EVBOX1 Switchboards for single-phase cold rooms

GB ENGLISH

IMPORTANT

Read this document thoroughly before installation and before use of the device and follow all recommendations; keep this document with the device for future consultation. Only use the device in the way described in this document; do not use the same as a safety device.

For further information consult the installation manual.

The device must be disposed of in compliance with local standards regarding the collection of electric and electronic equipment.

1 USER INTERFACE

1.1 Switching on/off the device in manual mode
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the ⏻ key 1 s.

1.2 The display
If the device is switched on, during the normal operation the display will show the magnitude set with P5 parameter, except during the defrost when the display will show the magnitude set with d6 parameter.
If the device is switched off, the display will be switched off.

### 1.3 Showing the magnitude detected by a probe
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the ⤓ key 1 s: the display will show the first available label.
3. Press and release the ↑ or ⤓ key to select:
   - **"Pb1"** if P4 = 0, 1, 2 or 3, room temperature, if P4 = 4, inlet air temperature
   - **"Pb2"** evaporator temperature
   - **"Pb3"** auxiliary temperature
   - **"Pb4"** evaporating temperature
   - **"Pb5"** evaporating pressure
   - **"Pb6"** CPT temperature ("Pb4" in EVB1204, EVB1214, EVB1206, EVB1216, EVB1226 and EVB1236)
   - **"Pb7"** auxiliary 2 temperature
   - **"Pb8"** auxiliary 3 temperature.
4. Press and release the ↵ key.
To exit the procedure:
5. Press and release the ↵ key or do not operate 60 s.
6. Press and release the ⏻ key.

### 1.4 Activating/deactivating the "overcooling" function
1. Make sure the device is switched on, the keyboard is not locked, no procedure is in progress, the defrost, the predripping, the dripping or the evaporator fan standstill are not in progress.
2. Press the ↑ key 4 s: the LED ❄ will flash; see also r5 and r6 parameters.

1.5 Activating the defrost in manual mode
1. Make sure the device is switched on, the keyboard is not locked, no procedure is in progress and the "overcooling" function is not in progress.
2. Press the ❄ key 4 s.
If to the defrost activation the evaporator temperature is above that set with d2 parameter, the defrost will not be executed.

1.6 Switching on/off the room light in manual mode
1. Make sure no procedure is in progress.
2. Press and release the 💡 key: the LED 💡 will switch on/off; see also u2 parameter.

1.7 Switching on the demisting heater
1. Make sure the device is switched on, the keyboard is not locked and no procedure is in progress.
2. Press the 🔆 key 1 s: the LED "AUX1" or "AUX2" will switch on; see also u6 parameter.

1.8 Switching on/off the auxiliary output in manual mode
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the 🔆 key 1 s: the LED "AUX1" or "AUX2" will switch on/off; see also u2 parameter.

1.9 Showing some instant magnitudes relative to the electronic expansion valve (only available in EVB1246 and EVB1256)
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the ⤓ key 1 s: the display will show the first available label.
3. Press and release the ↑ or ⤓ key to select:
   - **"SH"** instant superheating
   - **"POS"** demanded percentage the valve must be opened
   - **"POr"** instant percentage the valve is opened.
4. Press and release the ↵ key.
To exit the procedure:

5. Press and release the ↵ key or do not operate 60 s.
6. Press and release the ⏻ key.

1.10 Locking/Unlocking the keyboard
1. Make sure the device is switched on and no procedure is in progress.
2. Press the ⤓ and ⏻ keys 1 s: the display will show "Loc"/"UnL".

1.11 Silencing the alarm buzzer
1. Make sure no procedure is in progress.
2. Press a key; see also u4 parameter.

2 LOW OR HIGH PERCENTAGE OF RELATIVE HUMIDITY OPERATION (only if F0 parameter has value 5)

2.1 Activating the low or high percentage of relative humidity operation
1. Make sure the device is switched on, the keyboard is not locked and no procedure is in progress.
2. Press the ↵ and ↑ keys 4 s: the display will show "rhL" (low percentage of relative humidity operation) or "rhH" (high percentage of relative humidity operation) 10 s.
To restore the normal display in advance:
3. Press a key.

### 2.2 Learning the operation type in progress
1. Make sure the device is switched on, the keyboard is not locked and no procedure is in progress.
2. Press and release the ↵ and ↑ keys: the display will show "rhL" (low percentage of relative humidity operation) or "rhH" (high percentage of relative humidity operation) 10 s.
To restore the normal display in advance:
3. Press a key.

3 "HACCP" FUNCTION

3.1 Showing the information relative to the HACCP alarms
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the ⤓ key 1 s: the display will show the first available label.
3. Press and release the ↑ or ⤓ key to select "LS".
4. Press and release the ↵ key.
5. Press and release the ↑ or ⤓ key to select (if present):
   - **"AL"** minimum temperature alarm
   - **"AH"** maximum temperature alarm
   - **"id"** door switch input alarm
   - **"PF"** power supply interruption alarm (only available in EVB1214, EVB1216, EVB1236 and EVB1256).
6. Press and release the ↵ key: the LED "HACCP" will switch off and the display will show in succession (for example):
   - **"8.0"** the critical value is 8.0 °C/8 °F
   - **"Sta"** the display is about to show the date and the time the alarm has arisen (only available in EVB1214, EVB1216, EVB1236 and EVB1256)
   - **"y14"** the alarm has arisen in 2014 (to be continued)
   - **"n03"** the alarm has arisen in March (to be continued)
   - **"d26"** the alarm has arisen March 26, 2014 (to be continued)
   - **"h16"** the alarm has arisen at 16 (to be continued)
   - **"n30"** the alarm has arisen at 16:30
   - **"dur"** the display is about to show the duration of the alarm
   - **"h01"** the alarm has lasted 1 h (to be continued)
   - **"n15"** the alarm has lasted 1 h and 15 min.
To exit the procedure:
6. Press and release the ⏻ key.

### 3.2 Resetting the information relative to the HACCP alarms
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the ⤓ key 1 s: the display will show the first available label.
3. Press and release the ↑ or ⤓ key to select "rLS".
4. Press and release the ↵ key.
5. Press and release the ↑ or ⤓ key within 15 s to set "149".
6. Press and release the ↵ key or do not operate 15 s: the display will show "- - -" flashing 4 s, after which the device will exit the procedure.

4 DATA LOGGING FOR EN 12830 STANDARD COMPLIANCE (if present)

4.1 Activating the "HACCP" writing mode
The mode is always in progress.

4.2 Activating the "service" writing mode
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the ⤓ key 1 s: the display will show the first available label.
3. Press and release the ↑ or ⤓ key to select "LS".
4. Press and release the ↵ key.
5. Press and release the ↑ key within 15 s to set "1".
6. Press and release the ↵ key or do not operate 15 s: the display will show "SEr" flashing 4 s, after which the device will exit the procedure.

