Danfoss DECS 2.0 Energy Control System User Guide

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Contents

Introduction

Operating the DECS 2.0 system

The Danfoss Energy Control System (DECS) is a web-based software program that enables the user to remote control and monitor the parameter settings in the controllers and also monitor actual, reference and historical values of sensors and meters connected to the controller.

This user guide is intended for private end users of district heating installations who want to monitor their heat consumption and make changes to the controller parameters. It describes the most common functions which a private end user will usually make use of. Please consult the DECS 2.0 Operating Guide for a description of all available features.

The heating installation can be monitored and controlled from everywhere as DECS provides an intuitive user interface that is accessible from a web browser on a PC, laptop or smartphone connected to the internet.

To operate the DECS 2.0 system, open the web browser and enter the public IP address of the DECS 2.0 server in the address field. The user interface will then be shown in the web browser.
If you need help re. the IP address, please contact your network administrator.

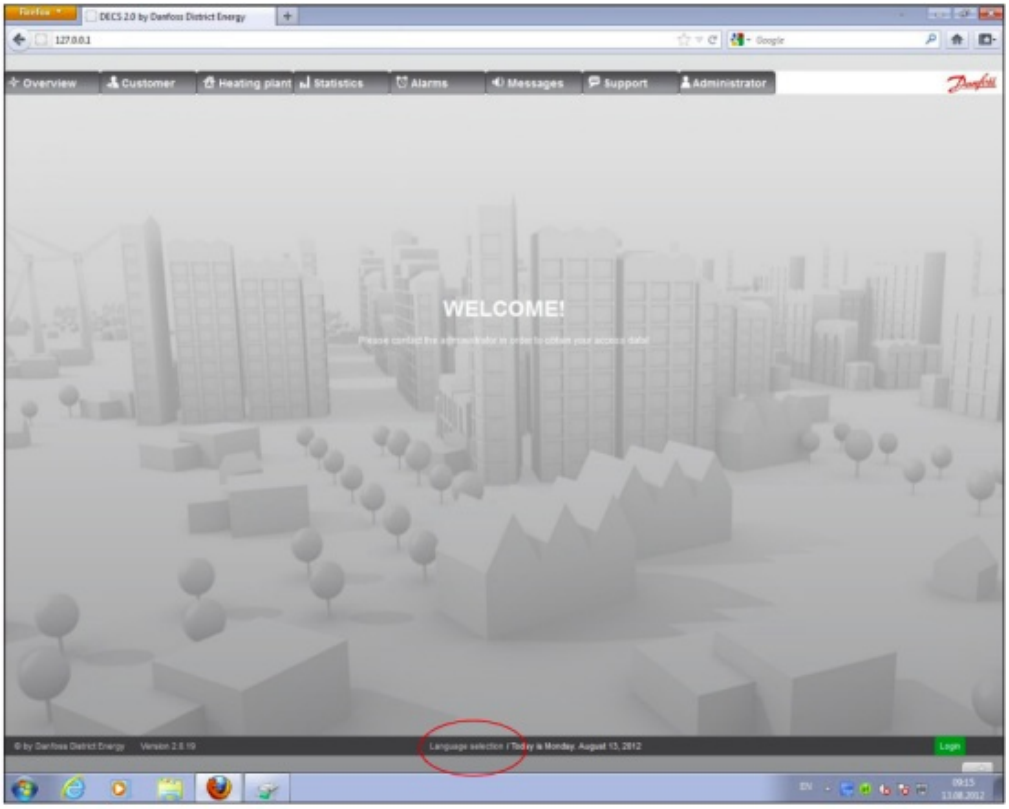
Alternatively, the district heating utility may have assigned a domain name to the DECS 2.0 server. In this case the domain name (URL) should be entered into the address field of the web browser instead of the IP address.

Please use one of the following web browsers for full compatibility:

- Mozilla Firefox
- Internet Explorer
- Google Chrome

Web browser must comply with requirements of Atvise SCADA Client software.
For details about specific browser versions compatible with Atvise please visit
http://www.atvise.com/en/vendors/compatibilitylist
For information on supported versions, please contact your system integrator or provider.

Language selection



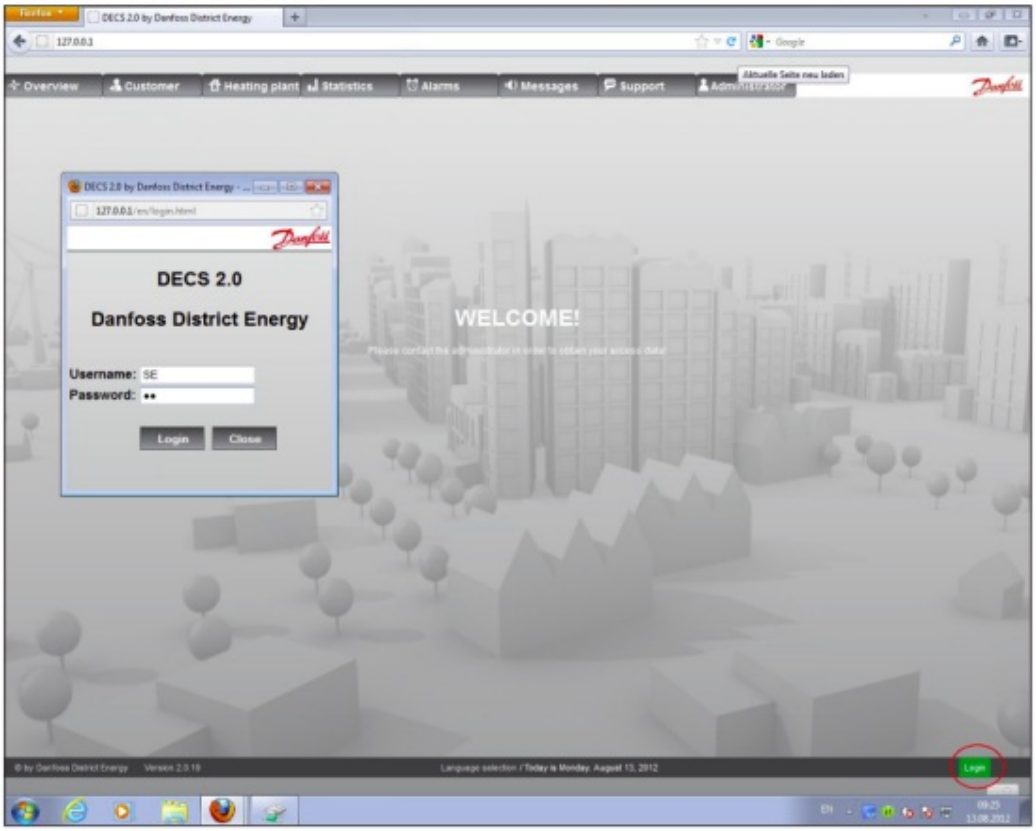
All users have registered a default user language.

