*.

Reset

In this menu you can find 2 different and powerful kinds of reset:



- **Restore Default Doorlock Settings.**
- **Reset Doorlock to Factory Mode.**



Tap this button to **restore all the device settings** to the default ones. All the editable parameters, like for example *Default User Settings, Door Opening Time, Sound, Bluetooth parameters*, etc...Will change back to the default values, originally set in the *Argo app*.

Tap this button to fully **reset your doorlock**. This function is useful for example, when you need to send back the device for repair and you need to remove the *Master Card* plant code from it.

A warning pop-up will advise you that it will cause the removal of the *Master Card* and the cancellation of the entire user list. All device parameters will come back to *Factory mode*.

Door status relay



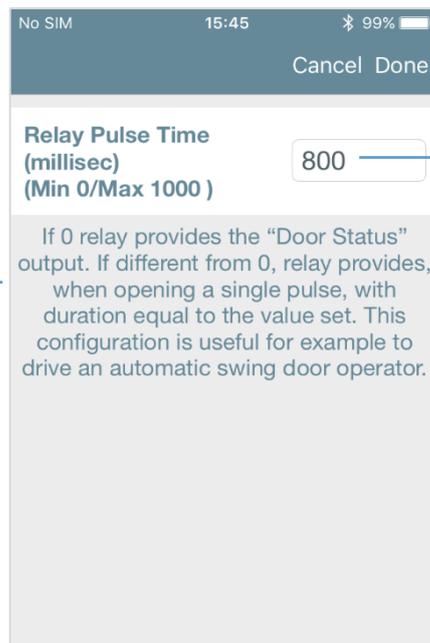
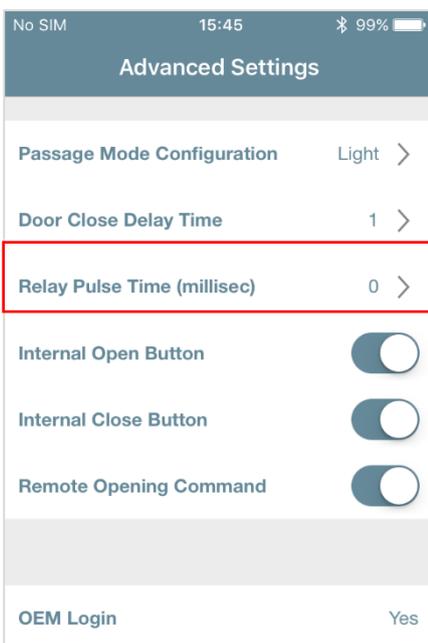
The output relay, embedded into the *x1R Smart* electronic board, allows you to get as standard output the *Door status*: open or closed. When the door is closed and safe, the relay is not active. When the door opens the relay become active, changing its internal state: the normally closed contact (NC), opens, while the normally open (NO), closes. This state can be used for example into an home automation system, to switch on the lights when the door opens, or to switch on an alarm system when door closes.



The relay signal, when opening, changes state at the first bolts movement, whether they are driven by electronic command, internal handle or mechanical key. This is for safety reasons, in order to activate an alarm, if present, in case of tampering. When closing instead, the relay changes state when the door is safe, that means with latch and bolts fully extended.

x1R Smart output relay behavior, can be se in 2 different ways by the *Argo* app:

- **Door status:** the output relay changes every time door opens and closes.
- **Single pulse:** the output relay provides, when opening, a *single pulse* with duration equal to the value set in milliseconds in the *Argo* app. The maximum programmable value is 1000msec (1sec.).



Set the Relay pulse time.

If the value is 0, the output relay provides the *Door status*.

If the value is not 0, the output relay provides a *single pulse* of the duration of the set value (i.e.: 800 means 0,8 sec.).

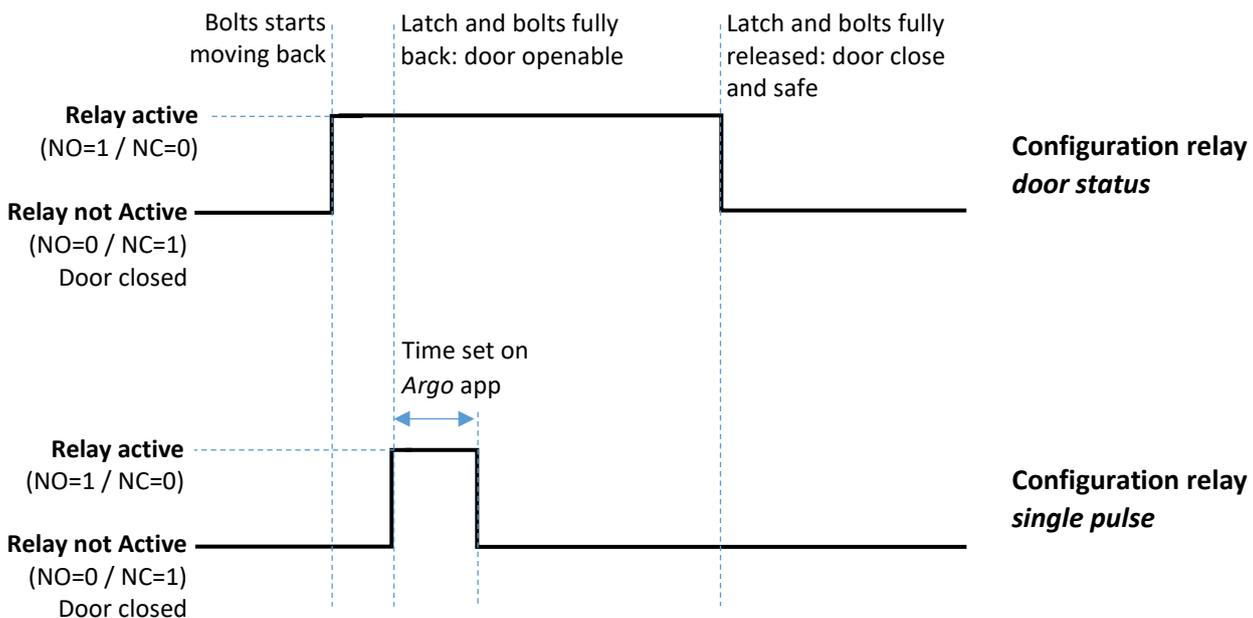
Single pulse

This solution is suitable for example, to drive an automatic swing door operator. In this case, in fact, it is necessary to send a *single pulse* to start the swing door operator. And this pulse has to be sent only after *x1RSmart* has completely withdrawn bolts and latch, so that the door is fully “free” to be automatically opened.



The relay “change of state” that generates the *single pulse*, occurs only when bolts and latch are completely withdrawn. This to be certain that door is fully “free” to be open when the swing door operator starts.

Below you can find two diagrams that summarize the relay functioning on both configuration:



For the relay technical data go to paragraph: *Technical Data*.

The NO contact behavior follows the relay status (active and not active).

To get an example of relay connection wiring diagram, go to paragraph: *Example of 8 Pins Multifunction Cable wiring scheme*.

