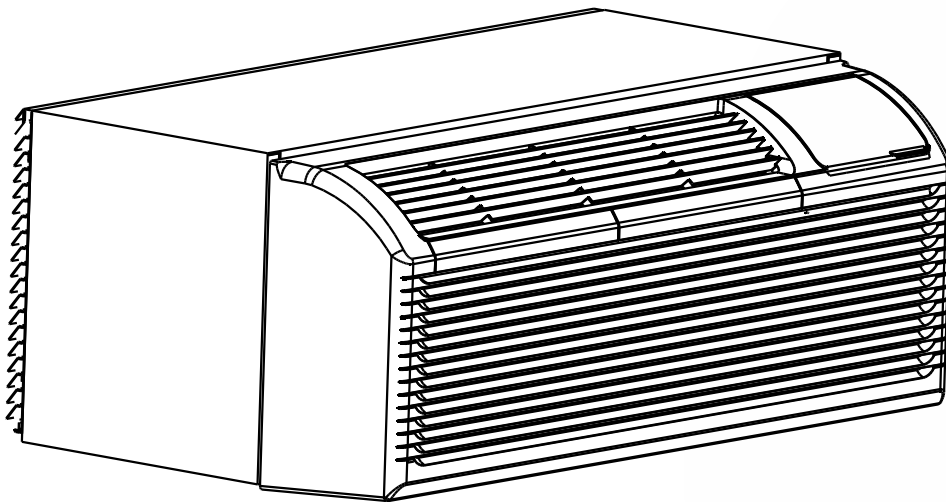


KTHN

SERIES

PACKAGED TERMINAL AIR CONDITIONER / HEAT PUMP

TROUBLESHOOTING



KLIMAIRE[®] ≈
Mark of Superior Quality

IMPORTANT NOTE:
Read this manual carefully before installing
or operating your new air conditioning
unit. Make sure to save this manual for
future reference.

