Graphical Interface Guide
AK-EM 100
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AK-EM 100 User guide
AK-EM 100 Introduction

Description of system

The AK-EM 100 provides a web based graphical user interface of a store which allows a range of daily users to monitor data, alarms and reports, either locally or remotely, regarding all of their monitored refrigeration equipment.

A store's refrigeration equipment is monitored continuously by controllers (AK, AKC, EKC), whose data is fed and interpreted via a System Manager or AKA Gateway into the AK-EM 100 device. The data is then made available via the network onto the web, where the AK-EM 100 graphical interface is run.

Advantages of AK-EM 100

- complete overview of store
- alarm monitoring
- provides up-to-date information in real time
- multi-user access
- easy to use web based front end
- allows staff to focus on key daily tasks
**List of menu options**

Certain functionality will be made available / unavailable according to the user’s access rights. This also applies to the menu system. Here, particular options like Comms and Technical Admin, would normally be inaccessible to a daily user.

- **Store Mimic** - A graphical representation of the store which contains all of the assets and their points of measurement. This is where the mimic templates and images are uploaded onto the system, and where points are configured for display.

- **Store Operations** - Store Operations contains information relating to both the overall store and its individual assets. View several types of reports, graphs, check the current alarm status, and configure asset details, as well as carry out some commands such as defrosting or switching on/off a refrigeration unit.

- **HACCP Reports** - Provides a HACCP report for all of the assets measurement points within the store. These are set up using some of the administration options, such as Food Types and Food Types Configuration.

- **Historical Alarms** - Depending on access rights, Historical Alarms provides seven types of reports, ranging from the total number of alarms to the worst performing asset.

- **Trending** - Depicts a graph of a point(s) which updates automatically to provide live data for a set period of time. Used for closely monitoring points.

- **Graphs** - Displays a graph for one or more points over a user specified time. Points

- **Commission Toolbox** - This is where the majority of the configuration between the AK-EM 100 and the gateway takes place.

- **Administration** - The administration section contains different levels depending on access rights of the daily user. Commissioners and Engineers would have full access to the section, where they can set up users and groups, configure the system, change the set points of assets.

- **User Manual** - Download the user and commissioning manuals.

- **Home** - Link to the user’s Home page.

- **Contact Us** - Link to Danfoss’s contact details.

- **Logout** - Log off from the AK-EM 100.

- **Store Name** - Displays the Store's name.

- **Current Alarm List** - Indicates there are alarms. Shows the latest alarm when the mouse is placed over it. Clicking on the icon takes you to the Current Alarm list page.

- **Network Communication** - Displays whether or not there is a connection to the network. If there is not, an alarm bell icon will be displayed.

- **MPH Performance** - Indicates that an MPH may be performing slower than normal - such as a data run being performed for the first time. This will disappear once the MPH has run its course and is back to normal. It could also indicate that the MPH has stopped completely.
LogOn

Logging onto the AK-EM 100

When the login page is accessed, you will be prompted to enter your user name and password to access the system.

Once logged in, your homepage will depend on which page has been allocated to you by an administrator.
1. System Functions

1.1 Navigation

Due to the nature of the interface being web based, many of the standard web browser techniques can be employed through operation. These include the typical navigation buttons on the browser’s toolbar; using text or images as hyperlinks; and a menu system to navigate through the site.

1.2 Common Options

Throughout the site, certain icons will appear which will allow you to perform certain actions against graphs, reports etc.

These are:

1.2.1 Export to Excel

Exports any tabular data into an Excel Spreadsheet, such as Alarm List information.

On some web browsers, small changes may have to be made to allow data, such as alarms, to be exported to Excel involving the ActiveX control.

This can be done by selecting Tools/Internet Options/Security from the web browser toolbar, and then selecting the custom level option.

When done so, scroll down the Security Settings and select the ‘Prompt’ option of the ‘Initialise and script ActiveX controls not marked as safe’.

1.2.2 Graph Options

There are several additional features which aid the viewing of graphs, all of which need the option selected first.

- **Pointer** - Click and hold the pointer on a graph and then move it left or right allows you to move along the X axis of the graph, providing there is adequate space to move along. Hovering over a point on the graph will bring up a tooltip with the parameter name and reading.

- **Zoom In** - While on the graph, click the mouse once to zoom in a set distance. Similarly, click and hold the mouse to zoom into a specific area of the graph. This is dependant on which Zoom Mode is selected (see below).

- **Zoom Out** - While on the graph, click the mouse once to zoom out a set distance.

- **X-Axis and Y-Axis Zoomable** - Zoom in with both axes unrestricted.

- **X-Axis Zoomable / Y-Axis Auto Scaled** - Zoom in with only the X-Axis unrestricted, as the Y-axis is fixed.
1.2.3 Print Page
Prints the current page in a print-friendly format via Internet Explorer.

In order to get the colours associated with the temperature levels in HACCP reports printed out properly, the browser settings must be changed. Go into your web browser toolbar and select Tools/Internet Options/Advanced, and make sure the the option 'Print background colours and images' is ticked.

1.2.4 Email Friendly Format
Formats the page in a separate window so it can be emailed.

1.2.5 Add to Favourites
Adds a selected graph or report to the favourites section of the homepage.

Adding a Report to Your Favourites
When a graph or HACCP report needs to be stored, it can be saved to the home page for reference. To store, click the Add to favourite icon.

This will bring up a dialogue box, where you will be prompted to enter a name for the favourite. There are two options as to which type of time period the report will take: Fixed Time or Rolling Time.