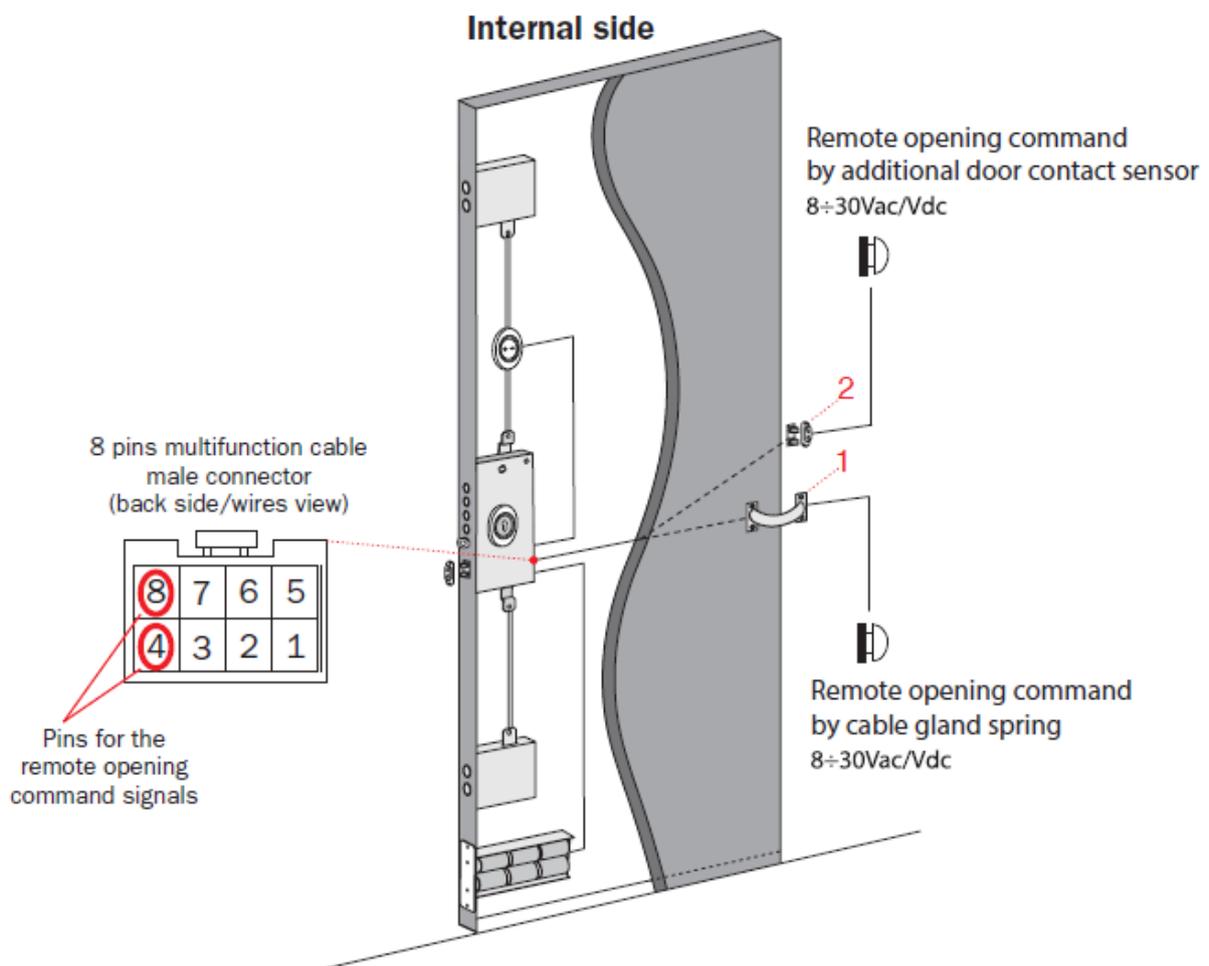
The relay behavior remains the same even with *Light mode* enabled.

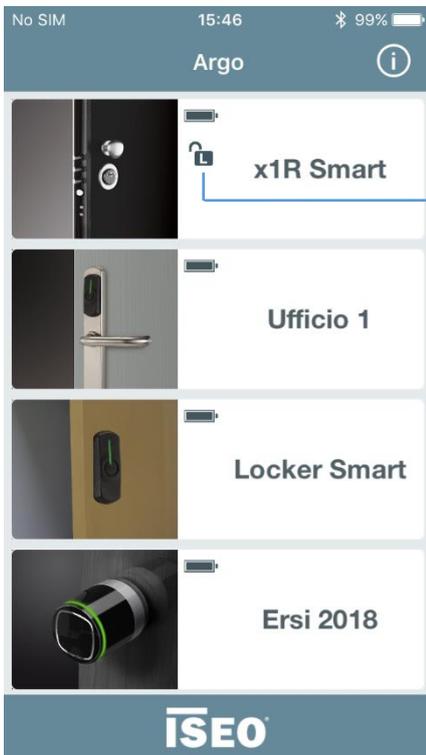
Remote opening command

The *x1RSmart* electronic motorized lock, provides an *optoisolated input* embedded into the electronic board. This input allows to connect a *remote opening command*, that can be, for example, the intercom button or a push button located in the reception or concierge table. This command can also be sent by an external control unit, belonging to an home automation system, alarm system or centralized opening system.

The *remote opening command* is connected to the *optoisolated input*, into the *8 Poles Multifunction Cable* connector, pin 4 and 8 (see paragraph *Electrical Connection*), and can be done:

1. By *cable gland spring*.
2. By an additional *Door contact sensor* (to be ordered separately), placed in the hinge side of the door.





Keeping pressed the *remote opening button*, the lock opens and keeps the latch back. After 7 sec. the *Argo* app will show the *Passage Mode* icon (*Light mode* as standard).

As soon as the *remote opening button* is released the bolts closes and the *Passage Mode* icon disappear from the *Argo* user interface.



The *remote opening command* must be always powered (8-30Vdc/ac).



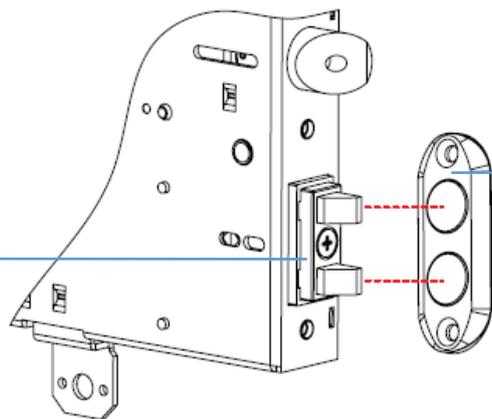
The remote opening is recorded into the events log.

To get an example of the *remote opening command* wiring diagram, go to paragraph: *Electrical connection* and *Example of 8 Pins Multifunction Cable wiring scheme*.

Door sensor contact

The *Door sensor contact* allows *x1R Smart* to define if the door is open or ajar. It is an electronic device composed by 2 contacts installed in the fixed frame of the door, in the lock side. When the door is ajar the 2 contacts touch other 2 contacts, with adjustable spring, located inside the *x1R Smart*, in order to indicate to the electronic of the lock, when door is actually ajar.

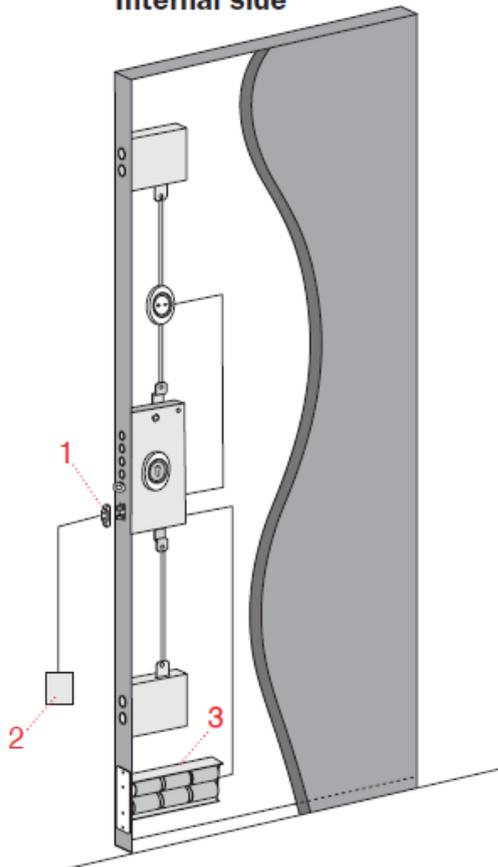
Door sensor contact (male), with adjustable spring contacts, installed into the lock.



Door sensor contact (female).

To be installed in the fixed door frame, in the lock side.

Internal side



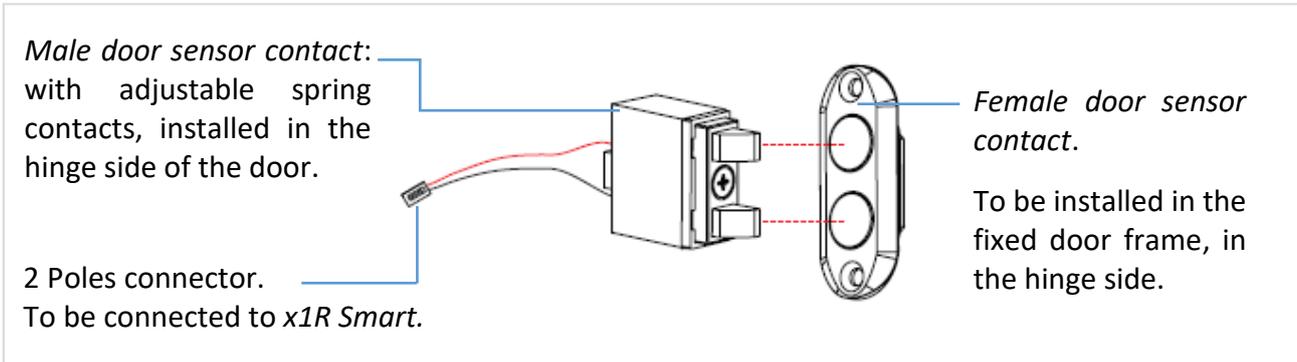
1. *Female Door sensor contact* installed in the fixed frame of the door, in the lock side, to get the door “ajar status”.

