

Overview Brochure | ADAP-KOOL® System Managers

Achieve your energy goals with
the best **control** and **system
management** for Food Retail

24/7

monitoring and
supervision of your
system



Right tools for the right job

The Danfoss System Manager is the key component of the intelligent ADAP-KOOL® refrigeration and HVAC systems for food retail. The System Manager is the brain of the system, coordinating data to and from the individual refrigeration and HVAC controllers, including temperature data for logging and alarms. The System Manager can be set up to optimize different functions such as suction pressure and coordinated defrosting, resulting in significant energy savings and optimum temperature control.

The System Manager can be set up and operated from a local screen or remotely via pc, tablet or mobile phone.

Remote Management Tool (RMT)

The RMT tool is designed to facilitate easy commissioning. The tool offers:

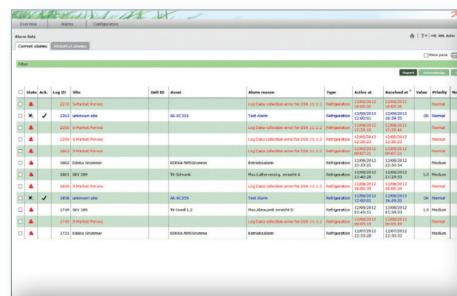
- Full offline programming in web environment
- Custom images to create graphic screens to be viewed in local screen and web browser
- Address Book to store multi-site details
- Map configured data points for live view of status
- Load System Manager firmware
- Save / load System Manager database



StoreView Desktop

The StoreView Desktop is designed to give the store manager and staff an easy overview of the current status on alarm, temperature and KPIs. The StoreView Desktop is designed as a stand-alone PC application and offers:

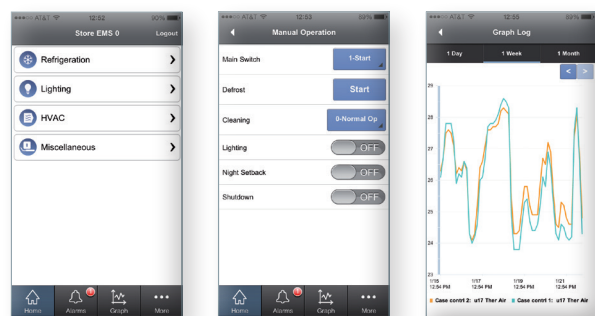
- Fast connection time since all required web files are self-contained
- Same web environment as the system manager web browser, but bundled as a desktop application
- User preference to allow store to configure according to their specific requirements



SiteService App

The SiteService App is designed for the service technician and offers the ability to remotely connect to a Danfoss controls system from a tablet or smart phone. The App offers:

- Site connections address book
- Live plant status (refrigeration/HVAC/ lighting/energy/ miscellaneous points)
- Device details
- Read/write parameter access
- Manual control (e.g. start a defrost)
- Alarm management
- History graphs visualization



AK-SM 800 - Alarm logger

- Dedicated alarm management solution based on AK-SM800 platform
- Designed to complement AK-SM800 systems
- New User Interface / Full touch screen
- Simple setup wizard and automated host setup
- Local alarm relay, buzzer and LED
- Audit trail
- Report to USB feature (Alarm list / Audit trail)



System Manager AK-SM 800 series

Connectivity & Control

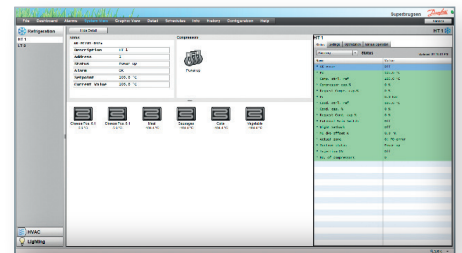
The System Manager AK-SM 800 series core design concept provides premier store control with the seamless connectivity from “case to cloud”. It supports centralized and decentralized control strategy and is compatible with Danfoss case and pack controllers and Danfoss I/O modules.

- Large colour screen (800x600)
- Easy USB access (software updates / database load / save)
- No internal battery to worry about



Updated features and functions

- New browser based 'wizards' to simplify initial configuration
- Multi graphic screens, allowing custom images with live datapoints showing status
- Built-in energy optimization functionality



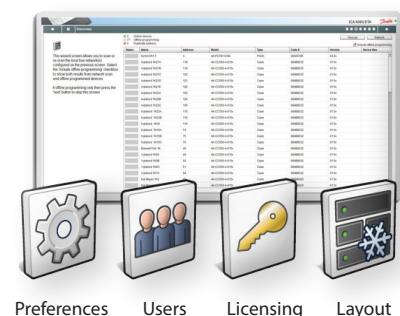
Get-Connected Web technology

The AK-SM 800 has a built-in web browser, and presents system information in a meaningful and rich way either as dashboards, automatic generated system graphics or asset detail screens.



