

# MODsense

# User Manual

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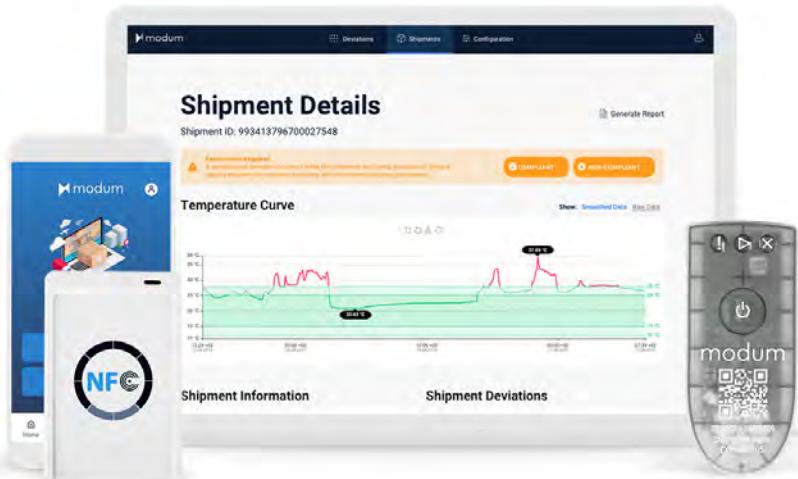
# 1. MODsense Overview

MODsense helps you monitor the temperature of your goods while they are in transit. Adverse environmental conditions can damage pharmaceutical (and other) products if they are exposed to temperatures that are too high or too low. This exposure may make them become ineffective. Here is where we can help.

Monitoring begins in the MODsense dashboard, where you can set up your shipment profiles and specify your monitoring criteria. Here you can also configure automatic alarms that are sent to users by email or by text message.

When your goods are ready to be packed, you can start the MODsense T data logger using an NFC pad or the MODsense mobile application. The logger is then packed with the goods and it starts recording the temperatures using the settings from your shipment profile. When the shipment is received, the data can be read from the logger simply by scanning the shipment ID on the package, meaning that there is no need to open the package.

The data from the logger is now available on the MODsense dashboard, where you can evaluate it to see whether the temperature conditions have been met. With the help of blockchain technology, your data is secure and available for regulatory reporting.



## Related information:

- [MODsense Dashboard \(Page 4\)](#)
- [MODsense T Logger \(Page 24\)](#)
- [MODsense Desktop App \(Page 27\)](#)
- [MODsense Mobile App \(Page 38\)](#)

## 2. MODsense Dashboard

The temperature-monitoring process starts in the MODsense dashboard. If you are the administrator at your company and you are setting up MODsense for the first time, you need to set up your account and then proceed with the initial setup. Otherwise, you can simply set up your account and get started with MODsense.

### 2.1. Account Setup

#### **Prerequisites:**

You have received an email invitation to access the MODsense system.

#### **About this task:**

Before you can work with the MODsense dashboard, desktop app, or mobile app, you need to set up your account so that you can log into the applications.

All of the applications (dashboard, mobile app, and desktop app) use the same login credentials.

#### **Proceed as follows:**

1. Click the link in your email invitation to go to the MODsense account setup screen.
2. Enter your first and last name.
3. Enter and confirm your password.
4. Accept the End User License Agreement and Privacy Declaration by clicking the checkbox.

5. Click *Confirm* to setup your account.

**MODsense Account Setup**

**Personal Information**

First Name: \_\_\_\_\_  
Last Name: \_\_\_\_\_  
Mobile Number: \_\_\_\_\_  
Language: English

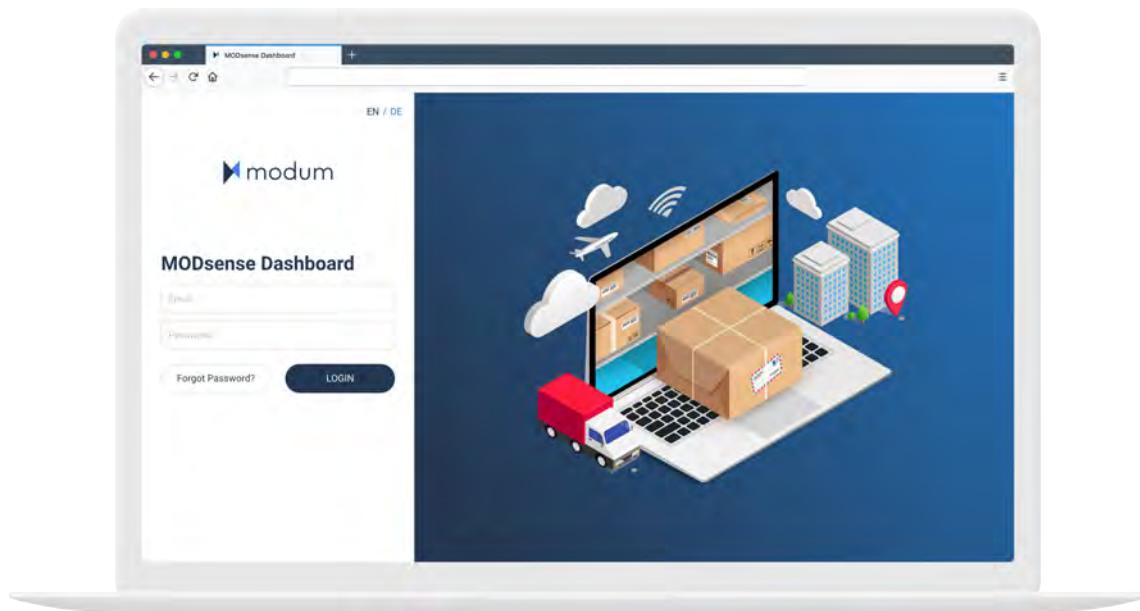
**Set Password**

New Password: \_\_\_\_\_  
Confirm Password: \_\_\_\_\_

I accept the [End User License Agreement](#) and the [Privacy Declaration](#)

**CONFIRM**

6. Enter your email and password on the next page to log in to the dashboard.



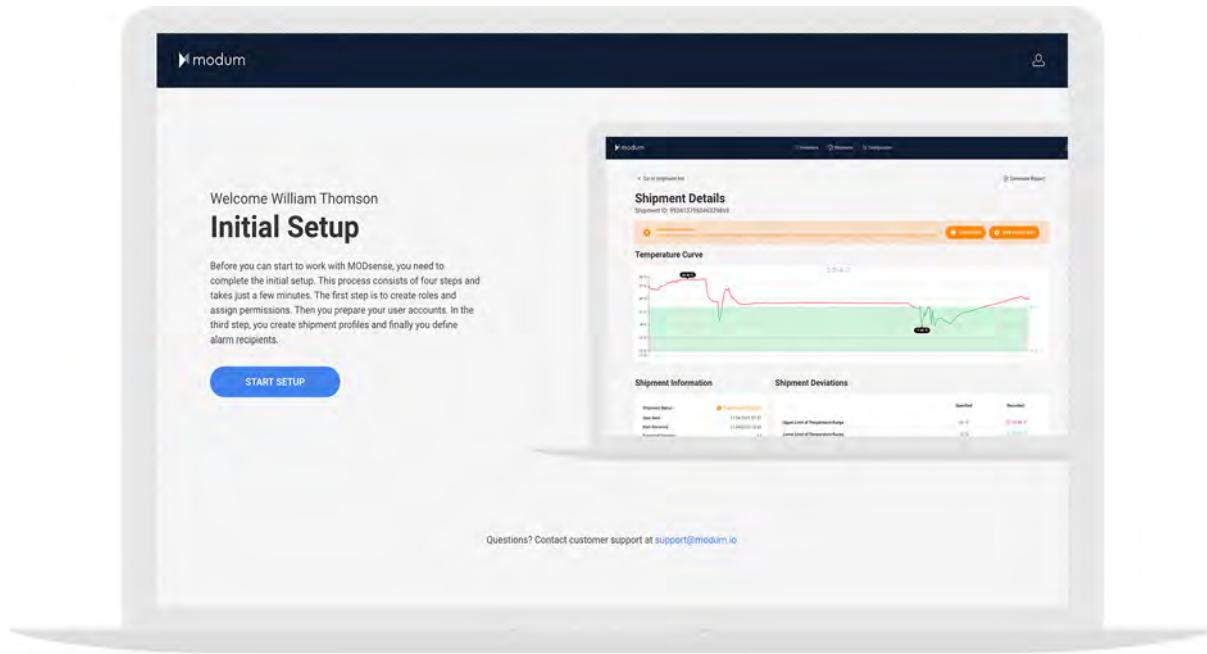
**i Note:**

If you enter your mobile phone number, you can receive alarms via text message. You can add or change your phone number in your user settings at any time.

## 2.2. Initial Setup

### About this task:

As an administrator, you first configure the system.



### Proceed as follows:

1. [Assign Roles and Permissions Page \(Page 7\)](#).
2. [Invite Users to MODsense \(Page 9\)](#).
3. [Set up Shipment Profiles \(Page 10\)](#).
4. [Define Alarm Recipients \(Page 11\)](#).

### Result:

After you have configured these settings, you can change them at any time on the [Configuration](#) tab.

## 2.2.1. Assign Roles and Permissions Page

### About this task:

Access to the functions of the MODsense dashboard, desktop app, and mobile app is controlled by a set of roles and permissions.

By default, there are four roles available in the system:

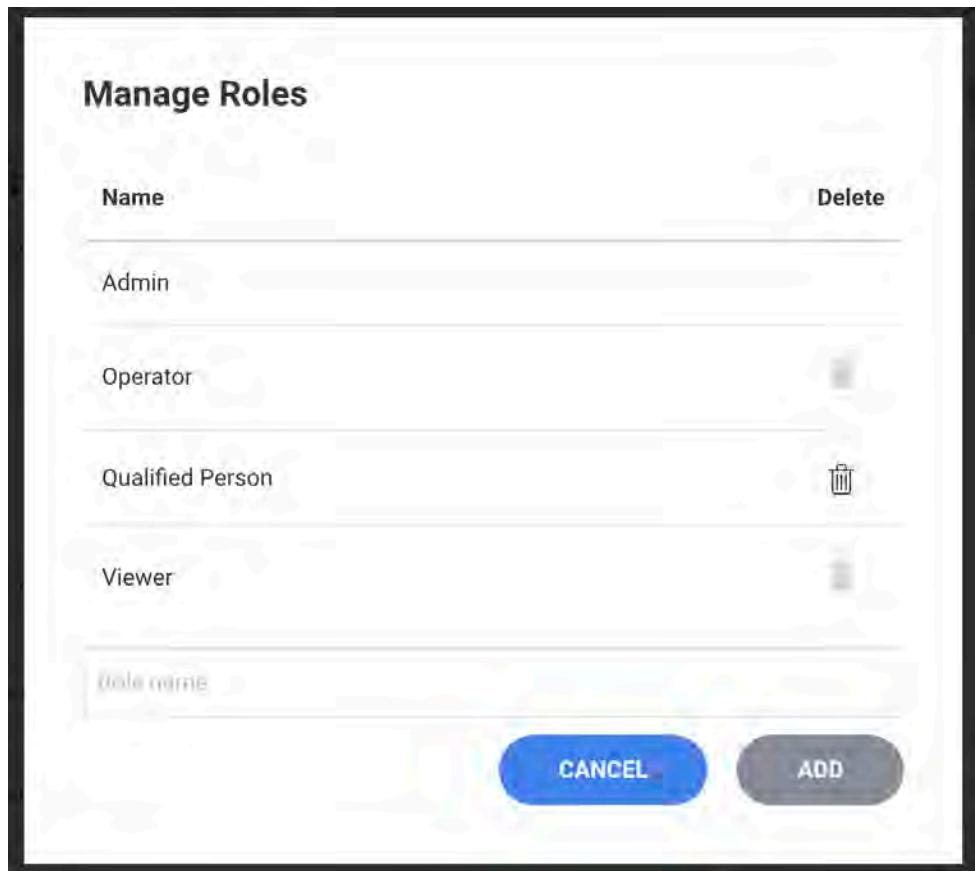
- **Administrators** have full access to all of the functions and features offered by MODsense.
- **Operators** are generally responsible for sending and receiving shipments. They are authorized to start and read the loggers.
- **Qualified persons** review the recorded data on the MODsense dashboard and decide whether a shipment can be accepted.
- **Viewers** can display and export shipments in various data formats.

Each role is associated with a number of permissions, which govern the activities that users with the assigned role can perform. You can add or remove permissions from a role as required, or even create a new role.

### Proceed as follows:

1. Click [Manage Role](#).
2. To add a role:
  - a. Enter a name for your new role.
  - b. Click [Add](#).

c. Click *Add* and close the *Manage Roles* window.



d. Set the checkmarks for each permission that you want to assign to a role.

3. To delete a role, click the trash can next to the name of the role.

**i Note:**

The admin role cannot be changed or deleted. You cannot delete a role if it is assigned to a user. The permissions are predefined by the system. You cannot create your own permissions.