2. Power supply (8-30Vdc - optional). It is always possible to power the lock through the *female Door sensor contact*.

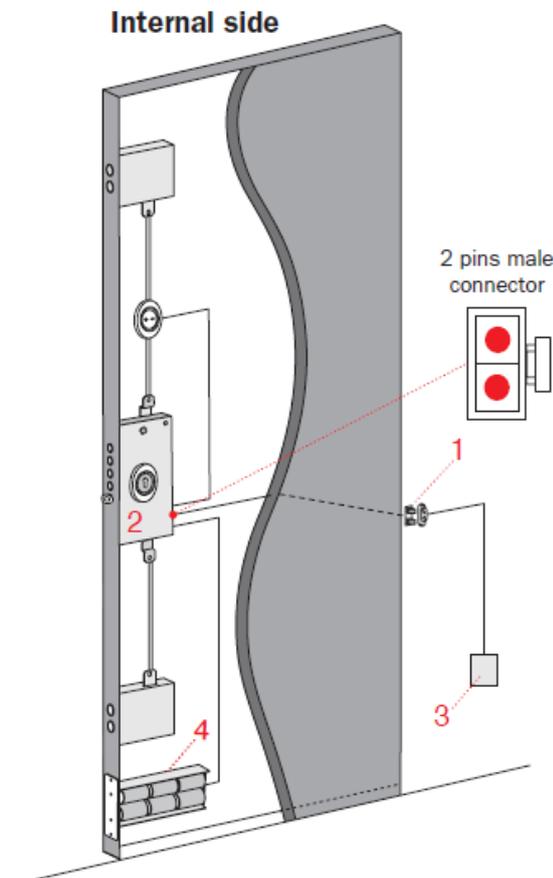
3. Alkaline batteries (6x1,5V type “D”). Mandatory in case of power supply by *door sensor contact*.

Door sensor contact in the hinge side of the door

It is possible to install the *female Door sensor contact* also in the hinge side of the door frame. To do that it is necessary to order a specific *x1R Smart* product code without the *male Door sensor contact* embedded in the lock (not standard solution). This code includes an additional *male Door sensor contact*, with adjustable spring contacts, to be installed in the hinge side of the door and to be connected to a 2 pin dedicated connector, placed into the *x1R Smart* electronic board (see *Electrical connection* paragraph).



With the *Door sensor contact* in the “hinge side of the door solution”, pay attention to properly regulate the contacts, in order to avoid that lock bolts starts when the door is yet not fully closed (ajar).



1. *Female Door sensor contact* to get the door “ajar status”. It is installed in the hinge side of the door. Connect the *male door sensor contact* to the 2 poles connector, available in back of the lock.
2. *x1R Smart* special version (not standard), without the *male Door sensor contact* embedded in the lock.
3. Power supply (8-30Vdc – optional). It is always possible to power the lock by the *female Door sensor contact*, installed in the hinge side door.
4. Alkaline batteries (6x1,5V type “D”). Mandatory in case of power supply by *door sensor contact*.

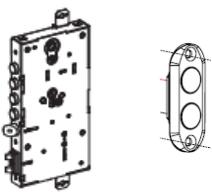
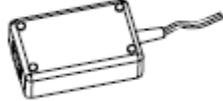
x1R Smart as actuator

The *x1R Smart* electronic motorized lock, can be also used as a simple *actuator*. In other words as a device that act an opening or closing action, following an external control signal (*remote opening command*).

In this configuration the *x1R Smart* operates with no *External control module* (*Bluetooth, RFID reader and keyboard*) connected on it, and does not need to be initialized. The *Internal control module* instead can be used, to allow opening from the inside. Power supply can be from mains (by cable gland spring), only by batteries, or both solution at the same time (back-up batteries). As consequence, in this configuration, the next *system components* are not more used:

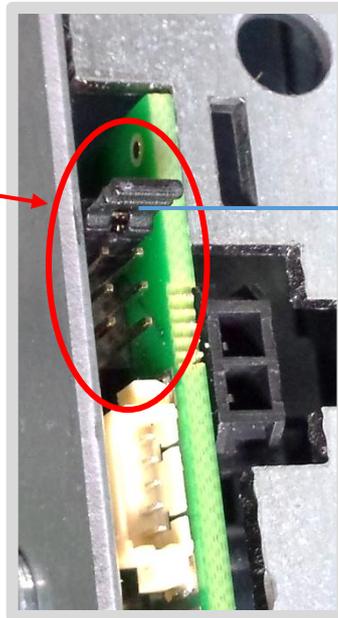
- *External control module* with or without keyboard, or hidden external control module: both includes *RFID reader* and *Bluetooth* radio module.
- *Master card*.
- *RFID credential*: such as *ISEO* or *Mifare* cards and tags.
- The smartphone and as consequence the *Argo* app.

x1R Smart system components as actuator:

Components	Description	Features
	x1R electronic lock for security doors and door contacts sensor.	<ul style="list-style-type: none"> ▪ Application or rim/mortice version ▪ <i>Standard</i> or <i>Single Action</i> version ▪ Door sensor contact supplied with the lock
	Battery holder complete with power supply cable and set of batteries.	<ul style="list-style-type: none"> ▪ 6 x 1,5V Alkaline Batteries "D" Type
	DC Power supply unit	<ul style="list-style-type: none"> ▪ Power supply unit 8-30Vdc, P = 30W
	Internal control module with open button.	<ul style="list-style-type: none"> ▪ Door opening button ▪ Not necessary if <i>Single Action</i> ▪ Additional button for future developments

Enable Actuator mode

To use the *x1R Smart* as actuator it is necessary to fit the *jumper*, available in the package, in the connector named *JP1*, as shown in the following picture.

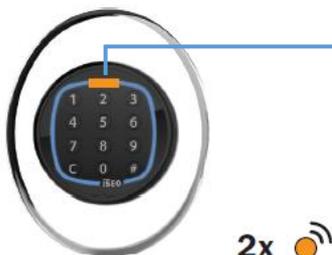


To use the lock as *actuator*, fit the *jumper* in the first top position of *JP1* connector (pins 1 and 2).

This operation disables the lock communication to the *External control module* and allows to use the lock not initialized without the opening and closing delay and related signal (see paragraph *device initialization*). Removing the jumper and power cycling the lock (Power ON reset), the lock comes back to the standard version (Actuator mode disabled).



After inserting or removing the *jumper*, switch off and on the lock to make the changes effective.



A NOT initialized *x1R Smart*, WITHOUT *JP1 jumper*, emits 2 acoustic signals together with 2 orange signals, before each opening and closing operation.

Actuator mode and Argo

When the *x1R Smart* is configured as *actuator*, it is not possible to interact with the *Argo* app anymore, but all settings previously done by *Argo* will keep memorized even in *Actuator mode* (excluded the *Passage Mode* function*). For example configuring by *Argo* (without jumper and with the *external control module* connected):

- a different opening time
- the relay pulse time feature

All these setting will remain unchanged in the *Actuator mode* (with the jumper and without the *external control module* connected). Of course they cannot longer be modified, since the *external control module* (which includes the *Bluetooth* radio), is no more present.

* In actuator mode the *Passage Mode* function is only available in *FREE* mode (see paragraph *Passage Mode configuration*).



