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1

STARTING UP THE APPLICATION

1.1 STARTING UP WITH A USB CONNECTION

If a USB connection is made to the DucoBox or IQ-unit on start-up, the application will automatically look for all components and their parameters. Progress is displayed on the start-up screen. Once the parameters have been retrieved, the application proceeds automatically to the network overview (see section 2.1.3 on page 8).



Figure 2. Connect to DucoBox Silent / Focus

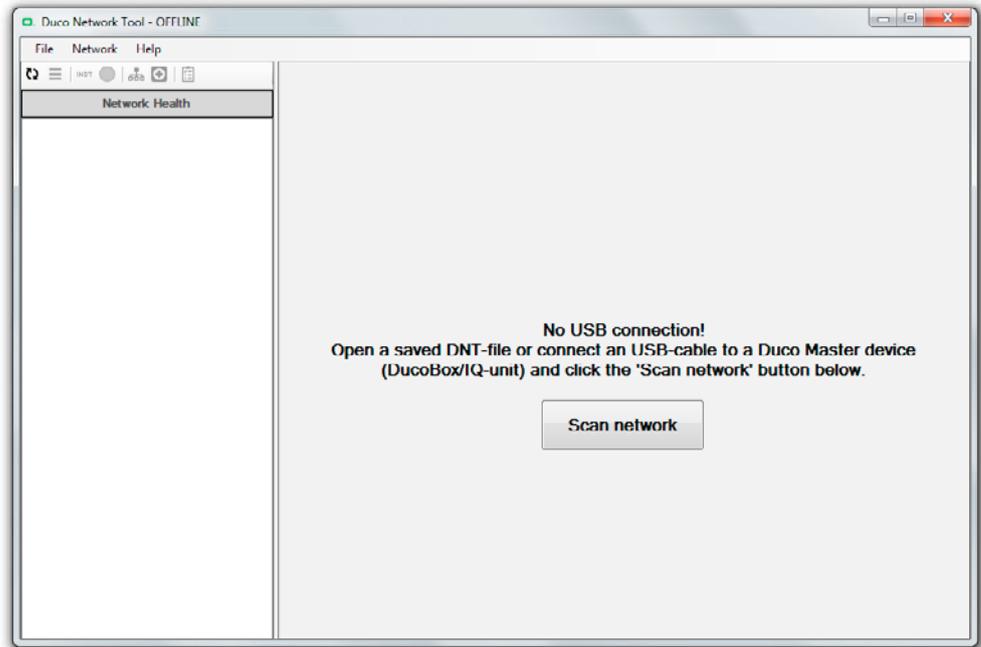


Figure 1. Connect to IQ-unit



Figure 3. Network loading screen on start-up

1.2 STARTING UP WITHOUT A USB CONNECTION



If a USB connection has not been made on start-up, you will go into the application's off-line mode. The USB cable can still be connected to a Duco Master component (DucoBox or IQ-unit). It is recommended that you click 'Scan network' next to bring up the network overview (ditto as starting up with a USB connection). On completing these steps the application goes on automatically to this overview (see section 2.1.3 on page 8).

The off-line mode can also be used to open DNT files (files with the network configuration fully saved (see section 4 on page 16)). This enables the complete network with all its parameters to be retrieved and analysed again later on.

