

Alarm List  
A/W Split (8754)

2018-01-10

Alarm code	Display level	Alarm text	Alarm definition	Possible cause	Action
1001 /A21/A22 /A23/A24	Customer	No communication betw. system controller and remote control	Room sensor will display error code A21/A22/A23/A24 depending on which heating circuit 1-4 it controls. The Room sensor has first been installed successfully. Then the EMS bus signal has gone absent from the parent controller (display HMC300/HPC400).	Poor EMS connection between display and installer module.	Check both ends of EMS cabling between the boards.
1010 /A11	Customer	No communication via EMS BUS connection	The local device hasn't received its EMS token from the EMS bus master for 2 minutes.	Break/disruption in EMS connection.	Check that accessories for the EMS bus (room control, mixing module, etc.) are properly connected. Also check connection between display and installer module.
1037	Customer	Outdoor temperature sensor faulty, heating standby mode active	The EMS communication between the sensor and the control unit.	The alarm can occur in conjunction with alarm 1010. Also see code 1010.	Check the alarm history and look for adjacent 1010 alarms. If one exists the installer module shall be upgraded with the latest available software.
				If alarm 1010 is not included in the alarm history, there can be a fault in the microcontroller of the installer module.	Replace the installer module.
1038	Customer	Invalid time/date	Time/date has not been set.	Time/date has not been set.	Set the time and date again.
				Extended power outage.	Set the time and date again.
1051	Customer	No communication with external room temp. sensor module	The module for external room temperature sensor has not been developed. The alarm is triggered if the installer still selects this module to control a heating circuit. (Also see alarm 3091.)	Incorrect setting in software. Service menu >> Set heating/cooling >> Heating circ. 1 >> Ext. room temp. sensor, shall always be set to No.	Under Service menu >> Set heating/cooling >> Heating circ. 1, make sure that Ext. room temp. Sensor = No, and that Programming unit = RC100/CR10. See room sensors' installer guide for more information.
1052	Customer	No communication with external room temp. sensor module	The module for external room temperature sensor has not been developed. The alarm is triggered if the installer still selects this module to control a heating circuit. (Also see alarm 3092.)	Incorrect setting in software. Service menu >> Set heating/cooling >> Heating circ. 2 >> Ext. room temp. sensor, shall always be set to No.	Under Service menu >> Set heating/cooling >> Heating circ. 2, make sure that Ext. room temp. Sensor = No, and that Programming unit = RC100/CR10. See room sensors' installer guide for more information.

1053	Customer	No communication with external room temp. sensor module	The module for external room temperature sensor has not been developed. The alarm is triggered if the installer still selects this module to control a heating circuit. (Also see alarm 3093.)	Incorrect setting in software. Service menu >> Set heating/cooling >> Heating circ. 3 >> Ext. room temp. sensor, shall always be set to No.	Under Service menu >> Set heating/cooling >> Heating circ. 3, make sure that Ext. room temp. Sensor = No, and that Programming unit = RC100/CR10. See room sensors' installer guide for more information.
1054	Customer	No communication with external room temp. sensor module	The module for external room temperature sensor has not been developed. The alarm is triggered if the installer still selects this module to control a heating circuit. (Also see alarm 3094.)	Incorrect setting in software. Service menu >> Set heating/cooling >> Heating circ. 4 >> Ext. room temp. sensor, shall always be set to No.	Under Service menu >> Set heating/cooling >> Heating circ. 4, make sure that Ext. room temp. Sensor = No, and that Programming unit = RC100/CR10. See room sensors' installer guide for more information.
1081	Customer	Two master prog units in the system.	The room sensor for heating circuit 1 has been incorrectly configured as a controller ("CO"/"SC").	The display unit in the indoor unit is always the controller in the system, and more than one is not allowed.	Configure the room sensor for remote control "Fb". See room sensors' installation guide for more information.
1082	Customer	Two master prog units in the system.	The room sensor for heating circuit 2 has been incorrectly configured as a controller ("CO"/"SC").	The display unit in the indoor unit is always the controller in the system, and more than one is not allowed.	Configure the room sensor for remote control "Fb". See room sensors' installation guide for more information.
1083	Customer	Two master prog units in the system.	The room sensor for heating circuit 3 has been incorrectly configured as a controller ("CO"/"SC").	The display unit in the indoor unit is always the controller in the system, and more than one is not allowed.	Configure the room sensor for remote control "Fb". See room sensors' installation guide for more information.
1084	Customer	Two master prog units in the system.	The room sensor for heating circuit 4 has been incorrectly configured as a controller ("CO"/"SC").	The display unit in the indoor unit is always the controller in the system, and more than one is not allowed.	Configure the room sensor for remote control "Fb". See room sensors' installation guide for more information.
3061	Customer	No communication with mixer module	A mixing module has previously been installed for heating circuit 1 and now the installer module is unable to communicate with the rooms sensor over the EMS bus.	Poor connection or improperly installed EMS cable between installer module and mixing module.	Check EMS cabling.
3062	Customer	No communication with mixer module	A mixing module has previously been installed for heating circuit 2 and now the installer module is unable to communicate with the rooms sensor over the EMS bus.	Poor connection or improperly installed EMS cable between installer module and mixing module.	Check EMS cabling.
3063	Customer	No communication with mixer module	A mixing module has previously been installed for heating circuit 3 and now the installer module is unable to communicate with the rooms sensor over the EMS bus.	Poor connection or improperly installed EMS cable between installer module and mixing module.	Check EMS cabling.

3064	Customer	No communication with mixer module	A mixing module has previously been installed for heating circuit 4 and now the installer module is unable to communicate with the rooms sensor over the EMS bus.	Poor connection or improperly installed EMS cable between installer module and mixing module.	Check EMS cabling.
3071	Customer	No communication with remote control	A room sensor has previously been installed for heating circuit 1 and now the installer module is unable to communicate with the rooms sensor over the EMS bus.	Poor connection or improperly installed EMS cable between installer module and room sensor.	Check EMS cabling.
3072	Customer	No communication with remote control	A room sensor has previously been installed for heating circuit 2 and now the installer module is unable to communicate with the rooms sensor over the EMS bus.	Poor connection or improperly installed EMS cable between installer module and room sensor.	Check EMS cabling.
3073	Customer	No communication with remote control	A room sensor has previously been installed for heating circuit 3 and now the installer module is unable to communicate with the rooms sensor over the EMS bus.	Poor connection or improperly installed EMS cable between installer module and room sensor.	Check EMS cabling.
3074	Customer	No communication with remote control	A room sensor has previously been installed for heating circuit 4 and now the installer module is unable to communicate with the rooms sensor over the EMS bus.	Poor connection or improperly installed EMS cable between installer module and room sensor.	Check EMS cabling.
3081	Customer	Configuration error: remote control not used	The room sensor refers to a circuit that does not exist.	The room sensor refers to a circuit that does not exist.	Ensure that the room sensor refers to the correct heating circuit.
3091 /A61/A11	Customer	Room temperature sensor faulty	The resistance thermometer inside the room sensor for heating circuit 1 is defective. (EMS communication is working.) An incorrect configuration of the rooms sensor will produce the same alarm.	Incorrect configuration of external room sensor. (This will also produce alarm 1051.)	Ensure that the setting Service menu >> Set heating/cooling >> Heating circ. 1 >> Ext. room temp. Sensor = No.
				Broken room sensor.	The room sensor must be replaced.
3092 /A62/A11	Customer	Room temperature sensor faulty	The resistance thermometer inside the room sensor for heating circuit 2 is defective. (EMS communication is working.) An incorrect configuration of the rooms sensor will produce the same alarm.	Incorrect configuration of external room sensor. (This will also produce alarm 1052.)	Ensure that the setting Service menu >> Set heating/cooling >> Heating circ. 2 >> Ext. room temp. Sensor = No.
				Broken room sensor.	The room sensor must be replaced.
3093 /A63/A11	Customer	Room temperature sensor faulty	The resistance thermometer inside the room sensor for heating circuit 3 is defective. (EMS communication is working.) An incorrect configuration of the rooms sensor will produce the same alarm.	Incorrect configuration of external room sensor. (This will also produce alarm 1053.)	Ensure that the setting Service menu >> Set heating/cooling >> Heating circ. 3 >> Ext. room temp. Sensor = No.
				Broken room sensor.	The room sensor must be replaced.