The language can though be changed simply by pressing the ‘Language selection’ button next to the date (see indication on the picture). This selection will overwrite the originally set default user language.

There are 3 languages available: English, German, and Italian.

The language can be changed at any time during operation, but any selections in tables, menus etc. will be lost as the display will refresh when another language is selected.

Login



You have to log in to your user account in DECS to access the monitoring and control features.

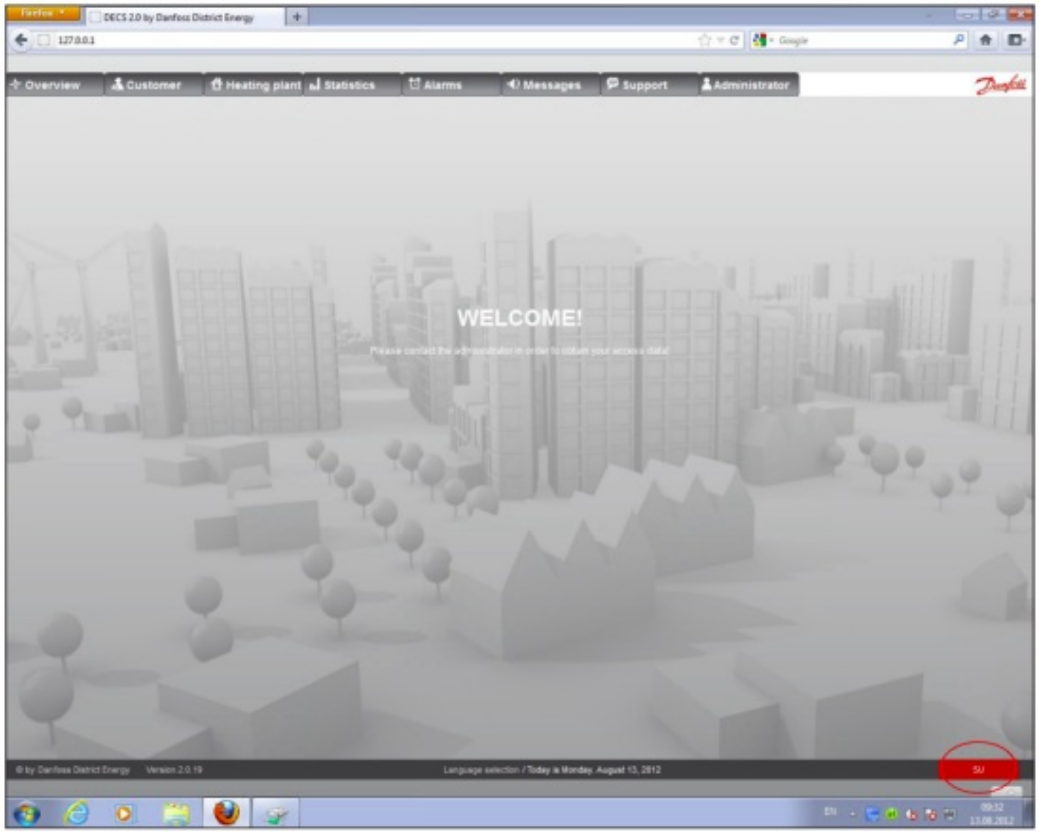
The district heating utility administrates the user accounts and will have to provide you with a username and password.

Click the green ‘Login’ button in the lower right corner of the screen to login (see indication on the picture).

When the login window appears on the screen, please enter your username and password and click the ‘Login’ button.

The green ‘Login’ button in the lower right corner of the screen now turns red to indicate that you have successfully logged into your user account in DECS.

Logout



After login the function of the login button changes to a logout function.

By pressing the button you will logout of the system and return to the main display.

If the web page for DECS 2.0 is closed, logout will also occur.

In addition, logout will occur after a set time of inactivity.

