

Display level	Cause code	Temporary cause code	Alarm text	Alarm definition	Possible cause	Action
Installer	5201		Warning outdoor sensor TL1 failure	Warning failure (>170 kOhm) on sensor TL1, after 3 faults in 2 hours.	Outdoor sensor TL1 missing	Install outdoor sensor
					Signal cable not connected to outdoor sensor TL1	Connect signal cable to outdoor sensor TL1
					Signal cable not connected to I/O board	Connect signal cable to I/O board
					Failure on signal cable to outdoor sensor TL1	Check/replace signal cable to outdoor sensor TL1
					Outdoor sensor TL1 is out of range	Check sensor TL1 ohm value to relevant sensor table
					Outdoor sensor TL1 faulty	Replace outdoor sensor TL1
Installer	5202		Warning outdoor sensor TL1 short circuited	Warning short circuit (<900 Ohm) on sensor TL1, after 3 faults in 2 hours.	I/O board not working	Replace I/O board
					Outdoor sensor TL1/signal cable short circuited	Check sensor TL1/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Outdoor sensor TL1 short circuited	Check ohm value with relevant sensor table/replace outdoor sensor TL1
					Signal cable to outdoor sensor TL1 short circuited	Repair/replace signal cable to outdoor sensor TL1
Customer	5203		Alarm outdoor sensor TL1 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor T0.	I/O board not working	Replace I/O board
					See possible causes for cause code 5201, 5202	See possible action for action code 5201, 5202
Installer	5204		Warning flow sensor T0 failure	Warning failure (>179 kOhm) on sensor T0, after 3 faults in 2 hours.	Flow sensor T0/signal cable failure.	Check sensor T0/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Screw terminal on I/O board to flow sensor T0 not tightened	Check screw terminal
					Flow sensor T0/signal cable failure.	Replace flow sensor T0
					I/O board not working	Replace I/O board
Installer	5205		Warning flow sensor T0 short circuited	Warning short circuit (<390 Ohm) on sensor T0 after 3 faults in 2 hours.	Flow sensor T0/signal cable short circuited.	Check sensor T0/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Flow sensor T0 short circuited	Check ohm value with relevant sensor table/replace flow sensor T0
					Signal cable to flow sensor T0 short circuited	Repair/replace signal cable to flow sensor T0
					I/O board not working	Replace I/O board
Customer	5206		Alarm flow sensor T0 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor T0.	See possible causes for cause code 5204, 5205	See possible action for action code 5204, 5205
Installer	5207		Warning Z1 heat transfer fluid out sensor TC1 failure	Warning failure (>179 kOhm) on sensor TC1 after 3 faults in 2 hours.	Heat transfer fluid out sensor TC1/signal cable failure.	Check sensor TC1/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Screw terminal on I/O board to flow sensor TC1 not tightened	Check screw terminal
					Flow sensor TC1/signal cable failure.	Replace flow sensor TC1
					I/O board not working	Replace I/O board
Installer	5208		Warning Z1 heat transfer fluid out sensor TC1 short circuited	Warning short circuit (<390 Ohm) on sensor TC1 after 3 faults in 2 hours.	Heat transfer fluid out sensor TC1/signal cable short circuited.	Check sensor TC1/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Heat transfer fluid out sensor TC1 short circuited	Check ohm value with relevant sensor table/replace heat transfer fluid out sensor TC1
					Signal cable to heat transfer fluid out sensor TC1 short circuited	Repair/replace signal cable to heat transfer out sensor TC1
					I/O board not working	Replace I/O board
Customer	5209		Alarm Z1 heat transfer fluid out sensor TC1 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TC1.	See possible causes for cause code 5207, 5208	See possible action for cause code 5207, 5208
Installer	5210		Warning Z2 heat transfer fluid out sensor TC1 failure	Warning failure (>179 kOhm) on sensor TC1 heat pump 2 after 3 faults in 2 hours.	Heat transfer fluid out sensor TC1 heat pump 2/signal cable failure.	Check sensor TC1 heat pump 2/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Screw terminal on I/O board to flow sensor TC1 heat pump 2 not tightened	Check screw terminal
					Heat transfer fluid out sensor TC1 heat pump 2/signal cable failure.	Replace heat transfer fluid out sensor TC1 heat pump 2
					I/O board not working	Replace I/O board
Installer	5211		Warning Z2 heat transfer fluid out sensor TC1 short circuited	Warning short circuit (<390 Ohm) on sensor TC1 heat pump 2 after 3 faults in 2 hours.	Heat transfer fluid out sensor TC1 heat pump 2/signal cable short circuited.	Check sensor TC1 heat pump 2/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Heat transfer fluid out sensor TC1 heat pump 2 short circuited	Check ohm value with relevant sensor table/replace heat transfer fluid out sensor TC1 heat pump 2
					Signal cable to flow sensor T0 short circuited	Repair/replace signal cable to heat transfer out sensor TC1
					I/O board not working	Replace I/O board
Customer	5212		Alarm Z2 heat transfer fluid out sensor TC1 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TC1 heat pump 2.	See possible causes for cause code 5210, 5211	See possible action for cause code 5210, 5211