2

APPLICATION OVERVIEW

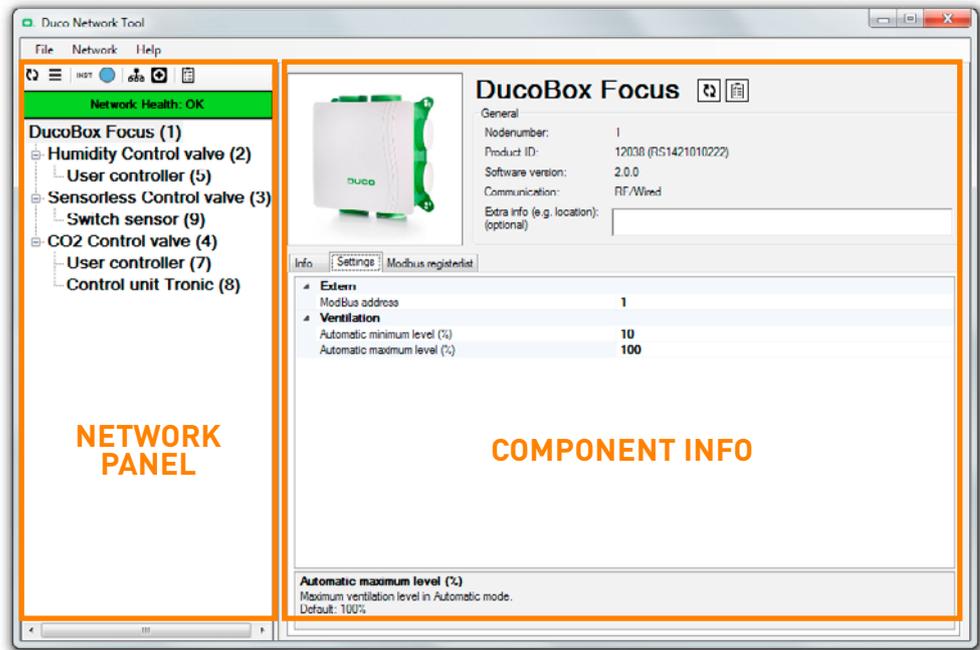


Figure 4. Application overview plus error messages

The application consists of two major parts:

- 2.1 Network panel
- 2.2 Component info

2.1 NETWORK PANEL

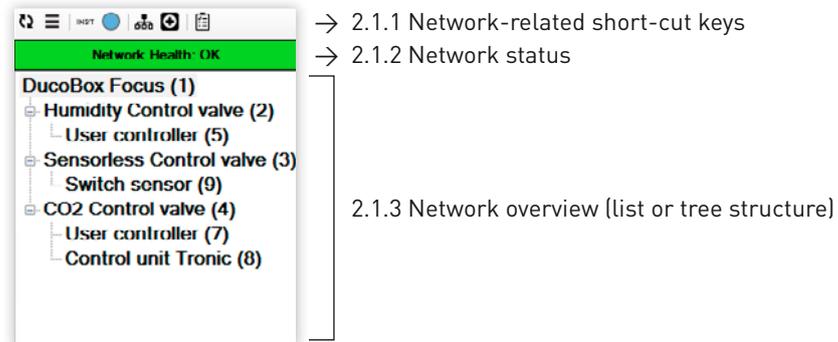


Figure 5. Network overview plus error messages

2.1.1 NETWORK-RELATED SHORT-CUT KEYS

Network-related short-cut keys can modify the network overview or bring about certain network activities.

	<p>Refresh network information</p> <p>This button refreshes all information relating to the network (consistent with application start-up). The arrows rotate while the network is being refreshed and settings cannot be changed.</p>
	<p>Change network display</p> <p>This button changes how the network overview is displayed, from a tree structure to a flat chronological list (in 'Node number' sequence: a unique address in the network).</p>
	<p>Installation mode</p> <p>This short-cut key puts the network into exit mode and exits from it.</p>
	<p>Display component</p> <p>This button enables a component in the network to be recognised. If this button is pressed, the component indicated in the network overview will light up in blue. This links the component indicated in the network to the physical component.</p>
	<p>Network overview</p> <p>A complete overview of the most significant network parameters <i>(see section 2.1.3 on page 8).</i></p>
	<p>Network status overview</p> <p>A complete overview of every error message and warning in the network <i>(see section 2.1.2 on page 7).</i></p>
	<p>Save as PDF file</p> <p>This short-cut key enables all the information to be saved in a PDF file <i>(see section 3 on page 13).</i></p>

