ENGINEERING
TOMORROW

December 2022 | Danfoss Climate Solutions for cooling

Cool Update

www.danfoss.com

Introduction

Danfoss Cool Update 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 Cool Update 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 Cool Update!

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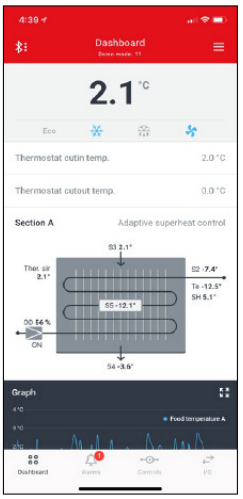
BLE (Bluetooth Enabler) Adapter with Companion KoolConnect Application

We are pleased to announce a launch of BLE Bluetooth communication external module with KoolConnect companion application that enables plug & play connectivity and data logging to our controllers ERC 11X, ERC 21X & EETa.

The BLE module EKE 202 and 203 and its companion app, KoolConnect, bring a new level of functionalities to the Commercial refrigeration space. The modules are simple plug and play devices that can be installed either during the manufacturing process or in the aftermarket, as they can operate with existing controllers (as outlined below). The modules will allow the direct interaction. It can also support mass programming in the production line.



Also supported are full parameter file programming, sharing, and receiving parameter files as well as checking alarms and past event, including parameter changes performed sometime in the past.

Key Features:

1. Bluetooth Low Energy 5.2
2. Simple Plug and Play module
3. Powered from controller
4. Data logging for 15 days
5. Real time clock with power back-up option

BLE variants

Model	Description	Code no. (single pack)	Code no. (I pack, 60 pcs)
EKA 202	BLE Adapter without power backup	080N0022	080N0026
EKA 203	BLE Adapter with power backup	080N0023	080N0027

Accessories

Description	Code no.
Interface cable - ERC 11X series	080N0329
Interface cable - ERC 21X series	080N0327
Interface cable - EETa	080N0325

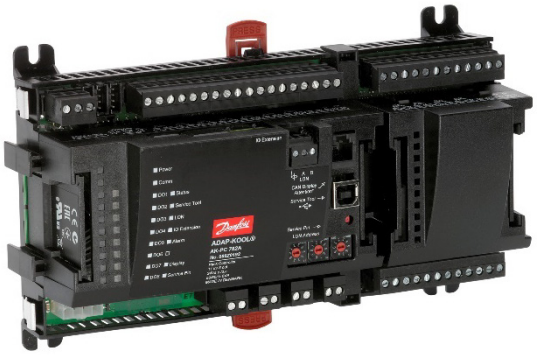
Installation Guide for Bluetooth Adapter Type EKA 202 & EKA 203 can be **downloaded here.**

KoolConnect App

KoolConnect App can be downloaded with the QR Code here:

AK-PC 782A and AK-PC 782B – Web Release of New Software Version 3.70

A new software version 3.70 for both the Pack controllers AK-PC 782A and AK-PC 782B is now available as Web release, with the intention to support the continuous development of transcritical CO_2 packs and to correct some minor bugs.



With this software release new features have been added to both the AK-PC 782A and AK-PC 782B:

- Support for Danfoss Heat Recovery Unit (HRU).
- Support for Heat Recovery Pump exerciser.
- Support for "Heat Recovery end delay".
- Support for "Fan Force Via Digital Input".
- Support for DST P310 pressure transmitters.
- Support for sensor input simulation.
- Support for increased number of Thermostats (5->10).
- Support for scaling in General Voltage Input and additional sensors in General PI.

The current AK-PC 782A with SW ver. 3.50 and AK-PC 782B with SW ver. 3.60 can be both upgraded to the SW ver. 3.70 if desired, by using the Service Tool. The upgrade is optional.

The SW ver. 3.70 is only available as Web release from wk. 48, 2022.

Please refer to your local Danfoss representative to have access to this new software release.

AK-CH 6xx, EKC 33x and AK-PC 5xx Product Family's Phase-Out

The existing AK-CH 6xx, EKC 33x and AK-PC 5xx product families have been phased out due to end of life of several components.

Code no.	Type
080Z0132	AK-CH 650, Chiller Controller
080Z0136	AK-CH 650A, Controller, UK-D-F-NL-I
084B7104	EKC 331, Controller, Capacity
084B7105	EKC 331T, Controller, Capacity W. Temp
084B8007	AK-PC 530, Pack Controller
084B8012	AK-PC 520, Pack Controller
084B8013	AK-PC560, Digital Scroll, Pack Controller
084B8014	AK-PC 531B, Pack Controller

For the following code numbers, we have a remaining stock, and we can offer you a last buy order to be placed within the end of 2022 and/or till stock is depleted:

Code no.	Type	Available stock
084B7104	EKC 331, Controller, Capacity	53
084B7105	EKC 331T, Controller, Capacity W. Temp	92
084B8007	AK-PC 530, Pack Controller	1
084B8012	AK-PC 520, Pack Controller	7
084B8014	AK-PC 531B, Pack Controller	79

SNV-ST 140B Released for Large-Scale Transcritical CO_2 Applications - Expanding SNV Portfolio

We are pleased to announce the release of Danfoss SNV-ST for 140 bar in two different connection types. The new SNV-ST for 140 bar is specifically designed to meet the increasing market demand for higher pressures in sub- and transcritical applications. Ready for CO_2 and future high-pressure refrigerants with maximum working pressure of 140 bar.

