

H424V1 User manual



MICHELETTI IMPIANTI

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1 Parameter list

	Parameter S	Description Functions about storage	Minimum	Maximum	Default	Unit
	St	Functions about storage temperature				
	_		-55.0	145.0	2.0	°C
	_	storage room temperature		50.0		
	_	differential	0.0	50.0	0.2	N.
	Fd_	Functions about defrost duration and timing	•	104 4 00 15	•	
	Fd0	immediate delay before next defrost		194 4:20:15	_	dd hh:mm:ss
		on-time duration of the defrost		194 4:20:15		dd hh:mm:ss
	Fdg	dripping time after defrost		194 4:20:15		dd hh:mm:ss
	FdE	evaporator fan activation delay after the defrost		194 4:20:15		dd hh:mm:ss
1	FdP	overall period of the defrost	0	194 4:20:15	4:00:00	dd hh:mm:ss
	FF	Functions about forced defrost				
	FFh	enable forced defrost by keyboard short cut	oFF	on	on	/
		forced defrost duration	0	194 4:20:15		dd hh:mm:ss
2		start immediate forced defrost	oFF	on	oFF	
_	FP	Functions about defrost preference	011	_011	011	/
	_	defrost type: 0=none / 1=pause / 2=air / 3=electric / 4=hot gas / 5=heat pump /	0	4	2	1
	FFL		U	4	2	/
	F.	6=heat pump by hp				
	Ft_	Functions about defrost temperature		4.= 0		^ c
	Ftt	defrost stop temperature	-55.0	145.0	6.0	°ر
	n	Functions about fans				
	nE_	Functions about evaporator fans				
	nEH	force evaporator fans when refrigeration is off	oFF	_on	oFF	/
	С	Functions about door and light		_		
	cP	Door switch and evaporator fan				
		stop evaporator fans when door is open	oFF	on	on	/
	cPF	pause defrost timer when air defrost is suspended by evaporator fan stop	oFF	on	_ on	· .
	cPd	delay of fan automatic switch on		194 4:20:15		dd hh:mm:ss
	cl	Functions about light	U	197 7.20.13	30.00	uu 1111.111111.5
	cI_ cIH		oFF			/
_		switch on the light when the door is open and off when closed		_on	_on	,
3	clo	switch off the light automatically if it has been switched on from outside	oFF	_on	_on	
	cld	delay of light automatic switch off	0	194 4:20:15	30	dd hh:mm:s
	v	Functions about electronic expansion valve				
	vΡ	Functions about electronic expansion valve preference				
4	νPΗ	enable electronic expansion valve	oFF	on	_on	/
	vt	Functions about electronic expansion valve temperature		_		•
5	vtt	wanted overheating (similar to Danfoss thermostatic overheating spring regulation)	-999.0	999.0	8.0	K
	vtU	maximum pressure allowed in the suction line (similar to Danfoss MOP)	0.0	999.0		(gauge) bar
	vd	Functions about electronic expansion valve timing	0.0	333.0	10.0	(gaage) bai
6	vd_ vd1	on-off duty cycle duration	0	194 4:20:15	0	dd hh:mm:ss
7				194 4:20:15		
	vd2	on duty cycle duration at refrigeration start (set to 0 for previous stop value)				dd hh:mm:ss
8	. vdd	on duty cycle adaptation speed (low value for slow adaptation and small swinging)	0	255	8	/
	b	Functions about probe calibration				
	b1_	Probe nr. 1				
	b1C	room temperature	-999.0	999.0	0.0	K
	b1A	enable probe	oFF	on	on	/
	b2	Probe nr. 2		_	_	
	b2C	defrost temperature	-999.0	999.0	0.0	K
	b2A	enable probe	oFF	on	on	
	b3	Probe nr. 3	51.7	_=	_011	,
	_	suction temperature	-999.0	999.0	0.0	K
		enable probe				
	DSA	· ·	oFF	_on	_on	/
	L	Functions about alarm and stand-by				
	Lt_	Temperature alarm				0.5
9		low temperature alarm set point	-55.0	145.0	-2.0	-
10		high temperature alarm set point	-55.0	145.0	14.0	
	Ltd	alarm delay	0	194 4:20:15	30:00	dd hh:mm:s
	LO	Door alarm				
	LOH	enable door alarm	oFF	on	on	/
		door alarm delay		194 4:20:15		dd hh:mm:s
		temperature alarm minimum delay after door opening	_	194 4:20:15		dd hh:mm:s
	Lo	On / stand-by status	J	10.15	13.00	aa
		actual status: stand-by or on	۵۲۲	<u>.</u>	٥٢٢	/
		actual Status. Statiu-by Of Oil	oFF	_on	oFF	/
	P	Functions about master preferences				
	Pd_	Functions about network address				,
		master address for global network communication	0	254	1	1
	PdS	number of slaves connected to this master	1	2	2	/
	I	Functions about input-output and machine state (read only)				
	ĪĀ	Analog inputs				
		room temperature	-55.0	145.0	-55.0	°C
	IA1		55.0			
		defrost temperature	-55 O	145 N	-hh ()	°C.
	IA2	defrost temperature	-55.0 -55.0	145.0 145.0	-55.0 -55.0	
		defrost temperature suction temperature Digital input	-55.0 -55.0	145.0 145.0		