For more information please visit www.klimaier.com

10.Troubleshooting

10.1 Error Display

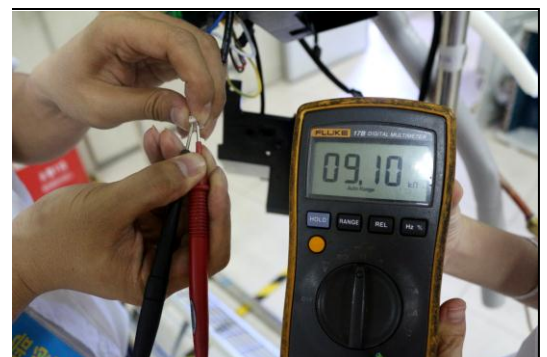
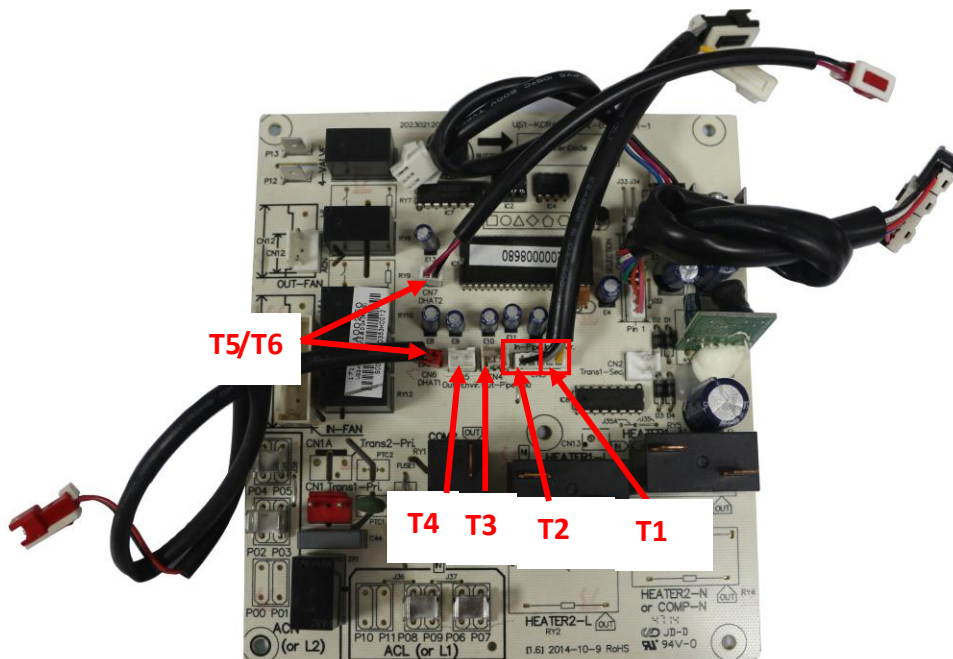
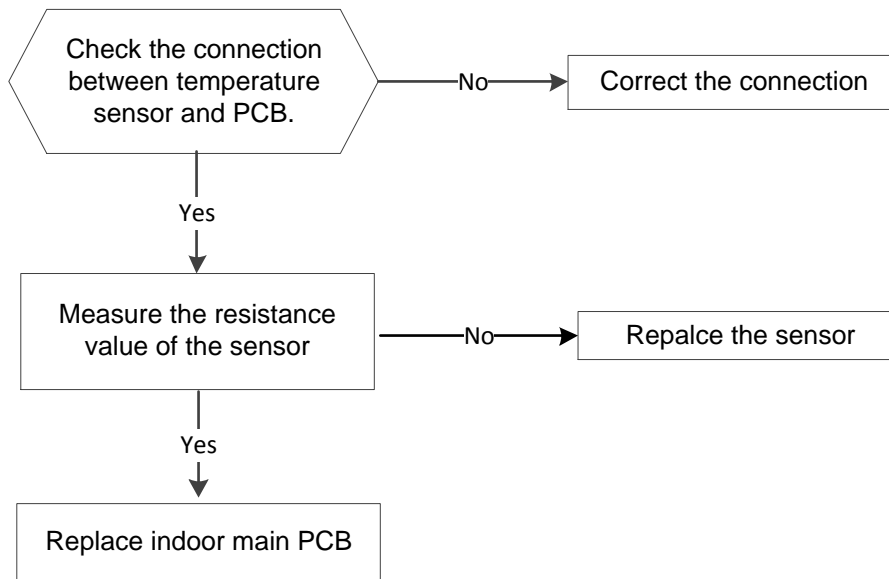
Codes	Contents
AS	Open or short circuit of T1 temperature sensor
ES	Open or short circuit of T2 temperature sensor
CS	Open or short circuit of T3 temperature sensor
oS	Open or short circuit of T4 temperature sensor
HS	Open or short circuit of T5 or T6 temperature sensor
Lo	Temperature is lower than displayrange(0 °C/32°F)
HI	Temperature is higher than displayrange(37 °C/99°F)
E4	Communication malfunction between main control board and displayboard.
LE	Drive-by-wire control failure

10.2 Troubleshooting

10.2.1 Open circuit or short circuit of temperature sensor diagnosis and solution(AS/E5/CS/oS/HS)

Error Code	AS/E5/CS/oS/HS
Malfunction decision conditions	If the sampling voltage is lower than 0.06V or higher than 4.94V, the LED will display the failure.
Supposed causes	<ul style="list-style-type: none">● Wiring mistake● Faulty sensor● Faulty PCB

