



LINDINSPECT®

User Information

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LINDINSPECT® is a browser-based user interface for Lindinvent's system and server software LINDINTELL. LINDINSPECT® makes operational data from climate control installations and other equipment in the building available for visualization, analysis, and control within a single interface. The tool is customized for a specific building by selecting how program modules in the LINDINTELL server software should be presented.

LINDINTELL is described in a separate product description.

Introduction

Prerequisites

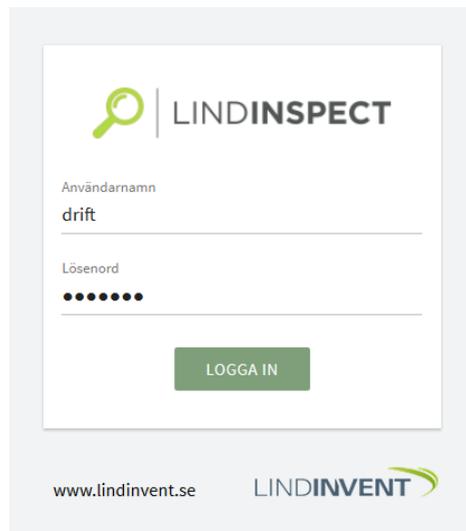
- The computer must be connected to the Internet (or another network with LINDINSPECT®).
- Supports the latest versions of Edge, Firefox, Google Chrome, and Internet Explorer 11.

Login and Home Page

Open the web browser and enter the address of the server where LINDINSPECT® is installed. After logging in with the assigned username and password, the LINDINSPECT® home page opens. The main menu is tailored to the user's assigned authorization level.

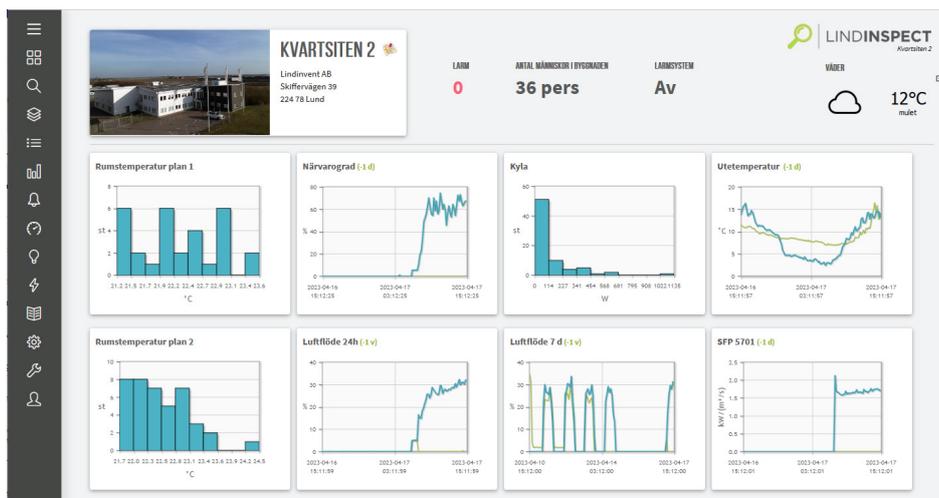
From the home page, users can search for operational data via the main menu or directly through a graph on the home page. Selecting a graph makes current values available for further analysis. Selected key values can be displayed directly on the home page.

Login Window



Login Window to LINDINSPECT®.

Example of Home Page



The main menu on the left shows which functions LINDINSPECT® supports in the current building. Users can navigate to building data via the main menu or directly through linked diagrams on the home page.

Terms Used in Connection with LINDINSPECT® (Italicized in this manual)

GLOSSARY	MEANING
Node	A connected device that can be identified via node ID on the established network (CAN).
Node Table	A tabular list of all included nodes in the network of controllers and user interfaces installed. For each node, the current node value for all basic control and adjustment variables is specified.
Node Value	The value a selected variable or parameter assumes for a specific node in the network.
System Value	A current value of one of the predefined system variables identified to provide an overview of how the system operates at a given moment.
Plan View	Floor plan layout showing rooms and nodes.
Node Label	A colored marker around a node in the plan view.
Display Value	The node value shown in a node label.