*Fixed Time* - when the graph or report is stored, it will be saved at the specific time period chosen. This option is best used when certain data needs to be looked at again, such as an alarm list or temperature curve.

*Rolling Time* - when the graph or report is accessed from the stored favourites, then it will generate with the latest information available. This option is most useful when you want to carry out common tasks regarding the latest information of an asset without having to go through the process of generation.

When finished, click the 'Add To Favourites' button.
The report will then be stored and made available to view on the user's home page.

Headers
In some reports featuring tables of data, such as the Alarm List, clicking on a column header will sort the data alphabetically or numerically.

User Rights
Due to different users receiving different access rights (what they can and can’t access), some of the options and functions which appear throughout the document maybe omitted.

Similarly, some of the example images contained within this document may appear slightly different to the actual screen display, and so any discrepancies between the two should be discarded.

User's access rights are configured by an administrator.

**Data Removal**
Please note that old data gets removed automatically after 2 years for all HACCP data, and 1 year for all other data.
2. The Store Mimic

2.1 Introduction

The Store Mimic is a visual representation of a store which displays the configured readings of all the assets and their controllers contained within the store. It provides an overall view of the store and its individual assets in real time, providing up-to-date information regarding readings and setting, while also allowing you to see at a glance if there are any assets in a state of alarm so that they can be acted upon quickly.

When you log on to the AK-EM 100, the store layout should already have been set up earlier by a commissioner. The default page can be the Store Mimic, but this can be different depending on the administrator's configuration of the AK-EM 100 when adding users. The first image of the mimic will be the top level image, which is a general overview of the store.

![Store Mimic Image]

2.2 Navigation

Navigation around the Mimics is done by clicking on links which will allow you to drill down onto another level of the store (such as an individual freezer) or a link, such as a report or Alarm list.

2.3 Viewing Data

The store mimic displays all of the current asset readings for the store. Running the mouse over a reading will produce a tooltip which displays the name of the asset name and the parameter name.

![Tooltip Image]

2.4 Alarm Checking

If the asset is in an alarm state, it will be indicated by a swinging bell icon. Clicking on the icon will take you to the Current Alarm list page for the asset. A static alarm icon indicates an alarm that has been acknowledged and assigned to a user.

![Alarm Icon]

2.5 Managing Alarms

To view the table of current outstanding alarms for the whole store from the mimic, click on the alarm bell icon. (The alarm bell icon can also be found on the Store Operations page, as well as the Latest Alarm icon, which is beneath the main menu.

When the mouse is hovered over the Last Alarm icon, it displays the time of the alarm, the asset name, the reason for the alarm, and the Status. Clicking on it also takes you to the Current Alarm list.
2.6 Current Alarm List

The Current Alarm List contains a list of all outstanding alarms, as well as those alarms that have been acknowledged but have yet to be closed. Each alarm has its own unique LogID, as well as the time of alarm, the asset it's associated with, the reason and its current status. Each alarm is colour coded to indicate if it is critical (red circle) or cautionary (yellow triangle).

Putting a check mark in the 'Show system alarms' box will also display all system alarms, such as MPH's or Gateway problems.

2.6.1 Assigning/accepting an Alarm

1. From the Current Alarm List, select an individual alarm by clicking on the LogID to bring up that alarm.

2. Then press the 'Accept' button to acknowledge the alarm and take responsibility of it. Once acknowledged, its status will change to 'Assigned' and the swinging alarm icon on the mimic will become stationary. If there is more than one alarm associated with the same asset that has not been accepted, then the alarm icon will continue to animate until all alarms are assigned.

When accepted, take the necessary action regarding the alarm, such as alerting an engineer etc.

2.6.2 Add Comment

A comment can only be added to an alarm once it has been accepted by entering the comment in the text field and pressing the 'Save' button.

You are also able to add a comment to all of the alarms listed by entering a comment in the field from the main Current Alarm page and pressing the 'Save' button. The comment will then be applied to all alarms. This option may be used when there are a few alarms which have occurred on the same asset.

2.6.3 Closing an Alarm

Once an alarm has been attended to (or automatically cleared), it is ready to be closed. Select the alarm LogID to bring up the individual alarm and press the 'Close Incident' button, adding a comment if necessary.

Then select a clearance reason (left) from the list and press the 'Close Incident' button. When closed, a table will be displayed with the full history of the incident. When done, the alarm icon in the mimic will disappear (as long as there are no more alarms for the asset), as well as from the Alarm List. It will now
When a parameter is right clicked, a menu appears where a variety of options can be chosen. Depending on your access rights, the options in the menu may differ slightly to the example shown right.

2.6.4 Accept/Close All
Pressing the 'Accept All' or 'Close All' button will accept or close all of the current alarms listed in one action, therefore cancelling out all of the alarms for all assets.

2.6.5 Automatically cleared alarms
There will be occasions when alarms will automatically clear themselves. For example, if a temperature reading was to lower, it would trigger an alarm. If no action were to be taken against it, and the temperature was to go back to a safe level, then the alarm would automatically clear itself. It would still appear in the Alarm List, where it could be checked out by an engineer, comments can be added to it, or it could be closed.

2.6.6. Back button
Once alarms have been commented on, assigned or completed, press the Back button to navigate to the updated alarm list or alarm details pages. Pressing the back button on the browsers toolbar will take you back to the previous page.

