

Error Code	Display Code(s)	Display Level	Alarm Text	Buzzer	Alarm Definition	Possible Cause	Action
1001	A21 A22 A23 A24	Customer	No comm. 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).	Poor EMS connection between display and installer board.	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 board.
1037		Customer	Outside temp. 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.	See action for error code 1010.
						If, in the alarm history, the error code 1037 can be found, but not 1010, there can be a fault in the microcontroller of the installer board.	Replace the installer board.
1038		Customer	Invalid time/date value		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.
1041		Customer	Voltage failure during screed drying		The alarm is given if power is lost during ongoing screed drying program. The program is automatically resumed when the power is back, unless the interruption outlasts the battery reserve of the control unit, or if the set maximum time (normally 12 h) has been exceeded.	Power loss.	Check fuses, possible bad connections etc.
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. The alarm is delayed by 4 minutes. (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 temperature 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. The alarm is delayed by 4 minutes. (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 temperature 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 temperature 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. The alarm is delayed by 4 minutes. (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 user interfaces in 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 remote controls in 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 remote controls in 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 remote controls in 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.
3021	Customer	Heating circuit flow temp. sensor faulty - standby mode active	The circuit for the flow sensor, connected to the mixer module for circuit 1, is either shorted or broken. The alarm is delayed by 10 s. Standby mode means that the mixing valve opening position is set to 10%, to ensure frost protection.	Bad connection.	Check connection.
				Shorted cable / defective sensor.	Disconnect cable from mixer module and measure the sensor with a multimeter. If shorted (0 Ohm) or broken (infinite resistance), replace sensor.
3022	Customer	Heating zone 2 supply temperature sensor fault, standby mode active	The circuit for the flow sensor, connected to the mixer module for circuit 2, is either shorted or broken. The alarm is delayed by 10 s. Standby mode means that the mixing valve opening position is set to 10%, to ensure frost protection.	Bad connection.	Check connection.
				Shorted cable / defective sensor.	Disconnect cable from mixer module and measure the sensor with a multimeter. If shorted (0 Ohm) or broken (infinite resistance), replace sensor.

3023		Customer	Heating zone 3 supply temperature sensor fault, standby mode active	<p>The circuit for the flow sensor, connected to the mixer module for circuit 3, is either shorted or broken. The alarm is delayed by 10 s.</p> <p>Standby mode means that the mixing valve opening position is set to 10%, to ensure frost protection.</p>	Bad connection.	Check connection.
					Shorted cable / defective sensor.	Disconnect cable from mixer module and measure the sensor with a multimeter. If shorted (0 Ohm) or broken (infinite resistance), replace sensor.
3024		Customer	Heating zone 4 supply temperature sensor fault, standby mode active	<p>The circuit for the flow sensor, connected to the mixer module for circuit 4, is either shorted or broken. The alarm is delayed by 10 s.</p> <p>Standby mode means that the mixing valve opening position is set to 10%, to ensure frost protection.</p>	Bad connection.	Check connection.
					Shorted cable / defective sensor.	Disconnect cable from mixer module and measure the sensor with a multimeter. If shorted (0 Ohm) or broken (infinite resistance), replace sensor.
3061	A11	Customer	No communication with htg circ. module	A mixing module has previously been installed for heating circuit 1, and now the installer board has been unable to communicate with the mixing module over the EMS bus for the past 4 minutes. The alarm is automatically acknowledged when communication is re-established.	Poor connection or improperly installed EMS cable between installer board and mixing module.	Check EMS cabling.
3062	A11	Customer	No communication with heating zone module	A mixing module has previously been installed for heating circuit 2, and now the installer board has been unable to communicate with the mixing module over the EMS bus for the past 4 minutes. The alarm is automatically acknowledged when communication is re-established.	Poor connection or improperly installed EMS cable between installer board and mixing module.	Check EMS cabling.
3063	A11	Customer	No communication with heating zone module	A mixing module has previously been installed for heating circuit 3, and now the installer board has been unable to communicate with the mixing module over the EMS bus for the past 4 minutes. The alarm is automatically acknowledged when communication is re-established.	Poor connection or improperly installed EMS cable between installer board and mixing module.	Check EMS cabling.
3064	A11	Customer	No communication with heating zone module	A mixing module has previously been installed for heating circuit 4, and now the installer board has been unable to communicate with the mixing module over the EMS bus for the past 4 minutes. The alarm is automatically acknowledged when communication is re-established.	Poor connection or improperly installed EMS cable between installer board and mixing module.	Check EMS cabling.

3071	A11	Customer	No communication with remote control	A room sensor has previously been installed for heating circuit 1, and now the installer board has been unable to communicate with the room sensor over the EMS bus for the past 4 minutes. The alarm is automatically acknowledged when communication is re-established.	Poor connection or improperly installed EMS cable between installer board and room sensor.	Check EMS cabling.
3072	A11	Customer	No communication with remote control	A room sensor has previously been installed for heating circuit 2, and now the installer board has been unable to communicate with the room sensor over the EMS bus for the past 4 minutes. The alarm is automatically acknowledged when communication is re-established.	Poor connection or improperly installed EMS cable between installer board and room sensor.	Check EMS cabling.
3073	A11	Customer	No communication with remote control	A room sensor has previously been installed for heating circuit 3, and now the installer board has been unable to communicate with the room sensor over the EMS bus for the past 4 minutes. The alarm is automatically acknowledged when communication is re-established.	Poor connection or improperly installed EMS cable between installer board and room sensor.	Check EMS cabling.
3074	A11	Customer	No communication with remote control	A room sensor has previously been installed for heating circuit 4, and now the installer board has been unable to communicate with the room sensor over the EMS bus for the past 4 minutes. The alarm is automatically acknowledged when communication is re-established.	Poor connection or improperly installed EMS cable between installer board and room sensor.	Check EMS cabling.
3081		Customer	Configuration error: Remote control not used	The room sensor has been configured to control circuit 1, which is not defined.	The room sensor has been configured to control circuit 1, which is not defined.	Ensure that the room sensor refers to the correct heating circuit. Alternatively, check the configuration for circuit 1.
3082		Customer	Configuration error: Remote control not used	The room sensor has been configured to control circuit 2, which is not defined.	The room sensor has been configured to control circuit 2, which is not defined.	Ensure that the room sensor refers to the correct heating circuit. Alternatively, check the configuration for circuit 2.
3083		Customer	Configuration error: Remote control not used	The room sensor has been configured to control circuit 3, which is not defined.	The room sensor has been configured to control circuit 3, which is not defined.	Ensure that the room sensor refers to the correct heating circuit. Alternatively, check the configuration for circuit 3.
3084		Customer	Configuration error: Remote control not used	The room sensor has been configured to control circuit 4, which is not defined.	The room sensor has been configured to control circuit 4, which is not defined.	Ensure that the room sensor refers to the correct heating circuit. Alternatively, check the configuration for circuit 4.

3091	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 room 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	A11	Customer	Room temperature sensor fault	The resistance thermometer inside the room sensor for heating circuit 2 is defective. (EMS communication is working.) An incorrect configuration of the room 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	A11	Customer	Room temperature sensor fault	The resistance thermometer inside the room sensor for heating circuit 3 is defective. (EMS communication is working.) An incorrect configuration of the room 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	A11	Customer	Room temperature sensor fault	The resistance thermometer inside the room sensor for heating circuit 4 is defective. (EMS communication is working.) An incorrect configuration of the room 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.
3121		Customer	Temperature limiter triggered	The alarm is given by the mixing module MM100 for circuit 1, if its MC1 input is open. It is possible to install a temperature guard which breaks up the connection over MC1 when the temperature is too high.	High temperature.	Check the function of the mixing valve and mixing module. Check the cut-off threshold for the temperature guard.
					Intermittent connection in cabling between temperature guard and MC1 input of MM100.	Check the cabling for continuity.
3122		Customer	Temperature limiter triggered	The alarm is given by the mixing module MM100 for circuit 2, if its MC1 input is open. It is possible to install a temperature guard which breaks up the connection over MC1 when the temperature is too high.	High temperature.	Check the function of the mixing valve and mixing module. Check the cut-off threshold for the temperature guard.
					Intermittent connection in cabling between temperature guard and MC1 input of MM100.	Check the cabling for continuity.
3123		Customer	Temperature limiter triggered	The alarm is given by the mixing module MM100 for circuit 3, if its MC1 input is open. It is possible to install a temperature guard which breaks up the connection over MC1 when the temperature is too high.	High temperature.	Check the function of the mixing valve and mixing module. Check the cut-off threshold for the temperature guard.
					Intermittent connection in cabling between temperature guard and MC1 input of MM100.	Check the cabling for continuity.

