

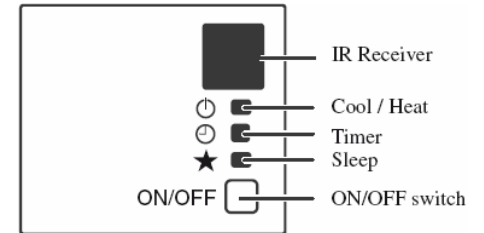
1. Troubleshooting By LED Display or Wired Controller Display

























Applicable Model Non Inverter Split Series

Product Range FTYN25/35/50/60LV1B



LED Indication



SLEEP  (Red)	COOL/HEAT  (Green/Red)	TIMER  (Yellow)	Wired Controller Display	Operation / Faulty Indication	Details of Malfunction (Reference Page)
	 Green		-	Cooling mode	n/a
	 Red		-	Heating mode	n/a
			-	Timer On	n/a
			-	Sleep mode On	n/a
			-	Fan mode On	n/a
			-	Dry mode On	n/a
	 1 time		E1	Room air sensor contact loose / short	2
 Continuous	 2 times		E2	Indoor coil sensor contact open	3
	 3 times		E3	Outdoor coil sensor contact open	4
		 1 time	E4	Compressor overload / Indoor coil sensor / Outdoor coil sensor short	5
	 Red		-	Defrost operation	n/a
		 3 times	E5	Gas leak	6
		 6 times	E8	Hardware error (tact switch pin short)	7
 Continuous	 4 times		E9	No Feedback from indoor fan motor	8
	 5 times		EE	EEPROM defrost	n/a

 ON  ON or OFF  BLINKING

1.1 "E1" Room air sensor contact open / short

Wired Controller Display	E1						
LED indications	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">SLEEP ★ (Red)</td> <td style="width: 33%;">POWER ⏻ (Green/Red)</td> <td style="width: 33%;">TIMER 🕒 (Yellow)</td> </tr> <tr> <td></td> <td>● 1 time</td> <td></td> </tr> </table>	SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)		● 1 time	
SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)					
	● 1 time						
Error Generation	The error is generated when room sensor is disconnected or shorted while system running.						
Supposed causes	The possible causes are: <ul style="list-style-type: none"> ▪ Faulty sensor ▪ Broken wire ▪ Loosen wire contact 						
Troubleshooting	<pre> graph TD A[Check the room sensor connector condition] --> B{Disconnect or loose?} B -- No --> C[reconnect] B -- Yes --> D[Check room sensor resistance value (Refer to Appendix: Table 1)] D --> E{Normal?} E -- No --> F[Replace room sensor] E -- Yes --> G[Replace PCB] </pre>						

1.2 "E2" Indoor coil sensor open

Wired Controller Display	E2						
LED indications	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">SLEEP ★ (Red)</td> <td style="width: 33%;">POWER ⏻ (Green/Red)</td> <td style="width: 33%;">TIMER 🕒 (Yellow)</td> </tr> <tr> <td>● Continuous</td> <td>● 2 times</td> <td></td> </tr> </table>	SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)	● Continuous	● 2 times	
SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)					
● Continuous	● 2 times						
Error Generation	The error is generated when indoor coil sensor is disconnected while system running.						
Supposed causes	The possible causes are: <ul style="list-style-type: none"> ▪ Broken wire ▪ Loosen wire contact 						
Troubleshooting	<pre> graph TD A[Check the coil sensor connector condition] --> B{Disconnected or loose?} B -- Yes --> C[Reconnect] B -- No --> D[Check resistance value (Refer to Appendix: Table 1)] D --> E{Normal?} E -- No --> F[Replace room sensor] E -- Yes --> G[Replace PCB] </pre>						