Menus

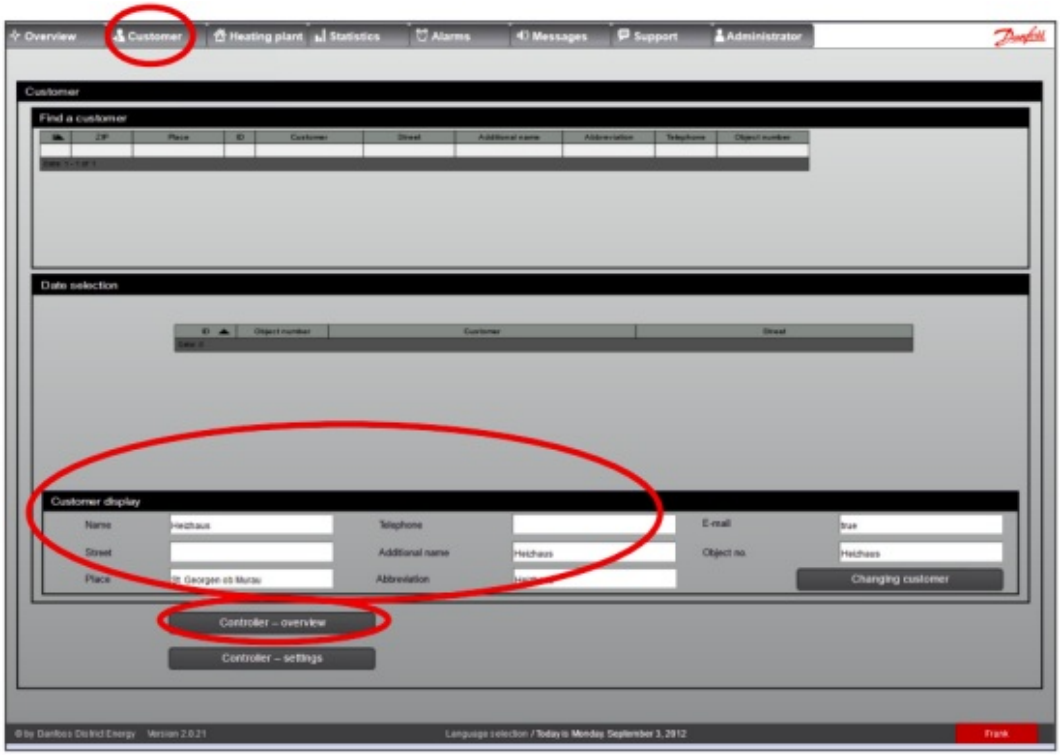
All monitoring and control features of DECS 2.0 are made available via the top menu. The top menu can have up to 8 sections, but the availability of the sections and also the availability of features within each section may vary as it depends on the privileges assigned to your user account by the district heating utility.

1. **Overview:** Quick overview of the district heating grid
2. **Customer:** Customer information and monitoring possibilities
3. **Heating plant:** To include heating plant displays, including the attached available information
4. **Statistics:** Graphical and tabular statistics information
5. **Alarm:** For monitoring alarms coming from the district heating controllers
6. **Messages:** For monitoring information related to the DECS 2.0 software
7. **Support:** Support related to the DECS 2.0 software, district heating controllers, district heating grid
8. **Administrator:** Adding new places, heat meter read-out data selection, user management of DECS 2.0, updating time stamp for the district heating controllers. Software update for controllers that support remote software update.

The following chapters describe the sections relevant to the private end users.

Please consult the DECS 2.0 Operating Guide for a description of all available features in all sections.

How to get an overview of your heating installation

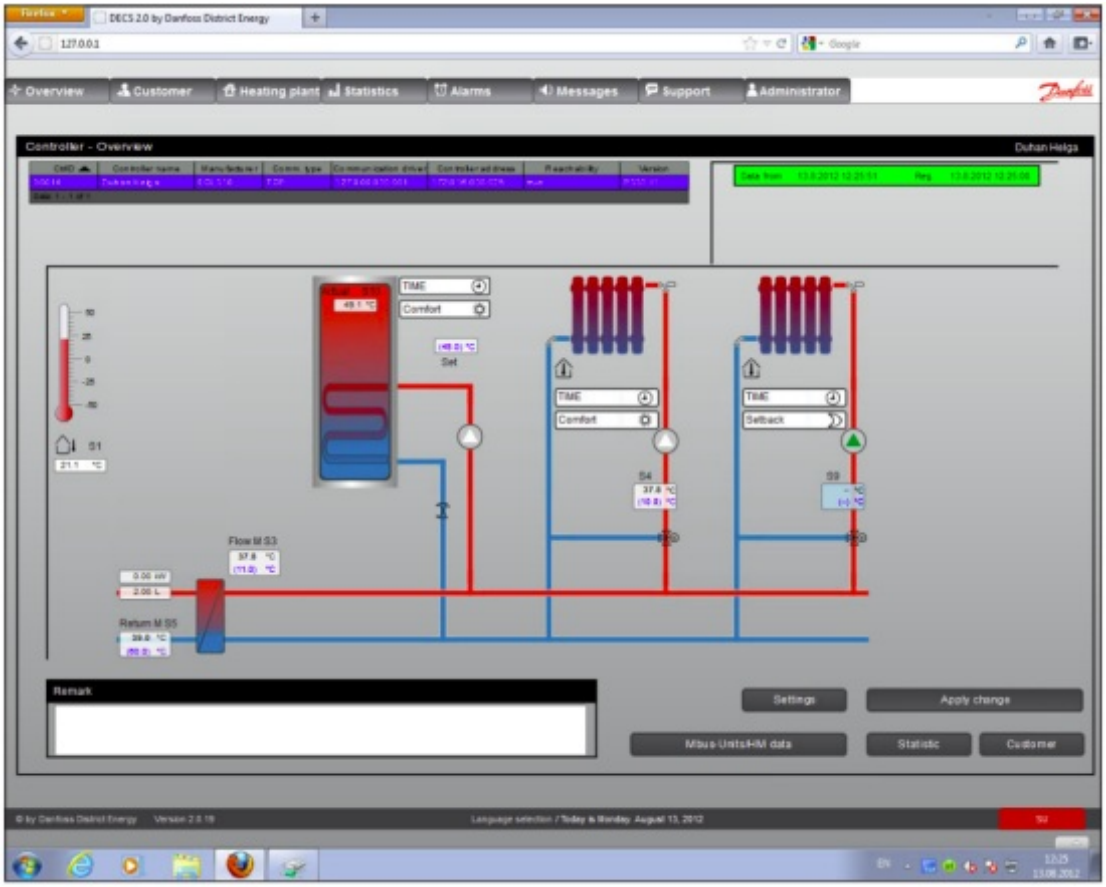


You are able to get an overview of your heating installation by clicking the ‘Customer’ section in the top menu (see indication on the picture).

As a private end user you will only be able to see your own heating installation in the list of customers.

Your customer information will be shown in the ‘Customer Display’ section (see indication on the picture).

Click the ‘Controller – Overview’ button to continue (see indication on the picture).

