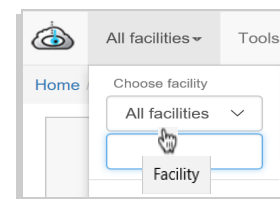# TSI manual

TSI (TermoSense® Internet) is the application that gives you own web pages with full overview of your facility, both in the present and in the past. TSI shows among other things:

- Current overview, including alarms
- Alarm reports
- Transmitter activities
- History and comparison chart
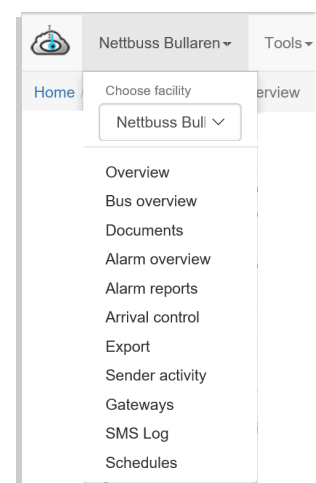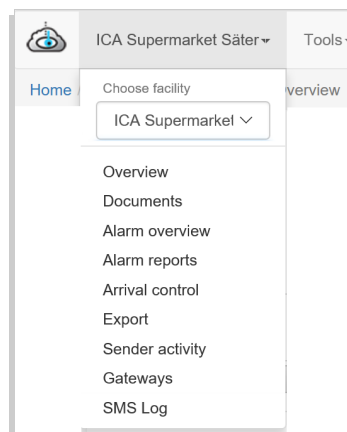- Export function to Excel
- Documentation

Start

– Log in to the TSI via the SensiNet website www.sensinet.se (menu selection TSI) or with the direct link tsi.termosense.com.

– Choose facility.

A dropdown menu appears with the choices you can make.

Bus facilities have a menu with two additional choices:
- Bus overview and
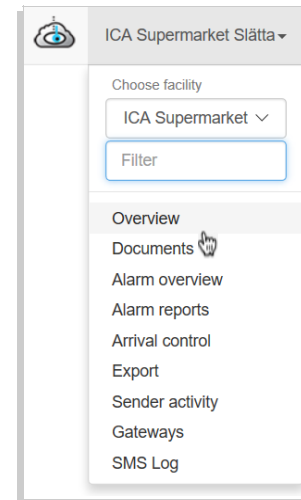- Scheduling.

Menu selection

- **Overview**
  Shows schematically all units included in the facility, as well as their current status.
  The overview is explained in more detail on the following pages in this document.

- **Bus overview** (only bus facilities)
  Lists all the bus company's buses that are at one of the company facilities' depots : bus
  individual, bus status, facility and ramp location.

- **Document**
  Downloadable documents that are relevant to the facility.

- **Alarm overview**
  Lists unacknowledged alarms in a sortable table. Each entry contains alarm device, its ID,
  transmitter type, duration, alarm mode (active, reset, unacknowledged).

- **Alarm reports**
  Report with records on all alarms with the latest first. Each item contains time, alarm unit, its ID,
  transmitter type, alarm mode and possibly additional values.

- **Arrival check**
  Tables with temperature measurements of foodstuff during in and outbound delivery. Entries are
  directly and wirelessly stored in a table corresponding to the respective supplier.

- **Export**
  To export selected parts from TSI to Excel.

- **Transmitting activity**
  Displays all transmitter activity throughout the facility for any day, as well as a statistical summary
  of how the communication has progressed.

- **Gateways**
  Displays general information and status of the facility: Overview with system status, technical
  information on gateway, summary of report activities, network information.

- **SMS log**
  A filterable chronological log with all SMS sent to different phone numbers.

- **Scheduling** (bus facilities only)
  Scheduling of heating for depot-deployed buses within a facility.

TSI Overview

The overview gives you a general summary of the facility,
ability to maintain the right temperature, moisture, and more.
You also have access to statistics and alarm functions.

