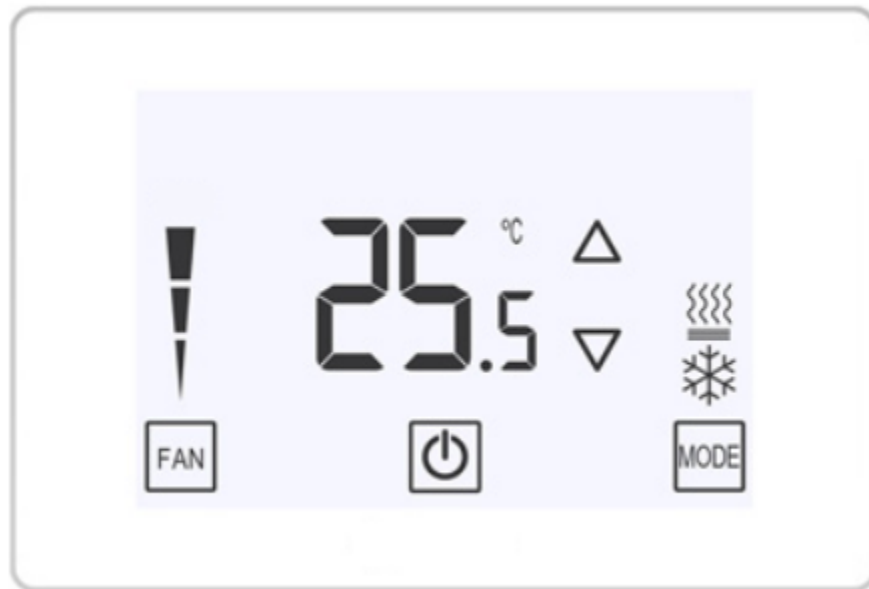


INSTALLATION INSTRUCTIONS AND HOMEOWNER'S MANUAL

Communicating Thermostat



Model : R02P034



FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING OR OPERATING THIS CONTROL AND SYSTEM COULD CAUSE PERSONAL INJURY AND/OR PROPERTY DAMAGE.

PRODUCT OVERVIEW

The R02P034 is our most powerful thermostat yet. Control your home comfort system powered by an improved full LED display control unit with touch sensitivity. Adjust the desired temperature with a wide setpoint range of 41 °F to 95 °F.

The unit works well with 24 VAC ClimateTalk™ architecture; powered by gas, electric heat, heat pumps, and central air conditioning based systems. With smart systems such as autoconfigure, autochangeover and advance diagnostics, you can take a hands off approach, while letting it do the heavy lifting for you. Additional features such as humidity control, dehumidification control, dual fuel control, and filter change-out indicator.

The R02P034 is the full package in home control systems.

WARNING

Thermostat installation and all components of the control system shall conform to Class II circuits per the NEC/CEC code.

WARNING

To prevent electrical shock and/or equipment damage, disconnect electric power to system at main fuse or circuit breaker box until installation is complete.

ATTENTION: MERCURY NOTICE

This product does not contain mercury, but it may replace a product that contains mercury. Mercury and products containing mercury must not be discarded in household trash. Do not touch any spilled mercury. Wearing non-absorbent gloves, clean up any spilled mercury and place it in a sealed container. For proper disposal of a product containing mercury or a sealed container of spilled mercury, place it in a suitable shipping container. On the Internet, visit www.switchthestat.ca.com for a location where the product containing mercury can be sent.

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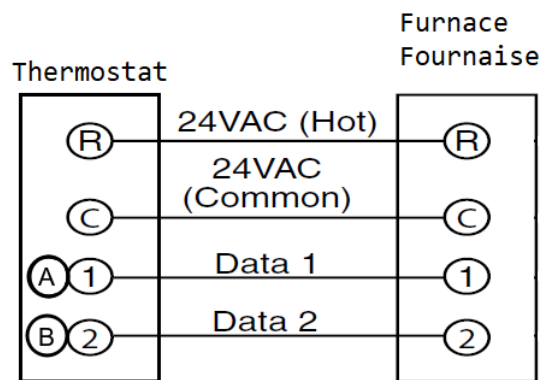
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1 Installation

This booklet contains installation instruction and information on the thermostat only. Separate installation instructions for the furnace or air handler and outdoor AC condensing unit or heat pump are provided.

