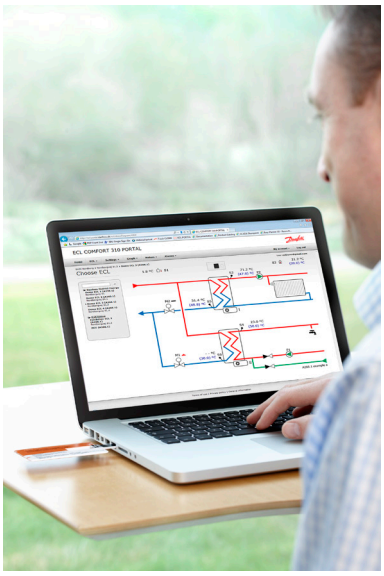
ENGINEERING
TOMORROW

Operating Guide

How to register your user account and ECL Comfort 296 / 310 controller to the ECL Portal



1.0 Contents

1.0 Contents 1
2.0 Introduction 2
2.1 Use the ECL Portal to take control of your plant 2
2.2 Application example 2
3.0 System requirements 3
3.1 Requirements to the computer accessing the ECL Portal 3
3.2 Requirements to the ECL Comfort 296 / 310 connection to the Internet 3
3.3 Requirements to the ECL Comfort 296 / 310 controller 3
3.4 Requirements to the Smartphone 3
4.0 Installation 4
4.1 As easy as can be 4
4.2 Configuration of the ECL Comfort controller to communicate with the ECL Portal 4
5.0 Working with the ECL Portal 8
5.1 Internet address 8
5.2 Language selection 8
5.3 Create user account 8
5.4 Log in to your account 10
5.5 Register your ECL controller(s) to the account 10
5.6 ECL Portal - front page 12
5.7 How to give private end users access to the ECL controller 12
5.8 Access levels 13
6.0 What to do if a private end user has registered his account in the ECL Portal before the professional user? 14
7.0 Hotline help 14
8.0 Further information and additional technical literature 14

2.0 Introduction

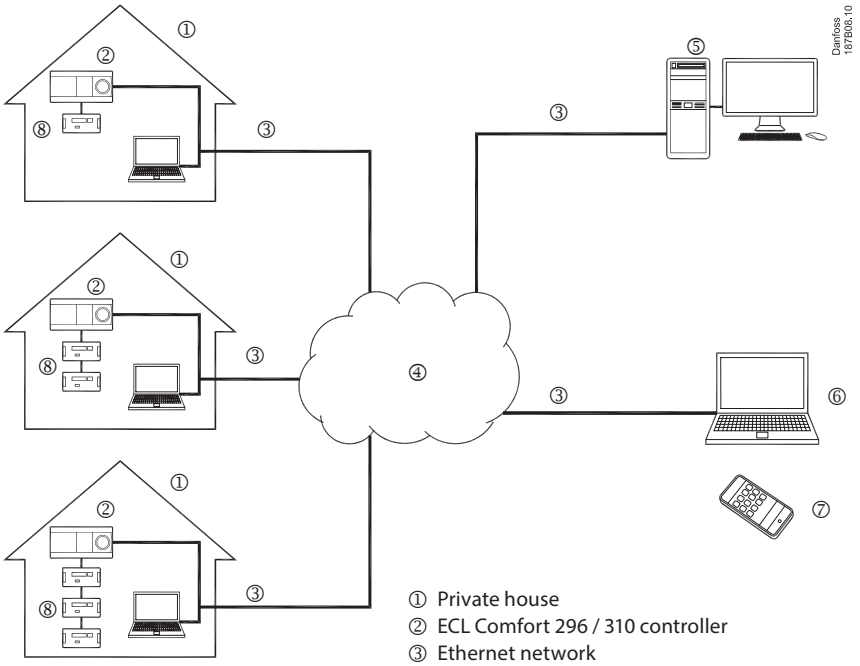
2.1 Use the ECL Portal to take control of your plant

This operating guide is intended for professional users like service personnel at district heating utilities, in larger plants or at owners/ operators of stand-alone district heating plants.

With the ECL Portal you can control your district heating system. It enables you to streamline service, commissioning and maintenance – directly from your PC or smartphone, wherever you are.

Furthermore, it allows you to grant private end users access to the ECL Portal thereby giving them the possibility to monitor energy consumption and adjust temperature settings.

2.2 Application example



① Private house
② ECL Comfort 296 / 310 controller
③ Ethernet network
④ Internet
⑤ ECL Portal server
⑥ Service provider's laptop
⑦ Service provider's Smartphone
⑧ Energy meters

In this example a service provider uses his laptop and Smartphone with internet connection to monitor and control the heating installations and read the energy consumption in several buildings using the ECL Portal (professional user account).

The people living in the buildings are using their laptops to monitor their energy consumption via the ECL Portal (private end user accounts) and to set room temperatures and night setback schedules.