In *Actuator mode*, without the *Argo app*, some important features are definitively lost:

- device software upgrade
- events log reading

Actuator mode and door status relay

In the *Actuator mode*, the relay behaviour described at paragraph *Door status relay*, is exactly the same. It remains as provided from the factory or as configured by *Argo*, before enabling the *Actuator mode*, fitting the jumper. As consequence even in *Actuator mode* the relay can provide as output:

- Door status (set as default from the factory)
- Single pulse: if previously configured by *Argo* (value different from 0)

Fingerprint reader for x1R Smart

Argo app fully integrates the fingerprint biometric authentication with *x1R Smart*. By *Argo* you can add users' fingerprints, manage the user list and even upgrade the fingerprint reader software.

The unique features are:

- Directly connected to x1R Smart electronic board.
- Fully integrated with *Argo app*.
- Battery operated.
- Software upgrade by *Argo app*.



The Fingerprint reader exclusively works with x1R Smart.

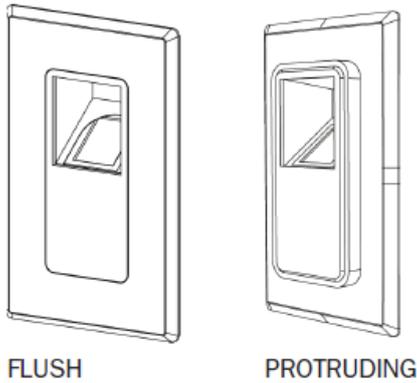
The Fingerprint reader module does not have Bluetooth inside, so it always requires in addition the

External Control Module (RFID Reader, Keypad RFID Reader, Hidden RFID Reader).

The Fingerprint reader is available in 2 different models to select upon installations requirements:

- EMBEDDED READER
- SURFACE MOUNTED READER.

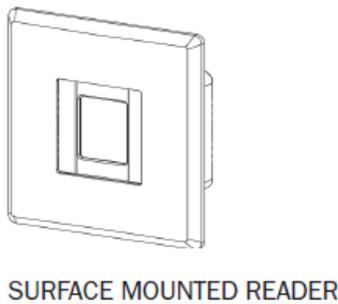
1.



EMBEDDED READER

The *x1R Smart* embedded reader has the optical reader placed at 45° allowing a very convenient user experience. The embedded reader is available in two different models allowing the following mounting options: FLUSH and PROTRUDING.

2.



SURFACE MOUNTED READER

The surface mounted reader is applied on the door surface with minimal insertion on the outside door panel without impact on the door structure.



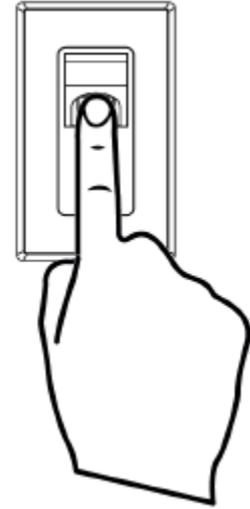
For *Fingerprint reader* dimensions, installation examples and electrical connection, read the *x1R Smart Finger Reader Installation Guide*, available at iseo.com.

For technical information about fingerprint technology, biometric template and identification process and for the commercial literatures, read the *Fingerprint* brochure, available at iseo.com.

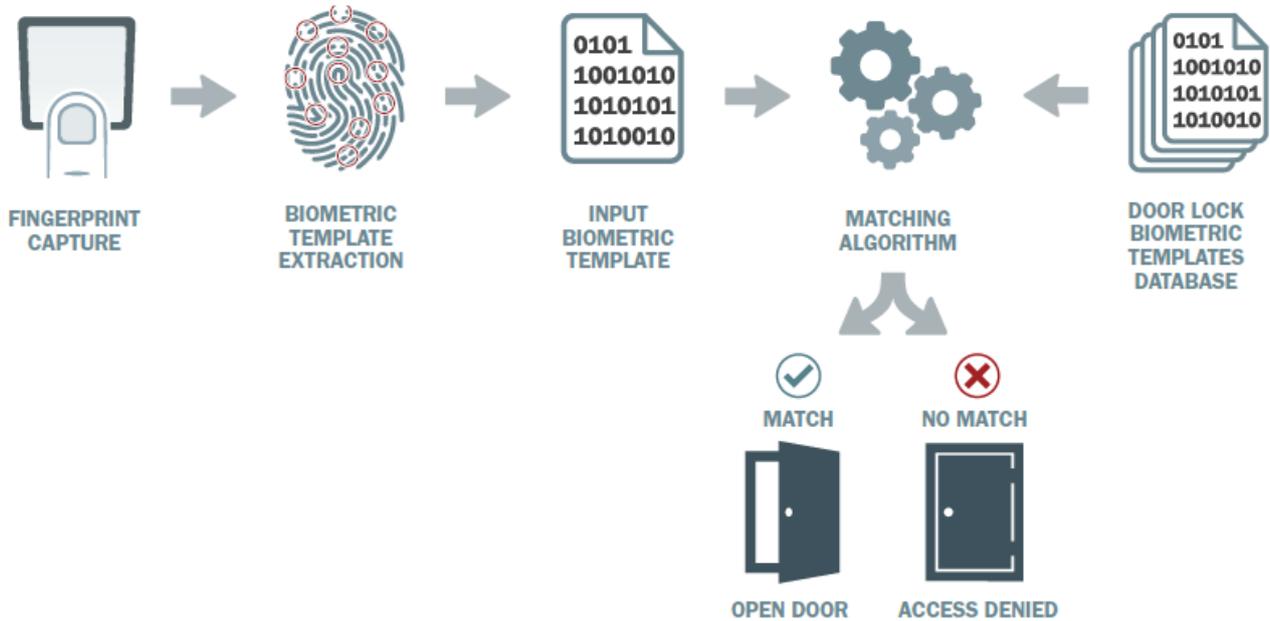
Principle of working

When the user place his finger in the reader, to open the x1R Smart, a matching algorithm compares the user's biometric template*, extracted from the captured image, with all the templates previously stored in the door lock's user list, identifying the right one.

The entire matching process takes less than 1 second.



*The biometric template is a digital reference stored in the door lock memory, created from the minutiae map. It is used for future comparison with other biometric templates of fingerprints presented at the reader. To know more about biometric template and minutiae map, read the *Fingerprint* brochure, available at iseo.com.

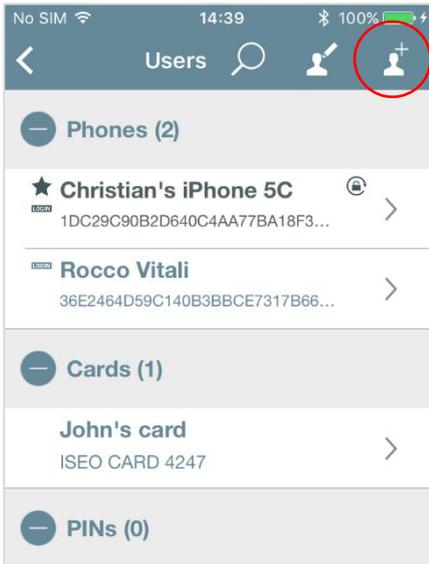


During the entire fingerprint identification process no fingerprint images are stored on the door lock, and a fingerprint image cannot be recreated from the biometric template.

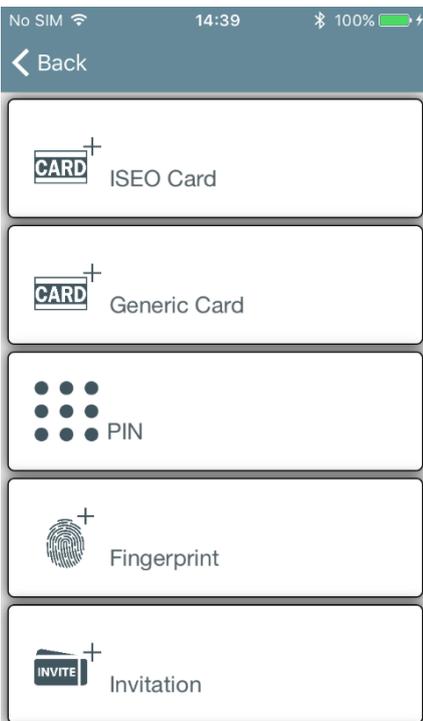
Add fingerprint users



To add a fingerprint open the *Argo app*, enter *Programming Mode* and follow the next steps.