1.3 "E3" Outdoor coil sensor open

Wired Controller Display	E3						
LED indications	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">SLEEP ★ (Red)</td> <td style="width: 33%;">POWER ⏻ (Green/Red)</td> <td style="width: 33%;">TIMER 🕒 (Yellow)</td> </tr> <tr> <td></td> <td>● 3 times</td> <td></td> </tr> </table>	SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)		● 3 times	
SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)					
	● 3 times						
Error Generation	The error is generated when outdoor coil sensor is disconnected while system running.						
Supposed causes	The possible causes are: <ul style="list-style-type: none"> ▪ Broken wire ▪ Loosen wire contact 						
Troubleshooting	<pre> graph TD A[Check the coil sensor connector condition] --> B{Disconnected or loose?} B -- Yes --> C[Reconnect] B -- No --> D[Check resistance value (Refer to Appendix: Table 1)] D --> E{Normal?} E -- No --> F[Replace room sensor] E -- Yes --> G[Replace PCB] </pre>						

1.4 "E4" Compressor overload / Indoor coil sensor short / Outdoor coil sensor short

Wired Controller Display	E4						
LED indications	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">SLEEP ★ (Red)</td> <td style="width: 33%;">POWER ⏻ (Green/Red)</td> <td style="width: 33%;">TIMER 🕒 (Yellow)</td> </tr> <tr> <td></td> <td></td> <td>● 1 time</td> </tr> </table>	SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)			● 1 time
SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)					
		● 1 time					
Error Generation	The error is generated when outdoor coil sensor > 68°C in cooling or indoor coil sensor > 68°C in heating; indoor coil sensor is shorted; outdoor coil sensor is shorted.						
Supposed causes	<p>The possible causes are:</p> <ul style="list-style-type: none"> ▪ Compressor high current ▪ Faulty indoor coil sensor ▪ Faulty outdoor coil sensor 						
Troubleshooting	<pre> graph TD A[Check the compressor] --> B{Running ampere highly increase?} B -- Yes --> C[Replace the compressor] B -- No --> D[Check coil sensor resistance value (Refer to Appendix: table 1)] D --> E{Normal?} E -- No --> F[Replace coil sensor] E -- Yes --> G[Replace PCB] </pre>						

“E5” Low refrigerant charge / Gas leak

Wired Controller Display	E5						
LED indications	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">SLEEP ★ (Red)</td> <td style="width: 33%;">POWER ⏻ (Green/Red)</td> <td style="width: 33%;">TIMER 🕒 (Yellow)</td> </tr> <tr> <td></td> <td></td> <td>● 3 times</td> </tr> </table>	SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)			● 3 times
SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)					
		● 3 times					
Error Generation	The error is generated when indoor coil sensor temperature is > 25°C in cooling or < 20°C in heating after compressor running for 30minutes.						
Supposed causes	The possible causes are: <ul style="list-style-type: none"> ▪ Refrigerant leaking ▪ Indoor coil sensor faulty 						
Troubleshooting	<pre> graph TD A[Perform a leak test] --> B{Leaking?} B -- Yes --> C[Repair the leak spot] C --> D[Top up refrigerant] B -- No --> E[Check coil sensor resistance value (Refer to Appendix: table 1)] E --> F{Normal?} F -- Yes --> G[Replace PCB] F -- No --> H[Replace coil sensor] </pre>						

“E8” Hardware error (tact switch pin short)

Wired Controller Display	E8						
LED indications	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">SLEEP ★ (Red)</td> <td style="width: 33%;">POWER ⏻ (Green/Red)</td> <td style="width: 33%;">TIMER 🕒 (Yellow)</td> </tr> <tr> <td></td> <td></td> <td>● 6 times</td> </tr> </table>	SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)			● 6 times
SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)					
		● 6 times					
Error Generation	The error is generated when tact switch pin is shorted.						
Supposed causes	The possible causes are: <ul style="list-style-type: none"> ▪ Tact switch pin is short circuit. 						
Troubleshooting	<pre> graph TD A[Check for tact switch pin condition] --> B{Normal?} B -- No --> C[Replace tact switch pin] B -- Yes --> D[Replace PCB] </pre>						

