

Simple Self-Diagnosis by Malfunction Code

Malfunction code	Malfunction Contents	Supposed causes	Objects					
			RA	SkyAir	VRV	Package	HRV	Chiller
R0	External protection device activated	External protection device connected to the terminal strip T1-T2 of indoor unit is activated		○	○	○		
R1	Malfunction of indoor unit PCB	Malfunction due to noise Defect of indoor unit PCB	○	○	○	○		
R3	Malfunction of drain level control system	Drain piping clogging, improper drain piping work Defect of drain pump Defect of float switch	○	○	○			
R4	Malfunction of freezing protection	Shortage of water volume Low water temperature setting Defect of 26WL Defect of water temperature thermistor						○
R5	High pressure control in heating, freeze-up protection control in cooling	Clogged air filter of indoor unit and short-circuit Defect of indoor unit heat exchanger thermistor	○					
R6	Fan motor locked, overload, overcurrent	Defect of connector contact Defect of fan motor Defect of indoor unit PCB	○	○	○	○		
R7	Malfunction of swing flap motor	Failure of swing flap motor Defect of indoor unit PCB Jammed swing mechanism/blade		○	○			
R8	Malfunction of power supply	Overcurrent of AC input Defect of power supply voltage		○	○			
R9	Malfunction of electronic expansion valve drive	Defect of electronic expansion valve coil Defect of indoor unit PCB Defect of connector contact				○	○	
RR	Heater overheat	26WH is activated						○
RF	Malfunction of a humidifier system	Water leakage of humidifier (option) Failure of swing float switch Improper drain piping incline		○	○			
RH	Malfunction of dust collector of air cleaner	Defect of dust collecting element Stained insulator part Defect of high voltage power supply unit Defect of indoor unit PCB	○	○	○			
RU	Malfunction of capacity setting (Indoor unit PCB)	Capacity setting adaptor is not installed when replacing PCB Defect of indoor unit PCB		○	○	○		
E1	Failure of transmission (between indoor unit PCB and fan PCB)	Defect of transmission of fan motor control driver		○	○			
E4	Malfunction of liquid pipe thermistor for heat exchanger	Defect of connector contact Defect of liquid pipe thermistor for heat exchanger	○	○	○	○		
E5	Malfunction of gas pipe thermistor for heat exchanger	Defect of connector contact Defect of gas pipe thermistor for heat exchanger	○		○	○		
E6	Malfunction of fan motor control driver	Defect of fan motor sensor system Defect of fan motor control driver			○	○		
E7	Front panel driving motor fault	Defect of front panel driving motor Defect of limit switch	○					
E9	Malfunction of suction air thermistor	Defect of connector contact Defect of thermistor for suction air	○	○	○	○		
ER	Malfunction of discharge air thermistor	Defect of connector contact Defect of thermistor for discharge air				○	○	
EC	Malfunction of humidity sensor system	Defect of connector contact Defect of humidity sensor	○	○				
EJ	Malfunction of thermostat sensor in remote controller	Defect of remote controller thermistor Malfunction due to noise Defect of remote controller PCB		○	○	○		
E0	Protection devices actuated (unified)	Protection device connected to outdoor PCB actuated Defect of protection device connector contact		○	○			○
E1	Defect of outdoor unit PCB	Malfunction due to noise Defect of outdoor unit PCB	○	○	○	○		○
E3	Actuation of high pressure switch (HPS)	Dirty outdoor unit heat exchanger and suction filter Defect of HPS Clogged refrigerant piping Defect of connector contact	○	○	○	○		
E3	System No.1 Actuation of high pressure switch (HPS)	Dirty outdoor unit heat exchanger Shortage of water volume Clogged refrigerant piping Defect of connector contact Defect of HPS						○