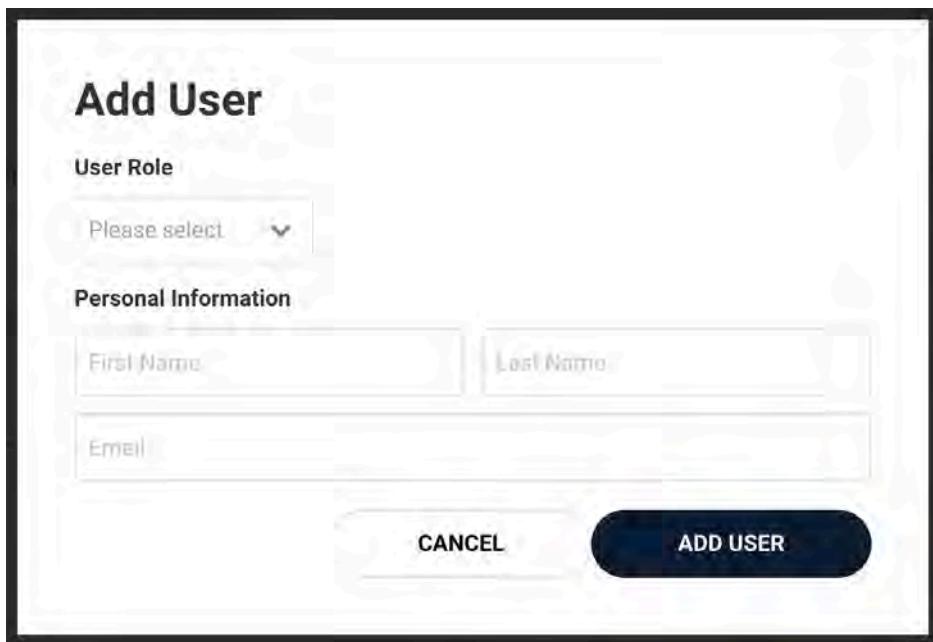
## 2.2.2. Invite Users to MODsense

### About this task:

Everybody who uses the MODsense dashboard, desktop app, or mobile app needs an account. You add users by sending them an account invite.

### Proceed as follows:

1. Click *Add User*.
2. Choose a *User Role*.
3. Enter the email address of the person you want to invite.
4. Click *Add User*.



### Result:

The persons you have invited automatically receive an email with a link they can click to set up their account. As soon as a user has set up an account, the user status changes from *Pending invite* to *Active*.

## 2.2.3. Set up Shipment Profiles

### About this task:

Shipment profiles contain the parameters, alarm criteria, and other settings that can be applied to a shipment. They are usually defined by the qualified persons responsible for ensuring that the temperature range is maintained during transit.

When the logger is started, the operator or picker assigns the shipment profile to the logger and to the package that is to be shipped.

### Proceed as follows:

1. Shipment Profile Name: Enter a unique name for the shipment profile.
2. Temperature Range: Specify the upper and lower limits of the temperature range.
3. Recording Interval: Specify how many times per minute the temperature should be recorded.
4. Expected Maximum Transport Duration: Specify the expected maximum transport duration of the shipment.
5. Define advanced settings:
  - Deviation alarms: Set the values for permissible deviations
  - Measurement Characteristics: Initial recording delay and outlier smoothing
6. Temperature Deviation Indication: Specify whether the alarm is displayed on the logger, and/or in the mobile app after the data has been read (see [LED Patterns \(Page 24\)](#)).
7. Save your settings.

### Result:

Once you have set up a shipment profile, it is listed under [Shipment Profiles](#) on the [Configuration](#) tab. The shipment profile is then also available in the desktop and mobile app for sending shipments. There you will also find the associated QR code, which you can print out and use when sending shipments with the MODsense desktop app (see [Send and Receive Shipments \(Page 27\)](#)).

## 2.2.4. Define Alarm Recipients

### About this task:

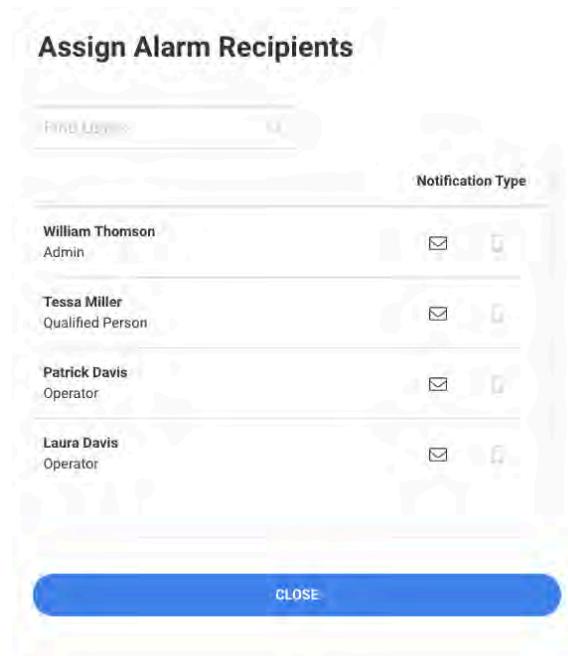
If a shipment deviation occurred, you can arrange for appointed users to be notified. The users are notified by email or text message. All active shipment profiles are listed. Alarm recipients and alarm types can be assigned to each shipment profile.

### Proceed as follows:

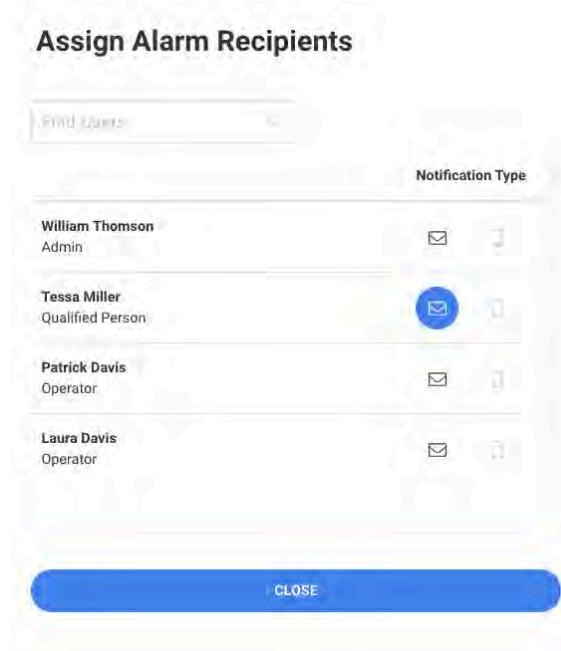
1. Click the configuration symbol of the shipment profile to which you want to add one or more alarm recipients.

Shipment Profiles	Alarm Recipients	Configuration	Details
Ambient	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cold	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

2. Find the user you want to activate as an alarm recipient.



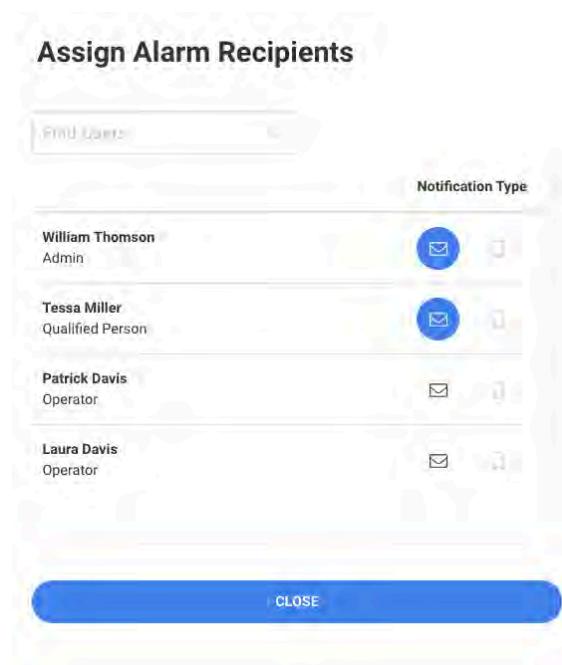
3. By clicking the respective alarm type symbol, you can determine whether this user will be notified by text message and/or email. The selected alarm types will be highlighted blue.



** Note:**

The text message alarm symbol will be inactive and grayed out if no mobile phone number was entered in the user profile. More information can be found at [User Accounts \(Page 21\)](#).

4. If desired, add more alarm recipients.



5. Click *Close*.

### Result:

Click the arrow symbol to review the current configuration.

Shipment Profiles	Alarm Recipients	Configuration	Details
Ambient	2	<input checked="" type="checkbox"/>	
Cold	2	<input checked="" type="checkbox"/>	
	<b>Notification Type</b>  <b>Alarm Recipients</b> Tessa Miller, William Thomson		

#### Note:

The system only sends notifications to active user profiles. Users with pending invitations do not receive alarms.

Deactivated alarms increase the risk of undetected shipment deviations.

## 2.3. Shipment Monitoring

The MODsense dashboard helps you to keep track of your shipments. You can use it to monitor the shipments in your company, and it enables you to investigate shipments for which a temperature deviation has been recorded.

### 2.3.1. Deviations

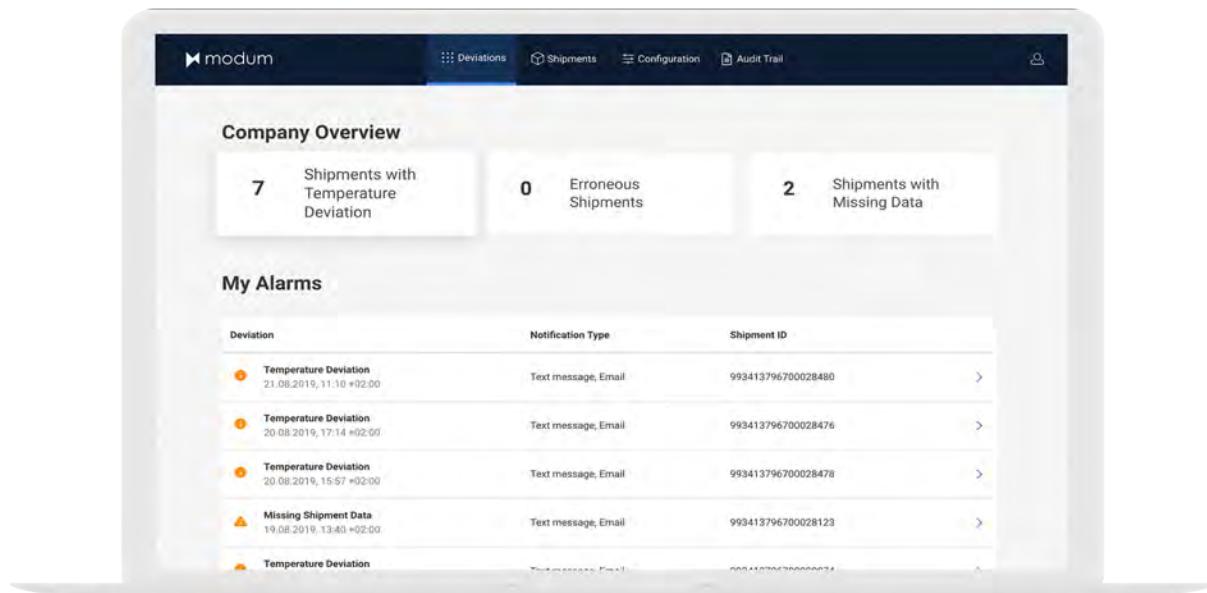
Deviations are defined as shipments whose recorded temperatures are outside the temperature range specified in the shipment profile in addition to shipments with erroneous data or exceeded transport duration.

At the top of the *Deviations* tab, all of the deviations are shown. These are grouped according to the following criteria:

- Shipments with temperature deviation
- Erroneous shipments
- Shipments with missing data

You can click on any of these areas to access the shipments list filtered according to these criteria.

In addition, you can see your personal alarms at the bottom of the page and click on any alarm to see the corresponding shipment details page.



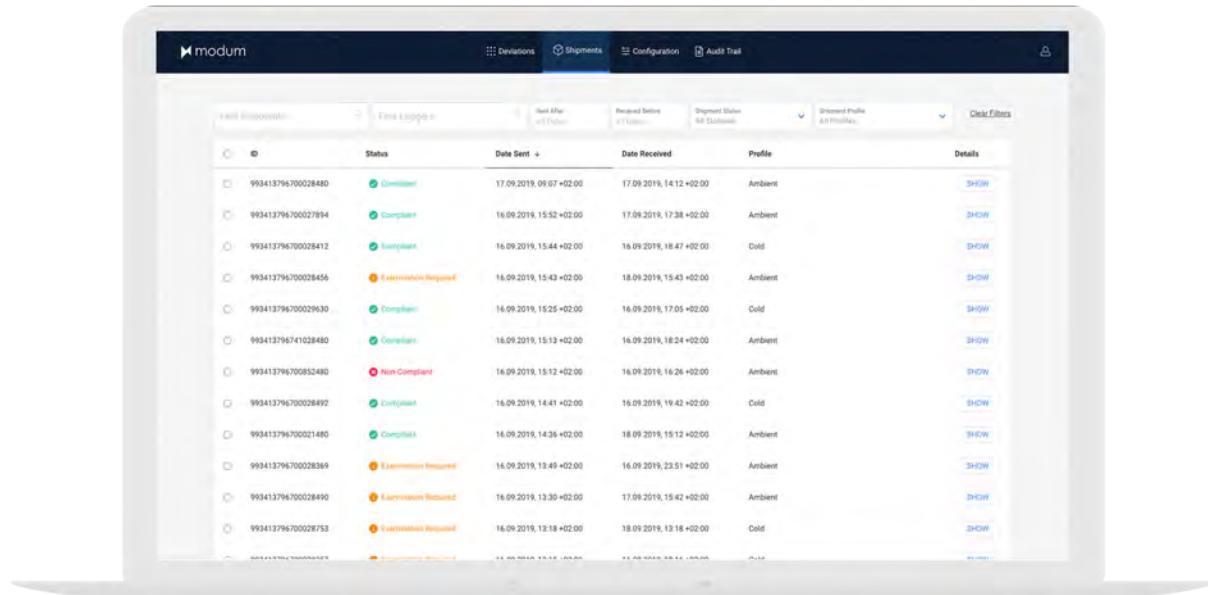
The screenshot shows the MODsense dashboard interface. At the top, there is a navigation bar with links for 'Deviations', 'Shipments', 'Configuration', and 'Audit Trail'. Below the navigation bar, the 'Company Overview' section displays three categories: 'Shipments with Temperature Deviation' (7), 'Erroneous Shipments' (0), and 'Shipments with Missing Data' (2). The 'My Alarms' section below shows a table of five alarms, each with a timestamp, notification type, and shipment ID. The alarms are: 1. Temperature Deviation (21.08.2019, 11:10 +02:00), 2. Temperature Deviation (20.08.2019, 17:14 +02:00), 3. Temperature Deviation (20.08.2019, 15:57 +02:00), 4. Missing Shipment Data (19.08.2019, 13:40 +02:00), and 5. Temperature Deviation (19.08.2019, 13:40 +02:00).

