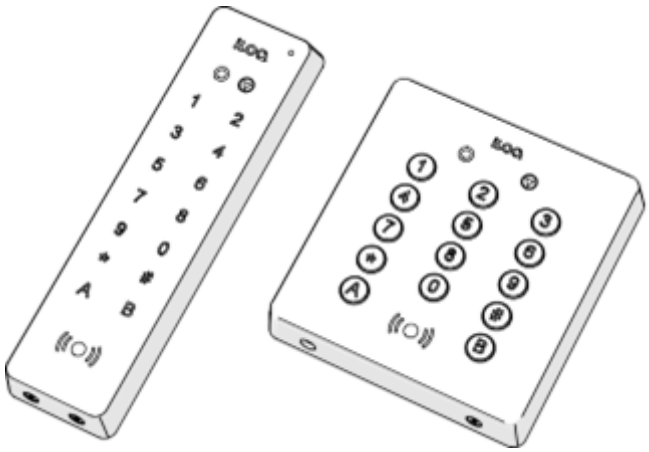
iLOQ 5 Series
iLOQ NFC Readers

iLOQ N504i NFC Reader
iLOQ N505i NFC Reader

Installation instructions



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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

iLOQ does not sell or provide products that require installation by an official electrician. Installation should still be performed by a qualified installer to avoid personal injury and product damage. Before proceeding with installation, read and understand the **safety information** thoroughly.

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.

2.4 Warranty

The warranty covers only such defects in the product that occur during the first two (2) years from the commencement of the warranty period, but no later than three (3) years from the Supplier's original delivery date.

- Two (2) years from the commencement date
- Three (3) years from the Supplier's (iLOQ) original delivery date

These conditions are not valid for the iLOQ S10 and the iLOQ 5 Series management software, and mobile software, which have separate conditions.

As a rule, all of the supplier's warranty obligations shall be fulfilled through a supplier's authorized partner. In all warranty-related matters, the customer must contact the supplier's partner from which they have purchased the warranted product. If the customer has purchased the product directly from the supplier, they can also contact the supplier directly in all warranty-related matters.

The supplier shall not be responsible for any damage that a fault or defect in the product may have caused to other property, nor shall the supplier be responsible for any other direct or indirect damage.

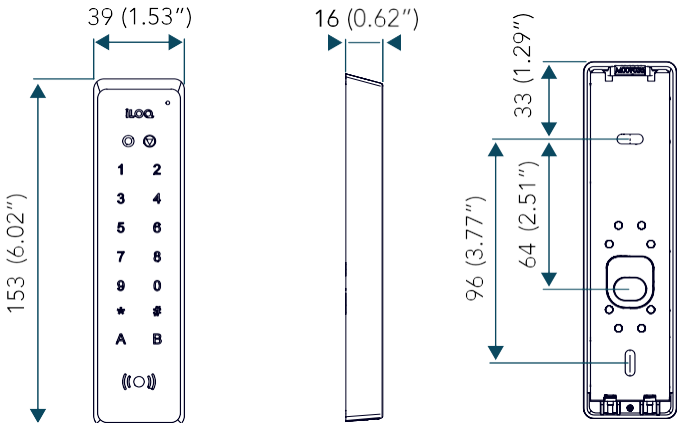
The following faults or damage shall not be compensated for under the supplier's warranty:

- The fault in the product was caused by failure to observe the operating instructions when using the product, by neglecting maintenance or by making changes to the product
- The product was broken when subjected to vandalism or violence
- The product has been installed incorrectly
- The product has been exposed to strong chemical agents or exceptional corrosion or oxidation or normal mechanical wear in the product