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E4	Actuation of low pressure switch (LPS)	Clogged refrigerant piping Shortage of gas Defect of connecting connector Defect of outdoor unit PCB		○	○	○		○
E5	Overheat of inverter compressor motor	Shortage of refrigerant amount Defect of connector contact Leakage of four way valve	○					○
E5	Inverter compressor motor lock	Inverter compressor lock Incorrect wiring		○	○	○		
E6	STD compressor motor overcurrent/lock	Closed stop valve STD compressor lock	○	○	○	○		
E6	System No.1 Compressor overcurrent	Defect of EXP. valve Shortage of refrigerant amount Defect of compressor						○
E7	Malfunction of outdoor unit fan motor	Faulty contact of fan motor connector Defect of fan motor Defect of fan motor driver	○	○	○	○		○
E8	Overcurrent of inverter compressor	Defect of compressor Defect of outdoor unit PCB Defect of inverter main circuit capacitor Defect of power transistor	○					
E9	Malfunction of electronic expansion valve coil	Defect of electronic expansion valve Defect of connector contact Defect of outdoor unit PCB		○	○	○		○
ER	Malfunction of four way valve	Defect of four way valve Shortage of gas Defect of outdoor unit PCB Defect of thermistor	○					
EC	Malfunction of entering water temperature	Malfunction of cooling water temperature Defect of thermistor Defect of outdoor unit PCB			○			
EF	Malfunction of thermal storage unit	Defect of electronic expansion valve of thermal storage unit Defect of thermal storage PCB			○			
F3	Malfunction of discharge pipe temperature	Shortage of gas Clogged refrigerant piping Defect of connector contact Defect to discharge pipe thermistor	○	○	○	○		○
F6	Abnormal high pressure in cooling	Defect of outdoor unit fan motor Defect of electronic expansion valve Defect of heat exchanger thermistor Defect of outdoor unit PCB	○					
F6	Refrigerant overcharged	Refrigerant overcharged Disconnection of outdoor air thermistor Disconnection of heat exchanger thermistor Disconnection of liquid pipe thermistor			○	○		
HD	Malfunction of sensor system of compressor	Harness is disconnected, or defective connection Defect of PCB	○					
H1	Malfunction of humidifier unit damper	Defect of limit switch Defect of damper	○					
H3	Malfunction of high pressure switch (HPS)	Defect of high pressure switch Broken wire Defect of connector contact Defect of outdoor unit PCB	○	○	○	○		
H4	Malfunction of low pressure switch (LPS)	Defect of low pressure switch Broken wire Defect of connector contact Defect of outdoor unit PCB		○	○			
H5	Malfunction of compressor motor overload thermistor	Defect of connector contact Defect of compressor motor overload thermistor	○					
H6	Malfunction of position detection sensor	Faulty contact of compressor cable Defect of compressor Defect of outdoor unit PCB	○					
H7	Malfunction of outdoor fan motor signal	Faulty contact of fan wiring Defect of fan motor Defect of fan motor driver		○	○	○		
H8	Malfunction of compressor input (CT) system	Defect of power transistor Defect of reactor Faulty wiring of inverter system Defect of outdoor unit PCB	○					
H9	Malfunction of outdoor air thermistor	Defect of connector contact Defect of thermistor for outdoor air	○	○	○	○		○
HE	Malfunction of (hot) water temperature thermistor	Defect of connector contact Defect of outdoor unit PCB Defect of thermistor for water temperature		○	○			
HF	Alarm in thermal storage unit with ice	Thermal storage group defective wiring Defect of setting Excess of thermal storage tank numbers		○	○			
HJ	Malfunction of thermal storage tank water level	Low water level Defect of switch setting Water level detecting sensor failure Defect of connector contact		○	○			

