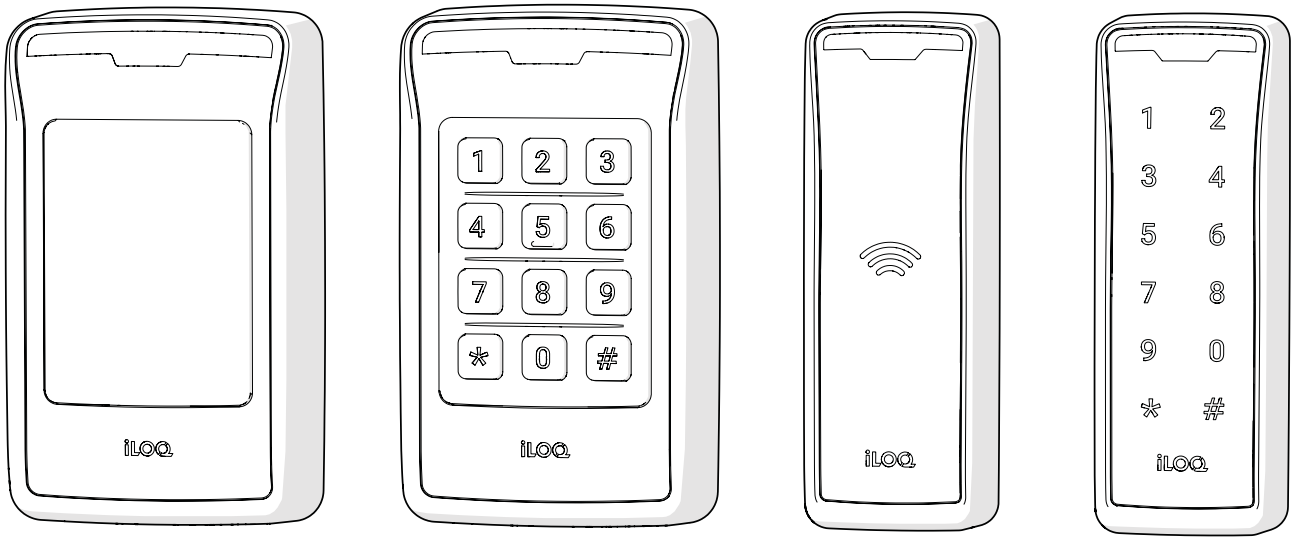
iLOQ 5 Series

iLOQ N510 NFC/PIN Door/Wall Reader

Installation instructions



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iLOQ Oy
support.iloq.com

Contents

1. Safety information 3
   1.1 Safety signs 3
   1.2 General warnings 4
2. Important 5
   2.1 This document 5
   2.2 Before installation 5
   2.3 Licenses 5
3. Installation 6
   3.1 Device dimensions 6
   3.2 Overview of the iLOQ NFC Readers 7
   3.3 Installing the iLOQ N510.1xx NFC/PIN Door Reader 8
   3.4 Installing the iLOQ N510.2xx NFC/PIN Wall Reader 12
4. LED functions of the iLOQ NFC Reader 12
5. Replacement and disposal 14
   5.1 Disposal of decommissioned products 14
6. Compliance 15
   6.1 CE 15
   6.2 FCC 15
   6.3 ISED 16
   6.4 Australia and New Zealand 16

1. Safety information

1.1 Safety signs

Sign	Description
	Electrical hazard. Indicates the presence of a hazard which could result in personal injury. Before working on any equipment, be aware of the hazards involved with electrical circuitry, and get familiar with standard practices for preventing accidents.
	General warning sign. Indicates the presence of a hazard which could result in personal injury, equipment damage, or loss of data.
	General notice sign. Indicates particularly important information about the installation and deployment.
	Read these instructions carefully before installation. This information is to ensure your safety and the long lifetime of the products installed.
	Use protective gloves.

