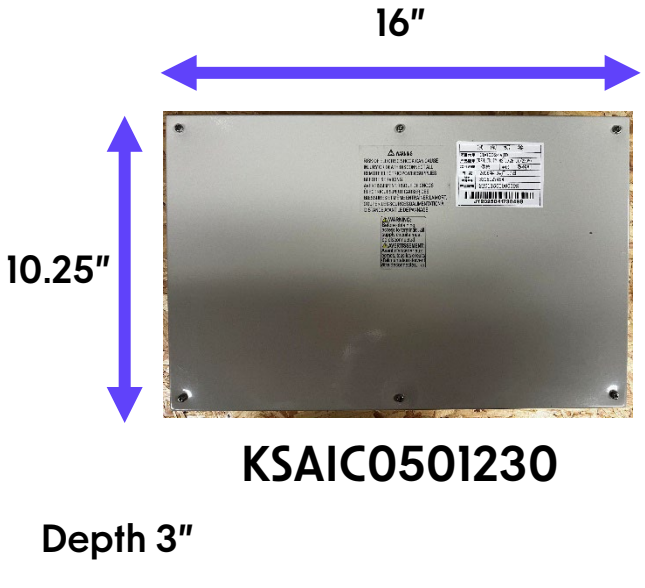
Controls

Use any compatible 24-Volt stat

24-Volt Interface Kit KSAIC0501230

- This kit is used to connect a Single zone or Multi-zone Ductless System to a standard 24-Volt wall style thermostat.
- For Multi-zone systems, any combination of Wireless, Wired and 24-Volt Interface Kits on each of the indoor units can be used.
- Keeps the Inverter Compressor operating as a Variable Speed System.
- For units with special functions such as louver "Swing", OEM wireless will still be required.



ecobee

Nest

Honeywell

Cielo

Controls

24-Volt Interface Kit KSAIC0501230 (cont.)

- What you get
- One per single zone
- For Multi's, each IDU with a 24-Volt stat will require one.

Interface Cover

501 Interface

T2 A-Coil Thermistor

T1 Room Air Thermistor

T1 Room Air Thermistor Extension Cable

Mounting kit

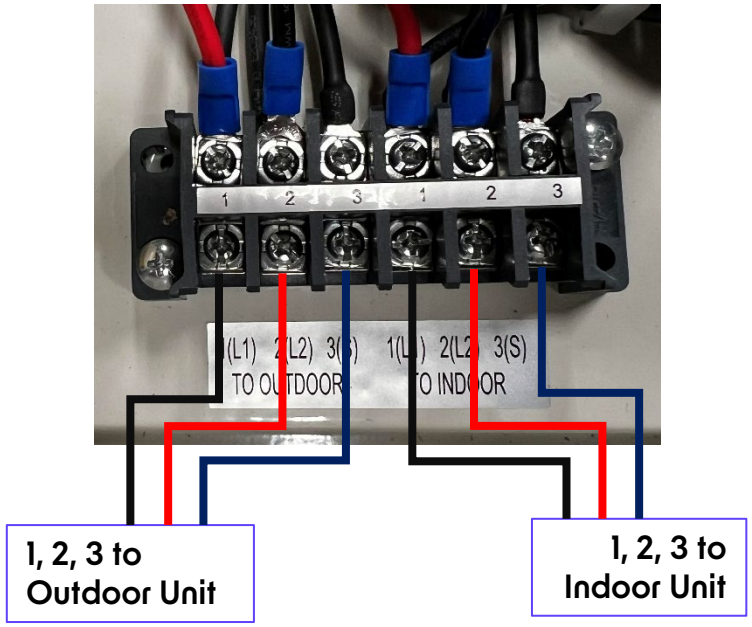
Controls

24-Volt Interface Kit KSAIC0501230 (cont.)

4-Wire Systems – 1, 2, 3 Wiring

1. Connect 14/4 (1, 2, 3, G) Stranded power/comm. wiring from the outdoor unit to the 501 Interface.
2. Connect 14/4 (1, 2, 3, G) Stranded power/comm. wiring from the 501 Interface to the indoor unit.

High Voltage Communication Connections



Power supply to ODU not shown.

Controls

24-Volt Interface Kit KSAIC0501230 (cont.)