“E9” No Feedback from indoor fan motor

Wired Controller Display	E9						
LED indications	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">SLEEP ★ (Red)</td> <td style="width: 33%;">POWER ⏻ (Green/Red)</td> <td style="width: 33%;">TIMER 🕒 (Yellow)</td> </tr> <tr> <td>● Continuous</td> <td>● 4 times</td> <td></td> </tr> </table>	SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)	● Continuous	● 4 times	
SLEEP ★ (Red)	POWER ⏻ (Green/Red)	TIMER 🕒 (Yellow)					
● Continuous	● 4 times						
Error Generation	The error is generated when there is no signal feedback from indoor fan motor.						
Supposed causes	The possible causes are: <ul style="list-style-type: none"> ▪ Indoor fan motor is malfunction ▪ Indoor fan motor connection wiring loosen 						
Troubleshooting	<pre> graph TD A{Is the fan motor wiring correct?} -- No --> B[Correct the wiring] A -- Yes --> C[Replace the fan motor] </pre>						

2. Troubleshooting By Component Failure

Component	Failure Type	Failure Causes	Reference Page
Compressor	2.1 Unit not working	<ul style="list-style-type: none"> • Wrong wiring • Terminal burnt • Poor ventilation • Short body • Jammed • High Ampere 	10
	2.2 Unit not cold	<ul style="list-style-type: none"> • Compressor noisy • Poor ventilation • Short body • Jammed • High Ampere 	11
	2.3 Outdoor noisy	<ul style="list-style-type: none"> • Compressor noisy • Unit noisy 	12
Fan Motor	2.4 Short body	<ul style="list-style-type: none"> • Severe fluctuation of voltage • Winding scratch during assembly process • Expose to the wet humidity environment • Assembly method incorrect 	13
	2.5 Noisy	<ul style="list-style-type: none"> • Bearing misalign during the assembly process • Assembly method not correct • Anti rust coating not enough • Expose to the wet humidity environment 	14
	2.6 Jammed	<ul style="list-style-type: none"> • Grease dry offs • Assembly method not correct • Anti rust coating not enough • Expose to the wet humidity environment 	15
	2.7 Not working	<ul style="list-style-type: none"> • Severe fluctuation of voltage • Thermal overload • Winding scratch during assembly process • Expose to the wet humidity environment 	16
	2.8 Running slow	<ul style="list-style-type: none"> • Capacitor wire loose/burst • Auxiliary winding/ Lead wire broken • Wrong wire color 	17
PCB	2.9 Not functioning	<ul style="list-style-type: none"> • Noise interference • Connection loosen • Transformer faulty • Component faulty 	18

2.1 Unit Not Working

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Wrong wiring • Terminal burnt • Poor ventilation • Short body • Jammed • High Ampere
<p>Troubleshooting</p>	<pre> graph TD Start[Unit not working] --> Q1{Is the compressor wiring correct?} Q1 -- No --> A1[Wrong wiring → (i)] Q1 -- Yes --> Q2{Is the terminal wire burnt?} Q2 -- Yes --> A2[Terminal burnt → (ii)] Q2 -- No --> Q3{Is the indoor and outdoor unit properly ventilated?} Q3 -- No --> A3[Poor ventilation → (iii)] Q3 -- Yes --> Q4{Check the compressor, is it short body?} Q4 -- Yes --> A4[Short body → (iv)] Q4 -- No --> Q5{Is the compressor jammed?} Q5 -- Yes --> A5[Jammed → (v)] Q5 -- No --> A6[High Amp → (vi)] </pre>

2.2 Unit Not Cold

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Compressor jammed • Poor ventilation • Short body • Jammed • High Ampere
<p>Troubleshooting</p>	<pre> graph TD Start[Unit not cold] --> Q1{Is the compressor jammed?} Q1 -- Yes --> A1[Jammed → (v)] Q1 -- No --> Q2{Is the indoor and outdoor unit properly ventilated?} Q2 -- No --> A2[Poor ventilation → (iii)] Q2 -- Yes --> Q3{Check the compressor, is it short body?} Q3 -- Yes --> A3[Short body → (iv)] Q3 -- No --> Q4{Is the compressor making humming noise?} Q4 -- Yes --> A4[Compressor noisy → (vii)] Q4 -- No --> A5[High Amp → (vi)] </pre> <p>The flowchart starts with a rectangular box labeled "Unit not cold". An arrow points down to a diamond-shaped decision box: "Is the compressor jammed?". From this diamond, a "Yes" path leads right to a rectangular box: "Jammed → (v)". A "No" path leads down to another diamond-shaped decision box: "Is the indoor and outdoor unit properly ventilated?". From this second diamond, a "No" path leads right to a rectangular box: "Poor ventilation → (iii)". A "Yes" path leads down to a third diamond-shaped decision box: "Check the compressor, is it short body?". From this third diamond, a "Yes" path leads right to a rectangular box: "Short body → (iv)". A "No" path leads down to a fourth diamond-shaped decision box: "Is the compressor making humming noise?". From this fourth diamond, a "Yes" path leads right to a rectangular box: "Compressor noisy → (vii)". A "No" path leads down and then right to a final rectangular box: "High Amp → (vi)".</p>

