

TROUBLESHOOTING GUIDE

FAULT	POSSIBLE CAUSES	REMEDIES
The system does not start.	Built-in safety timers have been activated	Ensure that 5 minutes has passed from turn on time.
	A breaker has turned OFF or a fuse has blown.	Check breakers and fuses.
	The thermostat set point is incorrect.	Check control settings are correct. Check the thermostat “set-point” is set low enough for cooling or high enough for heating.
	The master wall controller timer setting is incorrect.	Check the master wall controller timer settings. See Operating Instructions section.
Air does not flow (Indoor unit)	Zones might be switched off.	Check zones are switched on.
	During heating operation, the hot start function may have been activated.	During heating operation the indoor fan is delayed for 46 seconds or until the indoor coil reaches 24°C (whichever occurs first). This is to prevent cold drafts. Wait 46 seconds and the air will start flowing.
	During defrost of the outdoor coil in heating operation; the indoor fan will not operate for several minutes. (“HEAT” LED flashes on master wall control).	This is normal operation during the defrost cycle to prevent cold air being blown into rooms.
Cooling/Heating is not sufficient.	The cooling/heating function may not work effectively when the return air filter is clogged with dust and dirt.	Clean the return air filter.
	The cooling/heating function may not work effectively if the air inlet and air outlet on the outdoor unit are blocked.	Make sure the air inlet and air outlet on the outdoor unit is not blocked. Check that the area around the outdoor unit is free from obstructions that may cause the airflow to recirculate.
	The airflow across the indoor coil may not be enough and the anti-freeze protection or over heat prevention systems can lower the cycle capacity for the unit.	Reduce the total static pressure on the indoor fan to increase airflow. For example increase duct sizes, reduce tight duct work bends or increase return air grille size.
	The cool/heat load is too great for the air conditioner.	Perform a heat load analysis on the conditioned space. You may need to consider upgrading your air conditioner with a larger system.
	Open windows or doors will cause inefficient operation.	Close windows and doors in conditioned areas.
	Appropriate zones not turned on.	Turn on appropriate zones (if applicable)
	The outside temperature is beyond the air conditioner design conditions.	If you know a extreme day is coming turn the air conditioner on a few hours before ambient temperatures reach extreme. This should help on those few extreme days.
	You may be trying to operate the whole house on ESP Fan Mode.	Change fan mode to CONT HIGH fan speed. This increases the total fan speed. This will boost fan capacity.

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Steam emitted from outdoor unit.	This is caused by the defrosting operation of the outdoor units heat exchanger in heating operation in cold ambient conditions.	This is normal during the defrost operation in cold ambient conditions.
	Condensation of water on the outdoor coil during heating operation.	This is normal during heating operation. You can purchase drip trays to contain then drain this excess water.
Set temperature cannot be adjusted.	The zone control set temperature limits are being exceeded.	Check the upper and lower temperature limits are set correctly. See operation manual for details on setting upper and lower temperature limits.
Occasional wishing noise can be heard on heating cycle.	This is the sound of the gas changing directions as de-ice cycle begins.	This is a normal function of an air conditioner. The unit is removing any ice on the outdoor unit.
The compressor is running but the system is not cooling.	You are in heating mode.	Check the temperature settings.
	The reversing valve has jammed between heating and cooling.	Replace reversing valve.
The outdoor coil keeps freezing over.	Outdoor coil sensor might be faulty. See sensor (temperature/resistance) table and check resistance value.	Replace faulty sensor.
	May have obstruction in outdoor coil.	Remove obstructions.
There is only one condenser fan working.	The fan is faulty. Test the fan motor for correct voltage, check the motor winding resistance, open circuit, check capacitor, etc.	Replace faulty fan. If the fan motor needs to be replaced and there isn't one available immediately, then just disconnect the fan electrically and cover the faulty motors fan guard. This way the unit can still operate at reduced capacity using 1 fan until you get a replacement fan motor.
The system is short on gas. You've fixed the leak and want the system to operate at 100% so gas charge can be corrected. What can you do to ensure 100% compressor operation?	You can adjust your wall controller temperature so you have a large differential. This will operate at the system at 100% till the temperature gets to within 4°C of the set point.	Select Cooling or heating mode. If cooling adjust set-points more than 4°C lower than room temp. If Heating adjust set-points more than 4°C higher than room temp. Complete charging procedure until finished.
The indoor unit gives out odour.	This happens when smell of the room, furniture, or cigarettes are absorbed into the unit and discharged with the airflow.	If this happens, we recommend you to run the air conditioner on cooling for a period of time with the doors and windows open or have the indoor unit washed by a technician. Consult the installer from whom you bought the air conditioner.
	Check the drain is not piped into the sewerage drain line.	Re-pipe drain with a P-Trap and connect into household drainage or storm water drain.