1.2 General warnings

	Make sure that the power supply to the installation site is disconnected during installation. Do not switch on the power supply until the installation is complete.
	iLOQ devices must be installed and used effortlessly without the use of excessive force.
	Products should not be modified in any way except in accordance with the modifications described in these instructions.
	Installation should only be performed by a qualified technician.
	Use protective gloves during installation to avoid personal injury.

2. Important

2.1 This document

This document contains installation instructions for the iLOQ NFC Readers. For more information about the iLOQ 5 Series Online System, please visit support.iloq.com.

2.2 Before installation

The installation of iLOQ N510 readers should be performed by a qualified installer to avoid personal injury and product damage. Before proceeding with installation, read and understand the **safety information** thoroughly.

If this product is used in an elevator system, all connections must be performed and documented by certified elevator technicians in accordance with applicable safety regulations and standards.

NFC operated iLOQ lock cylinders must be installed at least 20 cm (8 inches) away from RFID/ NFC readers. Installing lock cylinders and readers closer than 20 cm (8 inches) may cause communication interference, which can lead to access problems.

Read these instructions carefully before installation. This information is to ensure your safety and the long lifetime of the installed products. After use, make sure that these instructions are passed on from the installer to the user.

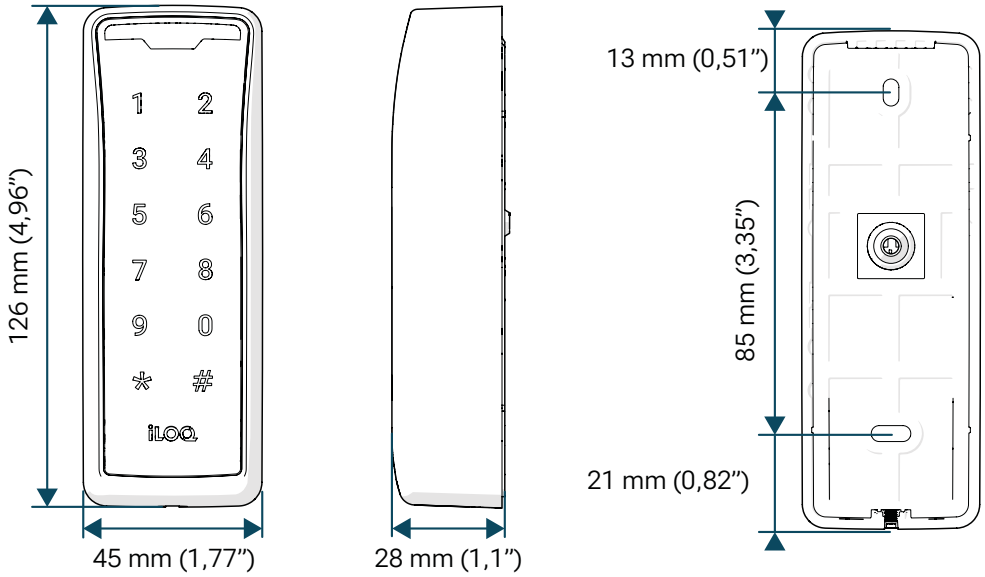
2.3 Licenses

The iLOQ NFC Reader does not require a license, but the device it is connected to does. For more detailed information on licenses, see the iLOQ Partner Portal and the iLOQ 5 Series product price list.

