

Samsung Split System Air Conditioning AC Error Codes

Main INDOOR Error Codes That Display On Samsung Split System Air Conditioners:

Indoor Display Error and Check Method

ERROR MODE	DESCRIPTION
E101 / E102	Communication Error (Indoor Outdoor)
E121	ROOM TH sensor error
E122	INDOOR MID, INDOOR IN PIPE-TH sensor error
E154	Fan Error (Indoor)
E162	EEPROM Error (Indoor)
E163	Option Error
E203	Time out Comm. (Inv Micom ↔ Main Micom)
E221	OUT-TH(Outdoor Temperature) Sensor Error
E231	CON-TH(Cond Temperature) Sensor Error
E251	DIS-TH(Discharge Temperature) Sensor Error
E416	DIS-TH(Discharge Temperature) Over Error
E422	EEV or Valve Close error-Self diagnosis
E440	Prohibit Operation Condition Error (Heating)
E441	Prohibit Operation Condition Error (Cooling)
E458	Fan Error(Outdoor)
E461	Comp Starting Error
E462	AC Input I_Limit Trip Error
E464	IPM Over Current(O.C) Error
E465	Comp V_limit/I_limit Error
E466	DC-Link Voltage Under/Over Error
E467	Comp Wire Missing Error
E468	Current Sensor Error
E469	DC-Link Voltage Sensor Error
E470	EEPROM Data Error (no data)
E471	EEPROM Data Error (Main Micom ↔ Inv Micom)
E474	Heatsink Sensor Error
E483	Over Voltage Protection Error
E484	PFC Over Load Error
E485	Input Current Sensor Error
E488	AC Input Voltage Sensor Error
E500	Heatsink Over Temperature Error
E554	Gas Leak Error

Samsung Split System Air Conditioning Indoor Unit Error Code Chart

Samsung Split Air Conditioner Error Fault Code – **E101 / E102**

Definition Of Error Code: **Communication Error (Indoor Outdoor)**

Samsung Split Air Conditioner Error Fault Code – **E422**

Definition Of Error Code: **Outdoor unit EEV close 1 self diagnosis error**

Samsung Split Air Conditioner Error Fault Code – **E121**
Definition Of Error Code: **ROOM TH sensor error**

Samsung Split Air Conditioner Error Fault Code – **E122**
Definition Of Error Code: **INDOOR MID INDOOR IN PIPE-TH sensor error**
Samsung Split Air Conditioner Error Fault Code – **E154**
Definition Of Error Code: **Fan Error (Indoor)**
Samsung Split Air Conditioner Error Fault Code – **E162**
Definition Of Error Code: **EEPROM Error (Indoor)**
Samsung Split Air Conditioner Error Fault Code – **E163**
Definition Of Error Code: **Option Error**
Samsung Split Air Conditioner Error Fault Code – **E203**
Definition Of Error Code: **Time out Comm. (Inv Micom Main Micom)**
Samsung Split Air Conditioner Error Fault Code – **E221**
Definition Of Error Code: **OUT-TH (Outdoor Temperature) Sensor Error**
Samsung Split Air Conditioner Error Fault Code – **E231**
Definition Of Error Code: **CON-TH (Cond Temperature) Sensor Error**

Samsung Split Air Conditioner Error Fault Code – **E251**
Definition Of Error Code: **DIS-TH (Discharge Temperature) Sensor Error**
Samsung Split Air Conditioner Error Fault Code – **E416**
Definition Of Error Code: **DIS-TH (Discharge Temperature) Over Error**
Samsung Split Air Conditioner Error Fault Code – **E422**
Definition Of Error Code: **EEV or Valve Close error Self diagnosis**
Samsung Split Air Conditioner Error Fault Code – **E440**
Definition Of Error Code: **Prohibit Operation Condition Error (Heating)**
Samsung Split Air Conditioner Error Fault Code – **E441**
Definition Of Error Code: **Prohibit Operation Condition Error (Cooling)**
Samsung Split Air Conditioner Error Fault Code – **E458**
Definition Of Error Code: **Fan Error (Outdoor)**
Samsung Split Air Conditioner Error Fault Code – **E461**
Definition Of Error Code: **Comp Starting Error**