2.1.2 NETWORK STATUS

This button displays the status of the network.
There are four different situations that can occur:

Network Health: OK	<p>OK The network is not showing any error messages.</p>
Network Health: INFO	<p>Information Despite the fact that the network is not showing any error messages, there are some issues. Click the button for a overview.</p>
Network Health: WARNING	<p>Warning There is an actual risk of error messages occurring in the network. Click the button for a overview.</p>
Network Health: ERROR	<p>Error Error messages have occurred in the network. Click the button for a overview of error messages.</p>

Click the 'network status' button (🔍 or Network Health: ERROR) for a overview of issues, warnings or error messages. This overview consists of the message sequence number, its status, a 'node number' and name, a description of the error message and a possible remedy.

#	Status	Node	Unit	Description	Possible solution
1	INFO	1	DucoBox Focus	Empty Home is ON (complete network is permanent low)	Press AUTO or an other manual button on a random user contr
2	ERR	1	DucoBox Focus	Flow calibration has failed!	Reboot the DucoBox while lid is closed to retry the flow calibrati
3	WARN	2	Humidity Control valve	Network connection bad!	Check if component is connected (wired) and has power.

2.1.3 NETWORK OVERVIEW

This part of the application displays an overview of all components. Click the component for a readout of the settings or other information (section 2.2). Components showing issues, warnings or error messages are displayed coloured light green, orange or red, respectively. Using the 'Change network display' button (☰), the overview can be displayed in the following structures:

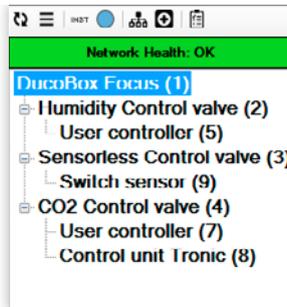


Figure 6. Tree structure

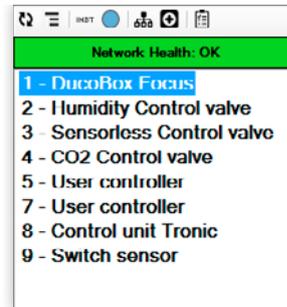


Figure 7. Chronological list structure

Click the 'Network overview' button (📊) for a detailed overview of the network.

#	Img	Name	Comm	Prod	Softw	Netw	Print	Asso	Stat	Vent	Cur	SensHoq	
1		DucoBox Focus	RF/Wired	12038	2.0.0	OK	0	0	AUTO (0x00)	70m³/h (41% of 170m³/h)	20% (Target: 20%)	-	N
2		Humidity Control valve	Wired	12035	2.2.0	OK	1	0	AUTO (0x00)	60m³/h (100% of 60m³/h)	100% (Target: 100%)	100%	N
3		Sensorless Control valve	Wired	12035	2.2.0	OK	1	0	AUTO (0x00)	4m³/h (10% of 35m³/h)	5% (Target: 5%)	-	N
4		CO2 Control valve	Wired	12035	2.2.0	OK	1	0	AUTO (0x00)	8m³/h (10% of 75m³/h)	22% (Target: 22%)	0%	N
5		User controller	Wired	12034	1.2.0	OK	2	2	AUTO (0x00)	-	-	-	N
7		User controller	Wired	12034	1.2.0	OK	4	0	AUTO (0x00)	-	-	-	N
8		Control unit Tronic	Wired	12031	1.0.0	OK	4	7	AUTO (0x00)	5%	15% (Target: 5%)	-	N
9		Switch sensor	RF	12040	1.2.0	OK	3	3	OFF (0x00)	-	-	0%	N

