



**9 WORKING SETPOINT AND CONFIGURATION PARAMETERS**

9.1 Working Setpoint					
	MIN.	MAX.	U.M.	DEF.	WORKING SETPOINT
	r1	r2	°C/°F (1)	0,0	working setpoint; see also r0 and r12
9.2 Parametri di configurazione					
PARAM.	MIN.	MAX.	U.M.	DEF.	WORKING SETPOINT
SP	r1	r2	°C/°F (1)	0,0	working setpoint; see also r0 and r12
ANALOG INPUTS					
CA1	-25	25,0	°C/°F (1)	0,0	room probe offset
CA2	-25	25,0	°C/°F (1)	0,0	if P4 = 1 or 2, evaporator probe offset if P4 = 3, condenser probe offset
P0	0	1	- - -	1	probe type (0 = PTC; 1 = NTC)
P1	0	1	- - -	1	degree Celsius decimal point (during normal operation) 1 = YES
P2	0	1	- - -	0	unit of measurement for temperature (2) 0 = °C (Celsius degree; resolution depends on P1 parameter) 1 = °F (Fahrenheit degree; resolution is 1 °F)
P4	0	3	- - -	1	second analog input function 0 = absent 1 = evaporator probe (defrost probe and probe determining the activity of the evaporator fan) 2 = evaporator probe (probe determining the activity of the evaporator fan) 3 = condenser probe
P5	0	2	- - -	0	magnitude displayed during normal operation 0 = room temperature 1 = working setpoint 2 = if P4 = 0, "- - -" if P4 = 1 or 2, evaporator temperature if P4 = 3, condenser temperature
P8	0	250	0,1 s	5	delayed display of temperature changes as detected by the probes
MAIN REGULATOR					
r0	0,1	15,0	°C/°F (1)	2,0	working setpoint differential; see also r12
r1	-99	r2	°C/°F (1)	-40	minimum working setpoint
r2	r1	99,0	°C/°F (1)	50,0	maximum working setpoint
r4	0,0	99,0	°C/°F (1)	0,0	working setpoint increase during the "energy saving" function; see also i0, i10 and HE2
r5	0	1	- - -	0	cooling or heating operation (3) 0 = cooling 1 = heating
r12	0	1	- - -	1	working setpoint differential type 0 = asymmetric 1 = symmetric
COMPRESSOR PROTECTION SYSTEM					
C0	0	240	min	0	delay in switching on of compressor after the device switches on (4)
C2	0	240	min	3	minimum compressor switch-off duration (5)
C3	0	240	s	0	minimum duration of compressor switch on time
C4	0	240	min	0	duration of compressor switch off time during a room temperature probe error (code "Pr1"); see also C5
C5	0	240	min	10	duration of compressor switch on time during a room temperature probe error (code "Pr1"); see also C4
C6	0,0	199	°C/°F (1)	80,0	condenser temperature is higher than that at which the condenser overheating alarm is activated (code "COH") (6)
C7	0,0	199	°C/°F (1)	90,0	condenser temperature above which the compressor shut down alarm is activated (code "CSd")
C8	0	15	min	1	compressor shut down alarm delay (code "CSd") (7)
DEFROST					
d0	0	99	h	8	if d8 = 0, 1 or 2, defrost interval 0 = interval defrost will never be activated if d8 = 3, maximum defrost interval
d1	0	2	- - -	0	type of defrost 0 = <b>ELECTRIC</b> - during defrost the compressor will remain off and the defrost output will be activated; evaporator fan activity will depend on F2 parameter 1 = <b>BY HOT GAS</b> - during defrost the compressor will be switched on and the defrost output will be activated; evaporator fan activity will depend on F2 parameter 2 = <b>VIA STOPPING OF COMPRESSOR</b> - during defrost the compressor will remain switched off and the defrost output will remain deactivated; evaporator fan activity will depend on F2 parameter
d2	-99	99,0	°C/°F (1)	2,0	evaporator temperature at end of defrost; see also d3
d3	0	99	min	30	if P4 = 0, 2 or 3, defrost duration if P4 = 1, maximum defrost duration; see also d2 0 = defrost will not be activated
d4	0	1	- - -	0	defrost when device is switched on (4) 1 = YES
d5	0	99	min	0	if d4 = 0, minimum time between switching on of device and activation of defrost (4) if d4 = 1, delay in activation of defrost after device is switched on (4)
d6	0	2	- - -	1	temperature displayed during defrost (only if P5 = 0) 0 = room temperature 1 = if on activation of defrost, the room temperature is below the "work setpoint + Δt", at maximum "work setpoint + Δt"; if on activation of defrost, the room temperature is above "work setpoint + Δt", at maximum the room temperature on activation of defrost (8) (9) 2 = label "DEF"