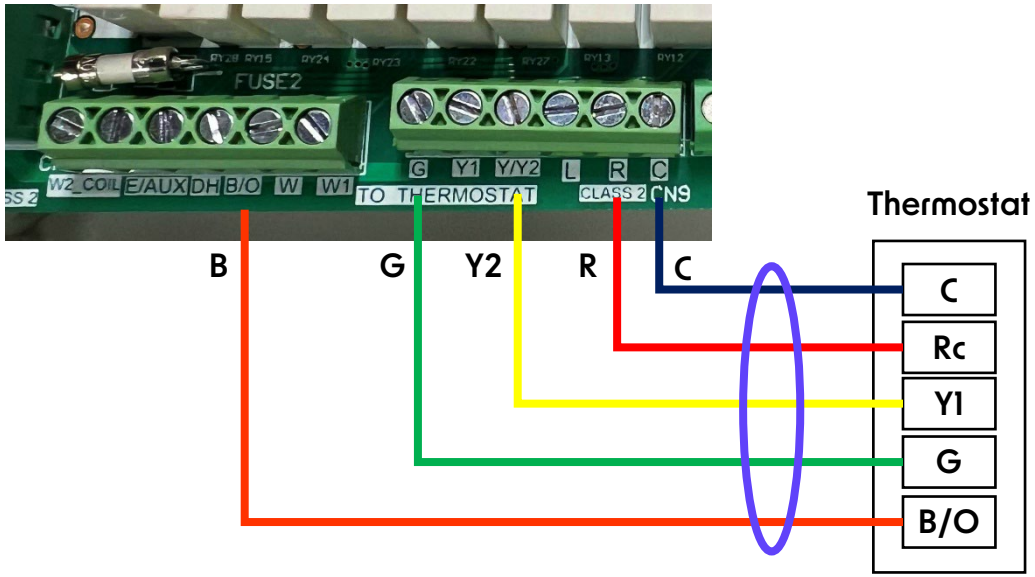
4-Wire Systems – 1, 2, 3 Wiring (end)

Terminal	Purpose
B/O	Reversing Valve (on Heat)
W	Heat
G	Fan Control
Y/Y2	Heat Pump / Cooling
R	24-Volt Power
C	24-Volt Common

3. Thermostat wire indoor unit to stat: minimum 5-wire, 18 gauge solid or stranded.
4. Do not use included T1 or T2 thermistors.
5. Set thermostat up based on wire diagram used.