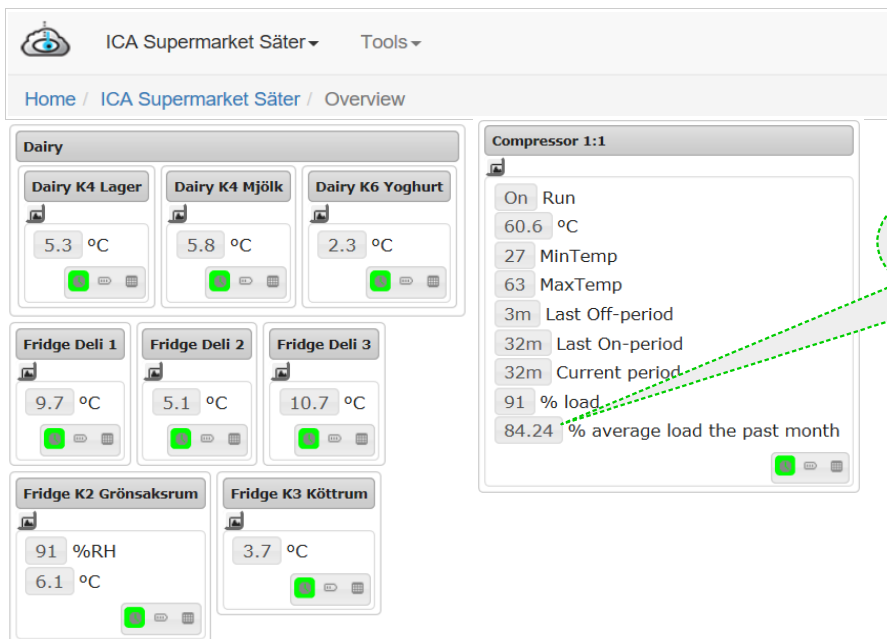To view the overview of the plant:
- Log in to the TSI (TermoSense® Internet)
- Select facility
- Then select verview

TSI Overview - Logical Layout

In the overview of the installation, you will see all the existing TermoSense® wireless sensor units in a logically grouped layout.
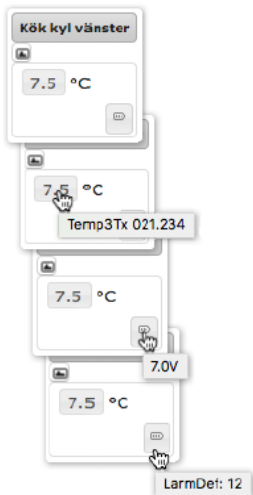Here is an example of a grocery store overview:

Good for energy savings management

A layout can also be grouped in other ways, such as in a form of a hall or building in which the sensors are located.

TSI Overview - Sensor Status

Below are different status of a sensor that can be displayed. Keeping the mouse pointer over different symbols provide even more information. A click on the chart symbol provides statistics for a sensor.
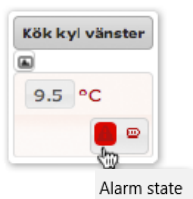
Normal state - everything is ok
The box shows the sensor's name, a chart symbol, the sensor's measurement value, and a battery symbol.

Labels displayed depending on mouse pointer location:
- At the measurement value, sensor type and unique identity (RF ID) are displayed.
- The battery symbol shows the current battery voltage.
- At the bottom of the battery symbol, the sensor's alarm definition-affilation.

Alarm
The sensor then alerts the alarm criterion according to the corresponding alarm definition satisfied, for example, high temperature for a defined period of time.
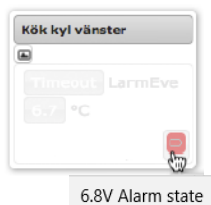– Fix the cause of the alarm.

Normalization of an Alarm - waiting for receipt
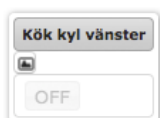The sensor is back in normal state after previous alarms.
–Confirm the alarm at base station or alarm receiver.
– Follow up with a check of the sensor's diagram.

Alarm mode - switch lost due to low battery voltage
Mouse pointer over the battery symbol shows the last registered battery voltage.
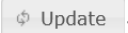– Send sensor to SensiNet AB for battery replacement.