1.1 Wiring Requirements

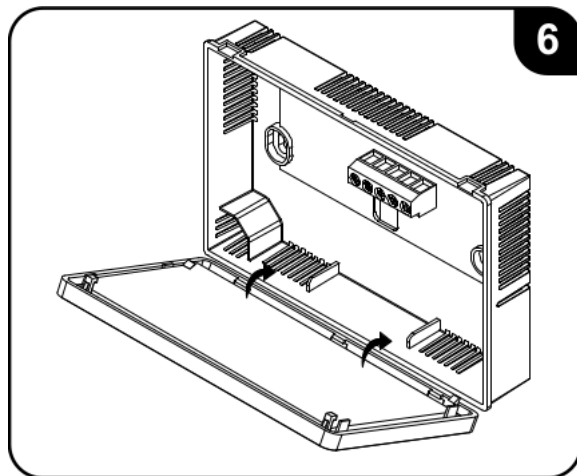
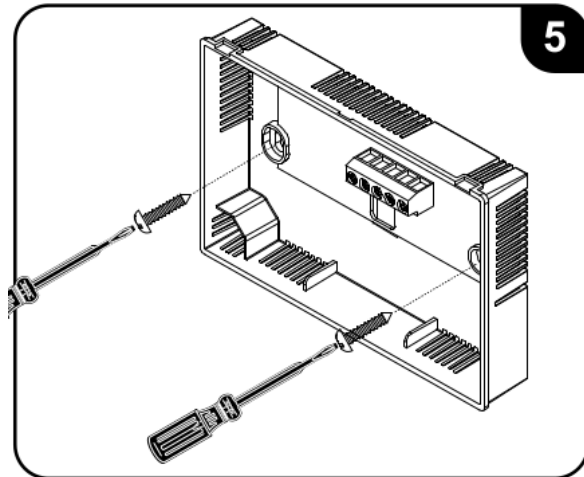
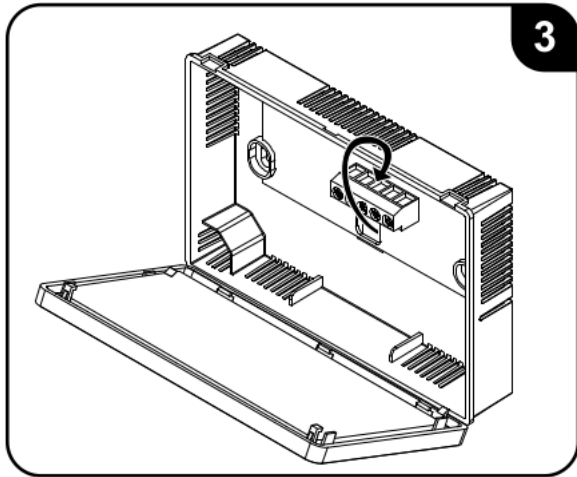
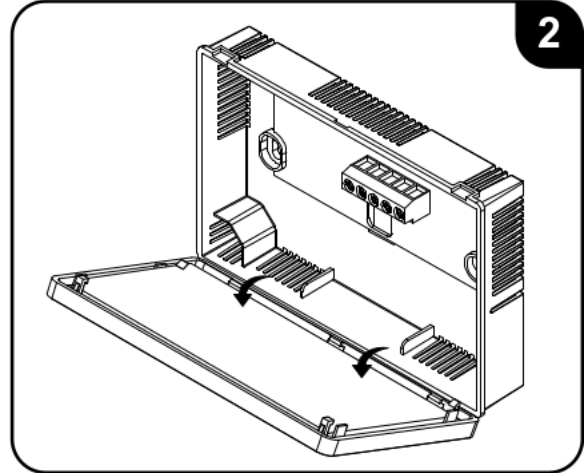
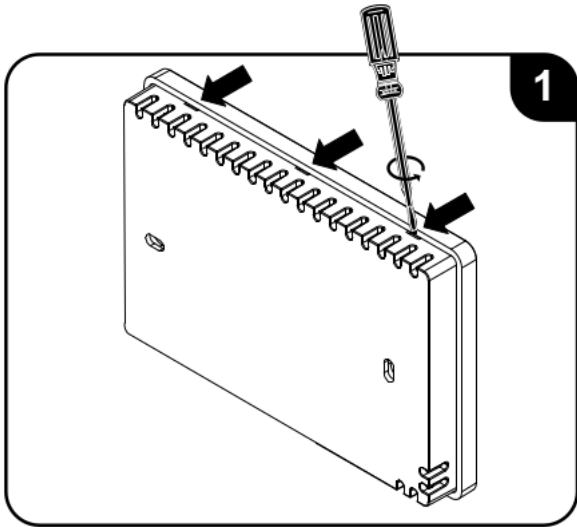
Each communicating device in the system has a four wire connection labelled (R, C, 1, 2). Each R, C, 1, and 2 terminals must be wired consistently. Maximum length from the thermostat to the indoor unit is 100 feet.