The valves have been created in 2 different types.
SNV-ST 140 bar – Connections:

1) Bottom branch 1/4 MPT, Side branch 1/4 FPT1/4
2) Bottom branch G1/2, Side branch G1/2

Impacted products

Sales code	Description
148B0082	SNV-ST ¼ FPT- ¼ MPT 140 bar
148B0084	SNV-ST G ½ - G ½ 140 bar

Design

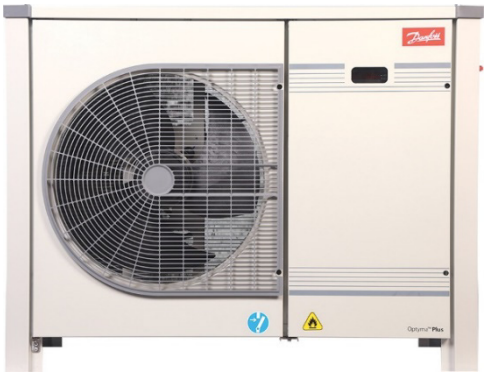
The design has not changed, SNV-ST is still a compact and light valve for easy handling and installation. Suitable for "heavy duty" industrial applications having a very robust and safe design including wide temperature and now, higher pressure.

Implementation date

Both SNVs are ready to be ordered.
The SNV's can be delivered as Multipack by ordering 12 pcs or as individual pieces.

To learn more about SNV-ST for 140 bar please contact your local Danfoss representative.

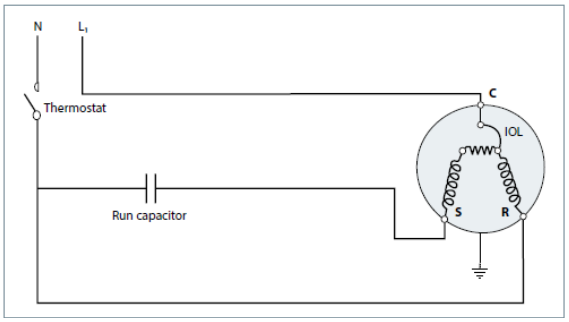
New CSR Wiring for Optyma™ Packaged Condensing Unit



As part of Danfoss' continuous product improvement, our Optyma™ packaged condensing unit range will now feature new wiring to improve the start ability of the unit when operating outside of the compressor specification.

Product improvement features and benefits

For all packaged Optyma™ condensing unit range equipped with single phase scroll compressors, standard Scroll PSC wiring will be upgraded to CSR wiring type.

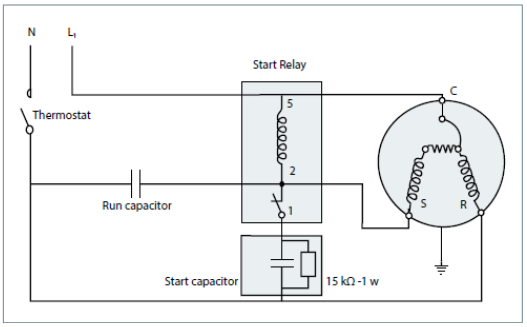


PSC wiring with a run capacitor only is the default wiring solution for single phase MLZ compressors.

The start winding (C-S) of the motor remains in circuit through a permanent (run) capacitor. This permanent (run) capacitor is connected between the start winding (S) and the run winding (R).

Required components:

- Run Capacitor



CSR wiring provides additional motor torque at start-up, using a start capacitor in combination with the run capacitor. The start capacitor is only connected during the starting operation. A potential relay is used to disconnect it after the start sequence.

Some applications with high differential pressure and start duty, e.g., soft serve ice cream machine, can require CSR wiring. This configuration can also be used to reduce erratic starting at unfavorable conditions such as very low ambient temperature or weak voltage.

Required components:

- Start Capacitor
- Starting Relay
- Run Capacitor

New wiring improves:

- Starting torque
- Start ability, upon favorable power supply
- Alignment with competitor behaviors