d7	0	15	min	2	dripping duration (during dripping the compressor will remain switched off and the defrost output will remain deactivated; evaporator fan activity will depend on F2 parameter)
d8	0	3	- - -	0	defrost activation methods 0 = <b>AT INTERVALS - FOR TIME</b> - defrost will be activated once the device has altogether been running for time d0 1 = <b>AT INTERVALS - FOR COMPRESSOR SWITCH-ON</b> - defrost will be activated once the compressor has altogether been switched on for time d0 2 = <b>AT INTERVALS - FOR EVAPORATOR TEMPERATURE</b> - defrost will be activated when the evaporator temperature has remained below the temperature d9 for a total time of d0 (10) 3 = <b>ADAPTIVE</b> - defrost will be activated at intervals, whose duration will each time depend on the duration of compressor switch-ons, the evaporator temperature and the door switch input activation; see also d18, d19, d20, d22, i13 and i14 (10)
d9	-99	99,0	°C/°F (1)	0,0	evaporator temperature is higher than that at which the defrost interval counter is suspended (only if d8 = 2)
d11	0	1	- - -	0	defrost alarm switches off once maximum time limit has been reached (code "dFd"); only if P4 = 1 and in absence of evaporator probe error (code "Pr2") 1 = YES
d15	0	99	min	0	minimum time that the compressor must be switched on before defrost can be activated (only if d1 = 1) (11)
d18	0	999	min	40	defrost interval (defrost will be activated when the compressor has been on totally, with the evaporator temperature below that of d22, for time d18; only if d8 = 3) 0 = 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 (relative to the evaporator temperatures average, or "evaporator temperatures average - d19"; only if d8 = 3)
d20	0	999	min	180	minimum consecutive time the compressor must be switched on such as to provoke the defrost activation 0 = defrost will never be activated due to the effect of this condition
d22	0,0	19,9	°C/°F (1)	2,0	evaporator temperature above which the defrost interval count shall be suspended (relating to the average of evaporator temperatures, that is to say, "evaporator temperatures average + d22"; only if d8 = 3); see also d18
TEMPERATURE ALARMS					
A1	0,0	99,0	°C/°F (1)	10,0	room temperature below which the minimum temperature alarm is triggered (code "AL"; it concerns the working setpoint, that is to say, "working setpoint - A1"); see also A11 0 = alarm absent
A4	0,0	99,0	°C/°F (1)	10,0	room temperature above which the maximum temperature alarm is triggered (code "AH"; it concerns the working setpoint, that is to say, "working setpoint + A4"); see also A11 0 = alarm absent
A6	0	99	10 min	12	delay in maximum temperature alarm (code "AH") after the device is switched on (4)
A7	0	240	min	15	minimum temperature alarm delay (code "AL") and maximum temperature alarm delay (code "AH")
A8	0	240	min	15	delay in maximum temperature alarm (code "AH") from the conclusion of evaporator fan standstill (12)
A9	0	240	min	15	delay in maximum temperature alarm (code "AH") following the deactivation of the door switch input (13)
A11	0,1	15,0	°C/°F (1)	2,0	differential of A1 and A4 parameters
EVAPORATOR FAN					
F0	0	4	- - -	3	evaporator fan activity during normal operation 0 = switched off 1 = switched on; see also F4, F5, i10 and HE2 (14) 2 = in parallel with the compressor; see also F4, F5, i10 and HE2 (15) 3 = depending on F1; see also F4, F5, i10 and HE2 (16) (17) 4 = switched off if the compressor is switched off, depending on F1 if the compressor is switched on; see also F4, F5, i10 and HE2 (16) (18)
F1	-99	99,0	°C/°F (1)	-1,0	evaporator temperature above (if r5 = 0) or below (if r5 = 1) which the evaporator fan is switched off (only if F0 = 3 or 4) (6)
F2	0	2	- - -	0	evaporator fan activity during defrost and dripping 0 = switched off 1 = switched on 2 = depending on F0
F3	0	15	min	2	duration of evaporator fan standstill (during evaporator fan deactivation the compressor can be switched on, the defrost output will remain deactivated and the evaporator fan will remain switched off)
F4	0	240	10 s	30	duration of evaporator fan switch off during "energy saving" function; see also F5, i10 and HE2
F5	0	240	10 s	30	duration of evaporator fan switch on during "energy saving" function; see also F4, i10 and HE2
DIGITAL INPUTS					
i0	0	5	- - -	1	effect caused by the activation of the digital input 0 = no effect 1 = <b>DOOR SWITCH - DOOR SWITCH INPUT ALARM ACTIVATION (code "id")</b> - the compressor and the evaporator fan will be switched off (at maximum for time i3 or until the input is deactivated); see also i2 (19) 2 = <b>DOOR SWITCH - DOOR SWITCH INPUT ALARM ACTIVATION (code "id")</b> - the evaporator fan will be switched off (at maximum for time i3 or until the input is deactivated); see also i2

