

Fault Code Displays

If an operational failure occurs, such as program error, a flashing fault code message will be displayed. Fault code displays are canceled by pressing the POWER key.

Fault Code	Indication	Result
PE	Software program error.	Shutdown

Humidistat Option

If the air handler has an electric heater, a humidistat can be connected to the Power/Logic circuit board so that the control will monitor humidity as well as the cabin temperature. Note that this is different than the Dehumidification Mode, which simply runs the unit in cooling for a pre-programmed period of time.

To operate the Humidistat Mode, the Aux Heat program must be enabled, and the system must be in the Auto Switchover Mode. A comfortable humidistat setting is 60% relative humidity.

The operation of the system in the Humidistat Mode is as follows:

- If the humidistat senses that the air is dry (below the humidistat setting), the air handler responds as in the Automatic Switchover mode above.
- If the humidistat senses moist air (above the humidistat setting) AND the loop water is cold (change-over thermostat is open), the air handler bypass valve will open to cool (the COOL indicator dot will light) and dehumidify the air, regardless of the cabin temperature.
- If, during the cooling/dehumidifying stage, the cabin temperature drops below setpoint, the electric heater will be energized to reheat the air to maintain the cabin temperature (the HEAT/AUX HEAT indicator dot will light and the Cool indicator dot will flash).
- If the loop water temperature is hot, the unit cannot dehumidify, so the system will operate as in the Auto Switchover Mode above (regardless of the humidistat).

Note: Procedures listed herein are for the SMXht keypad/display operating with an SMXII-HV power/logic board.

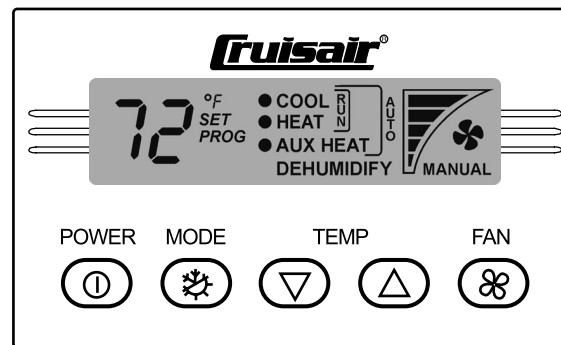
See the SMX II Control Systems (TW) Installation/Operation manual for more detailed instructions and information.



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SMXht Keypad/Display for TW Basic Operation & Programmer's Pocket Guide

SMX II Series Control Systems for Tempered Water



Basic Operation

Turning the System On:

Press the POWER or MODE keys to turn the system on. In three seconds, the system will start operating in whatever mode it was running prior to the last shut down. Press the MODE key prior to three seconds (while the display is flashing) to change mode before system starts, or any time to change the mode while the system is on. The modes available are: Run, Heat/Aux Heat, Auto Switchover, or Dehumidification Mode.

Modes and Their Indicators:

Run Mode will automatically switch from COOL to HEAT as required by setpoint and depending on tempered water loop temperature. A solid dot will light up to indicate that the bypass valve is open in that particular mode. The Heat/Aux Heat and Auto Switchover Modes should only be used when electric heat is installed. Setting the Heat/Aux Heat Mode will energize the electric heater (and open the bypass valve if there is hot water available) as indicated by the solid dot next to the word HEAT. When the Auto Switchover Mode is selected, the system will automatically change from COOL to HEAT/AUX HEAT as required by setpoint. NOTE: Change the Aux Heat program #23 to "--" if no electric heater is installed.

Selecting the Setpoint:

Press the Up or Down Arrow keys to adjust the setpoint (press and hold keys to scroll); wait three seconds after powering up system. The word SET will appear in the display while setpoint is being adjusted. The setpoint range is 55-99°F (10-40°C). Inside cabin temperature is continuously displayed.

