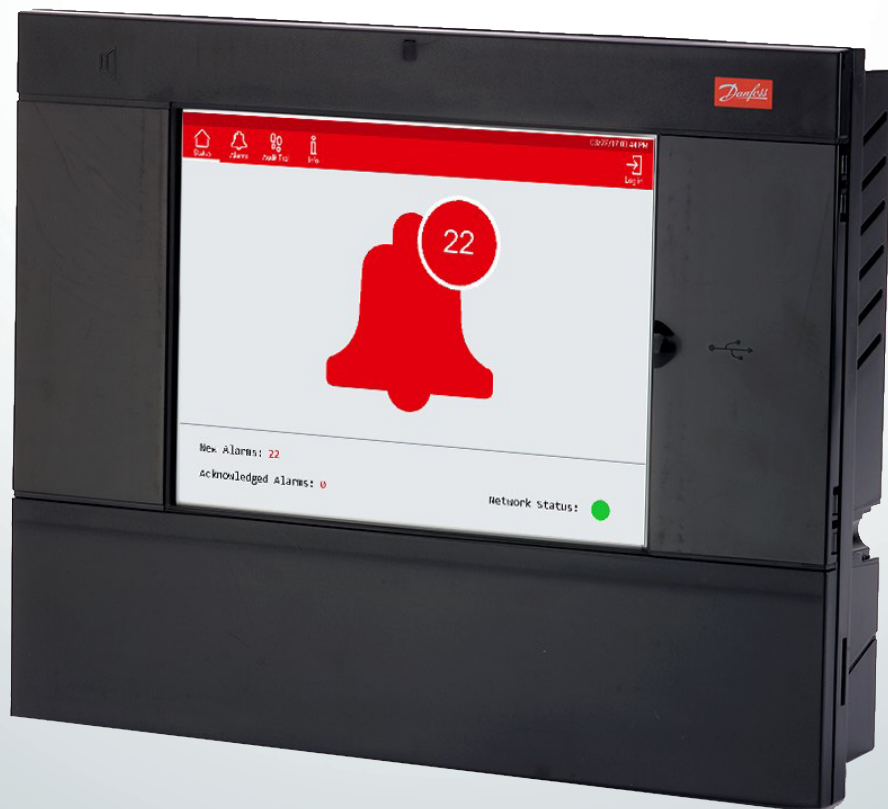


User Guide

Alarm Logger AK-SM 800AL

ADAP-KOOL® Refrigeration Control System



Introduction

The AK-SM 800AL Alarm Logger is designed to complement a Danfoss System Manager 800 application, where a dedicated alarm receiver solution is required. The Danfoss AK-SM 800AL has been designed for simplicity of setup and daily use, taking advantage of a new touch screen user interface.

The AK-SM 800AL is intended to be part of the System Manager host network, utilizing IP/Ethernet communications between all units. Alarms raised at any System Manager 800 can be forwarded/routed to the alarm logger for action and escalation by store staff.



System requirements

To ensure correct function and operation, the following system requirements must be met;

- AK-SM 800AL will only function with System Manager 800 units
- Minimum software requirement for AK-SM 800 units is 08.06x and above
- Master unit (net address 0) must be available on the host network
- Host SM800 network must be established between AK-SM 800 units and available for AK-SM 800AL

Principle of operation

The AK-SM 800AL has been designed with store personnel in mind, providing an easy to use and consolidated touch screen alarm console for your Danfoss System Manager 800 application. The main purpose of the AK-SM 800AL is to provide clear notification when an alarm occurs from any of the connected System Managers and offers the ability to acknowledge alarms, via an easy to use touch screen. The AK-SM 800AL also provides additional alert functionality via the use of local siren and alarm relay, which can be used for added security and peace of mind. If configured to do so, the AK-System Manager units in the store will route alarms to the AK-SM 800AL. The alarm routing to the logger is in addition to any routing already configured in the AK-System Manager(s).