3124		Customer	Temperature limiter triggered	The alarm is given by the mixing module MM100 for circuit 4, if its MC1 input is open. It is possible to install a temperature guard which breaks up the connection over MC1 when the temperature is too high.	High temperature.	Check the function of the mixing valve and mixing module. Check the cut-off threshold for the temperature guard.
					Intermittent connection in cabling between temperature guard and MC1 input of MM100.	Check the cabling for continuity.
3141	A21	Customer	Humidity sensor faulty	Sensor for relative humidity is faulty in the room sensor for circuit 1.	Sensor for relative humidity is faulty in the room sensor.	Replace room sensor.
3142	A22	Customer	Humidity sensor fault	Sensor for relative humidity is faulty in the room sensor for circuit 2.	Sensor for relative humidity is faulty in the room sensor.	Replace room sensor.
3143	A23	Customer	Humidity sensor fault	Sensor for relative humidity is faulty in the room sensor for circuit 3.	Sensor for relative humidity is faulty in the room sensor.	Replace room sensor.
3144	A24	Customer	Humidity sensor fault	Sensor for relative humidity is faulty in the room sensor for circuit 4.	Sensor for relative humidity is faulty in the room sensor.	Replace room sensor.
3171	A71	Customer	Low batt. voltage in radio room temp. sensor in heat. circuit 1	The wireless room sensor for circuit 1 reports low battery level.	Low battery level.	Replace the battery in the wireless room sensor.
3181	A91	Customer	No signal from radio room temp. sensor for heating circuit 1	The wireless room sensor for circuit 1 has previously been installed, but it is no longer possible to establish a connection to it.	Low battery level in the wireless room sensor.	Measure the battery's voltage and replace it if the voltage is weak.
					The distance between the room sensor and the key is too long.	Experiment with placement of the wireless room sensor. Start by placing it close to the key, in order to verify the function. If connection cannot be established in that situation, the room sensor may be defective and needs to be replaced.
5201	A01	Installer	Info Outside temperature 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 board and sensor.	Check signal cable and connection to installer board.
5202	A01	Installer	Info Outside temperature sensor T1 short circuit	Warning if the resistance of the outdoor sensor T1 < ~1300 Ohm (corresponding to a temperature > 57°C).	Outdoor sensor T1/signal cable shorted.	Check signal cable.
5203	H01	Customer	Alarm Outside temperature sensor T1 fault	Alarm if 3 error codes are registered within 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 board.	If sensor T1 measures the correct value, and the same warning (5201/5202) remains when the sensor is connected, replace the installer board.

5204	A01	Installer	Info 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 board and sensor.	Check signal cable and screw terminal on installer board.
5205	A01	Installer	Info Z1 Flow temperature sensor T0 short circuit		Warning if the resistance of flow sensor T0 < 500 Ohm (corresponding to a temperature > 110°C).	Flow sensor T0/signal cable shorted.	Check signal cable.
5206	H01	Customer	Alarm Z1 Flow temperature sensor T0 fault		Alarm if 3 errors of type 5204 or 5205 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 (> 15 kOhm or < 300 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 board.	If sensor T0 measures the correct value, and the same warning (5204/5205) remains when the sensor is connected, replace the installer board.
5207	A01	Installer	Info Temp. sensor TC1 open circuit		Warning if resistance of sensor > 30 kOhm (corresponding to a temperature < 0°C).	Screw terminal on installer board not properly tightened.	Check screw terminal for TC1.
						Heat carrier outlet sensor TC1/signal cable open circuit.	With TC1 disconnected from installer board, compare measured Ohm value with sensor table in documentation. Replace sensor if necessary.
						Defective installer board.	Replace installer board.
5208	A01	Installer	Info Temperature sensor TC1 short circuit		Warning if the resistance of the sensor < 390 Ohm (corresponding to a temperature > 180°C).	Heat carrier outlet sensor TC1/signal cable shorted.	With TC1 disconnected from installer board, compare measured Ohm value with sensor table in documentation. Repair sensor cable or replace sensor if necessary.
						Defective installer board.	Replace installer board.
5209	H01	Customer	Alarm Temperature sensor TC1 fault	(x)	Alarm if 3 errors of type 5207 or 5208 are registered within 3 hours, or if the circuit for sensor TC1 is continuously broken/shorted for more than 30 minutes.	See possible causes for error code 5207 och 5208.	See actions for alarm codes 5207, 5208.
5213	A01	Installer	Info Z1 Inlet temp. sensor TC0 open circuit		Warning if the resistance of heat carrier return-sensor TC0 > 30 kOhm (corresponding to temperature < 0°C). The compressor is stopped.	Screw terminal in installer board, 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 board.	Replace installer board.

5214	A01	Installer	Info Z1 Inlet temp. sensor TC0 short circuit		Warning if the resistance of heat carrier return-sensor TC0 < 500 Ohm (corresponding to temperature > 110°C). The compressor is stopped.	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	H01	Customer	Alarm Z1 Inlet temp sensor TC0 fault	x	Alarm if 3 errors of type 5213 or 5214 are registered within 3 hours, or if the circuit for sensor TC0 is continuously broken/shorted for 30 minutes. The compressor is stopped.	See possible causes for alarm codes 5213, 5214.	See possible actions for alarm codes 5213, 5214.
5234	A01	Installer	Info Pool temperature sensor TP1 open circuit		Warning if the resistance for sensor TP1, which is named TC1 on the pool module, is > 32 kOhm (corresponding to a temperature < 0°C).	Screw terminal for TC1 on pool module is not properly tightened.	Check terminal.
						Defective sensor or broken signal cable.	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.
5235	A01	Installer	Info Pool temperature sensor TP1 short circuit		Warning if the resistance for sensor TP1, which is named TC1 on the pool module, is < 680 Ohm (corresponding to a temperature > 100°C).	Screw terminal for TC1 on pool module is not properly tightened.	Check terminal.
						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	H01	Customer	Alarm Pool temperature sensor TP1 fault		Alarm if 3 errors of type 5234 or 5235 are registered within 3 hours, or if the circuit for the sensor is broken/shorted continuously for 30 minutes.	See possible causes for codes 5234, 5235.	See trouble-shooting advice for codes 5234, 5235.
5237	A01	Installer	Info DHW temp. sensor TW1 open circuit		Warning if the domestic hot water sensor TW1 < 0°C. Automatically reset if the temperature > 0°C. Sensor TW1 has different characteristics depending on the products' brand. See sensor table for more information.	Screw terminal for TW1 on installer board 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	A01	Installer	Info DHW temp. sensor TW1 short circ.	Warning if the domestic hot water sensor TW1 > 110°C. Automatically reset if the temperature < 110°C. Sensor TW1 has different characteristics depending on the products' brand. See sensor table for more information.	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	H01	Customer	Alarm DHW temperature sensor TW1 fault	Alarm is triggered if 3 errors of type 5237 or 5238, are registered within 3 hours, or if the circuit for sensor TW1 is continuously broken/shorted for more than 15 minutes. The alarm needs manual reset.	See possible causes for error codes 5237 and 5238.	See possible actions for error codes 5237 and 5238.
5240	A01	Installatör	Info Cooling outlet temperature sensor TK1 open circuit	Sensor TK1 for cooling outlet in the passive cooling station < 0°C (i.e. high resistance). Automatic reset when TK1 > 0°C.	Screw terminal for TK1 not properly tightened.	Check screw terminal.
					Sensor TK1 or signal cable is broken.	With the sensor disconnected from the terminal, measure and compare the resistance to sensor table in documentation. Repair cable or replace sensor if necessary.
5241	A01	Installer	Info Cooling outlet temperature sensor TK1 short circuit	Sensor TK1 for cooling outlet in the passive cooling station > 110°C (i.e. low resistance). Automatic reset when TK1 < 110°C.	Sensor TK1 or signal cable is 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.
5242	H01	Customer	Alarm Cooling outlet temperature sensor TK1 fault	Alarm is triggered if 3 errors of type 5240 or 5241, are registered within 3 hours, or if the circuit is continuously broken/shorted for more than 30 minutes. The alarm needs manual reset.	See possible causes for error codes 5240 and 5241.	See possible actions for error codes 5240 and 5241.
					If function of TK1 is verified, the extension board in the passive cooling station may be defective.	Replace extension board.
5243	A01	Installer	Info Cooling inlet temperature sensor TK2 open circuit	Sensor TK2 for frost protection (brine inlet) in the passive cooling station <= -20°C (high resistance), for 3 minutes. Automatic reset when TK2 > -20°C.	Screw terminal for TK2 not properly tightened.	Check screw terminal.
					Sensor TK2 or signal cable is broken.	With the sensor disconnected from the terminal, measure and compare the resistance to sensor table in documentation. Repair cable or replace sensor if necessary.
5244	A01	Installer	Info Cooling inlet temperature sensor TK2 short circuit	Sensor TK2 for frost protection (brine inlet) in the passive cooling station > 57°C (low resistance), for 3 minutes. Automatic reset when TK2 < 57°C.	Sensor TK2 or signal cable is 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.
5245	H01	Customer	Alarm Cooling inlet temperature sensor TK2 fault	Alarm is triggered if 3 errors of type 5243 or 5244, are registered within 3 hours, or if the circuit is continuously broken/shorted for more than 30 minutes. The alarm needs manual reset.	See possible causes for error codes 5243 and 5244.	See possible actions for error codes 5243 and 5244.
					If function of TK2 is verified, the extension board in the passive cooling station may be defective.	Replace extension board.