3094 /A64/A11	Customer	Room temperature sensor faulty	The resistance thermometer inside the room sensor for heating circuit 4 is defective. (EMS communication is working.) An incorrect configuration of the rooms sensor will produce the same alarm.	Incorrect configuration of external room sensor. (This will also produce alarm 1054.)	Ensure that the setting Service menu >> Set heating/cooling >> Heating circ. 4 >> Ext. room temp. Sensor = No.
				Broken room sensor.	The room sensor must be replaced.
3111 /A11	Customer	Configuration error: Incorrect remote control	The alarm is given if a room sensor was previously acknowledged, but it is later replaced with another room sensor type with hygrometer - or vice versa.	The alarm is given if a room sensor was previously acknowledged, but it is later replaced with another room sensor type with hygrometer - or vice versa.	Run the configuration wizard from Service menu / Commissioning. It automatically identifies the type of room sensor used.
3141 /A21	Customer	Humidity sensor defective	Sensor for relative humidity is faulty in the room sensor for heating/cooling circuit 1.	Sensor for relative humidity is faulty in the room sensor.	Replace room sensor.
3142 /A22	Customer	Humidity sensor defective	Sensor for relative humidity is faulty in the room sensor for heating/cooling circuit 2.	Sensor for relative humidity is faulty in the room sensor.	Replace room sensor.
3143 /A23	Customer	Humidity sensor defective	Sensor for relative humidity is faulty in the room sensor for heating/cooling circuit 3.	Sensor for relative humidity is faulty in the room sensor.	Replace room sensor.
3144 /A24	Customer	Humidity sensor defective	Sensor for relative humidity is faulty in the room sensor for heating/cooling circuit 4.	Sensor for relative humidity is faulty in the room sensor.	Replace room sensor.
5201	Installer	Warning Outside temp. sensor T1 open circuit	Warning if the resistance of the outdoor sensor T1 > 179 kOhm (corresponding to a temperature < -50°C).	Outdoor sensor T1 has not been installed.	Install outdoor sensor.
				Break on signal cable between installer module and sensor.	Check signal cable and connection to installer module.
5202	Installer	Warning Outdoor temp. sensor T1 short circuit	Warning if the resistance of the outdoor sensor T1 < 824 Ohm (corresponding to a temperature > 70°C).	Outdoor sensor T1/signal cable shorted.	Check signal cable.
5203	Customer	Alarm Outside temperature sensor T1 fault	Alarm if 3 warnings are registered withing 3 hours, or if the circuit for outdoor sensor T1 is continuously shorted/broken for 30 minutes.	See possible causes for the warnings 5201 and 5202.	See possible actions for the warnings 5201 and 5202.
				Outdoor sensor T1 value is out of range (> 179 kOhm or < 824 Ohm).	Measure the resistance of the temperature sensor. If the value is out of range the signal cable may have a break or short. Replace signal cable or sensor T1 if necessary.
				Defective installer module.	If sensor T1 measures the correct value, and the same warning (5201/5202) remains when the sensor is connected, replace the installer module.

5204	Installer	Warning Z1 Flow temperature sensor T0 open circuit	Warning if the resistance of flow sensor T0 > 30 kOhm (<0°C).	Break on signal cable between installer module and sensor.	Check signal cable and screw terminal on installer module.
5205	Installer	Warning Z1 Flow temperature sensor T0 short circuit	Warning if the resistance of flow sensor T0 < 500 Ohm (>110°C).	Flow sensor T0/signal cable shorted.	Check signal cable.
5206	Customer	Alarm Z1 Flow temperature sensor T0 failure	Alarm if 3 warnings are registered within 3 hours, or if the circuit for flow sensor T0 is continuously shorted/broken for 30 minutes.	See possible causes for the warnings 5204 and 5205.	See possible actions for the warnings 5204 and 5205.
				Flow sensor T0 value is out of range (> 30 kOhm or < 500 Ohm).	Measure the resistance of the temperature sensor. If the value is out of range the signal cable may have a break or short. Replace signal cable or sensor T0 if necessary.
				Defective installer module.	If sensor T0 measures the correct value, and the same warning (5204/5205) remains when the sensor is connected, replace the installer module.
5207	Installer	Warning Temperature sensor TC1 open circuit	Warning if open circuit (>179 kOhm) on sensor TC1 after 3 registered errors within 2 hours.	Screw terminal on installer module no properly tightened.	Check screw terminal for TC1.
				Heat carrier outlet sensor TC1/signal cable open circuit.	With TC1 disconnected from installer module, compare measured Ohm value with sensor table in documentation. Replace sensor if necessary.
				Defective installer module.	Replace installer module.
5208	Installer	Warning Temperature sensor TC1 short circuit	Warning short circuit (<3900 Ohm) on sensor TC1, if 3 registered errors within 2 hours.	Heat carrier outlet sensor TC1/signal cable shorted.	With TC1 disconnected from installer module, compare measured Ohm value with sensor table in documentation. Repair sensor cable or replace sensor if necessary.
				Defective installer module.	Replace installer module.
5209	Customer	Alarm Temperature sensor TC1 fault	Alarm after 3 errors within 3 hours, or 15 minutes of continuously broken/shorted circuit for sensor TC1.	See possible causes for alarm code 5207, 5208.	See actions for alarm codes 5207, 5208.
5213	Installer	Warning Z1 Inlet temp. sensor TC0 open circuit	Warning if the resistance of heat carrier return-sensor TC0 > 30 kOhm (<0°C).	Screw terminal in installer module, for heat carrier return sensor TC1, not properly tightened.	Check screw terminal for TC1.
				Heat carrier return sensor TC0/signal cable broken.	With sensor disconnected from the installer board, measure the Ohm value and compare it to table value in documentation. Repair cable or replace sensor if necessary.
				Defective installer module.	Replace installer module.

5214	Installer	Warning Z1 Inlet temp. sensor TC0 short circuit	Warning if the resistance of heat carrier return-sensor TC0 < 500 Ohm (>110°C).	Heat carrier return sensor TC0/signal cable shorted.	With sensor TC0 disconnected from the installer board, measure the resistance and compare it to sensor table in documentation. Replace sensor if necessary.
				Defective installer board.	Replace installer board.
5215	Customer	Alarm Z1 Inlet temperature sensor TC0 fault	Alarm if 3 warnings are registered within 3 hours, or if the circuit for sensor TC0 is continuously broken/shorted for 15 minutes.	See possible causes for alarm codes 5213, 5214.	See possible actions for alarm codes 5213, 5214.
5234	Installer	Warning Pool temp. sensor TP1 open circuit	Warning for interruption of the circuit (>179 kOhm) on sensor TC1, connected to the pool module, after 3 faults within 2 hours.	Pool temperature sensor TC1/signal cable interruption.	Measure resistance of sensor TP1/signal cable, and compare value to sensor table in documentation. TP1 needs to be disconnected from the I/O module during measurement.
				Screw terminal for sensor TC1, on pool module, is not properly tightened.	Tighten screws.
				Pool temperature sensor TC1/signal cable is broken.	Replace pool temperature sensor TC1.
				Defective I/O module.	Replace I/O module.
5235	Installer	Warning Pool temp. sensor TP1 short circuit	Warning if circuit for pool temperature sensor TC1, connected to the pool module, is shorted. Warning is triggered if three detected faults within 2 hours.	Pool temperature sensor TP1/signal cable shorted.	With sensor TC1 disconnected from the pool module, measure its resistance and compare it to sensor table. Repair cable or replace sensor if necessary.
				Defective pool module.	Replace pool module.
5236	Customer	Alarm Pool temperature sensor TP1 fault	Alarm if 3 errors within 3 hours, or if circuit for pool temperature sensor TC1 is broken/shorted continuously for 15 minutes.	See possible causes for codes 5234, 5235.	See trouble-shooting advice for codes 5234, 5235.
5237	Installer	Warning DHW temp. sensor TW1 open circuit	Warning if the resistance for hot water sensor TW1 < 0°C. See sensor table for resistance value.	Screw terminal for TW1 on installer module not properly tightened.	Check screw terminal.
				Sensor TW1 or signal cable is broken.	With the sensor disconnected from the installer board, measure and compare the resistance to sensor table in documentation. Repair cable or replace sensor if necessary.
				Defective installer board.	Replace installer board.

