ID-Lock UZ

Installation guide

Contents

ID-Lock UZ Overview

Advantages

The main advantages with ID-Lock UZ are:

- Greater safety and security in everyday life
- Greater sense of control over resident's own accommodation
- A stress factor less for the staff, especially during the night
- Battery operation allows for cost-effective installation
- Slim and stylish design
- Fully automatic unlocking of doors for the residents
- Possible for staff to open with remote transmitters or physical keys

What is ID-Lock UZ?

ID-lock with Carelock UZ is made for dementia patients and elderly in a group-living environment. It is designed for ease of use and a low cost of installation, where the purpose is to prevent accidental access rather than burglary. It is not designed for high security applications, such as external doors to a resident home or office.

You can always open doors in an ID-Lock UZ installation from the inside by just using the door handle without any key or transmitter, while the outside handle only works when the door is unlocked. Many hotel rooms have a similar functionality.

The residents only need to wear a small pendant transmitter in order to unlock the doors they have access to, without any manual interaction.

The staff can unlock all doors they have access to with a special staff transmitter, or with a regular (physical) key or the TES-app.

The ID-Lock UZ system consists of a position transmitter (IDT), a control box (TM2), staff- and resident transmitter pendants (Tx75), and an electronic lock (Carelock UZ).

The electric lock has a sleek design and is not bigger than a normal door handle. It is mounted on the outside of the resident's door, replacing the handle. Both the door and the lock-case remain completely unaffected by the installation, and it is very easy to restore everything back to its original state.

Because the electrical lock is completely battery-powered, no expensive electrical installations are required in the door itself. The only electrical requirement is the availability of a 12V or 24V DC source close to the door to power the IDT and the TM2-box.
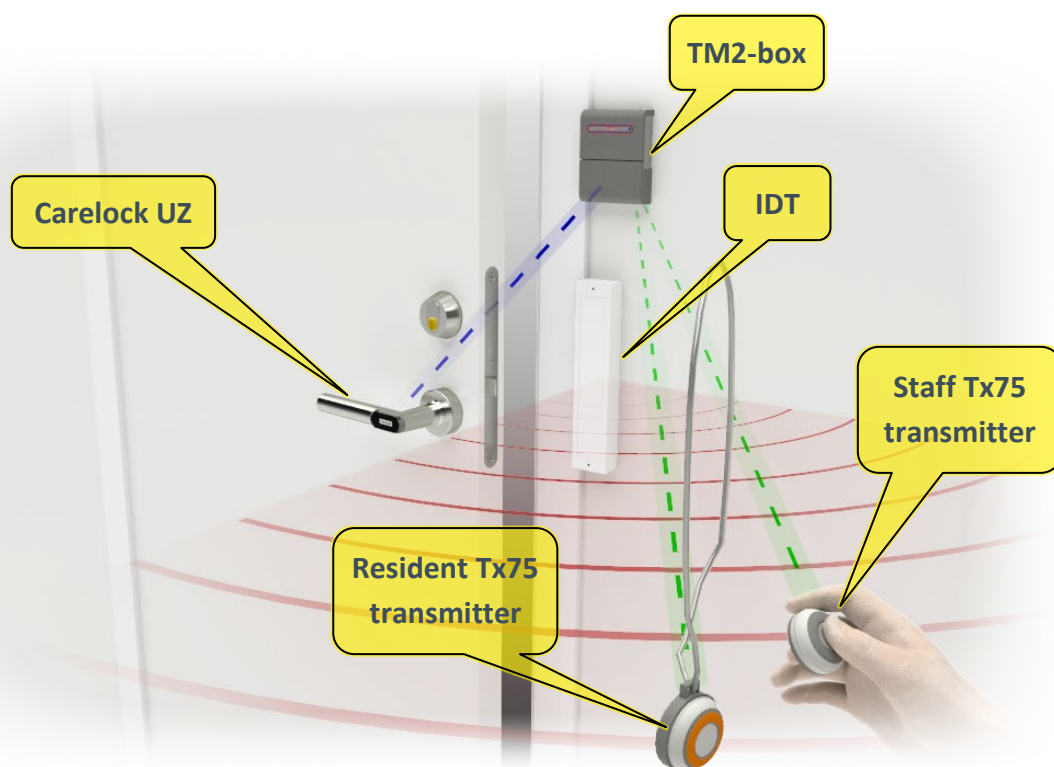
How does ID-Lock UZ work?