Wizard assistance for configuration

The designated web wizards are intended to assist the user in a step by step format offering clean screen formatting and drag and drop functionality. The net result is improved commissioning times and less chance of configuration errors.



Preferences Users Licensing Layout



	AK-SM 880	AK-SM 850	AK-SM 820	AK-SM 810 (no screen)	AK-SM 800 Alarm Logger
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HARDWARE PLATFORM					
Box Format (Wall Mountable)	✓	✓	✓	✓	✓
USB (Load/Save software)	✓	✓	✓	✓	✓
Color Screen SVGA 800x600 w/ Bit Map static graphics	✓	✓	✓	✗	touch
CE, C-Tick, UL, HACCP	✓	✓	✓	✓	✓
FIELD BUS / COMMUNICATIONS					
Lonworks RS485 (TP78 Special Order)	✓	✓	✓	✓	n/a
EKC Modbus	✓	✓	✓	✓	n/a
Ethernet (LAN/WAN/Host network connectivity)	✓	✓	✓	✓	n/a
CONTROL					
User selectable De-centralized control (Case and Pack controllers)	✓	✓	✓	✓	n/a
User selectable Centralized control (Rack control / I/O)	✓	✓	✓	✓	n/a
Desigend for Danfoss CO2 application support (AK2 controllers)	✓	✓	✓	✓	n/a
Next generation HVAC & Lighting control (MCX)	✓	n/a	✓	✓	n/a
Supports Danfoss and 3rd Party Devices (via field bus)	✓	✓	✓	✓	n/a
Po (Suction) optimization	✓	✓	✓	✓	n/a
Generic On/Off schedule (customizable)	✓	✓	✓	✓	n/a
Adaptive Rail heat control (via I/o or controller bus communications)	✓	✓	✓	✓	n/a
SYSTEM CAPACITY					
Rack/Pack controllers	12	12	5	5	n/a
Controller devices on field bus (i.e. EKC/CC.)	120	120	32	32	n/a
Schedules (Case lighting, Night setback, Shutdown, Def)	100	100	100	100	n/a
Calculation Points / Conversion Factors	96 / 10	96 / 10	96 / 10	96 / 10	n/a
HVAC (see comment)	45	n/a	10	10	n/a
Lighting zones	30	30	10	10	n/a
Energy meter input points	80	80	32	32	n/a
Leak detector inputs	50	50	10	10	n/a
Relay & Variable outputs (each)	70	70	20	20	n/a
Sensor & On-Off inputs (each)	80 / 70	80 / 70	20	20	n/a
EASE OF USE / REMOTE ACCESS					
Standard Web Browser & Offline programming	✓	✓	✓	✓	n/a
Full web interface consolidating all front ends	✓	✓	✓	✓	n/a
Danfoss Enterprise Services Support	✓	✓	✓	✓	n/a
StoreView Desktop (PC application)	✓	✓	✓	✓	n/a
Service Tool Tunnel (PC application)	✓	✓	✓	✓	n/a
SiteService Mobile App	✓	✓	✓	✓	n/a



For additional product details, visit
food-retail.danfoss.com/system-managers

Danfoss Enterprise Services

Think ahead and create value with big data

Danfoss Enterprise Services offer powerful analytics and reporting tools that can be used to ensure that assets are performing top-notch at all times. With access to real-time data 24/7, your staff can act on facts and control the store around the clock via dashboards with information about temperatures, energy consumption, alarms, etc.

What's in it for you?

With a Danfoss Enterprise Services subscription, Danfoss manages data collection, analysis and reporting. There are different service packages available that will enable you to:

- Benchmark stores and divisions to promote energy and environmental awareness
- Sustain energy savings achieved through optimization tailored to your facilities
- Improve profitability by reducing food loss and ensuring food quality

Danfoss Enterprise Services Portfolio - Enabling value-adding decisions

- 24/7/365 Alarm Management
- Compressor Performance
- Leak Detection
- Refrigerant Levels
- HACCP (Temperature Management)
- Setpoint Control
- Energy Baseline & Benchmarking
- Lighting & HVAC
- Estate Performance Reporting
- Continuous Commissioning
- Demand Response Programs

Today, Danfoss Enterprise Services is monitoring 5000 stores and handles more than 3 million alarms every year.

Open Standard XML Interface

- Standard XML Interface for 3rd party monitoring and managing
- Documentation on request
- No License or Protocol Fees



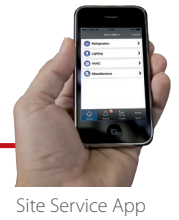
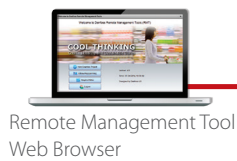
Engineering **Tomorrow's** Food Retail **Solutions**



Danfoss Enterprise Services



XML
Open XML interface



Evaporator Control

Pack Control

HVAC

Light, Aux. Control