4.3 Showing the errors relative to the data logging
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the ⤓ key 1 s: the display will show the first available label.
3. Press and release the ↑ or ⤓ key to select "Err".
4. Press and release the ↵ key.
5. Press and release the ↑ or ⤓ key to select (if present):
   - **"FUL"** space on SD card run out
   - **"Sd"** SD card not inserted or not recognized
   - **"Pr7"** auxiliary 2 temperature probe error
   - **"Pr8"** auxiliary 3 temperature probe error
   - **"BAt"** data logger battery error
To exit the procedure:
6. Press and release the ⏻ key.

5 COMPRESSOR OPERATION HOURS COUNT

5.1 Showing the compressor operation hours
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the ⤓ key 1 s: the display will show the first available label.
3. Press and release the ↑ or ⤓ key to select:
   - **"CH1"** compressor operation hours
   - **"CH2"** compressor 2 operation hours.
4. Press and release the ↵ key.
To exit the procedure:
5. Press and release the ↵ key or do not operate 60 s.
6. Press and release the ⏻ key.

5.2 Resetting the compressor operation hours
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the ⤓ key 1 s: the display will show the first available label.
3. Press and release the ↑ or ⤓ key to select "rCH".
4. Press and release the ↵ key.
5. Press and release the ↑ or ⤓ key within 15 s to set "149".
6. Press and release the ↵ key or do not operate 15 s: the display will show "- - -" flashing 4 s, after which the device will exit the procedure.

6 SETTINGS

6.1 Setting the date, the time and the day of the week (only available in EVB1214, EVB1216, EVB1236 and EVB1256)
To access the procedure:
1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press the ⤓ key 1 s: the display will show the first available label.
3. Press and release the ↑ or ⤓ key to select "rtc".
To set the year:
4. Press and release the ↵ key: the display will show "y" followed by the last two numbers of the year and the LED 🕐 will flash.
5. Press and release the ↑ or ⤓ key within 15 s.
To set the month:
6. Press and release the ↵ key while setting the year: the display will show "n" followed by the month number (01... 12).
7. Press and release the ↑ or ⤓ key within 15 s.
To set the day:
8. Press and release the ↵ key while setting the month: the display will show "d" followed by the day number (01... 31).
9. Press and release the ↑ or ⤓ key within 15 s.
To set the hour:
10. Press and release the ↵ key while setting the day: the display will show "h" followed by the hour number (00... 23).
11. Press and release the ↑ or ⤓ key within 15 s.

To set the minute:

12. Press and release the ⏎ key while setting the hour: the display will show "**n**" followed by the minute number (00... 59).
13. Press and release the ⬆ or ⬇ key within 15 s.

To set the day of the week:

14. Press and release the ⏎ key while setting the minute: the display will show the first available label.
15. Press and release the ⬆ or ⬇ key within 15 s to select:
    - "**Mon**" Monday
    - "**tuE**" Tuesday
    - "**UEd**" Wednesday
    - "**thu**" Thursday
    - "**Fri**" Friday
    - "**SAt**" Saturday
    - "**Sun**" Sunday.
16. Press and release the ⏎ key: the LED 🕐 will switch off, after which the device will exit the procedure.

To exit the procedure in advance:

17. Do not operate 60 s (possible changes will be saved).

6.2 Setting the working setpoint

1. Make sure the keyboard is not locked and no procedure is in progress.
2. Press and release the ⏎ key: the LED ❄ will flash.
3. Press and release the ⬆ or ⬇ key within 15 s; see also r1, r2 and r3 parameters.
4. Press and release the ⏎ key or do not operate 15 s: the LED ❄ will switch off, after which the device will exit the procedure.

To exit the procedure in advance:

5. Do not operate 15 s (possible changes will be saved).

6.3 Setting the configuration parameters

To access the procedure:

1. Make sure no procedure is in progress.
2. Press the ⬆ and ⬇ keys 4 s: the display will show "**PA**".
3. Press and release the ⏎ key.
4. Press and release the ⬆ or ⬇ key within 15 s to set "**-19**".
5. Press and release the ⏎ key or do not operate 15 s.
6. Press the ⬆ and ⬇ keys 4 s: the display will show "**SP**".

To select a parameter:

7. Press and release the ⬆ or ⬇ key.

To set a parameter:

8. Press and release the ⏎ key.
9. Press and release the ⬆ or ⬇ key within 15 s.
10. Press and release the ⏎ key or do not operate 15 s.

To exit the procedure:

11. Press the ⬆ and ⬇ keys 4 s or not operate 60 s (possible changes will be saved).

Interrupt the power supply of the device after setting the configuratin parameters.

6.4 Restoring the factory's settings

1. Make sure no procedure is in progress.
2. Press the ⬆ and ⬇ keys 4 s: the display will show "**PA**".
3. Press and release the ⏎ key.
4. Press and release the ⬆ or ⬇ key within 15 s to set "**149**".
5. Press and release the ⏎ key or do not operate 15 s.
6. Press the ⬆ and ⬇ keys 4 s: the display will show "**dEF**".
7. Press and release the ⏎ key.
8. Press and release the ⬆ or ⬇ key within 15 s to set "**1**".
9. Press and release the ⏎ key or do not operate 15 s: the display will show "**dEF**" flashing 4 s, after which the device will exit the procedure.
10. Interrupt the power supply of the device.

To exit the procedure in advance:

11. Press the ⬆ and ⬇ keys 4 s before setting "**1**" (the restore will not be executed).

Make sure the factory's settings are appropriate; see chapter WORKING SETPOINT AND CONFIGURATION PARAMETERS.

7 SIGNALS AND INDICATIONS

7.1 Signals

LED	Meaning
❄	compressor LED
❄	defrost LED
	evaporator fan LED
☺	room light LED
AUX1	auxiliary 1 LED
AUX2	auxiliary 2 LED
🕐	real time clock LED
HACCP	HACCP LED
	energy saving LED
⚠	alarm LED
	temperature LED
	pressure LED

7.2 Indications

Code	Meaning
Loc	the keyboard and/or the working setpoint are locked
- - -	the operation requested is not available
dEF	the defrost is in progress

7.3 Indications relative to the SD card

SDcard slotLED	Meaning
green	firmly, no writing is in progress and the data logger battery is charged; it is possible to remove the SD card flashing, no writing is in progress and the data logger battery is charging; it is possible to remove the SD card
red	firmly, a writing is in progress; it is not possible to remove the SD card flashing, the SD card is not insertet or has not been recognized

8 ALARMS

8.1 Alarms

Code	Meaning
AL	minimum temperature alarm
AH	maximum temperature alarm
id	door switch input alarm
PF	power supply interruption alarm
dI2	multipurpose input alarm
iSd	high pressure switch alarm
LP	low pressure switch alarm
HSH	high superheating alarm
C1t	compressor thermal switch alarm
C2t	compressor 2 thermal switch alarm
MiC	man in room alarm
COH	overheated condenser alarm
CSd	compressor switch off alarm
dFd	alarm defrost finished for maximum duration
Pd	alarm pump down by digital input finished for maximum duration

In the models without Wi-Fi the code **iSd** is **HP**.

