

ENGINEERING
TOMORROW



October 2023 | Danfoss Climate Solutions for cooling

TECH INSIDER



Introduction

Danfoss Tech Insider keeps you updated with the latest news on the cooling and industrial products portfolios from Danfoss Climate Solutions. The content is intended to give a quick overview of core technical news and updates in our product portfolio, including links to relevant documentation and more information.

Danfoss Tech Insider is sent out, on a monthly basis, to ensure you are always up to date with the latest innovations and changes made to Danfoss products and solutions.

We hope you will enjoy reading Danfoss Tech Insider!

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ACB Cartridge Pressure Switches are ATEX-Approved

ACB pressure switches with ATEX are now available.

ATEX-compliant switches are needed if the environment where the end-use equipment is installed is classified as an ATEX zone. If no ATEX zone classification is required for the end-use equipment, then standard ACB should be used. ATEX approved ACB will have a special marking on the product label. Please see below as a reference.

Product label of ACB without ATEX:



Product label of ACB with ATEX:



ATEX compliance will require a minor change to the ACB design. Because of that, ATEX will be available only with new ACB code numbers created upon individual requests.

ACB with ATEX marking will be ready for mass production in Q4 2023. Before that, only sample production is possible.

Several Accessories Related to AK-SM and AK2 Series Reach EoL and are Declared EoL Effective Immediately!

Due to several related products End of Life and still on-going component scarcity situation on older components, Danfoss has decided to phase out a series of legacy accessories for the AK-SM System Manager series.

Affected products

The list below includes the affected accessories with the associated product codes impacted by the phase out.

Impacted Product	Product Code
Modbus Repeater	084B2240
LON Repeater	084B2241

Alternative products

To support our customers to our best extent possible, the below table is generated with all the impacted products and the recommended or external market alternatives.

Legacy Phase Out List		
Modbus Repeater	084B2240	https://www.phoenixcontact.com/en-sk/products/interface-converter-psm-me-rs485rs485-p-2744429
LON Repeater	084B2241	https://www.phoenixcontact.com/en-sk/products/interface-converter-psm-me-rep-lon485-p-2708041

Digitalization of Customer Instructions for Temperature Sensors

Danfoss Sensing Solutions (Danfoss SEN) is implementing a new digital form of installation/instruction guide – featuring a QR code linking directly to our temperature sensors installation document online.

Danfoss SEN has utilized a standard installation guide in paper form for our temperature sensors line, since it started. Following the ESG (Environmental, Social, and Governance) principles, Danfoss SEN is working to improve its environmental impact, carbon footprint, waste management and energy consumption. Therefore, beginning of October 2023, we will implement the digital installation/instruction guide, using QR code on the box label with a web link to the document.

Example below:



The goal is to support the ESG principles while aiming for a better service and installation facilitation in several applications.

There will be a transition period between October 2023 in which some customers may still receive printed installation/instruction guide until that stock is depleted.

For more information, please visit [Danfoss Product Store](#) or contact your local sales representative.

Vulnerabilities Detected in the AK-SM 800A

To help keeping your Danfoss products secured and protected, we emphasize implementing cyber security best practices to maximize your protection against malicious attacks.

Further, we recommend to always keep your product updated since it is usual to include security updates in newest SW versions. (Usual procedure for all IoT devices and manufacturers)

We would like to inform that some researcher companies have identified some product vulnerabilities, which we already mitigated in the newest SW release and by working closely with these companies together.

DIVD (Dutch institute for vulnerability disclosure) is in the progress to scan devices and contact customers.

However, we could already get the pre-assigned CVE's provided which can be found here:

[DIVD-2023-00025 - Multiple vulnerabilities in Danfoss AK-SM 800A | DIVD CSIRT](#), including Danfoss mitigation and recommendation, as well as CVSS score on the criticality rating.

DIVD-2023-00025 - MULTIPLE VULNERABILITIES IN DANFOSS AK-SM800A

Our reference	DIVD-2023-00025
Case lead	Max van der Horst
Researcher(s)	<ul style="list-style-type: none"> • Jony Schats (HackDefense) • Stan Plasmeijer (HackDefense) • Synacktiv • Max van der Horst
CVE(s)	<ul style="list-style-type: none"> • CVE-2023-25913 • CVE-2023-25914 • CVE-2023-25915
Product	Danfoss AK-SM80A
Recommendation	It is recommended by Danfoss to install the latest patch with number 3.3.
Status	Open
Last modified	19 Aug 2023 15:49

Software Installation

Perform a unit backup and check for any open alarms and note any manual overrides before proceeding with update.

Step 1 - (install Danux 4.1.4.013.194.lpk)

- Using StoreView Browser 5 / StoreView Web select OS update and proceed with Danux upgrade.
- Allow a few minutes to pass with the new OS installed.
- Important notes: This file size package is large and depending on your network speed may take 10+ minutes to complete. *Do not interrupt power during the OS update!*

Step 2 – update System Manager firmware (package 3.3.spk)

- Using StoreView Browser 5 / StoreView Web or local USB Flash drive, select OS update and proceed software upgrade. *Do not interrupt power during the software update!*
- After installation is complete, review for correct system operation.