3.0 System requirements

3.1 Requirements to the computer accessing the ECL Portal

Web browser	• MS Internet Explorer • Firefox • Chrome • Safari Supported browser versions: The newest version available at the time the user accesses the ECL Portal and one year back in time.

3.2 Requirements to the ECL Comfort 296 / 310 connection to the Internet

Electrical interface	Ethernet, RJ45 connector
Cable type	Ethernet cable (CAT 5)
Max. bus cable length	According to Ethernet standard
LAN communication speed	• 10 Mbit/s • 100 Mbit/s
Network	Star network according to the standard Ethernet
IP addressing (LAN side)	Dynamic or static. DHCP server is needed on the LAN for the ECL Comfort 296 / ECL Comfort 310 to use Dynamic IP addressing.
Firewall	Must allow TCP Port 502 (default for Modbus-TCP protocol) traffic to pass from the LAN to the WAN side.

3.3 Requirements to the ECL Comfort 296 / 310 controller

Controller software	ECL Comfort 296 / ECL Comfort 310 controllers must be software version 1.11 (or newer). If it is version 1.11 – 1.30 then it will automatically be updated by the application key to at least version 1.30. If it is older than version 1.11 then it cannot be used for ECL Portal.
Application key software	1.04 (or newer)
ECA 30 Remote Control (optional)	1.30 (or newer)

3.4 Requirements to the Smartphone

Operating system	• Apple iOS 4 (or newer) • Google Android 2.1 (or newer)

4.0 Installation

4.1 As easy as can be

All you need is a computer, an Internet connection as well as connection to the ECL Comfort 296 / 310 controller(s) and you're going!

The communication between the ECL Comfort 296 / 310 controller(s) and the ECL Portal uses the existing standard Internet connection (Ethernet) in the building. This means that the installation process is virtually hassle-free. No special software needs to be installed on your PC.

Once the ECL Comfort 296 / 310 controllers are connected to the internet and a user account has been created at the ECL Portal website, then other users can be granted access to the ECL Comfort 296 / 310 controllers as well, i.e. private end users.

4.2 Configuration of the ECL Comfort controller to communicate with the ECL Portal

First, the ECL Comfort 296 / 310 controller must be configured to connect to the local network (LAN).

Connect the ECL Controller to the Internet by means of a standard Ethernet cable connected to the local network.

Leave the cable connected. The local network must allow outgoing communication on TCP Port 502 (Modbus-TCP protocol) to the Internet.

If you need more information about how to navigate in the ECL controller, please consult the operating guide for the application key in use.

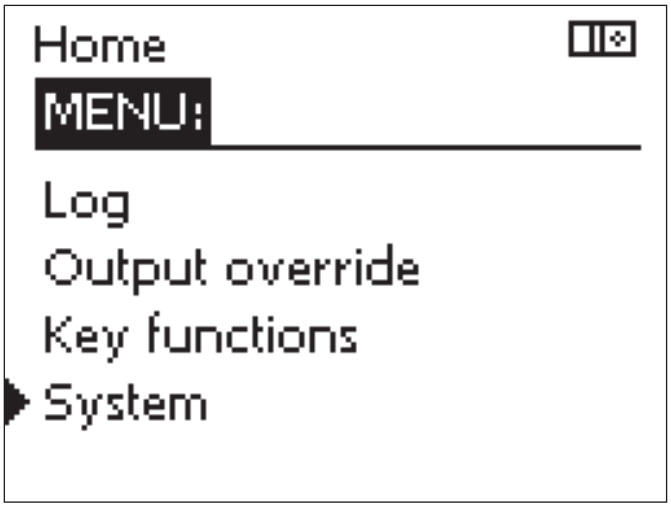
Go to the system menu:

Menu > System

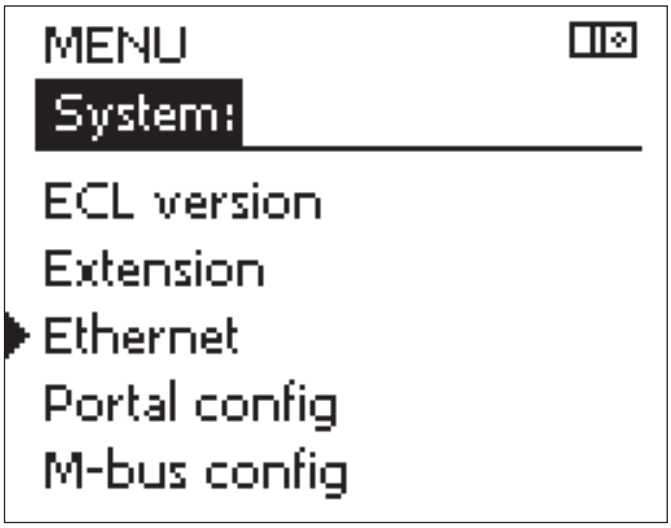
'System' menu is placed in 'Common controller settings' (⊡⊙).

How to enter common controller settings:

Action:	Purpose:	Examples:
	Choose 'MENU' in any circuit	MENU
	Confirm	
	Choose the circuit selector at the top right corner in the display	
	Confirm	
	Choose common controller settings	⊡⊙
	Confirm	



Select: Ethernet menu.