2.3 Outdoor Noisy

Supposed causes	The possible causes are: <ul style="list-style-type: none">• Compressor noisy• Unit noisy
Troubleshooting	<pre>graph TD; A[Outdoor noisy] --> B{Is the noise generated from the compressor?}; B -- Yes --> C[Compressor noisy -> (vii)]; B -- No --> D[Unit noisy -> (viii)];</pre>

2.4 Fan Motor Short Body

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Severe fluctuation of voltage • Winding scratch during assembly process • Expose to the wet humidity environment • Assembly method incorrect
<p>Troubleshooting</p>	<pre> graph TD Start[Switch on The Unit] --> Q1{Observe ID/OD Fan Motor Is Turning?} Q1 -- Yes --> End1[Fan motor is normal] Q1 -- No --> P1[Check on the power supply] P1 --> Q2{Phase connect correctly? (refer to TM)} Q2 -- No --> R1[Reconnect the phase connetion] Q2 -- Yes --> Q3{Running current within spec?} Q3 -- No --> Q4{Connectively correct?} Q4 -- No --> R2[Reconnect the wire connection] Q4 -- Yes --> Q5{Winding resistance within spec?} Q5 -- Yes --> R3[Send faulty fan motor to OYLM for further investigation] Q5 -- No --> Q6{Visual check winding is burnt?} Q6 -- No --> R4[Send faulty fan motor to OYLM for further investigation] Q6 -- Yes --> R5[Short body. Replace the ID/OD fan motor] R5 --> R6[Send faulty fan motor to OYLM] </pre>

2.5 Fan Motor Noisy

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Bearing misalign during the assembly process • Assembly method not correct • Anti rust coating not enough • Expose to the wet humidity environment
<p>Troubleshooting</p>	<pre> graph TD Start[Switch on The Unit] --> Q1{Observe ID/OD Fan Motor Is noisy?} Q1 -- No --> R1[Fan motor is normal] Q1 -- Yes --> Q2{Check screw is loose?} Q2 -- Yes --> R2[Tighten the screw] Q2 -- No --> Q3{Check bearing is loose?} Q3 -- Yes --> R3[Tighten the bearing/replace if bearing is wear & tear] Q3 -- No --> Q4{Check motor shaft misalignment?} Q4 -- Yes --> R4[Align the shaft/replace the motor if shaft is bend] Q4 -- No --> Q5{Check rusty part on fan motor?} Q5 -- Yes --> R5[Clean the rust & add in anti rust coating to prevent moisture] Q5 -- No --> R6[Noisy. Replace the ID/OD fan motor] R6 --> R7[Send faulty fan motor to OYLM] </pre>

2.6 Fan Motor Jammed

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Grease dry offs • Assembly method not correct • Anti rust coating not enough • Expose to the wet humidity environment
<p>Troubleshooting</p>	<pre> graph TD Start[Switch on The Unit] --> Q1{Observe ID/OD Fan Motor Is running?} Q1 -- Yes --> R1[Fan motor is normal] Q1 -- No --> Q2{Check bearing grease is dry off?} Q2 -- Yes --> R2[Refill with bearing grease] Q2 -- No --> Q3{Check motor shaft misalignment?} Q3 -- Yes --> R3[Align the shaft/ replace the motor if shaft is bend] Q3 -- No --> Q4{Check rusty part on fan motor?} Q4 -- Yes --> R4[Clean the rust & add in anti rust coating to prevent moisture] Q4 -- No --> R5[Jammed. Replace the ID/OD fan motor] R5 --> R6[Send faulty fan motor to OYLM] </pre>

