ENGINEERING
TOMORROW

Operating Guide

ECL Comfort 210 and 310, extended heat cut-out

1.0 Table of Contents

1.1 Important safety and product information

1.1.1 Important safety and product information

This Operating Guide is an appendix to operating guides associated with ECL application keys A230, A231, A260, A266, A361, A368 and A376 and contains only a description of the extended heat cut-out functionality.

The extended heat cut-out functionality can be realized with ECL Comfort 210 and ECL Comfort 310.

For information on general functions please consult the operating guide for the application key in question.

Additional documentation for ECL Comfort 210 and 310, modules and accessories is available on *http://danfoss.com/*.

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Safety Note
To avoid injury of persons and damages to the device, it is absolutely necessary to read and observe these instructions carefully.

Necessary assembly, start-up, and maintenance work must be performed by qualified and authorized personnel only.

Local legislations must be respected. This comprises also cable dimensions and type of isolation (double isolated at 230 V).

A fuse for the ECL Comfort installation is max. 10 A typically.

The ambient temperature ranges for ECL Comfort in operation are:
ECL Comfort 210 / 310 / 311: 0 - 55 °C
ECL Comfort 296: 0 - 45 °C.
Exceeding the temperature range can result in malfunctions.

Installation must be avoided if there is a risk for condensation (dew).

The warning sign is used to emphasize special conditions that should be taken into consideration.

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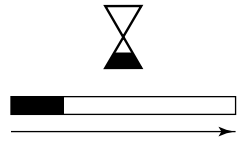
Application keys might be released before all display texts are translated. In this case the text is in English.

Automatic update of controller software (firmware):
The software of the controller is updated automatically when the key is inserted:

- ECL 210 / 310, as of controller version 1.11
- ECL 296, as of controller version 1.58
- ECL 311, as of controller version 11.01

The following animation will be shown when the software is being updated:



Progress bar

During update:

- Do not remove the KEY
  If the key is removed before the hour-glass is shown, you have to start afresh.
- Do not disconnect the power
  If the power is interrupted when the hour-glass is shown, the controller will not work.
- Manual update of controller software (firmware):
  See the section "Automatic / manual update of firmware"

This symbol indicates that this particular piece of information should be read with special attention.

As this Operating Guide covers several system types, special system settings will be marked with a system type. All system types are shown in the chapter: 'Identifying your system type'.

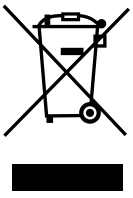
°C (degrees Celsius) is a measured temperature value whereas K (Kelvin) often is used for temperature differences.

The ID no. is unique for the selected parameter.

Example	First digit	Second digit	Last three digits
11174	1	1	174
	-	Circuit 1	Parameter no.
12174	1	2	174
	-	Circuit 2	Parameter no.

If an ID description is mentioned more than once, it means that there are special settings for one or more system types. It will be marked with the system type in question (e.g. 12174 - A266.9).

Parameters indicated with an ID no. like "1x607" mean a universal parameter.
x stands for circuit / parameter group.



Disposal Note

This symbol on the product indicates that it may not be disposed of as household waste.

It must be handed over to the applicable take-back scheme for the recycling of electrical and electronic equipment.

- Dispose of the product through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

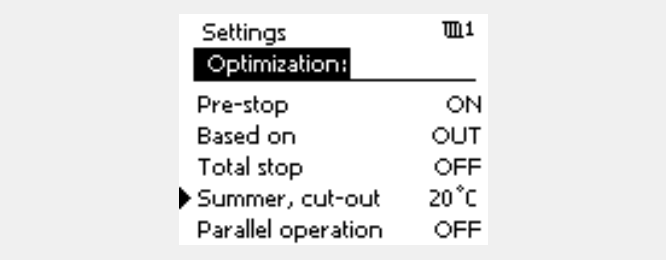
2.0 Settings

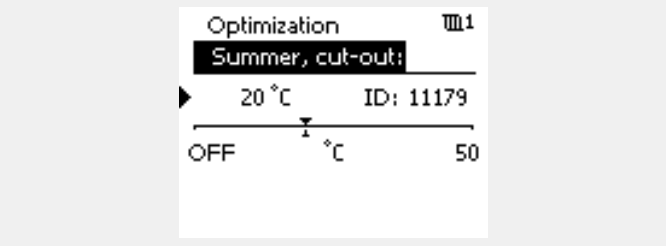
2.1 Optimization, summer cut-out

To enable differentiated cut-out temperature based on the time of the year two dates can be set with different settings of the cut-out temperature as well as the filtering defining the accumulated outdoor temperature.

For applications in which the heat cut-out has to run according to the outdoor temperature only, the settings are to be set in the "Summer cut-out" menu under "Optimization" for the heating circuit in question.

This is valid as long as the dates for "Summer" and "Winter" in the "Heat cut-out" menu are the same (factory setting).