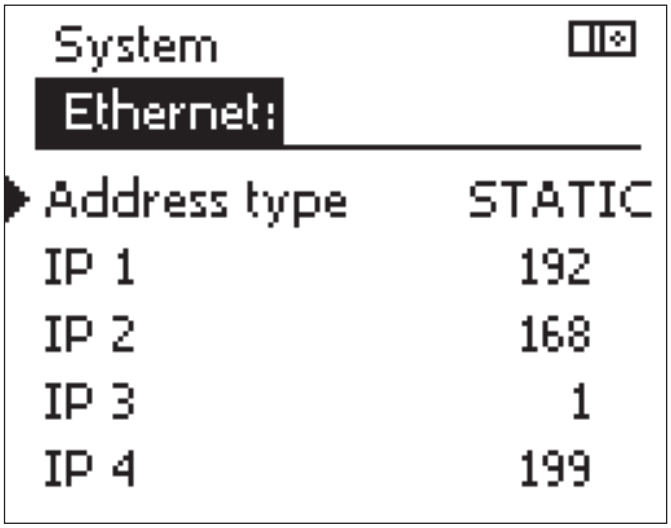
Select address type.

Change STATIC to DHCP.

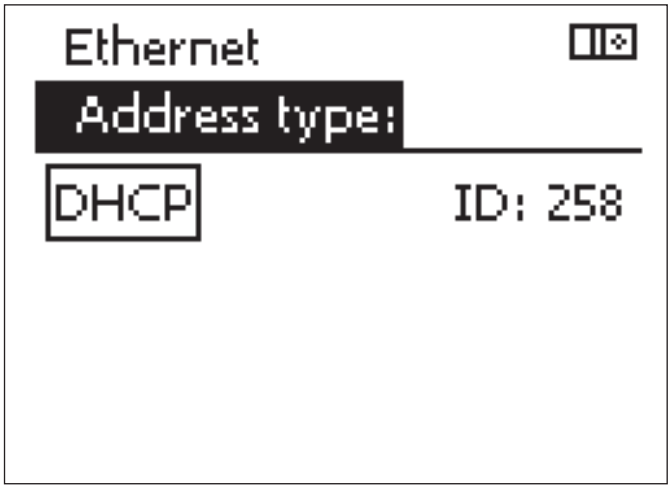
The easiest way to configure the ECL controller for the local network is by selecting the IP address type to be DHCP instead of STATIC.

The ECL controller will now receive network settings automatically.

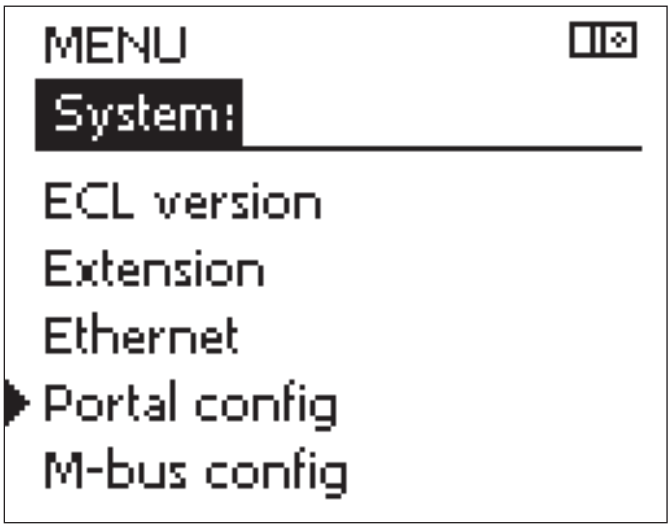
If the address type is set up to STATIC, the IP, Gateway and DNS addresses must be changed to be in line with the settings of your local network.



All IP settings are now configured and you can enable the ECL Portal in the Portal configuration menu.