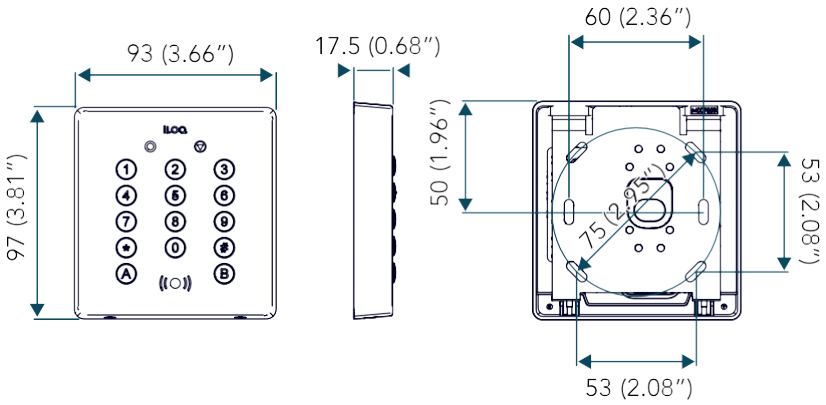
3. Installation

3.1 Device dimensions

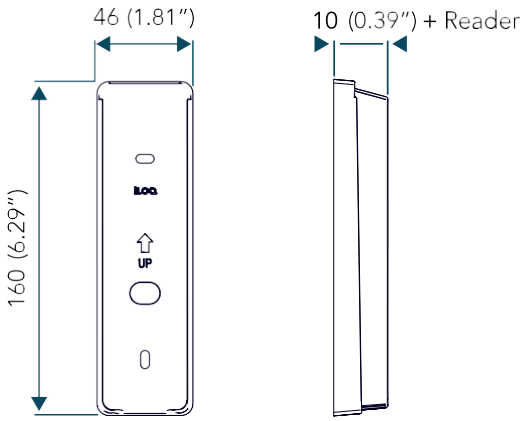
iLOQ N504i NFC/PIN Door Reader



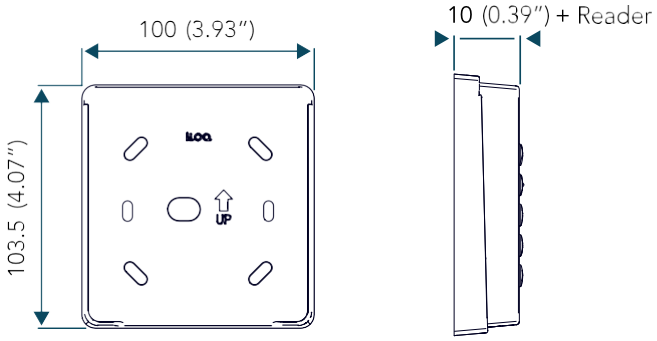
iLOQ N505i NFC/PIN Wall Reader



iLOQ A5.016 Mounting Plate



iLOQ A5.017 Mounting Plate



3.2 Overview of the iLOQ NFC Readers

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 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, but can also read Mifare RFID tags.

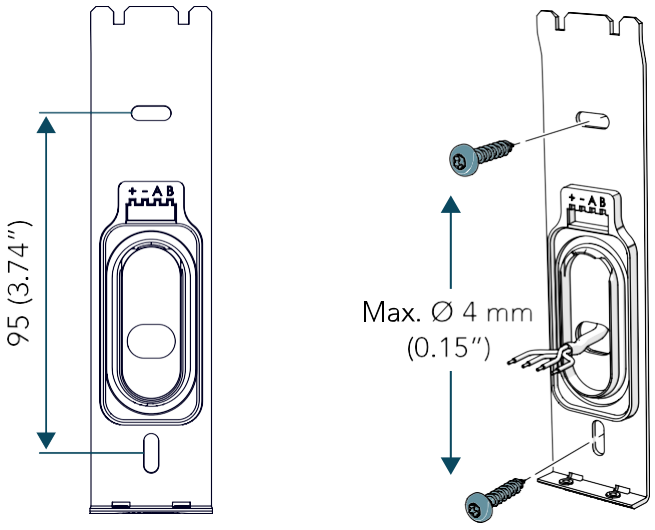
iLOQ N504i NFC/PIN Door Readers and iLOQ N505i NFC/PIN Wall Readers are equipped with a keypad that can be configured to demand a key + PIN-code combination or, for lower security, open the door with just an access code. iLOQ NFC Readers communicate with other iLOQ Online components via an RS-485 bus and with iLOQ keys wirelessly using NFC. In both cases the communication is secured with strong AES-256 encryption. The iLOQ NFC Readers are not programmed or in any way adjusted via iLOQ Manager software. No security-related data is stored in the memory of the reader. iLOQ NFC Readers do not have any other connections (inputs or outputs).