Deviation	Notification Type	Shipment ID
Temperature Deviation 21.08.2019, 11:10 +02:00	Text message, Email	993413796700028480
Temperature Deviation 20.08.2019, 17:14 +02:00	Text message, Email	993413796700028476
Temperature Deviation 20.08.2019, 15:57 +02:00	Text message, Email	993413796700028478
Missing Shipment Data 19.08.2019, 13:40 +02:00	Text message, Email	993413796700028123
Temperature Deviation 19.08.2019, 13:40 +02:00	Text message, Email	993413796700028123

## 2.3.2. Shipments

Shipment details provide you with a range of in-depth data on shipments that are in progress or that have been completed. They can be used for information purposes or as a basis for taking corrective or follow-up action.

### Shipment List

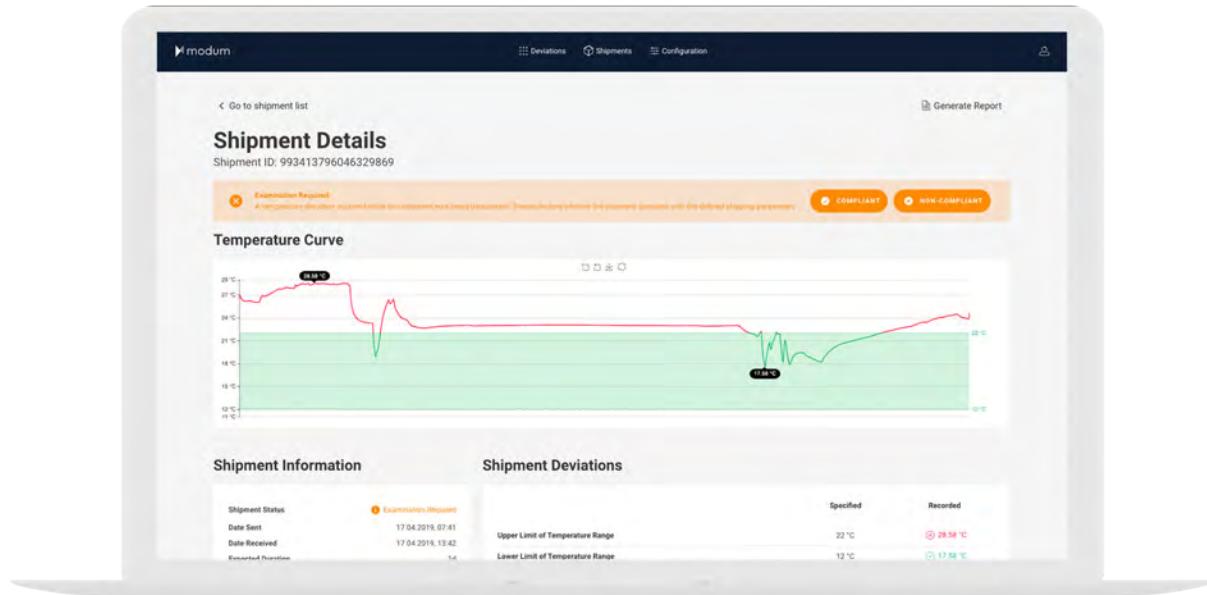


Shipment ID	Status	Date Sent	Date Received	Profile	Details
993413796700028480	Compliant	17.09.2019, 09:07 +02:00	17.09.2019, 14:12 +02:00	Ambient	<a href="#">SHOW</a>
993413796700027894	Compliant	16.09.2019, 15:52 +02:00	17.09.2019, 17:38 +02:00	Ambient	<a href="#">SHOW</a>
993413796700028412	Non-Compliant	16.09.2019, 15:44 +02:00	16.09.2019, 18:47 +02:00	Cold	<a href="#">SHOW</a>
993413796700028456	Examination Requested	16.09.2019, 10:43 +02:00	18.09.2019, 15:43 +02:00	Ambient	<a href="#">SHOW</a>
993413796700029630	Compliant	16.09.2019, 15:25 +02:00	16.09.2019, 17:05 +02:00	Cold	<a href="#">SHOW</a>
993413796741028480	Compliant	16.09.2019, 15:13 +02:00	16.09.2019, 18:24 +02:00	Ambient	<a href="#">SHOW</a>
993413796700852480	Non-Compliant	16.09.2019, 15:12 +02:00	16.09.2019, 16:26 +02:00	Ambient	<a href="#">SHOW</a>
993413796700028492	Compliant	16.09.2019, 14:41 +02:00	19.09.2019, 19:42 +02:00	Cold	<a href="#">SHOW</a>
993413796700021480	Compliant	16.09.2019, 14:36 +02:00	18.09.2019, 15:12 +02:00	Ambient	<a href="#">SHOW</a>
993413796700028369	Examination Requested	16.09.2019, 13:49 +02:00	16.09.2019, 23:51 +02:00	Ambient	<a href="#">SHOW</a>
993413796700028490	Examination Pending	16.09.2019, 13:30 +02:00	17.09.2019, 15:42 +02:00	Ambient	<a href="#">SHOW</a>
993413796700028753	Examination Requested	16.09.2019, 13:18 +02:00	18.09.2019, 13:18 +02:00	Cold	<a href="#">SHOW</a>

The [Shipments](#) area of the dashboard lists all of the shipments for your company. Here, you can view the most important data such as the shipment status, ID, dispatch and receipt dates, and the shipment profile that was applied.

You can also filter this list by date, shipment status, and shipment profile, or you can search for a specific shipment ID in the [Find Shipments](#) box. It is also possible to search the shipment list by the loggers's MAC address.

## Shipment Details



You can access the shipment details in any of the following ways:

- Click *Deviations* and, under *My Alarms*, click the entry for which you require more details.

**i Note:**

You can see only the alarms you have been notified about.

- Click *Deviations* and one of the options under *Company Overview* to access the list of shipments. Then click *Show* to view the details of the shipment in which you are interested.
- Click *Shipments* to access an unfiltered list of shipments, and then click *Show* for the shipment you are interested in.

The information on the *Shipment Details* screen depends on the status of the shipment and on your user role.

### 2.3.2.1. Shipment Statuses

A shipment can have any of the following statuses:

- **Compliant**

All the parameters defined in the shipment profile were adhered to or the status has been changed by the user.

- **Non-Compliant**

Certain parameters defined in the shipment profile were violated. The violated parameters are indicated in the *Shipment Deviations* section. This status can be set by the user only.

- **In Transit**

While a shipment is in transit, the temperature curve is not displayed, and no data is shown in either the shipment deviations or the shipment statistics.

- **Examination Required**

Due to a temperature deviation while the shipment was being transported, you are required to set the shipment status to *Compliant* or *Non-Compliant*.

- **Missing Data**

The expected shipment duration has exceeded but the logger data has not been read. You can change the shipment status to *Missing Data Acknowledged*.

- **Missing Data Acknowledged**

Shipment data is unavailable. This status can only be set by the user. If the shipment data arrives at a later point in time, the status will be updated automatically.

- **Erroneous**

A problem with the logger has occurred, which requires the attention of customer support. You can change the shipment status to *Error Acknowledged*.

- **Error Acknowledged**

Shipment data is unavailable. This status can only be set by the user.

### 2.3.2.2. Shipment Deviation Handling

Shipment deviations need to be manually reviewed in the MODsense dashboard. All shipments with deviations are shown in the *Deviations* page. An orange banner with a corresponding deviation message is displayed on the shipment details page.

#### Shipments with temperature deviations

Shipments with temperature deviations display a status of 'Examination Required'. These shipments have to be investigated and declared compliant or non-compliant. The shipment compliance can be declared using the buttons in the orange banner on the shipment details page. After declaring the compliance, the orange banner disappears and the shipment is no longer displayed on the *Deviations* page.

#### Proceed as follows:

1. Click the corresponding button in the orange banner.



2. Enter the reason for your selection and if your company requires additional verification for this step, then you will need to enter in your individual pin as well.

#### Declare Compliance

A screenshot of a 'Declare Compliance' form. It features a text input field with placeholder text 'Add reason...'. Below it is a 'Verification PIN' field with the instruction 'Please verify your identity with your PIN for security reasons' and a series of six empty input fields for entering digits. To the right of the PIN field is a 'COMPLIANT' button.

3. Click the button to confirm your entry.

#### **i** Note:

The indication of conformity relates to the defined parameters in the shipment profile.

## Shipments with temperature deviations

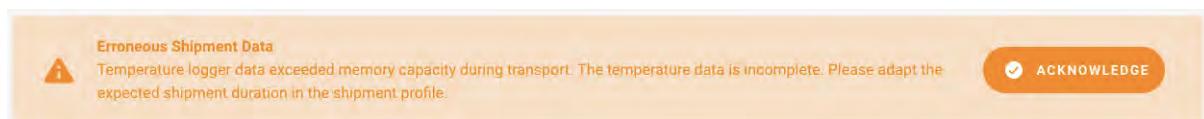
Shipments with missing shipment data will have a status of 'Missing Data'. These shipment deviations can be confirmed in the orange banner on the shipment details page. After confirming the missing shipment data, the shipment is no longer displayed on the [Deviations](#) page. If the shipment data arrives in the system at a later time, the shipment status is automatically updated.



## Shipments with erroneous data

Shipments with erroneous shipment data are set to a status of 'Erroneous'. This status is a fallback scenario and should never occur. Please contact us at [support@modum.io](mailto:support@modum.io) if this case occurs.

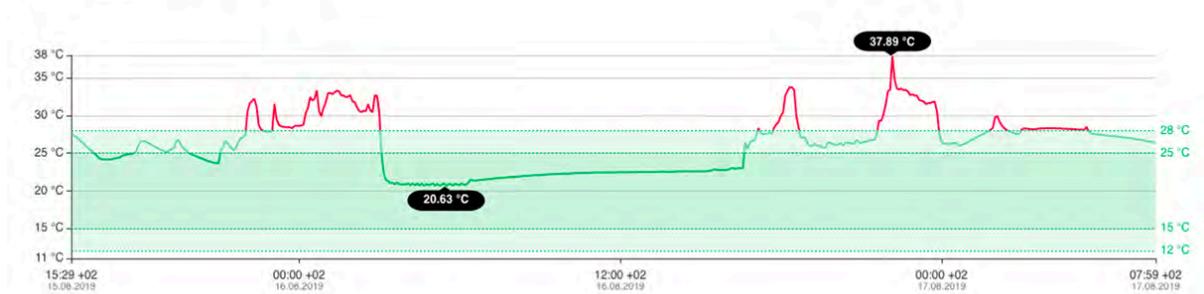
The shipment is no longer displayed on the [Deviations](#) page after acknowledging the erroneous shipment data.



### 2.3.2.3. Temperature Curve

The temperature curve is a graphical representation of the temperature variations that occur during a shipment.

#### Temperature Curve



If the temperature remains within the defined temperature range, the curve is green. As soon as the defined temperature range is violated, the curve turns red. It turns green

again if the temperature returns to within the defined temperature range.

If the *Outlier Smoothing* option has been activated in the shipment profile, you can choose between the views *Smoothed Data* and *Raw Data*:

- **Smoothed Data**

Alarm criteria are based on a moving average of the specified number of readings. This has the effect that single outliers have a reduced impact on the assessment of deviations.

- **Raw Data**

This view shows all of the recorded temperature readings.

 **Note:**

For shipments sent by Swiss Post, the temperature curve and events from the «Track consignments» online service are shown in the graph. The events are also listed in the change & comments log.

#### 2.3.2.4. Change & Comments Log

If your user role contains the permission *Add Comments*, you can enter comments on a given shipment in the Change & Comments Log. The log also shows shipment status updates that are generated automatically by the system.

 **Note:**

The entries in the Change & Comments Log cannot be edited or deleted.

#### 2.3.2.5. Reports

If you want to generate a report (for example, for regulatory reporting), you can do so by clicking *Generate Report* on the *Shipment Details* screen. The report contains all of the information from the shipment, and you can choose whether to include entries from the Change & Comments Log.

You can generate reports in PDF, CSV, or Microsoft Excel format.

### 2.3.3. Configuration

The *Configuration* area of the dashboard allows administrators to change the system setup.

#### Shipment Profiles

The *Shipment Profiles* tab lists all of the shipment profiles that are available in the system. From here, you can add, edit or delete profiles, view the details of each profile, and print the QR code to use with the desktop app (see [Send and Receive Shipments \(Page 27\)](#)).

 **Note:**

You cannot reinstate a shipment profile after having deleted it. You can delete a shipment profile at any time.

All shipment profile names must be unique regardless of whether they are active or have been deleted. For this reason, you cannot reuse the name of a deleted shipment profile.

#### Alarm Recipients

On the *Alarm Recipients* tab, you can specify which users receive an alarm if the parameters in a shipment profile are violated. Users can receive an alarm by email, and if they have entered a mobile phone number in their user profiles, they can also receive an alarm by text message.

#### User Accounts

The *User Accounts* area allows you to manage the user's data in your organization. For example, you can change a user's role, name, or email address. You can also delete and reactivate users or revoke passwords from here.

The overview page shows the status of each user: "active" users have accepted their email invitation, whereas "pending invite" users have received the invitation but did not set up their account yet.

