

Fact sheet

Capacity Controller Type **AK-PC 351**

Digital inputs
max. 8 pcs signal from automatic safety control, day/night signal

Analogue inputs

- P_o suction pressure or S4 media temperature
- P_c condensing pressure or S7 media temperature
- S_{c3} outdoor temperature
- S_d digital scroll/stream media temperature

Analogue outputs
max. 2 pcs for speed control of lead compressor and condenser fan

Solid state relay
output 1 pcs control of bypass on a digital scroll or for controlling unloader on a stream compressor. If the output is not used for the function, it can be used as ordinary relay output

Relay outputs
max. 5 pcs connection of compressors, condenser fans

Compact and powerful

Suction control

Up to 4 compressors in a variety of combinations:

- Single step
- Variable speed
- Digital scroll
- Stream (4 cylinder)
- Multi step with unloader valves

Condenser control

- Step control of up to 4 fans
- Speed control

Optimised control algorithms and factory settings

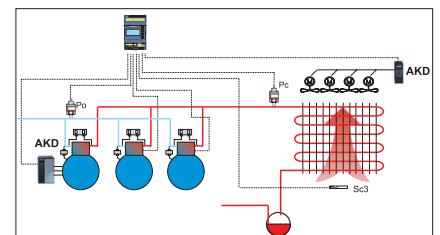
- Low and high suction pressure safety
- High condensing pressure safety
- Automatic compressor and fan control override functions to avoid high pressure cut out
- Smart settings and gain scheduling based on Danfoss refrigeration know-how
- Pump down on last compressor to reduce start/stops at low load

Energy saving features

- Night setback via Digital input or network
- Floating condensing pressure control
- Suction pressure optimisation

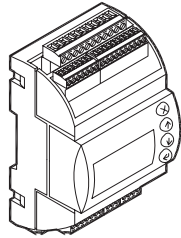
Graphical user interface with

- Multi language support
- Overview screens
- Wizard programming
- Celsius or Fahrenheit / Bar or Psi



Application	Description
	Single step Single step compressors of same size
	Speed on lead Speed compressor of one size single step compressors of another size
	Digital scroll on lead Digital scroll of one size single step compressors of another size
	Stream 4 cyl. on lead Stream 4 cyl. of on size single step compressors of another size
	Multistep compressors Multistep compressors with same no. of unloader valves and of same size

Technical data



Features	Description	
Supply voltage	24 V a.c. \pm 15 % 50/60 Hz, 17 VA	
	24 V d.c. (20-60 V), 17 VA	
4 analog Input	Pressure measuring: Ratiometric pressure transmitter type AKS 32R 1-5 volt pressure transmitter type AKS 32 0-20 (4-20) mA pressure transmitter type AKS 33	
	Temperature measurement Pt 1000 ohm/0 °C NTC - 86 K from digital scroll/stream	
8 digital input	From contact function E.g. to: Start/stop of regulation Monitoring of safety circuits General alarm function	
Relay output to capacity control	5 pcs. SPST (5 A): AC-1: 5 A (ohmic)	
	5 pcs. SPST (5 A): AC-15: 2 (inductive)	
	1 pc. Solid State PWM for scroll -unload	I _{max.} = 0.5 A I _{min.} = 50 mA Leak < 1.5 mA
2 Voltage output	0-10 V d.c. R _i = 1kohm	
Display output	For type MMIGRS2	
Data communication	Modbus for AK-SM 850	
Environments	-20 – 60 °C, During operations	
	-40 – 70 °C, During transport	
	20 – 80 % Rh, not condensed	
	No shock influence/vibrations	
Enclosure	IP 40	
Weight	0.2 kg	
Mounting	DIN-rail	
Connection terminals	max. 2.5 mm ² multi core	
Approvals	EU Low Voltage Directive and EMC demands re CE-marking complied with LVD tested acc. EN 60730-1 and EN 60730-2-9 EMC-tested acc. EN61000-6-2 and 3	

Ordering

Type	Description	Code no.
AK-PC 351	24 V AC/20-60 V DC, LCD, RS485, 1SSR S	080G0289

Approvals

EU Low Voltage Directive and EMC demands CE-marking complied with
LVD tested acc. EN 60730-1 and EN 60730-2-9
EMC-tested acc. EN61000-6-2 and 3.

Samples and related products

For samples and related products, please contact your local Danfoss representative.