Finding Operational Data via Views

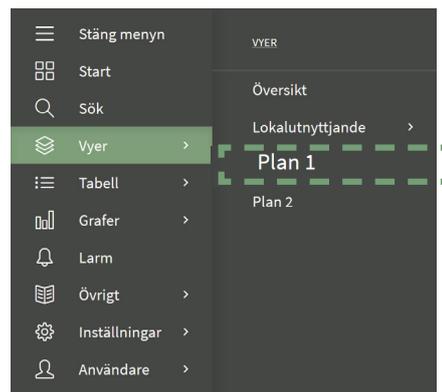
Starting from the Views menu option, operational staff can get a graphical overview of various operational data.

Below is an example from a plan view. The value shown in the colored node labels (A) can be switched by setting values in the dropdown field (B).

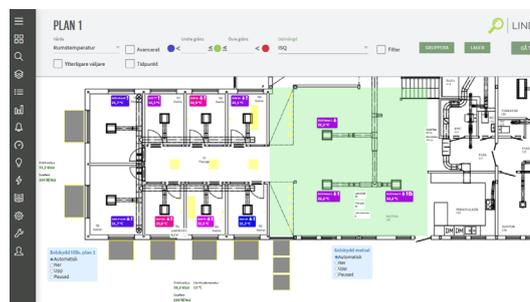
By linking from each node label/ID, the node is presented with node values in a window on the plan view (C). Here, operational staff can see alarm history and save notes per room/node.

Color markers in node labels are set according to a scale from the lowest to highest value. A node that does not have the selected display value is marked with a green node label.

Presence is indicated in the node label with a figure of a person.



Example of the "Views" Menu in LINDINSPECT®



Example of Plan View in LINDINSPECT®

PLAN 1

Värde: Rumstemperatur

Undre gräns: 21, Övre gräns: 23, Delmängd: ISQ

Avancerat, Filter, GRUPPERA

Ytterligare valjare, Tidpunkt

Direkt solljus: 28,3 klux, Soleffekt: 338 W/m²

151 Passage

154 Ljudnivå (0-5 V)

153 Kontor

152 CS

R155 JP & DB: 22,0 °C

R154 CSV: 23,2 °C

R153 PA: 22,4 °C

R152 CS: 21,1 °C

Solskydd tillb. plan 1

- Automatisk
- Ner
- Upp
- Pausad

Direkt solljus: 59,9 klux, Utomhustemperatur: 13,7 °C

Soleffekt: 608 W/m²

Selected nodes are presented in separate windows.

R152 CS

VÄRDEN	PRODUKTINFO	LARM	ÄNDRINGAR	ANTECKNING
Beteckning	R152 CS			
Unikt ID	41001			
Produktförkortning	ISQ-200			
Systembeteckning	5703			
Driftsläge	Ekonomi			
Rumstemperatur	21,5 °C			
Närvaro	Ja			
Koldioxidhalt	583 ppm			
Kanaltemperatur	19,4 °C			
Tilluftsflöde	8 l/s			
Lokalt tilluftsflöde	8 l/s			
Lokalt tilluftsflöde BBV	5 l/s			
Öppning	0 %			
Värmestez	56 %			

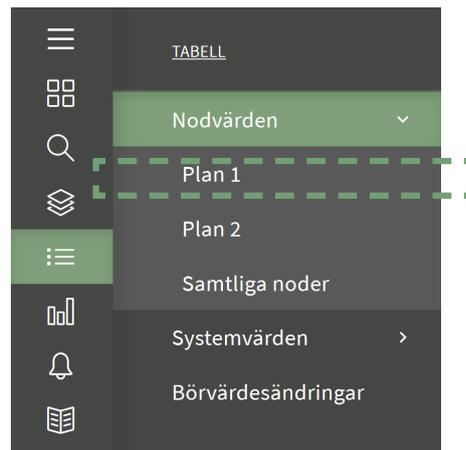
Part of the plan view showing selected nodes and node values in the floor plan, including shading.