#### Roles and Permissions

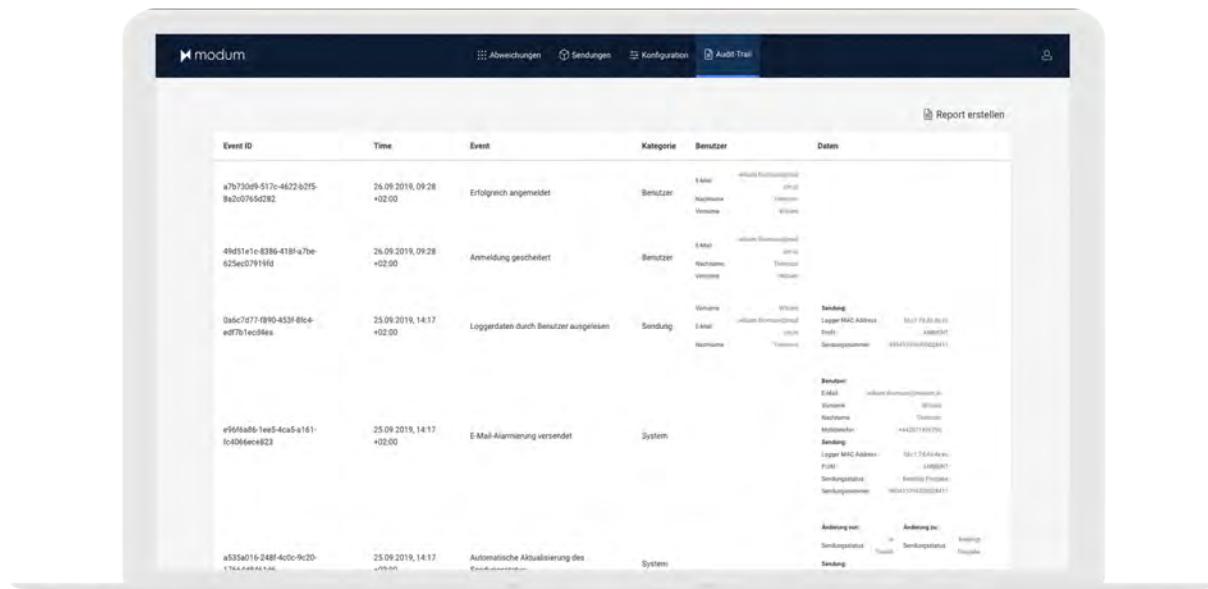
The *Roles and Permissions* tab allows you to manage the roles and permissions that are available in your system. For more information, see [Assign Roles and Permissions Page \(Page 7\)](#).

## Custom Fields

The *Custom Fields* area allows you to manage the custom fields in your organization. You can add new or change existing fields. Custom fields are shown as "Additional Information" on all shipment details pages and in shipment reports. Users with 'List All Shipments' and 'List Received Shipments' permission can add data to the custom fields on shipment details pages.

### 2.3.4. Audit Trail

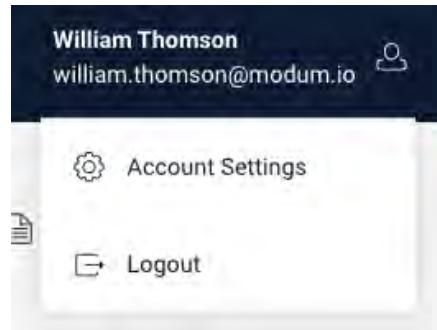
All actions and events are listed in the audit trail. Each entry is displayed with a unique identification number, time stamp, event, category, and changed data. As an administrator, you can view the audit trail and generate a report in CSV format.



Event ID	Time	Event	Kategorie	Benutzer	Daten
a7b730d9-517c-4622-b2f5-9a2c0765d292	26.09.2019, 09:28 +02:00	Erfolgreich angemeldet	Benutzer	E-Mail: <a href="mailto:admin@modumsoft.de">admin@modumsoft.de</a> Name: <a href="#">Modumsoft</a> Vorname: <a href="#">Modumsoft</a>	
49d51e1c-8386-418f-a7be-625ec07911fd	26.09.2019, 09:28 +02:00	Anmeldung gescheitert	Benutzer	E-Mail: <a href="mailto:admin@modumsoft.de">admin@modumsoft.de</a> Name: <a href="#">Modumsoft</a> Vorname: <a href="#">Modumsoft</a>	
0a6c7d77-f990-453f-8164-edf7e1e04ea	25.09.2019, 14:17 +02:00	Loggertaten durch Benutzer ausgelesen	Sendung	E-Mail: <a href="mailto:admin@modumsoft.de">admin@modumsoft.de</a> Name: <a href="#">Modumsoft</a> Vorname: <a href="#">Modumsoft</a>	Teilung: Logger MAC Address: 00:17:78:81:81:01 Endt: 10.10.2019 00:00:00 Sendungsnummer: 190421190000022441
e96faab6-1ee5-4ca5-a161-04d96ee823	25.09.2019, 14:17 +02:00	E-Mail-Alarmierung versendet	System		Benutzer: E-Mail: <a href="mailto:admin@modumsoft.de">admin@modumsoft.de</a> Name: <a href="#">Modumsoft</a> Vorname: <a href="#">Modumsoft</a> Mobilefon: +442074001795 Fax: +442074001796 Logger MAC Address: 00:17:78:81:81:01 PLZ: 10000 Sendungsstatus: <a href="#">Fertig Prozess</a> Sendungsnummer: 190421190000022441
a535a016-248f-4c0c-9c20-1162a7a911a2	25.09.2019, 14:17 +02:00	Automatische Aktualisierung des	Sendung		Aenderung von: <a href="#">Sendungsstatus</a> zu <a href="#">Sendungsstatus</a> Aenderung zu: <a href="#">Sendungsstatus</a>

## 2.4. Account Settings

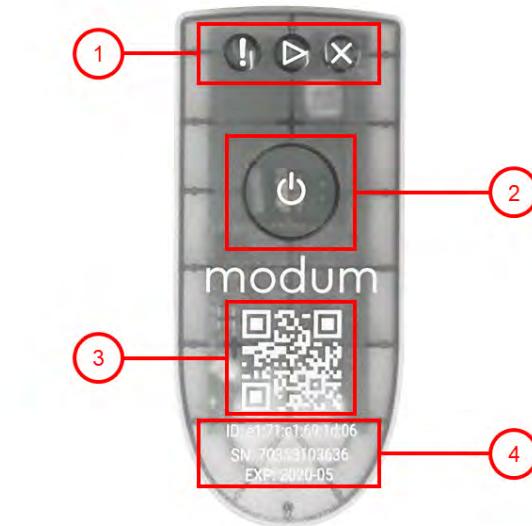
You can access your account settings by clicking the profile icon at the top right of the screen.



In your account settings, you can change your first name, last name, and mobile phone number. You can also select your preferred language and change your password.

## 3. MODsense T Logger

The MODsense T logger consists of four main areas:



1. Three LED lights indicate the operating status, conformity with set conditions, and the logger status. For more information about the meaning of each LED, see [LED Patterns \(Page 24\)](#).
2. Wake-up button
3. QR code used when sending a shipment via the mobile app. For more information, see [Send Shipment \(Page 38\)](#).
4. Data about the logger itself, such as its unique ID and expiry date.

### Related information:

[LED Patterns \(Page 24\)](#)  
[Technical Data \(Page 53\)](#)  
[Compliance Statements \(Page 57\)](#)

### 3.1. LED Patterns

Under normal circumstances, the LEDs on the logger are switched off. When the logger has been activated or when you press the wake-up button, the following LED patterns can be shown on the logger.

 **Note:**

If you press the wake-up button, all three LEDs flash briefly. If this is not the case, please return the logger to Modum.

Pattern	Status	Meaning
 (2 minutes)	Ready for synchronization	If the logger is in standby and you press the wake-up button, the middle LED flashes green for two minutes. During this time the logger is waiting to be activated via Bluetooth. If it is not activated, the logger returns to standby.
 (10 seconds)	Logger successfully activated	All three LEDs flash for 10 seconds. The logger has been successfully activated and will start recording after the defined delay.
 (5 seconds)	Temperature logging	If you press the wake-up button and the middle LED lights up green for 5 seconds, the logger is recording the temperature. Either no temperature deviation has been detected or the temperature deviation alarm has been disabled.
 (5 seconds)	Temperature deviation	If you press the wake-up button and the left and middle LEDs light up red and green respectively for five seconds, temperature deviations have been recorded.
 (5 seconds)	Error or low battery	If you press the wake-up button and the middle and right LEDs light up green and red respectively for five seconds, there is an error with the logger. For example, the memory may be full or the battery may be low.
 (5 seconds)	Temperature deviation and error	If you press the wake-up button and all LEDs light up for five seconds, temperature deviations have been detected and there is an error with the logger.
 (5 seconds)	Power saving	If you press the wake-up button and the right LED lights up red for five seconds, the logger has switched to power-saving mode. It does so whenever the temperature drops below freezing.

OOO

Return logger

If you press the wake-up button and none of the three LEDs flashes or lights up, the battery is empty. Please return the logger to Modum.

 **Note:**

The logger LEDs are indicative only. They should not be used as the basis for your process decisions.

## 4. MODsense Desktop App

You can send and receive shipments and see latest activities using the MODsense desktop app, which is available from the modum Help Center at <https://support.modum.io>

 **Note:**

If you are a Swiss Post customer, you will only need to take care of starting the loggers (4.1.1). The Swiss Post will read out the loggers for you when the shipment arrives at the final destination.

### 4.1. Send and Receive Shipments

**Prerequisites:**

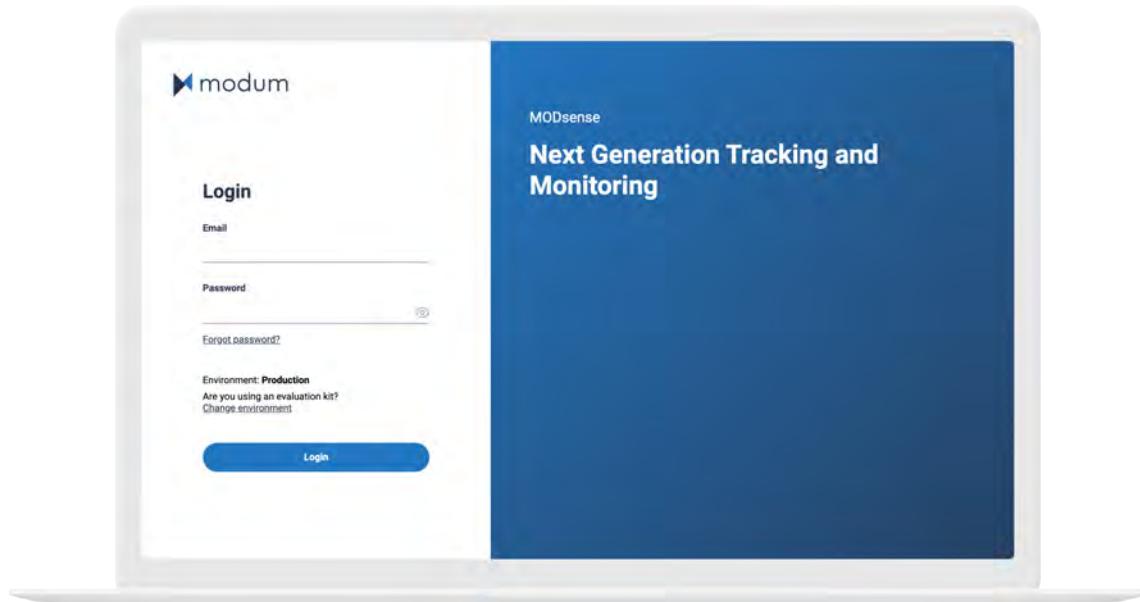
- You have downloaded the MODsense desktop app from the modum Help Center at <https://support.modum.io>
- You have a suitable NFC pad.
- You have turned on bluetooth.
- You have a suitable barcode scanner. (optional)
- You have printed out the QR code for the shipment profile. (optional)
- Your MODsense desktop app is connected to the internet.

 **Note:**

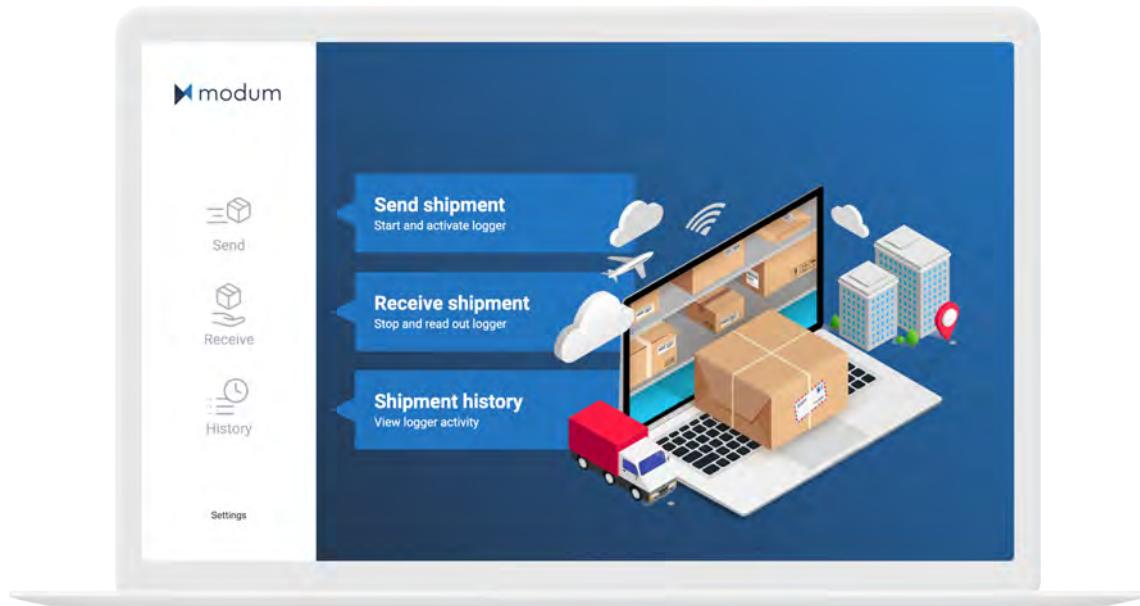
Please do not leave loggers on the NFC pad after usage as it will shorten battery live.