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EC FAN TROUBLESHOOTING

FAULT	SEQUENCE OF EVENTS	POSSIBLE CAUSES	REMEDIES
Airflow hunting during ESP & Self Learn Mode.	Indoor fan will intermittently “huff”.	Excessive static in ductwork.	Reduce static where possible. See installation guidelines on duct installation.
Too much airflow when minimum zones are on.	Air is blowing too much when in minimum zones.	Fan not set to ESP Mode.	Change fan setting to ESP Mode.
		Duct design is not air balanced correctly.	Adjust the duct design to air balance correctly.
		Minimum duct and outlet sizes requirements not followed.	Check versus ActronAir guidelines and adjust / change if necessary. See installation manual for guidelines.
ESP Mode is not available.	When scrolling through fan speeds, ESP Mode is not selectable.	During commissioning, Self-Learn mode was not activated.	Carry out self learn mode. See additional operating instruction.
		Self learn mode failed during commissioning.	Ensure that the air is balanced correctly (static may be too low). See guidelines on duct installation.
Low airflow during ESP Mode.	System produces reduced airflow on ESP mode when all or minimum zones are on.	Too much static in the system.	Reduce the static pressure of the system.
Indoor fan not changing speed.	Indoor fan does not change speed when reducing the amount of zones in ESP operation or when manually adjusting the speed at the controller	Static may be too low.	Increase static on ductwork line that is causing the fault. See guidelines on duct installation.
		Indoor PCB is not changing the fan PWM.	Check PWM and RPM values through the indoor unit dashboard on the MWC. Ensure these values change with each speed change. Check PWM voltages from indoor board. See diagnosis point 3 below. If the PWM voltage does not change with the fan speed change, there is a fault with the indoor PCB. If the PWM voltage is changing but the fan speed is not, the ductwork installation static is too low.

