ENGINEERING
TOMORROW

Danfoss EKE 347 liquid level controller

Powerful interface, easy setup and Modbus ready
Take local control to the next level

The Danfoss EKE 347 liquid level controller is used for regulation of the liquid level. The controller is connected with a level sensor that continuously measures the liquid level in the vessel/reservoir. With the user friendly interface and remarkable network connectivity capabilities, EKE 347 upgrades the control to a new level.

Friendly

EKE 347, an intuitive and easy to navigate controller with Modbus network capability.

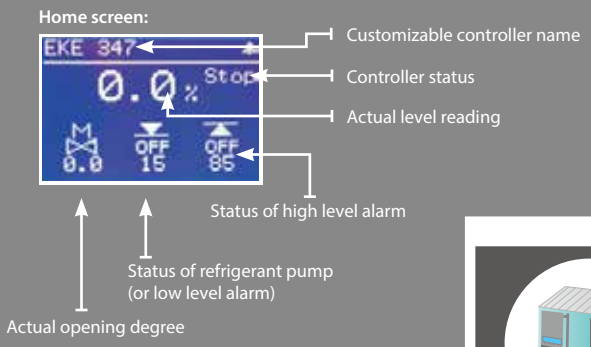
www.danfoss.com/ir

The EKE 347 controller is used for regulation of the liquid level in:

- Pump reservoirs
- Separators
- Intermediate coolers
- Economizers
- Condensers
- Receivers

The controller receives a 4-20mA signal from a guided radar sensor AKS4100(U) which accurately measures the liquid level in vessels/reservoirs.

Advanced algorithms provide analogue or digital signals to modulate ICM motorized valves or solenoid valves respectively.

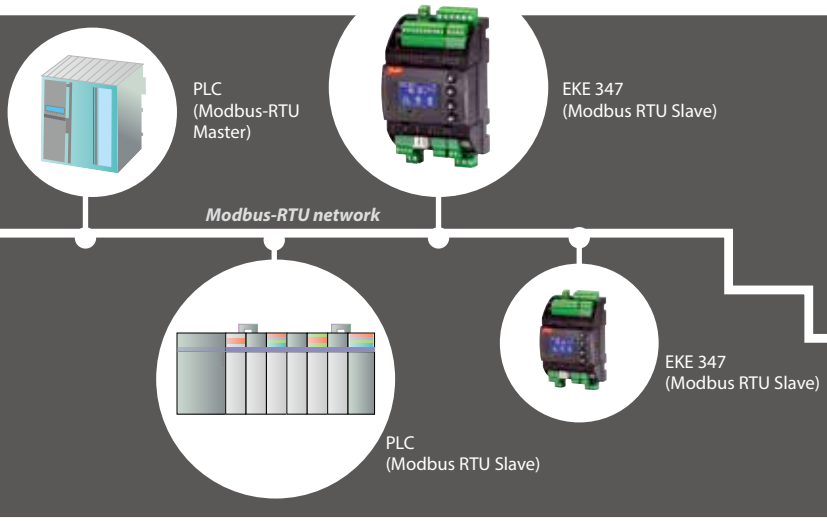


✓ **Clear Information: graphical and full text display**

- No user-guide required during set-up
- More parameters and alarm information available
- Users can get multiple fundamental real-time values via the LCD display on the home screen

✓ **Easy Communication: deep integration with PLC based systems**

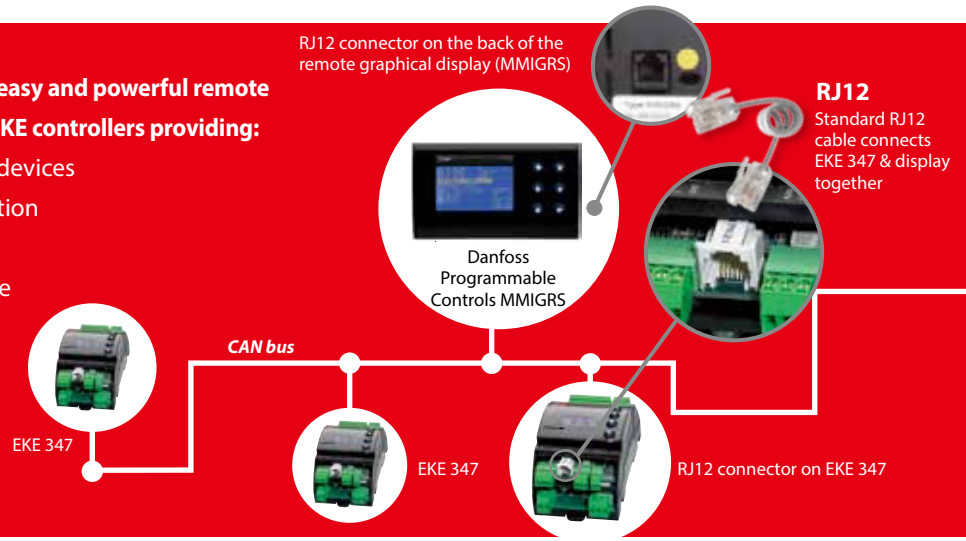
- Standard industrial PLC systems supporting Modbus-RTU communication
- Eliminates labor-intensive wiring of:
  - Individual analogue signals
  - Digital alarm signals and relays
  - Analogue input cards/channels on PLC



✓ **Information and Control in One Place: an easy and powerful remote graphical interface connects to multiple EKE controllers providing:**

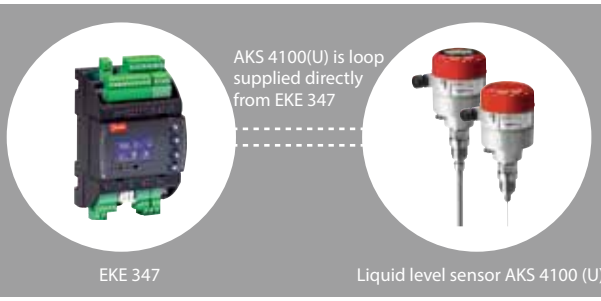
- Access to real-time status of connected devices
- Change settings from a convenient location
- An easy door-mount panel interface
- Reduced wiring and commissioning time
- A plug and play solution - featuring standard RJ12 connectors while no additional power supply required for its operation

Danfoss MMIGRS controls all connected EKE 347 level controller thru CAN bus.