NOTE! To avoid compromising the reading distance of the reader, install a mounting plate between metal surfaces and the reader. When installing two readers close to each other, install a metal sheet between the readers. Do not install the reader or the cabling near strong sources of electromagnetic radiation. Use a twisted and shielded pair cable when possible. Recommended cable types and lengths can be found in the iLOQ 5 Series Online System Planning Guide.

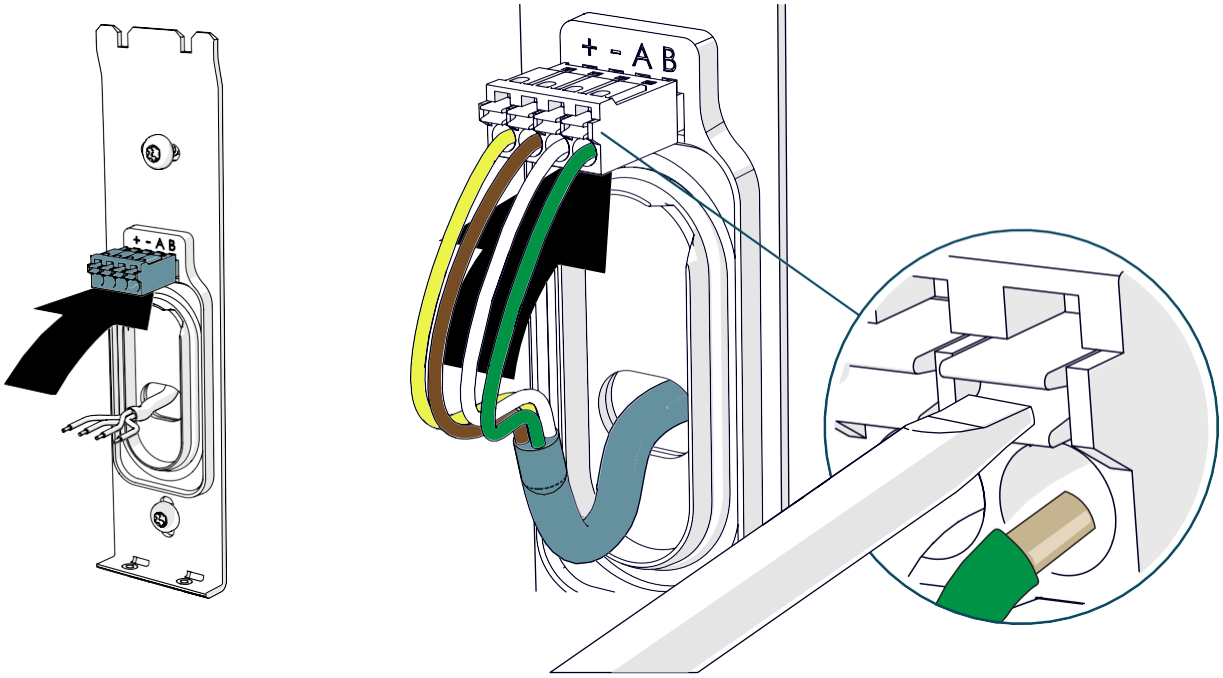
3.3 Installing the iLOQ N504i NFC/PIN Door Reader

The iLOQ N504i NFC/PIN Door Reader has a touch keypad and an NFC reader.
Proceed with the installation as follows:

