

SEVEN-SEGMENT DISPLAY - CONFIGURATION, CODES AND ALARM GUIDE

Unit Selection Code for Outdoor Control		
If the seven-segment display shows three (3) horizontal lines, the unit selection code will need to be programmed. Press and hold the button until the P U menu option is displayed, release button. The seven-segment display will string the selected as per example in diagram below. When the desired unit selection code appears, press and hold the button until it stops flashing and release.		
Unit Code	Unit Type	Unit Model
2	2-Ton HP	XP25-024
4	3-Ton HP	XP25-036
6	4-Ton HP	XP25-048
7	5-Ton HP	XP25-060
9	2-Ton AC	XC25-024
11	3-Ton AC	XC25-036
13	4-Ton AC	XC25-048
14	5-Ton AC (-01 rev.)	XC25-048
15	5-Ton AC (-02 rev. & later)	XC25-060

PUSH-BUTTON OPERATION

Outdoor control must be in **IDLE** mode (no heating or cooling operation)

To enter mode options, push and hold push button next to seven-segment display until **DASH** symbol appears. Immediately release the button. Once dash starts blinking, proceed to next step.

Push and hold button until mode selection displays on the seven-segment display (**A, F, P, U, d, F, E** or **c**). Immediately release the button, proceed to next step.

Push and hold button until the selection stops blinking, then release button. The seven segment will string the selected mode and the outdoor control will perform the selected function.

Idle mode — decimal blinks at 1 Hertz > 0.5 second ON, 0.5 second OFF. Idle mode is when the system is energized with no demand.

Display Symbol or Character	Display	Fan Test and Display String Option
-	Idle mode — decimal blinks at 1 Hertz > 0.5 second ON, 0.5 second OFF	
Ⓒ or H	Indicates either cooling (Ⓒ) or heating (H) mode and demand percentage.	
d F	Code displays when system is in defrost mode (heat pump only) - unit must be running in heating mode, outdoor ambient must be below 65°F and outdoor coil temperature must be below defrost termination temperature set point.	
F	Indicates outdoor fan RPM speed.	Outdoor control must be in Idle mode: To enter fan test option - F mode, push and hold button until solid - appears, release button. Display will start blinking. Within 10 seconds, push and hold button until required symbol F displays, release button. Display will start blinking. Within 10 seconds, push and hold button until display stops blinking, release button. Outdoor control outputs DC voltage on PWM and COM terminals. Outdoor fan will cycle ON for 10 minutes at 490 RPM. To exit test - Push and hold button until three horizontal bars display. Release button, outdoor fan will cycle OFF .
A	A in the display string represents the ambient temperature in °F at the sensor on the outdoor unit. In display configuration mode, it also represents the option for enabling both coil and liquid line temperature on the seven-segment display string.	Outdoor control can be in Idle or demand mode: To enter display configuration option - A mode, push and hold button until solid - appears, release button. Display will start blinking. Within 10 seconds, push and hold button until required symbol A displays, release button. Display will start blinking. Within 10 seconds, push and hold button until display stops blinking, release button. Display will string active error (E) code(s), ambient (A), outdoor coil (c) and liquid (L) temperatures in Fahrenheit. NOTE: If button is not pushed in the 10 second time period, the outdoor control will exit the test mode. If this occurs, test mode must be repeated.

Error Code Recall Mode (Note - outdoor control must be in idle mode)

E	To enter error code recall mode, push and hold button until solid E appears, then release button. Outdoor control will display up to 10 error codes stored in memory. If E □ □ □ is displayed, there are no stored error codes.
— — —	To exit error code recall mode push and hold button until solid three horizontal bars appear, then release button. <i>Note - Error codes are not cleared.</i>
c	To clear error codes stored in memory, continue to hold push button while the 3 horizontal bars are displayed. Release push button when solid c is displayed.
c	Push and hold for one (1) second, release button. Seven-segment will display □ □ □ and exit error recall mode.

Alarm Codes (Note: For codes that are not listed here, please refer to the Installation and Service Procedure manuals.)

E 105	The outdoor control has lost communication with either the thermostat or indoor unit. Check for mis-wired and/or loose connections between the thermostat, indoor unit and outdoor unit. Check for a high voltage source of noise close to the system. Automatically clears when error is corrected.
E 120	There is a delay in the outdoor unit responding to the system. This is caused by a delay in the outdoor unit responding to the thermostat. Check all wiring connections. Automatically clears when error is corrected.
E 124	The icomfort WI-FI™ thermostat has lost communication with the outdoor unit for more than 3 minutes. Check the wiring connections, ohm wires and unplug 6-pin connector from outdoor control and then reconnect. Automatically clears when error is corrected.
E 125	There is a hardware problem with the outdoor control. Check the wiring connections, ohm wires and unplug 6-pin connector from outdoor control and then reconnect. Automatically clears when error is corrected.