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			RA	SkyAir	VRV	Package	HRV	Chiller
J1	Malfunction of pressure sensor	Defect of pressure sensor connector contact Defect of pressure sensor Defect of outdoor unit PCB		○	○			
J2	Malfunction of current sensor of compressor	Defect of current sensor Defect of outdoor unit PCB		○	○	○		○
J3	Malfunction of discharge pipe thermistor	Defect of connector contact Defect of outdoor unit PCB	○	○	○	○		○
J4	Malfunction of low pressure equivalent saturated temperature sensor system	Defect of connector contact Defect of outdoor unit PCB (Multi-split, Super-multi)	○					
J5	Malfunction of suction pipe thermistor	Defect of connector contact Defect of outdoor unit PCB	○	○	○	○		○
J6	Malfunction of heat exchanger thermistor	Defect of connector contact Defect of outdoor unit PCB	○	○	○	○		○
J7	Malfunction of liquid pipe thermistor (Refrigerant circuit and others)	Defect of connector contact Defect of outdoor unit PCB		○	○			○
J8	Malfunction of liquid pipe thermistor (Refrigerant circuit and others)	Defect of connector contact Defect of outdoor unit PCB		○				
J9	Malfunction of gas pipe thermistor (Refrigerant circuit and others)	Defect of connector contact Defect of outdoor unit PCB	○	○	○	○		
JR	Malfunction of high pressure sensor	Defect of connector contact Defect of outdoor unit PCB		○	○	○		○
JE	Malfunction of low pressure sensor	Defect of connector contact Defect of outdoor unit PCB		○	○	○		○
JE	Malfunction of sub-tank thermistor	Defect of connector contact Defect of outdoor unit PCB			○			
JF	Malfunction of heating thermistor for heat exchanger	Defect of connector contact Defect of outdoor unit PCB			○			
JH	Malfunction of oil temperature thermistor	Defect of connector contact Defect of outdoor unit PCB			○			
L0	Malfunction of inverter system	Shortage of power supply capacity Defect of inverter PCB			○			
L1	Malfunction of inverter PCB	Defect of compressor wiring Blown fuse Defect of outdoor unit fan motor Defect of inverter PCB		○	○			
L3	Electrical box temperature rise	Fin temperature rise due to short-circuit Defect of power transistor Defect of outdoor unit fan Defect of outdoor unit PCB	○					
L4	Malfunction of inverter radiating fin temperature rise	Fin temperature rise due to short-circuit Defect of fin thermistor	○	○	○	○		
L5	Inverter instantaneous overcurrent (DC)	Closed stop valve Defect of compressor	○	○	○	○		
L6	Inverter instantaneous overcurrent (AC)	Overcharge of refrigerant amount Defect of compressor Shortage of power supply capacity Defect of inverter unit			○			
L8	Overcurrent of inverter compressor	Abnormal high pressure rise due to clogged refrigerant circuit and others Defect of compressor		○	○	○		
L9	Malfunction of inverter compressor startup	Faulty of pressure equalization Defect of compressor wiring Defect of compressor		○	○	○		
LR	Malfunction of power transistor	Defect of power transistor Defect of inverter PCB			○			
LE	Malfunction of transmission between outdoor unit PCB and micro-computer	Defect of grounding connection Defect of outdoor unit PCB	○					
LE	Malfunction of transmission between control and inverter PCB	Defect of connector contact Defect of inverter PCB Malfunction due to noise Defect of outdoor unit control PCB		○	○	○		
PG	Shortage of refrigerant amount (thermal storage unit)	Shortage of refrigerant Clogged refrigerant piping			○			

Malfunction code	Malfunction Contents	Supposed causes	Objects					
			RA	SkyAir	VRV	Package	HRV	Chiller
P1	Power voltage imbalance, open phase	Open phase Voltage imbalance between phases Faulty main circuit capacitor Defect of wiring contact		○	○	○		○
P2	Automatic refrigerant charge operation stop	Closed stop valve Closed valve of refrigerant tank			○	○		
P3	Malfunction of thermistor in electrical box	Electrical box temperature rise (ambient temperature rise) Defect of fin thermistor Defect of outdoor unit PCB	○	○				
P4	Malfunction of radiating fin temperature sensor	Defect of radiating fin thermistor Defect of wiring contact Defect of outdoor unit PCB	○	○	○	○		
P8	Heat exchanger freezing protection during automatic refrigerant charging	(Close the refrigerant cylinder. Start again from step 1.)			○	○		
P9	Malfunction of fan motor (humidifier unit)	Defect of fan motor Defect of outdoor unit PCB Broken relay harness Defect of connector contact	○					
P9	Automatic refrigerant charge operation completed	—			○	○		
PR	Broken wire of heater (humidifier unit)	Defect of heater unit Defect of thermistor Defect of outdoor unit PCB	○					
PR	Empty refrigerant cylinder during automatic refrigerant charging	Refrigerant cylinder of master unit is empty			○	○		
PC	Empty refrigerant cylinder during automatic refrigerant charging	Refrigerant cylinder of slave unit 2 is empty			○	○		
PE	Automatic refrigerant charge operation nearly completed	—			○	○		
PH	Malfunction of temperature (humidifier unit)	Defect of heater unit Defect of connector contact Defect of thermistor Defect of outdoor unit PCB	○					
PH	Empty refrigerant cylinder during automatic refrigerant charging	Refrigerant cylinder of slave unit 1 is empty			○	○		
PJ	Malfunction of capacity setting (Outdoor unit PCB)	Capacity setting adaptor is not installed Defect of outdoor unit PCB Improper capacity setting adaptor		○				
PJ	Improper combination between inverter and fan driver	Mistake of inverter PCB Mistake of inverter fan PCB Mistake of control PCB			○	○		
U0	Shortage of refrigerant	Shortage of refrigerant Closed stop valve Clogged refrigerant piping	○	○	○	○		○
U1	Reverse phase, open phase	Reverse phase, open phase of power wiring Wrong wiring Defect of outdoor unit PCB	○	○	○	○		○
U2	Defect of power supply voltage or instantaneous power failure	Defect of power supply voltage Defect of wiring contact Instantaneous power failure	○	○	○	○		
U3	Check operation not executed	Check operation not executed			○	○		
U3	Malfunction of transmission	Malfunction due to noise Wrong wiring Defect of outdoor unit PCB						○
U4	Malfunction of transmission between indoor and outdoor unit	Defect or indoor-outdoor transmission wiring Malfunction due to noise Defect of indoor unit PCB and outdoor unit PCB	○	○	○	○		○
U5	Malfunction of transmission between indoor unit and remote controller	Defect of remote controller wiring Defect of indoor unit PCB Malfunction due to noise Defect of remote controller main/sub setting	○	○	○	○		○
U6	Malfunction of transmission between indoor units	Faulty wiring Malfunction due to noise Defect of indoor unit PCB			○			
U7	Malfunction of transmission between main body micro-computer - INV micro-computer	Harness disconnection/broken wire between PCB Defect of outdoor unit PCB	○					
U7	Malfunction of transmission between outdoor units	Defect of wiring between outdoor units Defect of outdoor unit switch setting Defect of wiring between outdoor - thermal storage units			○	○		○
U8	Malfunction of transmission between remote controllers	Defect of remote controller main/sub setting Defect of remote controller wiring Defect of remote controller PCB		○	○	○	○	