1.2 Installing Thermostat

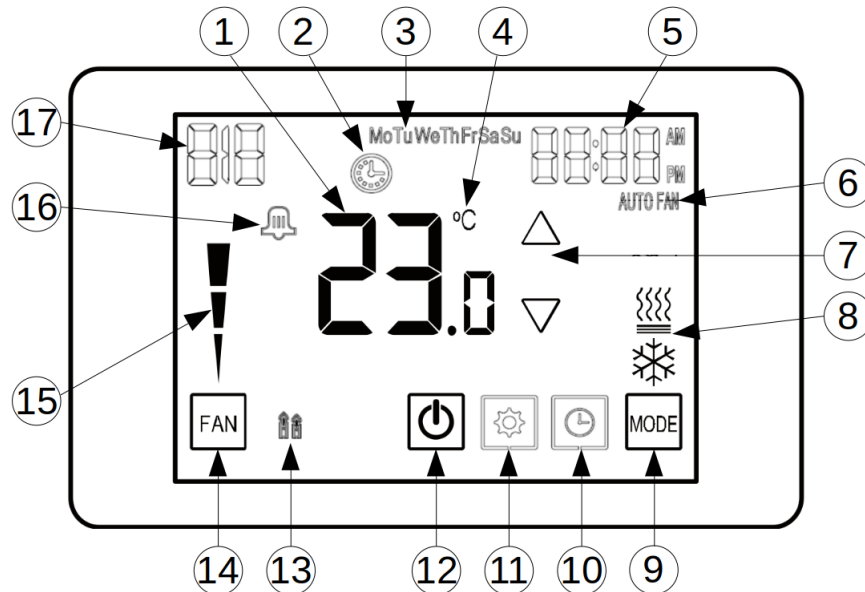
The thermostat should be placed where the temperature is representative of the general room conditions, away from cold or warm air draughts, radiant heat and direct sunlight. The thermostat must not be installed on an outside wall.

1. Using a flat a screwdriver, carefully separate the the top of the thermostat body from the base.
2. Swing the base open and detach it from the body.
3. Connect wires to terminal block on base.
4. Push excess wire into wall and plug hole with a fire resistant material (such as fiberglass insulation) to prevent drafts from affecting thermostat operation.
5. Attach base snugly to wall using the two provided mounting screws. Levelling is for appearance only and will not affect thermostat operation.
6. Carefully line up the bottom of the thermostat with the base and snap into place.



2 Operation


2.1 Display and Controls



1. Temperature display
2. Thermostat waiting
3. Week day
4. Temperature scale
5. Time display (or menu item value)
6. Continuous fan mode
7. Adjustment buttons
8. Operating mode
9. Mode select button
10. Clock setting button
11. Settings button
12. On/Off button
13. Auxiliary heat display
14. Fan mode button
15. Modulation indicator
16. Error/Alarm indicator
17. Humidity, outdoor temperature or alarm display

2.2 System Modes

On/Off

The  button allows to completely turn off the system. Then, no heating, cooling or ventilation command will be sent to the system.