Samsung Split Air Conditioner Error Fault Code – **E462**
Definition Of Error Code: **AC Input I Limit Trip Error**
Samsung Split Air Conditioner Error Fault Code – **E464**
Definition Of Error Code: **IPM Overcurrent (OC) Error**
Samsung Split Air Conditioner Error Fault Code – **E465**
Definition Of Error Code: **Comp V limit/I limit Error**
Samsung Split Air Conditioner Error Fault Code – **E466**
Definition Of Error Code: **DC-Link Voltage Under/Over Error**
Samsung Split Air Conditioner Error Fault Code – **E467**
Definition Of Error Code: **Comp Wire Missing Error**
Samsung Split Air Conditioner Error Fault Code – **E468**
Definition Of Error Code: **Current Sensor Error**
Samsung Split Air Conditioner Error Fault Code – **E469**
Definition Of Error Code: **DC-Link Voltage Sensor Error**

Samsung Split Air Conditioner Error Fault Code – **E470**
 Definition Of Error Code: **EEPROM Data Error (no data)**

Samsung Split Air Conditioner Error Fault Code – **E471**
 Definition Of Error Code: **EEPROM Data Error (Main Micom Inv Micom)**

Samsung Split Air Conditioner Error Fault Code – **E474**
 Definition Of Error Code: **Heatsink Sensor Error**

Samsung Split Air Conditioner Error Fault Code – **E483**
 Definition Of Error Code: **Overvoltage Protection Error**

Samsung Split Air Conditioner Error Fault Code – **E484**
 Definition Of Error Code: **PFC Overload Error**

Samsung Split Air Conditioner Error Fault Code – **E485**
 Definition Of Error Code: **Input Current Sensor Error**

Samsung Split Air Conditioner Error Fault Code – **E488**
 Definition Of Error Code: **AC Input Voltage Sensor Error**

Samsung Split Air Conditioner Error Fault Code – **E500**
 Definition Of Error Code: **Heatsink Over Temperature Error**

Samsung Split Air Conditioner Error Fault Code – **E554**
 Definition Of Error Code: **Gas Leak Error**

Indoor detailed inspection procedure

No	Procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the control box Check the PCB fuse	1) Is 1st fuse disconnected? 2) Is 2nd fuse disconnected?	. Over current . Indoor Fan motor short . AC part and pattern short of Indoor PBA
2	Supply power If the operating lamp twinkles at this time, the above 1)~3) have no relation	Check the power voltage	
		1) Is the BD71 input voltage 200Vac~240Vac?	. Power cord is fault, Fuse open, Wrong Power cable Wiring, AC part is faulty
		2) Is the voltage between both terminal of IC02 pin #1-#2 12Vdc?	. Switching Trans of Power circuit is faulty
		3) Is the voltage between both terminal of IC02 pin #2-#3 5Vdc?	. Power circuit is faulty, Load short
3	Press the ON/OFF button 1. Fan speed(high) 2. Continuous Operation	1) Is the voltage over AC 180V being imposed on terminal #3-#5 of fan motor connector (CN72)?	. Fan motor of the indoor is faulty
		2) The fan motor of the indoor unit doesn't run	. Fan motor connector(CN72) is faulty
		3) The power voltage between terminal #3-#5 of the connector(CN72) is 0V	. PBA is faulty