Figure 8. Network overview

2.2 COMPONENT INFO

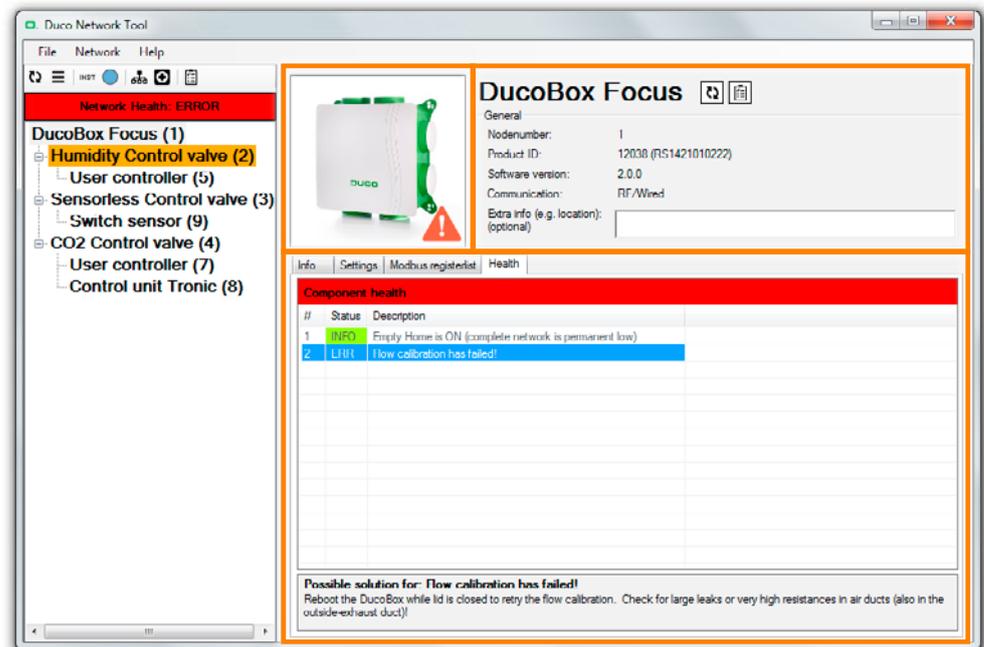


Figure 9. Component with error message

This screen consists of three major sections:

- 2.2.1 Image
- 2.2.2 General information
- 2.2.3 Specific information and settings, any ModBus parameters and status.

2.2.1 IMAGE

An image of the component is shown top left. Next to this image a pictogram is shown in the bottom right-hand corner, to indicate whether the component is showing any issues, warnings or error messages.

	Information Despite the fact that the component is not showing any error messages, there are some issues. Click the pictogram for a overview.
	Warning There is an actual risk of error messages occurring in the component. Click the pictogram for a overview.
	Error Error messages have occurred in the component. Click the pictogram for a overview of error messages.

2.2.2 GENERAL INFORMATION

General component information is displayed top right. This consists of the 'node number', product identification (with its serial number), the software version and communication capability. Additional information (such as location) can be added as well, this can be displayed in PDF format using the 'save as PDF file' function. In addition to the component name there are another two short-cut keys:

	Refresh component info This button only refreshes the info for the selected component. This can save time if it involves a large network. The arrows rotate while the network is being refreshed and settings cannot be changed.
	Save as PDF file This short-cut key can be used to save all information relating to the selected component as a PDF file <i>(see section 2 'Save as PDF file')</i> .

2.2.3 SPECIFIC INFORMATION AND SETTINGS

Up to four tabs may be displayed in this section:

- 2.2.3.1 Information
- 2.2.3.2 Settings
- 2.2.3.3 ModBus register list (for ModBus compatible components only)
- 2.2.3.4 Status – only if there is a message *(see also pictogram next to image)*

2.2.3.1 Information

This tab displays all component info.

