smart guide

CAREL

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CAREL

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Trouble shooting

TROUBLE	CAUSES	CHECK
The compressor doesn't start	- compressor ON delay - post-defrost dripping running	**c0**, **c1** and **c2** **dd**
Temperature over the fixed limits but no alarm signal	- alarm ON delay	**Ad**, **c6**, **d8**
IA, dA alarm signal	- multifunction input open	**input status**
Alarm connected to the multifunction input not detected	- alarm ON delay - parameter program. error	if **A4/A5**=1/2 check the status of the digital input; check **A7**
Defrost not enabled	- defrost cycle too short (**dP**) - interval between defrosts **dI=0** - end defrost temperature is low - evaporator temperature is high	**dP**, **dI** **dT** **d/** defrosting probe
Manual defrost not enabled (LED def. flashing)	- compressor protection time ON	**d9** (select **d9=1**)
High temperature alarm after defrost	- alarm delay after defrost is short - alarm threshold too low	**d8** **AH**
Display OFF after defrost too	- room temperature has not reached the set or time **d8** has not passed	Reduce **d8**
After the modification of a parameter the controller continues working with the old values	- the controller has not reached the value	Repeat the programming, turn off and on
For C models: fans don't start	1. a delay has been selected when starting the compressor and the fans	1. **C0**
	2. if **F0=1** or **2** (fans managed by fan controller) - the evaporator is <hot>: you may read the evaporator temperature selecting the parameter d/1; d/2; - dripping in progress; - **F1** (fans OFF temperature) low - post-dripping delay ON	2. **F0**, **d/1**, **d/2** **Fd** **F1** **dd**
	3. if **F0=0** - **F2=1** and the compressor is still - dripping ON - post-dripping lock ON	3. **F0** **F2** **Fd** **dd**

Probe configuration table

/A2.../A4: Probe configuration
Allows configuring the operation mode of probe 2.
/A2 to /A4 = 0 => probe 2 absent;
/A2 to /A4 = 1 => product probe (used for display only);
/A2 to /A4 = 2 => defrost probe;
/A2 to /A4 = 3 => condenser probe.
Anyway probe 2 is used for the calculation of the regulation virtual probe.
Default: /A2 = 2 => defrost probe:
/A2 = 0 on S model;
/A3=0;
/A4=0.

tl: Display on display
Select the probe to be displayed on the controller display.
/tl =1 => Virtual Probe;
/tl =2 => Probe 1;
/tl =3 => Probe 2;
/tl =4 => Probe 3;
/tl =5 => Probe 4;
/tl =6 => do not select
Warning:
- Control is always performed on the virtual control probe;
- If the probe to be displayed is not enabled the display shows "___".

Signals

Code	Event	Description
"dnL"	Signal	Download running
"rCt"	Signal	Enabled to the remote control programming
"Add"	Signal	Automatic address assignment procedure running
"Prt"	Signal	Report being printed
"LrH" , "HrH"	Signal	Enable procedure of: LOW relative humidity, HIGH relative humidity
"ccb" , "ccE"	Signal	Request to: START continuous cycle, END continuous cycle
"dFb" , "dFE"	Signal	Request to: START defrost, END defrost
"On" , "OFF"	Signal	Passing to: ON status, OFF status
"rES"	Signal	Manual reset alarm reset HACCP alarms reset Temperature monitoring reset

The buzzer is enabled if enabled by the parameter "H4".
The alarm relay is enabled if one of the auxiliary 1 and auxiliary 2 outputs ("H1" and "H5") has been given the function of alarm relay (normally closed or open).

Nota: the buzzer is disabled if the controller is connected to the CAREL supervisory system.