Samsung Split System Air Conditioning Error Inspection Indoor Unit

Outdoor detailed inspection procedure

No	Procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the control box Check the PCB fuse (Wait 3 minutes after power off)	1) Is 1st fuse disconnected?	. Over current . AC part and pattern short of Outdoor PBA
2	Check the Wiring	1) Is the Compressor wire connected clockwise? 2) Is the Reactor wire connected normal? 3) Is the Fan wire connected normal? 4) Is the 4way wire connected normal? 5) Is the sensor wire connected normal? 6) Is the EEV wire connected normal?	. Wrong assembly . Installation(service) condition is bad
3	"Supply power and operate the set (Use Remote-control, button in indoor set)"	Check the power voltage	
		1) Is the voltage between Terminal block L-N 200Vac~240Vac?	. Power cord is faulty, Wrong Power cable Wiring
		2) Is the C006 voltage 200Vac~240Vac?	. Fuse open . L,N,F1,F2 wire wrong wiring (Terminal Block-PBA)
		2) Is the CN150 voltage 200Vac~240Vac?	. Power circuit is faulty . Load short
		4) Is the PFC050(#26-#27) voltage 200Vac~240Vac after 3 minutes later?	. Fuse open . L,N,F1,F2 wire wrong wiring (Terminal Block-PBA) . PTC020 open . RY021, RY022 is faulty . Outdoor Micom(IC201) error
		5) Is the CE101 voltage 280Vdc~320dc after 3 minutes later?	. PFC050 is faulty . Reactor wire is wrong connection . Power circuit is faulty, Load short . BLDC Fan motor error
		6) Is the voltage CN151 #1-#2 voltage 15Vdc?	. Switching Trans of Power circuit is faulty . Load short
		7) Is the voltage CN152 #1-#2 voltage 12Vdc?	. Switching Trans of Power circuit is faulty . Load short
		8) Is the voltage CN151 #3-#2 voltage 5Vdc?	. Switching Trans of Power circuit is faulty . Load short
4	Check the LED lamp display	1) Normal : RED on, GRN blink, YEL off 2) Abnormal - All off : check no power - abnormal display : check error mode	. F1,F2 wire wrong wiring . Outdoor PBA is faulty

Samsung Split System Air Conditioning Error Inspection Outdoor Unit

NO	Operation of air conditioner	Explanation
1	The OPERATION indication LED(BLUE) blinks when a power plug of the indoor unit is plugged in for first time.	It indicates power is on. The LED stops blinking if the operation ON/OFF button on the remote control unit is pushed.
2	<p>In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the INDOOR FAN should operate.</p> <p>[In case of heat pump model]</p> <p>In a HEAT operation mode, the compressor does not operate at a room temperature lower than the setting temperature that indoor fan should operate.</p>	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew.
3	Fan speed setting is not allowed in DRY mode.	The speed of the indoor fan is set to LL in DRY mode. Fan speed is selected automatically in AUTO mode.
4	Compressor stops operation intermittently in Dry mode.	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
5	Timer LED(ORANGE) of the indoor unit lights up and the air conditioner does not operate.	Timer is being activated and the unit is in ready mode. The unit operates normally if the timer operation is cancelled.
6	The compressor stops intermittently in a COOL mode or DRY mode, and fan speed of the indoor unit decreases.	The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air frozen depending on the inside/outside air temperature.
7	<p>[In case of heat pump model]</p> <p>Compressor of the outdoor unit is operating although it is turned off in a HEAT mode.</p>	When the unit is turned off while de-ice is activated, the compressor continues operation for up to 9 minutes(maximum) until the deice is completed.
8	<p>[In case of heat pump model]</p> <p>The compressor and indoor fan stop intermittently in HEAT mode.</p>	The compressor and indoor fan stop intermittently if room temperature exceeds a setting temperature in order to protect the compressor from overheated air in a HEAT mode.
9	<p>[In case of heat pump model]</p> <p>Indoor fan and outdoor fan stop operation intermittently in a HEAT mode.</p>	The compressor operates in a reverse cycle to remove exterior ice in a HEAT mode, and indoor fan and outdoor fan do not operate intermittently for within 20% of the total heater operation.