2.7 Right Click Menu
When a parameter is right clicked, a menu appears where a variety of options can be chosen. Depending on your access rights, the options in the menu may differ slightly to the example shown right.

2.7.1 Graph Report
Produces a graph which includes all of the parameters for the whole asset. The parameters available for the graph are dependant on what are logged in the Gateway.
(Refer to section 7 for more information regarding Graphs.)

2.7.2 HACCP Report
This produces a HACCP report for the chosen asset, showing the representative temperatures for the current day.
(Refer to the section 4 for more information on HACCP Reports.)

2.7.3 Manual Defrost
A refrigeration unit can be set to a manual defrost directly from the Store Mimic. Selecting the option displays a confirmation screen about the defrost, asking if you wish to carry out the action. Once affirmed, the unit will start defrosting. This option should only be used when absolutely necessary.

This option will only be available once a switch has been setup for the asset in the administration section. If it hasn’t been set up, then a message saying the Manual Defrost switch has not been identified will be displayed.

2.7.4 Main Switch
If you need to turn off the switch off the asset e.g. for maintenance, then you can use the Main Switch option to do so. When selected, you are presented with a dialogue box which displays the current state of the main switch, the new state you will change it to, and whether you want to continue or abort.

Like the Manual Defrost (2.7.3), the Main Switch will only be able to work if it has been configured by a commissioner. A way of recognising whether the switch is configured on the mimic is working or...
not is to see if the switch's parameter reading has an ‘On/Off’ state attached to it (depending on the enumeration).

2.7.5 Basic Asset Details
Access to the Basic and Advanced Details pages are dependant on user access rights.

The Basic Details page gives access to parameter readings and settings belonging to an asset's controllers. What appears on the Basic Asset Details depends on what the Commissioner has allowed during the setup process.

Basic actions can also be performed from this page, such as activating switches, performing manual defrosts, or changing alarm levels. Editable settings are identified by fields with a white background, where you can change a setting by clicking on the parameter and entering the new value.

1. Select the asset from the Asset drop down list, or use the buttons to scroll through the assets.
2. When an asset is selected, click on the parameter row with the editable setting.
3. Enter the new value or setting in the text field. Data entry works off a predictive text to aid the user in entering the correct text command. Text fields with a pink colour indicate that an incorrect variable has been entered i.e. a number instead of a word.
4. Once selected, it will take a few moments to update the status.

The values are set up so that only the available options are those which apply to that parameter, such as ‘On’ or ‘Off’ being available for a switch, or certain temperature levels is to be met before an alarm is reached. Hovering over a reading will provide the Min and Max values.

Readings with ‘***’ indicate that the system is refreshing, and that the data will update in roughly 10 - 15 seconds.
### 2.7.6 Advanced Asset Details
Advanced Asset Details is similar to Basic Asset Details but it provides a broader range of settings and measurements than the Basic Asset Details by including every parameter reading and setting for all available assets.

An asset is made up of grouped headers which contain the parameters and setting of each one. Like the Basic Asset Details section, the settings with an editable background are able to be changed and new values entered.

1. Select the asset from the Asset drop down list, or use the buttons to scroll through the assets.

2. Select the header tab of the asset.

3. Click on the parameter setting with an editable text field.

4. Enter the new value or change state. Entering values work in the same manner as the Basic Details on the previous page. When selecting a new state or value, the range will only include the minimum and maximum settings or number of possible states.

5. Once selected, it will take a few moments to update the status.

Parameters are grouped logically under each tab. Settings are changed by clicking on a parameter value in a field with a white background. Hovering over a reading will provide the Min and Max values.

Parameter reading will initially appear as ‘***’. This is because the system is constantly refreshing, and should take about 15 seconds until the fields to update the values.

### 2.7.7 Hide Alarms
If an asset’s alarm needs to be disabled for any reason, then this option allows it to be ignored - made invisible - for a set period of time. This maybe due to maintenance or servicing, and will save the asset from appearing in a state of alarm in the Current Alarm List. The alarm itself is only invisible in terms of being displayed in the mimic or the alarm list within the AK-EM 100 only; the alarm is still active in the gateway.

When the Hide Alarm icon is selected for an asset, you are presented with a dialogue box asking for a specified time. Choose a time from the drop down list and press the ‘Hide Alarm’ button.

When done so, the alarm icon in Store Operations changes to indicate that an asset is exempt for a certain time period, which is displayed in the Hide Alarms column. To reset the asset before the time period runs out, press the Hide Alarm icon and then the Show Alarms button.

The procedure for hiding and showing alarms can be activated from the Store mimic or Store Operations page.
2.7.8 Current Alarms

Alarms can be hidden from an asset either when the asset has current alarms or when there are no alarms present. So that if you know an asset is going to be serviced for a period of time, then the alarms can be hidden just before the work starts.

Provides a link to the Current Alarm List page, where alarms can be dealt with.  
(Refer to the Current Alarm section on page 8 for more details).

2.7.9 Trends

Will take you to the Trending screen, where points can be looked at closer on a graph.  
(Refer to Trending chapter 6 for more information.)
3. Store Operations

3.1 Introduction

The Store Operations pages provides an easy to use summary of information regarding a store and the assets contained within it. From here, you can access the current and historical status of the store and view any alarm activities by clicking on the active hyperlinked icons. The top table contains information relating to the store. The alarm bell icon in the Current Alarms columns indicates that there are alarms currently active. Pressing on the icon will take you to the Current Alarms page. 