2.7 Fan Motor Not Working

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Severe fluctuation of voltage • Thermal overload • Winding scratch during assembly process • Expose to the wet humidity environment
<p>Troubleshooting</p>	<pre> graph TD Start[Switch on The Unit] --> Q1{Observe ID/OD Fan Motor Is Turning?} Q1 -- Yes --> End1[Fan motor is normal] Q1 -- No --> Q2{Check on the power supply} Q2 -- 3 Phase --> Q3{Phase connect correctly? refer to TM} Q2 -- Single Phase --> Q4{Visual check any burnt sign on fan motor} Q3 -- No --> Q5[Reconnect the phase connection] Q3 -- Yes --> Q4 Q4 -- Yes --> End2[Overheated. Check the voltage fluctuation & replace the motor] Q4 -- No --> Q6{Visual check any wire broken / connector burnt} Q6 -- Yes --> End3[Replace the wire connector] Q6 -- No --> Q7{Visual check any rusty part} Q7 -- Yes --> End4[Replace the rusty part] Q7 -- No --> Q8{Visual check winding is burnt?} Q8 -- Yes --> End5[Replace the motor] Q8 -- No --> End6[Not working. Replace the ID/OD fan motor] End6 --> End7[Send faulty fan motor to OYLM] </pre>

2.8 Fan Motor Running Slow

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Capacitor wire loose/burst • Auxiliary winding/ Lead wire broken • Wrong wire color
<p>Troubleshooting</p>	<pre> graph TD Start[Switch on The Unit] --> D1{Observe ID/OD Fan Motor Is noisy?} D1 -- No --> N1[Fan motor is normal] D1 -- Yes --> D2{Wrong connection of fan motor wire?} D2 -- Yes --> A1[Connect the fan motor wire according to TM] D2 -- No --> D3{Capacitor wire is loose/burst?} D3 -- Yes --> A2[Solder the capacitor wire/replace if the capacitor was burst] D3 -- No --> D4{Visual check lead wire broken?} D4 -- Yes --> A3[Replace the broken lead wire] D4 -- No --> D5{Visual check Aux winding is burnt?} D5 -- Yes --> A4[Replace the motor] D5 -- No --> A5[Running slow. Replace the ID/OD fan motor] A5 --> A6[Send faulty fan motor to OYLM] </pre>

2.9 PCB Not Functioning

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Noise interference • Connection loosen • Transformer faulty • Component faulty
<p>Troubleshooting</p>	<pre> graph TD A[Turn the power supply off once and then back on] --> B{Normal reset?} B -- Yes --> C[Could be outside cause (noise, etc) other than malfunction] B -- No --> D[Turn off power and remove the faulty PCB] D --> E{Visual Inspection I • Component lifted? • Copper track lifted? • Connector sitting. Lifted, solder crack or others? • Sensor condition: broken wire or epoxy broken? • Burnt?} E -- Yes --> F[Replaces sensors or PCB] E -- No --> G{Visual Inspection II • Connector: Fit or loose? • Insertion of the connector: Correct or wrong?} G -- Yes --> H[Reconnect] G -- No --> I[Check continuity for transformer and capacitor by using multimeter. Replace the PCB if no continuity] </pre>

(i) Wrong Wiring

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Wire connection is loosen • Lead wire is broken
<p>Troubleshooting</p>	<pre> graph TD Start[Wrong wiring] --> Q1{Is the wiring connection of compressor connected correctly?} Q1 -- No --> A1[Reconnect the compressor wiring and restart the system] Q1 -- Yes --> Q2{Is the wiring connection loose?} Q2 -- Yes --> A2[Tighten the compressor wiring and restart the system] Q2 -- No --> Q3{Is the wire broken or too old?} Q3 -- Yes --> A3[Replace the compressor wire and restart the system] Q3 -- No --> End[2.1 Unit Not Working] </pre>