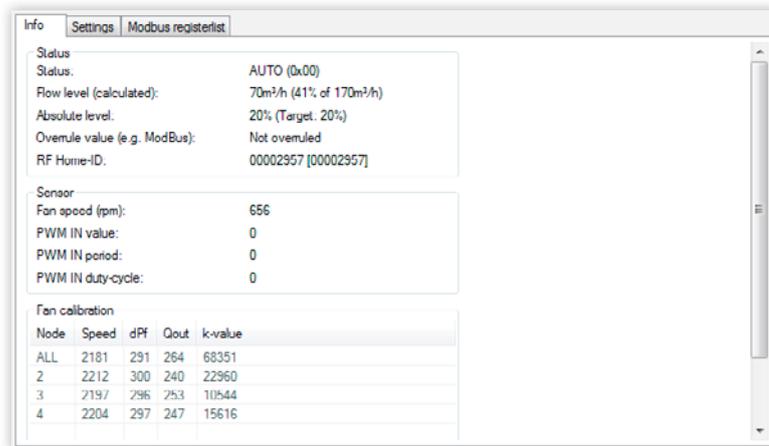


Figure 10. DucoBox Focus info tab

2.2.3.2 Settings

Settings for the selected component can be viewed or changed in this tab.

On selecting the setting, both the standard value and a brief description of the function are shown below it.

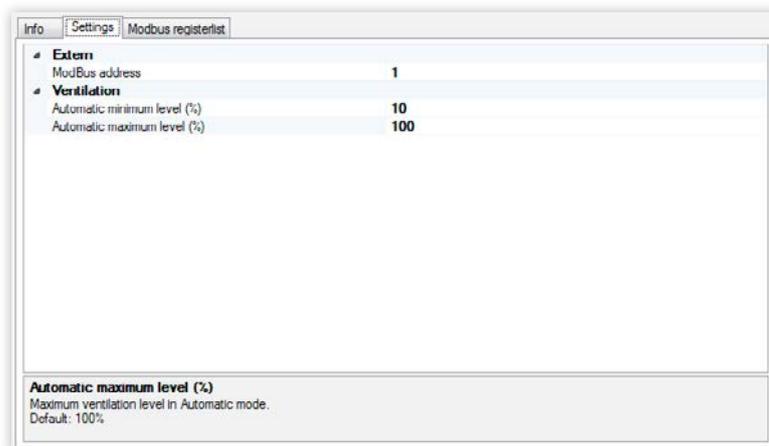


Figure 11. DucoBox Focus settings

2.2.3.3 ModBus register list

All Input and Holding ModBus registers for the component can be read out in this tab. The current value is displayed (it is updated upon refreshing the component or the network). This tab is displayed only if the network (DucoBox/IQ-unit) ModBus is compatible.

On selecting the register value, a brief description of the function is shown below it.

INPUT registers - Read parameter			HOLDING register - Write parameter		
Address	Description	Current value	Address	Description	Current value
10	Type module	10	10	Overrule ventilation level (%)	255
11	Status	0	11	-	
12	Ventilation level (%)	20	12	-	
13	-		13	-	
14	-		14	-	
15	-		15	Setting: Automatic minimum level (%)	10
16	-		16	Setting: Automatic maximum level (%)	100
17	-		17	-	
18	-		18	-	
19	Zone	0	19	Action	7

Type module Every kind of component has it's own typenumber.	Overrule ventilation level (%) Overrule associated ventilation intake levels with the desired level (100% is open).
--	---

Figure 12. ModBus register list for a User controller

2.2.3.4 Status

This tab displays any issues, warnings or error messages discovered for the component. This tab will only appear if any messages have been generated.

On selecting the error message a suggested remedy for the problem will appear below the message.

#	Status	Description
1	INFO	Empty Home is ON (complete network is permanent low)
2	ERR	Flow calibration has failed!

Possible solution for: Flow calibration has failed! Reboot the Ducobix while lid is closed to retry the flow calibration. Check for large leaks or very high resistances in air ducts (also in the outside-exhaust duct!).
--

3

SAVE AS PDF FILE

All information about the Duco Network can also be saved as a PDF file. In the drop-down menu top left you can choose from four types of document:

- Component settings
- ModBus register lists for ModBus implementations
- List of all components (nodes)
- Network error messages

Unwanted components can be unchecked in the middle of the left-hand section so as not to include them in the PDF file. The right-hand pane shows a sample PDF file once it has been saved. Press the 'Save' button to save the file in PDF format.