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Id4 S_OLP OSn LLA d_Od1 Od3	Description digital input 4 (door closure / remote defrost) - read by IA4 Machine status low pressure (LP) evaporator fan stopped by door opening or manual control actual alarm - read only (0 means no alarm)	Minimum oFF 0.0 oFF	Maximum on 999.0 on	oFF 0.0	
OLP OSn LLA d_ Od1 Od3	Machine status low pressure (LP) evaporator fan stopped by door opening or manual control	0.0 oFF	999.0	0.0	•
OLP OSn LLA d_ Od1 Od3	low pressure (LP) evaporator fan stopped by door opening or manual control	oFF			(gauge) bar
OSn LLA d Od1 Od3	evaporator fan stopped by door opening or manual control	oFF			(gauge) bar
LLA d_ Od1 Od3			on		,
d_ Od1 Od3	actual alarm - read only (0 means no alarm)			oFF	
Od1 Od3		U	255	0	/
Od3	Digital output				
	solenoid	oFF	_on	oFF	,
		oFF	_on	oFF	
	evaporator	oFF	_on	oFF	•
Od6	defrost	oFF	_on	oFF	/
	Functions about storage				
	Functions about storage temperature				
	storage room temperature	-55.0	145.0	2.0	
_td	differential	0.0	50.0	0.2	K
_	Functions about defrost duration and timing				
Fd0	immediate delay before next defrost	0	194 4:20:15	0	dd hh:mm:s
Fdd	on-time duration of the defrost	0	194 4:20:15	30:00	dd hh:mm:s
Fdg	dripping time after defrost	0	194 4:20:15	2:00	dd hh:mm:s
		0	194 4:20:15	7:00	dd hh:mm:s
	overall period of the defrost	0	194 4:20:15	4:00:00	dd hh:mm:s
:					
FFh	enable forced defrost by keyboard short cut	oFF	on	on	/
	• •		_		dd hh:mm:s
		oFF			
		·	_ =		,
_		0	4	2	/
		Ü	•	_	/
_	•	-55.0	145 0	6.0	°C
		33.0	2.0.0	0.0	- C
_	•	oFF	on	٥EE	/
		011	_011	011	/
_					,
	·		_		
			_		,
	•	0	194 4:20:15	30:00	dd hh:mm:s
	- · · · · · · · · · · · · · · · · · · ·		_on	_on	/
clo	switch off the light automatically if it has been switched on from outside	oFF	_on	_on	,
cld		0	194 4:20:15	30	dd hh:mm:s
	Functions about electronic expansion valve				
_	Functions about electronic expansion valve preference				
vPH	enable electronic expansion valve	oFF	on	on	/
			_	_	
vtt	wanted overheating (similar to Danfoss thermostatic overheating spring regulation)	-999.0	999.0	8.0	K
		0.0	999.0		(gauge) bar
					,
_		0	194 4:20:15	8	dd hh:mm:s
					dd hh:mm:s
		0	255		
				J	,
	·				
_		_gaa n	gaa n	0.0	K
	·				
	•	JI 1	_011	_011	/
		000 0	000.0	0.0	K
	•				
	•	OFF	_on	_011	/
_		000.0	000.0	0.0	V
	•				
	•	off	_on	_on	/
	•				
_	·				0.6
	. * . :				
	•	0	194 4:20:15	30:00	dd hh:mm:s
)_					
LOH	enable door alarm	oFF	_on	_on	
LOd	door alarm delay	0	194 4:20:15	30:00	dd hh:mm:s
LOt	temperature alarm minimum delay after door opening	0	194 4:20:15	15:00	dd hh:mm:s
	actual status: stand-by or on	oFF	on	oFF	/
	Functions about input-output and machine state (read only)				
	Analog inputs				
FF FFF F F CCC CCC CCC LVVVV Lbb Lbb LLLL) LLL,	FIGE FOR THE STATE OF THE STATE	exporator fan activation delay after the defrost Find overall period of the defrost Functions about forced defrost Find overall period of the defrost Find overall period of the defrost Find forced defrost by keyboard short cut Find forced defrost by keyboard short cut Find forced defrost by keyboard short cut Find forced defrost perference Find force defrost preference Find force defrost preference Find force vaporator fan selectric / 4=hot gas / 5=heat pump / 6=heat pump by hp Functions about defrost temperature defrost stop temperature Functions about fans Functions about fans Functions about fans Functions about overall period force evaporator fan selectric force evaporator fan stop evaporator fan stop evaporator fan stop evaporator fan selectric force evaporator fan selectric force evaporator fan selectric selectric force evaporator fan selectric force evaporation force force force force force evaporation selectric force evaporation force force force force evaporation selectric force evaporation force force force force force evaporation force	defect of exaporator fan activation delay after the defrost control of the defrost protection about forced defrost protection about forced defrost protection about forced defrost protection about forced defrost protection about defrost preference control of the defrost protection about defrost preference control of the defrost start immediate forced defrost preference control of the defrost stop temperature prunctions about defrost temperature prunctions about defrost temperature prunctions about evaporator fans prunctions about defrost stop temperature prunctions about door and light protection about fans protection about fans protection about fans protection about fans prunctions about door and light protection about fans protection about fans force about fans fans fans fans fans fans fans fans	Sect Sect	Section Sect