(ii) Terminal Burnt

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Voltage fluctuation • Incorrect capacitor specification
<p>Troubleshooting</p>	<pre> graph TD Start[Terminal burnt] --> D1{Check the incoming voltage. Is it within specification?} D1 -- Yes --> D2{Is the voltage supplied stable?} D1 -- No --> A1[Check the power supply and solve the problem] D2 -- Yes --> D3{Check the starting capacitor or starting relay. Is it normal?} D2 -- No --> A2[Check the power supply and solve the problem] D3 -- Yes --> End[Replace contractor] D3 -- No --> A3[Fix/ replace the starting capacitor or starting relay] </pre>

(iii) Poor Ventilation

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Filter dirty • Blockage at discharge air • Fan motor is malfunction
<p>Troubleshooting</p>	<pre> graph TD Start[Poor ventilation] --> D1{Is there any blockage on outdoor discharge air or fin coil?} D1 -- Yes --> A1[Remove any blocking material and restart the system] D1 -- No --> D2{Is the outdoor fan motor running normally?} D2 -- No --> A2[Fix/ replace the outdoor fan motor and restart the system] D2 -- Yes --> D3{Check indoor unit, any blockage on coil or air discharge?} D3 -- Yes --> A3[Remove any blocking material and restart the system] D3 -- No --> D4{Check indoor unit, is indoor fan motor functioning normally?} D4 -- No --> A4[Fix/ replace the indoor fan motor and restart the system] D4 -- Yes --> D5{Is the installation of indoor and outdoor within specification?} D5 -- No --> A5[Consult installer to reinstall and restart the system] D5 -- Yes --> End[2.1 Unit Not Working] </pre>

(iv) Compressor Short Body

<p>Faulty Phenomenon</p>	<p>Compressor Short Body</p>
<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Less oil return • Liquid flash back • Winding is scratched
<p>Troubleshooting</p>	<pre> graph TD Start[Short body] --> D1{Check refrigerant charge of the unit. Is it correct?} D1 -- No --> D2{Is there any leakage at the coil} D1 -- Yes --> D3{Is the TXV functioning normally?} D2 -- No --> A1[Recharge the system to the correct pressure value and restart the system] D2 -- Yes --> A2[Fix the leaking area. Then recharge the system to the correct pressure value and restart the system] D3 -- No --> A3[Replace the TXV and restart the system] D3 -- Yes --> D4{Is the crankcase heater off or not functioning?} D4 -- Yes --> A4[Replace/on crankcase heater for some time and restart the system] D4 -- No --> D5{Check the length of piping. Within specs? (long piping)} D5 -- No --> A5[Check for long piping and ensure it is within specs] D5 -- Yes --> A6[Replace compressor] </pre>

(v) Compressor Jammed

<p>Faulty Phenomenon</p>	<p>Jammed</p>
<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Less oil return • Thermal overload • Lock rotor activate (running current > lock rotor ampere)
<p>Troubleshooting</p>	<pre> graph TD Start([Jammed]) --> D1{Check refrigerant charge of the unit. Is it correct?} D1 -- No --> D2{Is there any leakage at the coil} D1 -- Yes --> D3{Is the indoor unit having any air blockage?} D2 -- No --> R1[Recharge the system to the correct pressure value and restart the system] D2 -- Yes --> R2[Fix the leaking area. Then recharge the system to the correct pressure value and restart the system] D3 -- No --> R3[Remove any obstacles and restart the system] D3 -- Yes --> D4{Is the indoor fan motor working normally?} D4 -- No --> R4[Repair /replace the indoor fan motor and restart the system] D4 -- Yes --> D5{Is the crankcase heater off or not functioning?} D5 -- Yes --> R5[Replace/on crankcase heater for some time and restart the system] D5 -- No --> D6{Check the length of piping. Within specs? (long piping)} D6 -- No --> R6[Check for long piping and ensure it is within specs] D6 -- Yes --> D7{Is the TXV functioning normally?} D7 -- No --> R7[Replace the TXV and restart the system] D7 -- Yes --> R8[Replace compressor & cap tube] </pre>