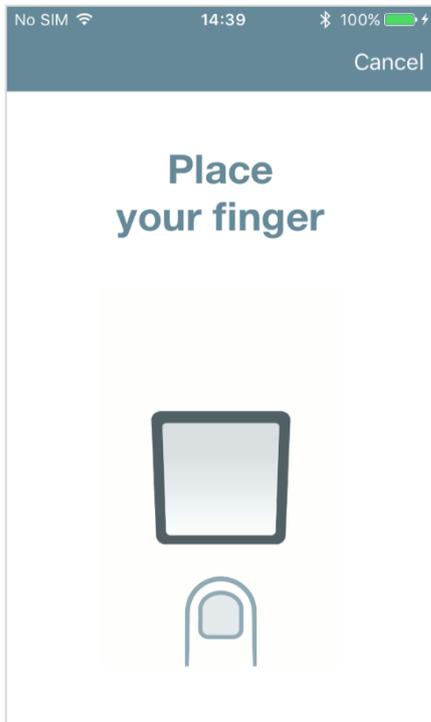
1. Touch add user icon



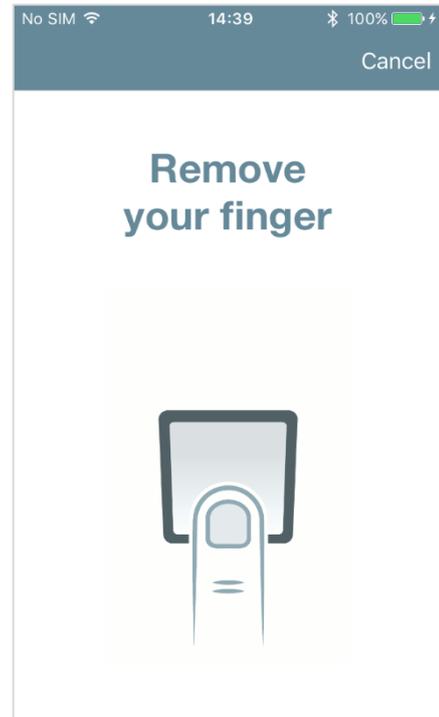
2. Touch **Fingerprint**

3. Follow the instruction on the phone display that guides you through the correct enrolling process.

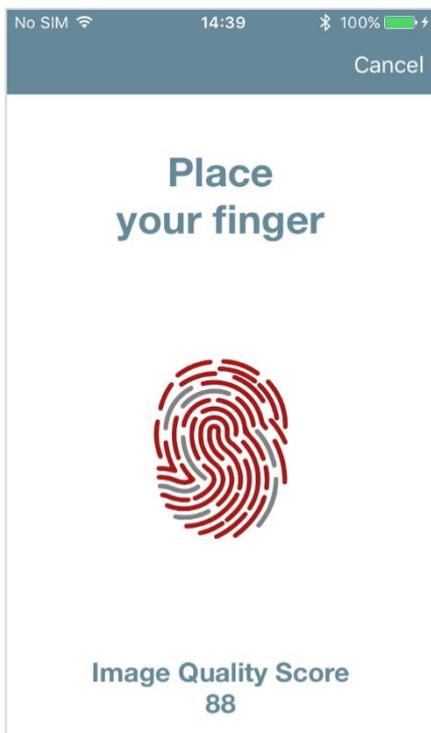
1



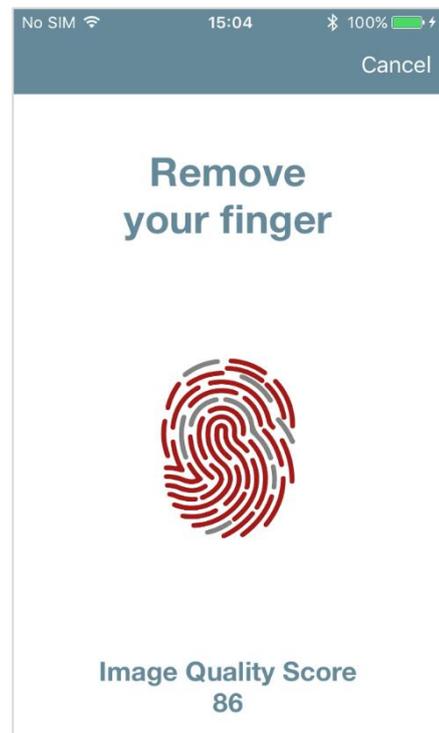
2



3



4



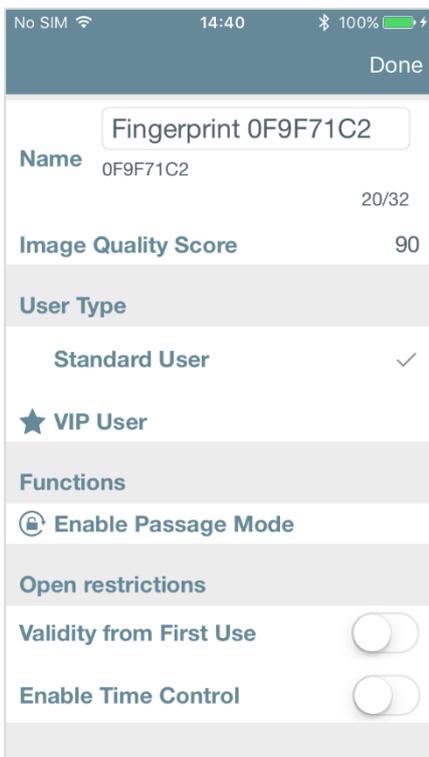
To know more about Image Quality Score go to the related paragraph.

4. Continue with the enrolment process until you get the next message:



6. The fingerprint enrolling process has ended.

5. Touch **OK**.

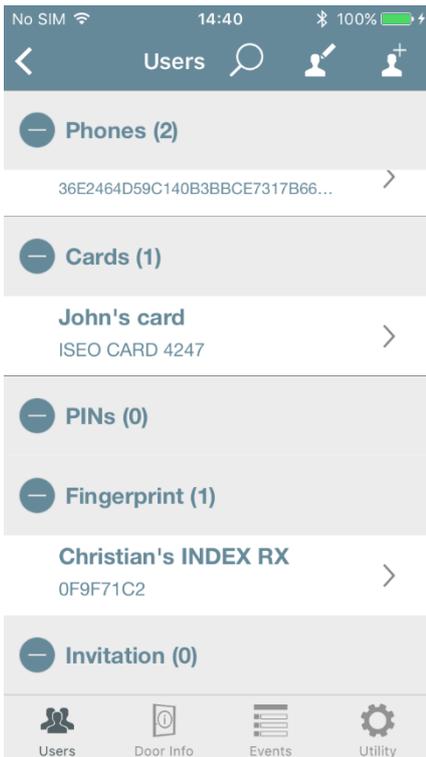


7. Write the fingerprint **Name**, set additional functions if required (VIP User, Open restrictions), then touch **Done**.



This is the best Image Quality Score obtained from the entire enroll process. It is permanently assigned to the user biometric template and it is the reference for the subsequent user's identification process. Higher is the value, better will be the fingerprint reading (lower reading errors). To know more about quality score go to Image quality score paragraph.

Advanced



8. The fingerprint is now added to the *User List* and can be used to open the door.

Fingerprint events

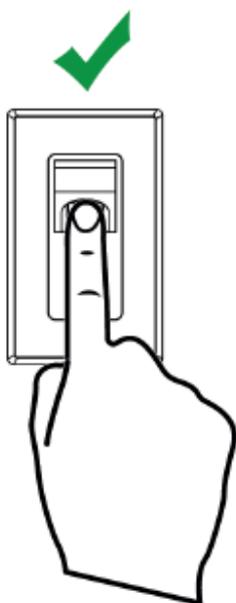
In the **Events** list we can see all the user's fingerprints transaction: both authorized and denied events.