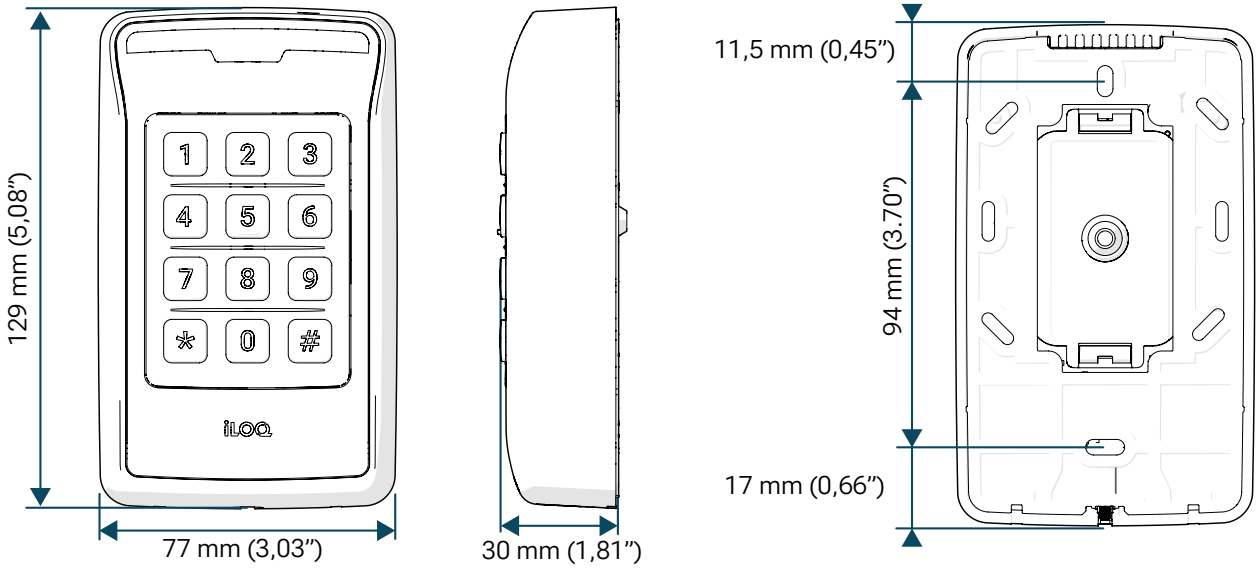
3. Installation

3.1 Device dimensions

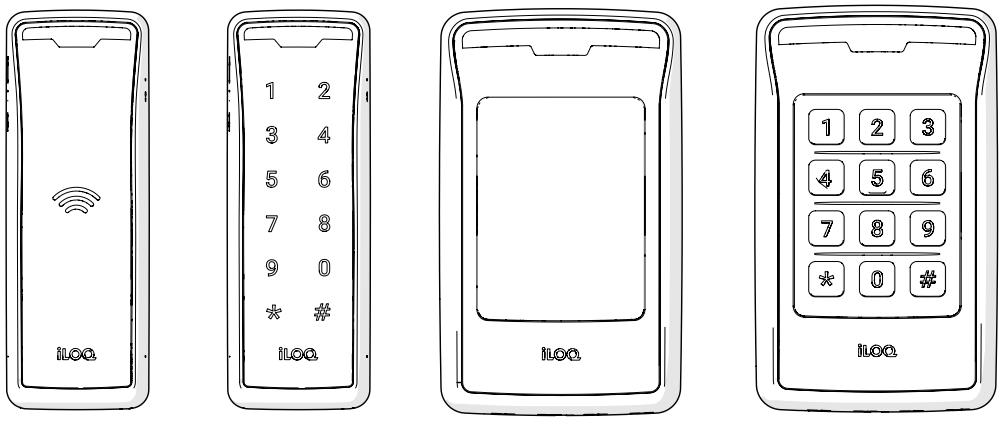
iLOQ N510.1xx Door Reader dimensions are 126 x 45 x 28 mm.



iLOQ N510.2xx Wall Reader dimensions are 129 x 77 x 30 mm.



3.2 Overview of the iLOQ NFC Readers



iLOQ N510 NFC Readers are available in the following variants:

- N510.100 NFC Door reader without a keypad
- N510.110 NFC/PIN Door reader with a capacitive 2x6 keypad
- N510.200 NFC Wall reader without a keypad
- N510.220 NFC/PIN Wall reader with a mechanical 3x4 keypad