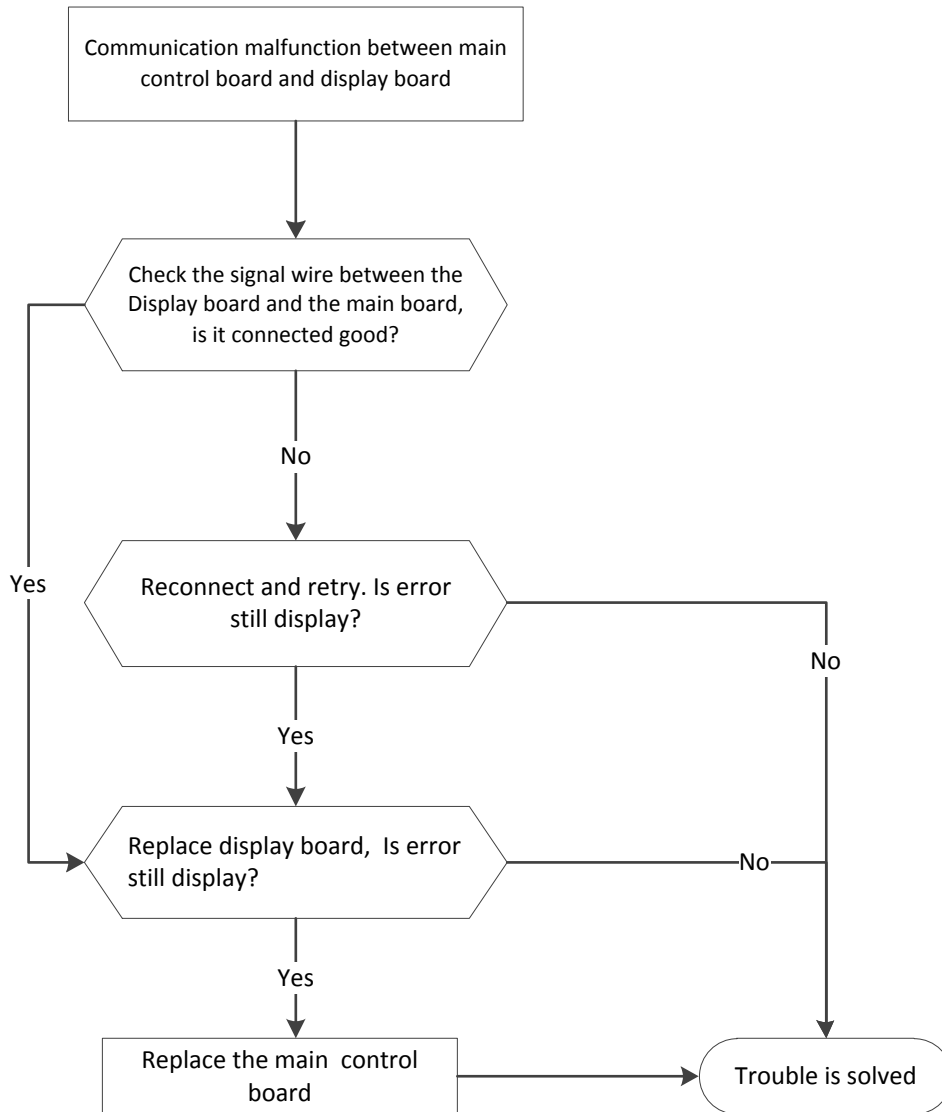
Troubleshooting:



10.2.2 Communication malfunction between main control board and display board. (E4)

Error Code	E4
Malfunction decision conditions	Main control board does not receive feedback from display board during 120 seconds.
Supposed causes	<ul style="list-style-type: none">● Wiring mistake● Faulty display board● Faulty main control board