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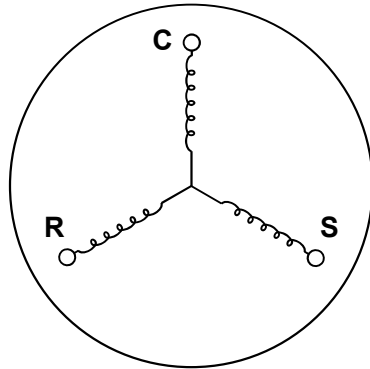
FAULT AND STATUS CODES					
Wall Controller (LM7-D)	Wall Controller (LM24W)	Zone Controller (LM-ZC)	Outdoor Unit CPU	Category	FUNCTION / FAULT
-	-	-	Off	Status	Unit Off
-	-	-	Cool	Status	Cooling Mode
-	-	-	HEAT	Status	Heating Mode
-	-	-	dEF3	Status	3 min to defrost
-	-	-	dEF2	Status	2 min to defrost
-	-	-	dEF1	Status	1 min to defrost
-	-	-	dr-1	Status	DRM1
-	-	-	dr-2	Status	DRM2
-	-	-	dr-3	Status	DRM3
E3	E3	E3	-	IDU	Room Sensor Error (open or short circuit)
E4	E4	-	-	IDU	Indoor Coil Inlet Sensor Error (open or short circuit)
E5	E5	E5	E05	IDU / ODU	Communication Error between Outdoor and Indoor Units
E6	E6	-	E06	VSD	High Discharge Temperature (Discharge Temp exceeded 138°C)
E7	E7	-	E07	ODU	Outdoor Coil Sensor Error (open or short circuit)
E8	E8	-	E08	VSD	Outdoor Discharge Sensor Error (open or short circuit)
E9	E9	-	E09	ODU	LP Tripped
E10	E10	-	E10	VSD	LP Sensor Error (open/short circuit)
E11	E11	-	E11	ODU	HP Tripped
E12	E12	-	E12	VSD	HP Sensor Error (open/short circuit)
E14	E14	-	E14	VSD	Condenser Pressure Low
E15	E15	-	E15	VSD	VSD Communication Error
E17	E17	-	E17	VSD	Peripherals Error
E18	E18	-	E18	VSD	In EEV Module Suction Temp Sensor is Open
E19	E19	-	E19	VSD	In EEV Module Suction Temp Sensor is Short
E22	E22	-	E22	VSD	Ambient Sensor Failure (open/short circuit) - Safe Mode
E23	E23	-	E23	VSD	EEV Board Communication Failure - Safe Mode
E25	E25	-	E25	Status	Ambient Temperature not updated
E26	E26	-	E26	VSD	Over Current
E27	E27	-	E27	VSD	Over Voltage
E28	E28	-	E28	VSD	VSD Temperature High
E29	E29	-	E29	VSD	Low Supply Voltage
E30	E30	-	E30	VSD	Trip Lock
E31	E31	-	E31	VSD	Internal Error
E32	E32	-	E32 - E33	VSD	Envelope Protection (HP/LP Trip Error due to VSD Pressure Sensors)
E34	E34	-	E34	VSD	Derating - High VSD Temperature
E35	E35	-	E35	VSD	Derating - Low Suction Pressure
E36	E36	-	E36	VSD	Derating - Low Condenser Pressure
E37	E37	-	E37	VSD	Derating - High Condenser Pressure
E38	E38	-	E38	VSD	Derating - Output Power Limit
E39	E39	-	E39	VSD	Defrosting Timed-Out
E40	E40	-	E40	VSD	VSD Restarting too Frequently
E41	E41	-	E41	VSD	DC Link Voltage Low
E99	E99	-	E99	VSD	Envelope Protection
HEAT blink every 8s	HEAT blink every 8s	-	deF	Status	Heating Mode - Defrost
HEAT blink every 8s	HEAT blink every 8s	-	HEAT	Status	Heating Mode - indoor coil pre-heat after defrost

NOTES:

1. When unit is powered up, "boot" will show in 7 segment display of outdoor board for 30 seconds, followed by normal controller status codes.
2. Faults may not be displayed on the wall control until the fault occurs several times.

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3. After unit runs normal from power up, if zone controller displays “E5”, this means that the zone controller has lost communication to connected zone motor barrel. The possible cause of problem could be:
 - a. Faulty zone motor;
 - b. Faulty cable connected to zone motor.
4. If zone controller displays “E3” during power up, this means that this zone controller was not configured by VAV module. The possible cause of this problem could be:
 - a. Faulty cable connected to zone controller;
 - b. Faulty zone controller;
 - c. Faulty zone motor.
5. If zone controller displays “a number” all the time after power up, this means that VAV module failed to detect any zone motor/barrel connected. The possible causes of this problem are:
 - a. Faulty cable connected to zone motor/barrel;
 - b. Faulty zone motor (internal zone motor power cable was NOT plugged into its socket).
6. Alternating display of E5 and set point indicates no communication between indoor board (AMIB) and Ultima VAV module. All zone wall controller will display three bars “---”. Constant E5 indicates a communication error between the AMIB (indoor board) and the outdoor board.



**COMPRESSOR WINDINGS
SINGLE PHASE**

UNIT MODEL	COMPRESSOR PART NUMBER / MODEL	RATING OF COMPRESSOR WINDINGS (OHMS)		
		C - S	C - R	S - R
CRV2-14AS / ERV2-14AS CRV2-14AS / ERM2-14AS	1560 - 466 / VRJ035UKNP6	0.21	0.21	0.21
CRV3-17AS / ERV3-17AS CRV3-17AS / ERM3-17AS	1560 - 467 / VRJ044UKNP6	0.21	0.21	0.21
CRV4-19AS / ERV4-19AS CRV4-19AS / ERM4-19AS	1560 - 467 / VRJ044UKNP6	0.21	0.21	0.21

NOTE:

- Please refer to Section 12 - Operation Details on pages 38-39 of the Platinum Service Manual for Compressor Suction / Discharge Temperature Sensor Chart.

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