

# EVK203

Every digital thermostat for low temperature refrigeration applications.

Defrost and fan management.

Display protection: IP 65

Power supply: 230 VAC, 3 VA

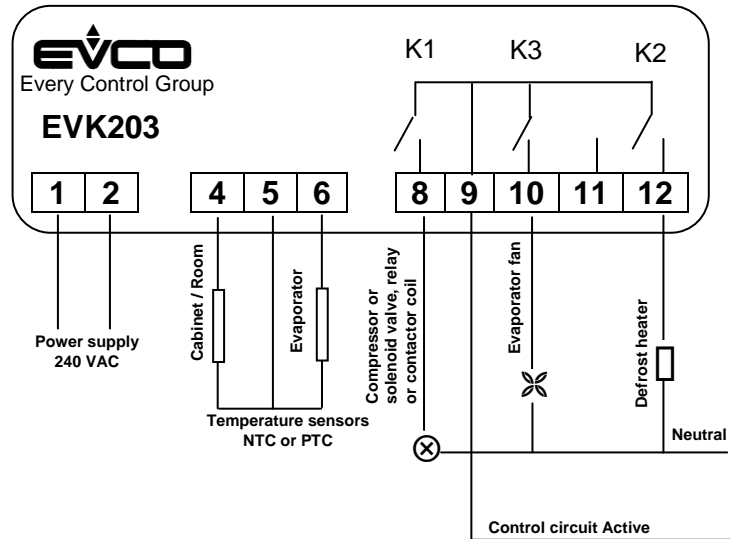
Working temperature: 0°C to 55°C

Working range: (PTC)-50 to 150, (NTC) -40 to 110

Relays output: K1=16A (4A ind.) @240 VAC

K2 and K3 = 8 A resistive @240 VAC

The maximum current allowed on the load is 10 A



## Programming procedure

### Temperature Set Point

Press "set" button once, \* will flash  
 Press ▼ or ▲ to set the desired value  
 Press "set" button to confirm

Alternatively the Temperature Set Point can be selected using parameter "SP", first on the list

### All parameters

Press ▼ And ▲ for 4 seconds  
 "PA" will be displayed  
 Press "set"  
 Press ▼ Or ▲ to select password "-19"  
 Press "set"  
 "PA" will be displayed  
 Press ▼ And ▲ for 4 seconds  
 "SP" will be displayed (first parameter on the list)  
 Press ▼ Or ▲ to select the parameter

### To modify selected parameter

Press "set"  
 Press ▼ Or ▲ to set the desired value  
 Press "set" to confirm

### To confirm all changes

Press ▼ And ▲ for 4 seconds or leave the controller untouched for approx. 1 min.

Switch the power supply "OFF/ON" after the modification of the parameters

Manual defrost can be activated by pressing ▲ Button for 4 seconds.  
 Possible only if evaporator temperature is below parameter "d2"

	LED ON	LED Flashes
	compressor is running	compressor delay "C0", "C1", "C2" or modification of the Set Point
	defrost in progress	defrost delay or dripping time "C0", "C1", "C2", "d7"
	evaporator fan runs	dripping time delay "F3"

To lock or unlock the display

<b>Loc</b>	To lock: press "set" and ▼ for 2 s, or by parameter "r3"
<b>UnL</b>	To unlock: press "set" and ▼ for 2 s, or by parameter "r3"

## Error messages

CODE	REASON	REMEDIES	EFFECTS
<b>AL</b>	Low temperature alarm	Check "A0", "A1", "A2"	No effects
<b>AH</b>	High temperature alarm	Check "A4", "A5"	No effects
<b>Pr1</b>	Room / cabinet sensor damaged, poor connection, wrong type of sensor, the cabinet temperature is outside the limits allowed by the working range of the controller	Check parameter "P0", check the connection, check the temperature next to the sensor	The compressor will work in accordance with parameters C4 & C5
<b>Pr2</b>	Evaporator / defrost sensor damaged, poor connection, wrong type of sensor, the evaporator temperature is outside the limits allowed by the working range of the controller	Check parameter "P0", check the connection, check the temperature next to the sensor	If "P3"=1 the defrost will last as per "d3" If "P3"=1 and "d8"=2, controller will work as if "d8"=0 If "F0"=3 or 4, controller will work as if "F0"=2