The sensor is turned off
It is installed as a device in the facility, but sensor has lost contact.
To activate simply use the touch-free activation key.
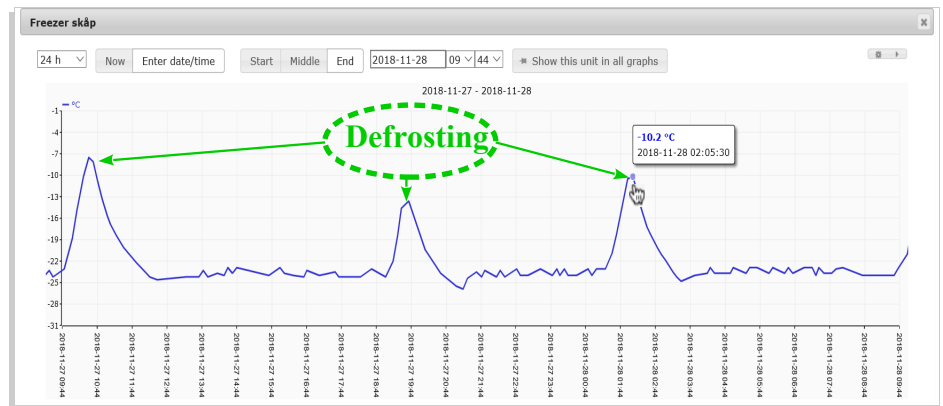
TSI Overview - Diagram

A click on the sensor's diagram symbol ⊞ provides a chart showing the sensor's current and historical metrics, providing statistics and trends to help you prevent costly failures. The desired time of the chart is chosen from a calendar and the time span ranges from 60 minutes to 4 weeks. Confirm selection with the button ⟳ Update .

Curves between different charts can be combined graphically to prove connection.
To do so use the button ⊷ Show this unit in all graphs .
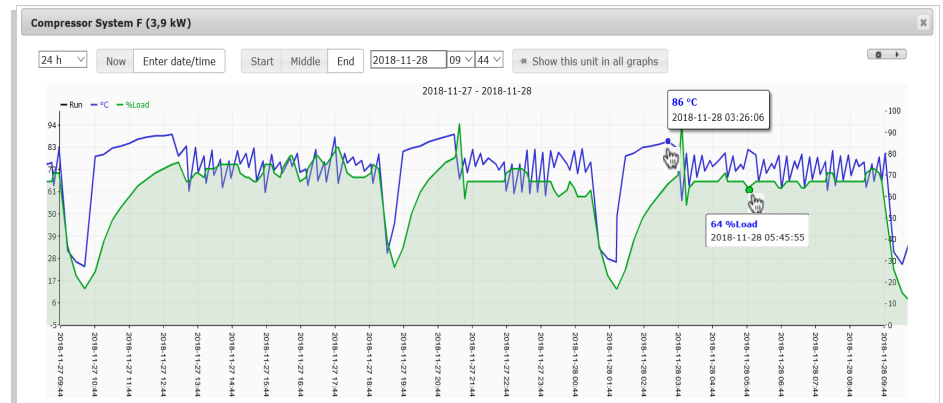
Example 1
Shows temperature in a freezer which is defrosted three times per displayed date. The diagram's time span is 24 hours.
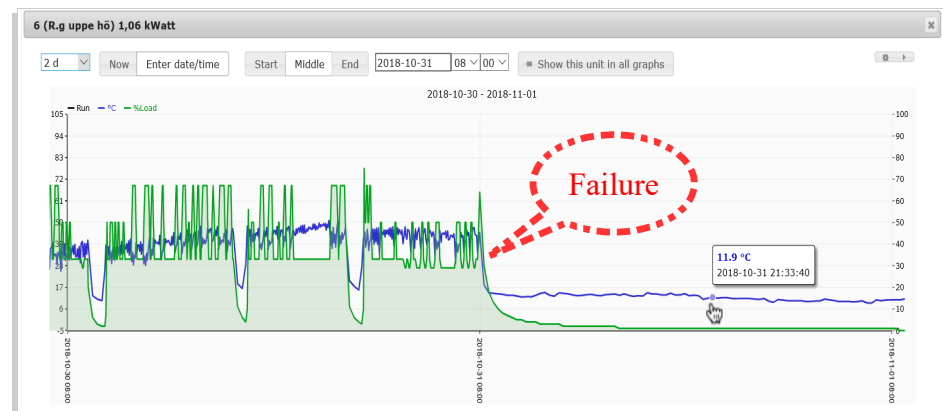