Refer to section 2.5 for information regarding the current alarms.

The second table describes the individual assets which belong to the store. Again, the alarm bell icon indicates that there are currently alarms activated regarding an asset, while pressing on the respective icon will take you to the relevant screen for that asset.

3.2 Store Options

A series of reports are available which allow you to drill down, for example, from a reason, to an asset, to an individual alarm.

3.2.1 Top Ten

The Top Ten report lists the top ten worst performing assets within the store for the current month, based on the number of alarms they receive. The page is broken down into two sections: critical and cautionary alarms. Scrolling down the page reveals the charts for both types of alarms, which are:

- Alarm Breakdown per asset
- The number of alarms per asset
- The alarm rate

The Top Ten report is a useful option as it provides information at glance as to where the store is under performing and what asset(s) needs to be looked at.

3.2.2 Asset League

This league refers to the total number of alarms per asset within the store for the current month, based on the number of alarms they receive.

Again, this is a useful option to quickly assess which assets are performing badly overall.

Hint
Clicking on the section of a chart (right) will take you to the Alarm list for the chosen asset.

Hint
Clicking on an asset will display the each of the alarms for that asset, and then selecting the LogID will further display the incident log for that alarm.
3.2.3 Reason League
This lists the most frequent reasons for the alarm, and operates the same way as described above for the Asset League.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count of Alarms</th>
</tr>
</thead>
<tbody>
<tr>
<td>--- Low T alarm</td>
<td>79</td>
</tr>
<tr>
<td>--- Max Def. Time</td>
<td>19</td>
</tr>
<tr>
<td>--- High T alarm</td>
<td>2</td>
</tr>
<tr>
<td>Danbuss Comms Error</td>
<td>1</td>
</tr>
</tbody>
</table>

3.2.4 HACCP
The HACCP report provides average temperatures of the parameters belonging to the store's assets over a 24 hour period. Refer to section 4 for more details on HACCP Reports.

3.3 Asset Options

3.3.1 Current Alarms
This has the same function of the Store's Current Alarms, except it displays the alarms for the selected asset only. Again, adding comments and closing the alarm can also be done from here, but only affects the asset. Refer to section 2.5 for acknowledging and closing alarms in the Current Alarm List.

3.3.2 Graph
Clicking on the graph icon will draw a graph for all of the parameters of the selected asset depicting their performance over the last 24 hours.

Hint
Clicking on the LogID of any alarm in the alarm list will drill down to the complete history of that alarm. From there you will be able to add a comment to the alarm, or close the alarm.

3.3.3 Current Status
The Current Status lists all of the controllers for the chosen asset, and displays the latest values for each and the time it was taken. It can be used as a means of checking the last time a reading of a parameter was taken.
3.3.4 Basic and Advanced Asset Details
Refer to chapters 2.7.5 - 2.7.6 of the Store Mimic section for more information regarding these functions.

3.3.5 Hide Alarms
Refer to chapter 2.7.7 of the Store Mimic section for more information regarding this function.

3.3.6 Configure
Configures the settings for the parameters of each asset, by selecting which parameters of an asset can be available for trending, HACCP reports, and configuring settings such as switches. This section should only be accessible to administrators or commissioners, and so the details of this section will be brief. (Refer to the Commissioner’s Guide for further details regarding configuration).

1. Select the asset from the drop down menu or scroll through using the arrows. The parameter groups can be expanded/collapsed by either clicking on the individual ‘+’ symbol or using the ‘Expand All’ button at the top.

2. Select the group heading to edit by clicking on the ‘+’ to display the list of parameters.

3. Click in a parameter’s field to change the setting or value. Data entry works off a predictive text, therefore aiding the user. Text fields with a pink colour indicate that an incorrect variable has been entered i.e. a number instead of a word. New values entered off-line will display a (), indicating that when switched online, they will be updated after a few seconds.

Display name - The Display Name can be edited and saved by entering a new or modifying the existing name and pressing the ‘Return’ key. This will change the display name throughout the site, such as in the Store Mimic, overriding the current DES file. Deleting the name entirely and pressing ‘Return’ will revert to the original name of the DES file.

Setting - This displays the current value of the setting. This can be changed manually if a text field is available, such as increasing a time interval, turning something off, or adjusting a temperature control. When entering a new value/setting, the field is predictive and will recognise the first letter for the parameter e.g. a switch will recognise either ‘True’ or ‘False’. If, for example, a number is entered in place of a letter, then the text field will change colour indicating a wrong value has been entered. Similarly, if a wrong number is entered, such as a ‘-4a’, then the error warning will also occur.

When a new value or setting is entered while ‘off line’, the new value will appear in brackets ‘***( )’ beside the old value, indicating that it will be updated once back ‘on line’. When it is online, it will take a few seconds to update.

HACCP - HACCP points are automatically filtered during the set up of the log files. Those parameters which have the function available will be made available for selection in any further HACCP reports for that asset. The options available in the HACCP section are produced in the administration section 4.8, Food Types. Select which food type the parameter is linked to.

Trend - Like the HACCP settings, the trending option will be available if the parameters are selected in the set up of the log files. If available, they can then be used for display in the graph trending reports.
Asset Details - The default setting for all of the parameters is set to Advanced, as all parameters for all assets will be made available for display in the Advanced Assets Details section. The choice here is whether you wish the parameter to also be displayed in the Basic or Advanced Assets Details section, or not at all. For instance, users can be configured to only see basic asset details and the monitoring rights can be controlled with this setting.