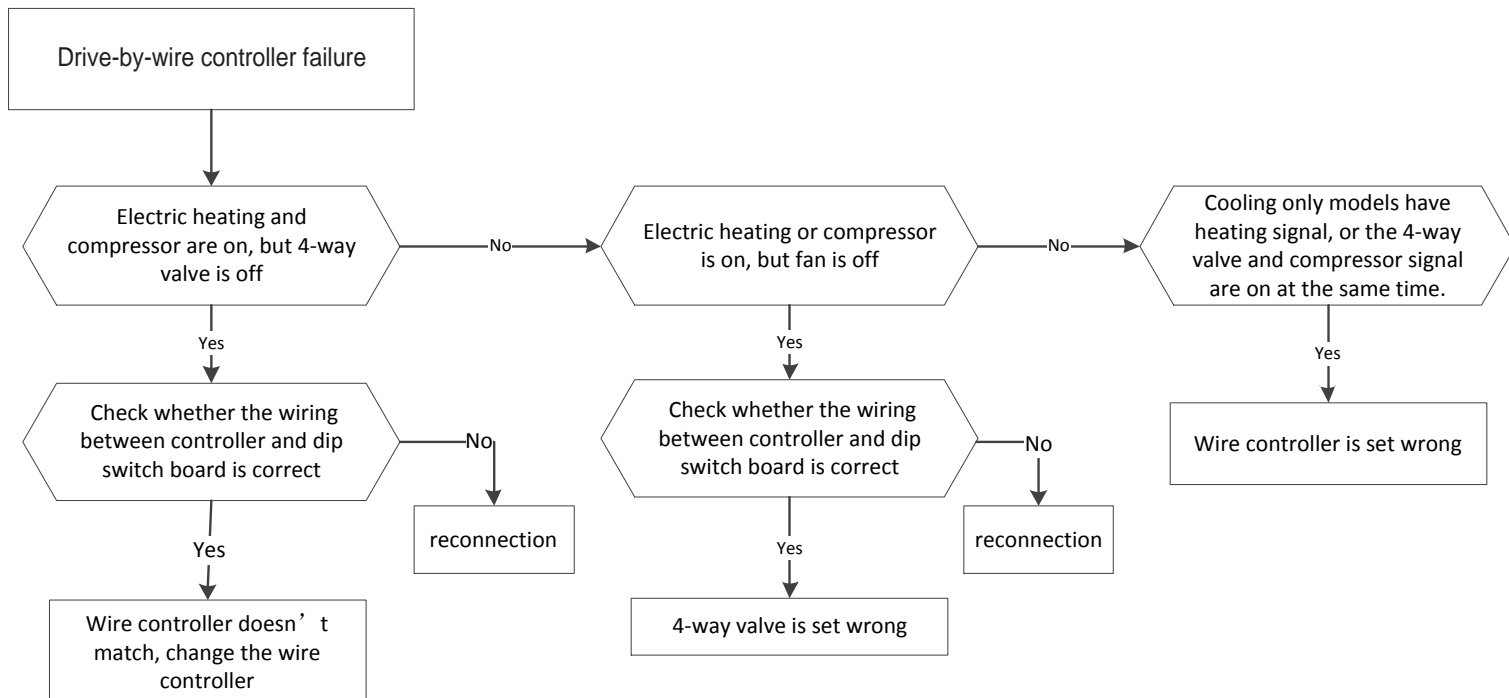
Troubleshooting:



10.2.3 Drive-by-wire controller failure. (LE)

Error Code	LE
Malfunction decision conditions	<ol style="list-style-type: none"> 1, Electric heating signal or compressor signal is on, but fan signal is off 2, Electric heating signal and compressor signal are on, but 4-way valve signal is off 3, Cooling only models have heating signal, or the 4-way valve signal and compressor signal are on at the same time.
Supposed causes	<ul style="list-style-type: none"> ● Wiring mistake ● Faulty wire controller ● Wire controller doesn't match

Troubleshooting:



DIP SWITCH TERMINAL	DESIGNATION	24V CONTROLLER
FC(L)	Front desk control terminal L	
FC(N)	Front desk control terminal N	
LOW-FAN	Low fan speed	GL
HI-FAN	High fan speed	GH
4-WAY	4-way valve(for heat pump model)	B
HEAT2	Electrical heater 2	W
HEAT1	Electrical heater 1	(W)
COMP	Compressor	Y
24V(N)	24VAC terminal N COM	C
24V(L)	24VAC terminal L	R