5238	Installer	Warning DHW temp. sensor TW1 short circuit	Warning if the circuit for hot water sensor TW1 is shorted (<390 Ohm).	Hot water sensor TW1/signal cable shorted.	With the sensor disconnected from the installer board, measure and compare the resistance to sensor table in documentation. Repair cable or replace sensor if necessary.
				Defective installer board.	If the sensor is found to be working and the warning is still triggered, replace the installer board.
5239	Customer	Alarm DHW temp. sens. TW1 fault	Alarm is triggered if 3 warnings have been registered within 3 hours, or if the circuit for sensor TW1 is continuously broken/shorted for 15 minutes.	See possible causes for warning codes 5237 and 5238.	See possible actions for warning codes 5237 and 5238.
5246	Customer	Alarm Z1 Electr.boost.heater E2 high li. saf. cut-out or press.reg. triggered	The alarm circuit has two guards connected in series: The overheating protector for the electrical heater is triggered. The pressure guard MC1 for the heating system is triggered due to pressure < 0,5 bar. Either of these two can cause the alarm.	Low system pressure. Air in the heating system.	De-air heating system according to instruction in the installer guide. Refill heating system.
				Clogged filterball SC1 on return pipe.	Clean filter ball SC1.
				Bad circulation in the heating carrier/heating system.	Check adjustment valves/thermostats for heating system.
				Fuse F1 is broken.	Replace fuse F1.
				Defective system pressure guard MC1.	Replace system pressure guard.
				Defective overheating protector.	Verify breaking temperature (96°C) for the overheating protector.
				Fuse F50 on installer module is broken.	Replace fuse F50.
				PWM signal or 230 V supply voltage missing for circulation pump PC0.	Ensure 230 V supply to PC0. Disconnect PWM signal from terminal 40,41 on installer module. The speed of the circulation pump should increase to 100%.
				Defective circulation pump.	Replace circulation pump.
				Contactor for electrical heater has got jammed in closed (active) position.	Check / replace contactor.
If all points above have been checked and the alarm persists, the installer module may be defective.	Replace installer module.				
5252	Installer	Warning Z1 Restr. in flow rate btw. outdoor and ind. unit (check strainer)	Warning when the heat carrier delta >13K in heating mode, or >7K in cooling mode.	Bad circulation in the heating carrier/heating system.	Check adjustment valves/thermostats for heating system.

5265	Installer	Warning Z1 PCB disconnected	Bad connection or interference on CANbus between heat pump and indoor unit.	Bad CANbus connections on installer board (indoor unit) or I/O board (outdoor unit).	Check CANbus connections on installer board and I/O board.
				Open circuit/break on CANbus cable between indoor and outdoor unit.	Replace CANbus cable.
				Incorrect type of CANbus cable. Read printed documentation for further info.	Change to proper type of cable.
				CANbus cable is placed together with power supply to heat pump. Interference can be generated by electromagnetic induction.	Separate CANbus and power supply by at least 100 mm.
				Incorrect earthing of CANbus cable.	Remove/connect cable shield to/from earth.
5266	Customer	Alarm Z1 PCB disconnected	Alarm after 3 warnings within 3 hours, or continuous disruption in 15 minutes.	See possible causes for warning 5265.	See actions for alarm 5265.
5269	Customer	Alarm Z1 Additional electric heater EE too high temperature	Alarm when sensor TC1>87°C. The alarm is automatically acknowledged/reset when TC1<80°C.	Dirt in filter ball SC1 on return line.	Clear system filter/filter ball SC1.
				Poor circulation in heat transfer system/heating system.	Check adjustment valves/thermostats for heating system. Ensure adequate flow.
				Defective TC1 sensor.	With TC1 disconnected from the installer module, compare its measured value to sensor table in documentation. Replace sensor TC1 if necessary.
5271	Customer	Alarm Heating circuit 1 high flow temperature	Alarm when sensor T0 > "Max. flow temperature" set point value + 5 degrees, for 10 seconds. The alarm is blocked for 5 minutes after a DHW cycle.	Defective T0 sensor.	With sensor disconnected from the installer board, compare sensor resistans to table values for T0 found in the documentation.
				Low flow in heating system.	Clean filter ball on return pipe. Check adjustment valves and thermostats for the heating system.
				The system is in heating mode but the diverter valve has not switched over to DHW.	Check that 230 V is available on terminal 53 (VW1) during DHW mode. If 230 V during DHW mode, replace the motor/cable for the diverter valve. If voltage is missing during DHW mode, replace the installer module.
5272	Customer	Alarm External heater EM is not operational	Alarm for external additional heater/overheating protector. Alarm is triggered if 230 V is missing on terminal 64 on installer module.	See possible causes for alarm 5246.	Se actions for alarm 5246.
				Tripped fuse at distrubution box.	Replace/reset fuses at distrubution box.



5273	Customer	Alarm Z1 Phase monitoring	Alarm if phase is missing. Only applicable for 3-phase models. 1-phase: If L1 is missing the indoor unit shuts down. If L3 is missing the heat pump shuts down.	Tripped fuse in indoor unit (tower).	Reset fuse in indoor unit.
				Phase/phases missing on terminals for supply voltage in heat pump.	Check that all phases are properly connected and that each one carries voltage.
				Phase/phases missing on terminals for supply voltage on EMI filter in the inverter.	Check that all phases are available on terminals for EMI filter.
				If voltage is present on all phases connected to the EMI filter, and alarm remains, the inverter is broken.	Replace inverter.
5275	Customer	Alarm Electric anode is out of order	Alarm if voltage > 1 V DC on terminal 45, 46 on installer module, for longer than 6 hours.	LED on electrical anode board is lit red.	Check connection/cable on terminal X2, and electrical anode rod in cylinder.
				Check that the LED is lit green on the electrical anode board.	If LED is lit green, check that voltage exceeds 1 V DC on terminal 45, 46 on installer module.
				If voltage > 1V DC on terminal 45,46, the installer module is defective.	Replace installer module.
				Green LED on electrical anode board is not turned on.	Ensure that 230V is available on terminal X1 on electrical anode board.
				If 230 V is available on terminal X1 If green LED on electrical anode board is turned off, the board is broken.	Replace electrical anode board.

5284	Customer	Warning Last thermal disinfection failed	The domestic hot water temperature, sensor TW1, has not reached 65°C within 180 minutes. If the warning is triggered a new attempt is postponed until the next day.	Water is continuously tapped from the cylinder.	Stop such continuous usage or change (prolong) the time for thermal disinfection.
				The electrical heaters output power is set too low in relation to hot water volume.	If the fuse requires the heater to run at limited power, you may need to allow a longer time for thermal disinfection. The time can be adjusted under [Service menu >> DHW >> Max. time].
				Hot water sensor is misplaced, or have come loose from the cylinder.	Put the hot water sensor in the correct position.
				Air in the heating coil.	De-air the heating coil.
				If using hot water circulation, too big losses from the pipes.	Make sure that circulation pipes are properly insulated.
				Incorrect reading from temperature sensor TW1.	With sensor disconnected from the installer module, measure its resistance and compare it to table value in documentation. Replace if necessary.
				Incorrectly connected pipes to hot water system.	Fix any pipe connection issues.
5285	Installer	Warning Risk of frost in heat. sys.	Warning if T0 (flow), TC1 (heat carrier flow) or TC0 (heat carrier return) < 5°C for 10 minutes. When the warning is triggered, all available heat sources are activated and all mixing valves are opened, in order to heat the system. The warning is reset when all of the previously mentioned sensors > 25°C.	Defective sensor.	Check the different sensors and compare Ohm-values to table values in documentation. Replace sensor if sensor if necessary.
				Supply voltage (230 V) is missing for circulation pump PC0.	Check that 230V is available on terminal PC0 (51, N) on the installation module. If not, also check that the fuse on the installation module is OK.
				PWM signal for circulation pump PC0 is missing.	Disconnect PWM signal from terminal 40,41 on the installation module. The speed of the circulation pump shall increase to max. If this does not happen, replace the circulation pump.
				Defective installation module (does not provide 230V for PC0 despite the fuse being OK, or that the PWM-signal is not working).	Replace installation module.
				Dirt in the air heat exchanger of the heat pump.	Clean air heat exchanger of the heat pump.