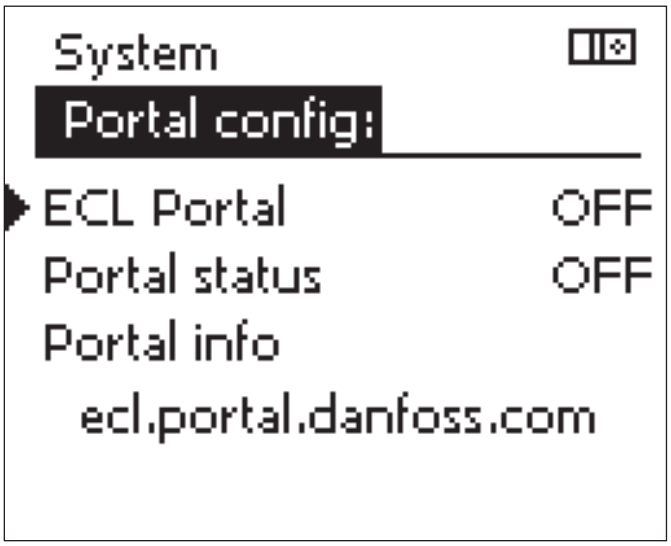
Go to System -> Portal Config



Check that the server address ends with .com

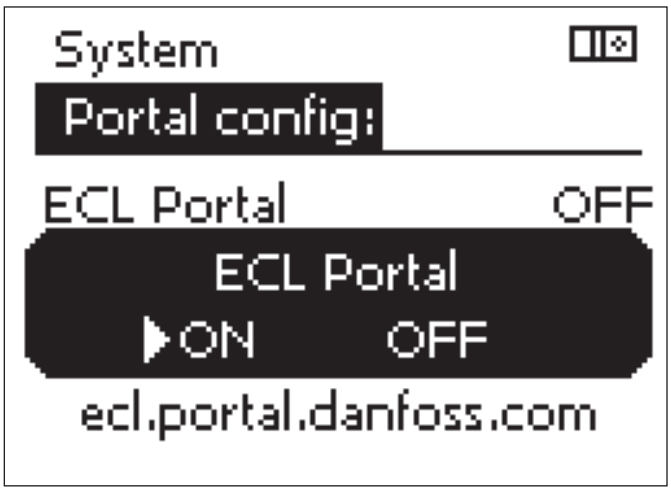
The server address automatically adapts to the language setting of the ECL, i.e. ends with .se for Swedish or .de for German.

If the language is not supported by the ECL Portal the server address must be manually set to end with .com to use English language.



Then set the ECL portal to ON.

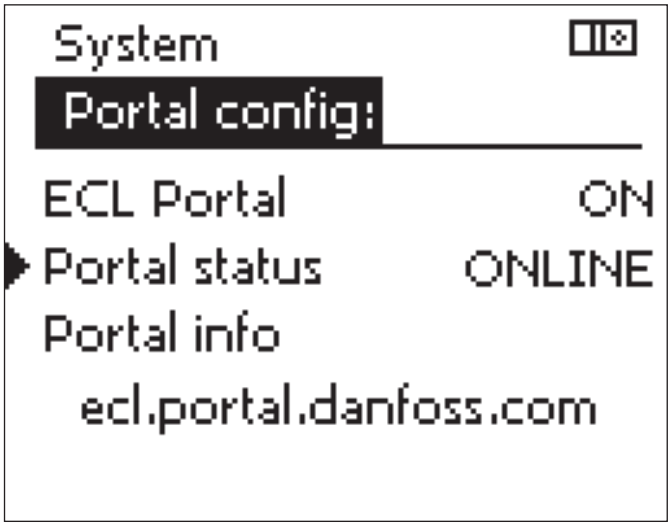
The server address cannot be changed if the portal is already 'ON.'



The ECL portal status should now change to ONLINE.

If the status does not change to ONLINE within a few seconds then a problem with the communication between the ECL controller and ECL Portal server has occurred.

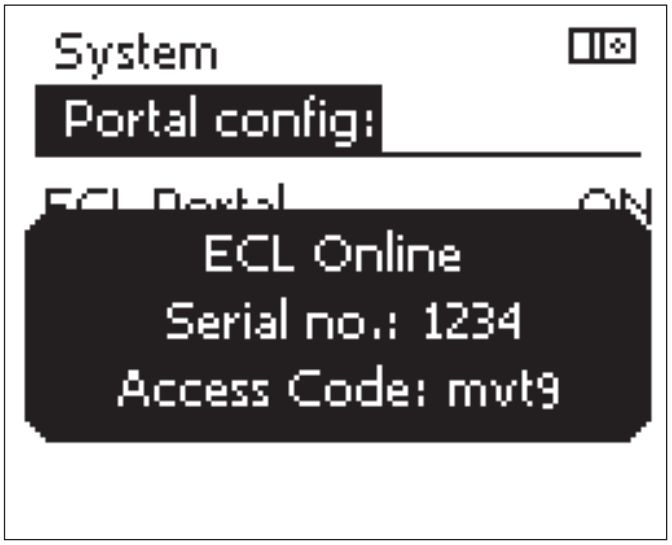
The network settings and the internet connection must then be checked.



Click on Portal info and you will get the serial no. and access code displayed.

Please write down the serial no. and access code as you will need these numbers to register the ECL controller to your user account on the ECL Portal.

The configuration of the ECL controller is now completed.



If the serial no. or access code should not be displayed, please check your internet connection.