- Each AK-SM 800 unit has alarm action options to route any / all alarms to the AK-SM 800AL
- Acknowledging an alarm at the AK-SM 800AL will also acknowledge the alarm at the relevant System Manager
- Set as default 'active' but user configurable, the AK-SM 800AL will show red front LED and buzzer when active alarm received
- Network indicator shows status of host network. Failures in host network will result in red indicator and visible screen saver icon
- Screen saver is activated after 5 minutes of no user input or immediately after logging out. The screen saver will show a 'live' alarm status icon if active or acknowledged alarms are present in the system, else the screen will go blank
- Two alarm status screens, showing 'Current & Acknowledged' and 'Cleared'
- New alarm type filter (default all selected), 'Refrigeration', 'HVAC', 'Lighting', 'Other'
- Simple alarm info shown in alarm screen, additional information shown via icon
- Each action taken by the authorized user is captured in the AK-SM 800AL audit trail
- The AK-SM 800AL offers a 'reminder alert' (user configurable), to ensure alarms that are still active in the system for x minutes are re-triggered locally (buzzer will be re-triggered)

Installation

The mounting location should be flat, dry and free of major vibrations. The AK-SM 800AL should be mounted at eye level and with consideration to ensure easy touch screen operation. Please refer to the included Instructions, provided in the product packaging for additional details on mounting and initial installation.

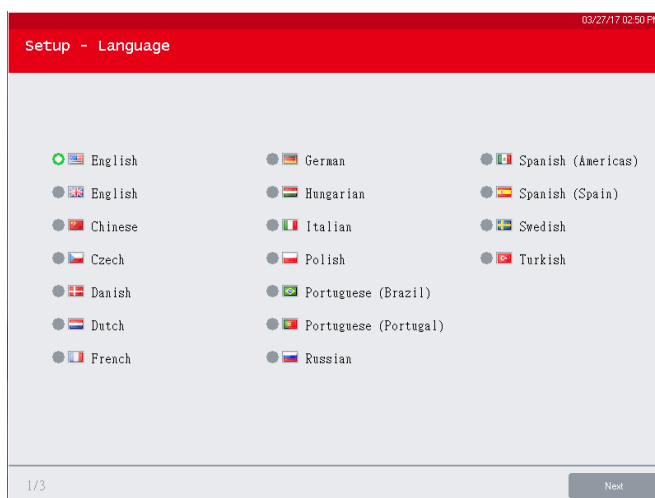
The AK-SM 800AL must be connected to a IP host network with at least one other AK-SM 800 unit (running minimum 08.06x software or above).

Note: The AK-SM 800AL has a fixed host network address of 9, the position of the rotary host address switch is not used for the AK-SM 800AL.

First time setup – setup wizard

Wizard 1/3 Language

Upon first start up, the AK-SM 800AL will display a simple 3-step wizard. The first screen will ask what language the unit should operate in. There is no requirement to reset the AK-SM 800AL when selecting the language, the unit will dynamically adjust per the selection. Once the wizard is completed it will not re-appear, if changes are required to any of the items found in the wizard selections these can be seen under the 'Settings' menu (Supervisor access required).



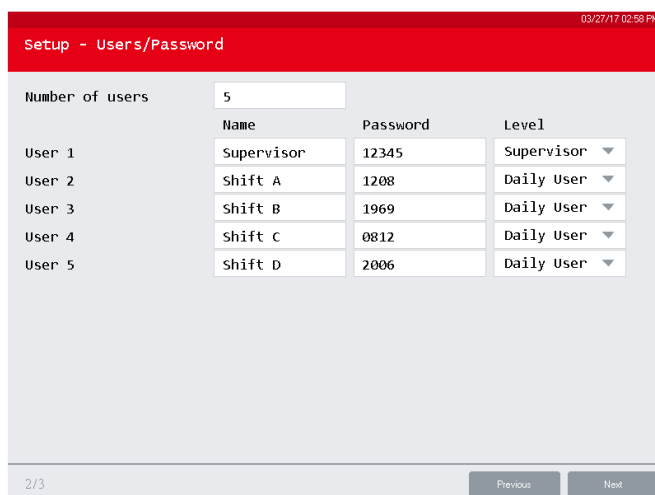
Wizard 2/3 Users Passwords

The second wizard screen is the Users/Password screen. Here the commissioning Engineer may define the users name and password. Up to 9 users in total can be assigned in the system. The first user is by factory default the 'Supervisor' level, this user has access to all configuration screens in the system. As part of the AK-SM 800 AL setup process the commissioning Engineer may change the factory given 'Name' and 'password' for the system Supervisor (however, the first user slot is always reserved for the Supervisor)