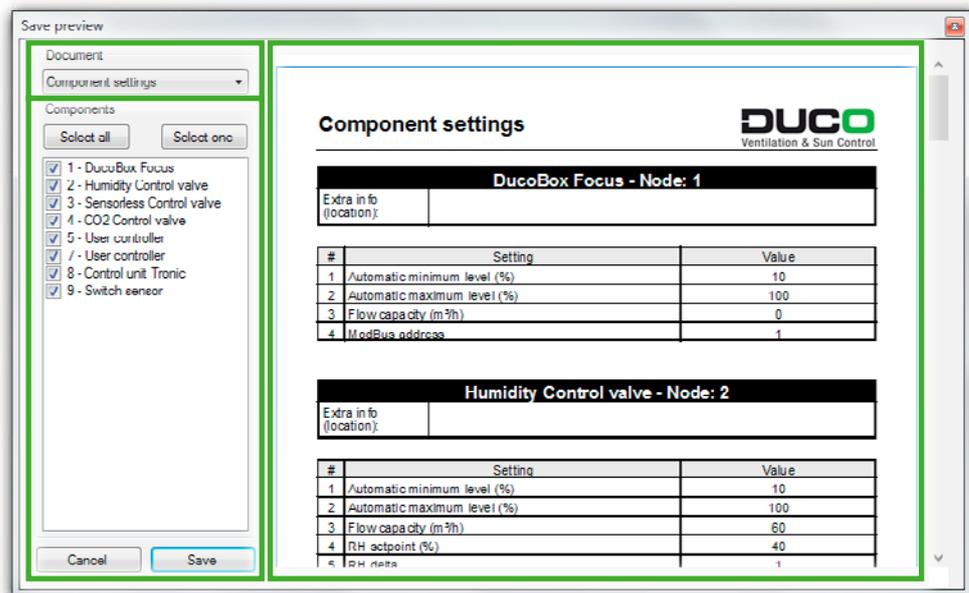


Figure 13. Component settings

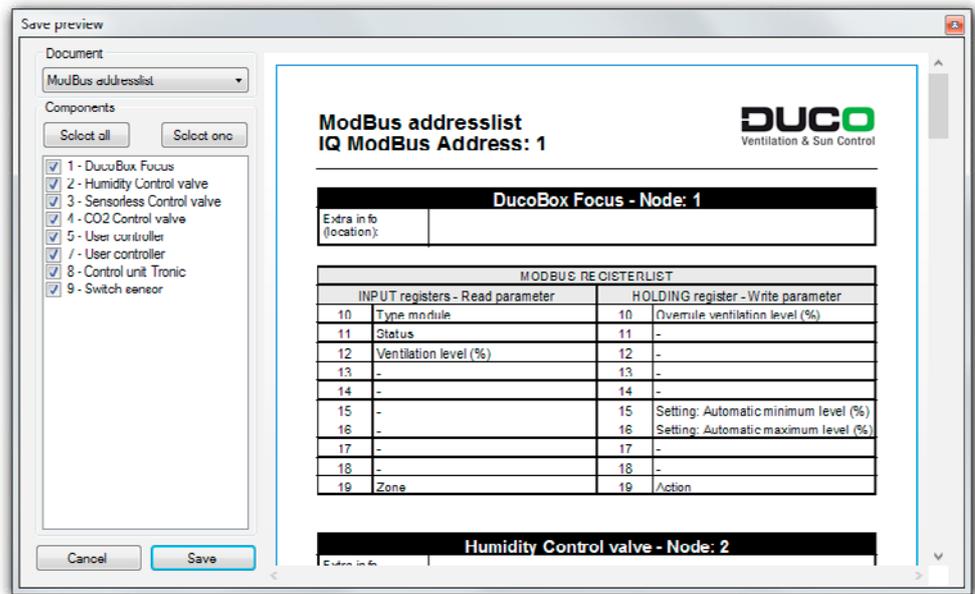


Figure 14. ModBus address list

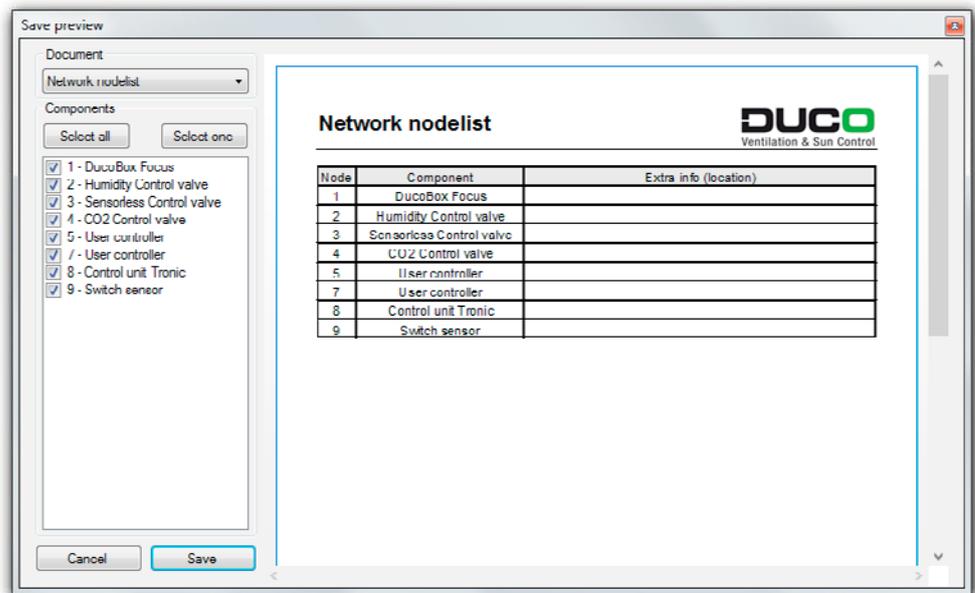


Figure 15. Network node list

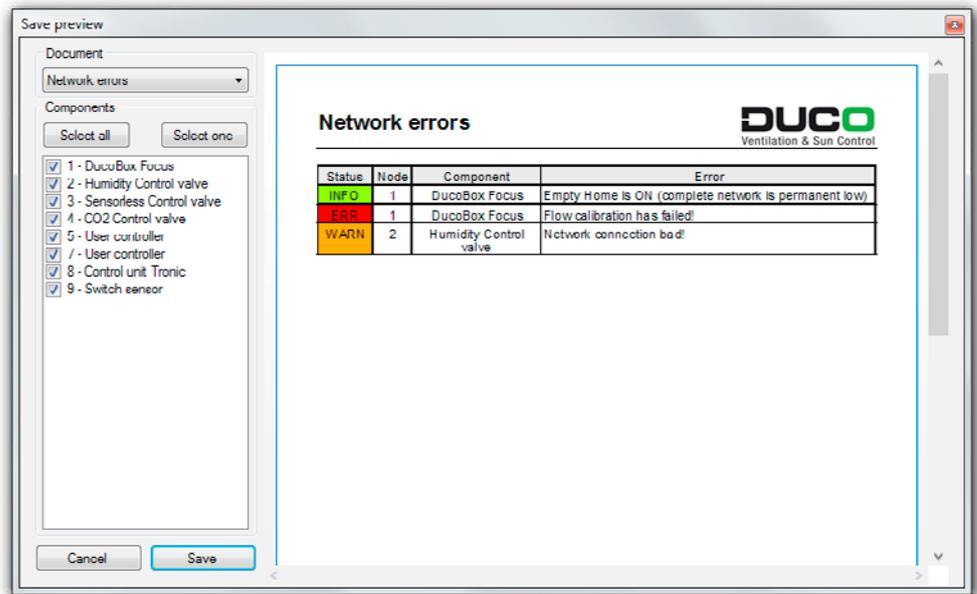