Adjusting the Fan Speed:

The FAN key is used to adjust the fan speed while in Manual Fan Speed Mode and to switch from Manual to Automatic Fan Speed Modes. The fan may be run manually whether the system is on or off. The word MANUAL appears in the display while in that mode. Automatic Fan Speed Mode may be operated only when the system is on. Fan behavior also depends on how the Fan Mode function is programmed - "C" for continuous or "I" for intermittent running with the bypass valve (see Programming below).

Dimming the Display:

Press the MODE and Up Arrow keys simultaneously and repeatedly to select the display brightness setting.

Backlight Mode:

While in the Sleep Mode (backlight is off) press any button to light the display, and then operate as usual.

Important Memory Function:

After changing modes, programming settings, setpoint, etc., wait at least 30 seconds before turning off main power supply in order for new settings to be maintained in memory.

Programming

SMXht keypad/display must be in the Off Mode prior to entering Programming Mode; pressing the POWER key turns the display off or on. Once in the Off Mode, then:

1. Simultaneously press and hold the MODE and Down Arrow keys for three seconds. Successful entry into the Programming Mode is indicated by the word "PROG" and a flashing "1" in the display.
2. Use the Up or Down Arrow keys to scroll until the desired program Function Number is displayed.
3. Press the MODE key to enter the desired function. The current value and the word "PROG" will be displayed.
4. Use the Up or Down Arrow keys to change the value of that program.
5. Press the POWER key to save the new settings, exit the Programming Mode, and return to the Off Mode.

NOTE: If SMXht is programmed for displaying °C (rather than the factory setting °F), then functions 3 & 4 should be adjusted. For function 3, the factory setting of 12 (or 1.5°F) should be changed to 7 (7/8 = 0.8°C). For function 4, the factory setting of 4 (or 0.5°F) should be changed to 2 (2/8 = 0.3°C). For these functions, 1°F (or 8) = 0.6°C (or 5).

See Programming Summary Table

Programming Summary Table For SMXht Keypad/Displays

Programmable Function	Function Number	Factory Setting	Range
this function is not used for TW	1	n/a	n/a
Fahrenheit/Celsius	2	F	F or C
Bypass Valve Differential	3	12 (12/8 = 1.5°)	2 to 31
Fan Response Differential	4	4 (4/8 = 0.5°)	2 to 31
Low Fan Speed	5	32	2 to 57
High Fan Speed	6	80	41 to 99
Fan Mode	7	C	C or I
AC Line Voltage Calibration	8	-	± 1%
Temperature Calibration	9	-	± 1%
HU (Humidity) Precirculation	10	10 (min)	0 to 30 min
HU Dehumidification	11	30 (min)	10 to 60 min
HU Time Period	12	12 (hrs)	2 to 16 hrs
Variable or 2-Speed Fan (2-Speed Fan for SMX Net only)	13	F1 (variable)	F1 or F2 (2-Speed)
High to Low Speed Adjustment (2-Speed Fan for SMX Net only)	14	38	00 to 6E
Software Version	15	Current Version	
Software Revision	16	Current Revision	
Changeover Thermostat Test	17	OP = Open (Cool) CL = Closed (Heat)	n/a
Humidistat Test	18	OP = Open (Humid) CL = Closed (Dry)	n/a
LED Segment Test	19	Lights all LED Segments	n/a
Backlight Mode	20	On	On = continuous SL = sleep mode dE=DX or CH=TW (do not change)
Select DX or TW power/logic board	21	CH	II or nE (Net) (do not change)
Select SMXII power/logic board. (SMX Net will be available in future)	22	II	AH or "--"
Aux Heat	23	AH	

Factory Memory Reset

To restore all programming functions to the Factory Setting, first switch to Off Mode and then simultaneously press and hold the POWER and MODE keys. Hold keys for three seconds while "00" flashes in the display. Successful memory reset is indicated by a "1" flashing back and forth across the display; release keys. System returns to the Off Mode.

NOTE: Performing a Factory Memory Reset will not change the value of Function Numbers 21 & 22. Also note that Function Number 2, which displays Fahrenheit or Celsius, reverts back to °F each time.