Whilst 'Supervisor' has full system access rights, the Daily user is intended for store staff. With the permissions level of 'Daily User' this user can Acknowledge and Clear an alarm or alarms. Note, that alarms can only be manually cleared if the original alarm has been set to a cleared status.

The Service user can change all system settings except users/ passwords.

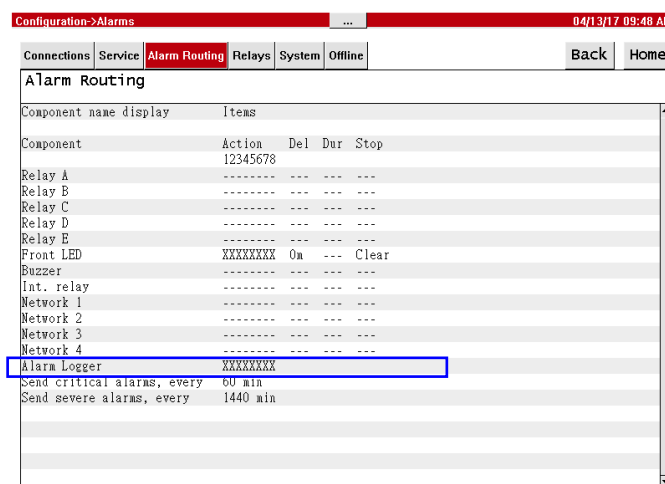
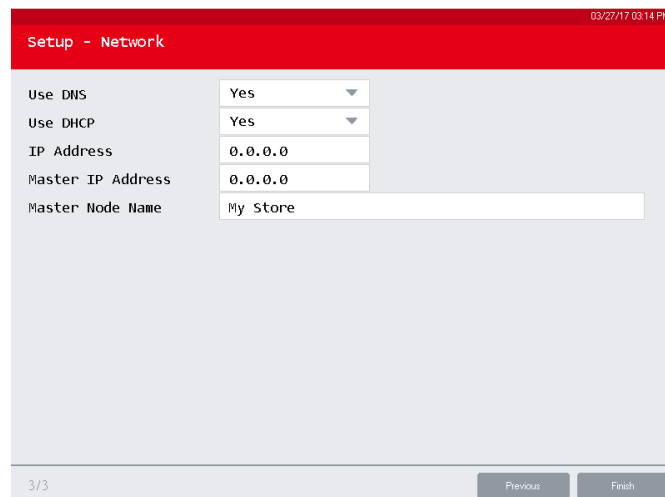
In the example opposite, 5 users have been set, each with a unique name. The AK-SM 800 AL will remember the last known user Name and pre-populate this for ease of use. If this is not the correct user group, simply select from the drop-down list.



Wizard 3/3 Network

This screen is used to define important IP configuration details for the AK-SM 800AL and the 'master' AK-SM 800 unit (address switch 0). Ensure all relevant settings are made in this screen, per site specifications. Once complete press the finish button, where the AK-SM 800AL will initiate a background scan and detection of host units.

Note: When pressing the finish button the AK-SM 800AL will communicate over the host network to establish communications with all other detected AK-SM 800 units. A progress bar will be shown, indicating the detection and communication process. As part of this process the AK-SM 800AL will automatically set all detected host AK-SM 800 units for alarm logger alarm action routing. Manual adjustment of these alarm actions is possible per site specifications.