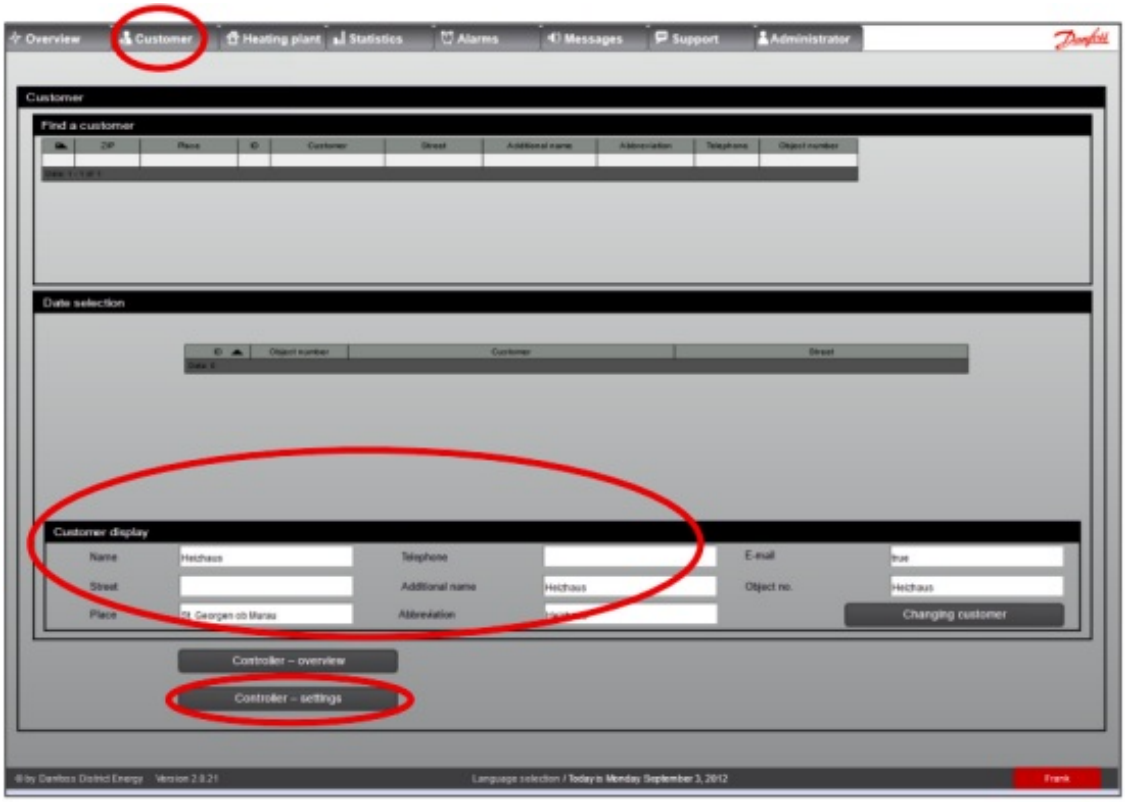


When clicking the ‘Controller – overview’ button, an overview of the installation for this specific customer is shown.

The available information on the overview picture might differ from the example shown depending on the installed district heating controller and on which application the controller is running.

You are always able to see the flow diagram for your heating installation and you will typically also be able to see the operation mode of each available heating circuit, flow temperatures, outside temperature and status of pumps.

How to change the settings of your heating installation



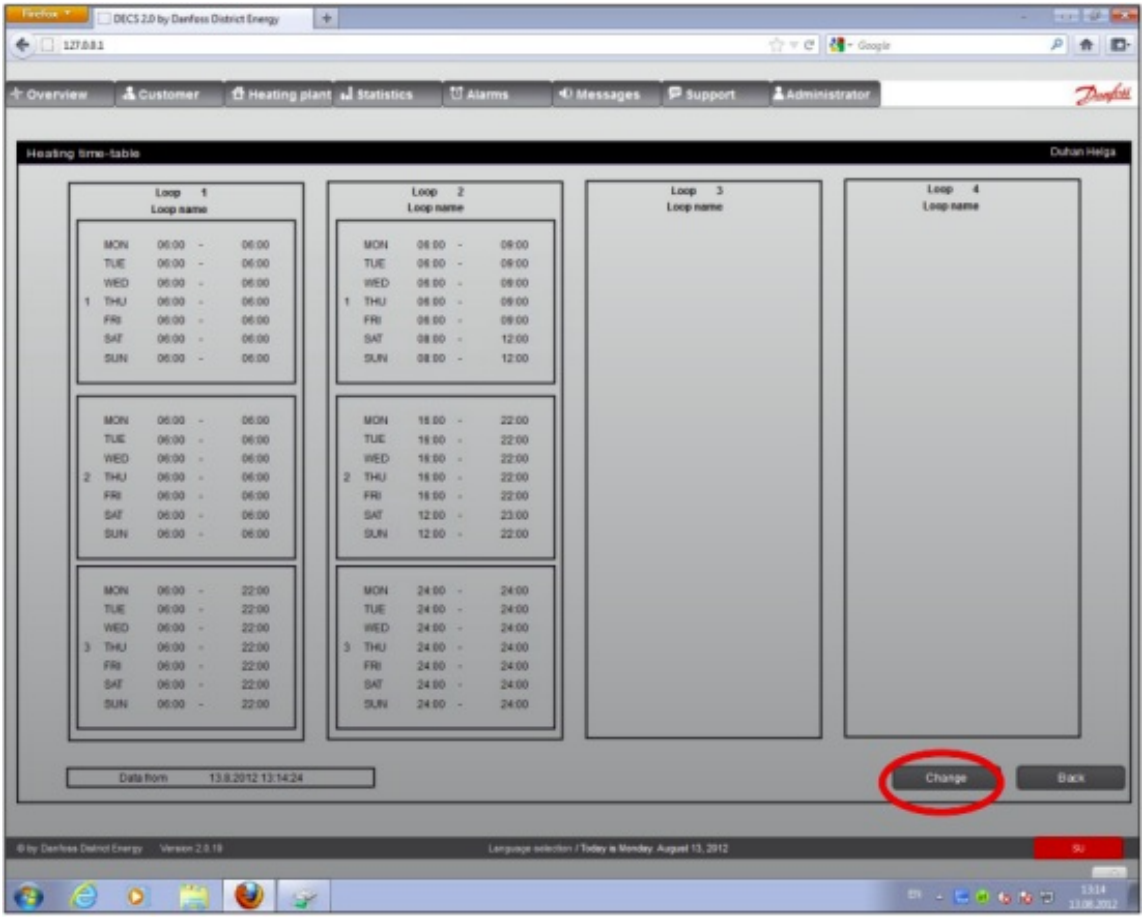
You are able to change some of the settings of your heating installation via DECS. As a private end user you will typically not have access to all settings as some settings need to be managed by the district heating utility operator.