This button also allows to exit any settings menu.


Fan Modes



Press  to switch between **Fan On** and **Fan Auto**.


When the thermostat displays AUTO FAN, the circulating fan will run only when there is a heating or cooling demand. Otherwise, the fan will run continuously.

Operating Modes

The operating mode can be changed using the  key.

Heat (): Heating with the primary heating source (heat pump if present, or furnace).





Auxiliary Heat ( and ): Heating with the auxiliary heating source (furnace). This is only available when a heat pump is connected.

Cool (): Cooling mode is only available when a heat pump or A/C unit is connected.

Auto ( and ): The thermostat will automatically switch between heating and cooling modes.

When there is a demand for the selected mode, the matching icon will start blinking and the thermostat will command the system to operate.



2.3 Clock Setting

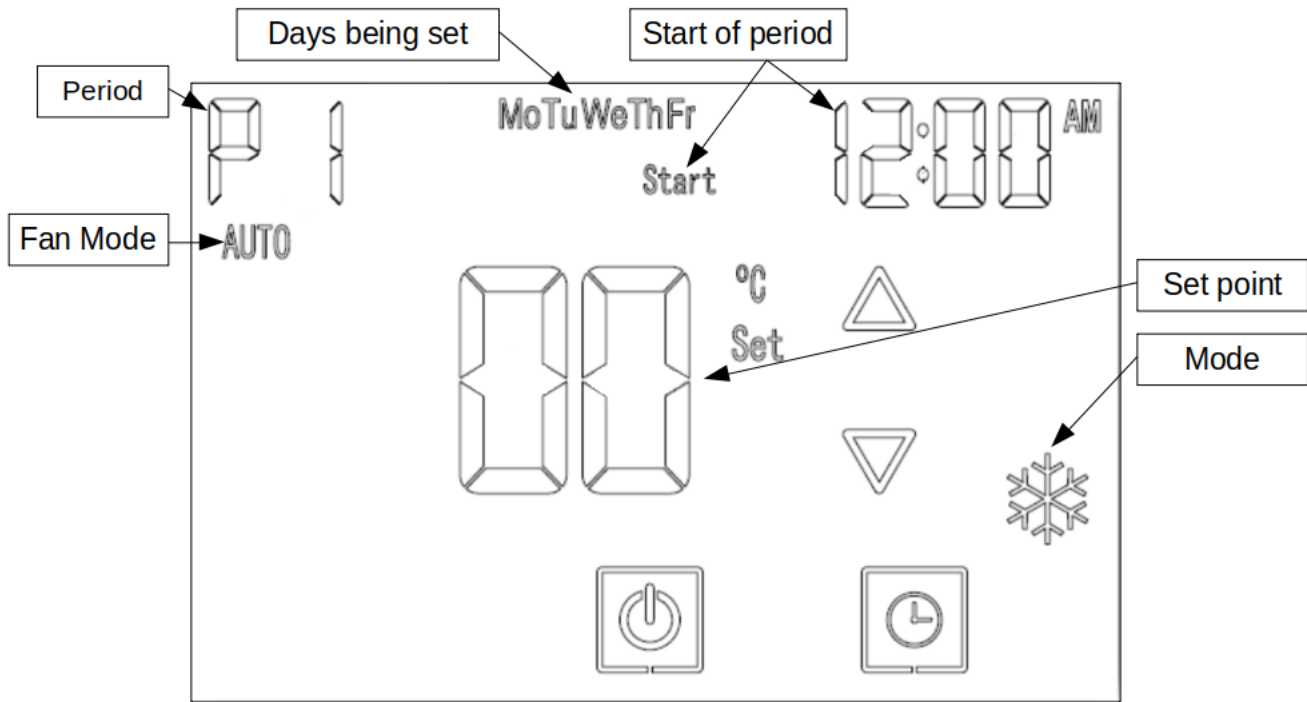
To set the time and day, press the  button. CLock will be displayed. Use the  and  buttons to adjust the blinking value. Press  to switch between setting the hours, minutes and day.


