November 2020

Cooling and Industrial Automation
Danfoss Tech Insider

Introduction

Danfoss Tech Insider keeps you well informed on the latest news and updates in Danfoss Cooling and Industrial Automation. 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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Stepper Valve Extension Module – EKE 1P

A new Stepper Valve Extension Module for use with the AK-PC 572 MiniPack controller has been released.

The EKE 1P support two application modes:
- Application 1: Extension module for AK-PC 572 to allow monitoring, configuration and service of the EKE 1P input and output from the AK-PC.
- Application 2: Valve driver (0-10V)

In application 2, the functionality is similar to the valve driver mode of the existing EKE 1A B / C. Application 1 is the main application, where typically two EKE 1P operate as extension modules for the AK-PC 572 connected via CANbus. As an extension module, all Input and Output, IO, of the EKE 1P are transparent to the AK-PC 572, that is for configuration, control, monitoring and service purposes.

Out-of-the-box, the EKE 1P is configured as an extension module where an analogue input is used to distinguish between the two EKE 1P's connected on CANbus. In this way it is easy to establish communication between the AK-PC 572 and the two EKE 1P's.

The EKE 1P is released with support for the new CCMT Light valve range (CCMT 3L, CCMT 5L and CCMT 8L), making it easy to select the valve type from a drop-down list both from AK-PC 572 in application 1 or from a locally connected graphical display, MMIGRS2, in application 2.

Also the new battery Back-up power module, EKE 2U, is supported by the EKE 1P to enable safe closure of the stepper valves in case of a power outage. Also the "state-of-health" signal from the EKE 2U may be connected to the EKE 1P to monitor the state of the EKE 2U. EKE 1P is pre-set as extension module for the AK-PC 572 controller (application 1).
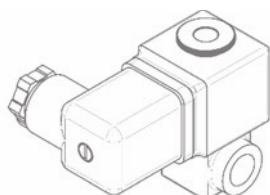
The MMIGRS2 is used to change the application to stepper motor driver (application 2) or any other configuration not directly available in the AK-PC 572.

For more information and part numbers download our **User Guide** or **Installation Guide**

Easier and Safer Coil to Valve Assembly

To improve quality and ensure correct tools are used to assembly coils to valve, we have decided to change knurled nuts to hexagon nuts in EV210A, EV310A, and EV220A, along with associated spare parts. Manual tightening is now possible and ensures assembly can be completed with the correct tool. New updated installation guides with the recommended torque will be implemented as of December 7.

EV210A with **knurled nut**   EV210A with **hexagon nut**
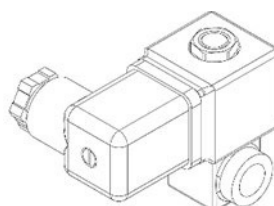
Flash End of Life – Impact on AK-SC355/AK-SM800 Series Software Tools

Adobe INC has announced that it will stop distributing and updating Flash Player after December 31, 2020 ("EOL Date"). See details official announcement following this **link**

Furthermore, Microsoft will by end of 2020 actively remove the Adobe Flash player from Microsoft Windows computers. See details and official announcement following this **link**

What does it mean for you, if you're using AK-SC355/AK-SM800 series software tools?
Users of the AK-SC355 and AK-SM800 series will no longer be able to use StoreView Browser or offline programming via the RMT tool upon deletion of Flash on the host computer.

Immediate action for StoreView Browser
For remote connectivity to the above product lines, the recommended and immediate solution is to use StoreView **Desktop**. StoreView **Desktop** does not require Adobe Flash to install or run and is available as a free download via the ADAP-KOOL© support site following this **link**

Immediate action for RMT (Remote Management Tool)
RMT will no longer support offline programming (simulation) and offline store mimics (graphics projects), due to its dependency of the simulator, which uses Flash. As there are no current alternatives, the task of offline programming is recommended to be replaced via physical unit(s) – i.e. a spare unit. This extends to creating graphics, to use this RMT feature it will be necessary to connect to a physical System Manager unit, not via simulation. Therefore, it is still possible to create graphics projects with RMT, but it will not be possible to fully program the graphics including data points offline. To place data points on the graphics, it will be needed to connect to a physical unit (since the simulator does not run without flash).

Day to day business impact
Starting January 1st, 2021, remote PC tool connectivity to AK-SM800 series and AK-SC355 series system managers can only be established using StoreView Desktop (PC application). StoreView Browser (web browser component) will no longer function. Please note that the built-in open enterprise XML is not affected by Adobe Flash EOL.