Heat Pump Wiring Diagram

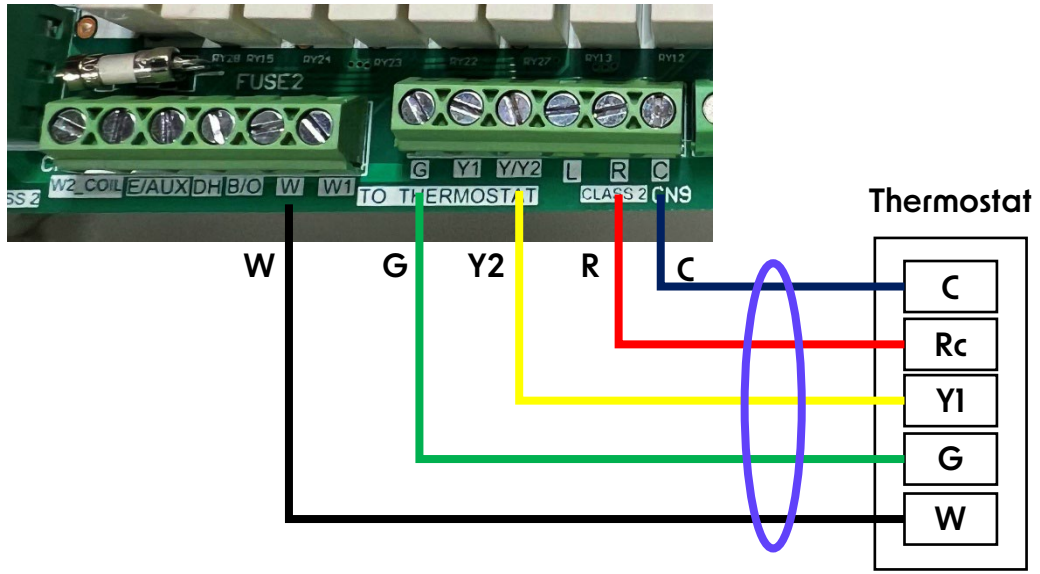
Thermostat Connections



1 Stage Heat Pump & 1 Stage Cool

Conventional Wiring Diagram

Thermostat Connections



1 Stage Heat & 1 Stage Cool

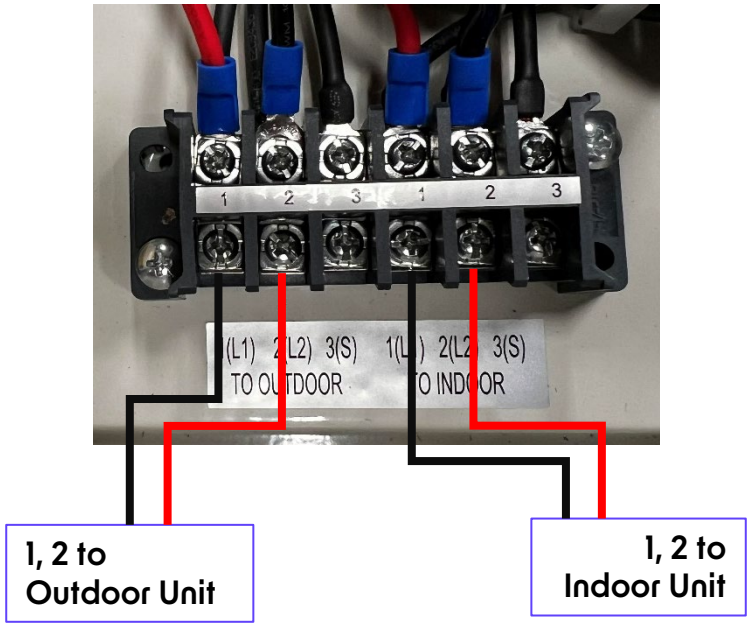
Controls

24-Volt Interface Kit KSAIC0501230 (cont.)

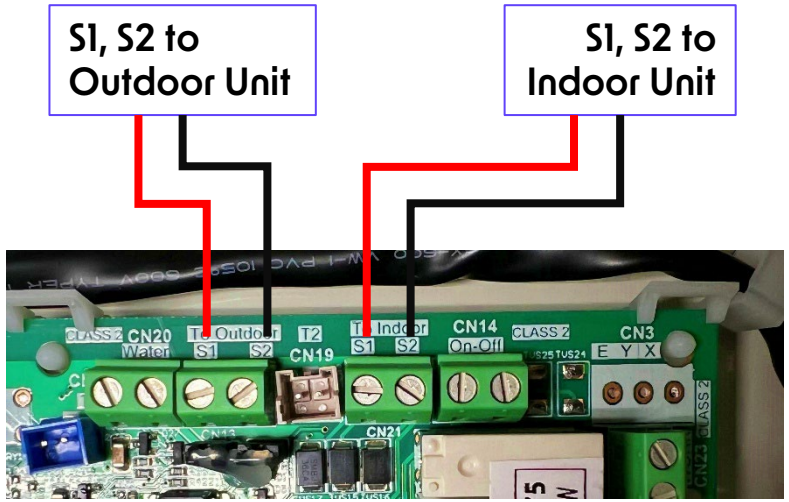
2-Wire Systems – S1, S2 Wiring

1. Connect 14/3 (1, 2, G) Stranded power/comm. wiring from the outdoor unit to the 501 Interface.
2. Connect 14/3 (1, 2, G) Stranded power/comm. wiring from the 501 Interface to the indoor unit.
3. Connect 16/2 (S1, S2) Stranded-shielded comm. wiring from the outdoor unit to the 501 Interface.
4. Connect 16/2 (S1, S2) Stranded-shielded comm. wiring from the 501 Interface to the indoor unit.

High Voltage Communication Connections



Low Voltage Communication Connections



Power supply to ODU not shown.

Controls

24-Volt Interface Kit KSAIC0501230 (cont.)