5292	Customer	Alarm Z1 JR1 clean outdoor unit	Alarm when JR1 > 65°C in cooling mode.	Blocked/low air flow through evaporator in heat pump.	Ensure sufficient air flow through the air heat exchanger.
				Fan is not running.	Activate test for heat pump.
				Fan is lacking 230V voltage.	Check that 230V voltage is available on output PL3, terminal 78, N on the I/O-module.
				Fan is lacking 0-10V signal.	Check 0-10V voltage on output PL3 PWM, terminal 20, 26 on the I/O-module, according to test outdoor unit.
				Defective fan.	If voltages are in accordance with the above, replace fan.
				Defective I/O-module.	If voltage is missing, replace I/O-module.
				Dirty/clogged air heat exchanger in heat pump.	Clean air heat exchanger.
5293	Customer	JR0 Alarm Clean heat pump Z1	Alarm if 3 warnings (code 5514) are registered within 3 hours, or if the same warning is active for 30 minutes. The alarm is given only when the heat pump is in heating mode. (See also code 5293.)	Blocked/low air flow through air heat exchanger in heat pump.	Ensure sufficient flow through the air heat exchanger.
				Fan is not running.	Activate test cycle for the outdoor unit.
				230 V supply voltage to fan is missing.	Check that 230 V voltage is available on PL3, installerboard, terminal 32 (78, N).
				0-10 V control signal missing for fan.	Check that 0-10 V voltage is available on output PL3 PWM, terminal 20 (20, 26), in accordance with test cycle for outdoor unit. Note that a PWM (pulse width modulation) signal can be difficult to measure accurately without special equipment. Most multimeters at VDC mode will however display an intermediate value. This is a sign that the PWM output is working.
				Defective fan.	If voltages are available as above, replace the fan.
				Defective I/O module.	If voltages are missing when performing above measurements, replace the I/O board.
5294	Installer	Warning Dew point monitor has tripped	The circuit for the dew point guard/condensate guard has been closed. > 2,5V DC on condensatio+D329n guard MD1 (previously known as MK2), terminal 34, 35 on installer module. The warning is automatically reset when the circuit has been open for 60 seconds.	Short circuit in cable/humidity sensor.	Measure the resistance of the circuit.
				Defective installer module.	Measure voltage on terminal MD1 (34, 35) on installer module, with the humidity sensor disconnected. If voltage is < 2,5V DC, replace installer module.

5295	Customer	Alarm Condensation guard has tripped	Alarm after 30 minutes of warning. The alarm must be manually acknowledged.	See possible causes for warning code 5294.	See actions for warning 5294.
5296	Customer	Alarm Z1 4-way valve error, cannot switch to cooling mode	Alarm if TR3 > TR4, and TC3 > TC0, after 5 minutes of cooling operation / defrost.	Defective coil for 4-way valve.	Measure the resistance of the coil on the 4-way valve. It should be between 1,3-1,5 kOhm. If not, replace the coil.
				No control signal to 4-way valve. (230 VAC missing on terminal 81-N on I/O module.)	Activate function test for the heat pump. (Service menu >> Diagnosis >> Function test >> Activate function tests = Yes. Heat pump >> Outdoor unit test = On.) Check that the control signal shifts between 0 and 230 VAC during the 2 minute test cycle. If the voltage is always 0 V, replace the I/O module.
				Defective sensor (TR3, TR4, TC3 or TC0)	Check that sensors are in their correct positions. Compare the temperature readings of the each sensor with an external sensor. If the reading is incorrect, replace the sensor.
				Seized/defective 4-way valve.	Replace 4-way valve.
5297	Customer	Alarm Z1 4-way valve error, cannot switch to heating mode	Alarm if TR4 > TR3, and TC0 > TC3, after 5 minutes in heating operation.	Defective coil for 4-way valve.	Measure the resistance of the coil on the 4-way valve. It should be between 1,3-1,5 kOhm. If not, replace the coil.
				No control signal to 4-way valve. (230 VAC missing on terminal 81-N on I/O module.)	Activate function test for the heat pump. (Service menu >> Diagnosis >> Function test >> Activate function tests = Yes. Heat pump >> Outdoor unit test = On.) Check that the control signal shifts between 0 and 230 VAC during the 2 minute test cycle. If the voltage is always 0 V, replace the I/O module.
				Defective sensor (TR3, TR4, TC3 or TC0)	Check that sensors are in their correct positions. Compare the temperature readings of the each sensor with an external sensor. If the reading is incorrect, replace the sensor.
				Seized/defective 4-way valve.	Replace 4-way valve.

5298	Installer	Warning Z1 High pressure alarm JR1	Warning if JR1 > 67°C (Pe=44 bar).	Dirt in system filter/filterball valve SC1.	Clean the filter.
				Poor circulation in heat transfer system/heating system.	Ensure sufficient flow.
				Air in heat transfer system/heating system.	Vent the heating system in accordance with instructions in installation manual. Fill up with water.
				Defective sensor TC3, TC0 or T0.	With sensors disconnected from installer module, measure the resistance of the sensors. Read out values from sensor table in documentation and compare them to actual temperatures. Replace any defective sensor.
				Diverter valve VW1 does not shift from hot water production to heating.	Check VW1 position. A=hot water, B=heating system.
				Defective installer module, bad control signal for diverter valve.	Check that terminal 53 on installer module provides 230V in hot water mode only.
				Defective installer module, PWM signal missing for circulation pump PC0.	Disconnect the PWM signal from terminal 40, 41 on the installer module. The speed of the pump should increase to 100%. If not, replace the circulation pump.
				Defective installer module, supply voltage, 230 V, missing from circulation pump PC0.	Measure voltage on terminal 51-N. If no voltage, replace installer module.
5299	Customer	Alarm Z1 High pressure alarm JR1	Alarm if JR1 > 67°C (Pe=44 bar) 3 times within 2 hours.	See possible causes for warning 5298.	See actions for warning 5298.
5302	Installer	Warning Z1 Too high temperature on compressor driver	Internal high temperature protection in inverter. Warning is triggered if temperature exceeds 80°C.	Poor heat transfer to cooling coil.	Check screw mountings for cooling coil.
5303	Customer	Alarm Z1 Temperature too high on compressor control system	Internal high temperature protection in inverter. Alarm if 3 warnings (code 5302) are triggered within 3 hours, or if the temperature continuously exceeds 80°C for 30 minutes.	See warning 5302.	See warning 5302.
				Defective inverter.	Replace inverter.

5310	Installer	Warning Z1 Too high discharge gas temperature	Warning if hot gas temperature TR6 > maximum temperature (90 or 115°C) for more than 60 seconds.	Suction gas overheating too high. The suction gas overheating is calculated through TR5 - JR0, and controls the position of the electronic expansion valve. Therefore correct readings from these sensors are important.	Compare read value from sensor TR5 with value of external thermometer. Connect manometer to refrigerant circuit and measure low pressure. Compare evaporating temperature value to read value from JR0.
				If neither JR0 or TR5 are bad, a possible cause could be that the electronic expansion valve is not regulating properly.	Use magnet to manually change position of the EEV during operation. This to ensure that the valve has not seized.
5311	Customer	Alarm Z1 Too high discharge gas temperature	Alarm after 3 warnings (code 5310) within 3 hours, or if the condition for the warning is fulfilled for more than 30 minutes.	Defective discharge temperature sensor TR6.	Measure the actual discharge temperature with a thermometer and compare it to the value displayed by TR6.
				Suction gas overheating too high. The suction gas overheating is calculated through TR5 - JR0, and controls the position of the electronic expansion valve. Therefore correct readings from these sensors are important.	Compare read value from sensor TR5 with value of external thermometer. Connect manometer to refrigerant circuit and measure low pressure. Compare evaporating temperature value to read value from JR0.
				If neither JR0 or TR5 are bad, a possible cause could be that the electronic expansion valve is not regulating properly.	Use magnet to manually change position of the EEV during operation. This to ensure that the valve has not seized.
				Lack of refrigerant, either due to insufficient filling or due to leak.	Search for leak and repair if necessary. Refill refrigerant.
5314	Installer	Warning Z1 Disch. gas temp. sensor TR6 open circuit	Broken circuit (> 364 kOhm) for sensor TR6.	Broken circuit for discharge gas temperature sensor TR6.	Check resistance of sensor TR6 and signal cable and compare to table value in documentation. Measurement is done with sensor disconnected from I/O-module. Replace sensor if necessary.
5315	Installer	Warning Z1 Disch. gas temp. sensor TR6 short circuit	Shorted circuit (< 350 kOhm) for sensor TR6, for more than 1 minute.	Discharge gas temperature sensor TR6 or signal cable is shorted.	Check resistance of sensor TR6 and signal cable and compare to table value in documentation. Measurement is done with sensor disconnected from I/O module. Repair cable or replace sensor if necessary.