5246	A01	Customer	Alarm Z1 electric booster heater E2 manual reset high limit (STB) or pressure switch tripped	(x)	Alarm is given when the overheating protector of the electrical heater is tripped, which happens at 95 degrees.	Tripped overheating protector.	Reset the overheating protector. Note that the button must be pushed hard. A "click" is heard when reset.
						Low system pressure. Air in the heating system.	De-air heating system according to instruction in the installer guide. Refill heating system.
						Clogged filterball on heat carrier return pipe.	Clean filter ball.
						Bad circulation in the heating carrier/heating system.	Check adjustment valves/thermostats for heating system.
						Defective overheating protector.	Verify breaking temperature (95°C). Replace overheating protector if to trips too soon.
						Circulation pump PC0 does not run. PC0 is controlled by Modbus and has its own set of alarms, where for instance error code 5918, is one of them.	Check the alarm log to see if PC0 has produced any alarm in conjunction with error code 5246. Note that PC0 cannot produce an alarm if its supply voltage is missing. Therefore this connection needs to be checked as well.
						Defective circulation pump.	If PC0 has its supply voltage connected and has not produced any alarms, but still does not run - replace the circulation pump.
	One of the contactors for the electrical heater has become stuck in closed position.	Toggle each electrical heater output, one at a time, off and on. Measure the corresponding control circuit voltage and output voltage for each contactor. Replace the contactor if activated even with inactive control voltage. If the control voltage is always 0 V in both off and on state, or always 230 V in both off and on state, it is a sign the output relay of the installer board is defective. Replace the installer board in this case.					
5252	H01	Customer	Info Z1 Flow rate betw. outdoor and indoor unit restricted (check filter)		Warning is given when heat carrier delta TC3-TC0 > 13 K. (The condition needs to be met for 3-10 minutes, depending on the operating mode of the heat pump, for the message to be triggered.) The heat pump continues to run as normal and the message can be acknowledged by the customer.	Bad circulation in the heat carrier/heating system.	Check and clean the filterball on the return pipe. Check adjustment valves and thermostats for the heating system.
5265	A01	Installer	Info Z1 PCB disconnected		Missing CANbus communication between installer board and HP board for 11 s.	Bad CAN bus connections on installer board or HP board.	Check CAN bus connections.

5266	H01	Customer	Alarm Z1 PCB disconnected		Alarm if error code 5265 is registered 3 times within 3 h, or if the CANbus communication has been continuously broken for 15 minutes.	See possible causes for warning 5265.	See actions for warning 5265.
5269	A01	Customer	Alarm Z1 Electric booster heater EE temperature too high	(x)	Alarm when sensor TC1 > 87°C for 4 s. Electrical heater operation is blocked. The alarm is inactivated when TC1 < 80°C. The customer can acknowledge the message, but the alarm remains active until the temperature has dropped below the approved level.	Dirt in filter ball on the return line.	Clear system filter/filter ball.
						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 board, compare its measured value to sensor table in documentation. Replace sensor TC1 if necessary.
5271	A01	Customer	Alarm Heating circuit 1 high flow temperature	x	Alarm when sensor T0 > "Max. flow temperature" set point value + 5 K. Return sensor TC0 is also monitored in case T0 incorrectly measures a too low temperature (only when DHW production is not active). The alarm is triggered with a delay of 0-10 s depending on how large the exceedance is. The alarm is blocked for 5 minutes after a DHW cycle. "Max. flow temperature": Service/Commissioning/ Max. temp HCx. Automatic reset happens when the flow and return temperatures drop to acceptable levels again.	Low system pressure. Air in the heating system.	De-air heating system according to instruction in the installer guide. Refill heating system.
						Low flow in heating system.	Clean filter ball on return pipe. Check adjustment valves and thermostats for the heating system.
						Defective T0 sensor.	With sensor disconnected from the installer board, compare sensor resistance to table values for T0 found in the documentation.
						The system is in heating mode but the diverter valve has not switched over to DHW.	Run the 3-way valve in manual mode and check that 230 V is available on terminal 53 (VW1) in DHW mode. If that is the case but the valve does not switch, replace the motor/cable for the diverter valve. If voltage is missing during DHW mode, replace the installer board.

5272	A01	Customer	Alarm External auxiliary 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 board.	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.
						Tripped fuse at distribution box.	Reset/replace fuses at distribution box.
						Circulation pump does not run.	Ensure that voltage is connected to circulation pump. Examine if there are additional error codes in the alarm log, related to the circulation pump.
						Defective overheating protector.	Verify breaking temperature (96°C) for the overheating protector. For instance, raise the temperature with Extra DHW program, to see if it triggers too soon.
						Contactors for electrical heater has got jammed in closed (active) position.	Measure control voltage and output voltage of each contactor to check if it has been jammed. If a contactor is continuously active regardless of control voltage, replace it.
5273	A01	Customer	Alarm Z1 Phase monitoring	x	Alarm if phase is missing.	Tripped fuse for the heat pump.	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.

5276	A01	Customer	Alarm Z1 Pressure in brine circuit too low	x	<p>The pressure guard is connected to the HP board's input "I15" [terminal 6, 13] and the circuit is normally closed. The pressure guard will break/open the circuit when the pressure drops below 0.5 (±0.1) bar. The event is detected immediately (without delay) and stops the compressor and cold carrier pump. The block is removed when the pressure guard has been closed for 30 s (pressure just above 0.5 bar).</p>	<p>Leakage or insufficiently filled cold carrier circuit.</p>	<p>Check for leakage and fill up the cold carrier circuit. Recommended pressure is 2.5-3.0 bar.</p> <p>The pressure sensor is mounted right before the circulation pump, in the flow direction. When the pump starts, it can result in a brief depressurization which causes the guard to open. For this reason it's wise to follow the recommendation.</p>
					<p>The alarm is produced when the pressure guard has tripped 2 times within 30 min, or the circuit is continuously broken for 15 min. It then requires manual acknowledgment before the heat pump is allowed to make further start attempts.</p> <p>If an external pressure guard has been connected (possible since installer board v2.02), it is monitored in parallel with the factory mounted pressure guard when using v2.02, or instead of the factory mounted pressure guard when using v2.03.</p>	<p>Broken circuit on input "I15" (factory mounted pressure guard), or on the chosen external input (external pressure guard).</p>	<p>Check that the guard is working, alternatively that the cable is properly connected to the input.</p>
5284	A01	Customer	Info Last thermal disinfection failed		<p>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.</p>	<p>Water is continuously tapped from the cylinder.</p>	<p>Stop such continuous usage or change (prolong) the time for thermal disinfection.</p>
						<p>The electrical heaters output power is set too low in relation to hot water volume.</p>	<p>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].</p>
						<p>Hot water sensor is misplaced, or have come loose from the cylinder.</p>	<p>Put the hot water sensor in the correct position.</p>
						<p>Air in the heating coil.</p>	<p>De-air the heating coil.</p>
						<p>If using hot water circulation, too big losses from the pipes.</p>	<p>Make sure that circulation pipes are properly insulated.</p>
						<p>Incorrect reading from temperature sensor TW1.</p>	<p>With sensor disconnected from the installer board, measure its resistance and compare it to table value in documentation. Replace if necessary.</p>
						<p>Incorrectly connected pipes to hot water system.</p>	<p>Fix any pipe connection issues.</p>

5285	H01	Installer	Info Risk of frost in heat. system	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 installer board. If not, also check that the fuse on the installer board is OK.
					Some other error has been registered in the Modbus controlled pump PC0.	Examine if there are additional error codes in the alarm log, related to the circulation pump.
					Defective installer board (does not provide 230V for PC0 despite the fuse being OK).	Replace installer board.
5294	A01	Installer	Info condensation guard tripped	The circuit for the dew point guard/condensate guard MD1 (previously named MK2) has been closed over terminal 34,35 on the installer board. 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.
5295	H01	Customer	Alarm Condensation monitor has tripped	Alarm when warning 5294 has been active for 30 minutes. The alarm must be manually acknowledged.	Short circuit in cable/humidity sensor.	Measure the resistance of the circuit.
					Defective installer board.	Measure voltage on terminal MD1 (34, 35) on installer board, with the humidity sensor disconnected. If voltage is < 2,5V DC, replace installer board.