9 ERRORS

9.1 Errors

Code	Meaning
Pr1	if P4 = 0, 1, 2 or 3, room temperature probe error if P4 = 4, inlet air probe error
Pr2	evaporator temperature probe error
Pr3	auxiliary temperature probe error
Pr4	evaporating temperature probe error
Pr5	evaporating pressure probe error
Pr7	auxiliary 2 temperature probe error
Pr8	auxiliary 3 temperature probe error
FUL	space on SD card run out
Sd	SD card not inserted or not recognized
rtc	real time clock error
BAt	data logger battery error

10 TECHNICAL DATA

10.1 Technical data

Purpose of control: operating control device.
Construction of control: incorporated electronic device.
Box: self-extinguishing grey.
Heat and fire resistance category: D.
Dimensions: 262.0 x 179.0 x 95.6 mm (10.314 x 7.047 x 3.763 in; W x H x D).
Method of mounting control: wall mounting, with screw anchors and fixing screws.
Degree of protection: IP65.
Connections:
- fixed screw connection terminal blocks with pitch 6.35 mm (0.25 in) for conductors up to 4.0 mm² (0.0062 in²): power supply and digital outputs
- fixed screw connection terminal blocks with pitch 5.0 mm (0.196 in) for conductors up to 2.5 mm² (0.0038 in²): analog inputs, digital inputs and communication ports
- only male removable screw connection terminal block with pitch 3.5 mm (0.137 in) for conductors up to 1.5 mm² (0.0028 in²): unipolar stepper electronic expansion valves driver (only available in EVB1246 and EVB1256)
- 5 poles only male JST connector with pitch 2.5 mm (0.098 in): unipolar stepper electronic expansion valves driver (only available in EVB1246 and EVB1256).

The maximum lengths allowed for the connecting cables are the following:
- power supply: 100 m (328 ft)
- analog inputs: 100 m (328 ft)
- power supply 4-20 mA transducers: 100 m (328 ft)
- digital inputs: 100 m (328 ft)
- digital outputs: 100 m (328 ft)

- communication ports: 1,000 m (3,280 ft); also look at *MODBUS specifications and implementation guides* manual available on http://www.modbus.org/specs.php
- unipolar stepper electronic expansion valves driver: 3 m (9.842 ft).

Use cables having a section suitable to the current running through them.

In case of use of the device to the maximum operating temperature and to full load, use cables having maximum operating temperature ≥ 90 °C (194 °F).

Operating temperature:
- from 0 to 45 °C (from 32 to 113 °F) the models with mag thermic circuit breaker, with mag thermic circuit breaker and residual current device and with contactor for three-phase defrost heaters management
- from 0 to 50 °C (from 32 to 122 °F) otherwise.

Storage temperature: from -25 to 70 °C (from -13 to 158 °F).
Operating humidity: from 10 to 90 % of relative humidity not condensing.
Control pollution situation: 2.
Environmental conformity:
- RoHS 2011/65/CE
- WEEE 2012/19/EU
- REACH regulation (CE) n. 1907/2006.

EMC conformity:
- EN 60730-1
- IEC 60730-1.

Power supply: 115... 230 VAC (+10 %, -15 %), 50... 60 Hz (±3 Hz), 35 VA max., supplied by a class 2 circuit.
The maximum current allowed for the phase is 16 A.
Mag thermic circuit breaker: 230 VAC, In 16 A, Icn 4,500 A, unipolar + neutral, for conductors up to 2.5 mm² (0.0038 in²); by request.
Mag thermic circuit breaker and residual current device: 230 VAC, In 16 A, Icn 4,500 A, Id 300 mA, unipolar + neutral, for conductors up to 2.5 mm² (0.0038 in²); by request.
Contactor for three-phase defrost heaters management: 230 VAC, Ie 9 A, Ui 690 V, Uimp 6 KV, Ith 20 A, 2.2 KW in AC3 @ 230 VAC with ta ≤ 55 °C (131 °F), for conductors up to 2.5 mm² (0.0038 in²); only available in models EVB1226 and EVB1236.
Method of providing earthing of control: with earthing terminal block.
Rated impulse voltage: 4 KV.
Overvoltage category: III.
Class and structure of software: A.
Real time clock: incorporated (with lithium secondary battery; only available in models EVB1214, EVB1216, EVB1236 and EVB1256).
Battery range in absence of power supply: 6 months.
Battery charging time: 24 h (the battery is charged by the power supply of the device).
Drift: ≤ 30 s/month @ 25 °C (77 °F).
Data logger battery: incorporated (nickel-metal hydride secondary battery; only available in the models with data logging for EN 12830 standard compliance).
Battery range in absence of power supply: more than 72 h.
Battery charging time: 24 h (the battery is charged by the power supply of the device).
Analog inputs: up to 7 inputs:
- 2 which can be set via configuration parameter for PTC, NTC or Pt 1000 probes (room temperature and evaporator temperature)
- 1 which can be set via configuration parameter for PTC, NTC or Pt 1000 probes (which can be set via configuration parameter for condenser temperature, critical temperature, evaporator 2 temperature or CPT temperature)
- 1 which can be set via configuration parameter for PTC, NTC or Pt 1000 probes (evaporating temperature; only available in EVB1246 and EVB1256)
- 2 which can be set via configuration parameter for NTC or Pt 1000 probes (auxiliary 2 temperature and auxiliary 3 temperature; only available in the models with data logging for EN 12830 standard compliance)
- 1 for 4-20 mA transducers (evaporating pressure; only available in EVB1246 and EVB1256).

Power supply 4-20 mA transducers: 12 VDC (±10 %), 30 mA max.

PTC analog inputs (990 Ω @ 25 °C, 77 °F)

Kind of sensor:	KTY 81-121.
Working range:	from -50 to 150 °C (from -58 to 302 °F).
Accuracy:	±0.5 % of the full scale.
Resolution:	0.1 °C (1 °F).
Protection:	none.

NTC analog inputs (10 KΩ @ 25 °C, 77 °F)

Kind of sensor:	ß3435.
Working range:	from -50 to 120 °C (from -58 to 248 °F).
Accuracy:	±0.5 % of the full scale.
Resolution:	0.1 °C (1 °F).
Protection:	none.

Pt 1000 analog inputs (1 KΩ @ 0 °C, 32 °F)

Working range:	from -99 to 150 °C (from -99 to 300 °F).
Accuracy:	±0.5 % of the full scale.
Resolution:	0.1 °C (1 °F).
Protection:	none.

4-20 mA analog inputs

Input resistance:	≤ 200 Ω.
Accuracy:	±0.5 % of the full scale.
Resolution:	0.01 mA.
Protection:	none; the maximum current allowed for the input is 25 mA.

Digital inputs: 3 inputs which can be set via configuration parameter for normally open or normally closed contact (door switch, multipurpose and multipurpose 2).

5 VDC, 2 mA digital inputs (free of voltage)

Power supply:	none
Protection:	none.