✓ **Self-powered Analogue Input Signal Loop**

- No extra power supply necessary for level sensors
- Easier commissioning



✓ **Global Application:**
multi-language support in addition to English

German French Spanish Portuguese

Italian Chinese Arabic Russian

- Convenient for technical support with local languages
- Avoids faulty operation by the controller, reducing risk of equipment damage

Technical data:

Supply voltage	24 V a.c. +/-20% 50/60 Hz, 15 VA or 24 V d.c. +/-20%, 10W (the supply voltage is galvanically separated from the input and output signals. Input/output are not individual galvanic isolated)	
Power consumption	Controller 20 W coil for AKV	15 VA 55 VA
Input signal *** Ri =** **0(4)-20mA:100 ohm** **0(2)-10 V: 100 kohm**	Level signal * e.g. AKS 4100(U) sensor	4-20 mA or 0-10 V
	ICM valve feedback signal *	From ICAD 0/4-20 mA
	Contact function start/stop of regulation	
Relay output	2 pcs. SPST	3A, 250 V AC
Alarm relay	1 pc. SPST	3A, 250 V AC
Current output	0-20 mA or 4-20 mA Max. load: 500 ohm	
Valve connection	ICM - via current output AKV/A- via 24 a.c. Pulse-Width Modulating output	
Data communication	MODBUS interface, Communication to other EKE controllers possible	
Environments	-20°C - +55°C (- 4°F - +131°F), during operation -30°C - +80°C (-22°F - +176°F), during transport	
	up to 90% Rh, not condensed	
	No shock influence / vibrations	
Enclosure	IP 20	
Weight	193 g	
Mounting	DIN rail	
Display	Multiline LCD display	
Terminals	max. 2.5 mm^2 multicore	
Approvals	EU Low Voltage Directive and EMC demands re CE-marking complied with. LVD-tested acc. to EN 60730-1 and EN 60730-2-9 EMC-tested acc. to EN61000-6-3 and EN 61000-6-2 UL approval: UL file E31024	

Industrial Refrigeration applications:

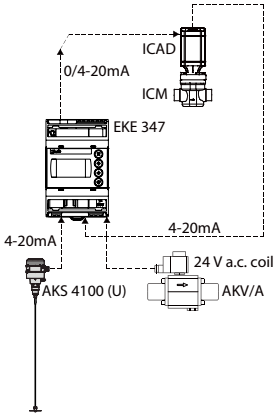
Level sensor
A guided radar technology sensor type AKS 4100(U)feeds an analogue signal to the controller.

EKE 347
Flexible control strategy: low or high side applications.

EKE 347 supports two types of Danfoss electronic expansion valves. Feedback signal input from ICM motorized valve available.

Expansion valves
Choice of expansion valves may be used.

- **ICM**
  ICM are direct operated motorized valves driven by digital stepper motor type ICAD
- **AKV/A**
  AKVA or AKV are pulse-width modulating expansion valves



Enhanced and Superior Value:

- ✓ **Intuitive Setup: quick wizard menu facilitates start-up**
- ✓ **Better Control Capabilities**
- ✓ **New System Instability Detection: new algorithms to minimize unwanted oscillations**
- ✓ **Dedicated to Industrial Refrigeration Applications: volt free change-over contacts**
- ✓ **I/O Expansion Device**

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Danfoss Industrial Refrigeration

A world of expertise at the click of a button

Turn to Danfoss if you want to combine quality components with expert knowhow and support. Try out these free tools, designed to make your work much easier.

Coolselector® 2 – New calculation software for Industrial Refrigeration

Coolselector®2 is your brand new Danfoss calculation and selection software designed to make selection processes for all industrial refrigeration projects easier and less time consuming. Coolselector® 2 is a unique calculation and support tool for contractors and system designers, offering complete pressure drop calculations, analysis of pipe and valve design and the ability to generate performance reports. It replaces the well-known DIRcalc™ software and offers several new functionalities.

Danfoss IR app

The free IR App gives you a spare parts tool, which makes it easy for you to find the spare part number for a given Danfoss industrial refrigeration valve. It also presents all the products and benefits of the SVL Flexline™ range – with a fun game thrown in as well.

Download 3D CAD symbols

From our online product catalogue on our website, you can download 3D CAD symbols and illustrations to help you when designing refrigeration plants.

IR application tool

With this interactive PowerPoint slideshow, you can explore all the details of a two-stage ammonia plant. You will find detailed cut-away drawings and information on the valves in the installation along with links to videos, literature and product animations.

Application handbook

The Application Handbook is designed to help you every step of the way when working with industrial refrigeration systems. Among many other things, it contains examples of how to select control methods for different refrigeration systems, their design and which components to choose.

Visit **www.danfoss.com/IR-tools** and find all the tools you need.

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