Enumeration - Some parameters can have states of 2 or more, such as a switch or an EKC unit. Select the enumeration state if required from the available options in the drop down menu. When run, the parameter will be displayed according to the value and converted based on the enumeration selected. The type of enumeration required is determined by the parameter’s setting, where a boolean value (either true or false) would typically have a 2 state, whereas a parameter with varying states could have many different enumeration values.

Units - Select the unit of measurement for the parameter from the drop-down list.
4. HACCP Reports

4.1 Overview

The Hazard Analysis Critical Control Point (HACCP) system of reports are there to provide the most effective way for food businesses to ensure consumer protection with regards to food safety management.

The report provides data over a set of assets which have previously been configured which shows a series of points average reading over an hour, and the subsequent difference in range from the configured minimum and maximum settings.

**Data Removal**
Please note that old data gets removed automatically after 2 years for all HACCP data, and 1 year for all other data.

HACCP Report
The HACCP report is a report which covers any one day. It provides a history of the chosen asset(s) over a 24 hour period and displays the average value of the setting per hour. These points in the HACCP report are set by the commissioner during the initial setup of the AK-EM 100.

Procedure
1. Select the HACCP report from the Store Level Reports list, select a day to view by either entering the day manually or choosing one from the calendar.

2. Select either ‘All Assets’ or an individual asset to display. Assets will only be displayed if their parameters have been logged in the Gateway. Then press the Go button to display the report.

The subsequent table will show the average values spread out over 24 hours. The values are colour coded in relation to the key provided, where the value is ‘+’ or ‘-’ the standard set point value.

The report contains the ‘Low’ and ‘High’ values for the point (set up in the administration section by the commissioner), where each colour in the chart represents how much out of range the value is based on the average temperature for the hour.

This type of report provides you with a complete view of an asset for any day, and can be used to quickly see which assets are performing accurately as well as viewing the cycles of the assets, such as defrosts times.

**Hint**
Clicking on any of the asset names in the HACCP report will produce a graph of the asset and all of its points, where the graph can then be customised if required.

**Refer to the System Functions section for further details regarding graph functions.**
5. Historical Alarms

5.1 Introduction

The Historical Alarm Reports section refers to the number of alarms received to the store that have been closed and displays them in a variety of different ways. There are eight report options available:

- Site Totals
- Alarm Action
- Top Ten
- Alarm List
- Asset League (Store)
- Reason League
- Alarm Analysis
- Current Alarm List

Each report can be over a certain time period, ranging from a week to a yearly quarter, or a specific time period. The procedures for generating a report follow the same guidelines for each report.

5.2 Report Types

5.2.1 Site Totals

The Site Total report lists the total number of alarms over a specified period of time for a store, which can then be broken down to which assets contain the alarms, which can be further broken down to view the incident log of the individual alarms.

Procedure
1. Select Site Alarms from the Store Level Reports drop down menu.
2. Select the required time period.
3. Select the ‘Go’ button.
4. Click on the Site name and subsequent assets to bring up the asset’s Alarm List.
5. Once compiled, the report will show the store name and the total number of alarms.
5.2.2 Alarm Action
The Alarm Action Report displays a pie chart with its sections forming what actions were taken for the historical alarms.

Clicking on the pie chart will provide a list of all the alarms, which can all be looked at individually.

**Critical Alarm Breakdown**

5.2.3 Top Ten
The Top Ten report shows the top ten worsting performing assets by the number of alarms they have raised. These are then broken down by the number of critical and cautionary alarms each asset has and their respective errors.

5.2.4 Alarm List
The Alarm List report displays all of the alarms for the store over the chosen time period.

The procedure for producing a report is exactly the same as the Site Totals report. Clicking on the LogID of an alarm will display the full incident log of that alarm, such as the clearances and comments. From the Incident Log page, comments can be attached to the alarm.
5.2.5 Asset League
The Asset League report is the same as to the second level of the Site Alarm report, in that it displays the number of alarms associated with each asset of the site. Again, drilling down the report by clicking on the asset title will take you to the alarm list page for that asset.

<table>
<thead>
<tr>
<th>Asset</th>
<th>Count of Alarms</th>
</tr>
</thead>
<tbody>
<tr>
<td>033.021 21 - AK2 CC 303A</td>
<td>300</td>
</tr>
<tr>
<td>033.018 16 - AK2 CC 303s</td>
<td>86</td>
</tr>
</tbody>
</table>

5.2.6 Reason League
The Reason League report is similar to the Asset League report, except in this case it displays the number of alarms per reason. This type of report is useful for spotting any trends regarding alarm caused by a reason/fault.

Drilling down the report by clicking on the reason or the alarm counts will show you to the alarm list page for that reason, as well as breaking it down per asset.

Clicking on the asset name or the alarm will display the alarm list for the asset/alarm. Selecting the LogID of the alarm will display the incident log.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count of Alarms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Defrost time Exceeded A</td>
<td>176</td>
</tr>
<tr>
<td>Max. Defrost time Exceeded C</td>
<td>90</td>
</tr>
<tr>
<td>Max. Defrost time Exceeded D</td>
<td>90</td>
</tr>
<tr>
<td>Max. Defrost time Exceeded B</td>
<td>90</td>
</tr>
</tbody>
</table>

5.2.7 Alarm Analysis
This report provides a further breakdown of alarms by specifically looking at a particular asset and looking at what type of alarm was raised, either critical or caution.
5.2.8 Current Alarm List
Provides the list of current alarms (refer to the Alarm Management section on page 8 for more details).
6. Trending

6.1 Introduction

Trending is a type of graph which is used to closely monitor an asset’s performance (such as temperature) during a particular period. While a normal graph can display a snapshot of asset up to its current value, the trending graph can display data in live time, while updating the data automatically as opposed to static.