Digital outputs: up to 6 outputs:

- two 30 res. A @ 250 VAC SPST electromechanical relays (compressor and evaporator fan)
- one 16 res. A @ 250 VAC SPST electromechanical relay (defrost)
- one 16 res. A @ 250 VAC SPST electromechanical relay (room light; not available in EVB1204 and EVB1214)
- one 8 res. A @ 250 VAC SPST electromechanical relay (which can be set via configuration parameter for room light, demisting heater, auxiliary output, alarm output, door heater, neutral zone operation heater, condenser fan, compressor 2, defrost 2, evaporator fan 2, pump down valve, on/stand-by or man in room; only available in EVB1204 and EVB1214)
- one 8 res. A @ 250 VAC SPST electromechanical relay (which can be set via configuration parameter for demisting heater, auxiliary output, alarm output, door heater, neutral zone operation heater, condenser fan, compressor 2, defrost 2, evaporator fan 2, pump down valve, on/stand-by or man in room; not available in EVB1204 and EVB1214)
- one 8 res. A @ 250 VAC SPDT electromechanical relay (which can be set via configuration parameter for demisting heater, auxiliary output, alarm output, door heater, neutral zone operation heater, condenser fan, compressor 2, defrost 2, evaporator fan 2, pump down valve, on/stand-by or man in room; not available in EVB1204 and EVB1214).

The device ensures a reinforced insulation among each connector of the digital outputs and the remaining parts of the device.

Unipolar stepper electronic expansion valves driver: 12 VDC, 260 mA max.

Type 1 or type 2 actions: type 1.

Additional features of type 1 or type 2 action: C.

Displays: 3 digits custom display, with decimal point and function icons.

Communication ports: 1 MODBUS RS-485 port (with MODBUS slave communication protocol).

Signal and alarm buzzer: incorporated.

Connectivity: Wi-Fi (according to the model).

Wi-Fi output power (EIRP): 11b: 67.5 mW and 11g: 71.1 mW, 11n (HT20) 56.5 mW.

Wi-Fi frequency range: 2,412... 2,472 MHz.

Security protocols: open, WEP, WPA/WPA2 Personal aka PSK.

Encryption methods: TKIP, CCMP.

Unsupported modes: mixed WPA/WPA2 PSK using TKIP + CCMP WPA/WPA2 Enterprise aka EAP.

For the models equipped with Wi-Fi sensor also refer to chapter 5 of the EVlinking Wi-Fi user manual

