



Temperature controller EKC 102



EKC 102 - Temperature controller

EKC 102 controllers for panel mounting are used for temperature and defrost control via pump-down or start/stop of compressor.



Functions

Thermostat

- ON/OFF thermostat
- Sensors: Danfoss Pt1000, PTC1000 or NTC5000
- Calibration of sensors
- Day/night control
- Alarm thermostat with delays

Defrost

- Electrical or natural defrost
- Start via DI input, time interval or display
- Defrost on demand
- Stop on time or temperature

Compressor

- Anti cycle timers for optimum compressor protection
- High-effect 16A relays for connection of compressors without use of intermediate relay
- Control of 2 compressors (version 102B)

Multipurpose DI input

- Multipurpose DI input for defrost start, day/night control, dooralarm or main switch

Other functions

- The S5 sensor can be used for monitoring of condenser temperature or as product sensor (version 102B+102D)
- Door function with alarm monitoring
- Manual control of outputs
- Delay of outputs at power up

Display & Programming

- High-efficient LED display with icons for indication of operational status. Parameter settings/readouts and alarm conditions can be read on the display.
- "Copy key" programming key with room for 25 different controller setups

Fan (102D only)

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

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

- Can control two compressors

Digital input for either:

- Door 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.(115 V) +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. Max. 1 mm ² on sensors - and DI inputs. Terminals are mounted on the circuit board		
Relays*		CE (250 V a.c.)	UL ** (240 V a.c.)
	DO1. Refrigeration	10 (6) A	10 A Resistive 5FLA, 30LRA
	DO2. Alarm/ Defrost/ Refrigeration	10 (6) A	10 A Resistive 5FLA, 30LRA
	DO3. Fan	6 (3) A	6 A Resistive 3FLA, 18LRA 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.		
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 is a 8 A relay. Max. load must be kept.

** UL-approval based on 30000 couplings

Ordering

Type	Description	Supply	Code No.
EKC 102A	Temperature controller	230 V a.c.	084B8500
		115 V a.c.	084B8503
EKC 102B	Temperature controller with alarm function	230 V a.c.	084B8501
		115 V a.c.	084B8504
EKC 102C	Temperature controller for electric defrost	230 V a.c.	084B8502
		115 V a.c.	084B8505
EKC 102D	Controller for refrigeration with fan function	230 V a.c.	084B8506
		115 V a.c.	084B8507

Accessories

EKA 179A	RS485 LON	084B8565
EKA 181A	Battery & Buzzer	084B8566
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: RS8DY

