

# 200NANO3CF

Pego Expert nano low temperature digital thermostat for both heating and cooling applications.

Static defrost by stopping the compressor.

Display protection: IP 65

Power supply: 230 VAC, 3 VA

Working temperature: -5°C to 55°C

Output: 3 relays (8A+8A+16A @240 VAC)

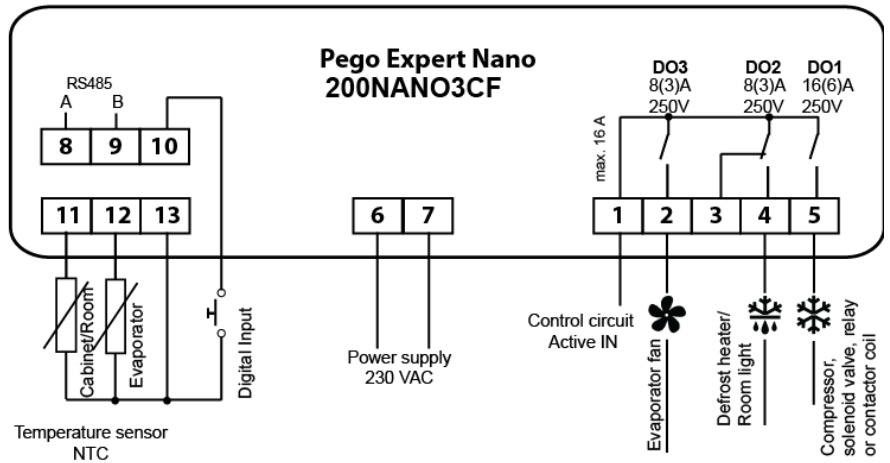
## Programming procedure

### Temperature Set Point ('Set'+▼or▲)

Press "set" button to view current setpoint.

Keep "set" button pressed and press ▼ or ▲ to set the desired value.

Release "set" button to return to view the room temperature. Changes are automatically saved.



## Programming Parameters

### Level 1 (▼+▲)

Press ▼ and ▲ for 3 seconds to access level 1 menu.

Press ▼ or ▲ to select the parameter.

### Level 2 (▼+▲+Stand-by)

Press ▼, ▲ and "stand-by" for 3 seconds to access level 2 menu.

Press ▼ or ▲ to select the parameter.

### To check/modify selected parameter

Press "set" to check the value of a parameter.

Press and hold "set" and ▼ or ▲ to set the desired value.

### To confirm all changes

Press ▼ and ▲ for 3 seconds to save settings and exit menu. Otherwise system leaves menu after 30 seconds.

For level 2 programming the system will be placed in Stand-By mode. Press "stand-by" to turn off Stand-By mode.

- ❖ During the normal operation the controller shows the room temperature.
- ❖ To activate/terminate defrost manually, press and hold ▼ for 3 seconds.
  - Manual activation possible only if evaporator temperature is below 'd2'.
  - If defrost is manually terminated, dripping (d7) is skipped.
- ❖ To enable ▲ to control the room light, set dO2 = 1.
  - Press ▲ for 3 seconds to activate/deactivate the room light.
  - The room light will turn on automatically when the door switch input is active or the man-in-cell alarm is triggered (E8).
- ❖ Alarm sound can be stopped by pressing down ▲.

	LED ON	LED Flashes
	Cold function ON	Cold function ON, compressor delay (C1)
	Fans ON	Fans paused after defrost (F5)
	Defrost in progress	Dripping in progress after defrosting (d7)
	Hot function ON	
	Room light ON (only if dO2=1)	Door switch activated or room light ON with alarm E8
	Temperature alarm has been reset	Alarm present

CODE	REASON	REMEDIES	EFFECTS
orH	Temperature out of range > 99°C	Check HSE	
orL	Temperature out of range less than -45°C	Check LSE	
EL	Low temperature alarm	Check A1	No effects
EH	High temperature alarm	Check A2	No effects
E0	Ambient sensor damaged or disconnected	Check the connection, check the temperature next to the sensor	The compressor will work in accordance with parameters CE1 & CE2
E1	Evaporator/defrost sensor damaged or disconnected	Check the connection, check the temperature next to the sensor	Evaporator fan will be managed by settings of parameters F3, F4 and F5. Defrost will be terminated by time parameter d3
E2	Data memory corrupted	Switch the power off and on, if the error message remains the controller must be changed	All outputs are deactivated except for alarm outputs
E8	Man-in-room alarm		Alarm sound will continue until door is opened
Ed	Door open alarm	Close door or check Tdo	After door switch opens and Tdo time has passed, alarm will be triggered
Ec	Compressor protection alarm		All outputs are deactivated except for alarm outputs