11 WORKING SETPOINT AND CONFIGURATION PARAMETERS

11.1 Working setpoint and configuration parameters

PARAM.	MIN.	MAX.	U.M.	DEF.	WORKING SETPOINT
SP	r1	r2	°C/°F (1)	-18.0	working setpoint; see also r0 and r12
PARAM.	MIN.	MAX.	U.M.	DEF.	ANALOG INPUTS
CA1	-25.0	25.0	°C/°F (1)	0.0	if P4 = 0, 1, 2 or 3, room temperature offset	if P4 = 4, inlet air temperature offset
CA2	-25.0	25.0	°C/°F (1)	0.0	evaporator temperature offset
CA3	-25.0	25.0	°C/°F (1)	0.0	auxiliary temperature offset
CA4	-25.0	25.0	°C/°F (1)	0.0	evaporating temperature offset (only available in EVB1246 and EVB1256)
CA5	-25.0	25.0	pt:10 (2)	0.0	evaporating pressure offset (only available in EVB1246 and EVB1256)
P0	0	2	- - -	1	temperature probe type (0 = PTC; 1 = NTC; 2 = Pt 1000); also look at Sd6
P1	0	1	- - -	1	decimal point for temperature (only if P2 = 0; 1 = YES)
P2	0	1	- - -	0	unit of measurement for temperature (0 = °C; 1 = °F) (3)
P3	0	2	- - -	1	evaporator temperature probe function (0 = absent; 1 = defrost and evaporator fan probe; 2 = evaporator fan probe)
P4	0	4	- - -	3	magnitude detected by the auxiliary temperature probe (0 = absent; 1 = condenser temperature; 2 = critical temperature; 3 = evaporator 2 temperature; 4 = outlet air temperature)
P5	0	4	- - -	0	magnitude displayed during the normal operation (0 = if P4 = 0, 1, 2 or 3, room temperature | if P4 = 4, CPT temperature; 1 = working setpoint; 2 = evaporator temperature; 3 = auxiliary temperature; 4 = inlet air temperature)
P7	0	100	%	50	percentage of the inlet air temperature for the calculation of the CPT temperature (only if P4 = 4) (4)
P8	0	250	s/10	5	delay in displaying the temperature variation
P9	-99.9	99.9	pt:10 (2)	-0.5	pressure transducer minimum setting (only available in EVB1246 and EVB1256)
P10	-99.9	99.9	pt:10 (2)	7.0	pressure transducer maximum setting (only available in EVB1246 and EVB1256)
PARAM.	MIN.	MAX.	U.M.	DEF.	MAIN REGULATOR
r0	0.1 (5)	15.0	°C/°F (1)	2.0	working setpoint differential; see also r12
r1	-99.0	r2	°C/°F (1)	-50.0	minimum working setpoint
r2	r1	99.0	°C/°F (1)	50.0	maximum working setpoint
r3	0	1	- - -	0	locking of the working setpoint setting (1 = YES)
r4	0.0	99.0	°C/°F (1)	0.0	working setpoint increase during the "energy saving" function; see also i5, i10, i15, HE2, H01... H14
r5	0.0	99.0	°C/°F (1)	0.0	working setpoint decrease during the "overcooling" function; see also r6
r6	0	240	min	30	duration of the "overcooling" function; see also r5
r12	0	1	- - -	1	working setpoint differential type (0 = asymmetric; 1 = symmetric)
PARAM.	MIN.	MAX.	U.M.	DEF.	ELECTRONIC EXPANSION VALVE (ONLY AVAILABLE IN EVB1246 AND EVB1256)
h01	3.0	25.0	°C/°F (1)	6.0	superheating
h02	10.0	40.0	°C/°F (1)	15.0	evaporating temperature above which the high superheating alarm (code "HSH") is activated (6)
h03	-70.0	40.0	°C/°F (1)	-70.0	evaporating temperature below which the low pressure modality is activated (6)
h04	1.0	99.9	°C/°F (1)	50.0	PID action proportional band
h05	0	999	s	50	PID action integral time
h06	0	999	s	10	PID action derivative time
h07	1	250	s	30	start up delay
h08	-1	100	%	-1	percentage the electronic expansion valve is opened during the manual operation (-1 = the superheating will be enabled)
h09	0	100	%	0	percentage the electronic expansion valve is opened during the defrost (only if d1 = 1)
h10	0	45.0	pt:10 (2)	1.0	evaporating pressure below which the compressor is switched off during the pump down; see also u3
h11	0	250	min	3	high superheating alarm (code "HSH") delay
h12	0	1	- - -	0	enabling the low pressure switch alarm (code "LP"; 1 = YES)
h13	-0.5	45.0	pt:10 (2)	0.5	evaporating pressure below which the low pressure switch alarm (code "LP") is activated (7)
h14	0	250	min	3	low pressure switch alarm (code "LP") delay
h15	0	9	- - -	0	refrigerant gas type	for EVB1246 (0 = R-22; 1 = R-404A; 2 = R-507A; 3 = R-744; 4 = R-290; 5 = R-717; 6 = R-1270; 7 = R-407F); for EVB1256 (0 = R-404A; 1 = R-744; 2 = R-290; 3 = R-717; 4 = R-1270; 5 = R-407F; 6 = R-449; 7 = R-448A; 8 = R-452; 9 = R-134A)
h16	0	2	- - -	1	electronic expansion valve type (0 = generic; 1 = Sanhua DPF; 2 = Danfoss ETS 6)
h17	0	100	%	30	percentage of the electronic expansion valve opening during the evaporating temperature probe error (code "Pr4") and/or during the evaporating pressure probe error (code "Pr5")
h18	0	490	stepx10	100	maximum number of operative steps for the electronic expansion valve (only if h16 = 0)
h19	0	250	step	30	number of overdriving steps for the electronic expansion valve (only if h16 = 0)
h20	25	999	step/s	100	step frequency for the electronic expansion valve (only if h16 = 0)
PARAM.	MIN.	MAX.	U.M.	DEF.	COMPRESSOR PROTECTIONS
C0	0	240	min	0	delay in switching on the compressor after the device is switched on
C1	0	240	min	5	minimum time between two consecutive times the compressor is switched on
C2	0	240	min	3	minimum time the compressor is switched off
C3	0	240	s	0	minimum time the compressor is switched on
C4	0	240	min	10	time the compressor is switched off during the room-/inlet air- temperature probe error (code "Pr1"); see also C5
C5	0	240	min	10	time the compressor is switched on during the room-/inlet air- temperature probe error (code "Pr1"); see also C4
C6	0.0	199	°C/°F (1)	80.0	condenser temperature above which the overheated condenser alarm (code "COH")is activated
C7	0.0	199	°C/°F (1)	90.0	condenser temperature above which the compressor switch off alarm (code "CSd") is activated
C8	0	15	min	1	compressor switch off alarm (code "CSd") delay
C10	0	999	hx10	0	number of compressor operation hours above which the request for maintenance is requested (0 = absent)
C11	0	240	s	3	minimum time between two different compressors are switched on
C12	0	10	- - -	2	incidence of the number of compressor operation hours on the choice of the compressor to be switched on/off when attempting to balance the number of operation hours and that of times it is switched on, between compressors; see also C13
C13	0	10	- - -	1	incidence of the number of times the compressor is switched on on the choice of the compressor to be switched on/off when attempting to balance the number of operation hours and that of times it is switched on, between compressors; see also C12
C14	0	2	- - -	2	pump down type (0 = by time; 1 = by digital input, see also u3; 2 = by evaporating pressure, see also h10 and u3, only available in EVB1246 and EVB1256)
PARAM.	MIN.	MAX.	U.M.	DEF.	DEFROST
d0	0	99	h	8	if d8 = 0, 1 or 2, defrost interval (0 = the defrost by intervals will never be activated)	if d8 = 3, maximum defrost interval
d1	0	2	- - -	0	defrost type (0 = electric; 1 = by hot gas; 2 = by stopping the compressor)
d2	-99.0	99.0	°C/°F (1)	3.0	evaporator temperature the defrost is finished (only if P3 = 1); see also d3
d2b	-99.0	99.0	°C/°F (1)	3.0	evaporator 2 temperature the defrost is finished (only if P4 = 3); see also d3
d3	0	99	min	30	if P3 = 0 or 2, defrost duration	if P3 = 1, defrost maximum duration; see also d2 (0 = the defrost will never be activated)
d4	0	1	- - -	0	defrost when the device is switched on (only if d8 = 0, 1, 2 or 3; 1 = YES)
d5	0	99	min	0	if d4 = 0, minimum time between the device is switched on and the defrost activation	if d4 = 1, delay in activating the defrost after the device is switched on
d6	0	2	- - -	1	magnitude displayed during the defrost (only if P5 = 0; 0 = if P4 = 0, 1, 2 or 3, room temperature | if P4 = 4, CPT temperature; 1 = if P4 = 0, 1, 2 or 3, at maximum "working setpoint + r0" or the room temperature when the defrost is activated | if P4 = 4, at maximum "working setpoint + r0" or the CPT temperature when the defrost is activated; 2 = code "dEF")
d7	0	15	min	2	dripping duration
d8	0	4	- - -	0	defrost activation mode (0 = by intervals, for time; 1 = by intervals, for switching on the compressor; 2 = by intervals, for evaporator temperature; 3 = adaptive; 4 = in real time)
d9	-99.0	99.0	°C/°F (1)	0.0	evaporator temperature above which the defrost interval count is suspended (only if d8 = 2)
d11	0	1	- - -	0	enabling the alarm defrost finished for maximum duration (code "dFd"; 1 = YES)
d15	0	99	min	0	minimum time the compressor is switched on when the defrost is activated in order that it can be executed (only if d1 = 1)
d16	0	99	min	0	predripping duration
d18	0	999	min	40	defrost interval (only if d8 = 3); see also d22 (0 = the defrost will never be activated due to the effect of this condition)
d19	0.0	40.0	°C/°F (1)	3.0	evaporator temperature below which the defrost is activated ("evaporator temperatures average - d19"; only if d8 = 3)