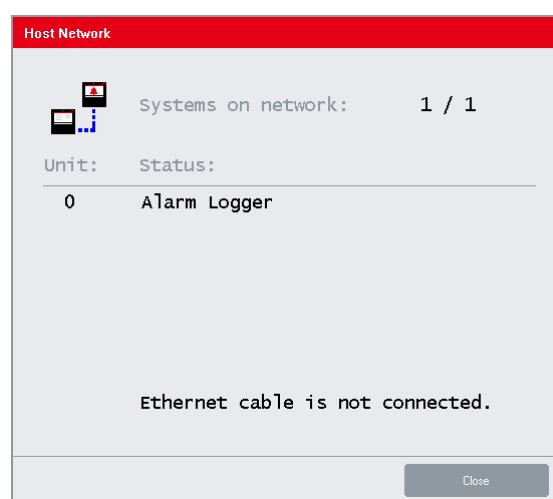


AK-SM 800 host units

For the AK-SM 800AL to function it is required that at least one AK-SM 800 unit be present in the host system. As part of the automated configuration process in the last wizard step the AK-SM 800 unit(s) will be set as default 'all on' for alarm action routing. If additional AK-SM 800 units are added after the wizard is run, please manually configure your AK-SM 800 alarm routing screen per site requirements.

Note: From the main menu screen press the Network Status icon for live host network status view Network Status:

Maintaining a fully functional host network is critical in ensuring all alarms are received by the alarm logger. If at any time a host communications error is detected, the AK-SM800AL will alert the user via a host network error icon.



System Settings

Whilst logged on at a Supervisor level it is recommended to check the 'Local Options' screen. Within this screen it is possible to define how your AK-SM 800AL behaves when receiving an alarm(s).

The following (user changeable) options are available;

Front LED [Enabled / Disabled] – New / Acknowledged alarms will show RED, no alarms will show Green

Buzzer [Enabled / Disabled] – Buzzer will activate if new alarm occurs. Also, when reminder alert is triggered

Internal relay option [Enabled / Disabled] – Relay 2 will enable when new or reminder alert triggered

Allow multiple-alarm acknowledge [Enabled / Disabled] – Allow bulk acknowledge actions if enabled

Enable alarm logger reminder alerts [Enabled / Disabled] – A reminder alert will be triggered if there are any new or acknowledged alarms in the AK-SM 800AL. The time between alerts is configurable and the AK-SM 800AL will check to see if there are any active (new / acknowledged) alarms, every x minutes.

Number of minutes between alerts [1-60] – user configurable

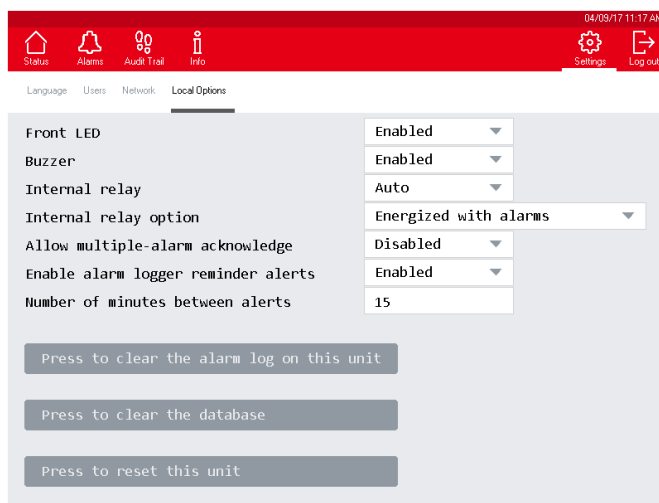
Press to clear alarm log on this unit – as described

Press to clear the database – as described

Press to reset this unit – as described

Note:

With the logger reminder alert set to 'Enabled' and a time set between alerts, the AK-SM 800AL will trigger the front LED (green and return red), local alarm relay (if enabled), and the unit buzzer (if enabled). This feature is intended to alert the store staff that outstanding active alarms (also host network errors) are still present in the system and minimizes the risk of food loss due to in-action of alarm condition.



Daily operation

With the AK-SM 800AL setup and receiving alarms, the following section describes typical daily use.