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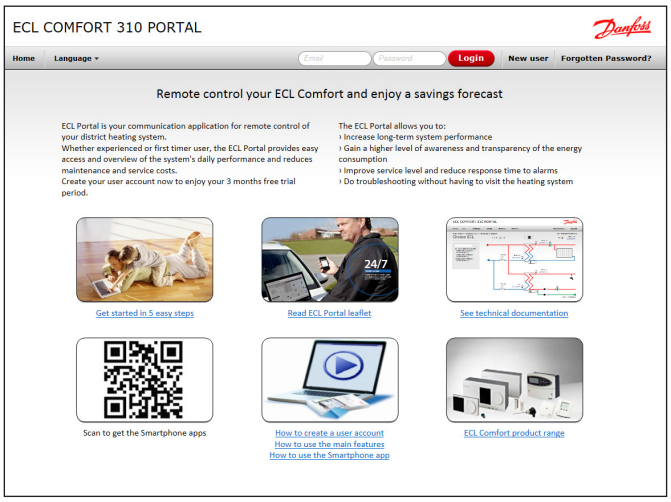
5.0 Working with the ECL Portal

5.1 Internet address

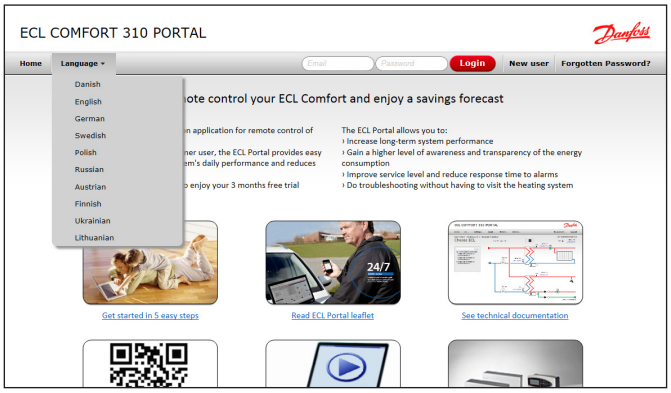
Open your Internet browser and go to
http://ecl.portal.danfoss.com/



5.2 Language selection

Language automatically adapts to the location of the user based on the regional settings of the user's computer.

You can select your language by pressing the "Language" selection button next to "Home".

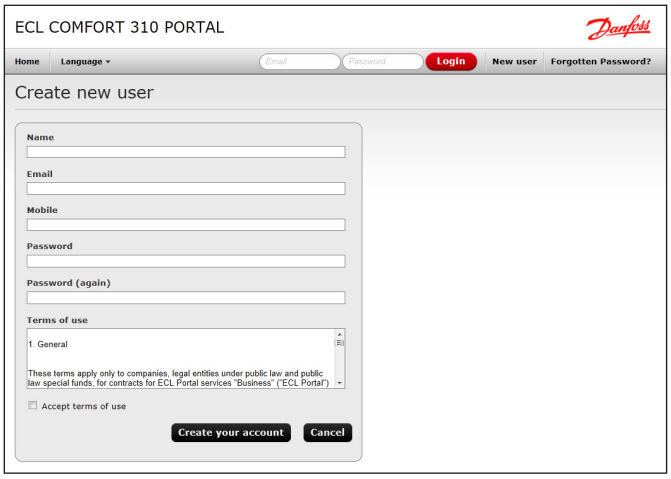


5.3 Create user account

Click on the "new user" button.

Enter your name, e-mail address and the password you would like to use.

Once you have read the terms of use, check the "accept terms of use" and continue.

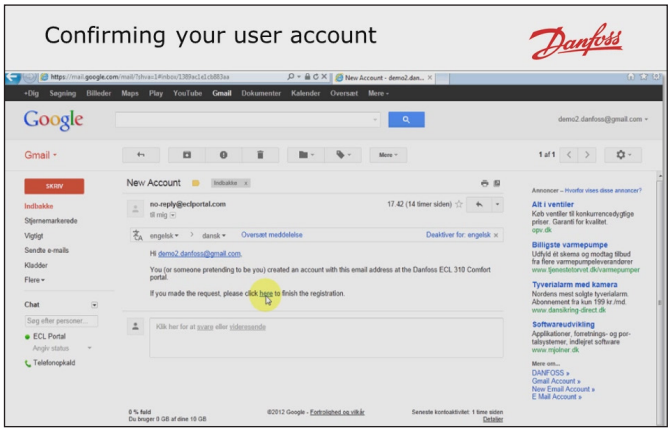


The professional user has to register the ECL controller to his user account before a private end user can register the same ECL controller to his account.

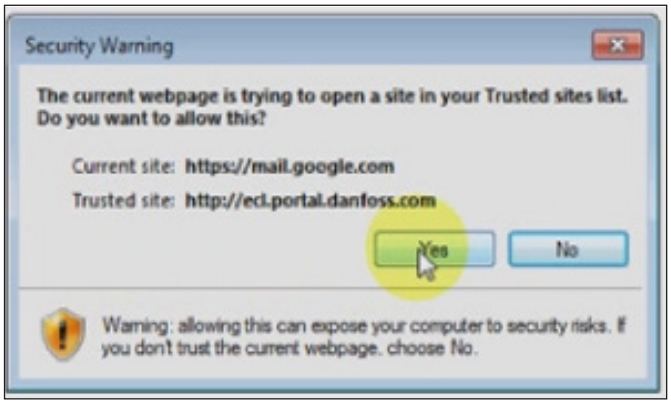
A confirmation e-mail is now sent to you from the ECL Portal.