## Refrigeration Distributors P/L

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# EVK 203T parameters

	Min.	Max.	unit	def	
<b>SP</b>	r 1	r 2	↑C	0.0	Temperature Set Point
<b>CA1</b>	-25.0	25.0	°C	0.0	Room/cabinet sensor calibration
<b>CA2</b>	-25.0	25.0	°C	0.0	Evaporator/defrost sensor calibration
<b>P0</b>	0	1		1	Type of sensor 0 = PTC, 1 = NTC
<b>P1</b>	0	1		1	Decimal point 1 = Yes
<b>P2</b>	0	1		0	0 = ↑C 1 = ↑F
<b>P3</b>	0	2		1	Evaporator sensor function: 0 = none 1 = defrost & fan management 2 = fan thermostat
<b>P5</b>	0	3		0	Display temperature: 0 = cabinet temp. 1 = Set Point 2 = evaporator temp. 3 = Set point-evaporator temp
<b>r0</b>	0.1	15	↑C	2.0	Differential
<b>r 1</b>	-99.0	r 2	°C	-50	Minimum set point
<b>r 2</b>	r 1	99.0	°C	50	Maximum set point
<b>r3</b>	0	1		0	Locking controller status 1 = Yes
<b>C0</b>	0	240	min	0	Delay on power up
<b>C1</b>	0	240	min	5	Minimum time between two compressors starts
<b>C2</b>	0	240	min	3	Minimum time compressor remains OFF
<b>C3</b>	0	240	s	0	Minimum time compressor remains ON
<b>C4</b>	0	240	min	10	Time compressor remains OFF in the event of cabinet/room sensor failure
<b>C5</b>	1	240	min	10	Time compressor remains ON in the event of cabinet/room sensor failure
<b>d0</b>	0	99	h	8	Defrost interval (0 = defrost disabled)
<b>d1</b>	0	1		0	0 = electric, 1 = hot gas defrost
<b>d2</b>	-55.0	99.0	°C	2.0	Defrost termination temperature
<b>d3</b>	0	99	min	30	Maximum defrost duration if P3 = 1 Defrost duration if P3 = 0 or 2
<b>d4</b>	0	1		0	Defrost activation on power up (1 = YES)

	Min.	Max.	unit	def	
<b>d 5</b>	0	99	min	0	Defrost delay after power up (if d4 = 1)
<b>d 6</b>	0	1		1	Override display during defrost (1 = YES)
<b>d 7</b>	0	15	min	2	Dripping time
<b>d8</b>	0	2		0	Kind of defrost interval, the defrost will be activated when: 0 = controller will stay ON for the time=d0 1 = compressor will stay ON for the time=d0 2 = the evaporator temp will stay below d9 for the time=d0
<b>d 9</b>	-99	99	↑C	0	Evaporator temp. above which the count of the defrost interval is suspended (only if d8=2)
<b>d A</b>	0	99	min	0	Minimum compressor run before hot gas defrost activation (d1=1)
<b>A0</b>	0	1	°C	0	0 = room temp. alarm, 1 = evaporator temp. alarm
<b>A1</b>	-99	99	↑C	-10	Temp. below which the low temp alarm is activated
<b>A2</b>	0	2		1	Low temp, alarm: 0 = alarm disabled 1 = deviation from Set Point 2 = absolute (A1)
<b>A4</b>	-99	99	°C	10	Temp. above which the high temp alarm is activated
<b>A5</b>	0	2		1	High temp, alarm: 0 = alarm disabled 1 = deviation from Set Point 2 = absolute (A4)
<b>A6</b>	0	240	min	120	Delay of alarm activation after power up
<b>A7</b>	0	240	min	15	Temperature alarm delay
<b>A8</b>	0	240	min	15	Delay of alarm after the last completion of defrost cycle
<b>F0</b>	0	4		1	Fan management (0 = OFF, 1 = ON, 2 = with compressor, 3 = according to F1, 4 = with compressor according to F1)
<b>F1</b>	-99	99	°C	-1	Evaporator fan stop temperature
<b>F2</b>	0	2		0	Stop fan during defrost (0 = Yes, 1 = No 2 = according to F0)
<b>F3</b>	0	15	min	2	After dripping evaporator fan delay
<b>L1</b>	1	247		247	Controller ID address
<b>Lb</b>	0	3		2	Network baud rate: 0=2400, 1=4800, 2=9600, 3=19200
<b>LP</b>	0	2		2	Parity: 0= none, 1 = odd, 2 = even
<b>E9</b>	0	1		1	Reserved

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