The IDT, which is mounted next to each door, is transmitting an RFID signal with a zone-ID that is unique to each door. The signal has a maximum range of approx. 1 to 1.5 meters (adjustable down to a few centimeters). The IDT RFID signal is marked in **red** in the illustration below.

When a resident's Tx75 transmitter detects the IDT signal, it will automatically transmit its own ID, together with the detected zone-ID from the IDT, to the TM2-box. The Tx75 transmitter has an ID that is unique for each transmitter on a site.

The staff Tx75 transmitters work the same way, except they do not automatically transmit anything; you must push the transmitter's button to trigger the transmission.

The Tx75 signals are marked in **green** in the illustration below.

The TM2-box is configured to accept certain Tx75 IDs and a certain IDT zone-ID. When an accepted combination is received, it will send a Bluetooth signal to the lock which will engage the door's outer handle, and the door can be opened by pulling the handle. The Bluetooth signal is marked in **blue** in the illustration below.

Installation of ID-Lock UZ

Before you begin

Carelock UZ comes in a "left" and a "right" version. The "left" version is intended to be mounted on doors that have the hinges on the left side, as seen from the side where the handle is to be mounted (normally the outside of the door). And vice versa for the "right" version.

These are the different models and versions available today:

- Part no. 062 09 801: Carelock UZ for ID-lock Left
- Part no. 062 09 802: Carelock UZ for ID-lock Right
- Part no. 062 09 803: Carelock UZ IP66 for ID-lock Left
- Part no. 062 09 804: Carelock UZ IP66 for ID-lock Right

The standard Carelock UZ is not water protected and may only be cleaned with a damp cloth or similar. For a more durable model, that can be cleaned with a wet cloth and/or sprayed with alcohol, chose the "IP66" model. The two models are mechanically very similar, and you can hardly see any difference between them.
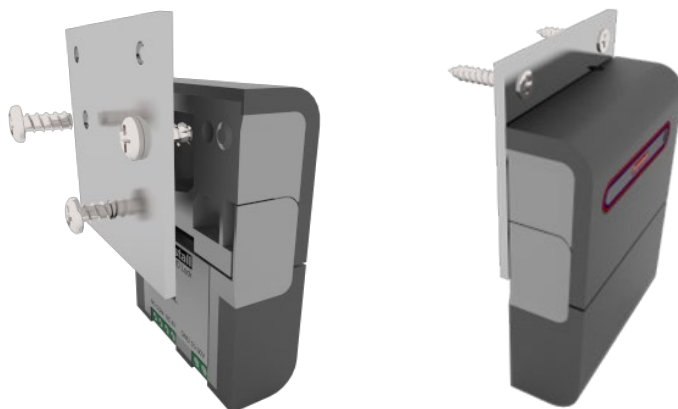
Carelock UZ fits doors with a wide range of thicknesses, but you need to choose a spindle (the square rod that connects the two handles on each side of the door) with an appropriate length. There are three different length of spindles that can be ordered from Tunstall:

- Part no. 062 09 201 for doors 30-56 mm thick
- Part no. 062 09 202 for doors 57-83 mm thick
- Part no. 062 09 203 for doors 84-110 mm thick

Installation of the TM2-box

This is one example how you may mount the TM2-box. Other examples are to mount it inside a plastic box or hide it above the ceiling.