Please open your e-mail inbox and look for it. It should appear within a few minutes.

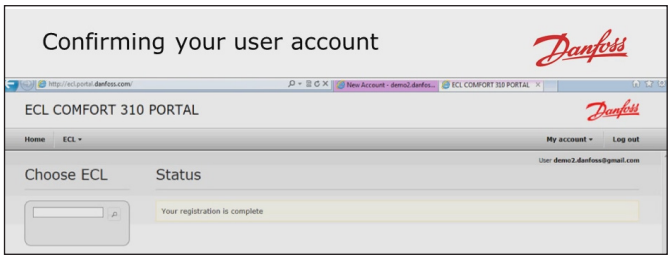
Open the e-mail and click on the link in the e-mail to confirm your user account.



Click on "Yes".



Your registration is complete.

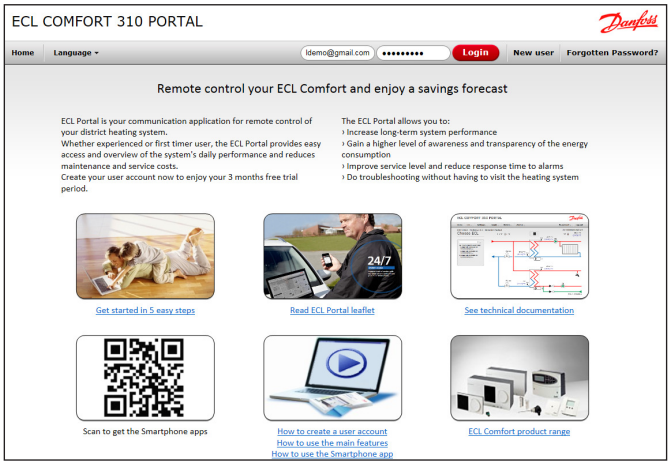


In case you don't receive the confirmation e-mail, please check your junk e-mail or spam folders as well.

5.4 Log in to your account

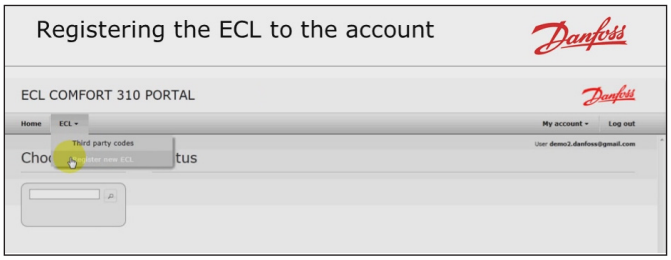
Log in to your user account by using your e-mail and password.

You are now ready to register one or more ECL Comfort 296 / 310 controllers to your account.

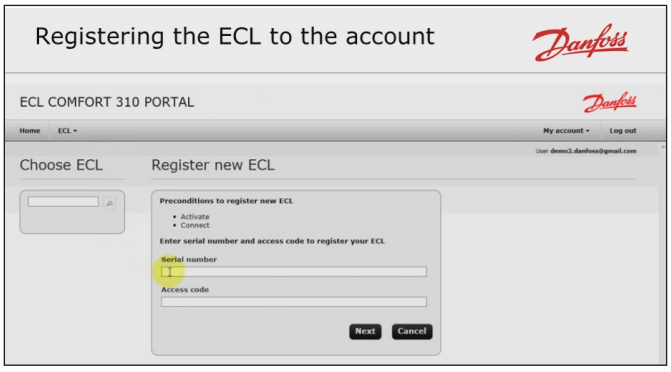


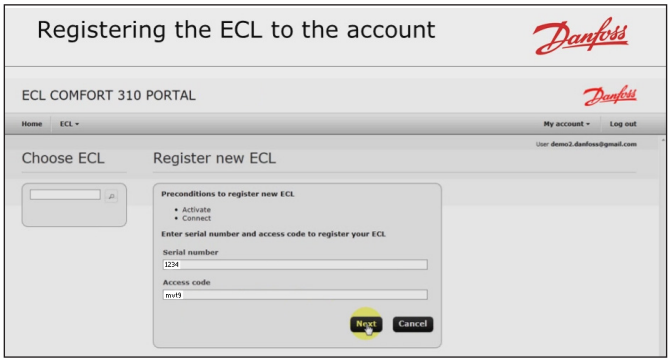
5.5 Register your ECL controller(s) to the account

Go to the "Register new ECL" menu.