5316	Customer	Alarm Z1 Discharge gas temp. sensor TR6 fault	Alarm if any of the warnings 5314 or 5315 has been triggered 3 times within 2 hours, or if any of the warnings have been active for more than 15 minutes.	See possible causes for warning codes 5314 and 5315.	See possible actions for warning codes 5314 and 5315.
				If the discharge temperature sensor TR6 measures correctly, the I/O-module may be defective.	Replace I/O module.
5320	Installer	Warning Temperature sensor TC3 open circuit	Broken circuit (> 390 kOhm) for sensor TC3 (heat carrier out).	Broken sensor TC3/signal cable.	With sensor disconnected from I/O module, measure resistance of sensor/signal cable and compare to table values in documentation.
				Connector not properly seated in I/O module.	Check connector.
				Broken sensor TC3/signal cable.	Replace sensor TC3.
				Defective I/O module.	Replace I/O module.
5321	Installer	Warning Temperature sensor TC3 short circuit	Shorted circuit (< 350 kOhm) for sensor TC3 (heat carrier out).	Sensor TC3/signal cable is shorted.	With sensor disconnected from I/O module, measure the resistance of sensor and signal cable. Compare to table values in documentation. Repair signal cable or replace sensor.
				Defective I/O module.	Replace I/O module.
5322	Customer	Alarm Temperature sensor TC3 fault	Alarm if any of the warning codes 5320 and 5321 are registered 3 times within 3 hours, or if TC3 circuit is continuously broken/shorted for 15 minutes.	See possible causes for warning codes 5320, 5321.	See actions for warning codes 5320, 5321.
5347	Installer	Warning Z1 Undervoltage at power supply	Warning if the supply voltage to the installer module < 180 V for 20 ms. The warning is reset automatically when the voltage > 190 V (but is active for at least 1 minute).	Bad connection in cable for supply voltage (230 VAC) to installer module.	Ensure proper connection.
				Low incoming net voltage to the installer module.	In case of repeated warnings, contact the electricity supplier.
5354	Installer	Warning Z1 Overcurrent on the compressor	Warning if the inverter registers an overcurrent >42 A DC to compressor, for more than 20 microseconds. Warning is automatically reset after 4 minutes if the condition is not fulfilled.	Broken/shorted cabling between the inverter and compressor.	Check cabling between inverter and compressor.
5355	Customer	Alarm Z1 Overcurrent on the compressor	Alarm after if 3 warnings are registered within 3 hours, or if the warning is active for 30 minutes.	See possible causes for warning code 5354.	See possible actions for warning code 5354.
				Defective inverter.	Replace inverter.
				Electrical fault in compressor.	Measure the resistance between windings and earth. If resistance < 10 kOhm, replace the compressor.

5362	Customer	Info Z1 overvoltage	The message is produced if the DC bus voltage inside the inverter exceeds 440 VDC for the 1-phase models and 800 VDC for 3-phase models, for more than 30 s.	Intermittent connection in main fuses.	Check main fuses with regard to poor contact.
				Too high supply voltage to inverter.	Note. Do not open the inverter to measure the DC bus voltage! Instead measure the incoming supply voltage to the inverter. It shall be at most 253 VAC for the 1-phase models and at most 440 VAC for the 3-phase models.
				Too high incoming mains voltage.	If repeated warnings, contact the electricity supplier, and perform a logged measurement of the voltage.
				If voltages are kept stable within given limits and the alarm is still tripped, the inverter could be defective.	Replace the inverter, but only if the voltages have been logged properly during the time of the alarm, and has not indicated any significant fluctuations.
5366	Installer	Warning Z1 Low superheat of refrigerant	Warning if suction gas overheating < 2 degrees and the discharge gas overheating < 20 degrees.	Motor not correctly mounted on electronic expansion valve.	Check motor.
				Check that the electronic expansion valves open/close in the correct order.	Activate test outdoor unit.
				Defective expansion valve motor.	Measure the resistance between the gray cable and orange, red, yellow and black cables. 46 kOhm = OK. If broken or shorted circuit, replace motor.
				Expansion valve VR1 opens too much/gets stuck in open position.	If repeated warnings, replace the expansion valve.
5367	Customer	Alarm Z1 Superheat of refrigerant too low	Alarm if 3 warnings are registered within 3 hours, or if the warning is active for 30 minutes.	See possible causes for warning code 5366.	See possible actions for warning code 5366.



5374	Installer	Warning Z1 Risk of frost in condenser	<p>Software v1.07:  * In defrost mode: Warning is given if TC3, TC1 or TC0 ≤ 15°C. Warning is reset when TC3, TC1 and TC0 &gt; 20°C, and also TR7 &gt; 10°C.  * In cooling operation: Warning is given if TC3, TC1 or TC0 ≤ 5°C, or TR7 &lt; 0°C for 30 seconds. Warning is reset when TC3, TC1 and TC0 &gt; 10°C, and also TR7 &gt; 10°C.  * In other cases (normal operation): Warning is given if TC3, TC1 or TC0 &lt; 5°C. Warning is reset when TC3, TC1 and TC0 &gt; 10°C, and also TR7 &gt; 10°C.</p> <p>Software v1.08:  * In defrost mode: Warning is given if TC3 or TC1 &lt; 5°C, or if TC0 ≤ 10°C. Warning is reset when TC3, TC1 and TC0 &gt; 20°C, and also TR7 &gt; 10°C.  * In cooling operation: Warning is given if TC3, TC1 or TC0 ≤ 5°C, or TR7 &lt; 0°C for 30 seconds. Warning is reset when TC3, TC1 and TC0 &gt; 10°C, and also TR7 &gt; 10°C.  * In other cases (normal operation): Warning is given if TC3, TC1 or TC0 &lt; 5°C. Warning is reset when TC3, TC1 and TC0 &gt; 10°C, and also TR7 &gt; 10°C.</p>	Insufficient or no circulation in heat transfer system/heating system.	Check adjustment valves/radiator thermostats.
				Dirt in system filter/filterball valve SC1.	Clean the filter.
				Air in heat transfer system/heating system.	De-air the heating system in accordance with instructions in installation manual. Fill up with water.
				A sensor could be defective.	Compare each of the sensors' reading in display to the actual temperatures. Replace sensor if necessary.
				Defective installer module, PWM-signal for circulation pump PC0 missing.	Disconnect PWM signal from terminal 36,37 on I/O module. The speed of the the circulation pump should increase to 100%.
				Defective I/O module, 230 V supply missing for circulation pump.	Check that 230 V is available on terminal 51,N on installer module.
				Defective installer module.	Replace installer module.
				Defective circulation pump.	Replace circulation pump.
5375	Customer	Alarm Z1 Risk of frost in condenser	Alarm if 3 warnings are registered within 3 hours, or if the warning is active for more than 30 minutes.	See possible causes for warning code 5374.	See possible actions for warning code 5374.
5378 /A01	Installer	Warning Z1 Outdoor unit defrost failure	<p>Warning if the gaseous refrigerant temperature TR7 &lt; 2°C for 10 seconds, or if TR7 &lt; -1°C for 1 second, in defrost mode.  When the warning is given the compressor stops. Then the heat pump will return to normal operation for 10 minutes. Next, the heat pump will start another defrost cycle and the warning will be automatically reset.  (Warning introduced in installation module v1.08.)</p>	Too low temperature of heating system.	Open more thermostats on the heating system.
5387	Customer	Alarm Z1 PFC compressor driver overheat	Alarm if internal temperature sensor in the inverter's PFC module > 80°C for 10 seconds.	Poor heat transfer to cooling coil.	Check screw mountings for cooling coil and the aluminum cooling plate.
				If repeated alarms, the inverter is likely defective.	Replace inverter.
5394	Installer	Warning Z1 Internal compressor driver fault 1	Warning if inverter registers over-current > 42 A DC to compressor, for more than 20 microseconds. Warning is automatically reset after 4 minutes if condition is no longer fulfilled.	Break/interruption or short-circuit in cabling between inverter and compressor.	Check cabling between inverter and compressor.