Acknowledging current alarms

When a new alarm or alarms are received by the AK-SM 800AL the alarm icon will update with the count of active and acknowledged alarms. If configured to do so, the AK-SM 800AL will turn the front LED red and will emit an alarm buzzer sound. The local relay on the AK-SM 800AL will also trigger (if configured to do so).



Note:

You do not have to be authorized to visualize alarm(s) in the AK-SM 800AL. The user can view all current / Acknowledged and Cleared alarms, however to acknowledge and manage the alarm(s), user authorization is required.

To Acknowledge the alarm or alarms you must be authorized by entering user name and password (usually defined in step two of initial wizard setup, else configurable via Settings screen). Once authorized, press the main alarm icon, new alarms text or the alarms menu icon – all three navigation paths will result in the ‘Current Alarms’ screen being displayed.

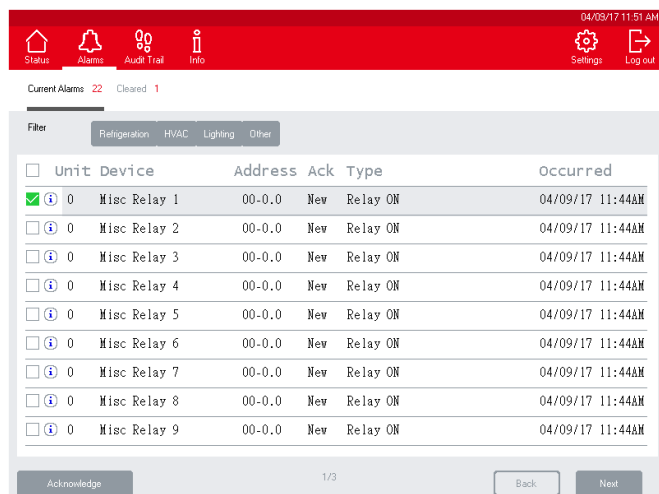
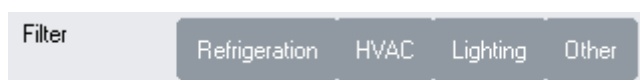
Simplified alarm details will be shown on this screen, showing which system unit the alarm originated from and a description of the alarm. For more details of the alarm, press the ‘info’ icon (or any location on the alarm line). The alarm can be Acknowledged at this screen via the Acknowledge button. The result of acknowledging the alarm is that all alerts (LED, buzzer, local alarm relay) will be de-activated. The action of acknowledging an alarm or alarms will be captured in the audit trail and will also be shown in the current alarms screen as ‘Ack’.

Note:

By factory default the option to ‘bulk’ Acknowledge action via the use of the master check box is disabled, resulting in the need to individually acknowledge each active alarm. By default, the alarm category filters are all ‘on’. Based on customer or application preferences these filters can be used to only show relevant alarms from these groups.

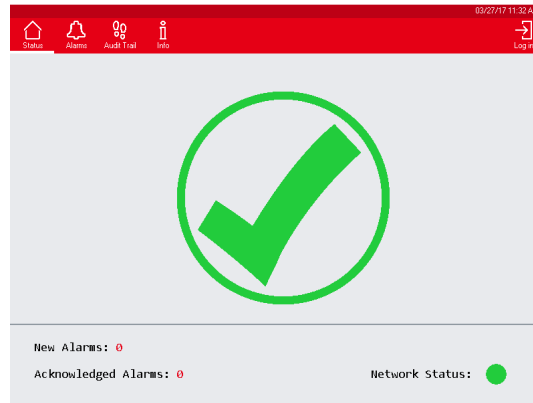
Note:

It is not possible to manually clear alarms, the cleared alarm state will be automatically set upon alarm error condition clearing.



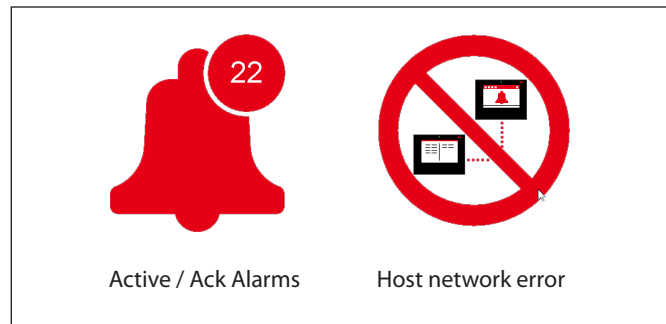
Cleared alarms

Alarms that are no longer in error condition will be shown in this screen.



