



Temperature controller EKC 202



EKC 202 - Refrigeration controller

The series of EKC 202 controllers can be used for a wide range of different refrigeration applications – from control of air temperatures and defrost to more advanced applications, including control of light and fans.



Functions

Thermostat

- ON/OFF heating or cooling thermostat
- Sensors: Danfoss Pt1000, PTC1000 or NTC5000
- Day / night control
- Thermostat band
- Alarm thermostat with delay

Defrost

- Electrical, natural or hot gas defrost
- Start via DI input, time interval or schedule (RTC)
- Defrost on demand
- Stop on time or temperature
- Coordinated defrost

Compressor

- Anti cycle timers for optimum protection
- High-effect 16A relays for connection of compressors without use of intermediate relays

DI input

- Multi purpose DI input for defrost start, door function, night setback, main switch, appliance cleaning, general alarm, defrost coordination and thermostat band.

Fan

- Fan delay during defrost
- Fan stop when compressor cuts out
- Fan stop at high S5 temperature

Light control


- Light control of day/night, door, or via network

Advantages

- **Integrated refrigeration-technical functions**
- **Defrost on demand in 1:1 systems**
- **Buttons and seal imbedded in the front**
- **IP65 density from the front panel**
- **Digital input for either:**
 - Door contact function with alarm
 - Defrost start
 - Start/stop of regulation
 - Night operation
 - Change-over between two temperature reference
 - Case cleaning function
- **Instant programming via programming key**
- **HACCP**
Factory calibration that will guarantee a better measuring accuracy than stated in the standard EN 441-13 without subsequent calibration (Pt 1000 ohm sensor)

Technical data and ordering

Technical data

Supply voltage	230 V a.c. +10/-15 %. 1.5 VA		
Sensors	Pt 1000 or PTC (1000 ohm/25°C) or NTC-M2020 (5000 ohm/25°C)		
Accuracy	Measuring range	-60 to +99°C	
	Controller	±1 K below -35°C ±0,5 K between -35 to +25°C ±1 K above +25°C	
	Pt 1000 sensor	±0.3 K at 0°C ±0.005 K per grad	
Display	LED, 3 digits		
Digital inputs	Signal from contact functions Requirements to contacts: Gold plating Cable length must be max. 15 m Use auxiliary relays when the cable is longer		
Electrical connection cable	Max.1,5 mm ² multi-core cable on supply and relays. Power current terminals are mounted on the circuit board. Max. 1 mm ² on sensors - and DI inputs. Low current terminals are with plugs		
 Relays*		CE (250 V a.c.)	UL *** (240 V a.c.)
	DO1. Refrigeration	10 (6) A	10 A Resistive 5FLA, 30LRA
	DO2. Defrost	10 (6) A	10 A Resistive 5FLA, 30LRA
	DO3. Fan	6 (3) A	6 A Resistive 3FLA, 18LRA 131 VA Pilot duty
	DO4. Alarm or light	4 (1) A Min. 100 mA**	4 A Resistive 131 VA Pilot duty
Environments	0 to +55°C, During operations -40 to +70°C, During transport		
	20 - 80% Rh, not condensed		
	No shock influence/vibrations		
Enclosure	IP 65 from front. Buttons and packing are imbedded in the front.		
Escapement reserve for the clock	4 hours		
Approvals	EU Low Voltage Directive and EMC demands re CE-marking complied with LVD tested acc. EN 60730-1 og EN 60730-2-9, A1, A2 EMC tested acc. EN50082-1 og EN 60730-2-9, A2		

* DO1 and DO2 are 16 A relays. DO3 and DO4 are 8 A relays. Max. load must be kept.

** Gold plating ensures make function with small contact loads

*** UL-approval based on 30000 couplings

Ordering

Type	Description	Code No.
EKC 202A	Refrigeration controller	084B8521
EKC 202B	Refrigeration controller with fan function	084B8522
EKC 202C	Refrigeration controller for electric defrost	084B8523

Accessories

EKA 178A	Data communication module MOD bus	084B8564
EKA 179A	RS485 LON	084B8565
EKA 181A	Battery & Buzzer	084B8566
EKA 181C	Battery module that will protect the clock in case of lengthy power failure	084B8577
EKA 182A	Copy key EKC - EKC	084B8567
AKS 12	Pt 1000 Sensor	084N0036
EKS 111	PTC 1000 Sensor	084N1178
EKS 211	NTC 5000 Sensor	084N1220

Additional information!

Manual: RS8DZ

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