## Level 1 Parameters

	Min.	Max.	unit	def	
<b>r0</b>	0.2	10	°C	2	Differential (positive if m0d=0 or negative if m0d=1)
<b>d0</b>	0	24	hour	4	Defrost interval (0 = defrost disabled)
<b>d2</b>	-35	45	°C	15	Defrost termination temperature
<b>d3</b>	1	240	min	25	Maximum defrosting duration
<b>d7</b>	0	10	min	0	Dripping duration. After defrost compressor and fans remain inactive for d7 value
<b>F5</b>	0	10	min	0	After dripping evaporator fan delay. If dripping is not set, fans pause after defrost for F5 value
<b>A1</b>	-45	A2	°C	-45	Minimum temperature alarm
<b>A2</b>	A1	99	°C	99	Maximum temperature alarm
<b>tEu</b>					Evaporator probe temperature display. Doesn't display anything when dE=1

## Level 2 Parameters

	Min.	Max.	unit	def	
<b>F3</b>	0	1		1	Fan status with compressor off (0 = Fans in continuous operation, 1 = Fans ON only with compressor ON)
<b>F4</b>	0	1		1	Stop fan during defrost (0 = No, 1 = Yes)
<b>Fst</b>	-45	99	°C	45	Evaporator fan stop temperature: Fans remain disabled if evaporator probe temperature is higher than value of Fst. Fans are re-enabled with evaporator probe deactivated or in error mode
<b>Fd</b>	1	10	°C	2	Differential of Fst
<b>dE</b>	0	1		0	Evaporator probe exclusion (0 = Evaporator probe present, 1 = Evaporator probe absent). If dE = 1, defrost occurs based on d0 and d3
<b>d1</b>	0	1		0	Defrosting type (0 = Electric element, 1 = hot gas)
<b>C1</b>	0	15	min	3	Minimum time between each turning off and on of the compressor
<b>CE1</b>	0	240	min	0	Duration of compressor ON time in the case of faulty probe-emergency mode (disabled if CE1=0 and then d0=0)
<b>CE2</b>	5	240	min	5	Duration of compressor OFF time in the case of faulty probe-emergency mode
<b>doC</b>	0	5	min	0	Compressor runs for value of doC due to activation of door switch

	Min.	Max.	unit	def	
<b>Tdo</b>	0	240	Min	0	Compressor re-activation time after door opened (0 = disabled)
<b>mOd</b>	0	1		0	0 = Cold function, 1 = Hot function (defrost disabled)
<b>In1</b>	-6	6		1	Digital input DI and activation mode setting 6 = Stop defrosting remotely (DI = ON) 5 = Start defrosting remotely (DI = ON) 4 = Stand-by remotely (DI = ON) 3 = Man-in-room alarm (DI = ON) 2 = Door switch (DI = ON ) 1 = Compressor protection (DI = ON) 0 = Disabled -1 = Compressor protection (DI = OFF) -2 = Door switch (DI = OFF) -3 = Man-in-room alarm (DI = OFF) -4 = Stand-by remotely (DI = OFF) -5 = Start defrosting remotely (DI = OFF) -6 = Stop defrosting remotely (DI = OFF)
<b>dO2</b>	0	1		0	Digital output DO2 setting (0 = Defrost heating element output, 1 = Room light output)
<b>LSE</b>	-45	HSE	°C	-45	Minimum set point
<b>HSE</b>	LSE	99	°C	99	Maximum set point
<b>CAL</b>	-10	10	°C	0.0	Sensor calibration
<b>Ald</b>	0	240	min	120	Temperature alarm delay
<b>Ad</b>				0	Network address for connection to TeleNET or Modbus supervision system: 0 - 31 (SEr = 0), 1 - 247 (SEr = 1)
<b>SEr</b>	0	1		0	RS-485 communication protocol ( 0 = TeleNET, 1 = Modbus-RTU)
<b>P1</b>	0	3		3	Active when PA ≠ 0 0= Displays set point and allows alarm stop 1= Displays set point, allows alarm stop + defrost 2= Blocks access to level 1&2 when programming 3= Blocks access to level 2 during programming
<b>PA</b>	0	999		0	Password (disabled when PA=0). See P1 for protection type
<b>reL</b>					Release software- reading only



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