Screen saver

The AK-SM 800AL has a screen saver feature that protects the screen from 'image burn-in' and offers a continuous live status of current system alarms. During screen saver mode one of two icons may be shown depending on alarm or system status;



Reports (Audit and Alarm list)

The alarm logger has the capability to save the list of alarms (active or not) and the audit trail to a USB drive. Insert drive and select "Save Report" to save to the drive.

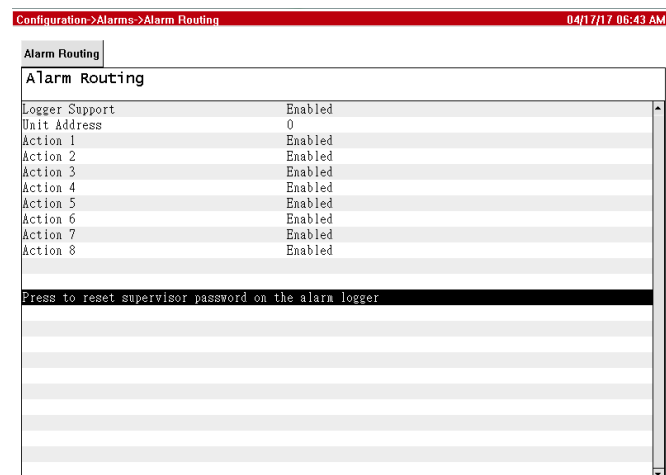
Loading New system software

Danfoss has a policy of continuous improvement, from time to time software updates will be available, please follow the instructions below to perform a system software update. Ensure you are authorized at the 'Supervisor' level and insert a USB Flash drive stick that contains the relevant software update. A pop up window will indicate what software has been detected on the USB Flash drive, select the appropriate software to load. During the software update a progress bar will be shown and typically the AK-SM 800AL will reset.

Note: Software must be located on the root directory of the USB Flash disk

Password Management

It is possible to manage passwords outside of the initial wizard process by navigating to the 'Users' screen under the 'Settings' menu. Supervisor level permission is required to access the Settings screens. If the Supervisor credentials for the AK-SM 800AL have been forgotten or there is a change in supervisor personnel, it is possible to re-set this user back to factory default (Supervisor / 12345). This can be done locally in the store or remotely, but both options are performed via the master AK-SM 800 unit. Via the master AK-SM 800 unit, navigate to the Configuration/ Alarms/Alarm Routing page. From this screen it is possible to re-set the alarm logger Supervisor password by pressing the associated line (see example below). This action is recorded in the Audit trail of both the Master AK-SM 800 unit and the AK-SM 800AL. The same principle is applied if accessing the system (master Unit) from a remote location, except StoreView desktop or web browser is used for connectivity.



Product specifications

Environmental Range	Operating temperature: -10 to +55°C (14 to 131°F)
	@ 90% RH (non condensing)
	IP 20
Electrical range	~ 100 - 240 V a.c. 50/60 Hz
	Built in alarm relay
	Contact voltage: Up to 240V,
	Load: AC-1 (Ohmic) Current rating.5 Amp AC-15(inductive) Current rating. 3 Amp
LCD	Active TFT colours (thin-film transistor), SVGA 800 x 600
Size	Unit Width 295 mm (11.6")
	Unit Height 235 mm (9.3")
	Unit Depth 65 mm (2.5")
	Mounting holes 246 mm (9.7") Width Mounting holes 175 mm (6.9") Height
Approvals	- Regulation 2005/37/EC - EN 12830, 07-1999 - EN 13485, 11-2001 - CE 080R1213 - C-Tick 080R1214 - UL E31024

Ordering

Type	Function		Code No.
AK-SM 800AL	Alarm Logger		080Z4014

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