Click the ‘Customer’ section in the top menu (see indication on the picture).

As a private end user you will only be able to see your own heating installation in the list of customers.

Your customer information will be shown in the ‘Customer Display’ section (see indication on the picture).

Click the ‘Controller – Settings’ button to continue (see indication on the picture).



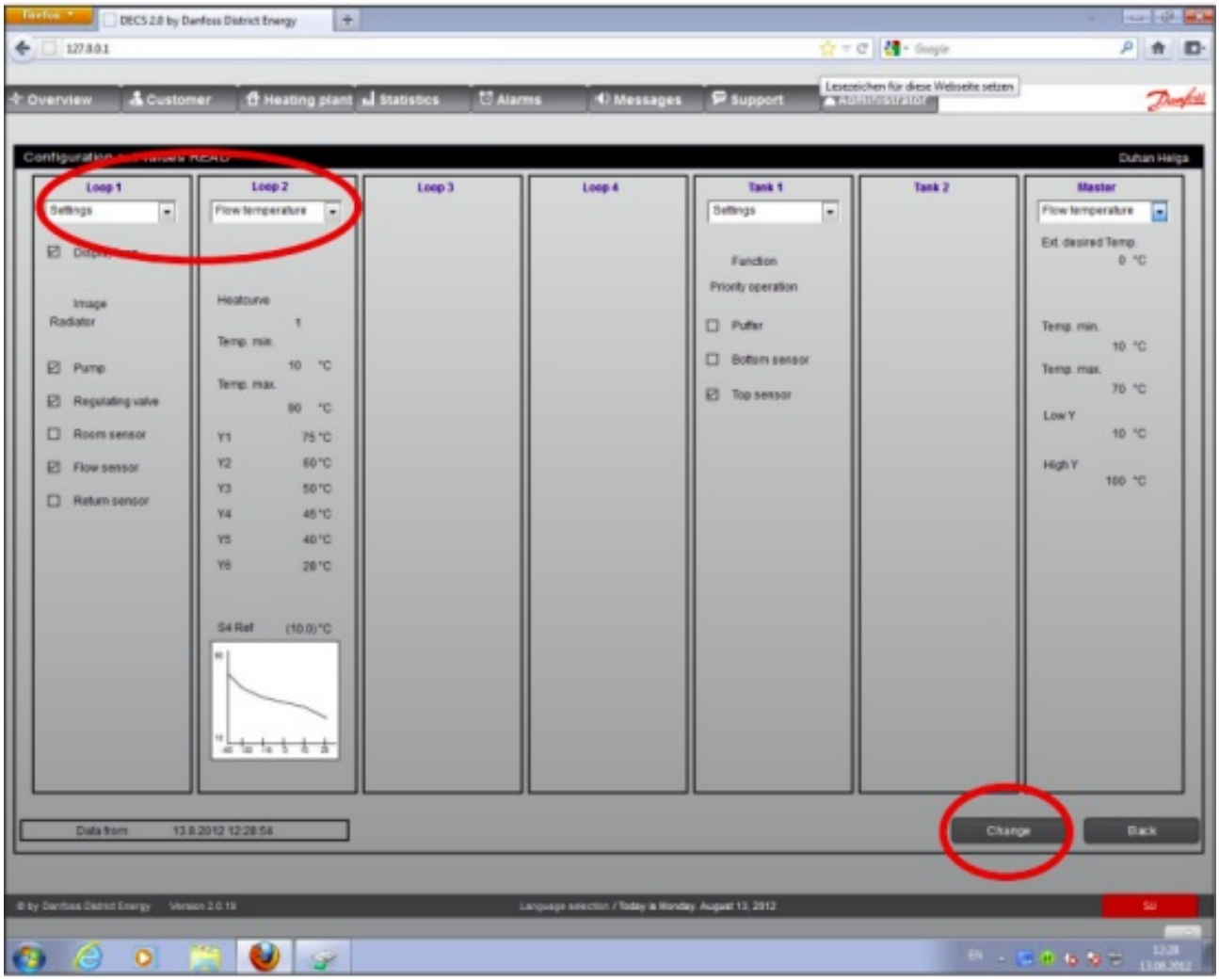
When clicking the ‘Controller – Settings’ button, an overview of the settings for this specific customer’s heating installation is shown.

The available settings on the overview picture might differ from the example shown depending on the installed district heating controller, on which application the controller is running and on the privileges assigned to your user account.

The controller settings are divided into 3 sections:

1. Setup
2. Time
3. Administration

1.