As System Managers are installed in various types of IT network infrastructures, Danfoss remains committed to find practical solutions for specific cases. Feel free to reach out for any questions on the suggested solutions or if you think this has caused some issues that needs to be resolved. We will then gladly assist you to find the best possible alternative.

Overview of all software tools/features dependent on Flash

Feature used for System Manager unit	Impact from Flash EoL	Alternative
Remote access via SvD 1.22	NO	
Web interface utilizing Adobe Flash (SvB)	**YES**	*Use StoreView Desktop (PC Application)*
Site Service App (iOS/Android)	NO	
RMT Upgrade Manager	NO	
RMT Controller Database Manager	NO	
RMT File Management	NO	
RMT Offline Programming	YES	*Use RMT with physical spare unit*
RMT Graphics Project (live unit)	NO	
RMT Graphics Projects (Offline/Simulation)	YES	*Use RMT online*

Mechanical Temperature Switches for Industrial Applications

The temperature switches program includes temperature controls for general industrial as well as light industrial applications, controlling air and water. They provide a volt free switch contact which will operate at the set temperature, thus providing a simple ON /OFF control.

Features and benefits:

- A variety of standard controls
- Highly specialized solutions
- Simple monitoring functions
- Critical safety precautions
- Ten different marine approvals for global use

For more information have a look at our **Website** or go directly to the **Brochure.**

New Safety Valve SFA 10H for CO_2

Danfoss is releasing the newest Safety valve SFA 10H for CO_2, which offers pressure settings from 28 to 65 bar. The new safety valve is very relevant in applications with CO_2 and synthetic oils (POE and PAG); where its reduced capacity, high reliability and high-pressure setting make it the perfect choice.

The new SFA 10H is a direct operated, spring loaded safety valve for vapor and gases intended for use as a safety device against excessive pressure in pressure vessels and other components of refrigeration systems with CO_2 and synthetic oils. The valve can be delivered with pressure setting between 28 and 65 bar (406 and 943 psig); and standard pressure setting certificate or TÜV pressure setting certificate.

The design and manufacturing of the SFA 10H addresses the known issues in CO_2 systems regarding safety valves leaks and set pressure dropping over time; its EPDM O-ring, used for the sealing, guarantees a tight sealing and a stable set pressure of the safety valves.

Refrigerant	CO_2 (with POE and PAG oils)	
Pressure setting	28 - 65 bar (406 and 943 psig)	
Temperature range	-50˚C to +100˚C (-58 °F to 212 °F)	
Sealing material	EPDM O-ring	
Thread	G threads (ISO 228/1)	NPT threads (ANSI/ASME B

Specifications SFA 10H

For further details on SFA 10H specification and characteristics you can check the **Datasheet.**
You can also visit our **website for safety valves** where you can learn more about our offerings for safety valves or find the part numbers in our **brochure**.

New Variants of Safety Valve SFA 10 & Change Over Valve DSV 10 with NPT Connections

To better fulfill requirements for different applications and improve the flexibility when selecting safety valves of the SFA 10 portfolio, we have extend our portfolio with new variants that feature NPT connections with outside pipe threads according to ASME/ANSI B 1.20.1, both in Safety valve SFA 10 and SFA 10H and change over valve DSV 10.

The NPT safety valve variants are offered across SFA 10 and SFA 10 HP with Danfoss standard pressure certificate, in selected pressure settings. A new variant of change over valve DSV 10 is also being released, it is specifically designed to fit and meet the capacity requirements of SFA 10 and SFA 10H due to running for longer periods with a lower back pressure.

Available NPT set pressure variants	
SFA 10	**10H SFA**
13	28
16	32
17	35
18	38
20	40
21	50
22	52
24	60
25	65

Available set pressures (Bar)

NPT threads (ANSI/ASME B 1.20.1)	
Inlet thread	NPT 1/2"
Outlet thread	NPT 3/4"

In addition to the new NPT variants, now the safety valves portfolio of SFA 10 includes bundled kits of DSV 10 + SFA 10 and DSV 10 + SFA 10H as one code number packed together. The bundled versions will be available for NPT connections, on the selected pressures of the NPT variants. The bundle includes one DSV 10 and two SFA 10 or SFA 10H, which is the typical arrangement for the protection of a pressure vessel.