Reading and Analyzing Data via Tables

Via the Table menu option and Node Values, the complete node table with all nodes and their node values can be opened.

The node table can be filtered and sorted by any column. Linked values or labels can be followed up on. Values in input fields can be changed directly from the table view. Following the link to the node label shows the node's location on the plan view.

[A] shows a selected logged node value in the node table. Selecting Plot shows logged values [A_{plot}] that can be examined in detail by placing the cursor on the graph (point) or by holding the cursor from and to the time period to be studied (interval). The selected time interval will then be shown for the defined period in higher resolution.



Example of the "Table" Menu in LINDINSPECT®

NODER - PLAN 1

TA BORT FILTER | SPARA SOM DELMÄNAD | VISA AVANCERAT | LADDA NER DATA

Beteckning	Benämning	Unikt ID	Produktförkortning	Rumstemperatur [°C]	Närvaro	Kanaltemperatur [°C]	Flöde BBV [l/s]	Tilluftsflöde [l/s]	Frånluftsflöde [l/s]	Digitalt flöde [l/s]	Balans [l/s]	Tryck [Pa]	Öppning [%]	Spjällöppning [°]	Värmesteg [%]	Komfortavvikelse [°C]	Beräknad kylförlust [W]	Rumstemperatur BB [°C]	Rumstemperatur BV [°C]	Miniflöde BV [l/s]	Närvaroflöde BV [l/s]	Maxiflöde BV [l/s]	Tid till ekonomi [min]	Förskjutning värme [°C]	Förskjutning kyla [°C]	Tid till komfort [min]
LB01-101-TD1	Kontor	1		21,7	Nej	21,7	8	8				54,2	17		36	0,0	0	22,5	22,5	8	11	60	45	0,5	1,5	5
LB01-102-TD1	Kontor	1		20,8	Nej	20,9	5	5				51,8	25		29	0,0	2	22,0	22,0	5	10	45	45	0,5	1,5	5
LB01-103-TD1	Kontor	11003	TTD	23,1	Ja	23,1	2	2													10	45	45	0,5	1,5	5
LB01-104-TD1	Kontor	11004	TTD	22,6	Ja	22,6	2	2													10	50	45	0,5	1,5	5
LB01-105-TD1	Kontor	11005	TTD	22,9	Ja	22,9	2	2													10	45	45	0,5	1,5	5
LB01-106-TD1	Kontor	11006	TTD	23,3	Ja	23,3	2	2													10	45	45	0,5	1,5	5

Plot
Histogram
Varaktighetsdiagram

Following the linked value in the node table shows logged data in the selected presentation format.

Example of a node table in LINDINSPECT®.

Logged node values in Plot



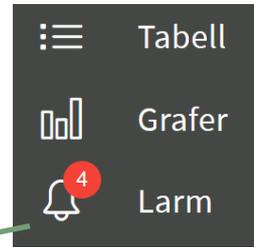
The selected type of chart presents and makes logged values available in LINDINSPECT®.

Viewing Alarms

Via the Alarms menu, the alarm list opens. The complete alarm list can be filtered to desired nodes in the building.

Alarms can be monitored and acknowledged via the alarm list. Following the linked node name [A] in the alarm list shows the node's location on the plan view.

An exclamation mark in the node label on the plan view indicates unacknowledged alarms.