Date/Time	User	Result
3/4/2019 2:47:43 PM	Jennifer's INDEX SX Fingerprint 5FE59DFB	Door Open
3/4/2019 2:47:37 PM	Fingerprint	Not in Memory
3/4/2019 2:47:34 PM	Fingerprint	Not in Memory
3/4/2019 2:47:31 PM	Auto Close	Door Close
3/4/2019 2:47:28 PM	Christian's INDEX RX Fingerprint 0F9F71C2	Door Open
3/4/2019 2:47:19 PM	Christian's iPhone 5C 1DC2909B2D640C4AA77BA18F3C656E9	Block Standard User OFF
3/4/2019 2:47:16 PM	Auto Close	Door Close
3/4/2019 2:47:13 PM	Mark's MIDDLE RX Fingerprint 42F88520	Door Open
3/4/2019 2:47:06 PM	Christian's INDEX RX Fingerprint 0F9F71C2	Blocked User
3/4/2019	Jennifer's INDEX SX	

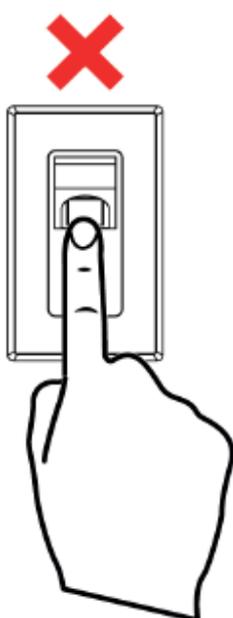
- Not in Memory** events can be caused by:
- finger not present in the User List.
 - Finger not correctly identified (reading error).

CORRECT AND INCORRECT FINGER POSITION

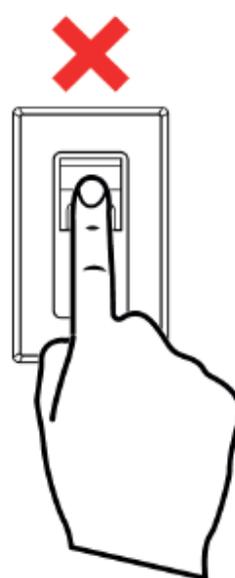
See in the next pictures the correct and some incorrect finger position examples.



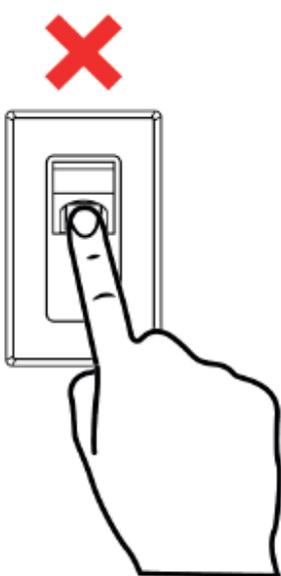
Correct position



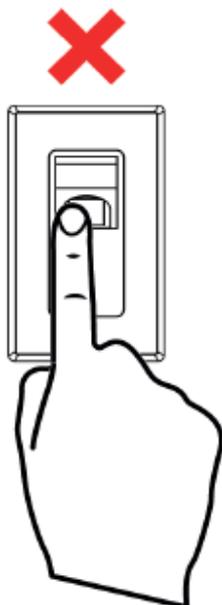
Too low



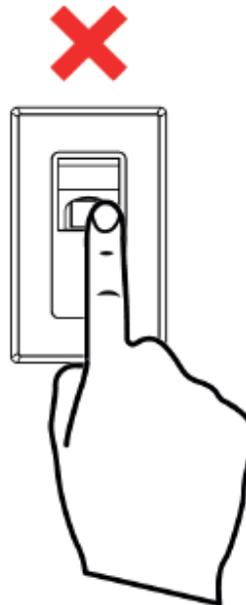
Too high



Not straight



Too much on the left side



Too much on the right side

Multi-Reader for x1R Smart

The *Multi-Reader for x1R Smart* it is an accessory that allows to manage many opening credentials in one unique device. It's possible to open the door by:



- Phone
- RFID credentials
- PIN code
- Fingerprint

The end user can always choose the most convenient and comfortable way to open, all by a single device.

The main *Multi-Reader* features are:

- Directly connected to the x1R Smart electronic board without the need of additional interface board.
- Fully integrated with the Argo app, in order to manage all the credentials in a unique and consistent way following the standard of the Argo app.
- Works with both x1R Smart powered by external power supply or by batteries, keeping in the latter case the same standard performance related to x1R Smart battery life.
- Automatic on-site software upgrade, by Argo app.
- Encrypted communication following the higher standard of security.
- Switch-on the keyboard by the “Wake on Hand” technology, a unique and simple gesture that guarantee the maximum energy saving.
- Large backlit capacitive keyboard with multicolour LED signalling and buzzer for acoustic signals.
- Suitable for outdoors installation (IPx5)



The *Multi-Reader* exclusively works with x1R Smart.

Advanced

The *Multi-Reader* is available in 2 versions:

- Multi-Reader (only keyboard version)
- Multi-Reader with fingerprint



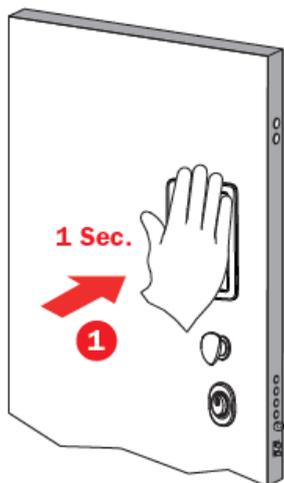
Only keyboard



With fingerprint reader

“Wake on Hand” technology

The “Wake on Hand” technology allows to switch-on the *Multi-Reader* keyboard by a simple and unique gesture, in order to insert a PIN code to access the door. This technology moreover allows to optimize the energy saving, keeping the capacitive keyboard always and completely off when not used.



“Wake on Hand” technology



For the *Multi-Reader* size, installation examples and electrical connection, read *x1R Smart Multi-Reader Installation Guide*. For commercial information read the *Multi-Reader Brochure*.

Both documents are available and downloadable from the *iseo.com* website.

Add a card

To add an RFID card to the *Multi-Reader* as credential to open, proceed as explained at paragraph *Adding credential by Argo app*. Present the card directly over the *Multi-Reader*.



Add a PIN code

To add a PIN code to the *Multi-Reader* as credential to open, proceed as explained at paragraph *Adding a PIN code by Argo app*. Digit the PIN code directly over the *Multi-Reader*. The keyboard when off need to be switched-on by the hand gesture (see *Wake on Hand tecnology*).



Add a fingerprint

(only *Multi-Reader* with *fingerprint* version)

To add a fingerprint to the *Multi-Reader* as credential to open, proceed as explained at paragraph *Fingerprint reader for x1R Smart*, in the section *Add fingerprint users*. The fingerprint enrolling procedure and use works in the same way of the standard fingerprint reader, keeping in this way the same user experience.



More advanced function about Argo app

To know more about *Fingerprint reader* and other advanced functions about *Argo* app, read the *Argo User Manual* available at: <https://iseo.com>

You can find explained the next important functions:

- Fingerprint reader image quality score and advanced settings.
- Battery levels
- Software upgrade
- Updating of Master Card level
- Master Cards set replacement and updating of system code.
- Operations summary without Argo app.
- Argo app error messages.
- Lights and acoustic signals.

...And much more.



Maintenance

Battery replacement

At every opening of *x1R Smart* by your smartphone and the *Argo app*, the button shows the battery level icon.



Battery level icon: there are 4 battery levels.

The battery level is also shown in the *Door Info* menu.

-  **Battery OK:** **green light** flashes on the device during opening time (standard opening signal).
-  **Battery Low:** warning message in the app and **orange light** flashes during opening time.
-  **Battery Very Low:** warning message in the app and **red light** flashes for 3 seconds before the opening signal (opening delayed).
-  **Battery Empty:** warning message in the app and **red light** illuminates for 3 seconds without opening.

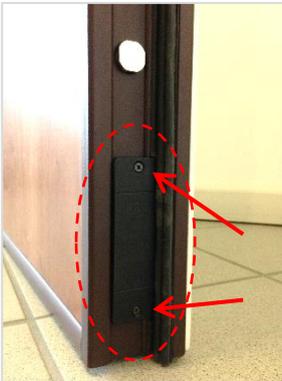


At the first battery low signal, replace the battery as soon as possible.



Battery replacement does not affect *Events* and data stored in the *Users list*.

To replace the batteries proceed as follows:

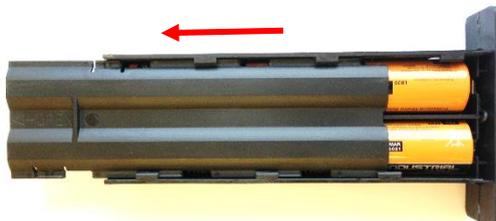


1. Find the battery pack position. This depends on door manufacturer. Usually it is installed in the front side of the door, up or down. In other cases, it can be placed in the top side of the door or even in the hinge side.