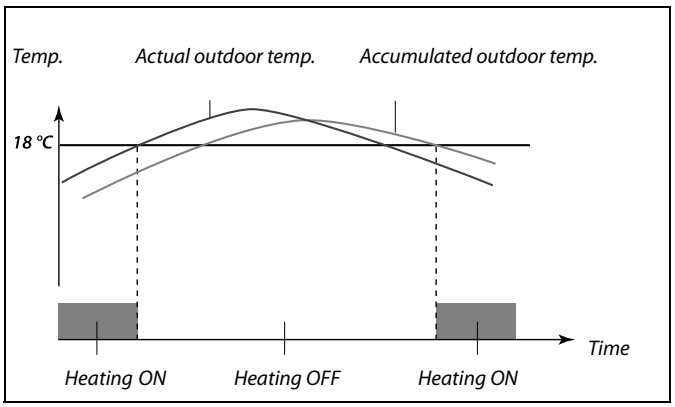
MENU > Settings > Heat cut-out

Summer cut-out (limit for heating cut-out)		**11179**
Circuit	*Setting range*	*Factory setting*
1*)	**OFF / 1 ... 50 °C**	**20 °C**

*) depending on application

The heating can be switched OFF when the outdoor temperature is higher than the set value. The valve closes and after the post-run time, the heating circulation pump stops. 'Temp. min.' will be overruled.

The heating system switches ON again when the outdoor temperature and the accumulated (filtered) outdoor temperature become lower than the set limit.

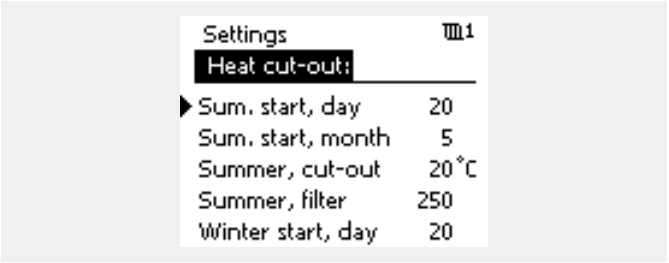


2.2 Differentiated heat cut-out

To set differentiated cut-out parameters for a heating circuit for "Summer" and "Winter" go to "Heat cut-out":
(MENU > Settings > Heat cut-out)
This function is active when the dates for "Summer" and "Winter" are different in the "Heat cut-out" menu.

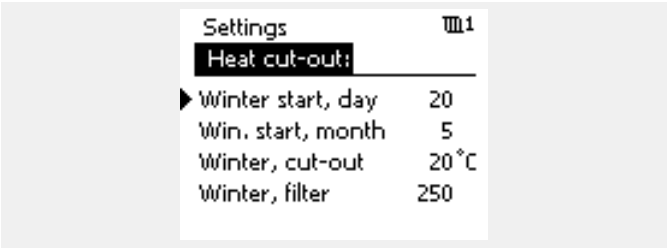
MENU > Settings > Differentiated heat cut-out

Extended heat cut-out setting			
Parameter	*ID*	*Setting range*	*Factory setting*
Summer day	**11393**	**1 … 31**	**20**
Summer month	**11392**	**1 … 12**	**5**
Summer cut-out	**11179**	**OFF / 1 … 50°C**	**20°C**
Summer filter	**11395**	**OFF / 1 … 300**	**250**



MENU > Settings > Differentiated heat cut-out

Extended winter cut-out setting			
Parameter	*ID*	*Setting range*	*Factory setting*
Winter day	**11397**	**1 … 31**	**20**
Winter month	**11396**	**1 … 12**	**5**
Winter cut-out	**11398**	**OFF / 1 … 50°C**	**20°C**
Winter filter	**11399**	**OFF / 1 … 300**	**250**



The heating cut-out is only active when the controller mode is in scheduled operation. When the cut-out value is set to OFF, there is no heating cut-out.

The above settings of the dates for the cut-out function are only to be done in the heating circuit 1 and are valid for other heating circuits in the controller as well, if applicable.

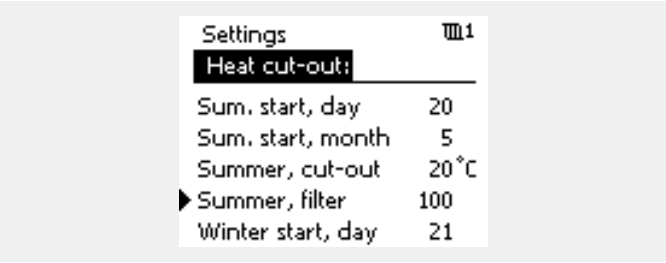
The cut-out temperatures as well as the filter constant are to be set individually per heating circuit.

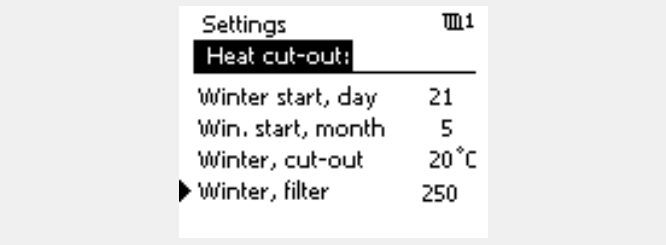
2.3 Summer/winter filter constant

The filter constant of 250 is applicable for average buildings. A filter constant of 1 is close switching according to actual outdoor temperature meaning low filtering (very “light” building).

A filter constant of 300 is then to be chosen if a big filtering is needed (very heavy building).

For heating circuits where the heat cut-out is demanded according to the same outdoor temperature for the whole year, but different filtering is wanted, different dates have to be set in the “Heat cut-out” menu enabling a selection of a filter constant different from the factory setting.
These different values have to be set in both the “Summer” and “Winter” menu.





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