PARAM.	MIN.	MAX.	U.M.	DEF.	Description
d20	0	500	min	180	minimum consecutive time the compressor is switched on such as to provoke the defrost activation (0 = the defrost will never be activated due to the effect of this condition)
d21	0	500	min	200	minimum consecutive time the compressor is switched on after the device is switched on or after the activation of the "overcooling" function such as to provoke the defrost activation (0 = the defrost will never be activated due to the effect of this condition)
d22	0.0	10.0	°C/°F (1)	2.0	evaporator temperature above which the defrost interval count is suspended ("evaporator temperatures average + d22"; only if d8 = 3); see also d18
d25	0	1	- - -	0	enabling the outlet air temperature probe as defrost probe during the evaporator temperature probe error (code "Pr2"; 1 = YES); see also d26
d26	0	99	h	6	defrost interval due to the effect the outlet air temperature probe works as defrost probe during the evaporator temperature probe error (code "Pr2"); see also d25 (0 = the defrost will never be activated due to the effect of this condition)
PARAM.	MIN.	MAX.	U.M.	DEF.	TEMPERATURE ALARMS
A0	0	1	- - -	0	temperature associated to the minimum temperature alarm (code "AL"; 0 = if P4 = 0, 1, 2 or 3, room temperature | if P4 = 4, CPT temperature; 1 = evaporator temperature)
A1	-99.0	99.0	°C/°F (1)	-10.0	temperature below which the minimum temperature alarm (code "AL") is activated; see also A0, A2 and A11
A2	0	2	- - -	0	minimum temperature alarm (code "AL") type (0 = absent; 1 = "working setpoint - |A1|"; 2 = "A1")
A4	-99.0	99.0	°C/°F (1)	10.0	temperature above which the maximum temperature alarm (code "AH") is activated; see also A5 and A11
A5	0	2	- - -	0	maximum temperature alarm (code "AH") type (0 = absent; 1 = "working setpoint + |A4|"; 2 = "A4")
A6	0	240	min	120	maximum temperature alarm (code "AH") delay after the device is switched on
A7	0	240	min	15	temperature alarm (code "AL" and code "AH") delay
A8	0	240	min	15	maximum temperature alarm (code "AH") delay after the evaporator fan standstill finishes
A9	0	240	min	15	maximum temperature alarm (code "AH") delay after the door switch input is deactivated
A10	0	240	min	1	duration of an interruption of power supply such as to provoke the memorization of the power supply interruption alarm (code "PF"; only available in EVB1214, EVB1216, EVB1236 and EVB1256)
A11	0.1 (5)	15.0	°C/°F (1)	2.0	"A1" and "A4" differential
A12	0	2	- - -	1	type of signal for the power supply interruption alarm (code "PF"; only available in EVB1214, EVB1216, EVB1236 and EVB1256; 0 = LED "HACCP"; 1 = code "PF", alarm buzzer and LED "HACCP"; 2 = code "PF", alarm buzzer if the duration of the interruption is longer than A10 and LED "HACCP")
PARAM.	MIN.	MAX.	U.M.	DEF.	EVAPORATOR FAN AND CONDENSER FAN
F0	0	5	- - -	1	evaporator fan activity during the normal operation (0 = switched off; 1 = switched on; see also F13, F14, i10, HE2, H01... H14 (8); 2 = according to the compressor; see also F13, F14, i10, HE2, H01... H14 (9); 3 = according to F1; see also F13, F14, i10, HE2, H01... H14 (10); 4 = switched off if the compressor is switched off | according to F1 if the compressor is switched on; see also F13, F14, i10, HE2, H01... H14 (11); 5 = according to F6)
F1	-99.0	99.0	°C/°F (1)	-1.0	evaporator temperature above which the evaporator fan is switched off (only if F0 = 3 or 4); see also F8
F2	0	2	- - -	0	evaporator fan activity during the defrost and the dripping (0 = switched off; 1 = switched on; 2 = according to F0)
F3	0	15	min	0	evaporator fan standstill maximum duration; see also F7
F4	0	240	s	60	time the evaporator fan is switched off during the low percentage of relative humidity operation; see also F5
F5	0	240	s	10	time the evaporator fan is switched on during the low percentage of relative humidity operation; see also F4
F6	0	1	- - -	0	low or high percentage of relative humidity operation (only if F0 = 5; 0 = low; 1 = high)
F7	-99.0	99.0	°C/°F (1)	5.0	evaporator temperature below which the evaporator fan standstill is finished ("working setpoint + F7"); see also F3
F8	0.1 (5)	15.0	°C/°F (1)	2.0	"F1" differential
F9	0	240	s	0	delay in switching off the evaporator fan after the compressor is switched off
F11	0.0	99.0	°C/°F (1)	15.0	condenser temperature above which the condenser fan is switched on ("F11 + 2.0 °C/4 °F")
F12	0	240	s	30	delay in switching off the condenser fan after the compressor is switched off
F13	0	240	sx10	30	time the evaporator fan is switched off during the "energy saving" function; see also F14, i10, HE2, H01... H14 (only if F0 = 1, 2, 3 or 4)
F14	0	240	sx10	30	time the evaporator fan is switched on during the "energy saving" function; see also F13, i10, HE2, H01... H14 (only if F0 = 1, 2, 3 or 4)
PARAM.	MIN.	MAX.	U.M.	DEF.	DIGITAL INPUTS
i0	0	5	- - -	3	effect provoked by the door switch input activation (0 = absent; 1 = the compressor and the evaporator fan will be switched off; see also i3; 2 = the evaporator fan will be switched off; see also i3; 3 = the room light will be switched on; 4 = the compressor and the evaporator fan will be switched off and the room light will be switched on; see also i3; 5 = the evaporator fan will be switched off and the room light will be switched on; see also i3); see also i4
i1	0	1	- - -	0	type of door switch input contact (0 = normally open; 1 = normally closed)
i2	-1	240	min	30	door switch input alarm (code "id") signal delay (-1 = the alarm will not be signalled)
i3	-1	120	min	15	maximum duration of the effect provoked by the door switch input activation on the compressor and the evaporator fan (-1 = the effect will last as long as the input will be deactivated)
i4	0	1	- - -	0	memorizing the door switch input alarm (code "id"; 1 = YES)
i5	0	9	- - -	7	effect provoked by the multipurpose input activation (0 = absent; 1 = the "energy saving function" will be activated; 2 = the multipurpose input alarm (code "dI2") will be activated; 3 = the high pressure switch alarm (code "iSd") will be activated; 4 = the auxiliary output will be switched on; 5 = the device will be switched off; 6 = the low pressure switch alarm (code "LP") will be activated; 7 = the compressor thermal switch alarm (code "C1t") will be activated; 8 = the compressor 2 thermal switch alarm (code "C2t") will be activated; 9 = the man in room alarm (code "MiC") will be activated)
i6	0	1	- - -	0	type of multipurpose input contact (0 = normally open; 1 = normally closed)
i7	0	120	min	0	if i5 and/or i15 = 2, multipurpose input alarm (code "dI2") signal delay | if i5 and/or i15 = 3, delay in switching on the compressor after the multipurpose input is deactivated
i8	0	15	- - -	0	number of multipurpose input alarms (code "dI2") such as to provoke the high pressure switch alarm (code "iSd"; only if i5 and/or i15 = 3; 0 = absent)
i9	1	999	min	240	time that must elapse in absence of multipurpose input alarms (code "dI2") in order that the alarm counter is reset (only if i5 and/or i15 = 3)
i10	0	999	min	0	time that must elapse in absence of door switch input activations (after the room temperature, if P4 = 0, 1, 2 or 3 | after the CPT temperature, if P4 = 4, has reached the working setpoint) in order that the "energy saving" function is activated; see also r4, F14, F15 and HE2 (0 = the function will never be activated due to the effect of this condition)
i13	0	240	- - -	180	number of door switch input activations such as to provoke the defrost activation (0 = the defrost will never be activated due to the effect of this condition)
i14	0	240	- - -	32	minimum time the door switch input is activated such as to provoke the defrost activation (0 = the defrost will never be activated due to the effect of this condition)
i15	0	9	- - -	9	effect provoked by the multipurpose 2 input activation (0 = absent; 1 = the "energy saving function" will be activated; 2 = the multipurpose input alarm, code "dI2", will be activated; 3 = the high pressure switch alarm, codes "dI2" and "iSd", will be activated; 4 = the auxiliary output will be switched on; 5 = the device will be switched off; 6 = the low pressure switch alarm, code "LP", will be activated; 7 = the compressor thermal switch alarm, code "C1t", will be activated; 8 = the compressor 2 thermal switch alarm, code "C2t", will be activated; 9 = the man in room alarm, code "MiC", will be activated)
i16	0	1	- - -	0	type of multipurpose 2 input contact (0 = normally open; 1 = normally closed)
i17	0	240	s	30	low pressure switch alarm (code "LP") delay after the device is switched on
PARAM.	MIN.	MAX.	U.M.	DEF.	DIGITAL OUTPUTS
u1	0	12	- - -	0	load managed by the digital output K4 (only available in EVB1204 and EVB1214; 0 = room light; 1 = demisting heater; 2 = auxiliary output; 3 = alarm output; 4 = door heater; 5 = neutral zone operation heater; 6 = condenser fan; 7 = compressor 2; 8 = defrost 2; 9 = evaporator fan 2; 10 = pump down valve; 11 = on/stand-by; 12 = man in room)
u1	0	12	- - -	6	load managed by the digital output K5 (not available in EVB1204 and EVB1214; 0 = reserved; 1 = demisting heater; 2 = auxiliary output; 3 = alarm output; 4 = door heater; 5 = neutral zone operation heater; 6 = condenser fan; 7 = compressor 2; 8 = defrost 2; 9 = evaporator fan 2; 10 = pump down valve (reserved in EVB1246 and EVB1256); 11 = on/stand-by; 12 = man in room)
u1	0	12	- - -	6	load managed by the digital output K3 (only available in EVB1226, EVB1236 and EVB*XC; 0 = reserved; 1 = demisting heater; 2 = auxiliary output; 3 = alarm output; 4 = door heater; 5 = neutral zone operation heater; 6 = condenser fan; 7 = compressor 2; 8 = defrost 2; 9 = evaporator fan 2; 10 = pump down valve (reserved in EVB1246 and EVB1256); 11 = on/stand-by; 12 = man in room)
u2	0	1	- - -	0	enabling the room light and the auxiliary output switch on/off in manual mode when the device is switched off (1 = YES)