Important: Review important details before enabling this feature.

Note: By default, 'Use Header Authentication' is disabled to avoid the breakage of existing XML connections. If enabled, current XML commands must be updated - all inbound XML communications must include user/password in header - Failure to do so will break existing XML communications.

Affected products

The following tables show the list of affected products within the System Manager portfolio.

Variants <u>with</u> LON Modules	
AK-SM 820A	080Z4024
AK-SM 820A - no WiFi	080Z4025
AK-SM 850A	080Z4021
AK-SM 850A - no WiFi	080Z4022
AK-SM 880A	080Z4028
AK-SM 880A - TP78	080Z4029

Variants without LON Modules	
AK-SM 820A	080Z4044
AK-SM 820A - no WiFi	080Z4045
AK-SM 850A	080Z4041
AK-SM 850A - no WiFi	080Z4042
AK-SM 880A	080Z4048

Timing and Stock

Release 3.3 and associated Danux is immediately available via the Danfoss [ADAP-KOOL support site](#).

All newly manufactured units will have Package 3.3 installed starting August.

Additional Flat Top Cover Gasket Added to SVL Complete Valves DN 15-40

An additional flat top cover gasket will be added to the boxes of SVL complete valves, size DN 15 to 40, to be used when disassembling the valve.

Description

To improve the installation and quality of the product an additional gasket has been added to be used when disassembling the valve.

We have observed that on some occasions the non-asbestos gasket between bonnet assembly and housing of the valves has been damaged or deformed during disassembly procedure. It is important to control the state of the sealings before the final installation of the bonnet assembly after the welding procedure.

We want to make it possible for installers to replace damaged/deformed gaskets immediately and therefore we have decided to add additional flat gaskets to the valve boxes for SVL complete valves DN 15-40.

SVA/FIA DN 15-40

Installation guide & additional gasket
in zip lock bag



SCA/CHV/REG DN 15-40

Installation guide, O-ring & additional gasket
in zip lock bag



Affected products

All complete valve types:

SVA-S DN15-40, SVA-L DN15-40, SVA-S SS DN15-40, SVA-L SS DN15-40, SVA-HL DN15-40, FIA DN15-40, FIA SS DN15-40, SCA-X DN15-40, SCA-X SS DN15-40, CHV-X DN15-40, CHV-X SS DN15-40, REG-SA DN15-40, REG-SB DN15-40, REG-SA SS DN15-40, REG-SB SS DN15-40

CO₂ Portfolio – New Catalogue

CO₂ is a natural cooling agent that delivers sustainable and energy-efficient refrigeration in everything from warehouses to ice machines.

CO₂ has several unique thermo-physical properties making it an ideal refrigerant and in practical applications, CO₂ systems deliver a very high-performance output.

Danfoss has published a catalogue introducing our broad selection of components and controls for CO₂ applications, including:

- Monitoring and system managing network units AK-SM system manager
- Pack controllers
- Evaporator controllers and stepper valves drivers/SH controllers
- High pressure electronic expansion valves
- Subcritical expansion valves
- Solenoid valves
- Sensors
- Line components
- Pressure switches
- Industrial refrigeration control valves for CO₂ systems
- Optyma™ iCO₂ Condensing units
- Heat recovery units



Download the catalogue here: [Components and controls catalogue for CO₂ applications](#)

Refrigerants: F-Gas Regulation Update



Are you ready for the new F-gas regulation?

Recently, policymakers reached an agreement on several new changes to the F-gas Regulation. Get the insights you need to best position yourself for the future.

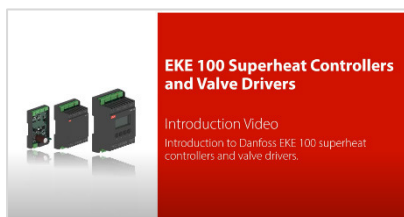
Register and see the recording of the RETHINK Live event with top refrigerant expert Torben Funder-Kristensen.

Register here:

https://event.on24.com/wcc/r/4372572/24516548E4C89322E9759153932EBC48?partnerref=emailcampaigns_MailS_FMC_F_Gas_Regulation

Videos

- Introduction to the EKE 100 superheat controllers and valve drivers - [LINK](#)
- Mechanical installation of the EKE 100 superheat controllers and valve drivers - [LINK](#)
- Electrical installation of the EKE 100 superheat controllers and valve drivers - [LINK](#)
- Why should you install an Air Purger? - [LINK](#)
- Why is Danfoss Air Purger better than the traditional? - [LINK](#)
- New features of Danfoss Air Purger - [LINK](#)
- Danfoss Optyma™ Slim Pack | Deep-dive tour for experts - [LINK](#)



Details for Additional Information

UK/IE

[Cooling United Support Hub](#)

[Support Made Easy](#)

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