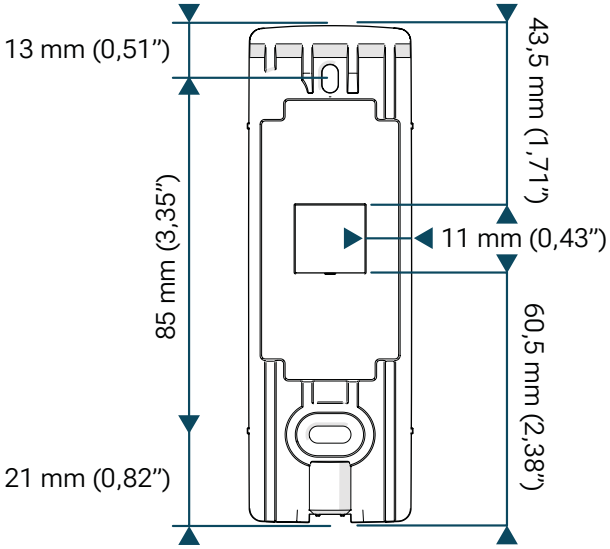
iLOQ NFC Readers can be installed directly to the door leaf or near the door, at a maximum distance of 10 m from a door module. iLOQ NFC Readers are connected to the reader bus of the N501 Standalone Door Module, N501.1 Standalone Door Module, iLOQ N502 Online Door Module or the iLOQ N503 Offline Door Module, or to the chain bus of the iLOQ N507 Online I/O Module to control electronic devices. iLOQ NFC Readers can be directly connected to the main bus of the iLOQ N500 Net Bridge to work as a HotSpot for updating keys. iLOQ NFC Readers use NFC technology to read and write data to iLOQ S5 and iLOQ S50 keys.

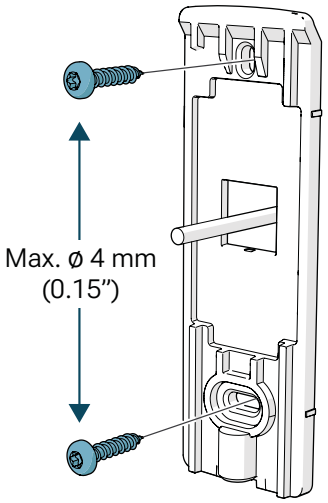
iLOQ N510 NFC readers are available with and without a keypad. The variants without a keypad (N510.100 and N510. 200) can be opened with a K5S key, a K55 key fob or an iLOQ phone key. The variants with a keypad (N510.110 and N510. 220) can be used to enhance security by requiring a PIN code in addition to a key, but they can also be used in lower security environments to require just an access code. iLOQ NFC Readers communicate with other iLOQ Online components via an RS-485 bus and with iLOQ keys wirelessly using NFC. In both cases the communication is secured with strong AES-256 encryption. No security-related data is stored in the memory of the reader. iLOQ NFC Readers do not have any other connections (inputs or outputs).

3.3 Installing the iLOQ N510.1xx NFC/PIN Door Reader

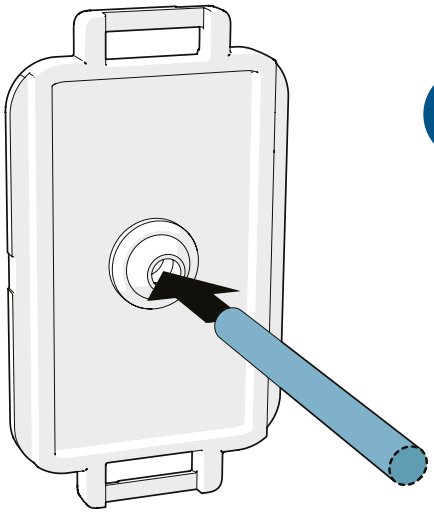
The iLOQ N510 Door reader is available in two versions: N510.110 comes with a capacitive touch keypad, N510.100 doesn't have a keypad.
Proceed with the installation as follows:

1. Install the mounting bracket to the wall or door. Make sure that the cable goes through the hole on the mounting bracket.