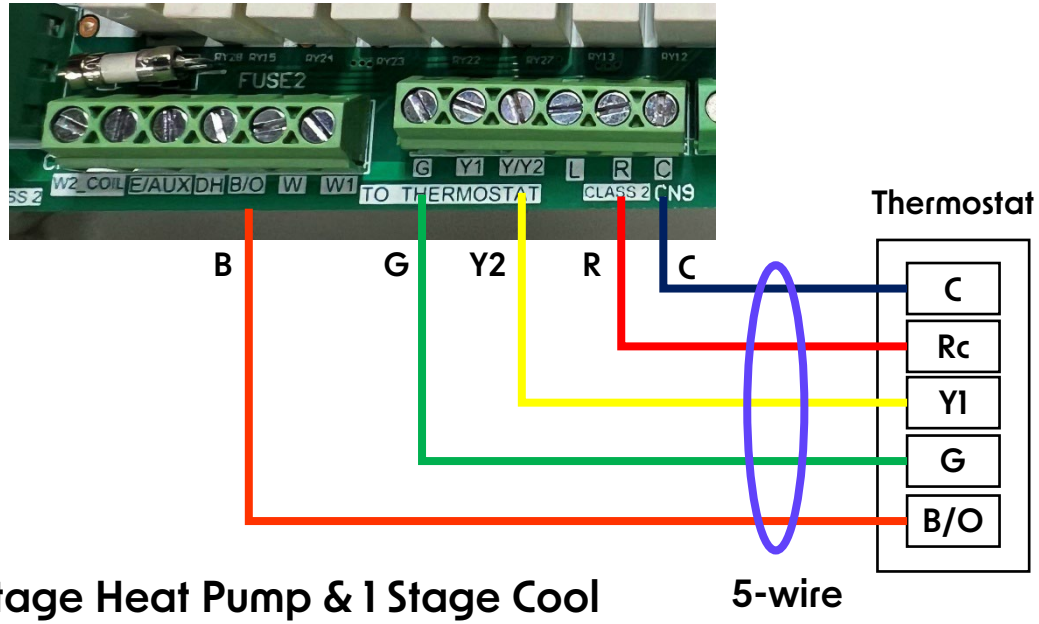
Terminal	Purpose
B/O	Reversing Valve (on Heat)
W	Heat
G	Fan Control
Y/Y2	Heat Pump / Cooling
R	24-Volt Power
C	24-Volt Common

2-Wire Systems – S1, S2 Wiring (end)

5. Thermostat wire indoor unit to stat: minimum 5-wire, 18 gauge solid or stranded.
6. Do not use included T1 or T2 thermistors.
7. Set thermostat up based on wire diagram used.