Once completed, press  to return to the main display.

2.4 Schedule Setting

By default, the scheduling mode is disable. Refer to section 3 to set the desired schedule type.

When scheduling is enabled, press  to enter clock configuration (see section 2.3). Using the  button to skip over the clock parameters, the schedule paramaters will be displayed.




Start is displayed indicating the start time of the current period is being set. Use \triangle and ∇ to adjust the blinking parameter, and use  to advance to the next one, in this order:

1. Period start time (hours)
2. Period start time (minutes)
3. Operating mode during the period
4. Fan mode
5. Modulation (unused)
6. Set point

The blinking cursor will cycle through these parameters for all periods, and for all day groups.


Once the schedule is set, to enter this mode press and hold  at the main display.



2.5 Alarms

The thermostat will display  when an alarm is raised. The alarm code will be shown in the top-left corner.


Display Code	Description	Action
FIL	Air filter cleaning reminder	Clean or replace the air filter, and reset the filter counter setting (P41)
FI	Defective temperature sensor	Replace the thermostat
EE	Communication error	Check equipment and wiring

3 Thermostat Settings

Press  to access the settings menu.


Use  and  to change the parameter value.

Use  to move to next parameter and  to move to the previous parameter.

Use  to exit to the main display.


Item	Description	Range	Default	Note
P1	Temperature adjustment	-6 to 6°C / -12 to 12°F	0°C / 0°F	
P2	Min. set point	5 to 35°C / 41 to 95°F	10°C / 50°F	Cooling
P3	Max. set point	5 to 35°C / 41 to 95°F	30°C / 86°F	Heating
P22	Continuous fan ratio	30 to 70%	30%	
P30	Beeper	0 / 1	1	0: Disabled 1: Enabled
P40	Air filter counter	0 - 999 hours	-	Read-only
P41	Air filter counter reset	0 / 1	0	0: Do not reset 1: Reset
P42	Air filter alarm delay	0 - 999 hours	0	0: Disabled
P49	Heat/cool switchover	0 to 10°C / 0 to 20°F	2.0°C / 4.0°F	Auto mode only
100	Dimming	0 / 1	1	0: Disabled 1: Enabled
102	Dimming brightness	0 to 90%	10%	
105	Brightness	50 to 100%	100%	
107	Schedule program	0 - 4	0	0: Disabled 1: 1 day 2: 5+2 days 3: 5+1+1 days 4: 7 days
108	Day periods	0 / 1	1	0: 2 periods 1: 4 periods
109	Clock format	0 / 1	0	0: 12h 1: 24h
122	Cool modulation speed	0 - 100 sec.	3 sec.	
123	Heat modulation speed	0 - 100 sec.	3 sec.	
124	Balance point	-30 to 15°C / -22 to 59°F	-20°C / -4°F	
125	Aux. heat temp. diff.	-1 to -4°C / -1 to -7°F	-1.5°C / -2°F	
187	Humidity or outdoor temp. display	0 / 1	1	0: Disabled 1: Enabled
191	Display selection (187)	0 / 1	0	0: Humidity 1: Outdoor temperature
194	Humidity deadband	2 to 20%	5%	
195	Humidity adjustment	-9 to 9%	0%	
197	Humidity set point	20 to 100%	45%	
199	Temperature unit	0 / 1	1	0: °F 1: °C
200	Factory reset	0 / 1	0	0: Do not reset 1: Reset


4 Equipment User Menu

Equipment operating information and options can be accessed by long pressing the  button.

Use  and  to select the menu item, or to change the parameter value.

Use  to confirm the selection.

Use  to return to the upper menu.

Use  to exit to the main display.

On entering this menu, you will have to select the equipment to be accessed.

Display	Description
F	Furnace
HP, RC or E	Interface board

Each Equipment User Menu has submenus to divide the information into categories. Each piece of equipment has a different set of submenus, with different parameters. The submenus and the information they provide are represented in the following tables.