5298	A01	Installer	Info Z1 High pressure alarm JR1		Warning if condensing temperature JR1 exceeds the current envelope limit -1K. Envelope diagram for the compressor is presented in its own section in the service manual.	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.	Measure the temperatures at the sensor positions with an external thermometer and compare them to the temperatures shown in the HMI. Replace sensor if considerable deviation is found.
						Diverter valve VW1 does not shift from hot water production to heating.	Check VW1 position. A=hot water, B=heating system.
						Defective installer board, bad control signal for diverter valve.	Check that terminal 53 on installer board provides 230V in hot water mode only.
						The circulation pump does not run.	Check that the supply voltage is connected to the pump. Check if the alarm log contains any error codes for the circulation pump.
						Defective installer board, supply voltage, 230 V, missing from circulation pump PC0.	Measure voltage on terminal 51-N. If no voltage, replace installer board.
5299	H01	Customer	Alarm Z1 High pressure alarm JR1	x	Alarm if error code 5298 is registered 3 times within 2 hours.	See possible causes for error code 5298.	See actions for felkod 5298.
5302	A01	Installer	Info Z1 Temperature too high on compressor control system		The temperature of the inverter's compressor control system exceeds 110°C. The compressor is stopped.	High ambient temperature, or poor heat transfer between inverter and cooling coil.	At isolated occurrences of this error code, the recommendation is to restart the appliance with no further action. Should the error code be given more often, see error code 5303 for more information.
5303	H01	Customer	Alarm Z1 Temperature too high on compressor control system	x	The temperature of the inverters' compressor control system > 110°C. Alarm is given if error code 5302 is registered more than 2 times within 3 h, or if the temperature continuously > 110°C for 15 minutes.	Poor heat transfer to cooling coil.	Check screw mountings for cooling coil and the aluminum cooling plate. Check thermal paste and contact surfaces.
						If repeated alarms, the inverter is likely defective.	Replace inverter.
5310	A01	Installer	Info Z1 Hot gas temperature too high		The temperature for discharge temperature sensor TR6 exceeds 110-120°C for 60 s. (The exact maximum temperature is dependent on the working point in the compressor envelope.) The alarm is blocked if any of the sensors TR6, JR0 or JR1 is broken.	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	H01	Customer	Alarm Z1 Hot gas temperature too high	x	Alarm if error code 5310 is registered more than 2 times within 3 h.	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	A01	Installer	Info Z1 Hot gas temperature sensor TR6 open circuit		Warning if the resistance for sensor TR6 > 364 kOhm (corresponding to a temperature < -30°C).	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 HP board. Replace sensor if necessary.
5315	A01	Installer	Info Z1 Hot gas temperature sensor TR6 short circuit		Shorted circuit (temperature reading > 150°C) for sensor TR6, for more than 1 minute. Compressor operation is halted.	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 installer board. Replace signal cable or sensor if necessary.
5316	H01	Customer	Alarm Z1 Gaseous refrigerant temperature sensor TR6 fault	x	Alarm if one of the error codes 5314 or 5315 is registered 3 times within 3 h.	See possible causes for the error codes 5314 and 5315.	See possible actions for the error codes 5314 and 5315.
						If the discharge temperature sensor TR6 measures correctly, the HP board may be defective.	Replace HP board.
5320	A01	Installer	Info Z1 condenser temp. sensor TC3 open circuit		Open circuit for sensor TC3 (resistance > 32.9 kOhm, corresponding to a temperature reading < 0°C). Reset is done automatically when read temperature exceeds 0°C.	Broken condenser outlet sensor TC3/signal cable.	With sensor disconnected from HP board, measure resistance of sensor/signal cable and compare to table values in documentation.
						Connector not properly seated in HP board.	Check connector.
						Broken sensor TC3/signal cable.	Replace sensor TC3.
						Defective HP board.	Replace HP board.
5321	A01	Installer	Info Z1 Condenser temp. sensor TC3 short circuit		Shorted circuit (< 390 Ohm) for condenser sensor TC3. Shorted circuit for sensor TC3 (resistance < 390 Ohm corresponding to a temperature reading > 180°C). Reset is done automatically when read temperature exceeds 180°C.	Broken condenser outlet sensor TC3 or shorted signal cable.	With sensor disconnected from HP board, measure the resistance of sensor and signal cable. Compare to table values in documentation. Repair signal cable or replace sensor.
						Defective HP board.	Replace HP board.

5322	H01	Customer	Alarm Z1 Condenser temperature sensor TC3 fault	x	Alarm if any of the error codes 5320 or 5321 are registered 3 times within 3 hours, or if any of them is active for more than 30 min.	See possible causes for error codes 5320, 5321.	See possible actions for error codes 5320, 5321.
5330	A01	Installer	Info Z1 Compressor control system communication fault		Warning if more than 20% of data sent to the inverter returns with errors (bad reply or no reply).	Supply voltage missing to HP board.	Check 230 V connection.
						Interference on Modbus.	Check Modbus cable/connection terminals between HP board and inverter.
5331	H01	Customer	Alarm Z1 Compressor control system communication fault	x	Alarm if communication is missing, or more than 30% of data sent to inverter returns with errors (incorrect reply or no reply at all).	Supply voltage missing to HP board.	Check 230V connection.
						Interference on Modbus, or intermittent connection in cabling.	Check Modbus cable/connection terminals between HP board and inverter. Disconnect connectors in both ends of the cabling and check that the pins are intact. Replace Modbus cabling if necessary.
						Defective HP board.	Check that 12V DC is available between Modbus terminals 31-34 on HP board. If 12V DC missing, replace HP board.
						Defective inverter.	Replace inverter.
5347	H01	Installer	Info Z1 Undervoltage at power supply		Warning if incoming AC voltage to installer board < 170 V. Warning is automatically reset when incoming AC voltage > 190 V for 2 minutes.	Low mains voltage. This alarm can also be registered in the event of a power failure, and is shown when the heat pump is turned on again.	If repeated warnings, contact the electricity supplier.
						Bad connection in cable for supply voltage (230 VAC) to installer board.	Ensure proper connection.
						If the error code is given constantly while supply voltage level is approved, there may be a bad voltage reading caused by defective installer board.	Replace the installer board.
5350	A01	Installer	Info Z1 Control failure on compressor		Compressor does not run, locked rotor. (The probability of internal fault inside inverter is low.)	Supply voltage outside of approved range.	Measure the voltage. It shall be between 180-253 VAC. Restart the system.
						Bad cabling connection between inverter and compressor.	Check cabling/connections between inverter and compressor.
						Liquid in compressor during start attempt. If the compressor sensor TR1 reads the wrong value, the compressor start may be granted before the refrigerant has evaporated.	Make sure that TR1 reads the correct temperature by measuring the compressor body with a thermometer and comparing the values.
						Improper setting of rotary encoders on the HP board.	Check that the A- and P-selectors (rotary encoders) are set according to the wiring diagram. It's a good idea to double-check these settings if the HP board has previously been replaced.

5351	H01	Customer	Alarm Z1 Control failure on compressor	x	Alarm if warning 5350 has been registered more than 2 times within 3 hours, or if the warning is active for 15 minutes. The compressor is stopped. Manual acknowledgment of the alarm is necessary for new start attempt.	See possible causes for error code 5350.	See possible actions for error code 5350.
5354	A01	Installer	Info Z1 Current consumption at compressor too high		Warning if the inverter registers an overcurrent transient to compressor. Warning is automatically reset after 4 minutes if the condition is not fulfilled. (The probability of a defective inverter is low.)	Broken/shorted cabling between the inverter and compressor.	Check cabling between inverter and compressor.
						Supply voltage is not within the approved range.	Measure the supply voltage. It shall be between 180-253 VAC. Restart the system.
5355	H01	Customer	Alarm Z1 Current consumption on compressor too high	x	Alarm after if 3 error codes (error code 5354) are registered within 3 hours, or if the warning is active for 30 minutes.	Broken/shorted cabling between the inverter and compressor.	Check cabling between inverter and compressor.
						Defective inverter.	Replace inverter.
						Electrical fault in compressor.	Measure the resistance between windings and earth. If resistance < 10 kOhm, replace the compressor.
5362	A01	Installer	Info Z1 Overvoltage	x	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. If the installer board is older than v2.02: - The message is given on customer level and must be acknowledged in order to allow a new start attempt. - See error code 5370 for additional possible causes and actions.	The most common cause is that the compressor fails to start due to internal characteristics. The inverter then reacts by sending an alarm for overvoltage.	Occasional failed start attempts shall be considered normal and does not require further actions. If the error code is produced very often, for instance 4-5 times in a row, blocking the compressor for a longer time, the problem requires further investigation.
						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.