Heat Pump Wiring Diagram

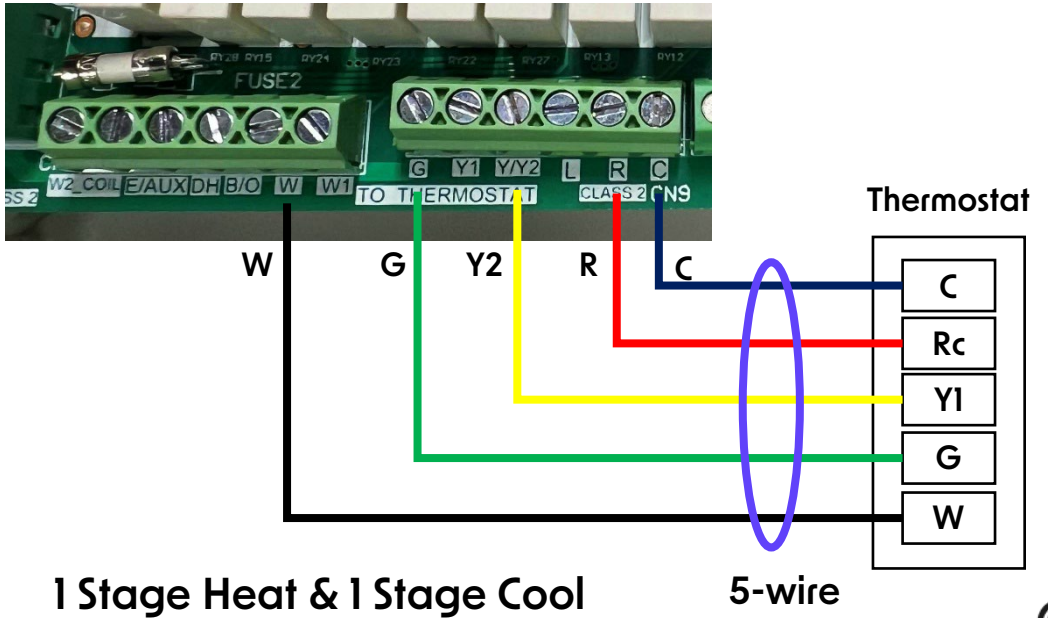
Thermostat Connections



1 Stage Heat Pump & 1 Stage Cool

Conventional Wiring Diagram

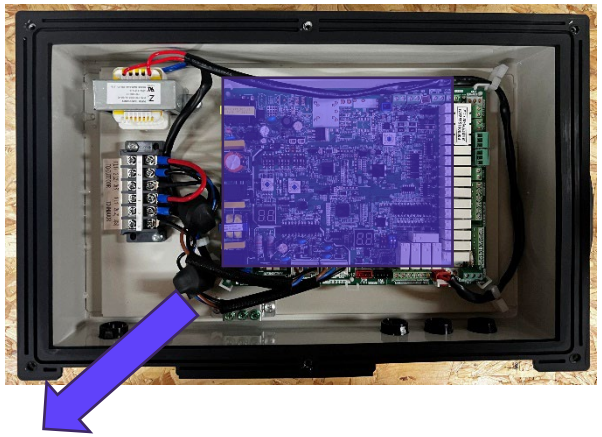
Thermostat Connections



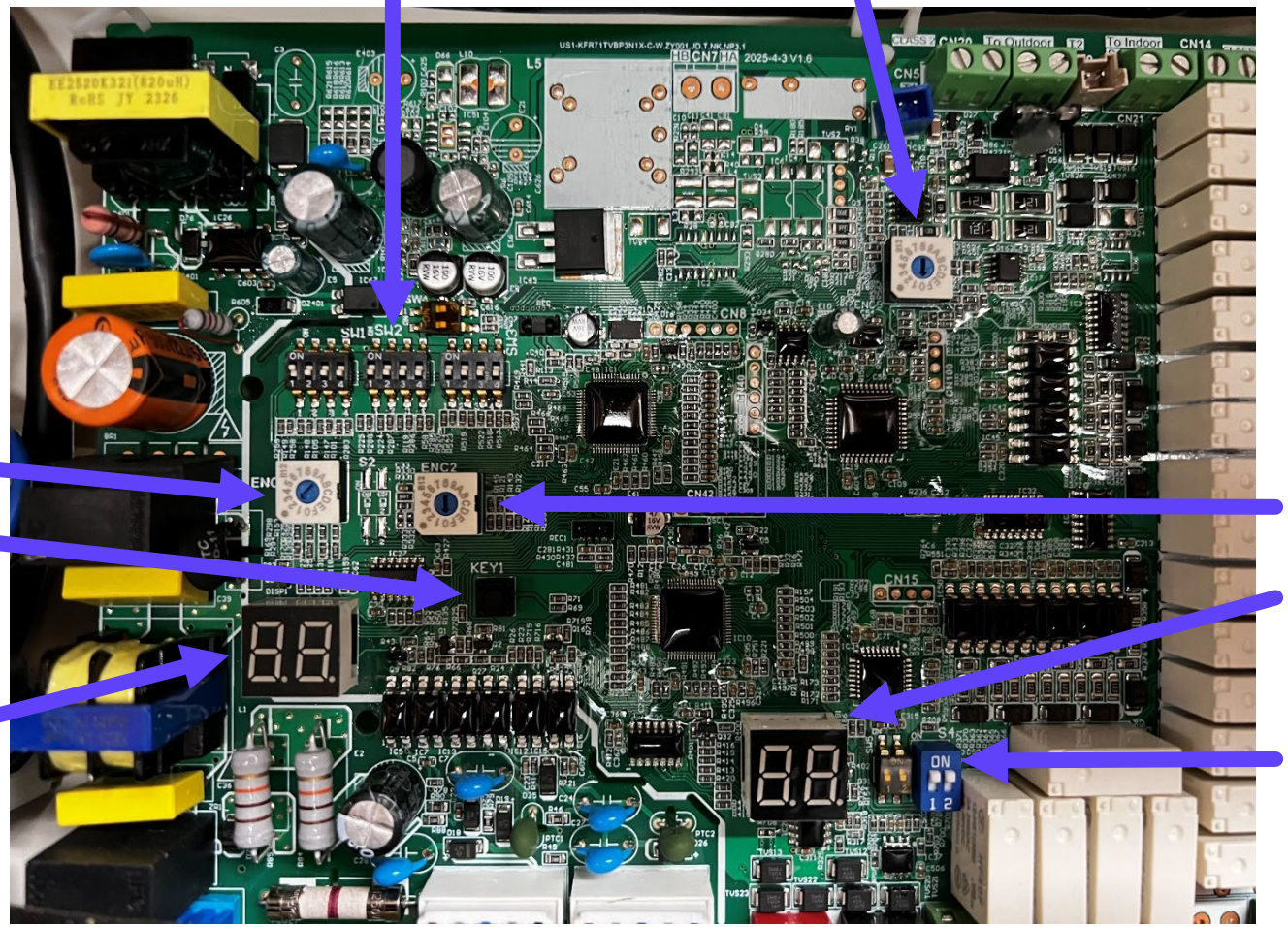
1 Stage Heat & 1 Stage Cool

Controls

24-Volt Interface Kit KSAIC0501230 (cont.)



Main PCB Layout



Controls

24-Volt Interface Kit KSAIC0501230 (cont.)

Quick Settings

1.

ALL Approved System Types	SW1-1	SW2-3
Default (verify only, do not change)	ON	OFF

2.

Fan Speed Selection				
Speed Selection	Auto Fan	Low	Med	High
SW3-1	OFF	OFF	ON	ON
SW3-2	OFF	ON	OFF	ON

3. Set ENC1 based on connected indoor unit capacity, use Table B

4. Set ENC2(S3) based on application. Leave it set to 0 if unsure.
   - Set outdoor temperature limitation for Aux Heating
   - OFF means no temperature limitation, Aux can operate at any outdoor temp.
   - Set to 3 = Aux heat will not operate above 3°F

Done!

Table A

ENC2(S3)	T4 F° (C°)
0	OFF
1	-4 (-20)
2	0 (-18)
3	3 (-16)
4	7 (-14)
5	10 (-12)
6	14 (-10)
7	18 (-8)
8	21 (-6)
9	25 (-4)
A	28 (-2)
B	32 (0)
C	36 (2)
D	39 (4)
E	43 (6)
F	46 (8)

Table B

ENC1	Capacity
0	6K
1	9K
2	12K
3	RESERVED
4	18K
5	24K
6	RESERVED
7	30K
8	36K
9	42K
A	48K
B	60K
C	RESERVED
D	RESERVED
E	RESERVED
F	RESERVED

Controls

24-Volt Interface Kit KSAIC0501230 (end)

Full DIP Explanations and Setting Options – Skip is used "Quick Settings"