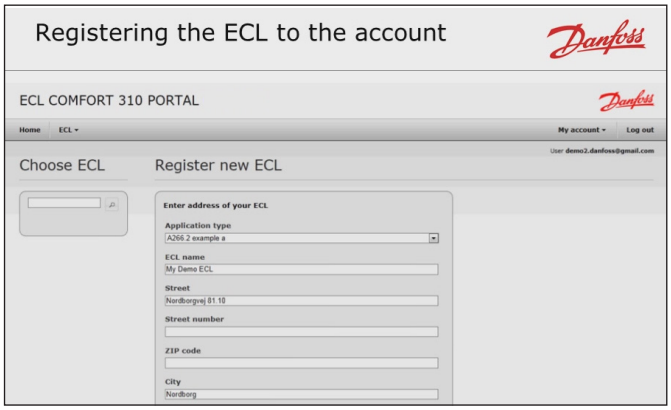
Enter the serial number and access code that was shown in the display of the ECL Comfort 296 / 310 controller.





The ECL Portal automatically configures its user interface based on the application installed in the ECL Comfort 296 / 310 controller.

In this example an A266.2 application key is installed.



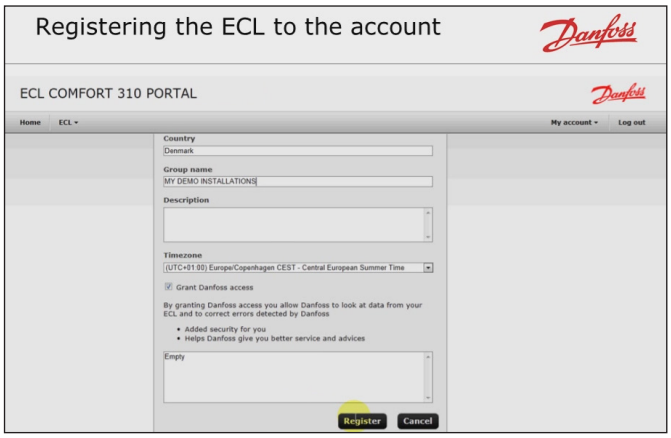
First, you have to type in the name and installation address of the ECL controller.

You can select which application example fits the installation the best and also add a description about the ECL Comfort 296 / 310 controller.

If several ECL Comfort 296 / 310 controllers are registered to your account you may find it useful to split them into groups. You can enter the name of the group in the "Group Name" field.

To complete the registration process you have to read and accept the terms and grant Danfoss access to the data.

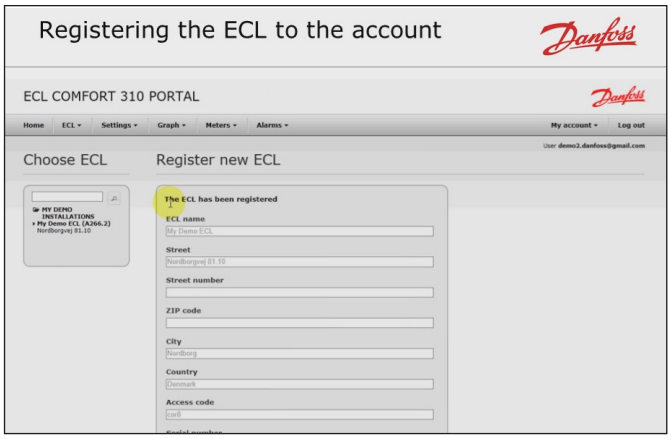
Click on "Register" and the ECL Comfort 296 / 310 controller is registered to your account.



Repeat this registration process for every ECL comfort 296 / 310 controller you would like to register to your account.

Professional users can register an unlimited amount of ECL Comfort 296 / 310 controllers to the account.

However, to register one or more ECL Comfort 296 / 310 controllers to a user account a license key is needed for each after the free trial period has ended.



5.6 ECL Portal - front page

From the front page of the ECL Portal you have now access to all the ECL controllers registered to your account.

When an ECL controller is selected, the flow diagram for that application is shown. It includes all sensors, pumps and valves supported by that application.

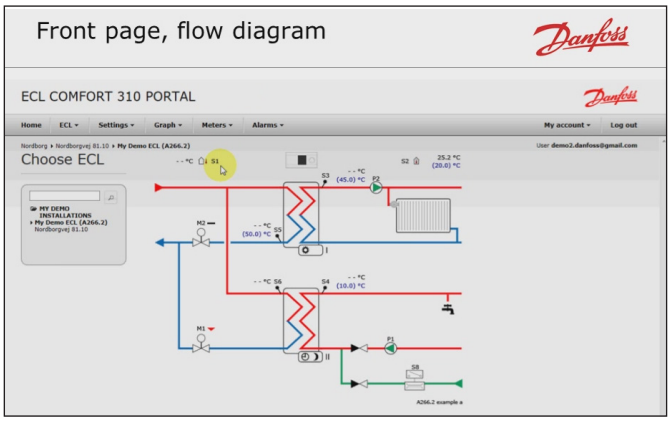
In this installation only a couple of sensors are connected to the ECL controller. If a sensor is not connected then no value is shown. Otherwise the actual value is shown.

The reference value set in the ECL controller is shown in parentheses.

Status of pumps is indicated by colors. Green means it is on, red means it is off.

The comfort mode and status of the valves are also indicated on the flow diagram.

Professional users have full access to all the features of ECL Portal.