					3 = <b>MULTIFUNCTION - ACTIVATION OF "ENERGY SAVING" FUNCTION</b> - the "energy saving" function will be activated (just with effect on the compressor, until the input is deactivated); see also r4
					4 = <b>MULTIFUNCTION - ACTIVATION OF MULTIFUNCTION INPUT ALARM (code "iA")</b> - the device will continue to operate normally; see also i2
					5 = <b>MULTIFUNCTION - ACTIVATION OF THE MAXIMUM PRESSURE SWITCH ALARM (code "iA")</b> - the compressor will be switched off (until the input is deactivated); see also i2
i1	0	1	- - -	0	type of digital input contact 0 = normally open (active input with closed contact) 1 = normally closed (active input with open contact)
i2	-1	120	min	30	if i0 = 1 or 2, delay in signalling of door switch input alarm (code "id") -1 = the alarm will not be signalled if i0 = 4, delay in signalling of multifunction input alarm (code "iA") -1 = the alarm will not be signalled if i0 = 5, delay in switching on of compressor after the deactivation of the maximum pressure switch alarm (code "iA") -1 = reserved
i3	-1	120	min	15	maximum duration of the effect caused by the activation of the door switch input on the compressor -1 = the effect will last until the input is deactivated
i10	0	999	min	0	time that must pass in absence of door switch input activations (after the room temperature has reached the working setpoint) for the "energy saving" function to be activated; see also r4, F4, F5 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 = defrost will never be activated due to the effect of this condition
i14	0	240	min	32	minimum duration of the door switch input activation such as to provoke the defrost activation 0 = defrost will never be activated due to the effect of this condition
ENERGY SAVING					
HE2	0	999	min	0	maximum duration of the "energy saving" function activated due to the effect of absence of door switch input activation; see also r4, F4, F5 and i10 0 = the function will last until the input is activated
HE3	0	240	min	2	time interval with no key strokes, after which the "low consumption" function is activated 0 = the mode shall never be activated
VARIOUS					
POF	0	1	- - -	1	key activation 1 = YES
PAS	-99	999	min	-19	access password for the configuration parameters 0 = the password need not be set

**Notes:**

- the unit of measurement depends on P2
- properly set the parameters corresponding to the regulators after setting P2 parameter
- if r5 parameter is set at 1, the "energy saving" function and the defrost management will be switched off; see also F1 parameter
- the parameter has effect even after an interruption in the power supply that occurs while the device is switched on
- the time set by parameter C2 is counted also when the device is off
- the differential of parameter is 2.0°C/4°F
- if when the device is switched on, the condenser temperature is already above that established in C7 parameter, then C8 parameter will not have effect
- the value Δt depends on r12 parameter (r0 if r12 = 0, r0/2 if r12 = 1)
- the display restores normal operation when, at the end of the dripping phase, room temperature falls below the value that locked the display (or if a temperature alarm is triggered)
- if P4 parameter is set at 0, 2 or 3, the device will function as if d8 parameter were set at 0
- if when defrost is activated, the operating duration of the compressor is less than the time established with d15 parameter, the compressor will remain on for the amount of time necessary to complete defrost, then the defrost shall be activated
- during defrost, dripping and evaporator fan standstill, the maximum temperature alarm is absent, provided that it was triggered after defrost activation.
- during activation of the door switch input, the maximum temperature alarm is absent, provided the alarm was signaled after the activation of the input
- F4 and F5 parameters have effect when the compressor is off
- F4 and F5 parameters have effect when the compressor is on
- if P4 parameter is set at 2, the device will function as if F0 parameter were set at 2
- F4 and F5 parameters have effect when the evaporator temperature is below the temperature established with F1 parameter
- F4 and F5 parameters have effect when the compressor is on and the temperature of the evaporator is below the temperature established with F1 parameter
- the compressor is switched off 10 s after the activation of the input; if the input is activated during defrost or when the evaporator fan is deactivated, the activation will not have any effect on the compressor.