Alarm table

Code	Icon on the display	Alarm relay	Buzzer	Reset	Description
"rE"		ON	ON	automatic	Automatic control probe fault
"E0" , "E1"		OFF	OFF	automatic	Room probe S1, defrosting probe S2: FAULT
"E2" , "E3" , "E4"		OFF	OFF	automatic	Probe S3, S4, S5: FAULT
"___"	-	-	OFF	automatic	Probe not enabled
"LO" , "HI"		ON	ON	automatic	LOW, HIGH temperature alarm
"AFr"		ON	ON	manual	Antifreeze alarm
"IA" , "dA"		ON	ON	automatic	IMMEDIATE alarm, DELAYED alarm from external contact
"dEF"		OFF	OFF	automatic	Defrost running
"Ed1" , "Ed2"	-	-	OFF	autom./man.	Evaporator 1 defrost, Evaporator 2 defrost ended for TIMEOUT
"Pd"		ON	ON	autom./man.	Maximum time pump-down alarm
"LP"		ON	ON	autom./man.	Low pressure alarm
"AtS"		ON	ON	autom./man.	Autostart in pump down
"cht"	-	-	OFF	autom./man.	Condenser high temperature pre-alarm
"CHT"		ON	ON	manual	Condenser high temperature alarm
"dor"		ON	ON	automatic	Door open for too long alarm
"Etc"		OFF	OFF	autom./man.	Real time clock fault
"EE" , "EF"		OFF	OFF	automatic	EEPROM error: UNIT parameters, OPERATING parameters
"HA" , "HF"	HACCP	OFF	OFF	automatic	HACCP alarm: "HA" type, "HF" type
"n1" to "n6"		ON	ON	automatic	Alarm signal for the units 1 to 6 present in the network
"d1" to "d6"		OFF	OFF	-	Download signal with errors in the units 1 to 6

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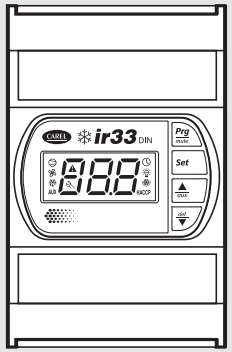

PRG/MUTE BUTTON

Pressing the button alone:
- pressed for more than 5" accesses the menu for setting type "F";
- silences the audible alarm (buzzer) and disables the alarm relay

Pressing together with other buttons:
- pressed for more than 5":
  - SET: accesses the menu for setting the type "C";
  - UP/AUX: resets any alarm

Default value reset:
- pressed for more than 5" startup:
  - enable the reset procedure.

Automatic address assignment (during supervisory program installation):
- pressed for 1":
  - enters the automatic address assigning procedure.

UP/AUX BUTTON

Pressing the button alone:
- pressed for 1":
  - enables/disables the auxiliary output.

Pressing together with other buttons:
- pressed for more than 5":
  - DOWN/DEF: enables/disables the continuous cycle operation;
  - SET: start the procedure for printing the reports (if the printer interface is connected to the controller);
  - PRG: resets any active alarm with manual reset.

DOWN/DEF BUTTON

Pressing the button alone:
- pressed for 5":
  - enables/disables a manual defrost (only with the right temperature conditions).

Pressing together with other buttons:
- pressed for 5":
  - UP/AUX: enables/disables the continuous cycle operation;
- pressed for 1":
  - SET: displays a submenu with the HACCP alarm parameters (HA, HAn, HF, HFn)

SET BUTTON

Pressing the button alone:
- pressed for 1":
  - displays and/or set the set point.

Pressing together with other buttons:
- pressed for 5":
  - PRG: accesses the menu for setting the type "C" parameters;
  - UP/AUX: starts the procedure for printing the report (if the printer interface is connected to the controller);
- pressed for 1":
  - DOWN/DEF: displays a submenu with the HACCP alarm parameters (HA, HAn, HF, HFn).

To access the "F" parameters
- Press the PRG button for more than 5": the display shows the code of the first modifiable "St" parameter.

To access the "C" parameters
1. Press PRG and SET buttons at the same time for more than 5"; the display will show the number "00";
2. Press UP/AUX or DOWN/DEF buttons until display the number "22";
3. Confirm by pressing the SET button; The display shows the code of the first modifiable "/2" parameter.

Modifying the parameters
After having displayed the parameter, either type "C" or type "F", proceed as follows:
1. Press UP/AUX or DOWN/DEF buttons until reaching the parameter to be modified and press SET to display the associated value;
2. Press SET to temporarily save the new value;
3. Press PRG button for more than 5" to definitively save the new values of the modified parameters and thus exiting the parameter setting procedure.