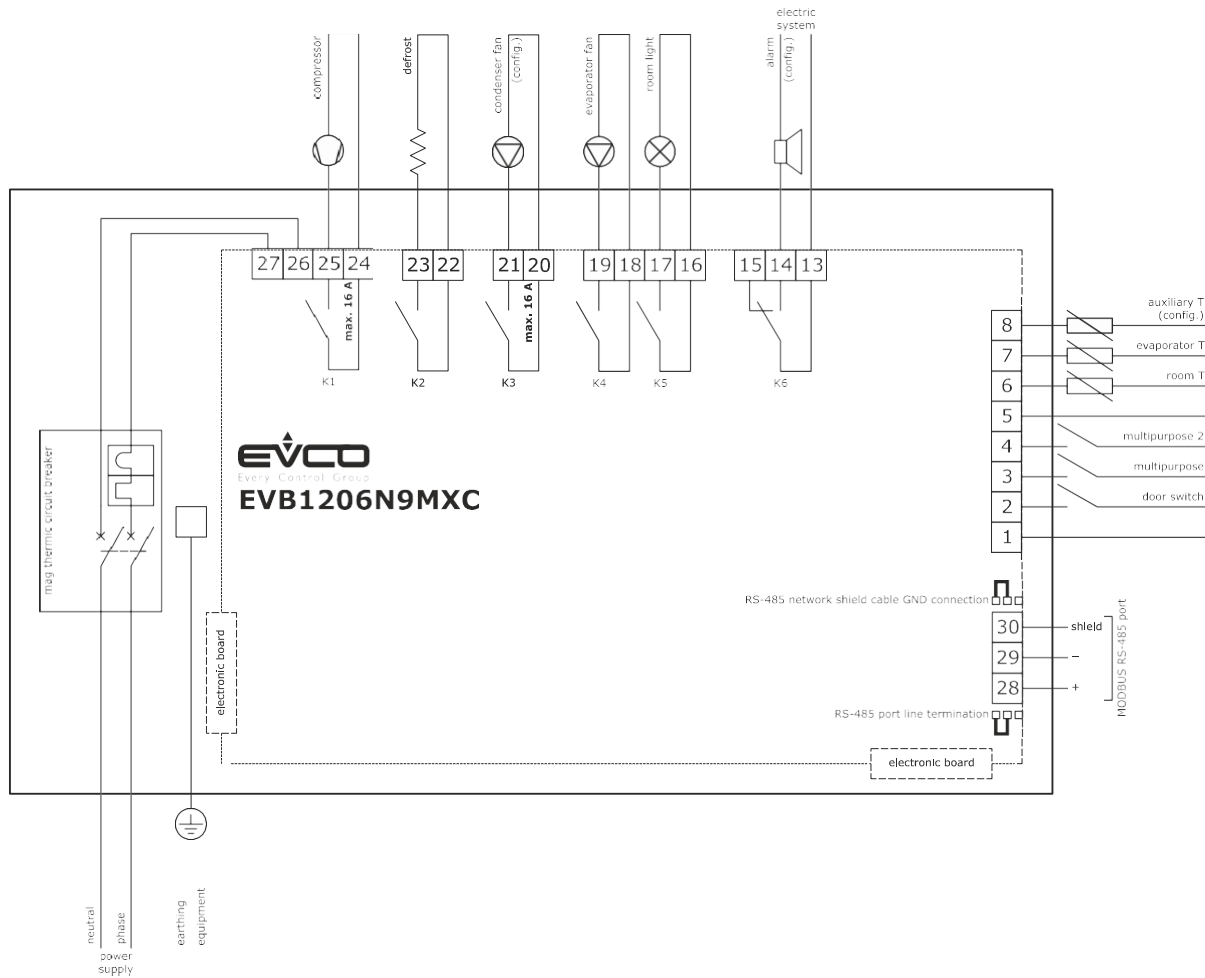| PARAM.	MIN.	MAX.	U.M.	DEF.	
u3	0	240	s	10	if C14 = 0, delay in switching off the compressor after the pump down valve is switched off | if C14 = 1 or 2, maximum time between the pump down valve is switched off and the compressor is switched off; see also h10 in EVB1246 and EVB1256
u4	0	1	- - -	1	enabling the alarm output deactivation silencing the alarm buzzer (1 = YES)
u5	-99.0	99.0	°C/°F (1)	-1.0	if P4 = 0, 1, 2 or 3, room temperature below which the door heater is switched on | if P4 = 4, CPT temperature below which the door heater is switched on ("u5 - 2.0 °C/°F)
u6	1	120	min	5	time the demisting heater is switched on
u7	-99.0	99.0	°C/°F (1)	-5.0	neutral zone value of the neutral zone operation heater ("working setpoint + u7")
u9	0	1	- - -	1	enabling the alarm buzzer (1 = YES)
u11	0	12	- - -	3	load managed by the digital output K6 (not available in EVB1204 and EVB1214) (0 = reserved; 1 = demisting heater; 2 = auxiliary output; 3 = alarm output; 4 = door heater; 5 = neutral zone operation heater; 6 = condenser fan; 7 = compressor 2; 8 = defrost 2; 9 = evaporator fan 2; 10 = pump down valve, reserved in EVB1246 and EVB1256; 11 = on/stand-by; 12 = man in room)
PARAM.	MIN.	MAX.	U.M.	DEF.	REAL TIME CLOCK
Hr0	0	1	- - -	1	enabling the real time clock (only available in EVB1214, EVB1216, EVB1236 and EVB1256; 1 = YES)
PARAM.	MIN.	MAX.	U.M.	DEF.	ENERGY SAVING
HE2	0	999	min	0	maximum duration of the "energy saving" function due to the effect of the absence of the door switch input activations; see also r4, F13, F14, i10 (0 = the function will last as long as the input will be deactivated)
H01	0	23	h	0	time the "energy saving" function is activated on Monday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H02)
H02	0	24	h	0	duration of the "energy saving" function on Monday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H01)
H03	0	23	h	0	time the "energy saving" function is activated on Tuesday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H04)
H04	0	24	h	0	duration of the "energy saving" function on Tuesday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H03)
H05	0	23	h	0	time the "energy saving" function is activated on Wednesday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H06)
H06	0	24	h	0	duration of the "energy saving" function on Wednesday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H05)
H07	0	23	h	0	time the "energy saving" function is activated on Thursday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H08)
H08	0	24	h	0	duration of the "energy saving" function on Thursday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H07)
H09	0	23	h	0	time the "energy saving" function is activated on Friday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H10)
H10	0	24	h	0	duration of the "energy saving" function on Friday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H09)
H11	0	23	h	0	time the "energy saving" function is activated on Saturday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H12)
H12	0	24	h	0	duration of the "energy saving" function on Saturday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H11)
H13	0	23	h	0	time the "energy saving" function is activated on Sunday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H14)
H14	0	24	h	0	duration of the "energy saving" function on Sunday (only available in EVB1214, EVB1216, EVB1236 and EVB1256; see also r4, F13, F14 and H13)
PARAM.	MIN.	MAX.	U.M.	DEF.	REAL TIME DEFROST (only available in EVB1214, EVB1216, EVB1236 and EVB1256; only if d8 = 4)
Hd1	h0	h - -	h	0	time the first daily defrost is activated (h - - = absent)
Hd2	h0	h - -	h	0	time the second daily defrost is activated (h - - = absent)
Hd3	h0	h - -	h	0	time the third daily defrost is activated (h - - = absent)
Hd4	h0	h - -	h	0	time the fourth daily defrost is activated (h - - = absent)
Hd5	h0	h - -	h	0	time the fifth daily defrost is activated (h - - = absent)
Hd6	h0	h - -	h	0	time the sixth daily defrost is activated (h - - = absent)
PARAM.	MIN.	MAX.	U.M.	DEF.	DATA LOGGING (only available in EVB1214, EVB1216 and EVB1256 without mag thermic circuit breaker o mag thermic circuit breaker and residual current device)
Sd0	1	30	min	30	writing interval in "HACCP" mode
Sd1	1	30	min	1	writing interval in "service" mode
Sd2	1	240	min	60	duration of the "service" writing mode
Sd3	0	1	- - -	0	enabling the auxiliary 3 temperature probe (1 = YES)
Sd4	0	1	- - -	0	enabling the writing of the room temperature value (1 = YES)
Sd5	0	1	- - -	1	kind of decimal separator (0 = comma; 1 = point)
Sd6	0	2	- - -	1	kind of auxiliary 2 temperature probe and auxiliary 3 temperature probe (0 = reserved; 1 = NTC; 2 = Pt 1000); also look at P0
PARAM.	MIN.	MAX.	U.M.	DEF.	EVLINK WI-FI MODULE (only available in models with Wi-Fi and in those pre-set for EVlinking module)
PA1	-99	999	- - -	426	first level password
PA2	-99	999	- - -	824	second level password
rE0	0	240	min	60	sampling interval
rE1	0	5	- - -	4	temperature selection for data logger (0 = none; 1 = cabinet; 2 = evaporator; 3 = auxiliary; 4 = cabinet and evaporator; 5 = all)
PARAM.	MIN.	MAX.	U.M.	DEF.	MODBUS RS-485
LA	1	247	- - -	247	device address
Lb	0	3	- - -	2	baud rate (0 = 2,400 baud; 1 = 4,800 baud; 2 = 9,600 baud; 3 = 19,200 baud)
LP	0	2	- - -	2	parity (0 = none; 1 = odd; 2 = even)
bLE	0	99	- - -	1	Serial port configuration for connectivity (only available in models with Wi-Fi and in those pre-set for EVlinking module; 0 = free, 1 = forced for EVconnect or EPoCA, 2-99 = EPoCA local network address)