DIP Switch Explanations

	Description	ON	OFF	Note
SW1-2	Maximum continuous run time before automatic capacity rise	60 Min.	30 Min. (default)	The purpose is to make the room temperature reach the set point, by rising the capacity
SW1-3	Set weather aux. heat is associated with the continuous running tome of the compressor	Aux. heat automatically activates after 60 min. of accumulated compressor running time	Aux. heat is not associated with the running time of compressor (default)	Only valid for heat pump + electric heat models
SW1-4	Anti-cold air protection option	No	Yes (default)	
SW2-1	Aux. heat ON/OFF temperature difference according to T4 limits (T4_W1_Temp)	2°F	4°F (default)	T4 W1 Temp set by DIP switch ENC2
ENC2 (S3)	Set outdoor temperature. Limitation: T4_W1_Temp (for Aux Heating)	See Table A, next slide		
SW3-1/SW3-2	Set fan speed of indoor unit	SW3-2/SW3-1: OFF/OFF: Auto Fan OFF/ON: Low Fan ON/OFF: Med Fan ON/ON: High Fan		SW3-1 and 3-2 work together
S4-2	DH function selection	Dehumidification control not available (default)	Dehumidification feature is enabled through thermostat	
ENC1	Capacity Selection	See Table B, next slide		
KEY1	You can start the forced defrost mode by pressing the KEY1 button. Press the KEY1 more than 3 seconds, for entering defrost mode, and press the KEY1 mare than 3 seconds again to exit defrost mode			