A trending graph could be used in a scenario such as when an engineer adjusts a setting and would want to closely monitor the effect that this change has had on the system, therefore they would set the trending graph to run in order to get instant feedback.

Not all points of an asset are available for trending, as they are selected in the administration section by a commissioner. The points which are available appear in the Point list once an asset is selected.

Procedure

1. Select an asset from the list to reveal the list of available points.

2. To send a point in the selected field for viewing, either select the point and press the ‘Add’ or ‘Select All’ button, or double click on the point to send it directly across. For other points to be added from another asset, repeat steps 1 and 2.

3. The same selection principles apply when removing points from the selection list.

4. Select a period (left) of time from the Trend Period drop down menu to determine the length of time the trend will last.

5. Press the ‘Go’ button to start trending.

The x-axis of the trending graph shows the time scale which was set, starting with the time when the trend was started. The graph is updated every ten seconds, therefore providing a more accurate reading of the asset.
The graph will continue to trend up until it reaches the end of the time period. Once there, it will be stored to the Trending History list.

6.2 Number of Trends

Only one trend window at a time can be run per AK-EM 100. If a trend is in progress and the trending option is selected, then a message will appear with the information of the trend in progress, as well as options of viewing or ending the trend. Similarly, these options appear if the user who initiated the trend chooses another option from the menu and goes back to the trending option while it is still running.

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Start Time</th>
<th>Period (min)</th>
<th>Point Names</th>
<th>Created By</th>
</tr>
</thead>
</table>

Hint
Click on the Trending History icon to display a list of trends which have previously been constructed. From here they can be viewed again or deleted.
7. Graph Reports

7.1 Introduction

Graph Reports provide you with the option of viewing a graph of any parameter(s) of any asset within the store. The graph can be from any period, such as a day to a yearly quarter, or a detailed time period. Because the graph can show many asset points at once, it is a good way of displaying similar points within different assets to show how they are performing against each other.

In principle, the graph works in the same way as Trending (refer to Chapter 6) for adding points, except instead of at looking at a point(s) in real-time, it will be over a period of time.

Procedure

1. Select the time scale from the available options, using the drop down menus and calendars where applicable.

2. Select the asset to display the points in the Point window.

3. Click on a point and press the ‘Add Selected’ button to add it to the Selection window, or press the ‘Add All’ button to send all points.

4. Once the points are in the Selected Points window, they can be removed by selecting them individually or as a selected group and pressing the ‘Remove Selected’, or the ‘Remove All’ button to empty the window.

5. Press the ‘Go’ button to display the graph.

Hint

To select multiple points, either hold down the Ctrl key and select the points, or hold down the mouse button and drag the cursor over a group of points.

Hint

Graph reports can be saved into your Favourites section by clicking on the favourites icon.

Refer to the System Functions section for further details on storing reports.
7.2 Graph Reports options

You have the option of displaying all of your selected data on one graph, or on a separate graph per asset selected.

- One graph per Asset
- All Points in one graph

7.3 Fetch Log Data

Pressing this button while on a graph will update the graph and populate it with the latest data from the logs, bypassing the Gateway.

Once pressed, the graph will take a few moments to update.

7.4 Saving to CSV

Before drawing graph from selected points, it is possible to save the selected points as a csv file and display them as a spreadsheet. The length of displayed values still depends on the time period selected in the selection screen.

Once all of the points are in the selection window, press the 'Save to CSV' button.

On the next screen, follow the instruction and save the save to a local location.

CSV Graph Report

Right click on the following link and choose save target as ...GraphAsCSV20070122124822717.csv

When opened, the spreadsheet will then show each parameter’s timetag and reading information over the chosen period. This information can be used to look at an asset’s performance more closely.
8. Home Page

Your home page is an information page which is made up of 4 sections:

1. Your Info
2. System Info
3. News
4. Your Favourites

8.1. Your Info

This section contains information regarding the user who has logged on, which includes the user’s name, the date they last visited the site, their expiry date, and the number of times they have accessed the site.

8.2. System Info

This section provides a quick overview of the store by listing the total number of assets contained within the store, and the number of assets currently in a state of alarm.

8.3. News

The news section will display any news updates for you to read. News items can only be formulated by an administrator.

8.4. Your Favourites

The favourites section is where favourite reports are stored. These reports are chosen by you and can be selected by a fixed or a rolling time period. This feature is very useful as it allows for easy access to frequently used reports, thus saving time by repeatedly looking for the same report.

Refer to the 1.2.4 section for more information regarding adding reports to the Favourites
9. Administration

The Administration section contains a variety of options, most of which are only available to advanced user groups, such as a Commissioner or Technical Engineer.

Refer to the Commissioner's User Guide for more details regarding the advanced features of the Administration section.

<table>
<thead>
<tr>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favourites &amp; Settings</td>
</tr>
</tbody>
</table>

9.1 Favourites and Settings

Favourites and Settings consists of several options available to the daily user relating to personal settings. These options are: favourites, change your email address, default graph, change language, and change your password.

Favourites
You can view any saved reports by clicking on the report name, or delete a report by selecting it from the drop down menu and pressing the Delete button. Depending on how your account was set up, there may be an option where you can email the report on a daily basis at a set hour.