(vi) Compressor High Ampere

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> ▪ Low voltage supply ▪ Blockage at air discharge ▪ Low refrigerant charge ▪ Indoor/Outdoor fan not running ▪ Chocking in refrigerant system
<p>Troubleshooting</p>	<pre> graph TD Start[High Amp] --> D1{Check the input voltage. Is the voltage stable?} D1 -- No --> A1[Check the power supply and solve the problem. Restart the system.] D1 -- Yes --> D2{Check refrigerant charge of the unit. Is it correct?} D2 -- No --> D3{Is there any leakage at the coil} D2 -- Yes --> D4{Is there any outdoor/indoor air blockage?} D3 -- No --> A2[Recharge the system to the correct pressure value and restart the system] D3 -- Yes --> A3[Fix the leaking area. Then recharge the system to the correct pressure value and restart the system] D4 -- Yes --> A4[Remove any obstacles and restart the system] D4 -- No --> D5{Is the indoor/outdoor fan motor working?} D5 -- No --> A5[Repair /replace the indoor fan motor and restart the system] D5 -- Yes --> D6{Is the system's piping length within specification?} D6 -- No --> A6[Check installation manual] D6 -- Yes --> D7{Is the TXV functioning normally?} D7 -- No --> A7[Replace the TXV and restart the system] D7 -- Yes --> D8{Is the oil trap installed properly?} D8 -- No --> A8[Reinstall the oil trap according to specification] D8 -- Yes --> End[Replace compressor] </pre>

(vii) Compressor Noisy

<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> ▪ Low refrigerant charge ▪ Blockage at air discharge ▪ Chocking in refrigerant system ▪ Liquid return to compressor
<p>Troubleshooting</p>	<pre> graph TD Start[Compressor Noisy] --> D1{Check refrigerant charge of the unit. Is it correct?} D1 -- Yes --> D2{Is the indoor unit having any air blockage?} D1 -- No --> D3{Is there any leakage at the coil} D2 -- Yes --> A1[Remove any obstacles and restart the system] D2 -- No --> D4{Is the indoor fan motor working normally?} D3 -- Yes --> A2[Recharge the system to the correct pressure value and restart the system] D3 -- No --> A3[Recharge the system to the correct pressure value and restart the system] D4 -- Yes --> A4[Repair /replace the indoor fan motor and restart the system] D4 -- No --> A5[Repair /replace the indoor fan motor and restart the system] D5{Is the power supply connection to compressor correct?} D6{Is the TXV functioning normally?} D7{Is the crankcase heater off or not functioning?} D8{Check the length of piping. Within specs? (long piping)} A6[Connect the power supply correctly and restart the system] A7[Replace the TXV and restart the system] A8[Replace /On crankcase heater for some time and restart the system] A9[Check for long piping and ensure it is within specs] A10[Replace compressor] D5 -- Yes --> D6 D5 -- No --> A6 D6 -- Yes --> D7 D6 -- No --> A7 D7 -- Yes --> A8 D7 -- No --> D8 D8 -- Yes --> A10 D8 -- No --> A9 </pre>

(viii) Unit Noisy

<p>Faulty Phenomenon</p>	<p>Unit Noisy</p>
<p>Supposed causes</p>	<p>The possible causes are:</p> <ul style="list-style-type: none"> • Metal parts touching • Fan motor humming noise
<p>Troubleshooting</p>	<pre> graph TD Start[Unit noisy] --> D1{Is there any vigorous vibration of parts during unit operation?} D1 -- Yes --> A1[Check the connection of the part. Reduce the vibration by adding damper on the vibrating part] D1 -- No --> D2{Check the mounting of the unit. Is the noise come from mounting?} D2 -- Yes --> A2[Add damper/ insulation on the mounting to reduce the noise] D2 -- No --> D3{Check the fan motor. Any humming noise?} D3 -- Yes --> A3[Fix/replace the fan motor and restart the system] D3 -- No --> D4{Check the grommet. Is it hardened/faulty?} D4 -- Yes --> A4[Fix/ replace the indoor fan motor and restart the system] D4 -- No --> D5{Is there any parts touching during unit operation?} D5 -- Yes --> A5[Fix the problem parts and restart the system] D5 -- No --> End[2.3 Outdoor Noise] </pre>