2. Remove the 2 cross screw that secure the battery pack.



3. Remove the battery pack disconnecting the 2 poles connector.



4. Remove the battery pack cover, gently pressing on it and sliding outwards at the same time.



5. Replace all batteries with the right model: 6x1,5V alkaline batteries "D" type.



Use only batteries of the right model and install it with correct polarity. Take care the battery holder is clean and does not present any oxide or acid signs. In this case carefully clean it by ethyl alcohol or replace it by a new spare part. Failure to do that you can compromise the lock functioning or damage the electronics boards.



Battery replacement does not affect the data stored in the *User list*.

Notes on battery usage by x1R Smart

When *x1R Smart* is not powered only by batteries, but also by external power supply unit, by cable gland spring or door sensor contacts, the batteries level behavior changes depending on configuration type (see paragraph *Options and versions*). To know in advance when battery need to be replaced, in order to avoid malfunction issues due to low or expired batteries, read the next information related to the *3 main configurations*.

A. Alkaline batteries powered

To know the battery charge, look at the *battery level* icon showed in the *Argo* app home screen, in the opening button. Alternatively check it in in the *Door Info* menu.

B. DC power supply via cable gland spring plus alkaline batteries as back-up.

In this configuration batteries are seldom used: only in case of power failure from mains, usually due to electrical energy black-out, power supply fault or wiring damage.

Batteries probably will last until their *expiration date* reported on it. This date need to be written and remembered because it will probably be the replacing batteries date (indicatively 6-7 years).

To check the battery real charge proceed as follows:

1. Disconnect the external power supply cable from *x1R Smart*, so that it is only battery powered.
2. Open the lock by your smartphone.
3. Check the battery charge by *Argo* app: look at the opening icon button or in the *Door Info* menu.

C. DC power supply via door sensor contacts plus alkaline batteries.

In this configuration batteries are used only when door is open. When door is closed, *x1R Smart* is always powered by *door sensor contact*. As consequence, the necessary energy to move the motor is provided from the electric mains. In fact the motor maximum current absorption, that take place during opening and closing, always happens when door is closed or ajar, so when the *door sensor contacts* are touching each other.

To check the battery real charge proceed as follows:

1. Disconnect the external power supply cable from *x1R Smart*, so that it is only battery powered.
2. Open the lock by your smartphone.
3. Check the battery charge by *Argo* app: look at the opening icon button or in the *Door Info* menu.

Cleaning

- Clean the surface with a soft, damp cloth.
- Only disinfection agents, that are explicitly formulated for cleaning delicate metal surfaces and plastics, may be used. If unsuitable cleaning agents or methods are used, the faceplates and the internal and external control modules surfaces may be damaged or discolour.
- Do not spray water or other liquids directly on the device.
- Do not clean with chemicals such as alcohol, thinners, benzene, acidic or alkaline solvent cleaners, abrasive cleaners, or lubricants, as these may damage the device's finish and cause discoloration.

Storage

- If *x1R Smart* will not be used for an extended period, remove the battery, and store the battery in a cool, dry area, taking care that terminals doesn't touch any conductive object or part.
- Store *x1R Smart* in a clean dry place at a room temperature between -20°C and +70°C and relative humidity between 20% and 95%, without condensing.
- To take care of the product at the best, use the original packing box.

Appendix

Events log messages

(Specific for x1RSmart)

Description	Meaning
Close with Mechanical Key	Lock closed by mechanical key.
Configuration changed	The Scheduled Passage Mode has been enabled, disabled or changed.
Delayed open	Open delayed due to battery in status <i>very low</i> .
Delayed close	Close delayed due to battery in status <i>very low</i> .
Door open	The lock has been opened by any authorized credential (phone, card, tag or PIN), or by an external command (internal control module or remote opening command).
Door Close	Door closed, x1R bolts automatically close. Maximum security.
Door Close Light	Door closed with Light Mode enabled. Only latch in, bolts not out.
Functional Mode change	The functional mode Outside Knob/Outside Handle has changed. This function is only available on x1R Smart Standard.
Lock bolts in half-way by handle	Lock bolts in half-way by handle
Lock bolts in half-way by key	Bolts have been moved by key but not completely in. Just 1 shot (half-way).
Lock not close due to motor extra-current error	It happens when there is an excessive friction of latch or bolts during closing.
Lock not close due to sensor time-out error	It may happen when motor does not engage the mechanic during closing.
Lock not open due to motor extra-current error	It happens when there is an excessive friction of latch or bolts during opening.
Lock not open due to sensor time-out error	It may happen when motor does not engage the mechanic during opening.
Open with Internal Handle	Lock opened from the inside by the internal handle.
Open with Mechanical Key	Lock opened by mechanical key.
Open by remote opening button	Lock opened by remote opening button.
Open denied due to internal handle pressed	It happens when, opening by any electrical command, the internal handle is slightly down enough to activate its internal sensor. It may happen for example in case of x1R combined with panic bar device, if installation has not been correctly done the weight of the bar could cause this issue.

Appendix

Description	Meaning
Passage Mode Change	Passage Mode has changed from Light to Free or viceversa.
Power ON reset	The lock has been switched OFF and ON disconnecting batteries and/or external power supply. At every Power ON reset the current x1R Smart software version is reported on the event.
Power ON watchdog reset	The lock has made an automatic reboot, by itself, to fix an internal software error condition that can be caused by different factors: installation issues or hardware conditions that may cause a wrong lock internal sensors condition. The reboot aims to fix these kind of issues reloading the lock software.
Reset Doorlock to Factory mode succesfull	Full device reset has been performed. Device is no more initialized and the user list is clean. Events are still present.
Restore Default Doorlock Setting succesfull	Restore of default setting has been performed. The device is still initialized but all settings come back to the factory default.
Single Action Change	x1R Smart version has been changed from Single Action to Standard (Single Action OFF), or viceversa (Single Action ON).
Software Upgrade	Device software upgrade has been performed. Event shows from which version to which version the software has been upgraded.



For the complete events list related to the Argo app, and in common to all the other *Smart series* devices, see the *Argo User Manual (Events log messages paragraph)*, available at link: <https://iseo.com>

Light and acoustic signal

Light & acoustic signal	Meaning	Notes
20sec. x 	First x1R Smart switch on: updating of external and internal control modules.	x1R Smart updates the control modules, including the <i>Bluetooth</i> module. Do not switch off the lock during this operation.
2 x  + n x 	x1R opening in not initialized state. Opening allowed with any <i>Mifare</i> card or tag.	The green led is flashing “n” times until the door opening or until the end of the opening time. The orange led delay the operation to indicate the lock not initialized.
2 x  + 2 x 	Door closing with x1R not initialized.	Physical closing of door. The orange led delay the operation to indicate the lock not initialized.
1 x  + 3 x 	x1R initialization procedure by <i>Master Card</i> .	<i>System code</i> assignment.
n x 	Enabled credential. Opening allowed.	The green led is flashing “n” times until the door opening or until the end of the opening time.
2 x 	Added credential	Only in <i>Programming Mode</i> .
2 x  + 2 x 	Door closed and safe.	Physical closing of door.
5 x  fast	Credential not in memory.	Card, tag or PIN never stored into the lock user list.
2 x  slow	Opening not allowed	Credential in the user list but user not enabled. I.e.: <i>Block Standard User</i> .
	Credential already programmed	Only in <i>Programming Mode</i> .
2 x  every 15sec. x 3min.	Door not safe or in a wrong latch position.	1) Door not aligned AND latch in half-way 2) Door not aligned AND latch completely inside the lock. 3) Door aligned AND latch completely inside the lock.
7 x  fast	Open denied.	The lock does not execute the received command, due to incongruence of the internal sensors status with the requested operation. I.e.: opening attempt with the internal handle pushed down.
1 x  + 2 x 	Enter <i>Programming Mode</i> .	
3 x 	Exit <i>Programming Mode</i> . Enable <i>Passage Mode</i> . Enable <i>Block Standard User</i> .	
5 x 	Disable <i>Passage Mode</i> . Disable <i>Block Standard User</i> .	

Light & acoustic signal	Meaning	Notes
n x  + 2 x 	Battery low.	During door opening or closing.
3 x  + n x 	Battery very low.	Before door opening or closing. Opening and closing delayed.
 3 sec.	Battery empty.	No opening or closing.