5395	Customer	Alarm Z1 Internal compressor driver fault 1	Alarm if 3 warnings (code 5394) are registered within 3 hours, or if the warning is continuously active for 30 minutes.	See possible causes for warning code 5394.	See possible actions for warning code 5394.
				Incorrect setting on rotary encoder/selector P on the heat pump's I/O module. The meaning of P=4 and P=6 has been accidentally swapped in some manuals.	Compare P-selection with settinf defined in manual. The following information is correct. P=4: HP 13 kW 3N~ P=6: HP 13 kW 1N~
				Electrical fault in compressor.	Measure the resistance between the compressor windings and earth. If resistance < 10 kOhm, replace the compressor.
				Defective inverter.	Replace inverter.
5408	Installer	Warning Z1 Air inlet sensor TL2 open circuit	Warning after 3 errors (>170 kOhm) within 2 hours, broken circuit for air inlet sensor TL2.	Broken air inlet sensor TL2/signal cable.	With sensor disconnected from I/O module, meaure Ohm-value of sensor and signal cable.
				Screw terminal on I/O module, for sensor TL2, not properly tightened.	Check screw terminal.
				Defective I/O module.	Replace I/O module.
5409	Installer	Warning Z1 Air inlet sensor TL2 short circuit	Warning circuit for air inlet sensor TL2 is shorted (< 900 Ohm).	Circuit for air inlet sensor TL2/signal cable is shorted.	Measure the sensor's resistance and compare it to sensor table in documentation. Replace TL2 if necessary.
				Defective I/O module.	Replace I/O module.
5410	Customer	Alarm Z1 Air inlet sensor TL2 fault	Alarm is triggered if 3 warnings (codes 5408, 5409) are registered within 2 hours, or if sensor TL2 is continuously shorted/broken for 15 minutes.	Se possible causes for warning codes 5408, 5409.	Disconnect sensor TL2 from installer module and check Ohm value for sensor and cable. Compare to sensor table in documentation.
5414	Installer	Warning Z1 Condensate sensor heating mode TR3 open circuit	Warning if circuit for sensor TR3 is broken (> 179 kOhm).	Screw terminal on I/O-module for sensor TR3 has not been tightened properly.	Check screw terminal.
				Sensor TR3/signal cable is broken.	With sensor disconnected from I/O module, measure resistance of sensor and compare it to table values in documentation. If broken, replace sensor.
				Defective I/O module.	If the sensor measures correctly but the same warning code persists, replace the I/O module.

5415	Installer	Warning Z1 Condensate sensor heating mode TR3 short circuit	Warning if circuit for sensor TR3 is shorted (<390 Ohm).	Sensor TR3/signal cable shorted.	With sensor disconnected from I/O module, measure resistance of sensor and compare it to table values in documentation. If broken, replace sensor.
				Defective I/O module.	Run the system with sensor disconnected from the I/O module. If the same warning code 5415 persists, replace the I/O module.
5416	Customer	Alarm Z1 Condensate sensor heating mode TR3 fault	Alarm if any of the warning codes 5414 or 5415 are registered 3 times within 2 hours, or if sensor TR3 is continuously broken/shorted for 15 minutes.	See possible causes for warning codes 5414, 5415.	See possible actions for warning codes 5414, 5415.
5420	Installer	Warning Z1 Condensate sensor cooling mode TR4 open circuit	Warning if circuit for sensor TR4 is broken (> 170 kOhm).	Screw terminal on I/O module, for sensor TR4, is not properly tightened.	Check screw terminal of I/O module.
				Broken sensor TR4/signal cable.	With sensor disconnected from I/O module, measure its resistance. If broken, replace sensor.
				Defective I/O module.	If the sensor measures correctly but the same warning code persists, replace the I/O module.
5421	Installer	Warning Z1 Condensate sensor cooling mode TR4 short circuit	Warning if circuit for sensor TR4 is shorted.	Sensor TR4/signal cable broken.	With sensor disconnected from I/O module, measure its resistance. If shorted, replace sensor.
				Defective I/O module.	If the sensor measures correctly but the same warning code persists, replace the I/O module.
5422	Customer	Alarm Z1 Condensate sensor cooling mode TR4 fault	Alarm is triggered if any of the warning codes 5420, 5421, are registered 3 times within 2 hours, or if circuit for sensor TR4 is continuously broken/shorted for 15 minutes.	See possible causes for warning codes 5420, 5421.	See possible actions for warning codes 5420, 5421.
5426	Installer	Warning Z1 Suction gas temperature sensor TR5 open circuit	Warning if circuit for sensor TR5 is broken (> 179 kOhm).	Screw terminal on I/O module, for sensor TR5, not properly tightened.	Check screw terminal on I/O module.
				Sensor TR5/signal cable broken.	With sensor disconnected from I/O module, measure its resistance. If broken, replace sensor.
				Defective I/O module.	If the sensor measures correctly but the same warning code persists, replace the I/O module.

5427	Installer	Warning Z1 Suction gas temperature sensor TR5 short circuit	Warning if circuit for sensor TR5 is shorted (< 390 Ohm).	Sensor TR5/signal cable shorted.	With the sensor disconnected from I/O module, measure its resistance. If shorted, replace sensor.
				Defective I/O module.	If the sensor measures correctly but the same warning code persists, replace the I/O module.
5428	Customer	Alarm Z1 Suction gas temperature sensor TR5 fault	Alarm if any of the warning codes 5426, 5427 are registered 3 times within 2 hours, or if circuit for sensor TR5 is continuously broken/shorted for 15 minutes.	See possible causes for warning codes 5426, 5427.	See possible actions for warning codes 5426, 5427.
5446	Installer	Alarm Z1 Flow and return between indoor and outdoor unit mixed up	Alarm if $(TC3 - 1) < TC0$ , and $JR1 > (TC3 + 7)$ , for more than 30 seconds. Where TC3 is heat carrier flow, TC0 is heat carrier return, JR1 is high pressure sensor (condensation temperature).	Hoses for flow and return between the heat pump and indoor unit have been mixed up.	Install hoses on the right connections.
				Defective sensor TC3 or TC0.	Check placement of sensors. Compare displayed temperatures for TC3 and TC0 with an external thermometer on these positions. Replace sensor(s) if deviations are found.
5448	Installer	Alarm Z1 Lack of refrigerant	Alarm after 20 minutes if the electronic expansion valve VR0 has opened 20% more than calculated value.	Too little refrigerant in heat pump.	Check refrigerant filling. Note! Activate the function "evacuation/fill" function when evacuating or filling refrigerant.
				Possible leak in refrigerant circuit.	Check/repair leak.
5450 /A01	Customer	Warning Z1 Condensate drain blocked	Value of temperature sensor TA4 does not increase in accordance with specification, after completed defrost.	Condensate drain in heat pump has been blocked.	Check/clean drain.
				Heating cable in condensate drain is defective and drain is frozen.	Check heating cable.
				Heating cable is missing voltage.	Check that 230 V is available on out EA1 terminal 26 (79, N). To test it: activate manual operation of the heating cable on the display.

5451 /A01	Customer	Alarm Z1 Too low flow rate during defrosting	<p>Software v1.00-1.07: Alarm if temperature difference TC0-TC3 &gt; maximum delta, for more than 30 seconds and the liquid line temperature TR4 &lt; 0 °C.</p> <p>Software v1.08+: Alarm if temperature difference TC0-TC3 &gt; maximum delta, for more than 30 seconds and the liquid line temperature by the indoor units' plate heat exchanger TR3 &lt; 0°C. Alarm is also given if there have been 4 consecutive warnings for defrost failure (code 5378).</p> <p>Maximum delta depends on the size of the heat pump. See below. ODU 3 kW: 2.0 K. ODU 5 or 7 kW: 5.5 K. ODU 9 kW: 4.2 K. ODU 12, 14 or 15 kW: 7.5 K.</p>	Too low temperature on heating system.	Open more thermostats on the heating system.
				Dirt in system filter/filterball SC1.	Clean system filter/filterball SC1.
				Air in heating system.	De-air heating system in accordance with instruction in manual. Fill heating system.
				Unsufficient flow in heating system.	Check adjustment valves/radiator thermostats.
				Bypass or buffer tank missing.	Install bypass or buffer tank to create proper conditions for successful defrosting. See installation guide for more information.
				Defective installer module, PWM signal to circulation pump PC0 is missing.	Disconnect PWM signal on terminal 40, 41 on installer module. The speed of the circulation pump shall increase to 100%.
				Defective installer module, 230 V missing on terminal PC0 (51, N).	Make sure that 230 V is available on terminal PC0 (51, N) on installer module.
				Defective installer module.	Replace installer module.
Defective circulation pump.	Replace circulation pump.				
5452	Customer	Warning Z1 Internal compressor control system fault	Alarm for internal fault in inverter.	Defective inverter.	Replace inverter.
5453	Customer	Warning Z1 No power supply to outdoor unit	Warning if incoming AC voltage to inverter < 165 V for 10 seconds. Warning is automatically reset after 2 minutes if the incoming AC voltage > 190 V.	Low or no voltage to outdoor unit.	Check main fuses with regards to poor contact and blown fuses.
				Low incoming mains voltage.	With repeated warnings, contact the electricity supplier.
5463	Customer	Alarm Z1 Defrost failure. Clean outdoor unit	Alarm if timer for defrost exceeds 800 seconds 3 times, or if a the need to defrost has occurred 3 times within minimal time, in heating mode.	Evaporator clogged with ice.	Gently melt the ice with hot water..
				The heat pump is overfilled.	Empty heat pump and fill according to information on type plate.
				Too low temperature on heating system.	Open more thermostats in heating system.
				Dirt in system filter/filterball SC1.	Clean system filter/filterball SC1.
5500	Customer	Warning Underfloor heating temp. Limiter has tripped	Alarm if the external input 1-3 on I/O module is closed, depending on selection.	Protective thermostat for underfloor heating has been tripped.	Reset thermostat, adjust heat curve if necessary.