Make a simple mounting plate by using a metal- or plastic plate that you drill holes in and attach to the TM2 box with 7 mm wide screws made for plastic as illustrated here.
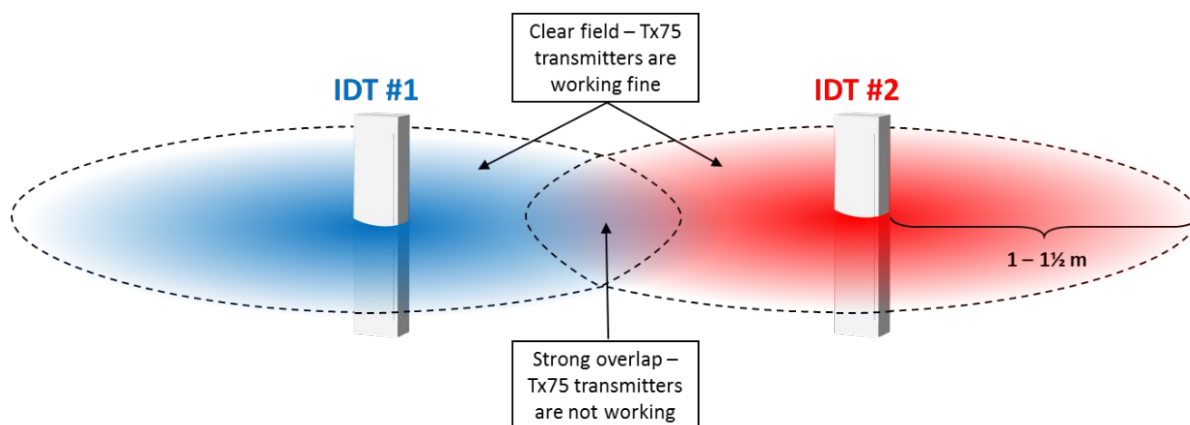

Carelock UZ is almost completely made of metal and therefore mechanically very robust. But this also means that the Bluetooth radio signal between TM2 and Carelock UZ will sometimes struggle to get through if the devices are installed too far away from each other. The optimal position of the TM2-box is on the wall next to the lock. If that is not possible, it may be mounted higher up on the wall, but never more than 2 meters away from Carelock UZ.

If the staff will be opening the locks with a Bluetooth remote control (Carelock SmartKey), the TM2 should always be placed as close to the lock as possible. This is because the SmartKey will try to connect to the nearest device, and since the Bluetooth signal goes via TM2, SmartKey will connect to the nearest TM2 (and the user is likely to hold their SmartKey close to the lock they are trying to open).

Installation of the IDT

The IDT should be mounted next to the door, preferably close to the lock. If there are several doors next to each other in, e.g., a corridor, then it is important that all IDTs are mounted on the same side of their respective door. Two IDTs must never be closer than 1 meter from each other.
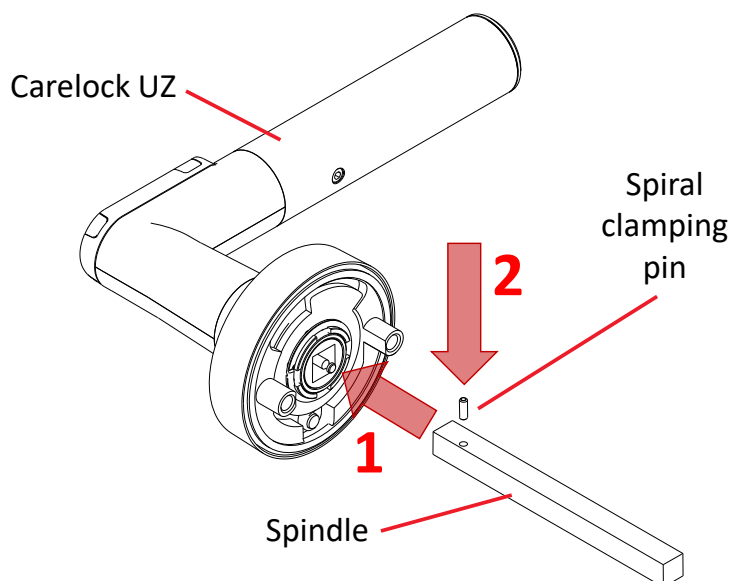
It may be necessary to adjust the output power of the IDT so that they don't overlap each other too much. Inside the IDT there is a potentiometer that can be used for adjusting the output power; clockwise turn will increase the power.