Change language
Select a default language to view the AK-EM 100 with by clicking on an appropriate flag icon.

Change your password.
Type in a new password.

9.2 Event Log

The Event Log provides a record of actions by any of the users within a specified time period and displays a table of the actions taken, and on what page and what time they were undertaken.

Pressing the radio button in the top left corner enables the view to show just the actions or the everything. Actions would come under an action that has changed something on the system, such as changing a parameter setting, whereas looking at an alarm list wouldn’t, though acknowledging an alarm would also count as an action.
### Time Period: Week 8

User: EM100 Administrator

<table>
<thead>
<tr>
<th>User Name</th>
<th>Page Name</th>
<th>Action</th>
<th>Time Visited</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM100 Administrator</td>
<td>Commission Toolbox</td>
<td>Default Gateway = 192.168.1.1</td>
<td>10:34 23 Feb 07</td>
</tr>
<tr>
<td>EM100 Administrator</td>
<td>Commission Toolbox</td>
<td>Default Gateway = 192.168.1.1</td>
<td>10:39 23 Feb 07</td>
</tr>
<tr>
<td>EM100 Administrator</td>
<td>Commission Toolbox</td>
<td>Network Communications = On</td>
<td>10:01 23 Feb 07</td>
</tr>
<tr>
<td>EM100 Administrator</td>
<td>Commission Toolbox</td>
<td>mphid = 1</td>
<td>10:01 23 Feb 07</td>
</tr>
<tr>
<td>EM100 Administrator</td>
<td>Commission Toolbox</td>
<td>Network Communications = On</td>
<td>09:54 23 Feb 07</td>
</tr>
<tr>
<td>EM100 Administrator</td>
<td>Commission Toolbox</td>
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<td>09:54 23 Feb 07</td>
</tr>
<tr>
<td>EM100 Administrator</td>
<td>Commission Toolbox</td>
<td>Default Gateway = 192.168.1.1</td>
<td>09:48 23 Feb 07</td>
</tr>
<tr>
<td>EM100 Administrator</td>
<td>Commission Toolbox</td>
<td>Default Gateway = 192.168.1.1</td>
<td>09:48 23 Feb 07</td>
</tr>
</tbody>
</table>
10. User Manuals

To view the user manuals in a pdf format within the website, select which language translation and which manual to look at, either the User Manual or Commissioning Manual, from the table.

**User Information**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Danish</td>
<td>🇩🇰</td>
<td>🇩🇰</td>
</tr>
<tr>
<td>English</td>
<td>🇬🇧</td>
<td>🇬🇧</td>
</tr>
<tr>
<td>French</td>
<td>🇫🇷</td>
<td>🇫🇷</td>
</tr>
<tr>
<td>German</td>
<td>🇩🇪</td>
<td>🇩🇪</td>
</tr>
</tbody>
</table>

The manual will open within the same browser window as the EM100, so it is suggested that the manual is viewed in a separate windows by using the right-click option for this.
11. AK-EM 100 Technical Specification

- 1GHz VIA CPU
- 1GB RAM
- 40 GB hard disk
- 1 10/100Mbit network
- PSU supply 60W max
- Operation Temperature 0 – 40°C
- Operation Humidity 5 – 90% @40°C non-condensing
12. Quick Task List

The Quick Task list is to provide a quick reference guide for the daily user and contains the tasks you would typically perform.

These tasks - in no particular order - are as follows:

- View Temperatures
- View Asset Details
- On / Off switch
- Manual Defrost
- Alarm Management
- Reports

(Some of these options won't be available, depending on the user's level of access.)

**View Temperatures**

- Select the Store Mimic from the main menu to reveal the graphical representation of the store.
- Each asset shown on the mimic displays the temperature for that freezer unit.
- Hovering the cursor over a hyperlinked asset reveals the assets name.
- Clicking on an asset’s link in the mimic will drill down to a more detailed mimic to display other parameters belonging to the asset.

**View Asset Details**

- To viewing or edit the controllers and parameters of an asset from the Store mimic, right click on the asset's reading and select Basic Details from the menu.
- This page lists the asset’s settings and respective measurements.
- The state of a parameter can be edited by entering new values.

*For more information on Basic Details, refer to the Store Mimic section.*

**On / Off Switch**

- To switch a cabinet on / off remotely from the store mimic, select Main Switch on the menu after right clicking on a measurement.
- A warning will appear indicating the current state on the switch, and asks you if you want to continue with the action of changing the state.
- Cabinets should only be switched off during special circumstances, such as cleaning or maintenance.

*Refer to the Store Mimic section for more information regarding the On/Off Switch.*

**Manual Defrost**

*Depending on setup, the manual defrost may not be made available to certain users.*

- To put a refrigeration unit on a manual defrost, right click on the unit's parameter reading in the store mimic and select Basic or Advanced Details from the menu.
- A warning will appear indicating whether you want to continue with the defrost.
- Change the state of the defrost parameter to 'On' in the 'Man. Def.' pop-up menu.

**Alarm Management**

- Active alarms will appear on the Store Mimic in the form of a red alarm bell icon, as well as on the Store Operations page and the Latest Alarm area beneath the main menu.
- Pressing the icon will take you to the Current Alarm List page, which contains a directory of all of the current alarms, which can be acknowledged, have comments added against them, and finally closed.