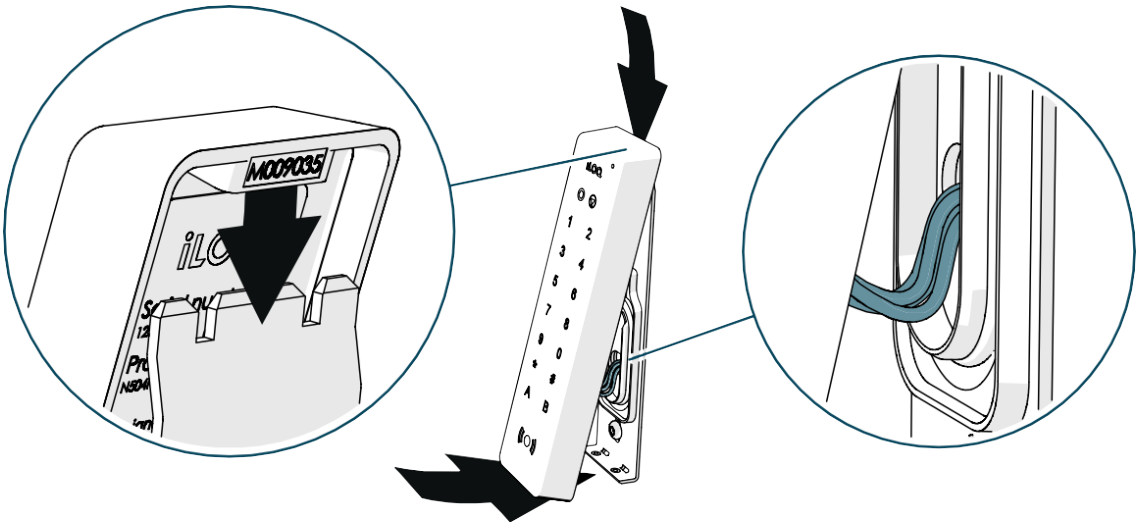
1. Install the mounting bracket to the wall or door.



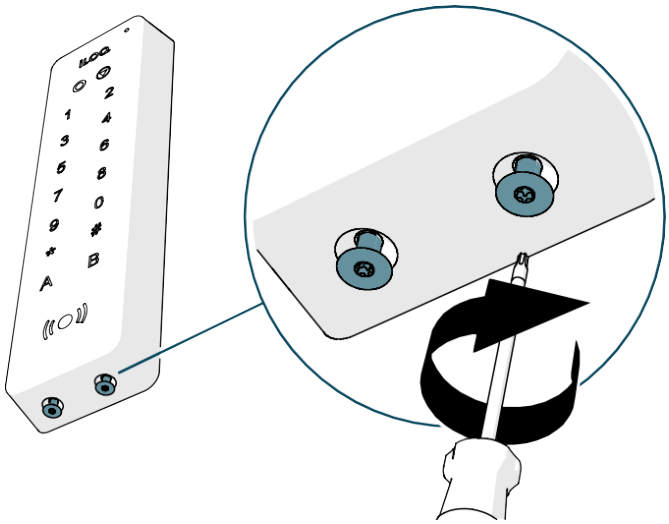
2. Peel the wires 10 mm.
3. Place the connector into the support on the mounting bracket.
4. Push the connector with a screwdriver to connect the cables to the quick connector. Use the guide to make the proper connections.