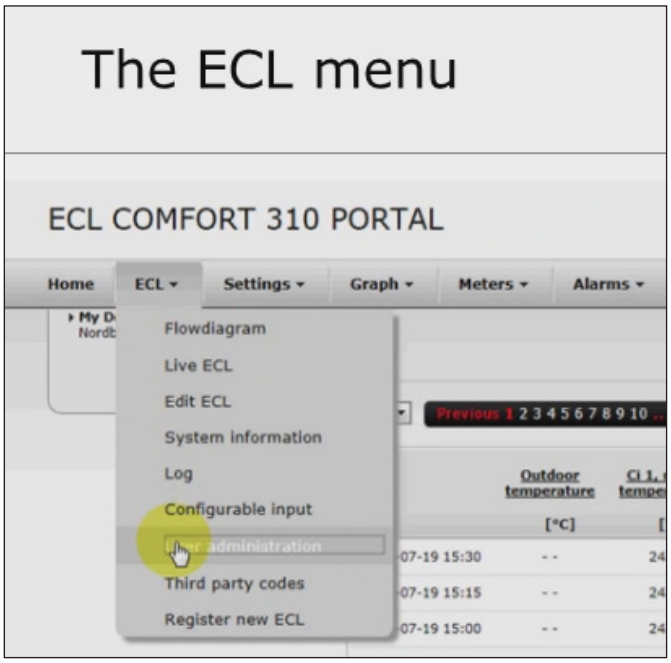
5.7 How to give private end users access to the ECL controller

First, the professional user has to register the ECL controller to his user account. Hereafter, the private user can register the same controller to his account.

When the ECL controller has been registered to the professional user's account, the private user will see that a message from the ECL Portal is sent to the professional user with the request for granting the private end user access to the ECL controller.

Click on the "User administration" button in the "ECL" menu to grant the private end user access to the ECL controller including the access level that has to be assigned to the private end user.

For the private end user to register his account, 5.1, 5.2, 5.3 (until log in) must be followed.



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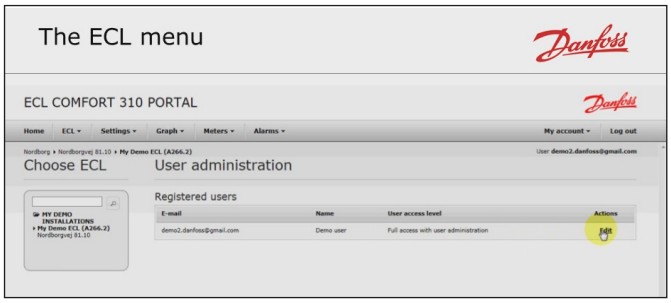
Registered users



5.8 Access levels

Read only	The user can read all settings. Changes are not allowed.
Limited access (recommended for private end users)	The user has limited access to the features of the ECL Portal, but will be able to: • monitor current and reference sensor values • monitor heat meters • see trend curves for logged data • export logged data to files • set schedule and holiday programs • set time & date • set comfort and saving room temperatures • set limited alarms
Full access (recommended for professional users)	The user has full access to all reading and writing modes in the ECL Portal.
Full access with user administration (recommended for administra-tors)	The user has the same rights as the professional user and is allowed to add users and change rights.

When the professional user has granted the user access to the ECL controller, the user can now log in to his account on the ECL portal using his e-mail and password.

6.0 What to do if a private end user has registered his account in the ECL Portal before the professional user?

In case a private end user has registered his account in the ECL portal before the professional user there are two possibilities either:

1. The private end user grants the professional user "Full access with user administration" or
2. Ask the local ECL Portal administrator in your Danfoss sales company to delete the private end user's access to the ECL Comfort 296 / 310 controller. Hereafter the professional user can register the ECL controller as the first one.

7.0 Hotline help

Professional users have access to a hotline for local support i.e. help on features of the ECL Portal and Smartphone apps which seem not to be functioning properly, troubleshooting on how to get the ECL Comfort 296 / 310 controller connected to the internet and ECL Portal or explanations of the features of the ECL Comfort 296 / 310 controller and ECL Portal in general.

However, no consulting services regarding the behavior of specific installations, optimizations etc. are included in the support.

8.0 Further information and additional technical literature

For further information on other features in the ECL Portal please watch the video tutorials:

- ECL Portal – Getting Started Part 1 VV.HX.A
- ECL Portal – Getting Started Part 2 VV.HX.B
- ECL Portal – Getting Started Part 3 VV.HX.C

Additional technical literature related to the Danfoss ECL Portal system:

- Data sheet on ECL Portal VD.HX.C
- User guide on ECL Comfort 210 /296 / 310 VI.KT.Y

The above literature can be found at: http://heating.danfoss.com/.

Here you can also find operating guides on the various Danfoss application keys describing how parameters and settings work in the ECL controller.

Smartphone apps can be downloaded for free via Apple AppStore (for iOS based Smartphones) and Google Play Shop (for Android based Smartphones). The app is found by searching for "ECL Portal".

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