A **X** in the following tables indicate alpha or numerical character. For more information on each menu item, refer to the manual of the corresponding equipment.

Chinook Gas Furnace User Menus

Main Menus		
Code	Menu	Description
S1 ₁ , S2 ₂	Status	Used to display equipment information
2 ₃	2 Week History	Display operating info. of last 2 weeks
L1 ₄	Life History	Display total operating info.
FA ₅	Fault History	Display info. on last 6 error codes
IF ₆	Unit Info	Display model and serial numbers
SE ₇	Setup	Adjustable settings

ST1 - Status 1			
Code	Parameter	Indications	Comments
R_1	Main Limit	Closed , Open	Main limit control status
r_2	MRLC Input	Closed , Open	Main reset limit control status
HR_3	HALC Input	Closed , Open	Heat assist limit control status
Id_4	IDM Output	Off , Lo , Hi	Inducer output status
FU_5	Furn Lo Pr Sw	Closed , Open	Low pressure switch status
FU_6	Furn Hi Pr Sw	Closed , Open	High pressure switch status
GA_7	Gas VLV Prcnt	XXX %, Off	Gas valve % open
GA_8	Gas VLV Relay	Lo , Hi , On, Off	Gas valve control output status
FL_9	Flame	Off , Marginal , Good , Unexpected	Status of flame sensor
bl_0	Blower CFM	CFM XXXX	Furnace blower CFM

St ₂ - Status 2			
Code	Parameter	Indications	Comments
dE_1	Mode	Mod Heat , Lo Heat , Hi Heat , AC1, AC2, Fan, HP1, HP2, Off	Operating mode of the system
o_2	Motor Mfgr	Regblt, Emerson	Blower motor manufacturer
rP_3	Motor RPM	RPM	Blower motro RPM
R_4	Maximum CFM	CFM XXXX	Maximum CFM blower provides
bl_5	Blower CFM	XXX	Blower airflow
Ho_6	HUM Output	On , Off	Humidifier output relay status
Eo_7	EAC Output	On , Off	Electronic air cleaner output relay status

Z ₃ - 2 Week History			
Code	Parameter	Indications	Comments
o_1	2wk Mod HT Hrs	XXX	2 Week Modulating Heat Hours of Operation
o_2	2wk Mod HT Cycls	XXXX	2 Week Modulating Heat Cycles
bl_3	2wk Blower Hrs	XXX	2 Week Blower Hours of Operation
bl_4	2wk Blower Cycles	XXXX	2 Week Blower Cycles

Ll ₄ - Life History			
Code	Parameter	Indications	Comments
to_1	Total Days Pwrđ	XXXX	Total days control has been powered
o_2	Mod HT Hrs	XXX	Modulating Heat Hours of Operation
o_3	Mod HT Cycls	XXXX	Modulating Heat Cycles
bl_4	2wk Blower Hrs	XXX	Blower Hours of Operation
bl_5	2wk Blower Cycles	XXXX	Blower Cycles

FA ₅ - Fault History		
Fault Code	Fault Occurred	Comments
XXX	Days XX	Display up to 6 faults; Days indicates how many days ago the fault occurred
Clear Faults (CF _x)	0 (no) , 1 (yes)	

IF₆ - Unit Info			
Code	Parameter	Indications	Comments
n ₀	Model Number	XXXX-XXXXXXXXXXXXXXXXXX	Unit model number
S _{n2}	Serial Number	XXXXXXXXXXXXXXXXXXXXXX	Unit serial number
S _{o3}	Software Vers	XXXXXX	Control software version

SE₁ - Setup			
Code	Parameter	Indications	Comments
HE ₁	Heat Rise Adjust	55F, 65F	Adjust heat temperature rise
I ₂	Min Heat Adj %	-15, -7, 0, 7, 15	Airflow adjustments at 40% firing rate
R ₃	Max Heat Adj %	-15, -7, 0, 7, 15	Airflow adjustments at 100% firing rate
FI ₄	Fixed Fire Rate	Off - 100%	Heat at fixed rate
rE ₅	Reset All Dflts	0 (no) , 1 (yes)	Reset furnace settings to factory defaults