5. Slide the top of the iLOQ N504i into place on the mounting bracket.



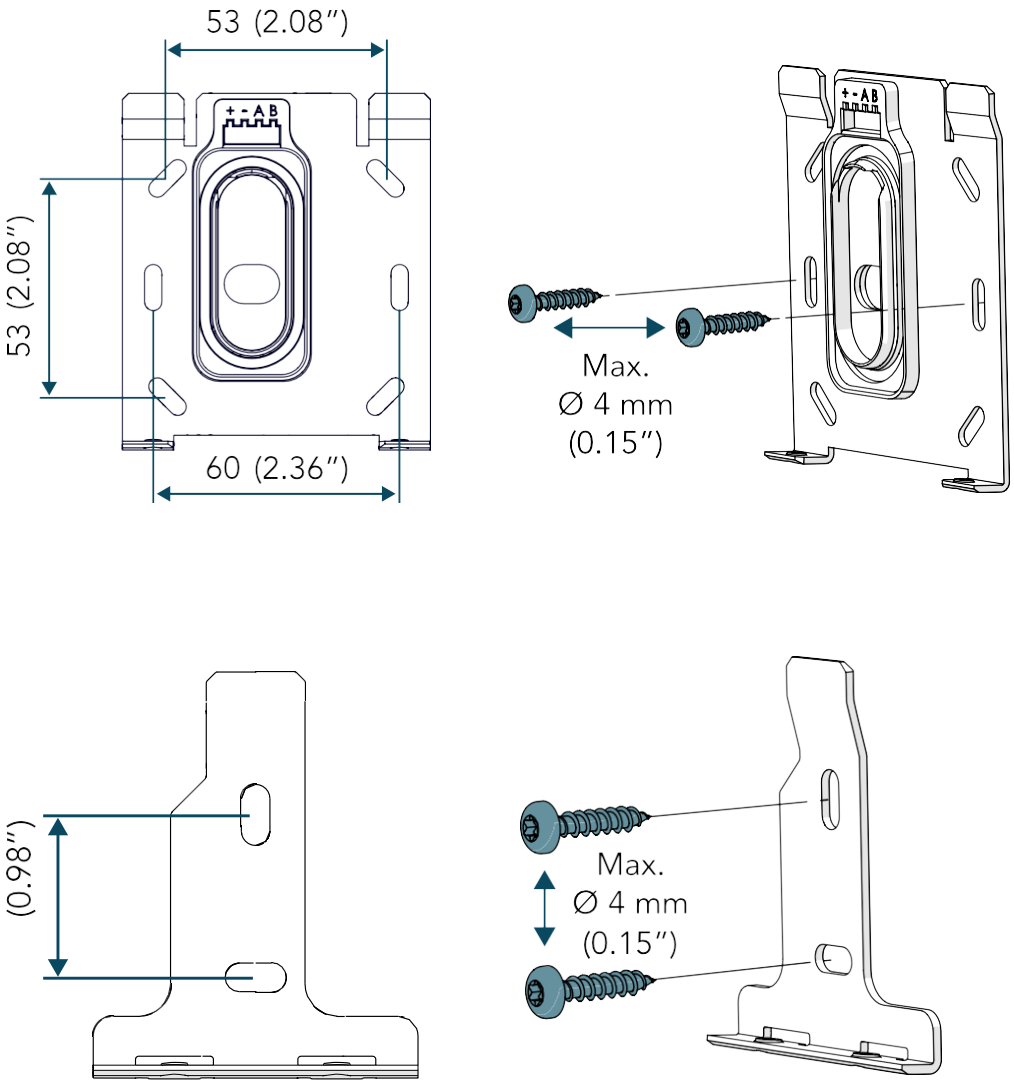
6. Tighten the two Torx T5 screws on the bottom of the iLOQ N504i.



3.4 Installing the iLOQ N505i NFC/PIN Wall Reader

The iLOQ N505i NFC/PIN Wall Reader has a button keypad and an NFC reader.

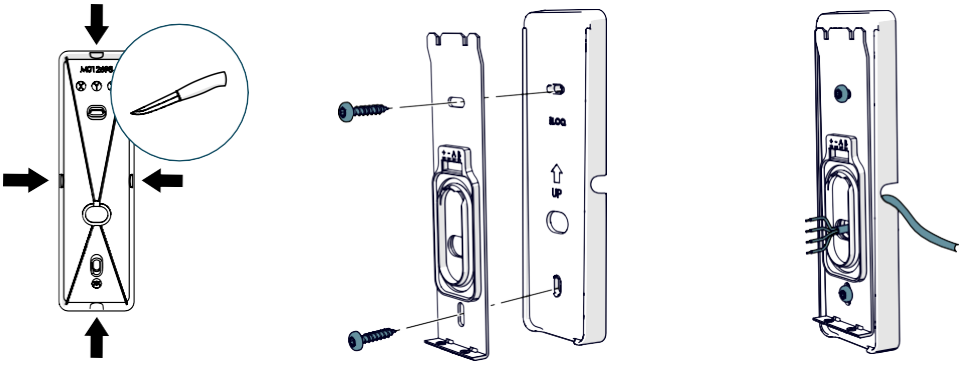
The installation and mounting of the iLOQ N505i is the same as the iLOQ N504i NFC/PIN Door Reader (the iLOQ N505i also has a quick connector for the cable) except for the dimensions.