With these additions, the Safety valves portfolio of SFA 10 and SFA 10H makes it easier to cover applications requiring a reduced relief capacity and demanding tight sealing and stable set pressure. The portfolio also includes spare parts and accessories that make service very simple and allow multiple installation options.

	Refrigerants	Pressure Setting	Sealing Material	Change Over Valve
SFA 10	R744, R717, HFC's	10-27 bar	CR O-ring (Chloroprene)	**DSV 10**
SFA 10H	R744 (with POE & PAG oils)	28-65 bar	EPDM O-ring	

SFA 10H safety valves

- Easy installation
- Perfect reseating
- Unchanged setpoint
- Trouble -free service

DSV 10 change over valves

- Position indicator – less risk of errors during service
- Blind plugs available – for system pressure testing
- Easy installation – reducer for perfect positioning
- Multiple connection options

Valves and Line Components Ready for R454C, R455A and R1234yf

The entire Danfoss portfolio of refrigeration components is now qualified for three A2L ultra-low GWP refrigerants: R454C, R455A and R1234yf. This complements the previous qualification of the T2/TE expansion valves in July 2020. In response to demand from customers who want to use A2L ultra-low GWP alternatives to R404A and R134a, we have upgraded our well-known and reliable refrigeration components.

A thorough qualification process has been followed as these ultra-low GWP refrigerants are mildly flammable—carrying the ASHRAE classification A2L—and therefore subject to additional safety requirements. Refrigeration professionals can now safely work with Danfoss products such as the popular T2 expansion valve, EVRv2 solenoid valve, DML filter drier, SGP sight glass, GBC ball valve, and many more.

Danfoss now offers an extended portfolio including product codes with flare connectors (e.g. TE2, TE5) as well as A2L-specific versions of all-electric components—including a dedicated pressure switch range—to prevent ignition. To learn more and find out how to select the approved components, visit the specific **homepage** and follow the links provided.

KoolProg Software Update – version 4.3

We have completed several improvements, enhancements and bug fixes to KoolProg Software (Ver. 4.3.). These improvements will give you an even better and smoother experience working with KoolProg tool and our Danfoss range of electronic controllers.

Key highlights of version 4.3

1. KoolProg now supports our new EET Series which is our new electronic thermostat offering from Danfoss and is set to launch very shortly.
2. New customized code numbers created are now supported by KoolProg in online mode
3. Various features/functions enhancements have been done
4. General improvement and bug fixes are done

New features/functions enhancements

o Support .erc and .dpf file format in "open" feature for ERC and ETC 1H respectively
o Dynamic Min Max feature implementation for EET and AK CC 55 controllers
o KoolProg text update for multiple languages
o ERC11x menu group and Parameter sequence updated

The new version of KoolProg is backwards compatible and now available for download using this **link**

Discover Refrigeration Zen with the Chilling with Jens Podcast

For almost two years now, installers and service technicians around the world have been tuning into the Chilling with Jens podcast to tap what we like to call "refrigeration zen" and learn more about the evaporative refrigeration process.

This podcast series takes you through the principles, processes, and systems around evaporative refrigeration. Each chapter builds on what you've already learned and becomes more advanced as you go. The podcast has something for everyone, industry veterans and students alike.

Tune in and subscribe on **SoundCloud** and **iTunes**.

Watch the Cooling United Live Sessions

After two days packed to the brim with excitement, conversation, demos, and industry talks, we concluded our first fully immersive live event. Now, the entire Cooling United Live experience is available for you to watch or relive. With more than 75 sessions, 5 stages, and a wide range of industry experts, there was no shortage of insightful perspectives and memorable moments at Cooling United Live.
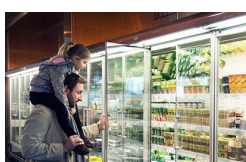
You can find the playlists from each of our five stages at the links below. Click the stage below you want to watch to get started:

[Main Stage](#)	[Air Conditioning](#)	[Food Retail](#)	[Commercial Refrigeration](#)	[Industrial Refrigeration](#)

Up-coming Webinars

Choose the right component for your CO_2 application – in English

- [Monday 30th November at 13:30 – 14:00 CET](#)

Install and calibrate the new Danfoss gas detectors– in English

- [Thursday 21st January 2021 at 14:00 – 14:30 CET](#)
- [Tuesday 26th January 2021 at 10:30 – 11:00 CET](#)

Details for Additional Information

UK/IE

[Cooling United Support Hub](#)
[Support Made Easy](#)
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