**Proceed as follows:**

1. Log on to the MODsense desktop app.

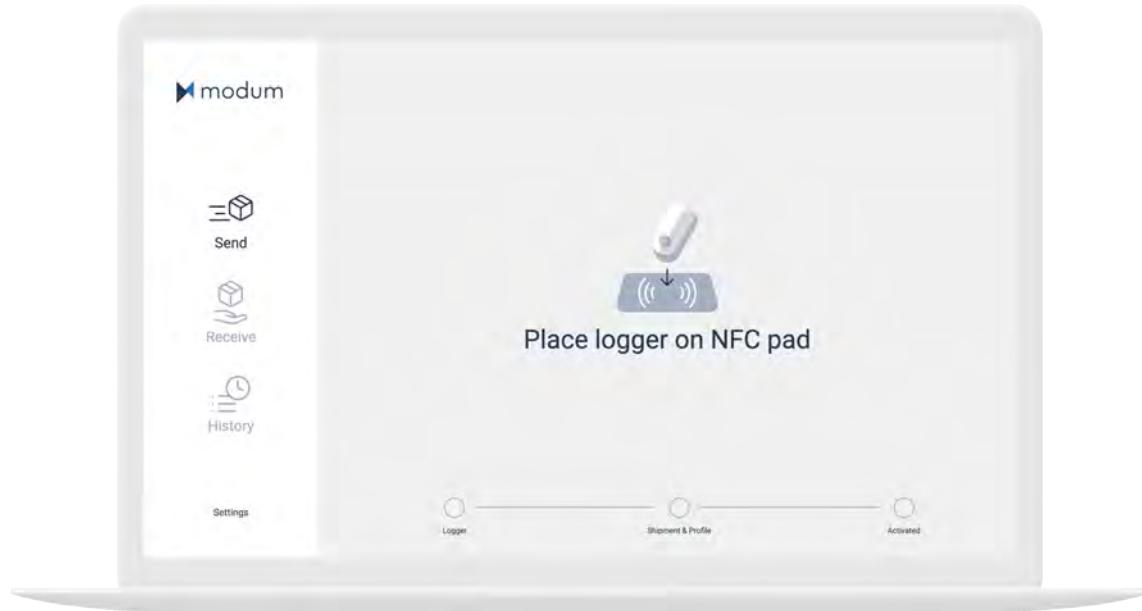


2. Click on *Send*, *Receive* or *History* in the navigation on the left side.



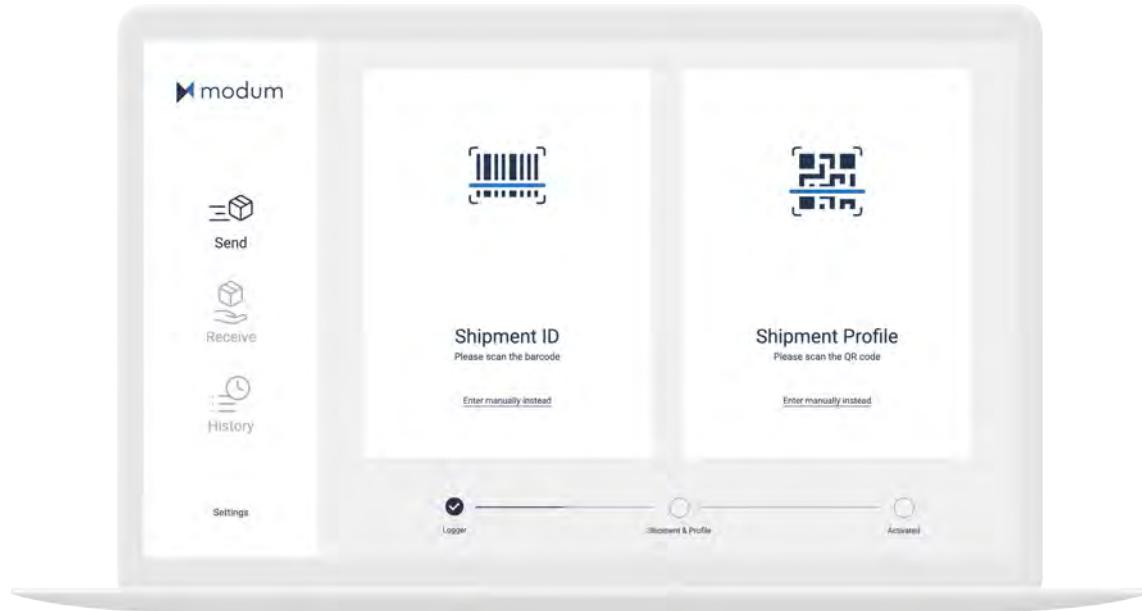
#### 4.1.1. Send

1. Place the logger on the NFC pad.

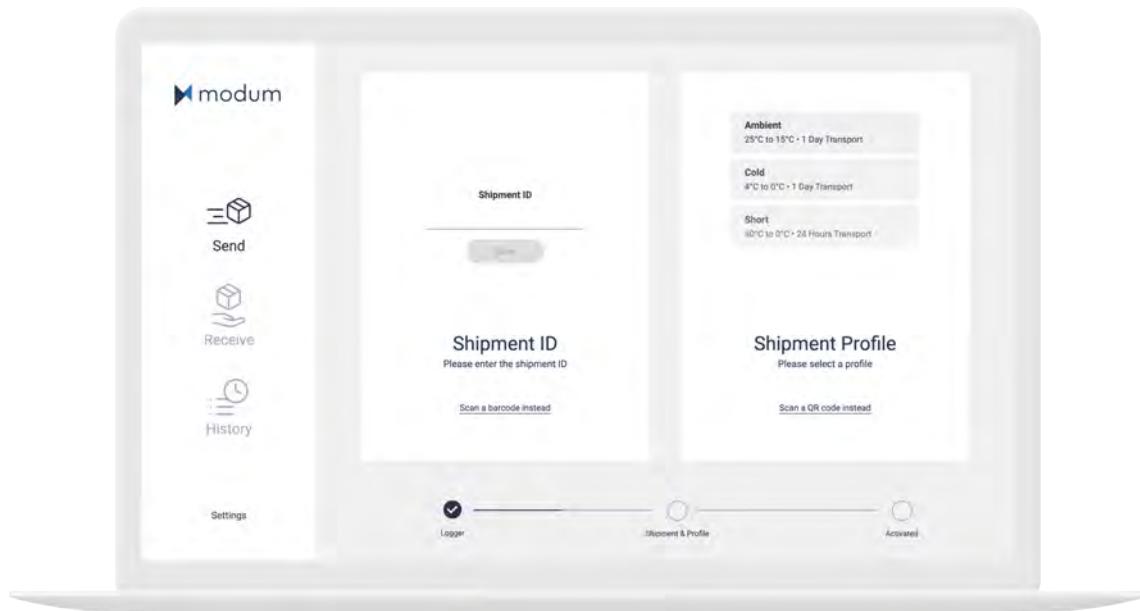


2. Scan the shipment ID on the package or enter it manually. (The shipment ID on the package contains the barcode with the tracking number of the logistics provider.)

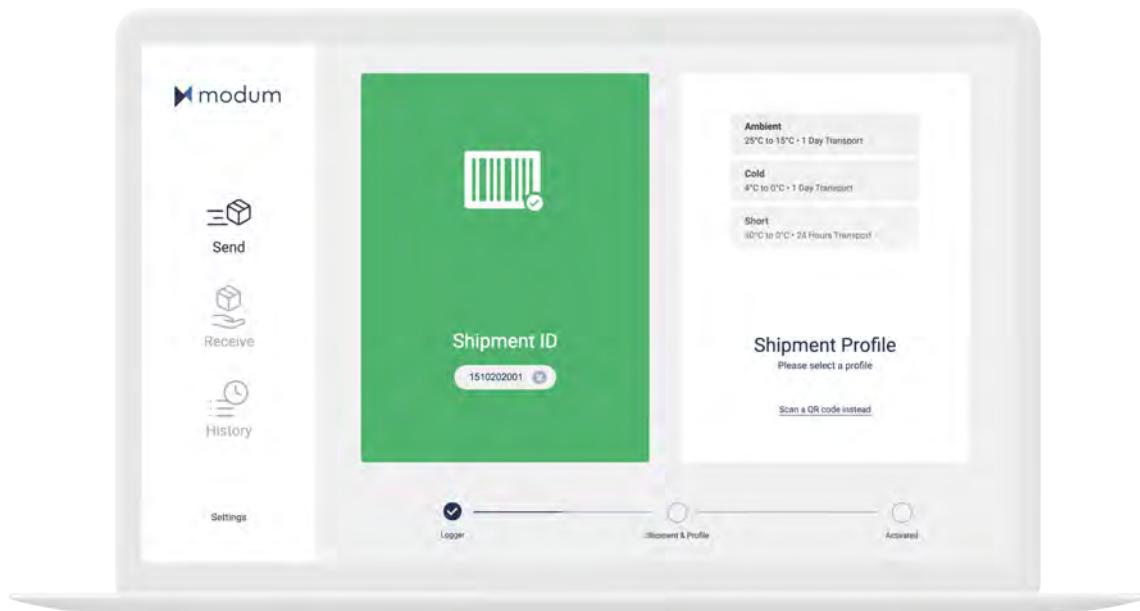
Scan shipment ID:



Enter manually:



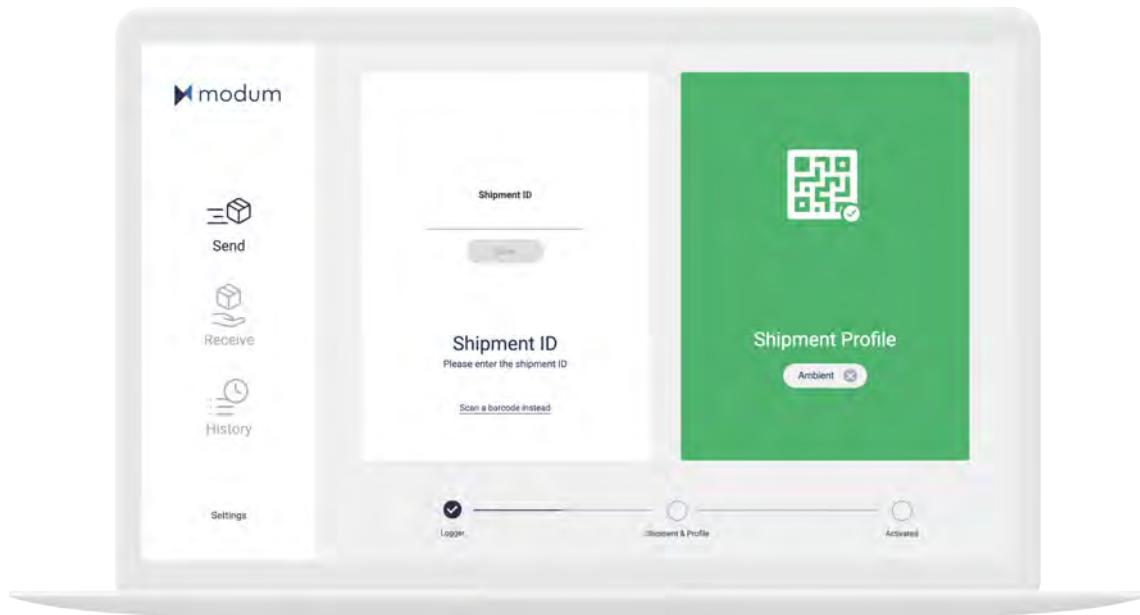
The left side of the screen turns green indicating that the shipment ID was scanned or entered successfully.



3. Scan the QR code of the shipment profile or choose the shipment profile from the list.

The right side of the screen turns green indicating that the shipment profile has

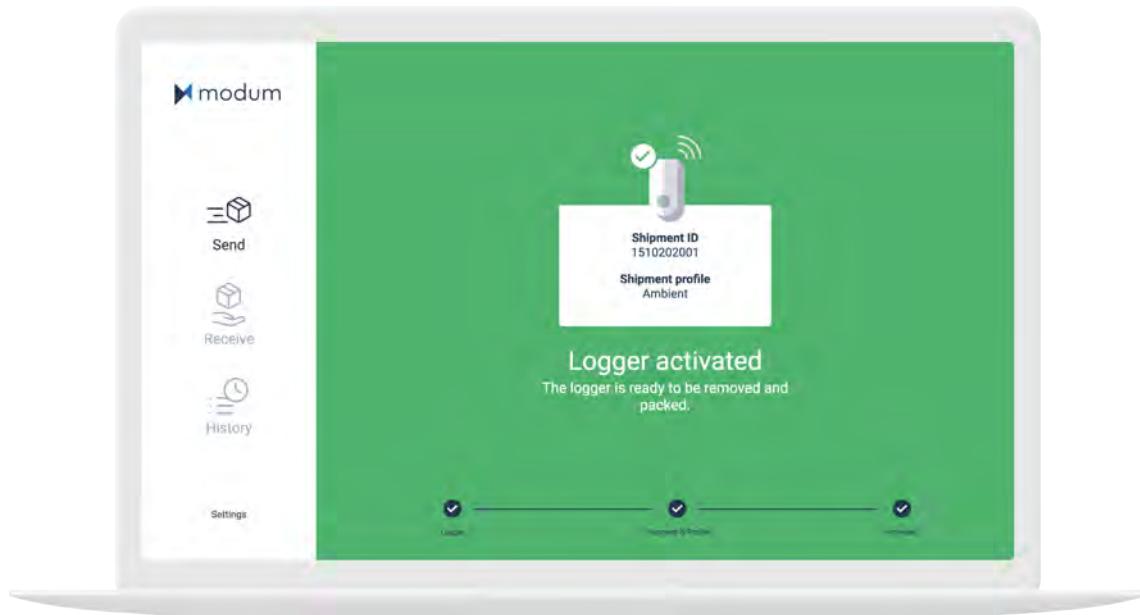
been entered successfully.