5503	Installer	Warning Connection problem with the power guard	Communication between installer module and power guard is missing for 30 seconds.	Incorrect cabling/connections.	Check cabling/connections.
				Poor connection in CANbus connections on installer module or power guard.	Check CANbus connections on installer module and power guard.
				Interruption/break on CANbus cable between installer module and power guard.	Replace CANbus cable.
				Incorrect type of CANbus cable.	Replace to correct type of CANbus cable. Check documentation for more information.
				CANbus cable installed together with/close to supply voltage to heat pump.	Separate CANbus and power cables by at least 100 mm to prevent interference.
5504	Customer	Alarm Connection problem with the power guard	Alarm if warning 5503 is registered 3 times within 3 hours, or if the warning is active for 30 minutes.	See possible causes for warning code 5503.	See possible actions for warning code 5503.
5506	Installer	Alarm Z1 Compressor does not start	Alarm if the compressor has not started within 2 minutes after a start signal has been sent.	Intermittent connection in cabling between inverter and compressor.	Ensure proper connection.
				Temporary malfunction in inverter.	Break power to heat pump and turn it on again.
				Internal error in inverter.	Replace inverter.
5507	Installer	Warning Z1 MR1 High pressure warn.	The circuit for the high pressure guard MR1 is broken for more than 3 seconds. The compressor stops.	The heat carrier flow is too low. Long pipe lengths or a heating system that is completely or partially closed, can be the reason.	Try to decrease the pressure drop.
				Defective pressure guard, i.e. broken circuit even though the current pressure is below the limit.	Replace pressure guard if it triggers too early. Normal breaking pressure is 44 bar (R410A).
				Break or poor connection in cabling between MR1 and inverter.	Check cabling/connections between MR1 and inverter.
				Break or poor connection in cabling between MR1 and inverter.	Make sure that the high pressure guard is connected.
				Expansion valve VR0/EEV0 remains closed. (Due to the receiver between the two expansion valves, a high pressure alarm can be triggered before a low pressure alarm.)	Activate function test och check the function of the expansion valve. If it does not regulate, first check control cabling between I/O module and coil, and the coil itself before replacing the complete expansion valve.
5508	Customer	Alarm Z1 MR1 High pressure alarm	Alarm if warning 5507 is registered 2 times within 3 hours.	See possible causes for warning code 5507 above.	See possible actions for warning code 5507 above.

5512	Installer	Warning Z1 Condensation temp. Outside control range	Warning if temperature of JR1 > the currently allowed envelope, for more than 30 seconds.	Too low evaporating temperature in relation to condensation temperature.	The most likely cause is low outdoor temperature. See diagram, chapter 4 of installer guide.
5513	Customer	Alarm Z1 Condensation temperature too high	Alarm if 3 warnings (code 5512) are registered within 3 hours, or warning active for 30 minutes.	Too low evaporating temperature in relation to condensation temperature.	The most likely cause is low outdoor temperature. See diagram, chapter 4 of installer guide.
				Too high flow or too low delta on heating system.	Adjust temperature/flow.
5514	Installer	Warning Z1 Evap. Pressure on JR0 too low	Warning if temperature of JR0 < the currently allowed envelope (-27°C) for more than 30 seconds.	Blocked or low air flow through air heat exchanger of heat pump.	Ensure sufficient air flow through air heat exchanger.
				Defective fan.	Activate test for outdoor unit.
				230 V supply voltage missing from fan.	Check if 230 V voltage is available on output PL3, terminal 32 (78, N)
				0-10 V control signal missing for fan.	Check 0-10V voltage on output PL3 PWM, terminal 20 (20, 26) using test function for outdoor unit.
				Defective fan.	If voltages are available in accordance with above and the fan is still not running, replace the fan.
				One of the expansion valves has got stuck in its closed position.	Check control cables to expansion valves. Run test cycle for outdoor unit and check that the expansion valves are opening.
				Defective I/O module.	If any of the voltages are missing, in accordance with above, replace the I/O module.
5515	Customer	Alarm Z1 Evap. Pressure on JR0 too low	Alarm if 3 warnings (code 5514) are registered within 3 hours, or if the same warning is active for 30 minutes. The alarm is given only when the heat pump is in cooling mode. (See also code 5293.)	See possible causes for warning code 5514.	See possible actions for warning code 5514.
5522	Installer	Alarm Wrong combination of indoor and outdoor units.	Setting of rotary encoder on installer board does not match the installed heat pump.	Non matching combination of heat pump and indoor unit.	Check combination.
				If I/O module has been replaced, it's possible that rotary encoder has not been set up correctly on the new I/O module.	Compare setting with rotary encoder of old I/O module. If that is not available the information can be found in the installer guide.
				When replacing installer module, the rotary encoder has not been set up properly on the new board.	Check setting of the rotary encoder, compare it to old board.

5523	Installer	Warning Z1 Internal compressor driver warning 3	Warning if incoming AC current > 31 A, 6 times. The warning is automatically reset after 4 minutes if the condition is no longer fulfilled.	Internal error in inverter.	Temporary malfunction. Await possible alarm in customer level (code 5524), before applying further actions.
5524	Customer	Alarm Z1 Internal compressor driver error 3	Alarm if warning 5524 is registered 3 times within 3 hours, or if the warning is active for 30 minutes.	Internal error in inverter.	Replace inverter.
5527	Customer	Alarm Z1 Too much refrigerant in cooling circuit	Alarm if JR1 > (TC3 + 5°C) and subcooling > set point value. Both conditions needs to be fulfilled for more than 5 minutes during hot water production.	Heat pump overfilled.	Evacuate heat pump and refill with quantity specified on type plate.
5541	Customer	Alarm Pool board communication failure	No communication between installer module and pool board for 90 seconds.	Poor connection in CANbus connections on installer module or pool module.	Check CANbus connections on installer module and pool module.
				Break on CANbus cable between installer module and pool module.	Replace CANbus cable between installer module and pool module.
				Improper type of CANbus cable.	Change to the correct type of cable. More information can be found in the installer guide.
				CANbus cable installed together with/close to supply voltage to heat pump.	Separate CANbus and power cables by at least 100 mm to prevent interference.
				Improper earthing of CANbus cable.	Disconnect/connect cable shield from/to earth.
5594 /H01	Customer	Alarm Z1 Air in the system	<p>The temperature of sensor TC1 has increased too fast (&gt; 0.8 K/s) for normal working conditions.</p> <p>The alarm is introduced in software v1.08 and is only applicable for indoor units with integrated 9 kW electrical heater.</p> <p>From software v1.09 the alarm is blocked when TC0&gt;TC1. This is to prevent false alarms in some rare situations.</p>	The flow is blocked by valve.	Wait two minutes for the appliance to cool down. Check if there is any closed valve blocking the flow.
				The flow is blocked because of bad electrical connection to circulation pump.	Ensure that the circulation pump is running.
				If there is nothing blocking the flow there is likely air in the appliance.	Redo the filling and venting according to described procedure in the documentation. Ensure that all air is removed from the appliance and heating system.
5600	Installer	Warning Compressor blocked (IPM fault)	The outdoor unit has produced an alarm with error code 21. (IPM = Intelligent Power Module). The outdoor unit will make a new start attempt every 3 minutes. If the error occurs 10 times within 1 hour further attempts are blocked.	See separate error handling instructions for Split outdoor unit, error code 21.	See separate error handling instructions for Split outdoor unit, error code 21.