5366	A01	Installer	Info Z1 Superheat of refrigerant too low		Suction gas overheating < 2 K and discharge gas overheating < 20 K for 15 minutes.	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	H01	Customer	Alarm Z1 Superheat of refrigerant too low	x	Alarm is given if error code 5366 is registered more than 2 times within 3 h, or if the warning is continuously active for 15 minutes. The compressor stops. The alarm requires manual acknowledgement.	See possible causes for error code 5366.	See possible actions for error code 5366.
5371	H01	Customer	Alarm wrong position on PCS mixer valve		TK2 (cold carrier inlet temperature for passive cooling station) is more than 1K below TB0 (cold carrier return temperature), and TB0 < 1°C, despite mixing valve VK1 in the passive cooling station being closed (from the perspective of the software, i.e. active closing signal). The alarm is triggered when the condition has been met for 15 minutes.	Intermittent or missing cable connection to mixing valve VK1.	Check cabling.
						The mixing valve motor is incorrectly mounted.	Check that the motor is correctly mounted relative to the valve, so that it can fully close.
						Defective mixing valve motor.	Replace the motor on the valve.
5387	H01	Customer	Alarm Z1 PFC compressor control system overheated	x	Alarm if internal temperature sensor in the inverter's PFC module > 110°C.	Poor heat transfer to cooling coil.	Check screw mountings for cooling coil and the aluminum cooling plate. Check thermal paste and contact surfaces.
						If repeated alarms, the inverter is likely defective.	Replace inverter.
5394	A01	Installer	Info Z1 Internal compressor control system failure 1		Warning is given if inverter registers overcurrent to compressor. Warning is automatically reset after 4 minutes if condition is no longer fulfilled.	Bad grid voltage.	Check that the voltage is between 180-253 VAC.
						Short-circuit in cabling.	Check cabling between inverter and compressor.
						Incorrect setting on rotary encoder (P-selector) on the HP board. An incorrect setting can result in improper modulation of the compressor supply voltages, from the inverter.	Compare P-selection with settinf defined in manual.
						High torque in compressor. (Very low probability of error in inverter.)	At sporadic occurrences of the message, restart the appliance. Further actions should only be necessary if the problem is recurring. See error code 5395 for more information.

5395	H01	Customer	Alarm Z1 Internal compressor control system failure 1	x	Alarm if 3 error codes (code 5394) are registered within 3 hours, or if the warning is continuously active for 30 minutes.	See possible causes for error code 5394.	See possible actions for error code 5394.
						Defective compressor. (Very low probability of error in inverter.)	Measure the resistance between the compressor windings and earth. If resistance < 10 kOhm, replace the compressor.
5414	A01	Installer	Info Z1 Condensate sensor TR3 heating mode open circuit		Open circuit for temperature sensor TR3.	Screw terminal on HP board for sensor TR3 has not been tightened properly.	Check screw terminal.
						Sensor TR3/signal cable is broken.	With sensor disconnected from HP board, measure resistance of sensor and compare it to table values in documentation. If broken, replace sensor.
						Defective HP board.	If the sensor measures correctly but the same error code persists, replace the HP board.
5415	A01	Installer	Info Z1 Condensate sensor TR3 heating mode short circuit		Shorted circuit for temperature sensor TR3.	Sensor TR3/signal cable shorted.	With sensor disconnected from HP board, measure resistance of sensor and compare it to table values in documentation. If broken, replace sensor.
						Defective HP board.	Run the system with sensor disconnected from the HP board. If the same error code 5415 persists, replace the HP board.
5416	H01	Customer	Alarm Z1 Refrigerant condensate sensor heating mode TR3 fault	x	Alarm is given if error code 5414 or 5415 is registered more than 2 times within 2 h, or if the circuit for temperature sensor TR3 has been continuously shorted/broken for 15 minutes.	See possible causes for error codes 5414, 5415.	See possible actions for error codes 5414, 5415.
5420	A01	Installer	Info Z1 Condensate sensor TR4 cooling mode open circuit		Open circuit for temperature sensor TR4.	Screw terminal on HP board, for sensor TR4, is not properly tightened.	Check screw terminal of HP board.
						Broken sensor TR4/signal cable.	With sensor disconnected from HP board, measure its resistance. If broken, replace sensor.
						Defective HP board.	If the sensor measures correctly but the same error code persists, replace the HP board.
5421	A01	Installer	Info Z1 Condensate sensor TR4 cooling mode short circuit		Shorted circuit for temperature sensor TR4.	Sensor TR4/signal cable broken.	With sensor disconnected from HP board, measure its resistance. If shorted, replace sensor.
						Defective HP board.	If the sensor measures correctly but the same error code persists, replace the HP board.

5422	H01	Customer	Alarm Z1 Refrigerant condensate sensor cooling mode TR4 fault	x	Alarm is given if any of the error codes 5420 or 5421 are registered more than 2 times within within 2 hours, or if the circuit for sensor TR4 is continuously broken/shorted for 15 minutes.	See possible causes for error codes 5420, 5421.	See possible actions for error codes 5420, 5421.
5426	A01	Installer	Info Z1 Suction gas temp. sensor TR5 open circuit		Open circuit for temperature sensor TR5.	Screw terminal on HP board, for sensor TR5, not properly tightened.	Check screw terminal on HP board.
						Sensor TR5/signal cable broken.	With sensor disconnected from HP board, measure its resistance. If broken, replace sensor.
						Defective HP board.	If the sensor measures correctly but the same error code persists, replace the HP board.
5427	A01	Installer	Info Z1 Suction gas temp. sensor TR5 short circuit		Shorted circuit for temperature sensor TR5.	Sensor TR5/signal cable shorted.	With the sensor disconnected from HP board, measure its resistance. If shorted, replace sensor.
						Defective HP board.	If the sensor measures correctly but the same error code persists, replace the HP board.
5428	H01	Customer	Alarm Z1 Suction gas temperature sensor TR5 fault	x	Alarm is given if error code 5426 or 5427 is registered more than 2 times within 2 h, or if the circuit for sensor TR5 is continuously broken/shorted for 15 minutes.	See possible causes for error codes 5426, 5427.	See possible actions for error codes 5426, 5427.
5432	A01	Installer	Info Z1 Low pressure sensor JR0 open circuit		Warning if voltage < 0,5 V DC on terminal 17 on HP board.	Poor connection in cabling/terminal 17,19 on HP board.	Check cabling and terminal connections 17, 19 on HP board.
						Defective HP board.	Check that 5V DC is available between terminal 19 and 24 (signal ground), with the pressure sensor disconnected. If voltage is <0.5V, replace the HP board.
						Pressure sensor JR0 is defective.	Check that 5V DC is available between terminal 19 and 24 (signal ground). If voltage is 5V, replace the pressure sensor.
5434	H01	Customer	Alarm Z1 Low pressure sensor JR0 fault	x	Alarm is given if error code 5432 is registered 3 times within 2 h, or if the circuit for JR0 has been continuously open for 15 minutes.	See possible causes for error code 5432.	See possible actions for error code 5432.