Rem. Parameter	Description	Minimum	Maximum	Default Unit
IA1	room temperature	-55.0	145.0	-55.0 °C
IA2	defrost temperature	-55.0	145.0	-55.0 °C
IA3	suction temperature	-55.0	145.0	-55.0 °C
ld_	Digital input			
ld4	digital input 4 (door closure / remote defrost) - read by IA4	oFF	_on	oFF /
OS_	Machine status			
OLP	low pressure (LP)	0.0	999.0	0.0 (gauge) bar
OSn	evaporator fan stopped by door opening or manual control	oFF	_on	oFF /
LLA	actual alarm - read only (0 means no alarm)	0	255	0 /
Od_	Digital output			
11 Od1	solenoid	oFF	_on	oFF /
11 Od3	light	oFF	_on	oFF /
11 Od5	evaporator	oFF	_on	oFF /
11 Od6	defrost	oFF	on	oFF /

2 Parameter remarks

- 1 The period of each cycle includes on-time + off-time, that is the overall duration of the cycle.
- 2 Following defrost cycles will be aligned to the end of forced one.
- 3 No action if the light is switched on from inside the room.
- 4 When off, the refrigeration solenoid is steadily on during cooling.
- 5 Caution! Low overheating causes liquid return and compressor damage.
- 6 Caution! Short duty cycle reduces valve life.
- 7 Caution! Low overheating causes liquid return and compressor damage.
- 8 Caution! High adaptation speed causes swing in the suction line and damage to the compressor.
- 9 The low temperature differential is fixed, and alarm status stops at 0.2 $^{\circ}\text{C}$ above the set point.
- 10 The high temperature differential is fixed, and alarm status stops at 0.2 $^{\circ}$ C under the set point.
- 11 The minus sign on display ("-") signals that output is going to start after a delay.

3 Alarm list

Display	Alarm	
A01	low temperature	Low temperature limit has been reached.
A02	high temperature	High temperature limit has been reached.
A03	door open	Time limit for door opening has been reached.

4 Slave alarm list

Display	Alarm	
A96	slave EEPROM	Failed write operation onto the slave EEPROM.
A97	out of range	The slave address EdS might be out of the master range, the latter going from 1 to PdS.
A98	no link	The slave does not receive any message from the master.
A99	lost link	The slave lost the communication with the master.

5 Button list

Push button		Function
B1	esc - silence	Exit without saving from any menu - alarm buzzer silence.
B2	up	Up navigation in the menu.
B3	on/stand-by - pause	Toggle between on and stand-by - toggle evaporator fan stop.
B4	left - light	Left navigation in the menu - switch the light on and off.
B5	down - defrost	Down navigation in the menu - force immediate defrost.
B6	right - menu - set	Right navigation in the menu - display and modify the set point - enter menu.



6 Led list

Led		Function
L1	cooling	On during cooling.
L2	evaporator	On during evaporator run - blinking slowly during activation delay.
L3	defrost	On during defrost - blinking slowly during dripping.
L4	unused	Unused in this application.
L5	unused	Unused in this application.
L6	unused	Unused in this application.
L7	light	On when lighting is on - blinking slowly during deactivation delay.

7 Soft command list

Soft command Function

8 How to ...

How to Switch between on and stand-by.	Function Keep pressed B3 button, to activate and deactivate stand-by. In stand-by every output is disabled except light, leds from L1 to L6 blink, timers continue to count.
Stop or restart evaporator fans.	Press shortly the B3 button. When the evaporator fans are stopped, the display blinks.
Program the menu.	Keep pressed B6 to enter the menu. Navigate up and down with B2 and B5. Select the submenu by B6. Change the parameter by B2 and B5, press B6 to confirm, or B4 to go back without saving. The changes will have effect after the exit from programming pressing B4 repeatedly. Press B1 to exit immediately without saving any parameter.
Show or change temperature set.	Press shortly B6 - the display shows the current set point - change it by B2 and B5, and confirm it by B6. As alternative, enter the menu program as explained above, modify the parameter t0, then confirm it.
Force a defrost.	Keep pressed B5.

9 Shortcut list

Buttons to press Shortcut description - keep pressed 5 seconds B5 Force an immediate defrost.

10 Led and push button location