Figure 16. Network error messages

4

SAVING AND OPENING DNT FILES

The entire network and all its settings/parameters can be saved as a DNT file (DNT = Duco Network Tool). To do this go to the 'File' > 'Save Network to file...' menu. These files can be opened again later on via 'File' > 'Open Network file...', even if there is no USB connection to the DucoBox or IQ-unit in place.

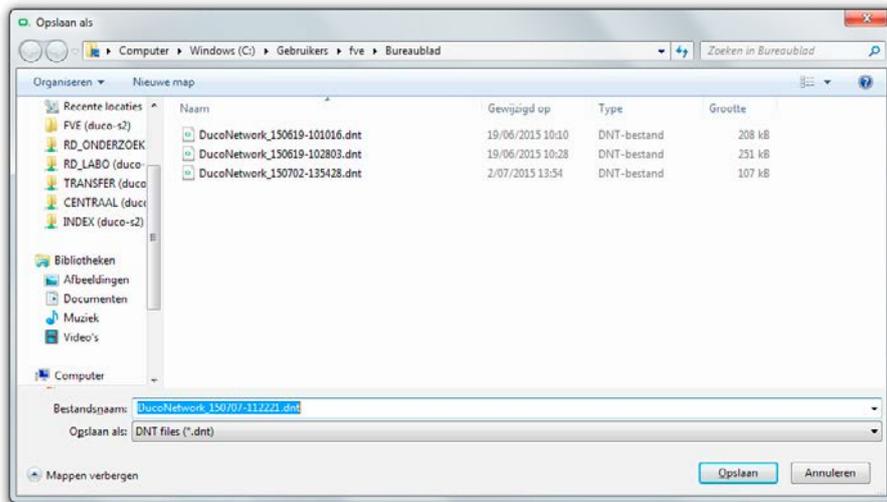


Figure 17. Saving a network as a DNT file

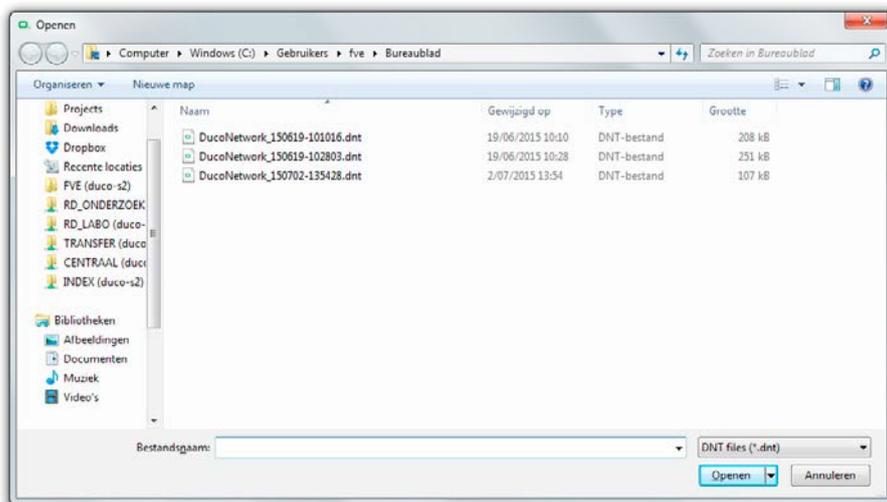


Figure 18. Opening a DNT file