Outdoor Unit

Outdoor Unit

System

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Malfunction code	Malfunction Contents	Supposed causes	Objects							
			RA	SkyAir	VRV	Package	HRV	Chiller		
System	U9	Malfunction of transmission (other system)	Defect of communication between other indoor unit and outdoor unit Other indoor unit electronic expansion valve failure							
	UR	Defect of indoor/outdoor power supply	Wrong model connections Wrong PCB connected	Improper power supply Defect of PCB	○					
	UR	Malfunction of field setting	Malfunction of field setting by remote controller Defect of remote controller wiring Defect of indoor unit PCB			○				
	UR	Improper combination of indoor and outdoor units	Excess of connected indoor units Uncanceled service mode	Malfunction of field setting Defect of outdoor unit PCB			○	○	○	
	UR	Remote temperature setting wire disconnection	Remote temperature setting wire disconnection Defect of connector contact							○
	UE	Malfunction of setting of centralized controller address	Address duplication of centralized controller			○	○	○		
	UE	Malfunction of transmission between indoor unit and centralized controller	Malfunction of wiring between indoor unit and centralized controller Defect of setting of group number Defect of indoor unit PCB			○	○	○	○	○
	UF	Wiring and piping mismatch	Improper connection of transmission wiring between indoor-outdoor units and outdoor-outdoor units			○	○	○		
	UH	Malfunction of system	Improper connection of transmission wiring between indoor-outdoor units and outdoor-outdoor units Defect of indoor and outdoor unit PCB (RA: Mismatching indoor and outdoor units, Defect of voltage, Freeze protection in other indoor unit)		(○)		○	○		
	UU	Malfunction of transmission (Accessory devices)	Defect of accessory devices Faulty wiring				○			○
	M1	Malfunction of centralized remote controller PCB	Defect of centralized remote controller PCB			○	○	○	○	○
	M8	Malfunction of transmission between optional controllers for centralized control	Other centralized control power disconnection Defect of transmission wiring	Centralized control reset switch ON Central remote controller address change		○	○	○	○	○
	MR	Improper combination of optional controllers for centralized control	Improper combination of optional controllers for centralized control More than one master controller is connected Faulty setting of centralized control Defect of centralized control			○	○	○	○	○
MC	Address duplication, improper setting	Address duplication of central remote controller setting			○	○	○	○	○	
Others	60	External protection device actuated	Actuation of external protection device Defect of output signal wiring Defect of control PCB							○
	64	Malfunction of indoor air thermistor	Defect of connecting connector Defect of control PCB	Defect of thermistor for indoor air					○	
	65	Malfunction of outdoor air thermistor	Defect of connector contact Defect of control PCB	Defect of outdoor air thermistor					○	
	6A	Malfunction of damper system	Defect of connector contact Defect of damper motor	Defect of limit switch Defect of control PCB					○	
	70	System No. 2 Compressor overload	Shortage of refrigerant amount Leakage of four way valve							○
	71	System No. 2 Compressor overcurrent	Shortage of refrigerant amount Defect of compressor							○
	72	System No. 2 Fan motor overcurrent	Defect of fan motor connector contact Defect of fan motor							○
	73	System No. 2 Malfunction of high pressure (HPS) actuated	Dirty heat exchanger Clogged refrigerant piping Defect of HPS	Shortage of water volume Defect of connector contact						○
	74	System No. 2 Malfunction of low pressure switch (LPS)	Clogged refrigerant piping Shortage of gas	Defect of connector contact Defect of LPS						○
	75	System No. 2 Malfunction of low pressure sensor	Defect of connector contact Defect of PCB	Defect of low pressure sensor						○
	76	System No. 2 Malfunction of high pressure sensor	Defect of connector contact Defect of PCB	Defect of high pressure sensor						○