5438	A01	Installer	Info Z1 High pressure sensor JR1 open circuit		Warning if voltage < 0,5 V DC on terminal 16 on HP board.	Poor connection in cabling/terminal 16,18 on HP board.	Check cabling and terminal connections 16, 18 on HP board.
						Defective HP board.	Check that 5V DC is available between terminal 18 and 22 (signal ground), with the pressure sensor disconnected. If voltage is missing or <0.5V, replace the HP board.
						Pressure sensor JR1 is defective.	Check that 5V DC is available between terminal 18 and 22 (signal ground), with the pressure sensor disconnected. If voltage = 5V DC, replace the pressure sensor.
5440	H01	Customer	Alarm Z1 High-pressure sensor JR1 fault	x	Alarm is given if error code 5438 is registered 3 times within 2 h, or if the circuit for JR1 has been continuously open for 15 minutes.	See possible causes for error code 5438.	See possible actions for error code 5438.
5448	H01	Installer	Alarm Z1 Refrigerant charge too low		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.
5452	A01	Customer	Info Z1 Internal fault on compressor control system	x	Alarm for internal fault in inverter.	Defective inverter.	Replace inverter.
5453	A01	Customer	Info Z1 No power supply to outdoor unit ("Outdoor unit" is an unfortunate choice of words, since the message is applicable for all heat pump types with an installer board.)	x	Message is given if incoming AC voltage to installer board < 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.
5500	A01	Customer	Info Underfloor temperature limiter has tripped	x	The circuit's own protective thermostat has tripped. Alarm is given when the external input configured for this purpose, on the installer board, is closed.	Protective thermostat for underfloor heating has been tripped.	Reset thermostat, adjust heat curve if necessary.
5503	A01	Installer	Info Connection to current monitor faulty		Communication between installer board and power guard is missing for 30 seconds.	Incorrect cabling/connections.	Check cabling/connections.
						Poor connection in CAN bus connections on installer board or power guard.	Check CAN bus connections on installer board and power guard.
						Interruption/break on CAN bus cable between installer board and power guard.	Replace CAN bus cable.
						Incorrect type of CAN bus cable.	Replace to correct type of CAN bus cable. Check documentation for more information.
						CAN bus cable installed together with/close to supply voltage to heat pump.	Separate CAN bus and power cables by at least 100 mm to prevent interference.

5504	A01	Customer	Alarm Connection to current monitor faulty		Alarm is given if error code 5503 is registered 3 times within 3 h, or if communication with the power guard has been missing for 30 minutes.	See possible causes for error code 5503.	See possible actions for error code 5503.
5506	A01	Installer	Alarm Z1 Compressor does not start		The compressor has not started within 2 minutes after start signal has been sent. Automatic acknowledgement happens after 2 minutes, whereupon the inverter is allowed to make a new start attempt.	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	A01	Installer	Info Z1 MR1 High press. warning		The circuit for the high pressure guard MR1 is open. The compressor stops.	The heat carrier flow is too low. The reason can be long pipe lengths or a heating system that is completely or partially closed.	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.
						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 HP board and coil, and the coil itself before replacing the complete expansion valve.
5508	H01	Customer	Alarm Z1 MR1 High pressure alarm	x	Alarm if error code 5507 is registered more than 2 times within 3 h, or if the circuit for the high pressure guard is continuously open for 15 minutes. The compressor stops.	See possible causes for error code 5507 above.	See possible actions for error code 5507 above.
5512	A01	Installer	Info Z1 Dew point outside control range		Warning if temperature of JR1 > the currently allowed envelope, for more than 60 seconds.	Too low evaporating temperature in relation to condensation temperature.	The most likely cause is low outdoor temperature. See diagram in service manual.
5513	H01	Customer	Alarm Z1 Dew point too high	x	Error code 5512 is registered more than 5 times within 3 h, or has been continuously active for more than 15 minutes. The compressor stops. Manual acknowledgement is required for new start attempt.	Too low evaporating temperature in relation to condensation temperature.	The most likely cause is low outdoor temperature. See envelope diagram in service manual.
						Too low flow or too high delta on heating system.	Adjust temperature/flow.

5514	A01	Installer	Info Z1 Evaporation pressure on JR0 too low		JR0 < minimum allowed evaporating temperature for more than 30 seconds. Minimum allowed evaporating temperature is based on the type of collector used. Borehole: -15°C. Surface: -15°C. Groundwater: -5°C. Exhaust air: -10°C.	Insufficient flow in cold carrier/brine circuit.	Check function of cold carrier circulation pump.
						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 HP board.	If any of the voltages are missing, in accordance with above, replace the HP board.
5522	A01	Customer	Alarm Indoor and outdoor unit are incompatible. (Note. The message has been defined for air/water heat pumps. A more correct description is that the installer board and HP board does not work together due to incorrect addressing.)	x	The configuration of the rotary encoder P on the installer board and HP board respectively, form an unsupported combination.	Bad combination of P-settings on installer board and/or HP board. In many cases it can be that a board has been replaced and that the new board has not been configured.	If possible, copy setting of old board from the same appliance. Alternatively, compare the rotary encoder settings with the approved combinations stated in the installer guide.
5523	A01	Installer	Info Z1 Internal fault 3 on compressor control system		Short circuit in the inverter's PFC circuit.	One or more incoming phases to the inverter is missing.	Check that all phases are connected.
						Internal error in inverter.	Temporary malfunction. Await possible alarm in customer level (code 5524), until applying further actions.
5524	H01	Customer	Alarm Z1 Internal compressor control system fault 3	x	Error code 5523 has been registered more than 2 times within 3 h, or has been continuously active for more than 15 minutes.	Internal error in inverter.	Replace inverter.
5527	H01	Customer	Alarm Z1 Too much refrigerant in cooling circuit		JR1 > (TC3 + 5°C) and subcooling > (set point value + 5°C). Both conditions needs to be fulfilled for more than 15 minutes during hot water production, to trigger the alarm.	Heat pump overfilled.	Evacuate heat pump and refill with quantity specified on type plate.
5531	A01	Installer	Info Z1 Compressor temp. sensor TR1 open circuit		Broken circuit for compressor temperature sensor TR1. Operation can continue by the software using discharge temperature TR6-10°C, as a replacement temperature for TR1.	Bad connection between sensor TR1 and HP board.	Check connector.
						Compressor temperature sensor TR1 or signal cable broken.	With sensor disconnected from HP board, measure resistance of sensor. If broken circuit (infinite resistance), replace sensor.
						If the sensor demonstrably works but the error code is still produced, the HP board can be defective.	Replace HP board.

5532	A01	Installer	Info Z1 Compressor temp. sensor TR1 short circuit		Shorted circuit for compressor temperature sensor TR1. Operation can continue by the software using discharge temperature TR6-10°C, as a replacement temperature for TR1.	Compressor sensor TR1/signal cable is shorted.	With sensor disconnected from HP board, measure resistance of sensor. If shorted, replace sensor.
						If the sensor demonstrably works but the error code is still produced, the HP board can be defective.	Replace HP board.
5533	H01	Customer	Alarm Z1 Compressor temperature sensor TR1 fault	x	One of the error codes 5531 or 5532 is active (broken or shorted circuit for TR1), at the same time as sensor TR6 is broken.	See possible causes for the error codes 5531, 5532.	See possible actions for the error codes 5531, 5532.
5541	H01	Customer	Alarm Pool module communication failure		No communication between installer board and pool board for 90 seconds.	Poor connection in CAN bus connections on installer board or pool module.	Check CAN bus connections on installer board and pool module.
						Break on CAN bus cable between installer board and pool module.	Replace CAN bus cable between installer board and pool module.
						Improper type of CAN bus cable.	Change to the correct type of cable. More information can be found in the installer guide.
						CAN bus cable installed together with/close to supply voltage to heat pump.	Separate CAN bus and power cables by at least 100 mm to prevent interference.
						Improper earthing of CAN bus cable.	Disconnect/connect cable shield from/to earth.
5543	A01	Installer	Info Z1 Superheat temperature is excessive		Suction gas overheating (TR5 - JR0) exceeds 10 degrees for more than 10 minutes, where TR5 is the suction gas temp and JR0 is the low pressure sensor.	Incorrect reading from suction gas temperature sensor TR5.	Measure the temperature with an external thermometer. If the value presented in the display does not match the measured valve, replace the sensor.
						Incorrect reading from low pressure sensor JR0.	Connect manometer check the pressure on the low pressure side. Replace the low pressure sensor if the values do not match.
						Poor connection of control signal cables for expansion valve.	Check that the cabling is properly attached in both ends.
						Lack of refrigerant or defective expansion valve.	A suction gas overheating below 6 degrees for 10 minutes, can be a sign of shortage, but the symptoms can also be caused by an expansion valve that doesn't open properly. Contact local service department for guidance.
5547	A01	Installer	Info Z1 Brine inlet temperature at TB0 is too low		Cold carrier inlet temperature sensor TB0 < set temperature limit - 1K, for 30 s. (Service/ Heat source settings/ Heat pump/ TB0 brine temp min. in)	The temperature limit for TB0 may be set lower than necessary.	Check the set temperature limit for TB0.
						Incorrect reading from sensor TB0.	Compare sensor reading to actual temperature. Replace sensor if there is a deviation.