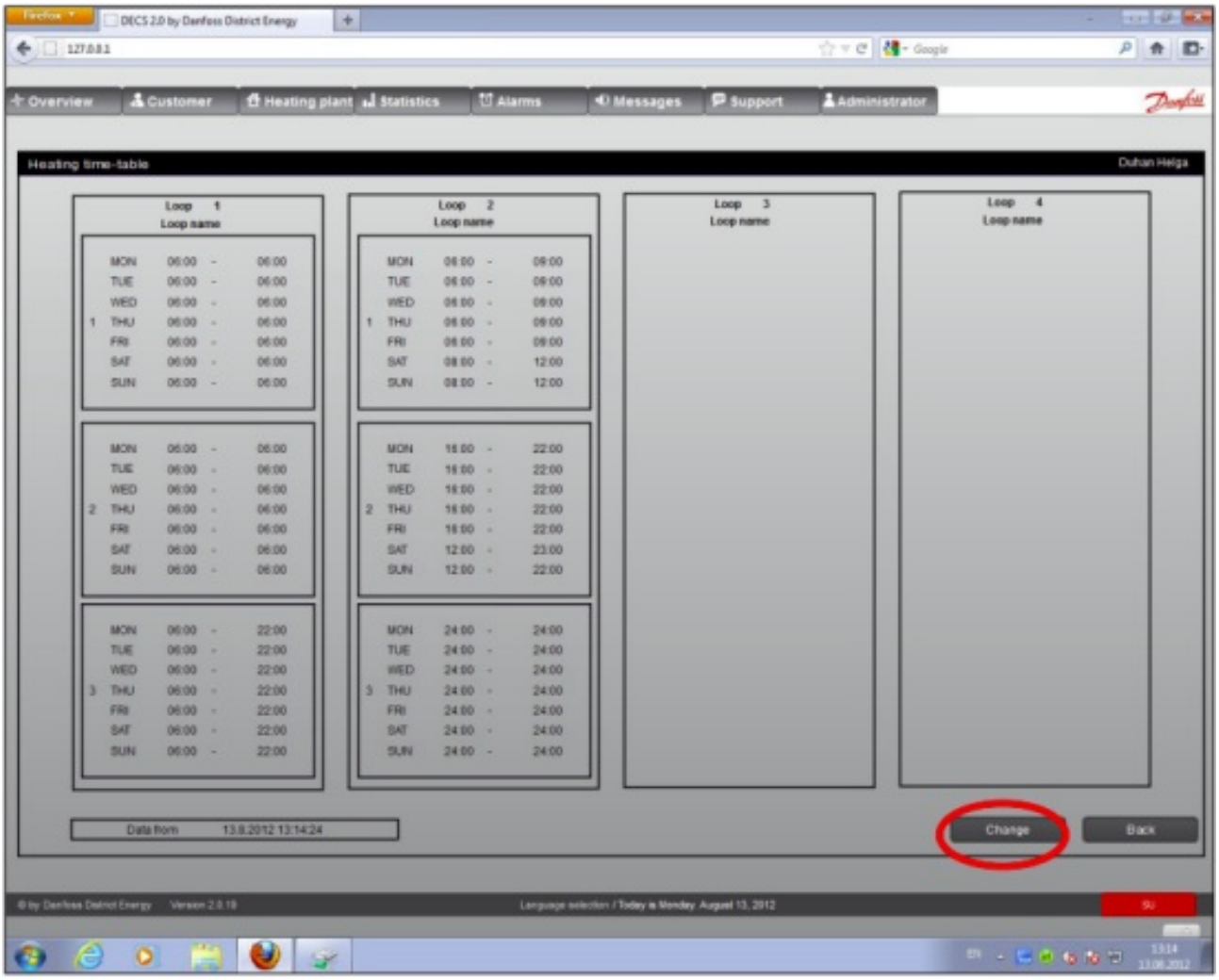


Configuration target values

Here the ‘configuration target values’ of the selected controller are visualized. A group of settings can be selected in the dropdown menus for each heating circuit (see indication on the picture). In this way you can customize the view of the settings to your preferences.

To change the settings please click on the ‘Change’ button (see indication on the picture).
The available settings might differ from the example shown depending on the installed district heating controller, on which application the controller is running and on the privileges assigned to your user account.

2.



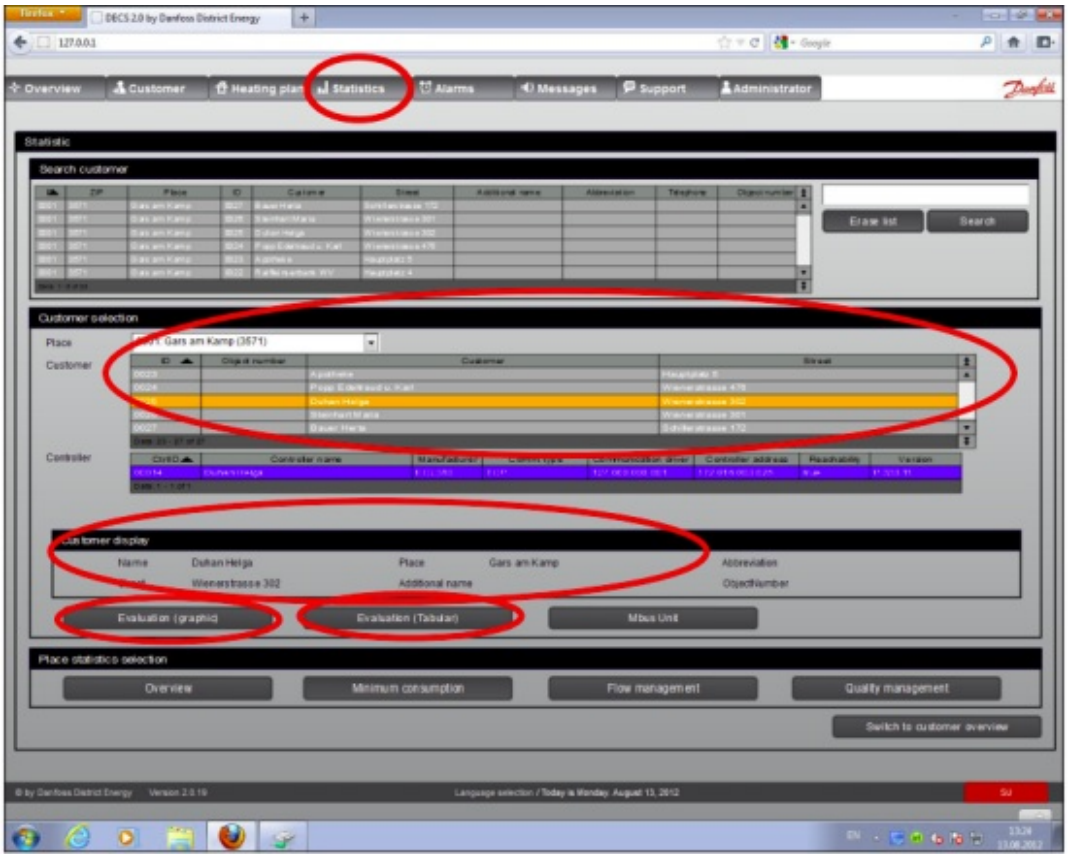
Heating time tables

In this section you can determine the heating times for each available heating circuit.To change the heating t ime table please click on the ‘Change’ button (see indication on the picture).