Code	Parameter	U.M.	Type	Def.	Max	Min
Pw	Password	-	C	22	200	0
/2	Measurement stability	-	C	4	15	1
/3	Probe display reaction	-	C	0	15	0
/4	Virtual probe	-	C	0	100	0
/5	Select °C or °F	flag	C	0	1	0
/6	Decimal point	flag	C	0	1	0
/tI	Display on internal terminal	-	C	1	6	1
/tE	Display on external terminal	-	C	0	6	0
/P	Select type of probe	-	C	0	2	0
/A2	Configuration of probe 2 (S models)	-	C	2	4	0
		-	C	0	4	0
/A3	Configuration of probe 3	-	C	0	4	0
/A4	Configuration of probe 4	-	C	0	14	0
/A5	Configuration of probe 5	-	C	0	14	0
/c1	Calibration of probe 1	°C/°F	C	0.0	20	-20
/c2	Calibration of probe 2	°C/°F	C	0.0	20	-20
/c3	Calibration of probe 3	°C/°F	C	0.0	20	-20
/c4	Calibration of probe 4	°C/°F	C	0.0	20	-20
/c5	Calibration of probe 5	°C/°F	C	0.0	20	-20
St	**Temperature set point**	**°C/°F**	**F**	**0.0**	**r2**	**r1**
rd	**Controller differential**	**°C/°F**	**F**	**2.0**	**20**	**0.1**
rn	Neutral zone	°C/°F	C	4.0	60	0.0
rr	Delta reverse regulator with dead zone	°C/°F	C	2.0	20	0.1
r1	Minimum SET allowed	°C/°F	C	-50	r2	-50
r2	Maximum SET allowed	°C/°F	C	60	200	r1
r3	Operating mode	flag	C	0	2	0
r4	Automatic night-time set point variation	°C/°F	C	3.0	20	-20
r5	Enable temp. monitoring	flag	C	0	1	0
rt	**Temp. monitoring interval**	**hours**	**F**	**-**	**999**	**0**
rH	**Max. temperature read**	**°C/°F**	**F**	**-**	**-**	**-**
rL	**Min. temperature read**	**°C/°F**	**F**	**-**	**-**	**-**
c0	Comp. and fan start delay at start-up	min	C	0	15	0
c1	Min. time between successive starts	min	C	0	15	0
c2	Min. compressor OFF time	min	C	0	15	0
c3	Min. compressor ON time	min	C	0	15	0
c4	Duty setting	min	C	0	100	0
cc	Continuous cycle duration	hours	C	0	15	0
c6	Alarm bypass after continuous cycle	hours	C	2	15	0
c7	Maximum Pump-Down time	s	C	0	900	0
c8	Comp. start delay after open PD valve	sec	C	5	60	0
c9	Enable autostart with PD operation	flag	C	0	1	0
c10	Select Pump-Down by time or pressure	flag	C	0	1	0
c11	Second compressor delay	s	C	4	250	0
d0	Type of defrost	flag	C	0	4	0
dI	**Interval between defrosts**	**hours**	**F**	**8**	**250**	**0**
dt1	**End defrost temperature**	**°C/°F**	**F**	**4.0**	**200**	**-50**
dt2	**End defrost evap./aux evap.**	**°C/°F**	**F**	**4.0**	**200**	**-50**
dP1	**Max. defrost duration, evap.**	**min**	**F**	**30**	**250**	**1**
dP2	**Max. defr. duration, aux evap.**	**min**	**F**	**30**	**250**	**1**
d3	Defrost start delay	min	C	0	250	0