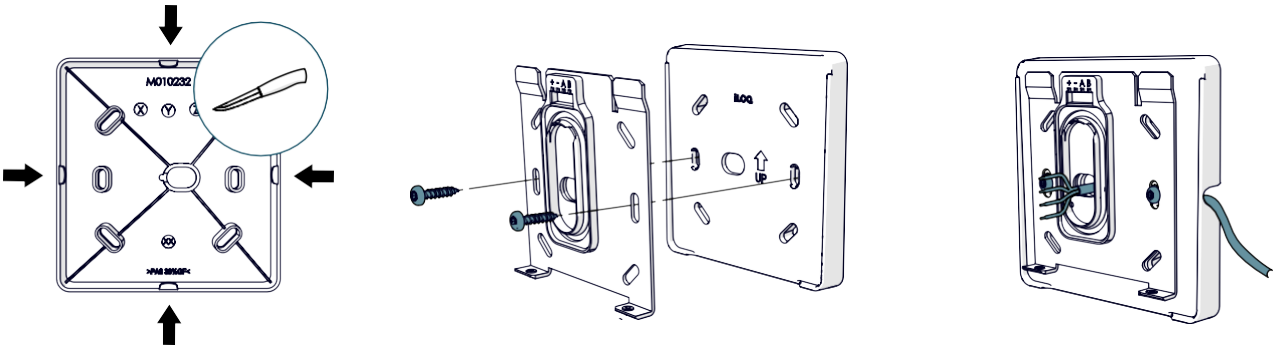
3.5 Mounting plates

If it is not possible to feed the cable from directly behind the reader, a separate mounting plate can be used. The mounting plates are placed behind the mounting bracket. They have available slots so that the cable can be fed through from any side of the mounting plate.

iLOQ A5.016
Mounting plate for the iLOQ N504i NFC/PIN Door Reader

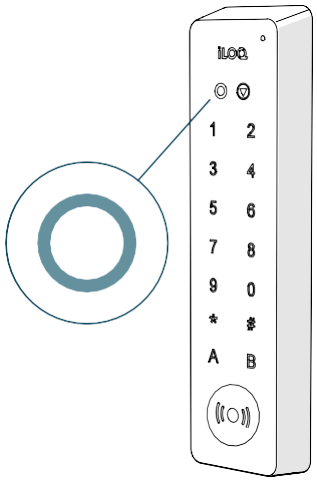


iLOQ A5.017
Mounting plate for the iLOQ N505i NFC/PIN Wall Reader

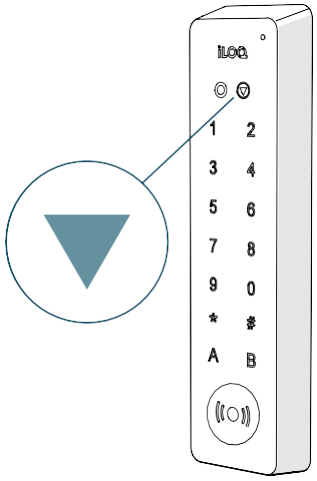


4. LED functions of the iLOQ NFC Reader

Connection status

	• Amber light	N503: Door module does not have the correct time (RTC). N501, N502, N507: Indicates that the reader has connection to the door module (setup succesful).
	• Red light	Indicates that the setup was not successful. Wrong devices in the bus. Reader does not have connection.
	• Green light	N503: Door module has the correct time (RTC). N501, N502, N507: Reader connected correctly and connection to iLOQ server OK.
	• Blue light	Indicates that the reader firmware is being updated. Update will take approx 2 min. Don't turn off the power! Reader cannot be used at this time.

Key communication status

	• Amber light	Key communication has started.
	• Purple light	Phone key communication has started.
	• Red light	The key did not have a valid access right or the key communication has failed. Sound indication confirms the denied access.
	• Green light	Access granted - Lock will be opened. A valid key with correct access rights was used A valid access code was used Sound indication confirms the access granted event.

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 iLOQ N504i NFC Reader

FCC

FCC ID: 2A2HZN504I

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.

ISED

IC: 30160-N504I

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.

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.

6.2 iLOQ N505i NFC Reader

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/.

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FCC ID: 2A2HZN505I

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Installation instructions

iLOQ
support.iloq.com
Elektroniikkatie 10
90590 Oulu
Finland

Internal