In the same way you are able to view and change the time tables for the boiler and circulation pump by click ing the ‘Heating time table, boiler’ and ‘Heating time table, circulation pump’ in the ‘Controller – Settings’ scr een.

By clicking the ‘Holiday – circulation – boiler load time’ button in the ‘Controller – Settings’ screen you can d etermine the time for the controller to go into holiday mode and whether the controller automatically shall swi tch between winter and summer time. You can also select the language of the controller, boiler charging tim e, duration of water circulation including the time duration and which days to start the water circulation. The available time tables might differ from the example shown depending on the installed district heating controll er, on which application the controller is running and on the privileges assigned to your user account.

How to view statistics for your heating installation



The statistics section provides a set of features to display historical values of all sensors and heat meters connected to the heating installation. The values can be shown in both graphical and tabular form.

Click the ‘Statistics’ section in the top menu (see indication on the picture).
As a private end user you will only be able to find and select your own heating installation in the list of customers.

You will find your heating installation by selecting your ‘Place’ and then select the customer in the list by double-clicking on it (see indication on the picture).

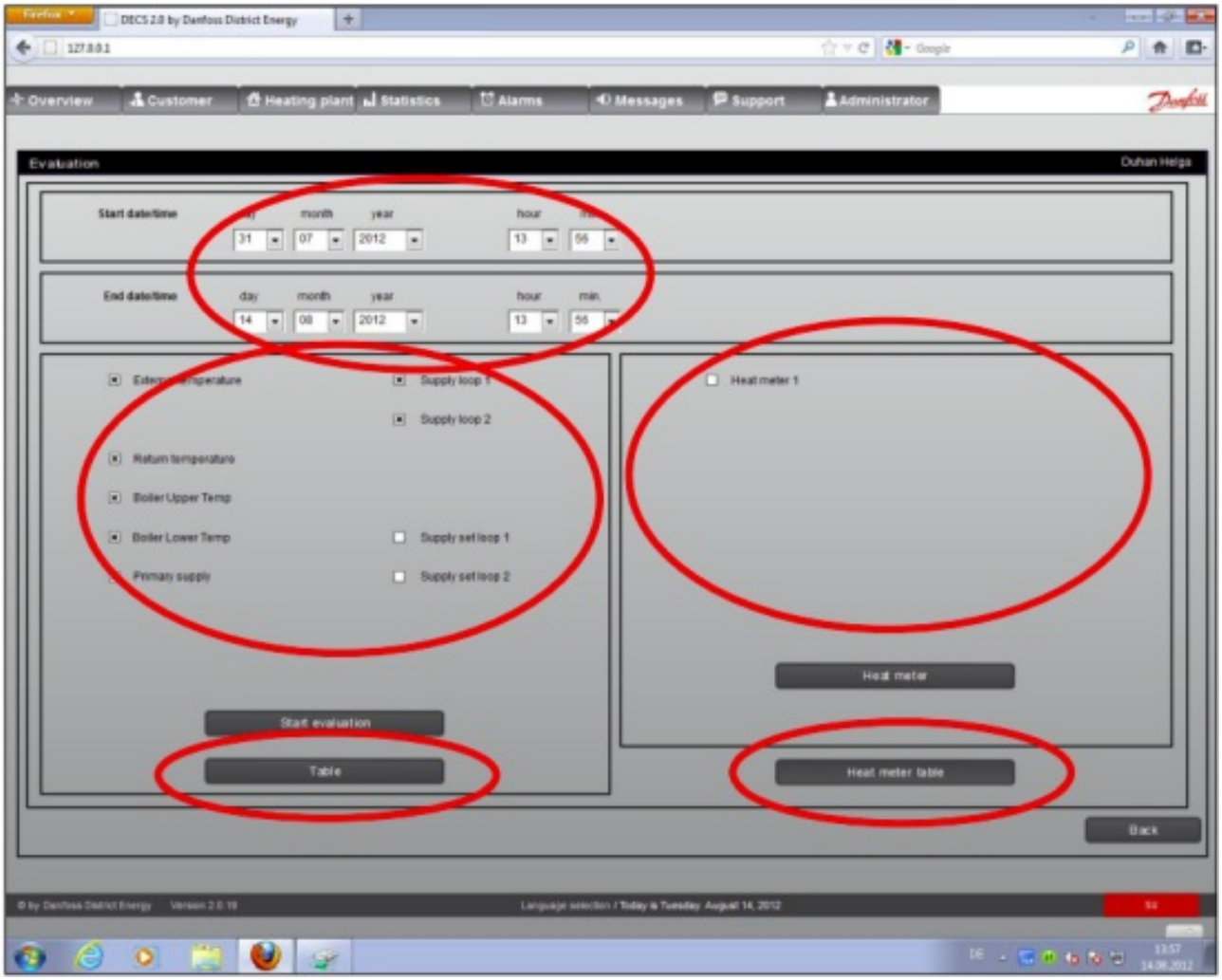
Your customer information will now be shown in the ‘Customer Display’ section (see indication on the picture). This is the general procedure for selecting the customer to be monitored and controlled.