Impacted products and replacement parts for CSR wiring

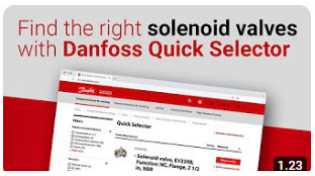
Code	Refrigerant	Model	Compressor	CSR electrical device multipack (10 pcs) spare part code start capacitor	CSR electrical device multipack (10 pcs) spare part code starting relay
114X7267	A1+A2L	OP-MSIM034MLW05G	MLZ015T	120Z0399, 145-175 µF	120Z0394
114X7275	A1+A2L	OP-MSIM034MLW09G	MLZ015T	120Z0399, 145-175 µF	120Z0394
114X4205	A1+A2L	OP-MPIM034MLP00G	MLZ015T	120Z0399, 145-175 µF	120Z0394
114X7269	A1+A2L	OP-MSIM044MLW05G	MLZ019T	120Z0399, 145-175 µF	120Z0394
114X7277	A1+A2L	OP-MSIM044MLW09G	MLZ019T	120Z0399, 145-175 µF	120Z0394
114X7271	A1+A2L	OP-MSIM046MLW05G	MLZ021T	120Z0399, 145-175 µF	120Z0394
114X7279	A1+A2L	OP-MSIM046MLW09G	MLZ021T	120Z0399, 145-175 µF	120Z0394
114X4207	A1+A2L	OP-MPIM046MLP00G	MLZ021T	120Z0399, 145-175 µF	120Z0394
114X7273	A1+A2L	OP-MSIM057MLW05G	MLZ026T	120Z0399, 145-175 µF	120Z0394
114X7281	A1+A2L	OP-MSIM057MLW09G	MLZ026T	120Z0399, 145-175 µF	120Z0394
114X4209	A1+A2L	OP-MPIM057MLP00G	MLZ026T	120Z0399, 145-175 µF	120Z0394
114X7312	A1+A2L	OP-MSIM068MLW05G	MLZ030T	120Z0400, 161-193 µF	120Z0394
114X7318	A1+A2L	OP-MSIM068MLW09G	MLZ030T	120Z0400, 161-193 µF	120Z0394
114X4307	A1+A2L	OP-MPIM068MLP00G	MLZ030T	120Z0400, 161-193 µF	120Z0394
114X7314	A1+A2L	OP-MSIM080MLW05G	MLZ038T	8173001, 88-108 µF	120Z0395
114X7320	A1+A2L	OP-MSIM080MLW09G	MLZ038T	8173001, 88-108 µF	120Z0395
114X4312	A1+A2L	OP-MPIM080MLP00G	MLZ038T	8173001, 88-108 µF	120Z0395
114X7061	A1	OP-MSXM034MLW05G	MLZ015T	120Z0399, 145-175 µF	120Z0394
114X7195	A1	OP-MSXM034MLW09G	MLZ015T	120Z0399, 145-175 µF	120Z0394
114X4261	A1	OP-MPXM034MLP00G	MLZ015T	120Z0399, 145-175 µF	120Z0394
114X7161	A1	OP-MSXM044MLW05G	MLZ019T	120Z0399, 145-175 µF	120Z0394
114X7211	A1	OP-MSXM044MLW09G	MLZ019T	120Z0399, 145-175 µF	120Z0394
114X7063	A1	OP-MSXM046MLW05G	MLZ021T	120Z0399, 145-175 µF	120Z0394
114X7197	A1	OP-MSXM046MLW09G	MLZ021T	120Z0399, 145-175 µF	120Z0394
114X4281	A1	OP-MPXM046MLP00G	MLZ021T	120Z0399, 145-175 µF	120Z0394
114X7065	A1	OP-MSXM057MLW05G	MLZ026T	120Z0399, 145-175 µF	120Z0394
114X7199	A1	OP-MSXM057MLW09G	MLZ026T	120Z0399, 145-175 µF	120Z0394
114X4290	A1	OP-MPXM057MLP00G	MLZ026T	120Z0399, 145-175 µF	120Z0394
114X7067	A1	OP-MSXM068MLW05G	MLZ030T	120Z0400, 161-193 µF	120Z0394
114X7201	A1	OP-MSXM068MLW09G	MLZ030T	120Z0400, 161-193 µF	120Z0394
114X4308	A1	OP-MPXM068MLP00G	MLZ030T	120Z0400, 161-193 µF	120Z0394
114X7069	A1	OP-MSXM080MLW05G	MLZ038T	8173001, 88-108 µF	120Z0395
114X7203	A1	OP-MSXM080MLW09G	MLZ038T	8173001, 88-108 µF	120Z0395
114X4321	A1	OP-MPXM080MLP00G	MLZ038T	8173001, 88-108 µF	120Z0395
114X7098	A1	OP-MSXM093MLW05G	MLZ042T	8173001, 88-108 µF	120Z0395

Implementation date

All packaged Optyma™ condensing units starting from serial number XXXXXCG4522 will be affected on week 45 of 2022.

Videos

- OFC discharge solution for oil-free systems **- LINK**
- Danfoss Quick Selector - solenoid valve selection made easy **- LINK**
- Custom applications with Coolselector®2 **- LINK**
- How to videos:
  - How to replace AK-PC 782A with AK-PC 782B - **LINK**
  - How to connect AK-PC 782B to AK-SM 800A - **LINK**
  - How to service ETS large electric expansion valves: 400L–500L **- LINK**
  - How to service ETS large electric expansion valves: 175L–250L **- LINK**



Danfoss Climate Solutions EER Region
– Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Serbia, Slovakia, Slovenia, Ukraine