Samsung Split System Air Conditioning Troubleshooting

Classification	Class	Description
Cooling	Q	The cooling is weak.
	A	When it is hot outside, its cooling capacity decreases due to the increase of the ambient temperature. When the dust filter gets blocked or warm outside air gets in, the cooling capacity will decrease. So, make sure to clean the dust filter frequently, prevent heat loss by closing the doors and insulate the cooling area by using curtains, blinds, shades or window tinting.
	Q	The cooling is good generally. But, it gets weak when it is considerably hot.
	A	It occurs when the outdoor unit is exposed to direct sun light and heat-up air is not ventilated well. So, set up a sunblind over the outdoor unit and keep stuff away from the unit to increase the ventilation. When the cooling capacity decreases during a heat wave, clean the heat exchanger of the outdoor unit or spray some cold water to the heat exchanger to increase the cooling capability.
	Q	The cooling is weak. Does it need refrigerant charging?
	A	It is not correct charging refrigerant regularly. Except that you have moved in several times or the connection pipes are broken, the refrigerant does not run low. So, when refrigerant is additionally charged, it could be costly and cause a product's failure. When the refrigerant leaks, all of it will escape in a short time resulting in cooling failure and no water coming out of the drain hose. So, if water comes out from the drain hose, it indicates the normal operation of the product and it does not need refrigerant charging.
	Q	It fails to do cooling.
	A	When the air conditioner is set to ventilation or the desired temperature is set higher than the current temperature, it fails to do cooling. In this case, select cooling or set the desired temperature lower.
Leakage	Q	It floods the floor.
	A	Place the drain hose properly. When it is not placed properly, the drain water would flow back flooding the floor. So, straighten out the drain hose for the water to be drained well.
	Q	Water drips at the drain connection (service valve) of the outdoor unit.
	A	When a glass bottle is taken out of the refrigerator, moisture gets condensed on its surface due to the temperature differences. The same principle applies to the air conditioner. When cold refrigerant goes through the copper tube, moisture gets condensed on the surface of the tube and the connection areas. To prevent the water condensation, the pipes are insulated. But, the connection areas of the outdoor unit are not insulated for the purpose of maintenance or repair, and water gets condensed due to the temperature differences and drips down. Generally, it evaporates right away. But, when it drips much during muggy days, put a water pan on the floor.
	Q	It leaks even though a drain pump is used.
A	It occurs when the drain pump is plugged out or it is out of order. Check the power of the drain pump and the position of the drain hose, and when the pump is faulty, contact the drain pump manufacturer. Samsung Electronics do not manufacture drain pumps. So, we are not able to correct the drain pump problems.	

Samsung Split System Air Conditioning General Troubleshooting 1

Smells	Q	Whenever the air conditioner is turned on, it irritates my eyes and gives me a headache.
	A	There are no components in the air conditioner irritating the eyes and sending out chemical smells. But, when the air conditioner is turned on, other smell sources are sucked into the air conditioner and get out of it. So find and root out the smell sources. Generally, it occurs at a interior renovated place, a pharmacy, a gasoline handling place, a tire shop, a second-hand book shop or an electronic component handling place, when its chemical or musty smells are sucked in and sent out, it can be misled that the air conditioner generates them.

Samsung Split System Air Conditioning General Troubleshooting 2

Classification	Class	Description
Smells	Q	Whenever the air conditioner is turned on, it stinks.
	A	When are no components in the air conditioner sending out chemical smells. But, when the air conditioner is turned on, other smell sources are sucked into the air conditioner and get out of it. So, find and root out the smell sources. Generally, when the drain hose is taken out to the washing room or there are sources of smells such as a diaper bin, a shoe shelf or a socks bin, bad smells generate. Also, it occurs where glass cleaners or air fresheners are used; when they are sucked in interacting with dusts and moistures inside, bad smells generate. these kinds of organic materials noxious to human bodies. So, we recommend against the use of them.
	Q	Whenever the air conditioner is turned on, it smells sour.
	A	When the room is papered recently, its paste smells would be sucked inside. Also, when the air conditioner is installed in the study room of young boys loving sweat-generating activities such as the basketball, excessive sweats evaporate and get sucked into the air conditioner resulting in bad smells. So, find and root out problem or refresh the room frequently.
	Q	Whenever the air conditioner is turned on, it smells musty.
	A	It is due to the improper keeping of the product after its use. When keeping the product, dry up the inside with the operation of ventilation to prevent must. When the product is kept without drying up the inside with ventilation, mold would grow inside resulting in must. So, open the windows and switch on the ventilation function to get rid of the saturated smell inside.
	Q	Whenever the air conditioner is turned on, it sends out bad smells such as stale smells.
	A	It occurs generally when there are pet animals in the house. Their smells stay at the same place. But, when the air conditioner is turned on, the air gets circulated resulting in the circulation of the smells. So, find and root out the problem or refresh the room frequently.
	Q	It sends out bad smells.
A	When the air filter is filthy, it could send out bad smells. So, clean the filter and ventilate the room with the windows open while operating the ventilation function.	
Operation	Q	It won't start.
	A	There is a power failure or it is plugged out. Also, check if the power distribution panel is switched off.
	Q	It goes off during operation.
	A	When the hot air does not escape properly, it goes off during operation. it occurs when it does not ventilate properly because the outdoor unit is covered, the back of the outdoor unit is blocked by a cardboard or a plywood panel, and the front of the outdoor unit is blocked by the closed window or other obstacles. Clear the above obstacles from the outdoor unit.
	Q	It generally works properly. But, when it's considerably hot, it goes off during operation.
	A	It occurs when the outdoor unit is exposed to direct sunlight and the hot air does not escape properly. Set up a sun blind over the outdoor unit and clear the neighboring obstacles from the outdoor unit to provide good ventilation. When it goes off frequently during a heat wave, it would prevent the turn-off and increase the cooling capacity cleaning the outdoor unit or spraying some water to the heat exchanger.
	Q	The remote controller won't operate.
A	When the batteries run out or the transmitter or receiver of the remote controller is blocked by obstacles, change the batteries or keep the obstacles away from the controlling area. Also, the remote controller may not work under intensive light from a 3-wave length lamp or a neon sign due to the EMI. In this case, take the remote controller closer to the receiver.	