For the complete Light and acoustic signal list, related to the Argo app, and in common to all the other *Smart series* devices, see the *Argo User Manual*, available at link: <https://iseo.com>

Wiring specifications

In the next table you can find the wiring specifications in relation to the power supply voltage and the distance between power supply and lock.

Wiring	Lock and power supply maximum distance (mt)	Minimum power supply (Vdc)	Minimum wire gauge (mm ²) in relation to the power supply
<i>External power supply</i>	2mt	10	0,75
	5mt	12	0,75
	10mt	12	1
	20mt	12	1,5
<i>Remote opening command</i>	100mt	9	0,3
<i>Door status relay</i>	Wiring specifications depends on relay characteristics (see paragraph <i>Technical Data</i>), and on the operating characteristics of the circuit or system controlled by the relay.		

Why some Functional Modes are no more present on Argo?

With the introduction of the *Light Mode* and the *Scheduled Passage Mode*, the *Functional Modes* 3, 4 and 5 are no more required, since the 2 new functions cover all the 3 previous configurations.

In the next table we can see the previous *Functional Modes* description and how to reproduce it with *Argo 2.3*, just combining the functions *Light Mode* and *Scheduled Passage Mode*.

Mode	Previous Functional Modes description	Correspondence with Argo 2.3
3	The lock withdraws bolts and latch when opening but will not automatically shoot the bolts when closing. Another command is required to manually shoot the bolts (by phone, card/tag, PIN, internal keypad), or by mechanical key.	Outside Knob + enable Light mode (disable Light Mode to shoot the bolts by phone, card/tag, PIN)
4	The lock withdraws only the bolts when opening but will not automatically shoot the bolts when closing. An external handle is required to manually withdraw the latch and an electronic command is required to manually shoot the bolts.	Outside Handle + enable Light mode (disable Light Mode to shoot the bolts by phone, card/tag, PIN)
5	The lock withdraws only the latch when opening and will not automatically shoot the bolts when closing. The bolts can only be moved using the mechanical key. When bolts are manually shot by key no other electronic command will be accepted to open.	Outside Knob + enable Light mode (disable Light Mode to shoot the bolts by phone, card/tag, PIN) It's no more possible to disable the electronic by key.



With *Argo 2.3* is no more possible to disable the electronic by the mechanical key (previous *Functional Mode* 5). This function actually is no more necessary managing the door by the *Argo app*, since by *Argo* disable or delete users is very easy and fast. Moreover this function was not so easy to manage: setting the *Mode* 5 from outside, with the door closed for example, you couldn't enter anymore the door by *Argo*, card/tag or PIN.

Troubleshooting

Argo app error messages



For these information refer to the *Argo User Manual* available at: <https://iseo.com>

x1R Smart troubleshooting

Issue	Possible cause	Possible solution
The x1R internal motor sounds like “free rotating”. Latch and bolts are not moving.	<p>The motor cannot engage the internal lock mechanism. It tries 3 times then stop giving an acoustic and light signal error.</p> <p>The events log reports “<i>Lock open/close with sensor time-out error</i>”</p>	<ul style="list-style-type: none"> ▪ Check the cylinder cam is in right position (zero position) ▪ Try to open by internal handle (if <i>Single Action</i>), or mechanical key, to try to unlock the motor. ▪ Check cylinder is the correct model. ▪ Check the correct lock installation, referring to the installation guide and in particular to the <i>Warnings</i> section. ▪ If the problem has not solved call the <i>IseoZero1 Technical Support</i>.
x1R does not close or open: the motor sounds like strives doing the operation. After 3 attempts, the lock gives an acoustic and light signal error.	<p>Bolts or latch cannot enter or exit from their seat. The lock tries 3 times then stop.</p> <p>The events log reports “<i>Lock open/close with motor extra-current error</i>”.</p>	<ul style="list-style-type: none"> ▪ Check if the door properly close and if it is correctly aligned. ▪ Check by key that bolts correctly enter into strike holes with enough play and space. ▪ Check that lock, when door is open, correctly works by mechanical key and electronically by door sensor contact. ▪ Check the connecting rods are not blocked and have a play of at least 1 millimetre. Try the lock with rods disconnected.

Troubleshooting

Issue	Possible cause	Possible solution
x1R does not respond to any command. Latch and bolts doesn't move. Control modules emits 7 acoustic signals together with 7 fast red blinking. <i>Opening denied</i> if opening by smartphone.	x1R Smart has an internal logical error that compromise the software functionality inhibiting the lock. It could for example a broken or not calibrated internal sensor	<ul style="list-style-type: none"> ▪ Check if the x1R Smart version in the Advanced menu, correspond to the lock code reported in the lock case label. ▪ Call the <i>IseoZero1 Technical Support</i> to try the automatic sensor calibration procedure.
x1R, when door is closed, periodically emits 2 acoustic signal together with 2 red light signal (slow).	The latch is not fully inside its seat, due to an excessive of friction or door not aligned.	<ul style="list-style-type: none"> ▪ Check the latch seat is properly dimensioned and aligned to latch when door is closed. ▪ Check the distance between door and frame. ▪ Check issue is not caused due to the pressure of the door sealing.
x1R does not respond to any command. Latch and bolts doesn't move. The command modules have led OFF and doesn't give any sound. <i>"Connection error"</i> message when opening by phone.	<ul style="list-style-type: none"> ▪ x1R not powered. 	<ul style="list-style-type: none"> ▪ Check batteries status. ▪ Check main power supply if present. ▪ Check the power supply cable, if properly connected and not damaged, and check if connector is broken or has false contacts. ▪ If the problem has not solved call the <i>IseoZero1 Technical Support</i>.
x1R with door closed, doesn't engage the bolts. Correct light and sounds behaviour.	<ul style="list-style-type: none"> ▪ <i>Light mode</i> enabled ▪ <i>Door sensor contact</i> not working or contacts doesn't properly touch. 	<ul style="list-style-type: none"> ▪ Disable the <i>Passage Mode</i> or the <i>Scheduled Passage Mode</i>. ▪ Check if the <i>Door sensor contact</i> has been installed with right polarity. ▪ Check if the <i>Door sensor contact</i> correctly touch. If not check position and properly regulate contacts. ▪ Replace the <i>Door sensor contact</i>.
The latch keeps inside the lock.	<ul style="list-style-type: none"> ▪ <i>Free Mode</i> enabled. ▪ Remote opening button always pressed. ▪ Latch mechanically stuck. 	<ul style="list-style-type: none"> ▪ Disable the <i>Passage Mode</i> or the <i>Scheduled Passage Mode</i>. ▪ Unlock or disconnect the remote opening button. ▪ Unlock the latch.

Troubleshooting

Issue	Possible cause	Possible solution
The external control module doesn't react/respond to any RFID or PIN credential giving no light signal nor beeping sound.	<ul style="list-style-type: none">External control module not connected or wiring damaged.Faulty/broken external control module	<ul style="list-style-type: none">Check the external control module wiring if not damaged and if the connector is well fixed to x1R Smart.Switch OFF and ON the x1R Smart: at the reboot the lock try to communicate and update, if necessary, the external control module.Try with another external control module to see if problems is fixed.
Enabled credential doesn't open. Reader emits 2 acoustic signals together with 2 red lights.	<i>Block Standard User</i> function enabled.	<ul style="list-style-type: none">Disable <i>Block Standard User</i> function by <i>Argo app</i>.
As soon as I open the door the lock switches off (control modules led OFF).	Lock powered by <i>Door sensor contacts</i> and battery low.	<ul style="list-style-type: none">Replace batteries.
x1R is not visible on <i>Argo app</i> . The external and internal module is flashing red, at regular interval, without any sound.	<i>Bluetooth</i> module not connected or not working.	<ul style="list-style-type: none">Check the <i>Bluetooth</i> module cable if intact and well connected, on both sides.Replace the <i>Bluetooth</i> module.

Technical assistance

For any help please contact *ISEOZero1 Technical Support*. You can find your country telephone nr. at: <http://iseozero1.com/iseozero1/index.html#contacts>.

When you contact the *ISEOZero1 Technical Support* please provide the next information:

- *Argo app* software version.
- *Smartphone* model and software version.
- *x1R Smart* configuration and main board software version.
- Precise and detailed description of the issue.

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