The desktop app checks the logger's battery level and its expiry date before the logger is activated. This ensures that the battery power is sufficient for the planned shipment duration and that the logger's expiry date will not exceed. In case the battery is too low, an error message is displayed.

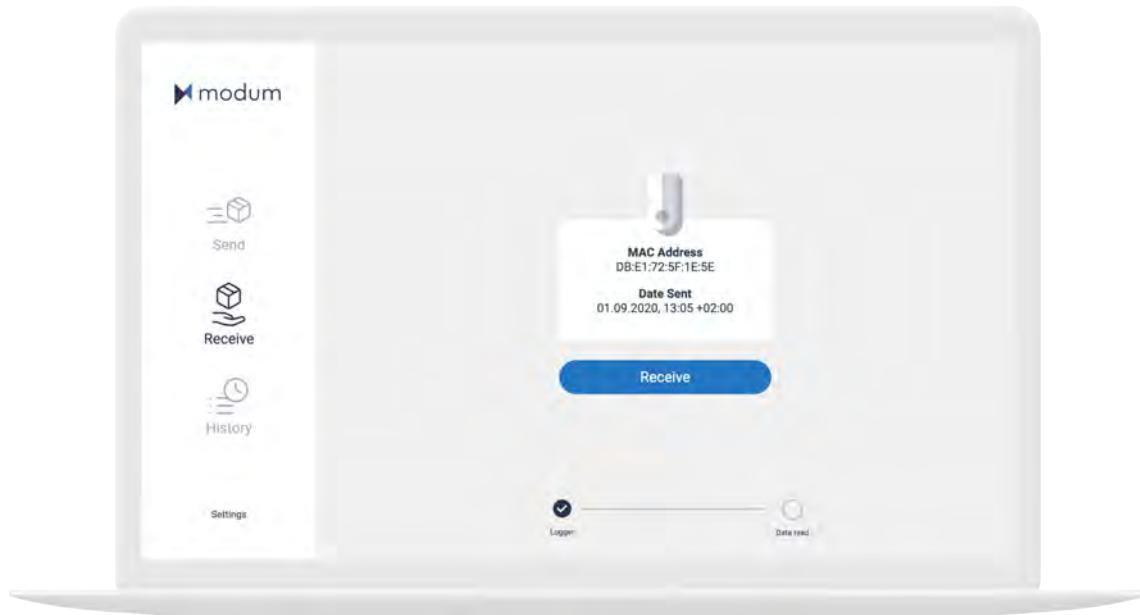
The logger activation starts automatically after your confirmation.

4. The logger is now activated and can be packed.

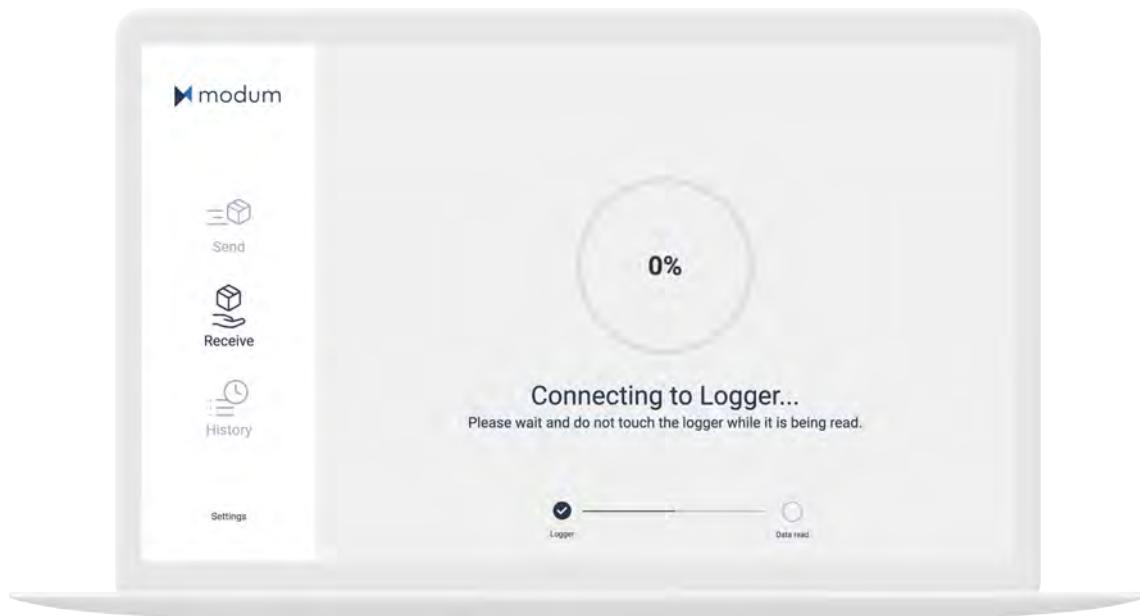


## 4.1.2. Receive

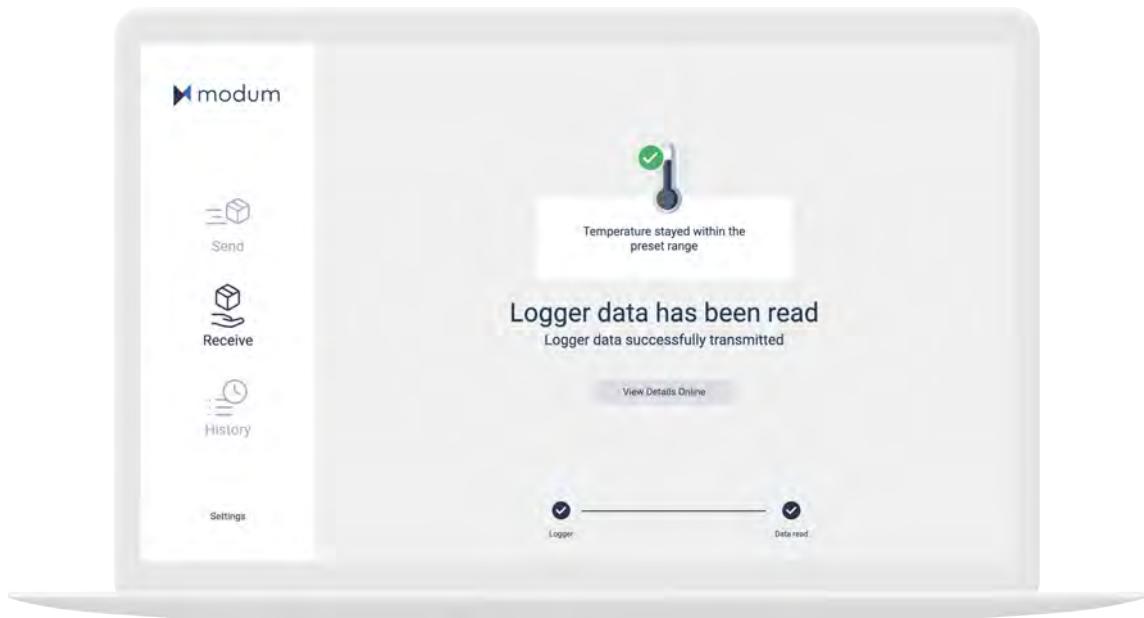
1. Place the logger on the NFC pad and confirm with *Receive*.



2. Wait until the logger has been completely read out.



3. The logger has been read and can be reused. Click on *[View Details Online](#)* to get more information about the recorded data.

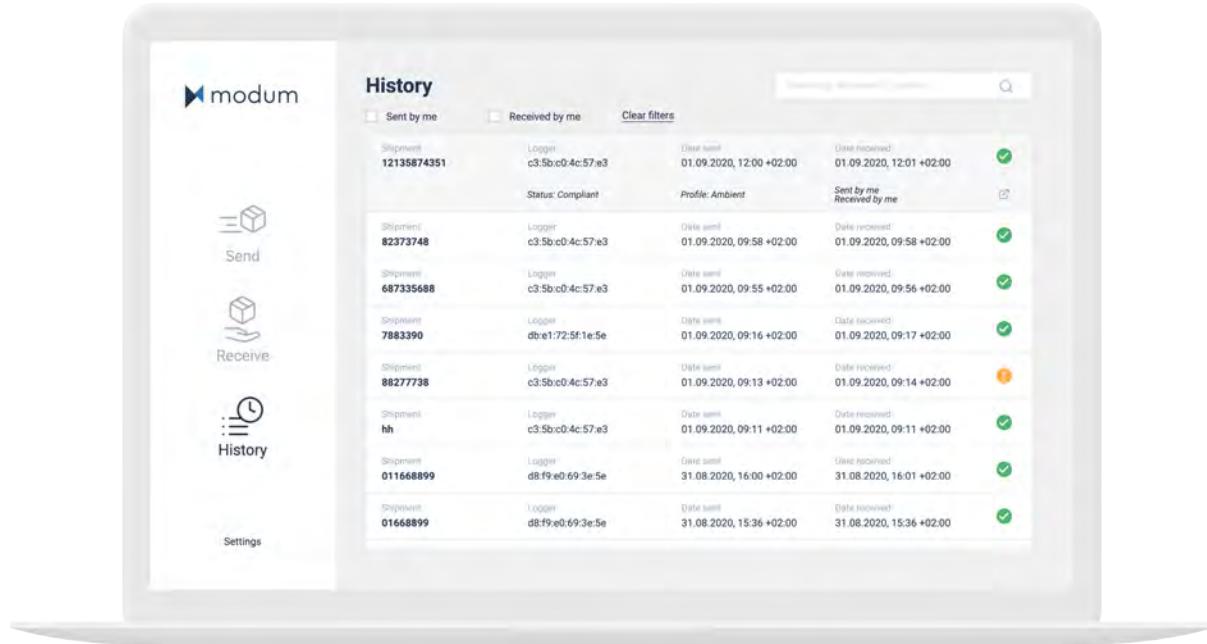


**i Note:**

If an error occurs while generating or receiving a shipment, follow the instructions on the screen. For further support, visit our Help Center at <https://support.modum.io>.

## 4.1.3. History

Click in the navigation left on *History* to show the latest activities.

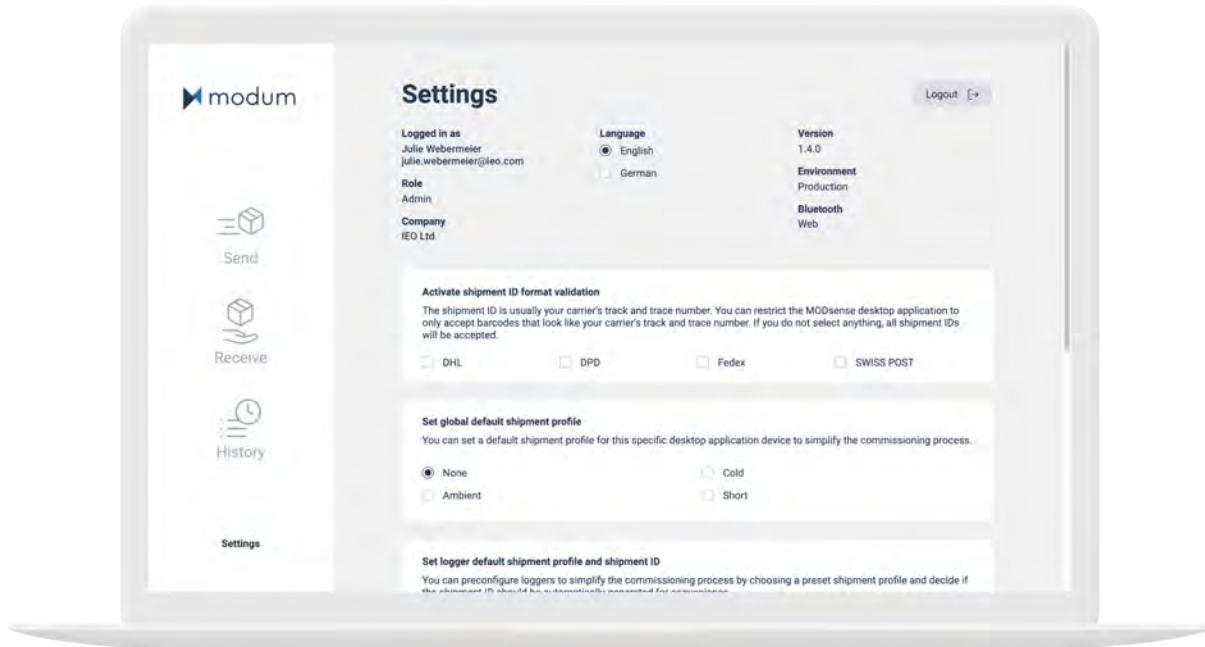


The History screen shows a list of recent shipments. Each entry includes the Shipment ID, Logger ID, Date sent, Date received, and a status indicator (green checkmark, yellow warning, or red error). The sidebar on the left has icons for Send, Receive, History (which is selected and highlighted in blue), and Settings.