Malfunction code	Malfunction Contents	Supposed causes	Objects							
			RA	SkyAir	VRV	Package	HRV	Chiller		
Others	77	System No. 1 Malfunction of fan inter lock	Defect of relay contact Broken wire							○
	78	System No. 2 Malfunction of fan inter lock	Defect of relay contact Broken wire							○
	7A	System No. 2 Malfunction of current sensor of compressor	Defect of current sensor Defect of outdoor unit PCB	Defect of compressor						○
	7C	System No. 2 Malfunction of pump inter lock	Cooling water pump interlock actuated							○
	80	Malfunction of entering water temperature thermistor	Defect of connector contact Defect of entering water temperature thermistor							○
	81	Malfunction of leaving water temperature thermistor	Defect of connector contact Defect of leaving water temperature thermistor							○
	82	System No. 1 Malfunction of refrigerant thermistor	Defect of connector contact Defect of refrigerant thermistor							○
	83	System No. 2 Malfunction of refrigerant thermistor	Defect of connector contact Defect of refrigerant thermistor							○
	84	System No. 1 Malfunction of heat exchanger thermistor	Defect of connector contact Defect of heat exchanger thermistor							○
	85	System No. 2 Malfunction of heat exchanger thermistor	Defect of connector contact Defect of heat exchanger thermistor							○
	86	System No. 2 Malfunction of discharge pipe thermistor	Defect of connecting connector Defect of discharge pipe thermistor							○
	88	System No. 2 Malfunction of discharge pipe temperature	Shortage of gas Defect of connector contact	Defect of discharge pipe thermistor Clogged refrigerant piping						○
	89	Malfunction of brazed-plate heat exchanger freezing	Dirty heat exchanger Defect of thermistor		Shortage of refrigerant amount					○
	8A	System No. 2 Malfunction of leaving water temperature thermistor	Defect of connector contact Defect of leaving water temperature thermistor							○
	8E	System No. 1 Malfunction of suction pipe thermistor 1 for heating	Defect of connector contact Defect of suction pipe thermistor							○
	8F	System No. 1 Malfunction of suction pipe thermistor 2 for heating	Defect of connector contact Defect of suction pipe thermistor							○
	8H	Abnormal high hot water temperature	Three-way valve malfunction Defect of water temperature setting		Defect of thermistor					○
	90	Abnormal chilled water quantity, abnormal AXP	Shortage of water volume Disconnection of AXP							○
	91	System No. 2 Malfunction of electronic expansion valve	Defect of connector contact Defect of electronic expansion valve coil							○
	92	System No. 2 Malfunction of suction pipe thermistor	Defect of connector contact Defect of suction pipe thermistor							○
94	Malfunction of transmission (between heat reclaim ventilation unit and fan unit)	Defect of fan unit PCB Defect of connecting wire between (1) and (2)							○	
95	System No. 1 Malfunction of inverter system	Defect of fan inverter unit							○	
96	System No. 2 Malfunction of inverter system	Defect of fan inverter unit							○	
97	Malfunction of thermal storage unit	Defect of thermal storage unit							○	
98	Malfunction of thermal storage brine pump	Actuation of thermal storage brine pump overcurrent (OC)							○	
99	Malfunction of thermal storage brine tank	Low water level of thermal storage brine tank							○	