LARM

Larm	Nod	Prioritet	Från	Till ↓	Kvitterat	Kvitterat av
▲ Nod saknas	▲R238 SBM	Hög	2018-10-29 08:41:15	Aktivt	<input type="checkbox"/>	
▲ Nod saknas	▲R240 Torg utve	Hög	2018-10-26 13:49:49	Aktivt	<input type="checkbox"/>	
▲ Nod saknas	▲R244 SBM	Hög	2018-10-26 13:49:49	Aktivt	<input type="checkbox"/>	
▲ Nod saknas	▲DSC R	Hög	2018-10-26 13:49:49	Aktivt	<input type="checkbox"/>	
▲ Enheten indikerar mekani	▲R242 HPT	Hög	2018-10-27 06:11:55	2018-10-27 09:50:58	<input type="checkbox"/>	
▲ Nod saknas	▲R125 DRP	Hög	2018-10-26 13:49:49	2018-10-26 16:35:51	<input type="checkbox"/>	

1: Alarm List with fields for filtering and follow-up

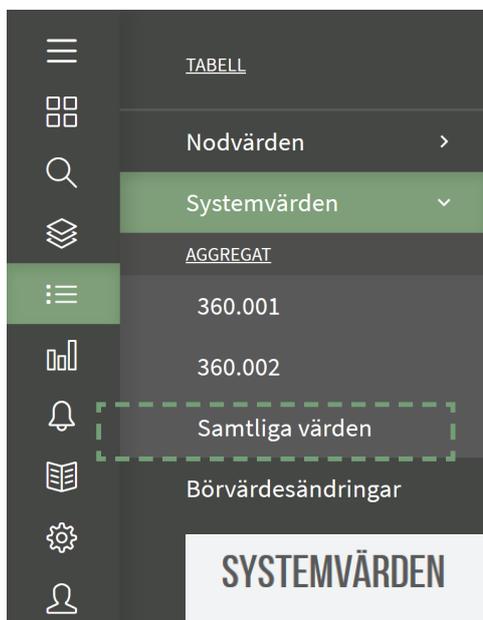
2: Node with Alarm displayed on plan view

The Alarms menu option helps users overview and manage alarms.

Finding System Values

Via the Table menu and System Values, the list of all system values can be displayed.

Various system values can be studied via the table. Underlined values have logged time series that can be presented in a graph. Multiple values with time series can be added to the same graph.



SYSTEMVÄRDEN	
Antal don	29 st
Antal don med kylbehov (ÄV > BV)	0 st
Antal don med närvaro	<u>12</u> st
Antal don med rumstemperatur inom dödzon	<u>26</u> st
Antal don med värmebehov (ÄV < BV)	3 st
Antal döda noder	0
Antal larmande noder	0
Antal noder totalt	33
Högsta rumstemperatur	<u>23</u> °C
Klockslag för dagens första närvaro	<u>602</u> (hhmm)
Klockslag för gårdagens sista närvaro	<u>1743</u> (hhmm)
Lägsta rumstemperatur	<u>21,2</u> °C
Medeltemperaturen	<u>22</u> °C
Morgonvädring, 0 = AV, 1 = PÅ	0
Nod med högsta rumstemperatur	<u>11003</u>
Nod med lägsta rumstemperatur	<u>11020</u>

SYSTEMVÄRDEN	
Nod med näst högsta rumstemperatur	<u>11005</u>
Nod med näst lägsta rumstemperatur	<u>11024</u>
Näst högsta rumstemperatur	<u>23</u> °C
Näst lägsta rumstemperatur	<u>21,3</u> °C
Optimeringssignal för tilluftstemperatur	<u>20</u> °C
Optimeringssignal för tryck - Frånluft	<u>100</u> Pa
Optimeringssignal för tryck - Tilluft	<u>0</u> Pa
Sammanlagring närvaro	<u>41,4</u> %
Sammanlagring tilluftsflöde	<u>26,3</u> %
SFP SWEGON (kW/m3/s)	<u>0,7</u>
Summa balans	<u>331</u> l/s
Summa balansoffset	<u>325</u> l/s
Summa frånluftsflöde	<u>56,7</u> l/s
Summa tilluftsflöde	<u>382</u> l/s
Summa tilluftsflöde max	1455 l/s
Utomhustemp	<u>10,1</u> °C