Example 2
Shows the values from compressor of a given fridge. The curves show both working temperature and loading of the compressor from which its normal operation mode can be monitored.
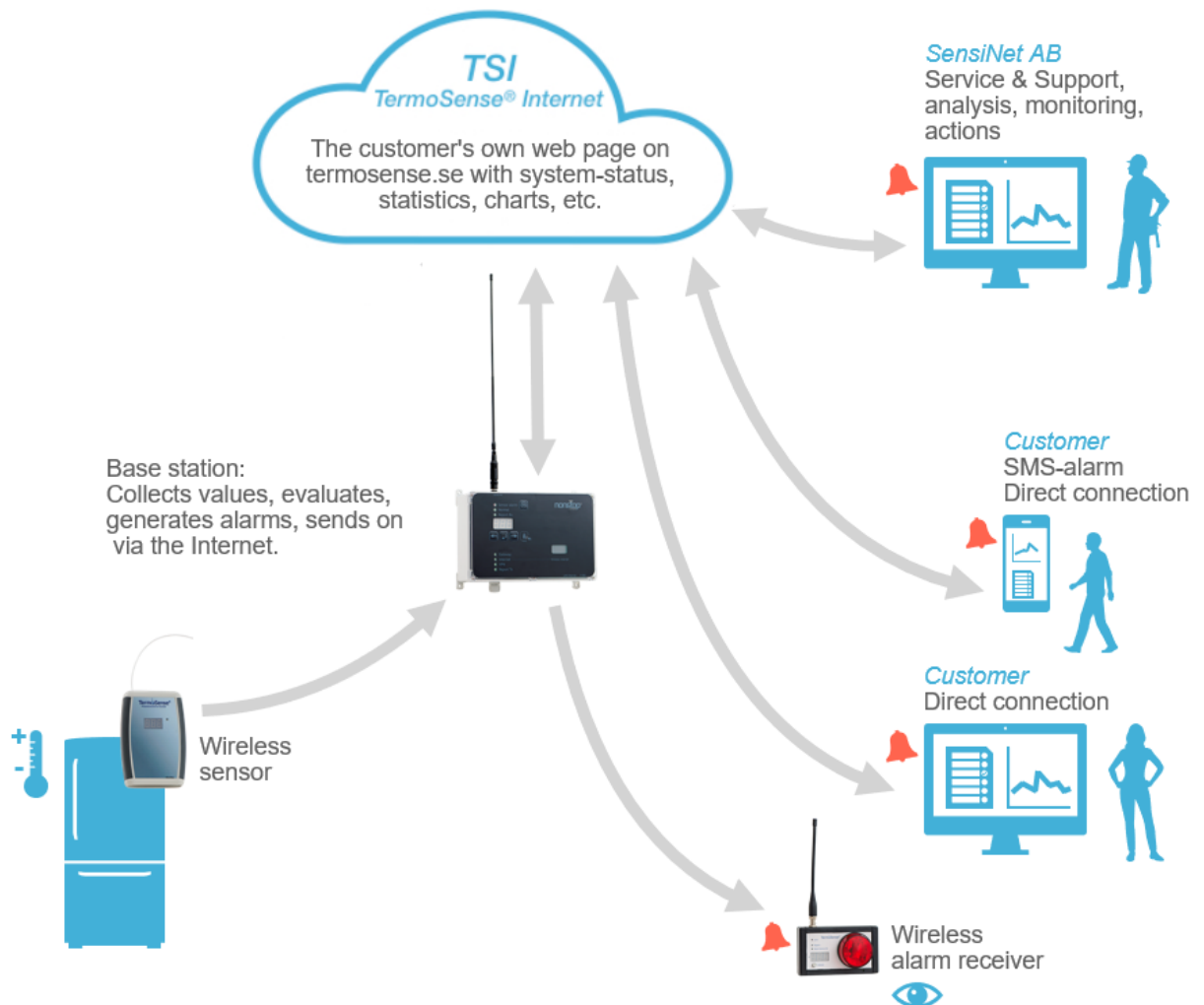

Example 3
Diagram showing a compressor's failure. The diagram's time span has been adjusted around the time of failure.

TermoSense® General system principle

TSI
TermoSense® Internet

The customer's own web page on termosense.se with system-status, statistics, charts, etc.

SensiNet AB
Service & Support, analysis, monitoring, actions

Base station:
Collects values, evaluates, generates alarms, sends on via the Internet.

Customer
SMS-alarm
Direct connection

Wireless sensor

Customer
Direct connection

Wireless alarm receiver

v1.2

SensiNet

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