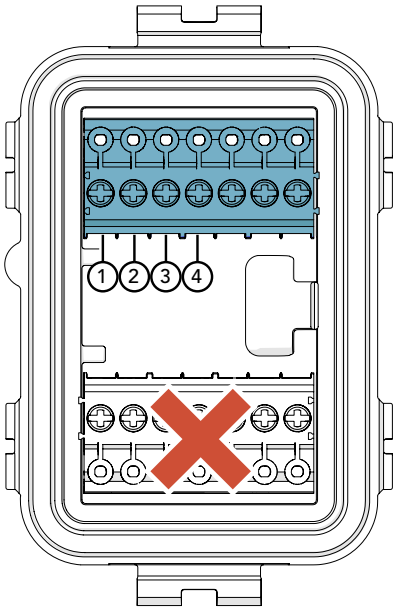


2. Slide the cable through the seal of the back cover.



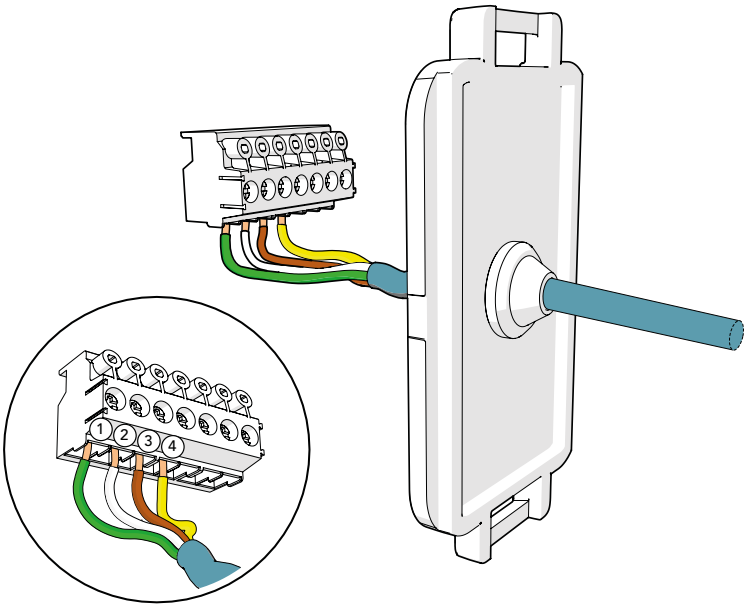
NOTE! To maintain the product's IP67 rating, the cable wiring diameter must be 6 mm ± 0.5 mm, using a single, round cable.

3. Peel the wires 10 mm.
4. Connect the wires to the connector as specified in the following table.

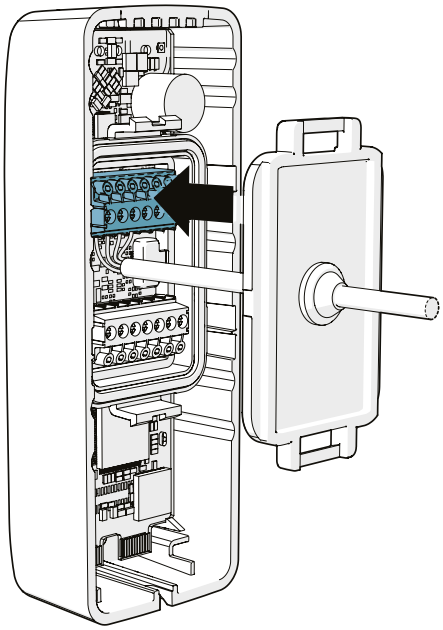


Terminal	Pin	Connections	Wire
1	Pin 1	V IN	DC+
2	Pin 2	GND	DC-
3	Pin 3	CLK/W1/D+A	A
4	Pin 4	DAT/W0/D-B	B

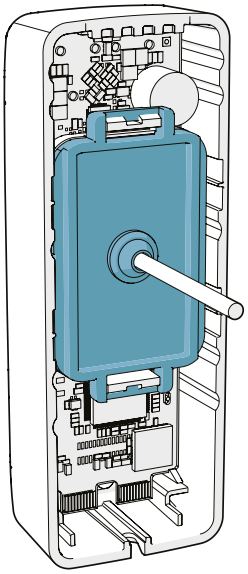
NOTE! Do not attach wires to the lower connector.