5601	Customer	Alarm Compressor blocked (IPM fault)	The outdoor unit has produced an alarm with error code 21. See definition for warning code 5600 above. Alarm is triggered in the indoor unit if the outdoor unit alarm has been active for more than 4 minutes.	Broken compressor or too much refrigerant in compressor. See separate error handling instructions for Split outdoor unit, error code 21, for more information.	See separate error handling instructions for Split outdoor unit, error code 21.
5602	Installer	Warning Inverter power consumption to high	The outdoor unit has produced an alarm with error code 22. Inverter current > 14 A. The outdoor unit will automatically make a new start attempt when the condition is no longer met.	See separate error handling instructions for Split outdoor unit, error code 22.	See separate error handling instructions for Split outdoor unit, error code 22.
5603	Customer	Alarm Inverter power consumption to high	The outdoor unit has produced an alarm with error code 22. See definition for warning code 5602 above. Alarm is triggered in the indoor unit if the outdoor unit alarm has been active for more than 4 minutes.	See separate error handling instructions for Split outdoor unit, error code 22.	See separate error handling instructions for Split outdoor unit, error code 22.
5604	Installer	Warning DC voltage outside of permissible range	The outdoor unit has produced an alarm with error code 23. The DC link voltage is too low or too high. See separate error handling instructions for Split outdoor unit for limits. The outdoor unit will automatically attempt to restart when the condition is no longer fulfilled.	See separate error handling instructions for Split outdoor unit, error code 23.	See separate error handling instructions for Split outdoor unit, error code 23.
5605	Customer	Alarm DC voltage outside of permissible range	The outdoor unit has produced an alarm with error code 23. See definition for warning code 5604 above. Alarm is triggered in the indoor unit if the outdoor unit alarm has been active for more than 4 minutes.	See separate error handling instructions for Split outdoor unit, felkod 23.	See separate error handling instructions for Split outdoor unit, felkod 23.
5610	Installer	Warning Evaporator phase sequence incorrectly connected	The outdoor unit has produced an alarm with error code 26. Problem med supply cabling to the compressor. The outdoor unit will make a restart attempt every 3 minutes. If the error occurs 10 times within 1 h, further attempts are blocked.	See separate error handling instructions for Split outdoor unit, error code 26.	See separate error handling instructions for Split outdoor unit, error code 26.
5611	Customer	Alarm Evaporator phase sequence incorrectly connected	The outdoor unit has produced an alarm with error code 26. See definition for warning code 5610 above. An alarm is triggered in the indoor unit if the outdoor units' alarm has been active for more than 4 minutes.	Incorrect phase sequence. See separate error handling instructions for Split outdoor unit, error code 26, for more information.	See separate error handling instructions for Split outdoor unit, error code 26.

5612	Installer	Warning Current on IGBT too high, check coil	The outdoor unit has produced an alarm with error code 27. PSC fault. The outdoor unit will make a restart attempt every 3 minutes. If the error occurs 10 times within 1 h further attempts are blocked.	See separate error handling instructions for Split outdoor unit, error code 27.	See separate error handling instructions for Split outdoor unit, error code 27.
5613	Customer	Alarm Current on IGBT too high, check coil	The outdoor unit has produced an alarm with error code 27. See definition for warning code 5612 above. Alarm is triggered in the indoor unit if the outdoor unit alarm has been active for more than 4 minutes.	See separate error handling instructions for Split outdoor unit, error code 27.	See separate error handling instructions for Split outdoor unit, error code 27.
5616	Installer	Warning Evaporator power consumption too high	LG error code 29.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5617	Customer	Alarm Evaporator power consumption too high	LG error code 29.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5618	Installer	Warning Gaseous refrigerant temperature too high	LG error code 32.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5619	Customer	Alarm Gaseous refrigerant temperature too high	LG error code 32.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5622	Installer	Warning Gaseous refrigerant sensor TH6 failure	LG error code 41.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5623	Customer	Alarm Gaseous refrigerant sensor TH6 failure	LG error code 41.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5624	Installer	Warning Air temperature sensor of outdoor unit TL2 failure	LG error code 44.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5625	Customer	Alarm Air temperature sensor of outdoor unit TL2 failure	LG error code 44.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5626	Installer	Warning Average evaporator temperature sensor TR8 failure	LG error code 45.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5627	Customer	Alarm Average evaporator temperature sensor TR8 failure	LG error code 45.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5628	Installer	Warning Suction gas temperature sensor TH5 failure	LG error code 46.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5629	Customer	Alarm Suction gas temperature sensor TH5 failure	LG error code 46.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5632	Installer	Warning Communication error between internal HP PCBs	LG error code 52.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.

5633	Customer	Alarm Communication error between internal HP PCBs.	LG error code 52.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5634	Installer	Warning Communication error between in- and outdoor unit	LG error code 53.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5635	Customer	Alarm Communication error between in- and outdoor unit	LG error code 53.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5636	Installer	Warning Phase sequence incorrect or a phase is missing	LG error code 54.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5637	Customer	Alarm Phase sequence incorrect or phase missing	LG error code 54.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5638	Installer	Warning Defective EEPROM on PCB in outdoor unit	LG error code 60.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5639	Customer	Alarm Defective EEPROM on PCB in outdoor unit	LG error code 60.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5640	Installer	Warning Temperature at condenser-pipe is too high >65°C	The outdoor unit has produced an alarm with error code 61.	See separate error handling instructions for Split outdoor unit, error code 61.	See separate error handling instructions for Split outdoor unit, error code 61.
5641	Customer	Alarm Temperature at condenser-pipe is too high >65°C	The outdoor unit has produced an alarm with error code 61. The alarm (5641) is triggered if the condition has been fulfilled more than 10 times within the last 24 h, or if the condition is continuously fulfilled for more than 15 minutes.	See separate error handling instructions for Split outdoor unit, error code 61.	See separate error handling instructions for Split outdoor unit, error code 61.
5642	Installer	Warning Temperature at heatsink is too high >85°C	LG error code 62.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5643	Customer	Alarm Temperature at heatsink is too high >85°C	LG error code 62.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5646	Installer	Warning Heatsink temperature sensor fault	LG error code 65.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5647	Customer	Alarm Heatsink temperature sensor fault	LG error code 65.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5648	Installer	Warning Compr. starting current too high	LG error code 73.		
5649	Customer	Alarm Compr. starting current too high	LG error code 73.		
5650	Installer	Warning Z1 condensor inlet (heating) TR7 open circuit			
5651	Installer	Warning Z1 condensor inlet (heating) TR7 short circuit			
5652	Customer	Alarm Z1 condensor inlet (heating) TR7 fault			

5656	Installer	Warning Z1 Condenser inlet temperature sensor TR3 open circuit			
5657	Installer	Warning Z1 Condenser inlet temperature sensor TR3 short-circuit			
5658	Customer	Alarm Z1 Condenser inlet temperature sensor TR3 failure			
5662	Installer	Warning Z1 Pressure sensor open circuit or short-circuit	LG error code 43. See separate service manual for Split outdoor unit.		
5663	Customer	Alarm Z1 Pressure sensor failure	LG error code 43. See separate service manual for Split outdoor unit.		
5664	Installer	Warning Z1 Evaporator inlet temperature sensor TR4 failure	LG error code 48. See separate service manual for Split outdoor unit.		
5665	Customer	Alarm Z1 Liquid in cooling sensor TR4 fault	LG error code 48. See separate service manual for Split outdoor unit.		
5666	Installer	Warning Z1 Low evap. pressure	LG error code 35.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5667	Customer	Alarm Z1 Low evap. pressure	LG error code 35.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5668	Installer	Warning Z1 Communication error btw. indoor and outdoor unit	LG error code 55.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5669	Customer	Alarm Z1 Communication error between indoor and outdoor unit	LG error code 55.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5670	Installer	Warning Z1 Outdoor unit fan blocked	LG error code 67.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.
5671	Customer	Alarm Z1 Outdoor unit fan blocked	LG error code 67.	See separate error handling instructions for Split outdoor unit.	See separate error handling instructions for Split outdoor unit.

6070 /A51	Customer	Solar thermal system not yet started	The installer has completed the configuration of the solar module but has not approved of it to start within 15 minutes from the completion of the configuration. There is a special menu alternative under commissioning that starts the solar module, where the installer is asked if the system is filled. Answering yes to the question will start the solar module. The alarm was created because many installers would forget to start the solar module after completing its configuration. The alarm can be given again if the configuration is changed.	The installer has forgotten to start the solar module.	Check the configuration is correct and that the rotary encoders on the solar module is correctly set. Start the solar module from the commissioning menu for the solar module under service menu.
EC/251	Customer		Alarm is triggered if the installer modules' built-in EEPROM-memory is corrupted or access is not permitted.	If the software version of the installer module $\leq 1.04$ , "stand-alone"-operation is not handled correctly. Communication with the EEPROM-memory ceases and execution is halted. The user interface will be locked.	Replace installer module. Ensure that the new installer module has software version $\geq 1.06$ .