Classification	Class	Description
Installation	Q	Who installs the air conditioner? (Relocation/Re-installation)
	A	When relocating or re-installing the air conditioner, make sure to contact Samsung Electronics Service Center or Authorized Service Agent and have them to do the job. (If not, It could cause personal injury or product damage.) The cost for the relocation/re-Installation of the air conditioner is subject to the customer's expense. There is a cost table. But, our service engineer needs to visit to total up the cost correctly. When you move in, make sure to contact Samsung Electronics Service Center or Authorized Service Agent in advance to streamline the process.
	Q	Is it possible to install the outdoor unit outside?
	A	It is possible to install it at a designated place in the apartment or on the rooftop nearby. But, it's illegal hanging an angle iron case with the outdoor unit in it outside the apartment. Also, it is illegal obstructing passers-by with the outdoor unit installed outside.
	Q	What can be done to install the outdoor unit facing the road because it is a commercial building?
	A	The following is an excerpt from building code going into effect from JUNE 1 st 2005. "The exhaust pipe of a cooling or ventilation facility installed in a building adjacent to the streets of commercial or residential areas shall be installed higher than 2 m to prevent the exhaust air from blowing directly to passers-by and the current facilities shall be corrected by MAY 31 st 2005." So, please install it higher than 2 m or not to blow the hot exhausting air directly to passers-by.
	Q	What about installing a windscreen during installation not to blow hot air directly to passers-by?
	A	When the hot air from the front of the outdoor unit is blocked, the product's performance will be affected and it will fail to operate properly. So, keep it at least 300mm away from its surrounding walls and give it good ventilation.

Samsung Split System Air Conditioning General Troubleshooting And Installation

Outdoor LED Display Error and Check Method (12K/18K/24K)

LED PATTERN			DESCRIPTION
YEL	GRN	RED	
○	○	○	Power off/VDD NG
●	●	●	Power ON reset(1sec)
○	⊙	●	Normal Operation
○	○	●	Abnormal Communication (Indoor↔Outdoor)
○	●	●	
○	○	⊙	IPM Over Current(O.C) Error
○	⊙	○	Comp Starting Error
○	●	○	EEPROM Data Error (no data)
○	●	⊙	DC-Link Voltage Under/Over Error
			PFC Over Load Error
			Over Voltage Protection Error
⊙	○	⊙	OUT-TH(Outdoor Temperature) Sensor Error
⊙	○	●	DIS-TH(Discharge Temperature) Over Error
⊙	⊙	○	DIS-TH(Discharge Temperature) Sensor Error
⊙	⊙	●	Current Sensor Error
			Heatsink Sensor Error
			Input Current Sensor Error
⊙	●	○	Comp V_limit/I_limit Error
			Heatsink Over Temperature Error
⊙	●	⊙	CON-TH(Cond Temperature) Sensor Error
⊙	●	●	Time out Comm. (Inv Micom↔Main Micom)
●	○	○	Fan Error(Outdoor)
●	○	⊙	EEPROM Data Error (Main Micom↔Inv Micom)
●	○	●	Comp Wire Missing Error
●	⊙	○	Prohibit Operation Condition Error (Heating)
			Prohibit Operation Condition Error (Cooling)
●	⊙	⊙	DC-Link Voltage Sensor Error
			AC Input Voltage Sensor Error
●	⊙	●	AC Input I_Limit Trip Error
●	●	○	Gas Leak Error
			EEV or Valve Close error-Self diagnosis
○	⊙	⊙	Test Operation at Cooling Mode
⊙	⊙	⊙	Test Operation at Heating Mode

● LED ON, ○ LED OFF, ⊙ LED BLINKING