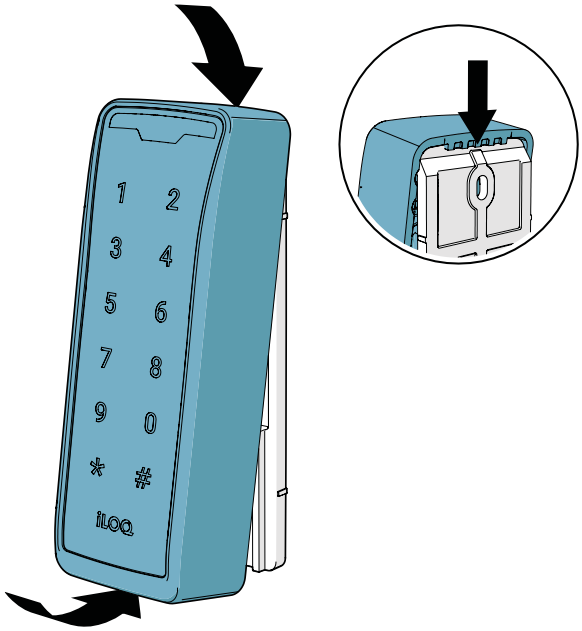
5. Install the connector to the iLOQ N510.



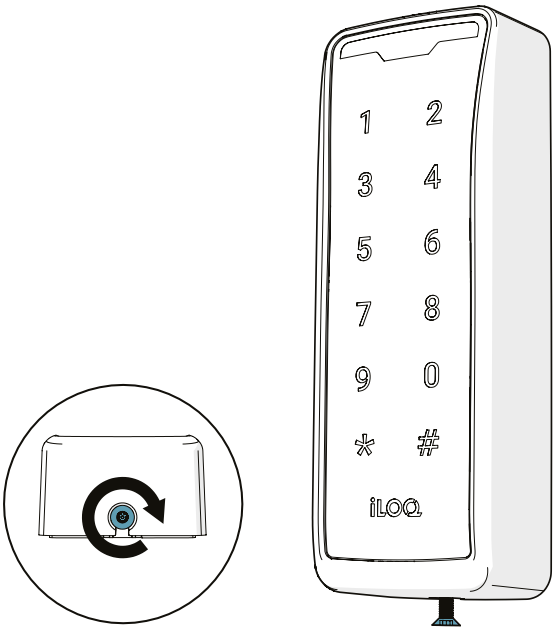
6. Install the back cover to the iLOQ N510.



7. Slide the top of the iLOQ N510 into place on the mounting bracket.



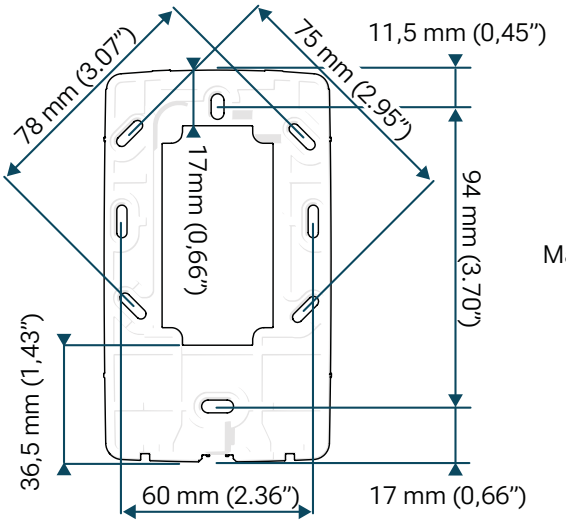
8. Tighten the security Torx T10 screw on the bottom.