5549	H01	Customer	Alarm Z1 Brine inlet temperature TB0 is too low	Error code 5547 is registered more than 2 times within 3 h, or has been continuously active for 15 minutes. The compressor stops. Manual acknowledgment is required.	See possible causes for error code 5547.	See possible actions for error code 5547.
5551	A01	Installer	Info Z1 Brine outlet temperature at TB1 is too low	Cold carrier outlet temperature sensor TB1 < set minimum TB0 temperature - 2K, for 30 s. (Service/ Heat source settings/ Heat pump/ TB1 brine temp min. out)	Incorrect reading from sensor TB1.	Compare sensor reading to actual temperature. Replace sensor if there is a deviation.
5553	H01	Customer	Alarm Z1 Brine outlet temperature TB1 is too low	Error code 5551 is registered more than 2 times within 3 h, or has been continuously active for 15 minutes. The compressor stops. Manual acknowledgment is required.	See possible causes for error code 5551.	See possible actions for error code 5551.
5555	A01	Installer	Info Z1 Brine inlet temperature at TB0 is too high	Warning if TB0 > 30°C for 30 s. The compressor stops.	Incorrect reading from sensor TB0.	Compare sensor reading to actual temperature. Replace sensor if there is a deviation.
5557	H01	Customer	Alarm Z1 Brine inlet temperature TB0 is too high	Error code 5555 is registered more than 2 times within 3 h, or has been continuously active for more than 15 minutes. The compressor stops. The alarm requires manual acknowledgment.	See possible causes for error code 5555.	See possible actions for error code 5555.
5559	A01	Installer	Info Z1 Brine outlet temperature at TB1 is too high	Warning if TB1 > 30°C for 30 seconds. The compressor stops.	Incorrect reading from sensor TB0.	Compare sensor reading to actual temperature. Replace sensor if there is a deviation.
5561	H01	Customer	Alarm Z1 Brine outlet temperature TB1 is too high	Error code 5559 is registered more than 2 times within 3 h, or has been continuously active for more than 15 minutes. An additional condition is that the alarm for low pressure in the brine circuit is not active at the same time. The compressor stops. The alarm requires manual acknowledgment.	Incorrect reading from sensor TB1.	Compare sensor reading to actual temperature. Replace sensor if there is a deviation.
5563	A01	Installer	Info Z1 high temperature differential between TB0 and TB1	The temperature difference TB0-TB1 > 10K for 15 minutes. The alarm is suppressed if TB1 > 10°C.	System filter/filterball is clogged.	Check filter. Clean if necessary.
					Air in brine system.	De-air brine system according to instruction in manual.
					Brine circulation pump PB3 is defective.	Test brine pump PB3 using manual operation from the display.
					Bad reading from brine sensor TB0/TB1.	Compare displayed values to actual temperatures measured with an external thermometer. Replace sensor(s) if deviation(s) found.

5565	H01	Customer	Alarm Z1 Temperature difference between TB0 and TB1 high		Error code 5563 is registered more than 2 times within 3 h, or has been continuously active for more than 15 minutes. The compressor stops. Manual acknowledgement is required.	System filter/filterball is clogged.	Check filter. Clean if necessary.
						Air in brine system.	De-air brine system according to instruction in manual.
						Brine circulation pump PB3 is defective.	Test brine pump PB3 using manual operation from the display.
						Bad reading from TB0/TB1.	Compare displayed values to actual temperatures measured with an external thermometer. Replace sensor(s) if deviation(s) found.
5571	A01	Installer	Info Z1 Brine inlet temperature sensor TB0 short circuit		Shorted circuit for temperature sensor TB0.	Defective sensor TB0 or shorted signal cable.	With sensor disconnected from HP board, measure resistance of sensor. If shorted, replace sensor.
						If the sensor demonstrably is working but the error code is still produced, the HP board may be defective.	Replace HP board.
5573	A01	Installer	Info Z1 Brine inlet temperature sensor TB0 open circuit		Broken circuit for temperature sensor TB0.	Brine in sensor TB0/signal cable broken.	With sensor disconnected from HP board, measure resistance of sensor. If broken, replace sensor.
						Screw terminal for brine sensor TB0 not properly tightened.	Check screw terminal.
						If the sensor demonstrably is working but the error code is still produced, the HP board may be defective.	Replace HP board.
5575	H01	Customer	Alarm Z1 Brine inlet temperature sensor TB0 fault	x	Error code 5571 or 5573 has been registered more than 2 times within 2 h, or the circuit for sensor TB0 has been continuously broken or shorted for more than 15 minutes.	See possible causes for error codes 5571, 5573.	See possible actions for error codes 5571, 5573.
5577	A01	Installer	Info Z1 Brine outlet temp. sensor TB1 short circuit		Shorted circuit for temperature sensor TB1.	Brine out sensor TB1/signal cable is shorted.	With sensor disconnected from HP board, measure resistance of sensor. If shorted, replace sensor.
						If the sensor demonstrably is working but the error code is still produced, the HP board may be defective.	Replace HP board.

5579	A01	Installer	Info Z1 Brine outlet temp. sensor TB1 open circuit		Broken circuit for temperature sensor TB1.	Brine out sensor TB1/signal cable broken.	With sensor disconnected from HP board, measure resistance of sensor. If broken, replace sensor.
						Screw terminal for brine sensor TB1 not properly tightened.	Check screw terminal.
						If the sensor demonstrably is working but the error code is still produced, the HP board may be defective.	Replace HP board.
5581	H01	Customer	Alarm Z1 Brine outlet temperature sensor TB1 fault	x	Error code 5577 or 5579 has been registered more than 2 times within 2 h, or continuous broken or shorted circuit for sensor TB1 for 15 minutes.	See possible causes for error codes 5577, 5579.	See possible actions for error codes 5577, 5579.
5585	H01	Customer	Alarm Z1 Low pressure sensor detects problems in brine circuit	x	Error code 5514 has been registered more than 2 times within 3 h, or is continuously active for 15 minutes.	See possible causes for error code 5514.	See possible actions for error code 5514.
5593	A01	Installer	Info Pool module communication failure		No communication with pool module for 90 s or more.	EMS cable not connected or broken.	Check EMS connection.
5594	A01	Customer	Alarm Z1 Air in the system	(x)	TC1 > TC0 + 20K, and T0 < TC0 + 5K. The condition is monitored for 10 minutes after activation of electrical heater.	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.
5900	H01	Installer	Info: Phase loss to compressor // Note that some versions of the HMI may show the following incorrect text: "Internal fault in control device (MCU)"		The message is given if the inverter detects phase loss to the compressor.	One of the phases is not connected between inverter and compressor.	Connect phase.
						Broken winding in compressor.	Measure the resistance of the compressor windings.
5902	A01	Installer	Info: Compressor motor overload		Current overload for a period of time.	Low supply voltage. There shall be at least 180 VAC between each phase and neutral.	Measure the voltages. Contact the electricity supplier for a logged measurement if the problem is recurring.
5903	A01	Installer	Info: Fault in compressor motor		Motor control sequencer error (loss of motor control). Typically occurs with another higher priority fault from the inverter.	This alarm often occurs in conjunction with other high priority alarm from the inverter.	Go through the alarm log to see if there are more inverter-related alarms that might give clues to what has happened.
5904	A01	Customer	Alarm: External fault at inverter?		Command to stop with fault (from Modbus master).	Defective inverter.	Replace inverter.
5905	A01	Customer	Alarm: Insufficient supply voltage to inverter control	x	Supply voltage is lower than 180 VAC.	Supply voltage is lower than 180 VAC.	Measure the phases to the inverter. Contact the electricity supplier if the problem persists.