Appendix: Table 1 Resistance – Temperature Characteristics

Resistance R25=10.0kΩ ± 1.0%

B Value B25/30=3450K ± 1.0%

T°C	Rmin (kΩ)	Rnom (kΩ)	Rmax (kΩ)	T°C	Rmin (kΩ)	Rnom (kΩ)	Rmax (kΩ)
-10	4.42E+01	4.53E+01	4.65E+01				
-8	4.02E+01	4.12E+01	4.22E+01	42	5.28E+00	5.37E+00	5.45E+00
-6	3.66E+01	3.74E+01	3.83E+01	44	4.92E+00	5.01E+00	5.09E+00
-4	3.33E+01	3.41E+01	3.49E+01	46	4.59E+00	4.67E+00	4.76E+00
-2	3.04E+01	3.11E+01	3.18E+01	48	4.29E+00	4.37E+00	4.42E+00
0	2.78E+01	2.84E+01	2.90E+01	50	4.01E+00	4.09E+00	4.16E+00
2	2.54E+01	2.59E+01	2.65E+01	52	3.75E+00	3.82E+00	3.90E+00
4	2.33E+01	2.37E+01	2.42E+01	54	3.51E+00	3.58E+00	3.65E+00
6	2.14E+01	2.18E+01	2.21E+01	56	3.29E+00	3.36E+00	3.43E+00
8	1.96E+01	2.00E+01	2.03E+01	58	3.08E+00	3.15E+00	3.22E+00
10	1.80E+01	1.83E+01	1.86E+01	60	2.89E+00	2.96E+00	3.01E+00
12	1.66E+01	1.69E+01	1.71E+01	62	2.71E+00	2.78E+00	2.84E+00
14	1.53E+01	1.55E+01	1.57E+01	64	2.55E+00	2.61E+00	2.67E+00
16	1.41E+01	1.43E+01	1.45E+01	66	2.40E+00	2.45E+00	2.51E+00
18	1.30E+01	1.32E+01	1.33E+01	68	2.25E+00	2.31E+00	2.37E+00
20	1.20E+01	1.22E+01	1.23E+01	70	2.12E+00	2.17E+00	2.23E+00
22	1.11E+01	1.12E+01	1.14E+01	72	2.00E+00	2.05E+00	2.10E+00
24	1.03E+01	1.04E+01	1.05E+01	74	1.88E+00	1.93E+00	1.98E+00
26	9.52E+00	9.62E+00	9.72E+00	76	1.77E+00	1.82E+00	1.87E+00
28	8.82E+00	8.92E+00	9.02E+00	78	1.67E+00	1.72E+00	1.77E+00
30	8.17E+00	8.27E+00	8.37E+00	80	1.58E+00	1.62E+00	1.67E+00
32	7.58E+00	7.68E+00	7.78E+00	82	1.49E+00	1.53E+00	1.58E+00
34	7.04E+00	7.14E+00	7.23E+00	84	1.41E+00	1.45E+00	1.49E+00
36	6.54E+00	6.64E+00	6.73E+00	86	1.33E+00	1.37E+00	1.41E+00
38	6.09E+00	6.18E+00	6.27E+00	88	1.26E+00	1.30E+00	1.34E+00
40	5.67E+00	5.75E+00	5.84E+00	90	1.19E+00	1.23E+00	1.27E+00

Appendix: Table 2 Fan Motor Winding Resistance

(i) Indoor Unit

Coil	Model Color	Resistance (Ω)			
		<i>FTYN25LV1B</i>	<i>FTYN35LV1B</i>	<i>FTYN50LV1B</i>	<i>FTYN60LV1B</i>
Main	White-Black	435.0	435.0	297.0	211.0
Aux	Black-Red	336.0	336.0	247.4	246.9

Note:

1. The above resistance is measured at 20°C for reference only. Tolerance is $\pm 15\%$
2. Specification is subjected to change by manufacturer without prior notice.

(ii) Outdoor Unit

Coil	Model Color	Resistance (Ω)			
		<i>RYN25LV1B</i>	<i>RYN25LV1B</i>	<i>RYN50LV1B</i>	<i>RYN60LV1B</i>
Main	Black-Blue	457.0	278.0	169.5	159.0
Aux	Black-Red	307.0	246.0	147.5	165.0

Note:

1. The above resistance is measured at 25°C for reference only. Tolerance is $\pm 10\%$
2. Specification is subjected to change by manufacturer without prior notice.