Shipment ID	Logger	Date sent	Date received	Status
12135874351	c3:5b:c0:4c:57:e3	01.09.2020, 12:00 +02:00	01.09.2020, 12:01 +02:00	Green checkmark
82373748	c3:5b:c0:4c:57:e3	01.09.2020, 09:58 +02:00	01.09.2020, 09:58 +02:00	Green checkmark
68735688	c3:5b:c0:4c:57:e3	01.09.2020, 09:55 +02:00	01.09.2020, 09:56 +02:00	Green checkmark
7883390	db:e1:72:5f:1e:5e	01.09.2020, 09:16 +02:00	01.09.2020, 09:17 +02:00	Green checkmark
88277738	c3:5b:c0:4c:57:e3	01.09.2020, 09:13 +02:00	01.09.2020, 09:14 +02:00	Yellow warning
hh	c3:5b:c0:4c:57:e3	01.09.2020, 09:11 +02:00	01.09.2020, 09:11 +02:00	Green checkmark
011668899	d8:f9:e0:69:3e:5e	31.08.2020, 16:00 +02:00	31.08.2020, 16:01 +02:00	Green checkmark
01648899	d8:f9:e0:69:3e:5e	31.08.2020, 15:36 +02:00	31.08.2020, 15:36 +02:00	Green checkmark

## 4.2. App Settings

You can access your app settings by clicking settings at the bottom left of the screen. In your app settings, you can activate shipment ID format validation and set a default shipment profile.



### 4.2.1. Shipment ID Format Validation

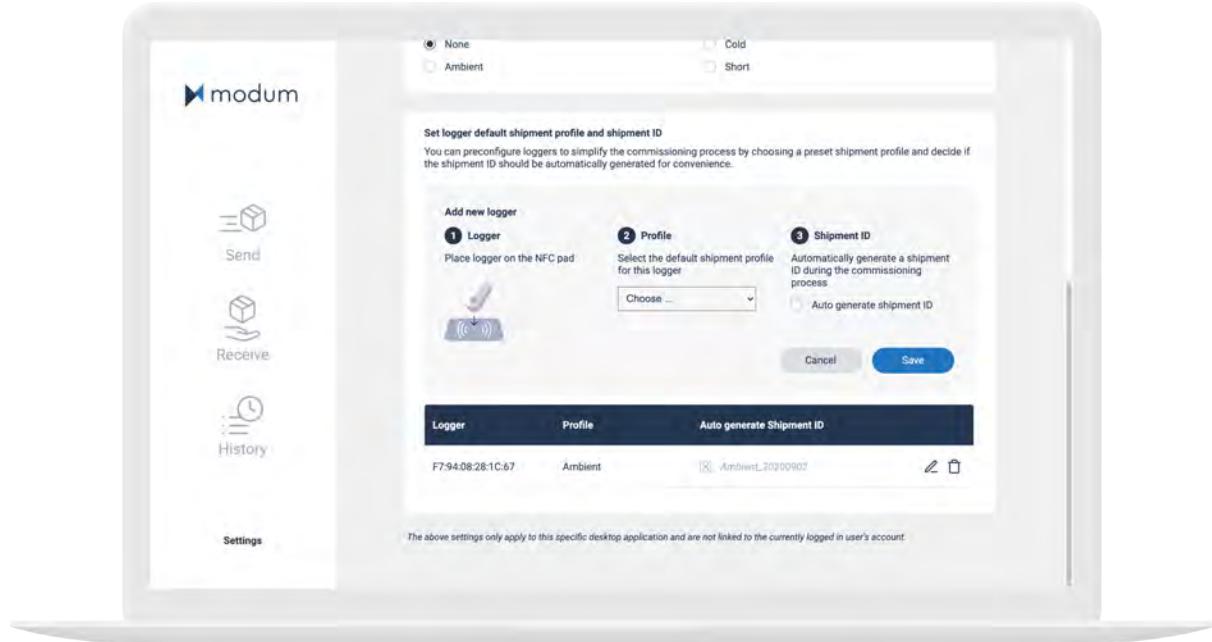
You can restrict the MODsense desktop application to only accept barcodes that look like your carrier's track and trace number. Click on one or several formats to activate the validation. The activated formats will be highlighted blue. If you don't select anything, every shipment ID will be accepted.

### 4.2.2. Default Shipment Profile

You can set a default shipment profile for the specific desktop application station to simplify the commissioning process. Click on the profile you want to set as a default. The selected profile will be highlighted blue.

### 4.2.3. Preconfigure Loggers

You can prepare loggers with default shipment profiles and shipment IDs to simplify the commissioning process.

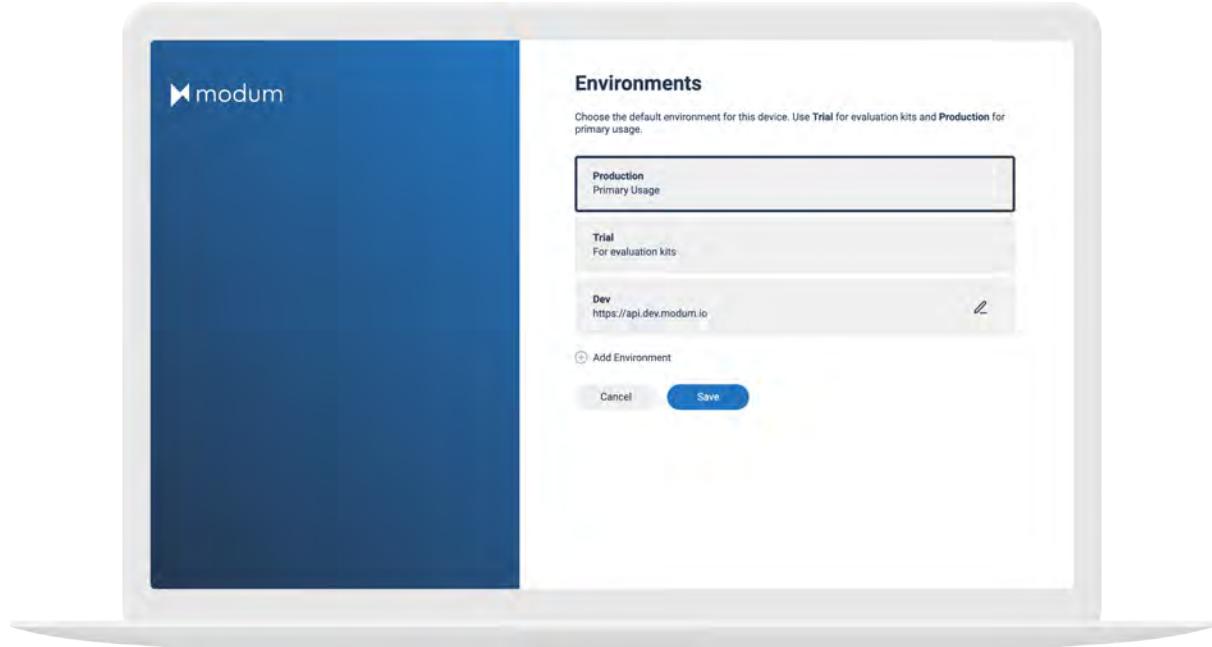


**i Note:**

The app settings are local settings and apply only for the specific desktop application station. They are not linked to the currently logged in user account.

#### 4.2.4. Changing Environments

On the login page there is the possibility to change the system environment. Click on [Change environment](#) to show the environments.



The Trial environment can only be used to get to know and test new features before they are available in production. The environments are not linked and there is no exchange of shipment data and no sharing of user accounts.

**Note:**

Use the trial environment for evaluation and to get to know our system. Please use the production environment for your quality controlled shipments.

## 5. MODsense Mobile App

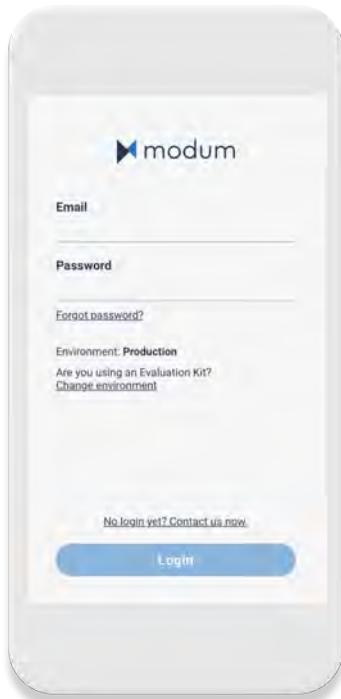
You can use the mobile app to send and receive shipments. The app can be downloaded from the Google Play Store or from the Apple App Store.

**i** **Note:**

If you are a Swiss Post customer, you will only need to take care of starting the loggers (5.1). The Swiss Post will read out the loggers for you when the shipment arrives at the final destination.

### 5.1. Send Shipment

1. Open the mobile app and log in.

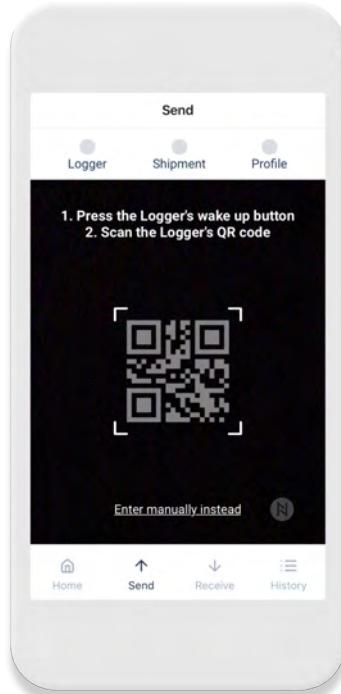


2. Tap the **Send shipment** in the navigation bar at the bottom.

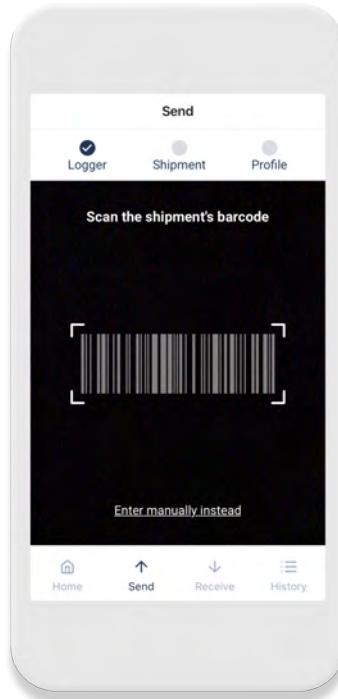


3. Press the wake up button on the logger.

4. Scan the QR code on the logger or enter it manually.

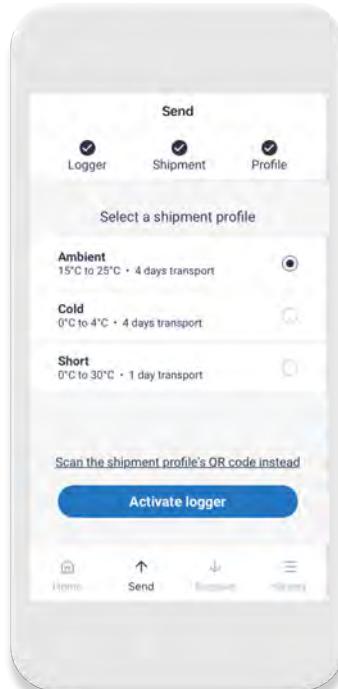


5. Scan the shipment ID or enter it manually.



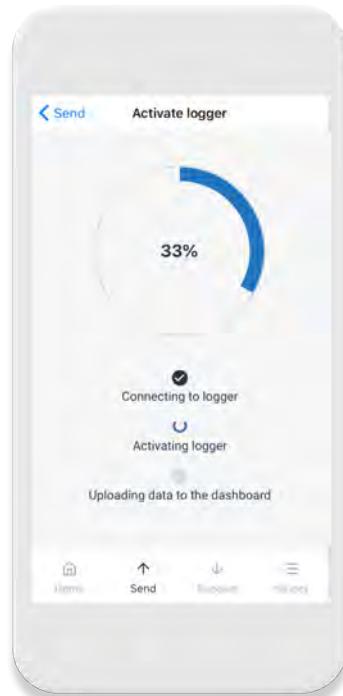
This contains the barcode with the tracking number of the logistics provider.

6. Select a shipment profile or scan the shipment profile's QR code. Tap *Activate logger*.

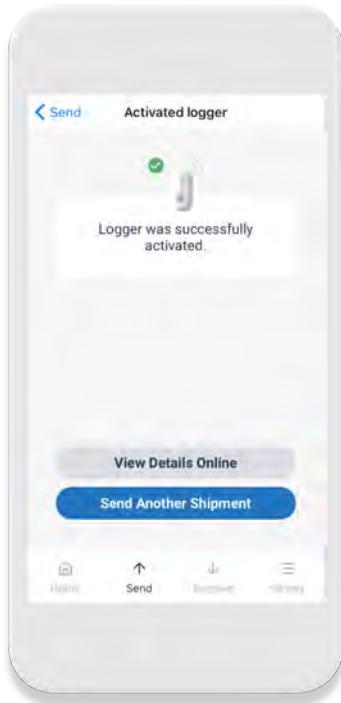


The app connects to the logger and checks the battery level and expiry date before the logger is activated. This ensures that the battery power is sufficient for the planned shipment duration and that the logger's expiry date will not be exceeded.

The logger's activation progress is displayed.



7. The app then shows the shipment status. You can now send another shipment or view the details of your shipment online.



**i Note:**

If an error occurs while generating a shipment, please follow the instructions on the screen. For further support, please visit our Help Center at <https://support.modum.io>.

## 5.2. Receive Shipment

You can use the mobile app to receive shipments and read the data.

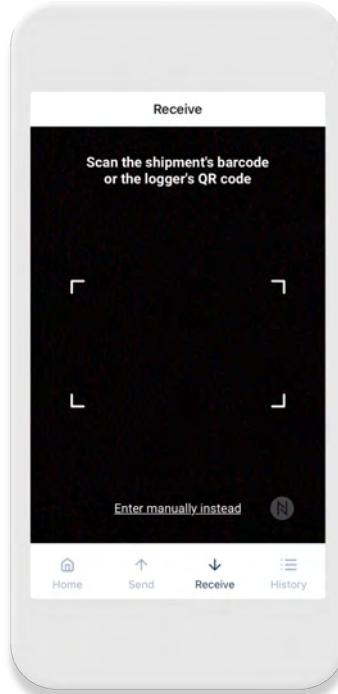
1. Open the mobile app and log in.