5906	A01	Installer	Info: Brief high compr. motor overload		Rapid increase in power load for the compressor.	If the problem keeps appearing several times, it is likely the case that the rotor is locked.	Check the compressor supply. Disconnect the supply and measure the windings of the compressor between U-V, V-W, U-W.
5908	A01	Customer	Alarm: Inverter control initialisation fault		Initialization error of inverter control.	Initialization error.	Initialization error.
5909	A01	Customer	Alarm: heat. pump with unknown fct. connected to Modbus		A pump of unknown function is connected to Modbus.	The pump to general preset address, when it should not.	Configure the recently connected circulation pump as either PC0 or PC1.
5917	A01	Customer	Alarm: No communication with heating pump PC0	x	No communication with heat carrier circulation pump PC0.	Missing supply voltage to circulation pump.	Check supply power to pump.
						The communication cable for Modbus is not properly connected.	Check communication cable and connections.
5918	H01	Customer	Alarm: Flow rate for heating pump PC0 too low	x	Heat carrier pump PC0 has a built-in function for flow measurement. PC0 reports low flow if its measurement indicates less than 50 l/h for 5 s. The alarm invokes an automated de-airing routine, which runs for up to 15 minutes. The alarm is reset automatically when the flow exceeds 60 l/h.	Air in system.	Check, de-air and fill heating system.
5919	A01	Customer	Alarm: Heating pump PC0 is blocked	x	Heat carrier pump PC0 reports error for locked rotor.	Rotor is blocked by e.g. foreign objects or deposits which prohibit rotation.	Check filter ball valve and water quality. Remove pump motor from pump housing and remove any dirt from impeller and housing.
5920	A01	Customer	Alarm: Supply voltage for heating pump PC0 too low	x	Heat carrier pump PC0 reports error for low supply voltage.	The supply voltage for PC0 is lower than 150V.	Check line voltage. Check fuses. If the voltage is too low, contact the electricity supplier and request a logged measurement of the voltage.
5921	A01	Customer	Alarm: Internal fault in the heating pump PC0	x	Heat carrier pump PC0 reports internal electrical fault.	Internal electrical fault.	Break supply voltage to PC0 and turn it on again. If the error message comes back, replace the circulation pump.
5922	A01	Customer	Alarm: Supply voltage for heating pump PC0 too high	x	Heat carrier pump PC0 reports overvoltage on its supply phase.	Supply voltage to PC0 is too high.	Check line voltage. Check fuses. If the voltage is too high, contact the electricity supplier and request a logged measurement of the voltage.
5923	A01	Customer	Alarm: Dry running of heating pump PC0	x	Heat carrier pump PC0 reports dry run.	The heating circuit is not properly filled.	Fill heating circuit.
5937	A01	Installer	Info: Flow rate from ext. source by heating pump PC0		A flow is drawn through the heat carrier pump PC0 by an external source.	Additional circulation pump has been mounted in the circuit, which is not controlled by the heat pump.	Check if there is any additional circulation pump connected in series with PC0.

5938	A01	Installer	Info: Temp. in the control device of heating pump PC0 too high	Heat carrier pump PC0 reports an error for overheated electronics inside its control box.	The ambient temperature in the installation room is too high. As recommended in the installer guide, the room temperature shall not exceed 35°C.	Wait for the temperature to drop.
					If the ambient temperature < 25°C and the error code is still given, the circulation pump may be defective.	Replace circulation pump PC0.
5939	A01	Installer	Info: Supply voltage heating pump PC0 too low	Heat carrier pump PC0 reports error for low supply voltage.	The supply voltage for PC0 is lower than 195V.	Check line voltage. Check fuses. If the voltage is too low, contact the electricity supplier and request a logged measurement of the voltage.
5940	A01	Installer	Info: Air in the heating pump PC0	Circulation pump PC0 reports error for presence of air in the heat carrier circuit.	Air in system.	Perform de-airing.
5980	A01	Customer	Alarm: PWM signal outside permissible range	Configuration error.	Configuration error.	Replace the inverter.
5981	A01	Installer	Info: Incorrect running direction of compressor	The warning is triggered if the condensing pressure has not increased by least 0.5 bar in 10 s after run signal was sent from the inverter. The compressor is stopped. Automatic reset and new start attempt follows after 2 minutes.	Wrong rotation direction in compressor.	Check that the are correctly connected by the compressor (right phase sequence).
5983	A01	Customer	Alarm: Incorrect running direction of compressor	The alarm is produced if error code 5981 is registered more than 2 times within 2 h. The compressor stops. Manual acknowledgement is required for new start attempt.	See possible causes for error code 5981.	See possible actions for error code 5981.
5984	A01	Customer	Alarm: No refrigerant in refrigerant circuit	No or almost no refrigerant left in the heat pump. Also see error code 5448.	Detection is made using the pressure sensors JR0 and JR1, as well as the temperature sensors TB0 and TC0. A possibility is that one of the sensors has a measurement error.	Check the accuracy of the sensors with pressure gauge and external thermometer.
					Leak in refrigerant circuit.	Search for leak and repair if necessary. Refill refrigerant.
5987	A01	Customer	Alarm: Brief high overload for the compressor motor	Very fast increase of compressor motor load, which usually is a sign of locked rotor.	Bad connection between inverter and compressor.	Check connections.
					Damaged windings in the compressor.	Measure the resistance of the compressor windings (U-V, V-W, U-W). If shorted or broken circuit, replace compressor.
5988	A01	Customer	Alarm: Fault in the inverter control MCE	Loss of motor control.	The alarm often occurs in combination with other inverter alarm.	Check the alarm log to see if additional inverter alarms have been registered.

5989	A01	Customer	Alarm: No phase betw. inverter control and compressor motor	Phase lost to compressor winding.	Bad compressor connection.	Check connections.
					Damaged windings in the compressor.	Measure the resistance of the compressor windings (U-V, V-W, U-W). If shorted or broken circuit, replace compressor.
					Defective inverter.	Replace the inverter if none of the possible causes above explains the alarm.
5990	A01	Customer	Alarm: Overload for the compressor motor	Current overload for a period of time.	Low supply voltage. There shall be at least 180 VAC between each phase and neutral.	Measure the voltages. Contact the electricity supplier for a logged measurement if the problem is recurring.
5993	A01	Installer	Info: No communication betw. inv. control and main contr. unit.	The HP board has lost communication with the inverter.	Disturbances in Modbus communication.	Check Modbus cables.
5994	A01	Installer	Info: Low pressure in brine circuit	The pressure guard for the cold carrier circuit has tripped (normally open circuit). Pressure limit is 0.5 bar.	Leakage or insufficiently filled cold carrier circuit.	Check for leakage and fill up the cold carrier circuit. Recommended pressure is 2.5-3.0 bar.
6212	H01	Customer	Alarm: No communication with the passive cooling module possible	No communication with passive cooling module. PCM does not resond.	Invalid configuration of rotary encoder on extension board for passive cooling station.	Compare setting of rotary encoder to documentation.
					Defective CAN wiring.	Check connections. Replace cabling if necessary.
					If the CAN cabling is intact and properly connected, the extension board may be defective.	Replace extension board for passive cooling station.
6213	A01	Installer	Info: No communication with the passive cooling module possible	No communication with passive cooling module. PCM does not resond.	Invalid configuration of rotary encoder on extension board for passive cooling station.	Compare setting of rotary encoder to documentation.
					Defective CAN wiring.	Check connections.
6216	A01	Installer	Info: Signal from upper DHW temp.sens. TW 2 outs. perm. range	The circuit for upper DHW sensor TW2 is shorted. (Measured temperature $\geq 110^{\circ}\text{C}$.)	Defective sensor or short circuit in signal cable.	With the sensor disconnected from the installer board, measure its resistance. If short circuit, replace the sensor.
6217	A01	Installer	Info: No signal from upper DHW temperature sensor TW2	The circuit for the upper DHW sensor TW2 is broken. (Measured temperature $\leq 0^{\circ}\text{C}$.)	Poor connection of sensor.	Check that the sensor is properly connected.
					Defective sensor or break in signal cable.	With the sensor detached from the installer board, measure its resistance. If broken circuit, replace the sensor.
6218	H01	Customer	Alarm: Signal from upper DHW temp. sensor TW2 outside perm. range	Error code 6216 or 6217 has been registered more than 2 times within 3 h, alternatively continuously shorted or broken sensor for 15 minutes.	See possible causes for error code 6216 and 6217.	See possible actions for error code 6216 and 6217.
					If the sensor demonstrably is working but the error code is still produced, the installer board may be defective.	Replace the installer board.

6219	H01	Customer	Info: Maintenance on heat pump due		The message is displayed when the heat pump has been in operation for 3 and 5 years respectively, and seeks to remind the customer of warranty service. Error code 6219 and 6220 are given simultaneously.	See definition.	When the message is acknowledged on customer level, it shown a second time after 24 h. New acknowledgement, then a third and last reminder follows after another 24 h. When it has been acknowledged there will be no more reminders. If technician acknowledges error code 6220 on installer level, further reminders on customer level are blocked.
6220	A01	Installer	Info: Perform maintenance on heat pump		The message is displayed when the heat pump has been in operation for 3 and 5 years respectively, to remind about warranty service. Error code 6219 and 6220 are given simultaneously. (The run-time timer is located in the installer board and will therefore be reset if the board is replaced. Upgrading of software in existing board does however not affect the timer.)	See definition.	Acknowledge error code 6220 on installer level in conjunction with warranty service. Further reminders on customer level (error code 6219) will be blocked.