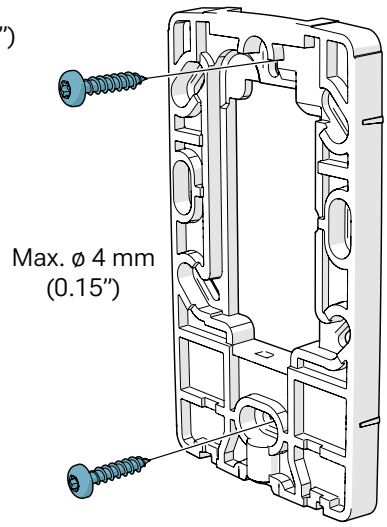


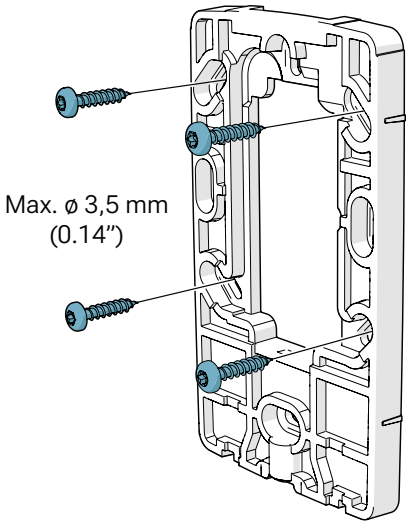
3.4 Installing the iLOQ N510.2xx NFC/PIN Wall Reader

The iLOQ N510 Wall reader is available in two versions: N510.220 comes with a mechanical keypad, N510.200 does not have a keypad.

The installation and mounting of the iLOQ N510 Wall Reader is the same as the iLOQ N510 Door Reader except for the dimensions.





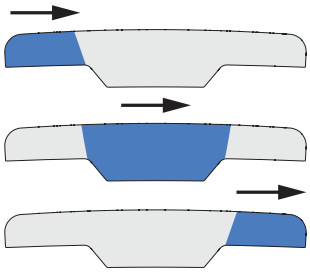


4. LED functions of the iLOQ NFC Reader

Setup

	Blue light	Indicates that the reader is being set up.
	Green light	Indicates that the setup was successful.
	Red light	Indicates that the setup was not successful.

Firmware update

	Blue LEDs blink sequentially from left to right.	Indicates that the reader firmware is being updated. Don't turn off the power! Reader cannot be used at this time.
	Green light	Indicates that the update was successful.
	Red light	Indicates that the update was not successful.

5. Replacement and disposal

If a product is defective, replace it with a new one using the installation instructions. If you are not sure how to replace or discard a certain product, contact the device manufacturer. Contact information can be found at support.iloq.com.

5.1 Disposal of decommissioned products

	Never discard an electrical appliance in household waste. Follow local laws and regulations for safe and environmentally friendly product disposal.
	Before discarding products, bear in mind that most iLOQ products are reusable. All programmable products can be reset to factory settings, after which they can be reused in another system.

Recycling instructions of decommissioned products are depicted below.

Decommissioned product	Sorting
Decommissioned iLOQ fittings, mounting accessories and thumb turn knobs can be recycled as scrap metal.	
Decommissioned iLOQ products containing electronics and circuit boards, such as iLOQ Cylinders, iLOQ Keys, net bridges, door modules, key and NFC readers, and relay cards, must be recycled at an electrical and electronic equipment collection point.	
iLOQ products containing batteries and accumulators, such as key fobs, programming keys and clock circuits, should be recycled at a regional collection point for batteries and small accumulators.	
Most iLOQ packaging materials are suitable for cardboard and plastic recycling.	

6. Compliance

6.1 CE

This product is compliant with Directives 2014/53/ EU, 2011/65/EU and 2015/863/EU. The full text of the declaration of conformity is available at https://www.iloq.com/en/declaration-of-compliance/.

6.2 FCC

N510.100/N510.110 FCC ID: 2A2HZN5101

N510.200/N510.2200 FCC ID: 2A2HZN5102

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications made to this equipment not expressly approved by iLOQ Oy may void the FCC authorization to operate this equipment.

6.3 ISED

N510.100/N510.110 IC: 30160-N5101

N510.200/N510.2200 IC: 30160-N5102

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s) and complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation of the device.

N510.100/N510.110 IC: 30160-N5101

N510.200/N510.2200 IC: 30160-N5102

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage.
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

6.4 Australia and New Zealand

R-NZ

iLOQ 5 Series

iLOQ N510 NFC/PIN Door/Wall Reader

Installation instructions

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