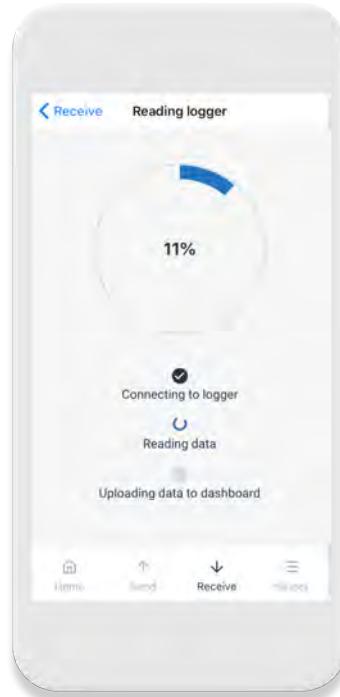
2. Tap the *Receive* button in the navigation bar on the bottom.



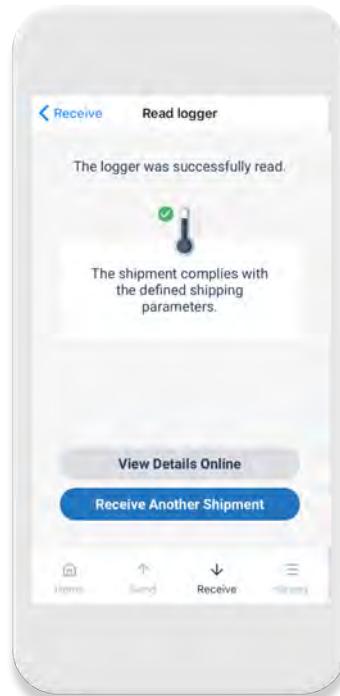
3. Scan either the shipment ID on the package or the logger's QR code after removing it from the package.



The app then connects to the logger and shows the progress of the data being read.



4. A readout summary is shown. You can receive another shipment or view the details of your shipment online.



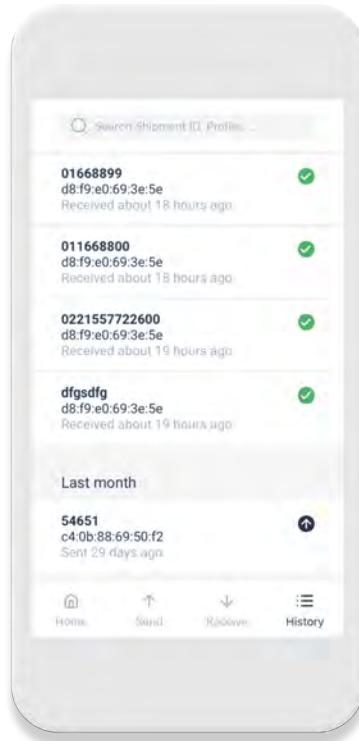
In case of a temperature deviation, a message is displayed provided that the notification of temperature deviations has not been deactivated in the shipment profile.

 **Note:**

If an error occurs while reading out a shipment, please follow the instructions on the screen. For further support, please visit our Help Center at <https://support.modum.io>.

## 5.3. Shipment History

You can view the most recent sent and received items here. Tap any item and it will be expanded to display more information. To view even more details, click the [More details](#) link and you will be redirected to the MODsense dashboard item's shipment page.

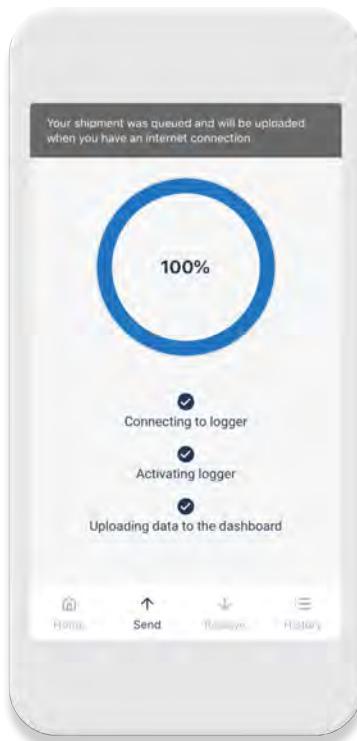


## 5.4. Offline Case

You can activate or read logger data with the MODsense app without an internet connection. The shipment data is stored on the mobile phone but is not forwarded to the MODsense system until your internet connection is restored. Because of this, it is therefore not visible in the MODsense dashboard. To alleviate the temporary missing data, the MODsense mobile app should be connected to the internet whenever possible.

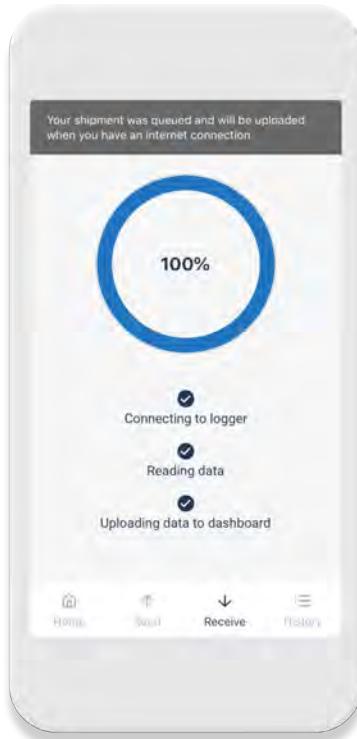
### Offline Logger Activation

The shipment status page displays a warning if a logger has been activated without an internet connection. The shipment data is stored on the phone and queued.



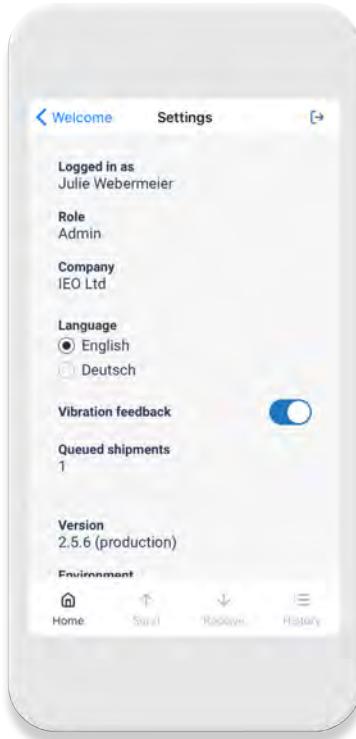
## Offline Logger Data Read

The readout overview page displays a warning if a logger has been read without an internet connection. The shipment data is stored on the phone and queued.



## Queued Shipment Data

The number of shipments in the queue is displayed in the settings page. The shipment data is automatically uploaded as soon as the app is reconnected to the internet. The data is then immediately visible in the dashboard.

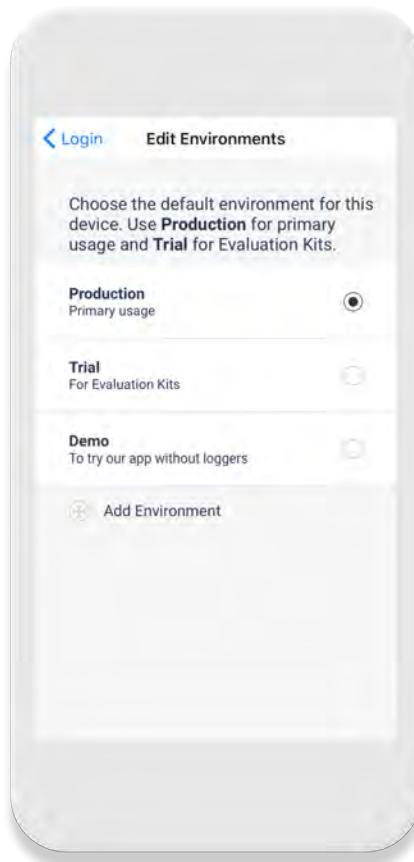


**i Note:**

Do not logout of the MODsense mobile app if you still have shipment data in the queue. If you do so, the pending shipment data will be lost when logging out of the app.

## 5.5. Changing Environments

On the login page there is the possibility to change the system environment. Click on [Change environment](#) to show the environment switch.



The trial environment can only be used to get to know and test new features before they are available in production. The two environments are not linked and there is no exchange of shipment data nor sharing of user accounts.

**i** **Note:**

The trial environment should only be used for evaluation kits and to get to know our system. It should not be used in a production environment.

# 6. Error Handling & Support

## Error Handling

For information about error handling, please visit the “Documentation & Manuals” section of our Help Center at <https://support.modum.io>.

## Support

If you require further support, please contact us at [support@modum.io](mailto:support@modum.io). You will need to quote your authentication code, which you can find in your account settings.

## Releases

Comprehensive information about releases and known issues is available in the “Documentation & Manuals” section of our Help Center at <https://support.modum.io>.

## 7. Technical Data

### 7.1. Device Specifications

Dimensions L x W x H	95 x 43 x 10 mm
Weight	22 g
Casing	ABS / MABS, tamper-evident
Protection Class	IP 65, IP 67
Measured Parameters	Temperature in °C
Measurement Accuracy	±0.5 °C within operating measurement range
Maximum Storable Measurements	45,000 measurements
Battery Type	Li/MnO <sub>2</sub> Coin Cell
Communications Interface	Bluetooth Low Energy (BLE) Near Field Communication (NFC)
User Interface	3 LEDs: operating state, conformity with set conditions, and logger state 1 button: wake-up
Repeatable Use	Unlimited within operating conditions
Device Traceability	Unique logger ID, QR tag on device
Data Traceability	Device-specific signature for data authenticity from logger to blockchain
Compliance	RED, RoHS, WEEE, EN 12830:2018, RTCA DO-160G
Markings	CE, FCC

## 7.2. Operating Conditions

Operating Measurement Range	-20 °C to +60 °C
Storage Conditions	+5 °C to +30 °C
Typical Battery Lifetime	6-12 months, depending on use case
Sensor Calibration Validity (from production date)	18 months
Logger Expiration Date	Set and written on device

## 7.3. Measuring Parameters & Settings, Customizable for Each Shipment

Measurement Start Delay	0 to 60 minutes
Measuring Interval Range	1 to 30 minutes
Data Export Formats	PDF, CSV, Excel
Alarm Settings	Multi-level, Cumulated temperature, Shipment delay
Notifications	Email, Text Message, Smart Contract API

# 8. Important Instructions

## For Your Safety

Please note the following guidelines. Use the MODsense system exclusively for the purpose indicated in the product specifications and only under the conditions specified in this user manual. The manufacturer shall not be liable for any damages that resulted from unauthorized or incorrect utilization of the system.

### **Battery**

The battery is not replaceable and must not be changed by the user. By opening the casing, the liability claim shall lapse.

## Process-relevant Instructions

### **Wireless Interference**

Although our temperature loggers were designed, tested and manufactured according to the requirements for radio frequency emissions, all wireless devices can be exposed to performance-disturbing disruptions if they are used in proximity of strong electromagnetic forces such as power cables or overly dense wireless network connections.

### **Spare Loggers**

The MODsense desktop app and the MODsense mobile app check the logger's battery level and expiry date before the logger is activated. This ensures the logger's usability for the planned shipment. Spare loggers must always be available at the commissioning location in case a logger should prove unusable.

### **Measurement Accuracy**

Each temperature sensor is factory calibrated across the full operational range. Temperature measurement accuracy is validated by ISO 17025 accredited laboratories. Relevant technical documentation and specifications with test reports are available to our customers upon request.

### **Commissioning Process**

If a logger is not located in the package assigned by the logistics system, the temperature data can be assigned to a wrong shipment. Therefore, the commissioning process should be designed in a way that avoids the loggers getting confused.

## **Logger Data Read**

The logger data should be read from the shipment number barcode instead of the logger QR code, whenever possible. The risk of an accidental logger confusion can thereby be minimized.

## **Safety in Air Transport**

As damaged loggers may pose a safety risk to the transporting aircraft, it is crucial that the loggers are in a safe condition when sent by air freight.

### **Operating Instructions**

Every logger must be thoroughly inspected for physical damage before it is included in a shipment sent by air freight or affixed to a shipment sent by air freight. Loggers with visible damage such as dents, indentations, cracks or severe scratches; as well as deformed, discolored or ruptured devices must be separated and must NOT be sent by air freight.

## **Regulatory and System Requirements**

### **Regulatory Requirements**

For information about regulatory requirements, please visit the “Documentation & Manuals” section of our Help Center at <https://support.modum.io>

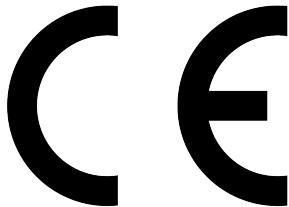
### **System Requirements**

For information about system requirements, please visit the “Documentation & Manuals” section of our Help Center at <https://support.modum.io>.

## **Legal Information**

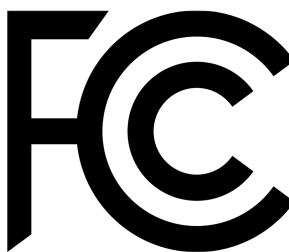
The End User License Agreement and Privacy Declaration for the Software-as-a-Service Solution is available for download in the “Legal Information” section of our Help Center at <https://support.modum.io>.

# Compliance Statements



Hereby, modum.io AG declares that the radio equipment type MODsense T Temperature recorder (generation 1) is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: <https://modum.io/compliance>.



FCC ID: 2AU2P-T202011

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.

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 not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This statement reflects the requirements of §15.105 and §15.21.

# Disposal and Recycling



This symbol indicates that this product and/or battery should not be disposed of with household waste. Products must be taken for separate collection at the end of their working life. For information about modum.io's recycling program and collection, visit <https://modum.io/compliance/recycling>.

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# **Version**

User Manual Version 1.14