POSSIBLE CAUSES	SOLUTIONS
<p>UNIT DOES NOT START Unit may have become unplugged Fuse may have blown Circuit breaker may have been tripped Unit may be off Unit may be in a protection mode.</p>	<p>Check that plug is plugged securely in wall receptacle. Note: Plug has a test/reset button on it. Make sure that the plug has not tripped. Replace the fuse. See Note 1. Reset circuit breaker. See Note 1. Turn unit on (bottom right button on keypad).</p>
<p>UNIT NOT COOLING/HEATING ROOM Unit air discharge section is blocked Temperature setting is not high or low enough Note: Setpoint limits may not allow the unit to heat or cool the room to the temperature desired. Check section on dipswitch settings. Unit air filters are dirty. Room is excessively hot or cold when unit is started. Vent door left open. Unit may be in a protection mode. Compressor is in time delay.</p>	<p>Make sure that curtains, blinds or furniture are not restricting or blocking unit airflow. Reset to a lower or higher temperature setting. Remove and clean filters. Allow sufficient amount of time for unit to heat or cool the room. Start heating or cooling early before outdoor temperature, cooking heat or gatherings of people make room uncomfortable. Close vent door. Check dipswitch settings for desired comfort. Wait approximately 3 minutes for compressor to start.</p>
<p>DISPLAY HAS STRANGE NUMBERS/ CHARACTERS ON IT</p>	<p>The unit may be in a protection mode. The unit may be set for °C (instead of °F).</p>
<p>UNIT MAKING NOISES</p>	<p>Clicking, gurgling and whooshing noises are normal during operation of unit.</p>
<p>WATER DRIPPING OUTSIDE</p>	<p>If a drain kit has not been installed, condensation runoff during very hot and humid weather is normal. See Note 2. If a drain kit has been installed and is connected to a drain system, check gaskets and fittings around drain for leaks and plugs.</p>
<p>WATER DRIPPING INSIDE Wall sleeve is not installed level</p>	<p>Wall sleeve must be installed level for proper drainage of condensation. Check that installation is level and make any necessary adjustments.</p>
<p>ICE OR FROST FORMS ON INDOOR COIL Low outdoor temperature Dirty filters</p>	<p>When outdoor temperature is approximately 55°F or below, frost may form on the indoor coil when unit is in Cooling mode. Switch unit to FAN operation until ice or frost melts. Remove and clean filters.</p>
<p>COMPRESSOR PROTECTION Power may have cycled, so compressor is in a restart protection.</p>	<p>Random Compressor restart-Whenever the unit is plugged in, or power has been restarted, a random compressor restart will occur. After a power outage, the compressor will restart after approximately 3 minutes. Compressor Protection-To prevent short cycling of the compressor, there is a random startup delay of 3 minutes and a minimum compressor run time of 3 minutes.</p>

NOTES:

1. If circuit breaker is tripped or fuse is blown more than once, contact a qualified electrician.
2. If unit is installed where condensation drainage could drip in an undesirable location, an accessory drain kit should be installed and connected to drain system.

Characteristic of temperature sensor

Temp. °C/°F	Resistance KΩ	Temp. °C/°F	Resistance KΩ	Temp. °C/°F	Resistance KΩ
-10/14	62.2756	17/62	14.6181	44/111	4.3874
-9 /15.8	58.7079	18/64	13.918	45/113	4.2126
-8 /17.6	56.3694	19/66	13.2631	46/115	4.0459
-7 /19.4	52.2438	20/68	12.6431	47/117	3.8867
-6 /21.2	49.3161	21/70	12.0561	48/118	3.7348
-5 /23	46.5725	22/72	11.5	49/120	3.5896
-4 /24.8	44	23/73	10.9731	50/122	3.451
-3 / 26.6	41.5878	24/75	10.4736	51/124	3.3185
-2 / 28.4	39.8239	25/77	10	52/126	3.1918
-1 /30.2	37.1988	26/79	9.5507	53/127	3.0707
0 /32	35.2024	27/81	9.1245	54/129	2.959
1 /33.8	33.3269	28/82	8.7198	55/131	2.8442
2 /35.6	31.5635	29/84	8.3357	56/133	2.7382
3 /37.4	29.9058	30/86	7.9708	57/135	2.6368
4 /39.2	28.3459	31/88	7.6241	58/136	2.5397
5 /41	26.8778	32/90	7.2946	59/138	2.4468
6 /42.8	25.4954	33/91	6.9814	60/140	2.3577
7 /44.6	24.1932	34/93	6.6835	61/142	2.2725
8 /46.4	22.5662	35/95	6.4002	62/144	2.1907
9 /48.2	21.8094	36/97	6.1306	63/145	2.1124
10 /50	20.7184	37/99	5.8736	64/147	2.0373
11 /51.8	19.6891	38/100	5.6296	65/149	1.9653
12 /53.6	18.7177	39/102	5.3969	66/151	1.8963
13 /55.4	17.8005	40/104	5.1752	67/153	1.830
14 /57.2	16.9341	41/106	4.9639	68/154	1.7665
15 /59	16.1156	42/108	4.7625	69/156	1.7055
16 /60.8	15.3418	43/109	4.5705	70/158	1.6469

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