**HACCP Report**

- The HACCP report can be accessed from the main menu.
- It displays a table of hourly average temperatures for each parameter of an asset (which have been configured by a commissioner) within the store over a 24 hour period.

*Refer to the main HACCP section in the manual for more information.*
12.1 Service and Diagnostic

The following tasks are available depending on the access rights of the user, and are typically made available to the Service Engineer:

**Trending**
Allows you to view a graph of an asset’s Parameter(s) which predicts a trend within a user defined time period between 5 and 60 minutes, which is automatically updated when any changes in values occur.

**Alarm Reports**
Gives you a choice of report types to view over a defined historical time period.

**Graph Reports**
Provides a graph of measured parameters from one or several assets over a specified time period.

**Asset Configuration**
Change the setting or state of an asset from the Configuration screen in Store Operations.
## Change History

<table>
<thead>
<tr>
<th>DATE</th>
<th>No.</th>
<th>CHANGE</th>
<th>DESCRIPTION</th>
<th>TRAC No.</th>
<th>Page</th>
<th>Chpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>04.10.07</td>
<td>001</td>
<td>Added Display Data Only Graphs</td>
<td>Display graphs using log data only</td>
<td>735</td>
<td>27</td>
<td>7.3</td>
</tr>
<tr>
<td>05.11.07</td>
<td>002</td>
<td>Display Name change</td>
<td>Press the 'Return' key to overwrite the DES File name</td>
<td>671</td>
<td>17</td>
<td>3.1.2</td>
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<tr>
<td>14.01.08</td>
<td>003</td>
<td>ActiveX controls for exporting to Excel</td>
<td>Changing the ActiveX controls in the browser to allow alarms to be exported to an Excel spreadsheet.</td>
<td>82</td>
<td>7</td>
<td>1.2</td>
</tr>
<tr>
<td>11.11.08</td>
<td>004</td>
<td>Changed user manual section</td>
<td>Added new language table selection</td>
<td>29</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>12.11.08</td>
<td>005</td>
<td>Added new user change password</td>
<td>New users needs to change password after first login</td>
<td>5</td>
<td>LogOn</td>
<td></td>
</tr>
<tr>
<td>12.11.08</td>
<td>006</td>
<td>MPH indicator</td>
<td>Inserted new image and text for MPH Alert on menu page.</td>
<td>4</td>
<td>Menu Options</td>
<td></td>
</tr>
<tr>
<td>12.11.08</td>
<td>007</td>
<td>Added new controls for new Chart Director graphs</td>
<td>Deleted old graph functions</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>12.11.08</td>
<td>008</td>
<td>Print on b&amp;w printer option</td>
<td>Deleted the options as no longer available.</td>
<td>7</td>
<td>was 1.2.4</td>
<td></td>
</tr>
<tr>
<td>13.11.08</td>
<td>009</td>
<td>Updated new graphs</td>
<td>Updated new graphs and deleted older sections (7.3)</td>
<td>24-25</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>13.11.08</td>
<td>010</td>
<td>Deleted Trending graph customisation section</td>
<td>No longer applicable to Trending graphs + added new screen shot for displaying graph.</td>
<td>23</td>
<td>was 6.3</td>
<td></td>
</tr>
<tr>
<td>13.11.08</td>
<td>011</td>
<td>Updated image in Homepage section</td>
<td>Replaced image and changed page reference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.11.08</td>
<td>012</td>
<td>New image for Asset League report</td>
<td>To replace the older version</td>
<td>14</td>
<td>3.2.2</td>
<td></td>
</tr>
<tr>
<td>13.11.08</td>
<td>013</td>
<td>Deleted 24hrs reference for an assets performance on a graph.</td>
<td>No longer applicable + added graph function reference</td>
<td>15</td>
<td>3.3.2</td>
<td></td>
</tr>
<tr>
<td>13.11.08</td>
<td>014</td>
<td>New image for Current Status report</td>
<td>Replaced older version</td>
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<td>3.3.3</td>
<td></td>
</tr>
<tr>
<td>14.11.08</td>
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<td>Removed 'Expand all' reference</td>
<td>No longer used + added new screenshot for Config screen + added new Unit column.</td>
<td>16</td>
<td>3.3.6</td>
<td></td>
</tr>
<tr>
<td>14.11.08</td>
<td>016</td>
<td>Added hover over setting</td>
<td>Brings up tooltip with min/ max values.</td>
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<td>14.11.08</td>
<td>017</td>
<td>Mentioned log points</td>
<td>HACCP and Trending option only available if points are logged in the Gateway.</td>
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<td>3.3.6</td>
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<td>018</td>
<td>Mentioned Log point in Haccp reports</td>
<td>Added updated images + mentioned logged points for displayed assets.</td>
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<td>14.11.08</td>
<td>019</td>
<td>Changed Hist Alarm set up screen</td>
<td>New image, as well as new images for Site Totals</td>
<td>18</td>
<td>5.1-5.2.1</td>
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<tr>
<td>14.11.08</td>
<td>020</td>
<td>New screens for Top Ten and Alarm List.</td>
<td>Updated images</td>
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<td>5.2.3 - 5.2.4</td>
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<td>14.11.08</td>
<td>021</td>
<td>New screens for Asset League, Reason League, Alarm Analysis, and Current Alarm List</td>
<td>Updated Images</td>
<td>20-21</td>
<td>5.2.5 - 5.2.8</td>
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<td>14.11.08</td>
<td>022</td>
<td>Added Haccp print control command + image</td>
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