Code	Parameter	U.M.	Type	Def.	Max	Min
d4	Enable defrost at startup	flag	C	0	1	0
d5	Defrost delay at startup	min	C	0	250	0
d6	Display off during defrost	-	C	1	2	0
dd	**Dripping time after defrost**	**min**	**F**	**2**	**15**	**0**
d8	**Bypass alarms after defrost**	**hours**	**F**	**1**	**15**	**0**
d9	Defrost priority over compressor protection	flag	C	0	1	0
d/1	**Display defrost probe**	**°C/°F**	**F**	**-**	**-**	**-**
d/2	**Display defrost probe**	**°C/°F**	**F**	**-**	**-**	**-**
dC	Base times for defrost	flag	C	0	1	0
d10	Compressor running time	hours	C	0	250	0
d11	Running time temp. threshold	°C/°F	C	1.0	20	-20
d12	Advanced defrost	-	C	0	3	0
dn	Nominal defrost time	-	C	65	100	1
dH	Proport. factor for variation in "dI"	-	C	50	100	0
A0	Alarm and fan differential	°C/°F	C	2.0	20	0.1
A1	Type of threshold for "AL" and "AH"	flag	C	0	1	0
AL	**Low temp. alarm threshold**	**°C/°F**	**F**	**0.0**	**200**	**-50**
AH	**High temp. alarm threshold**	**°C/°F**	**F**	**0.0**	**200**	**-50**
Ad	**Low and high temp. alarm delay**	**min**	**F**	**120**	**250**	**0**
A4	Configur. of digital input 1	-	C	0	12	0
		-	C	3	12	0
A5	Configur. of digital input 2	-	C	0	12	0
A6	Stop compressor from external alarm	min	C	0	100	0
A7	External alarm detection delay	min	C	0	250	0
A8	Enable alarms "Ed1" and "Ed2"	flag	C	0	1	0
A9	Config. ingresso digitale 3	-	C	0	12	0
Ado	Door switch light management mode	flag	C	0	1	0
Ac	High condenser temp. alarm	°C/°F	C	70.0	200	0.0
AE	High cond. temperature alarm differential	°C/°F	C	10.0	20	0.1
Acd	High cond. temp. alarm delay	min	C	0	250	0
AF	Off time with light sensor	s	C	0	250	0
ALF	Antifreeze alarm threshold	°C/°F	C	-5.0	200	-50
AdF	Antifreeze alarm delay	min	C	1	15	0
F0	Fan management	flag	C	0	2	0
F1	**Fan start temperature**	**°C/°F**	**F**	**5.0**	**200**	**-50**
F2	Fan OFF with compressor	flag	C	1	1	0
F3	Fans in defrost	flag	C	1	1	0
Fd	**Fans off after dripping**	**min**	**F**	**1**	**15**	**0**
F4	Condenser fan OFF temp.	°C/°F	C	40.0	200	-50
F5	Condenser fan ON differential	°C/°F	C	5.0	20	0.1
H0	Serial address	-	C	1	207	0
H1	Function of relay 4	flag	C	1	13	0
H2	Disable keypad/Infrared	flag	C	1	6	0
H3	Remote control enabling code	-	C	0	255	0
H4	Disable buzzer	flag	C	0	1	0
H5	Relay 5 function	-	C	3	13	0
H6	Lockout buttons	-	C	0	255	0
H7	Select keypad	flag	C	0	1	0
H8	Select output to activate with time band	flag	C	0	1	0
H9	Enable set point variation with the band	flag	C	0	1	0

Code	Parameter	U.M.	Type	Def.	Max	Min
HPr	Print profile	-	C	0	15	0
Hdn	Available default parameter set number	-	C	0	6	0
Hdh	Offset anti-sweat heater	°C/°F	C	0.0	200	-50
HrL	Enable remoting the light relay state of the master	flag	C	0	1	0
HrA	Enable remoting the ausiliary relay state of the master	flag	C	0	1	0
HSA	Enable alarms of other devices of the local network	flag	C	0	1	0
In	Establishes if the unitis normal, master or slave	-	C	0	6	0
HAn	HA event number occured	-	C	0	15	0

Code	Parameter	U.M.	Type	Def.	Max	Min
HA...HA2	Date/time of most recent HA	-	C		-	-
y__	Year	years	*	0	99	0
M__	Month	months	*	0	12	1
d__	Day	day	*	0	7	1
h__	Hour	hours	*	0	23	0
n__	Minute	min	*	0	59	0
t__	Duration	hours	*	0	99	0
HFn	Number of events HF occurred	-	C	0	15	0
HF...HF2	Date/time of most recent HF	-	C	-	-	-
y__	Year	years	*	0	99	0
M__	Month	months	*	0	12	1
d__	Day	day	*	0	7	1
h__	Hour	hours	*	0	23	0
n__	Minute	min	*	0	59	0
t__	Duration	hours	*	0	99	0
Htd	HACCP alarm delay	min	C	0	250	0
td1...td8	Defrost time band	-	C	-	-	-
d__	Day	day	*	0	11	0
h__	Hour	hours	*	0	23	0
n__	Minute	min	*	0	59	0
ton...toF	Light/aux ON time band (ton) OFF (toF) luce/aux	-	C	-	-	-
d__	Day	day	*	0	11	0
h__	Hour	hours	*	0	23	0
n__	Minute	min	*	0	59	0
0tc	RTC date/hour setting	-	C	-	-	-
y__	Year	years	0	00	99	0
M__	Month	months	1	1	12	1
d__	Month day	days	1	1	31	1
u__	Week day	days	6	6	7	1
h__	Hour	hours	0	0	23	0
n__	Minute	min	0	0	59	0