The statistics can now be viewed in two different ways depending on which button is clicked (see indication on the picture):

1. Evaluation (graphic)
2. Evaluation (tabular)

1.	 **Evaluation (graphic)** You can do a graphical evaluation of all values from the sensors and heat meters by specifying the time period, the sensors and heat meters to be evaluated.The time period is specified with a start and end date/time (see indication on the picture).The available sensors for temperature, flow, pressure etc. are shown in a list and you may select one or more of these sensors to be shown graphically (see indication on the picture).If heat consumption needs to be evaluated as well, then select one or more of the available heat meters in the list (see indication on the picture).Finally, click the 'Adjust graphics' button to create the graphs.The graphs can be printed by clicking the 'Print' button.

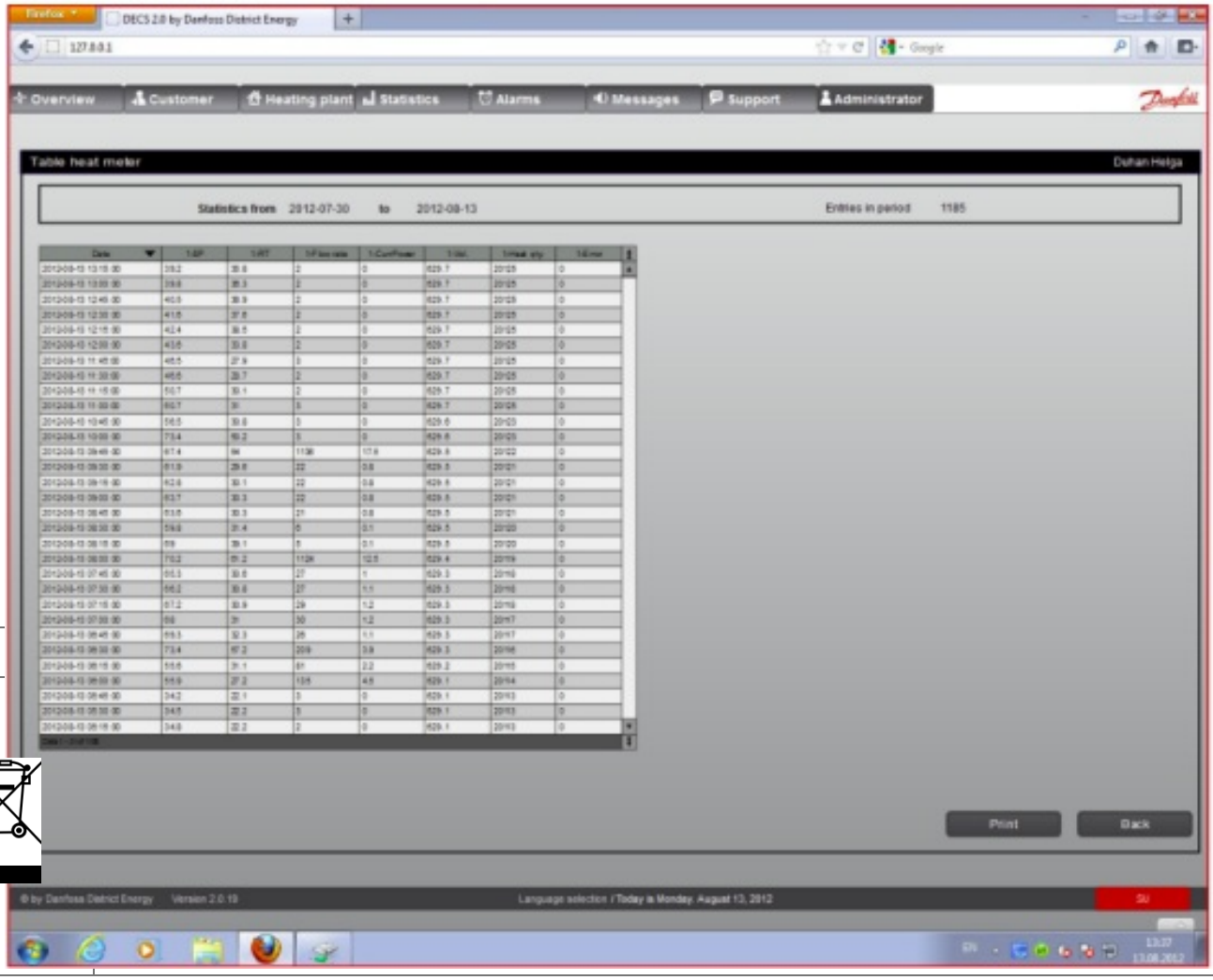
2.



Evaluation (tabular)

By using the tabular evaluation function you will have the values from the sensors and heat meters displayed in a tabular form for the specified period of time.The time period is specified with a start and end d ate/time (see indication on the picture).The available sensors for temperature, flow, pressure etc. are shown in a list and you may select one or more of these sensors to be evaluated in the table (see indication on the picture).Click the ‘Table’ button to view the table of sensor values (see indication on the picture).

If heat consumption needs to be evaluated as well, then select one or more of the available heat meters in t he list (see indication on the picture).Then click the ’Heat meter table’ button to create the table of heat mete r values (see picture on the next page).When the graphs or tables are shown on the screen they can be prin ted by clicking the ‘Print’ button.



Evaluation (tabular) – Table heat meter

Additional documentation for the DECS 2.0
Danfoss Energy Control system is available on www.heating.danfoss.com

Danfoss A/S
Heating Segment danfoss.com +45 7488 2222 **E-Mail:** heating@danfoss.com

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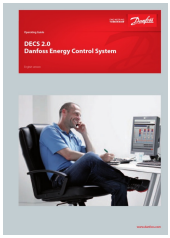
Documents / Resources

	**Danfoss DECS 2.0 Energy Control System** [pdf] User Guide BC091586469017en-020402, DECS 2.0 Energy Control System, DECS 2.0, Energy Control System, Control System
	**Danfoss DECS 2.0 Energy Control System** [pdf] User Guide ECL Comfort 310, OPR0010, OPR0020, DECS 2.0 Energy Control System, DECS 2.0, Energy Control System, Control System

References

- Danfoss Climate Solutions for heating | Efficient solutions for superior comfort | Danfoss
- Danfoss Climate Solutions for heating | Efficient solutions for superior comfort | Danfoss
- User Manual