The radiation from an IDT is close to equal in all directions, and it is not possible to shield it in one direction because the frequency is so low (approx. 17 kHz). This means that the IDT field will radiate as much inside of the apartment as outside, causing the ID-lock to trigger the lock also when a resident is moving around inside the apartment close to the door. This is another reason why you should lower the output power as much as possible, while making sure the system still works as intended.
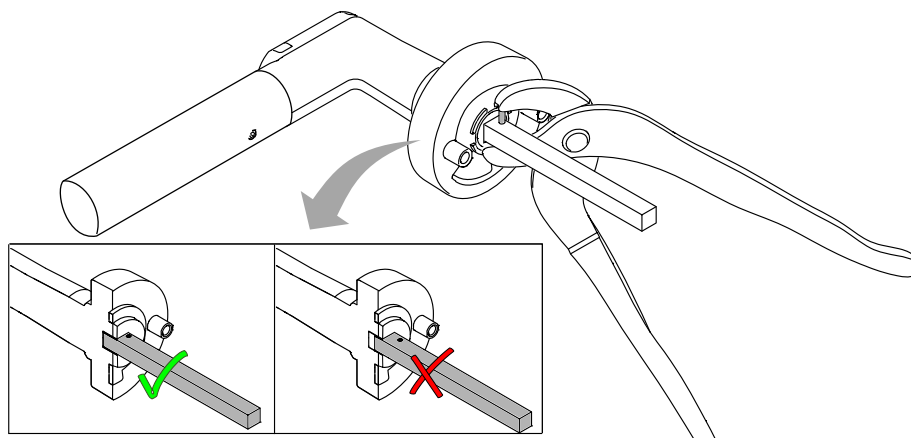
Installation of a Carelock UZ handle

Assembling the spindle

The spindle must be assembled before you can mount Carelock UZ on a door.

Insert the spindle onto the square hole in Carelock UZ. Make sure it is pushed all the way in and *then* insert the spiral clamping pin into the spindle as shown here.

Press the spiral clamping pin all the way in, using adjustable pliers (this is the trickiest part of the installation because of the tiny size of the spiral clamping pin).
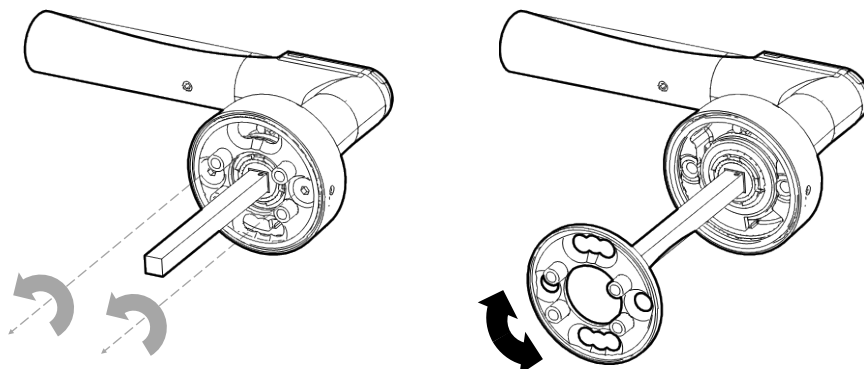
Replace the handle on the outside of the door with Carelock UZ, reusing existing screws.

If the handle is not perfectly horizontal when mounted, you need to adjust the adapter (see below).

Adapter adjustment

If the Carelock UZ is not perfectly in horizontal level when mounted on the door, you may need to adjust the adapter:

Remove the two screws that hold the adapter in place.

Remove the adapter and rotate it slightly in the required direction.

Re-mount the adapter and tighten the screws firmly.

Additional information

Any updates of this guide, as well as an installation guide for TM2 and the configuration app that is required for configuring and testing the ID-Lock UZ system, will be available in https://tunstalldownload.com/carelock/uz.

The name of the configuration app is "Carelock Config Light". It is only available for Android phones, running Android 7 or later.

The easiest way to install the configuration app is to use your Android phone's browser and navigate to the above URL or scan the QR code here. To be able to install the app via your phone's browser, you must first enable installing "unknown apps" (in some phones known as "install from unknown sources").

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