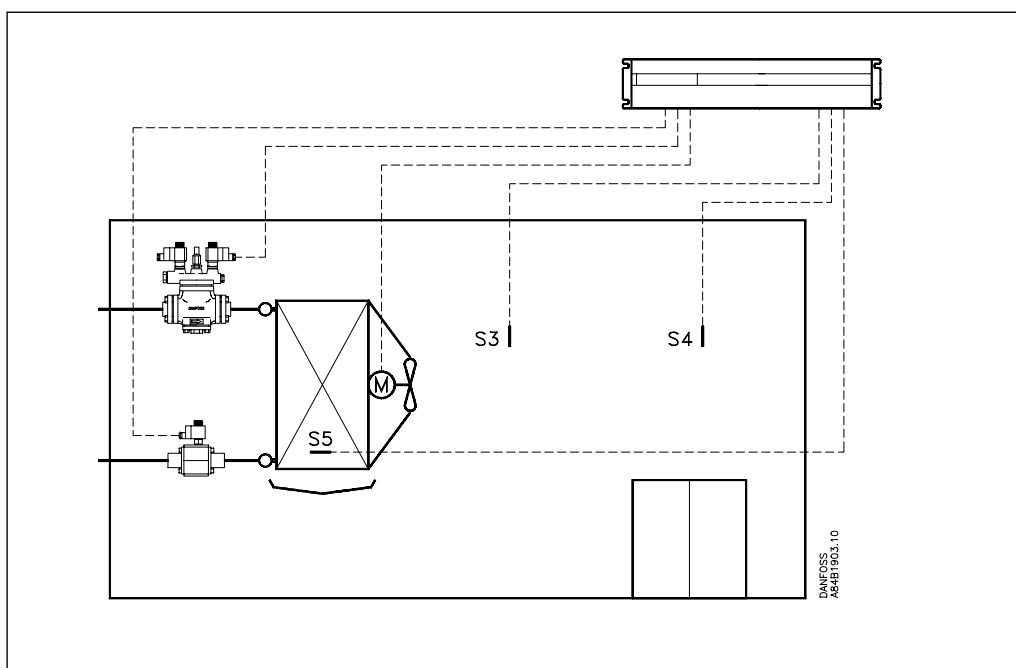


Introduction

AKC 151R is an electronic room controller incorporating all functions necessary to control an air-cooled evaporator, in the cold room of an industrial plant where flooded evaporators are used (pump recirculation principle). The regulator operates together with an electrically operated valve - either a solenoid or an expansion valve. The temperature is measured with a Pt 1000 ohm sensor, which is extremely accurate for the purpose. Depending on the application, one to three sensors per regulated evaporator are used. In addition to temperature regulation and monitoring (i.e. alarm functions and data collection) the regulator offers other functions such as defrosting, cooling air regulation, compressor start/stop, forced valve closing, alternative thermostat settings (depending on electricity tariffs).



Principle



AKC 151R functions as an electronic room thermostat where the room temperature is measured with one, or two, Pt 1000 sensors: S3 and S4.

The advanced defrost function, including temperature-controlled defrost stop with S5, together with flexible setting up, means that it is possible to configure AKC 151R to suit different types of evaporators.

Functions

- Thermostat set back allows the reduction of the room temperature, when the electricity tariff is low
- Fan operation during cutout
- Normally hot gas or electric defrost
- Weekly defrost programme
- Liquid drain function
- Complete compressor functionality during operation with hot gas defrost
- Injection delay
- Fan delay
- Supply valve bypass delay
- Quick-start function (requires AKVA valve)
- Data collection via AKM: temperature, alarms, etc.
- Modem communication facility
- Separate display can be connected

Technical data

Supply	230 V +10/-15%, 50/60 Hz, 6 VA Consumption 10 VA		
Sensor	Pt 1000	Saux1, Saux2:	Random temperature measurement
		S3, S4	Thermostat sensor
		S5	Defrost stop sensor
ON/OFF inlets	Contact function ¹⁾	S6	Setpoint change. NO
		DI	Forced refrigeration. NO
	230 V a.c.	On	Refrigeration start/stop (230 V a.c. ON)
		DEF.START	Defrost start (230 V a.c. ON)
ON/OFF outlets (230 V)	Semi-conductor	AKVA (Mosfet)	Liquid line valve (EVRA eller AKVA) ²⁾
		FAN (triac)	Evaporator fans
	Relay: AC-1 (ohmic): 6A AC-15 (inductive): 3A	HP BYPASS:	Defrost liquid drain
		SUCTION:	Suction line valve (PML/X)
		COMPRES:	Compressor
		ALARM:	Common alarm output
Ambient temperature	during operation	0 to + 55°C	
	during transport	-50 to +70°C	
Enclosure	Material	Anodized aluminium (plastic end cap)	
	during operation	0 to + 55°C	
	Class	IP30(32)	
	Weight	1.5 kg	
	Mounting	Wall or DIN rail	
Operation	Control panel AKA 21 or PC with software system AKM		

- ¹⁾ To achieve a reliable switching, we recommend to use relays or switches with fine silver or fine grain silver contacts (Ag/AgNi0.15). These contacts may eventually be gold plated (Ag + Au).
- ²⁾ The AKVA output requires a coil for 230 V direct current.

Approvals

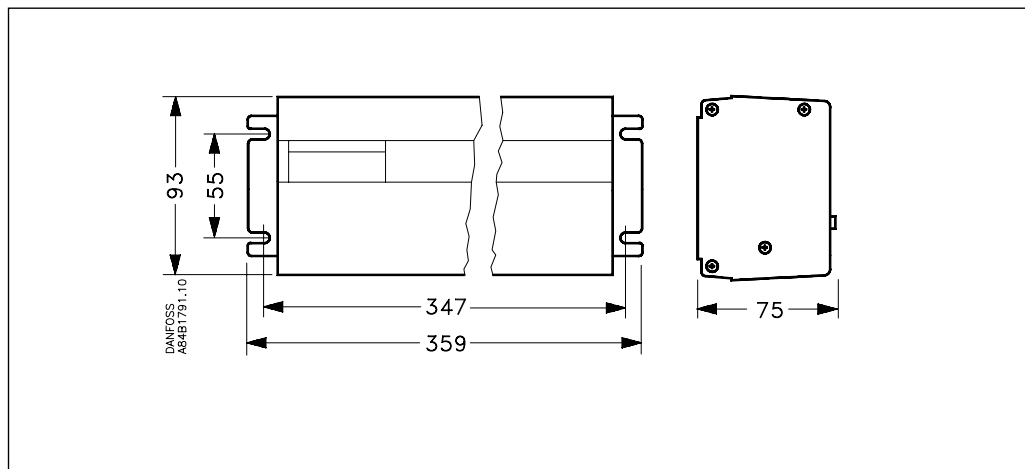
EMC directive 89/336/EEC
EMC directive 92/31/EEC
EN 50081-1
EN 50082-1
EN 50082-2

LVD directive 73/23/EEC
LVD directive 93/68/EEC
EN 60730-1
EN 60730-2-1
EN 60730-2-9

Ordering

Type	Function	Code no.
AKC 151R	room controller	084B6195

Dimensions



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