Notes:

(1)   the unit of measurement depends on P2 parameter

(2)   the unit of measurement depends on P9 and P10 parameters

(3)   properly set the parameters relative to the regulators after setting P2 parameter

(4)   the formula for the calculation of the CPT temperature is the following one:

CPT temperature = {[(P7 parameter) x (inlet air temperature)] + [(100 - P7 parameter) x (outlet air temperature)] : 100}

(5)   the value depends on P2 parameter (0.1 °C or 1 °C)

(6)   the differential of h02 and h03 parameters is 2.0 °C/4 °F

(7)   the differential of h13 parameter is 2.0 bar g/PSI g

(8)   F13 and F14 parameters have effect when the compressor is switched off

(9)   F13 and F14 parameters have effect when the compressor is switched on

(10)   F13 and F14 parameters have effect when the evaporator temperature is below the temperature set with F1 parameter

(11)   F13 and F14 parameters have effect when the compressor is switched on and the evaporator temperature is below the temperature set with F1 parameter.

12   DIMENSIONS AND INSTALLATION

12.1   Dimensions

Dimensions are in mm (in).

95.6 (3.763)

262.0 (10.314)

179.0 (7.047)

12.2   Additional information for the installation

- make sure the working conditions of the device (operating temperature, operating humidity, etc.) are in the limits indicated; see chapter TECHNICAL DATA of the installation manual
- do not install the device close to heating sources (heaters, hot air ducts, etc.), devices having big magnetos (big speakers, etc.), locations subject to direct sunlight, rain, humidity, dust, mechanical vibrations or bumps
- according to the safety legislation, the protection against possible contacts with the electrical parts must be ensured by a correct installation of the device; all the parts which ensure the protection must be fixed so that you can not remove them if not by using a tool.

13   ELECTRICAL CONNECTION

13.1   Electrical connection

Electrical connection for models without direct loads connection (for example EVB1256N9M).

13.2   Additional information for electrical connection

- do not operate on the terminal blocks of the device using electrical or pneumatic screwers
- if the device has been moved from a cold location to a warm one, the humidity could condense on the inside; wait about an hour before supplying it
- make sure the power supply voltage, the electrical frequency and the electrical power of the device correspond to those of the local power supply; see chapter TECHNICAL DATA of the installation manual
- disconnect the power supply of the device before servicing it
- connect the device to a MODBUS RS-485 network using a twisted pair
- position the power cables as far away as possible from the signal cables
- for the repairs and for information about the device please contact the EVCO sales network.

Electrical connection for models without direct loads connection (for example EVB1206N9MXC).

Electrical connection for models with data logging for EN 12830 standard compliance (for example EVB1214N9XLC).