E 131	The outdoor control parameters are corrupted. Replace outdoor control.
E 132	Internal software error. Replace outdoor control.
E 180	The outdoor unit ambient temperature sensor has malfunctioned. Use sensor check out procedure in the applicable Installation and Service Procedure manuals to troubleshoot sensor code. As a result the outdoor unit control will not perform low ambient cooling. Automatically clears when error is corrected.
E 345	The O relay on the outdoor unit control has failed. Either the pilot relay contacts did not close or the relay coil did not energize.
E 409	Outdoor control's secondary voltage is 18VAC or less. If voltage raises above 20 VAC for 2 seconds, the moderate code is cleared. If the voltage remains below 18VAC for 10 minutes or longer, the system locks out. See Note ² .
E 410	The outdoor unit low pressure switch has open. Confirm that the system is properly charged with refrigerant. Check TXV, indoor unit blower motor, dirty filters or clogged refrigerant filter. Confirm that the evaporator coil is clean. Automatically clears when error is corrected.
E 411	The low pressure switch has opened 5 times within one hour. As a result, the outdoor unit is locked out ² .
E 412	The outdoor unit high pressure switch has open. Check condenser fan motor, TXV, indoor unit blower motor, stuck reversing valve or clogged refrigerant filter. Automatically clears when error is corrected.
E 413	The high pressure switch has opened 5 times within one hour. As a result, the outdoor unit is locked out ² .
E 416	The outdoor coil sensor has malfunctioned. Use sensor check out procedure in the applicable Installation and Service Procedure manuals to troubleshoot sensor code. As a result the outdoor unit control will not perform defrost. Automatically clears when error is corrected.
E 422	Compressor top cap switch exceeding thermal limit. Check condenser fan motor, TXV, indoor unit blower motor, stuck reversing valve or clogged refrigerant filter. Automatically clears when error is corrected ² .
E 423	The inverter has detected a circuit problem ³ . If this occurs 10 times during a one hour period the outdoor unit is locked out ² .
E 424	The liquid line temperature sensor has malfunctioned. Use sensor check out procedure in the applicable Installation and Service Procedure manuals to troubleshoot sensor code.
E 425	Outdoor control has increased minimum compressor speed to allow for proper oil return due to low ambient temperature.
E 426	Ten inverter alarms have been detected during a one hour period. As a result, the outdoor unit is locked out ² .
E 427	The inverter has detected a DC peak fault condition ³ . If this occurs 10 times during a one hour period, the outdoor unit is locked out ² .
E 428	The inverter has detected a high main input current condition ³ . If this occurs 5 times during a one hour period, the outdoor unit is locked out ² .
E 429	The inverter has detected a DC link low voltage condition ³ . If this occurs 10 times during a one hour period, the outdoor unit is locked out ² .
E 430	Compressor start failure ³ . If this occurs 10 times during a one hour period, the outdoor unit is locked out ² .
E 431	The inverter has detected a PFC circuit over-current condition ³ . If this occurs 10 times during a one hour period, the outdoor unit is locked out ² .
E 432	The inverter has detected a DC link high voltage condition. If this occurs 10 times during a one hour period, the outdoor unit is locked out ² .
E 433	The inverter has detected a compressor over-current condition ³ . If this occurs 5 times during a one hour period, the outdoor unit is locked out ² .
E 434	Outdoor control has lost communications with the inverter for greater than 3 minutes. Outdoor control will stop all compressor demands, recycle power to the inverter by de-energizing the contactor for 2 minutes. Automatically clears when error is corrected.
E 435	Inverter internal error. Outdoor control will cycle power to inverter by de-energizing the contactor for 2 minute. Outdoor control will cycle power to the inverter 3 times and then outdoor unit is locked out ² . After 3 attempts, the outdoor unit is locked out ² . If error is persistent, replace inverter.
E 436	Inverter heat sink temperature exceeded limit ³ . If this occurs 5 times during a one hour period, the outdoor unit is locked out ² .
E 437	Heat sink temperature sensor fault has occurred (temperature less than -4°F or greater than 264°F after 10 minutes of operation) ³ . If this occurs 5 times during a one hour period, the outdoor unit is locked out ² .
E 438	The inverter has detected a PFC circuit over-current condition ³ . If this occurs 10 times during a one hour period, the outdoor unit is locked out ² .
E 439	Input current is approaching a high limit. The compressor will automatically slow down to reduce input current. The outdoor control will set indoor CFM and outdoor RPM to values according to demand percentage from room thermostat.
E 440	Heat sink temperature is approaching limit. The compressor speed will automatically slow down to reduce heat-sink temperature. The outdoor control will set indoor CFM value according to demand percentage from room thermostat and will set outdoor RPM to maximum.
E 441	Compressor current is approaching high limit. The compressor speed will automatically slow down to reduce compressor current. The outdoor control will set indoor CFM and outdoor RPM to values according to demand percentage from room thermostat.
E 442	The top cap switch has opened 5 times within one hour. As a result, the outdoor unit is locked out ² .
E 443	Incorrect appliance unit size code selected. Check for proper configuring under unit size codes for outdoor unit on configuration guide or in installation instructions. If replacing inverter, verify inverter model matches unit size. The alarm/fault clears after the correct match is detected following a reset. Remove the thermostat from the system while applying power and reprogramming.
E 600	Compressor has been cycled OFF on utility load shedding (24VAC power applied to L and C terminals) ¹ .
E 601	Outdoor unit has been cycled OFF on low temperature protection ¹ .

1 - Installation and Service Procedure for more detailed information on these codes.
 2 - To clear lockout, unplug 6-pin connector wither terminal designations (**R i+ i- C Y1 O**) from outdoor control and then reconnect.
 3 - Error will clear itself after 3 minutes.