Supreme Electric Furnace User Menus

SE₁ - Status			
Code	Parameter	Indications	Comments
CF ₁	CFM	XXXX CFM	Current airflow
C ₂	CMD	XXX %	% of active electric elements
vE ₃	Version	X_X_X	Firmware version

FA₂ - Fan			
Code	Parameter	Indications	Comments
Co ₁	Cont Fan Ratio	0-100, FC*	% CFM when fan on
rl ₂	Rise	20-80, FC*	Temperature rise (°F)

AU₃ - Autobackup			
Code	Parameter	Indications	Comments
En ₁	Enabled	0 (no) , 1 (yes)	If autobackup is enabled
dE ₂	Mode	Normal, Fusion	Autobackup mode
tt ₃	Wait Time	0-120, FC*	Wait time before autobackup (min)
UP ₄	Update Delay	0-30, FC*	Time before updating autobackup command (sec)
SE ₅	Set PT Offset	0.0-3.5, FC*	Minimum offset with setpoint for autobackup (°F)
Lo ₆	Lockout temp	-20-20, FC*	Furnace lockout temperature (°C)
rl ₇	Rise	20-80, FC*	Temperature rise (°F) for autobackup

SY₄ - System			
Code	Parameter	Indications	Comments
od ₁	AC/HP ON Delay	005-120, FC*	Fan delay after AC/HP start (sec.)
fd ₂	AC/HP OFF Delay	005-240, FC*	Fan delay after AC/HP stop (sec.)
rP ₃	Ratio Max Pwr	20-100, FC*	% of max. power of the furnace
dU ₄	Dual Heat	NOR, HP, DOUB	Dual heat option

rE₅ - Reset			
Code	Parameter	Indications	Comments
FA ₁	Factory Values	0 (no) , 1 (yes)	Reset furnace settings to factory defaults

* **FC** values will be shown if a more precise value has been configured at the furnace control (refer to the Supreme furnace manual).

Interface Board User Menus (Alizé)

St₁ - Status			
Code	Parameter	Indications	Comments
Co ₁	Comp Speed	XX Hz	Compressor frequency
FA ₂	Fan Speed	XXX RPM	Outdoor fan speed
Co ₃	Coil Temp	XX dF	Indoor coil temperature (°F)
tU ₄	Tube Temp	XX dF	Outdoor coil temperature (°F)
Co ₅	Comp Temp	XX dF	Compressor discharge temperature (°F)
o ₆	Model	XXXXX	ODU model
vE ₇	Version	XX_XX_XX	Interface board firmware version

Et₂ - CFM/TON			
Code	Parameter	Indications	Comments
HE ₁	Heat CFM/TON	250-750	CFM/TON in heating
Co ₂	Cool CFM/TON	250-750	CFM/TON in cooling
dr ₃	Dry CFM/TON	250-750	CFM/TON in dehumidification

dE₃ - Defrost			
Code	Parameter	Indications	Comments
dE ₁	Defrost Fan %	0-100	% Fan during defrost
dE ₂	Defrost Heat	0 (no) , 1 (yes)	Use aux. heating during defrost. If yes, the Defrost Fan % option will set the heat % of the furnace.
FO ₃	Force Cycle %	0 (no) , 1 (yes)	Force defrost cycle

Er₄ - ERV/HRV			
Code	Parameter	Indications	Comments
FA ₁	Fan %	20-55	Fan speed for ERV/HRV

Sy₅ - Display			
Code	Parameter	Indications	Comments
tE ₁	Temp adj.	-5-5	Outdoor temperature adjust (°C)
Pr ₂	Priority	Cool, DH	Prioritize cooling or dehum
SU ₃	Over-cooling allowed	0-3	For dehum requests (°C)
tE ₄	Test maximum	Off, Fan, Cool, Heat	Run at max. for 60 minutes

rE₆ - Reset			
Code	Parameter	Indications	Comments
FA ₁	Factory Values	0 (no) , 1 (yes)	Reset settings to factory defaults