Installer	5213		Warning Z1 heat transfer fluid in sensor TC0 failure	Warning failure (>179 kOhm) on sensor TC0 after 3 faults in 2 hours.	Heat transfer fluid out sensor TC0/signal cable failure.	Check sensor TC0/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Screw terminal on I/O board to flow sensor TC0 not tightened	Check screw terminal
					Flow sensor TC0/signal cable failure.	Replace flow sensor TC0
					I/O board not working	Replace I/O board
Installer	5214		Warning Z1 heat transfer fluid in sensor TC0 short circuited	Warning short circuit (<390 Ohm) on sensor TC0 after 3 faults in 2 hours.	Heat transfer fluid in sensor TC0/signal cable short circuited.	Check sensor TC0/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Heat transfer fluid in sensor TC0 short circuited	Check ohm value with relevant sensor table/replace heat transfer fluid in sensor TC0
					Signal cable to heat transfer fluid out sensor TC0 short circuited	Repair/replace signal cable to heat transfer out sensor TC0
					I/O board not working	Replace I/O board
Customer	5215		Alarm Z1 heat transfer fluid in sensor TC0 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TC0.	See possible causes for cause code 5213, 5214	See possible action for cause code 5213, 5214

Installer	5216		Warning Z2 heat transfer fluid in sensor TC0 failure	Warning failure (>179 kOhm) on sensor TC0 after 3 faults in 2 hours.	Heat transfer fluid out sensor TC0 heat pump 2/signal cable failure. Screw terminal on I/O board to flow sensor TC0 heat pump 2 not tightened Flow sensor TC0 heat pump 2/signal cable failure. I/O board not working	Check sensor TC0 heat pump 2/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal Check screw terminal Replace flow sensor TC0 heat pump 2 Replace I/O board
Installer	5217		Warning Z2 heat transfer fluid in sensor TC0 short circuited	Warning short circuit (<390 Ohm) on sensor TC0 heat pump 2 after 3 faults in 2 hours.	Heat transfer fluid in sensor TC0 heat pump 2/signal cable short circuited. Heat transfer fluid in sensor TC0 heat pump 2 short circuited Signal cable to heat transfer fluid out sensor TC0 heat pump 2 short circuited I/O board not working	Check ohm value with relevant sensor table/replace heat transfer fluid in sensor TC0 heat pump 2 Repair/replace signal cable to heat transfer fluid out sensor TC0 heat pump 2 Replace I/O board
Customer	5218		Alarm Z2 heat transfer fluid in sensor TC0 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TC0.	See possible causes for cause code 5217, 5216	See possible action for cause code 5216, 5217
Installer	5234		Warning Pool temperature sensor TP1 failure	Warning failure (>179 kOhm) on sensor TP1 after 3 faults in 2 hours	Pool temperature sensor TP1/signal cable failure. Screw terminal on I/O board to Pool temperature sensor TP1 not tightened Pool temperature sensor TP1/signal cable failure. I/O board not working	Check sensor TP1/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal Check screw terminal Replace pool temperature sensor TP1 Replace I/O board
Installer	5235		Warning Pool temperature sensor TP1 short circuited	Warning short circuit (<390 Ohm) on sensor TP1 after 3 faults in 2 hours.	Pool temperature sensor TP1/signal cable short circuited. Pool temperature sensor TP1 short circuited Signal cable to heat transfer fluid out pool temperature sensor TP1 short circuited I/O board not working	Check ohm value with relevant sensor table/replace pool temperature sensor TP1 Repair/replace signal cable to pool temperature sensor TP1 Replace I/O board
Customer	5236		Alarm Pool temperature sensor TP1 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TC0.	See possible causes for cause code 5234, 5235	See possible action for cause code 5234, 5235
Installer	5237		Warning Z1 hot water sensor TW1 failure	Warning failure (>179 kOhm) on sensor TW1 after 3 faults in 2 hours.	Hot water sensor TW1/signal cable failure. Screw terminal on I/O board to hot water sensor TW1 not tightened Hot water sensor TW1/signal cable failure. I/O board not working	Check sensor TW1/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal Check screw terminal Replace flow sensor TW1 Replace I/O board
Installer	5238		Warning Z1 hot water sensor TW1 short circuited	Warning short circuit (<390 Ohm) on sensor TW1 after 3 faults in 2 hours.	Hot water sensor TW1/signal cable short circuited. Heat transfer fluid in sensor TW1 short circuited Signal cable to heat transfer fluid out sensor TW1 short circuited I/O board not working	Check ohm value with relevant sensor table/replace heat transfer fluid in sensor TW1 Repair/replace signal cable to heat transfer out sensor TW1 Replace I/O board
Customer	5239		Alarm Z1 hot water sensor TW1 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TW1.	See possible causes for cause code 5237, 5238	See possible action for cause code 5237, 5238
Customer	5246		Alarm Z1 electric cassette E2 tripped overheat protection / pressure switch	Alarm when overheat protection electric element or system pressure switch MC1 broken (<0.5 bar) in Air module.	Low system pressure, air in heating system Dirt in system filter/filter ball SC1 Poor circulation in heat transfer system/heating system Fuse F1 faulty Defective pressure switch Defective overheat protection Defective I/O board, no PWM signal to circulation pump Fuse F50 I/O board faulty Defective I/O board, 230 V missing on terminal 01 (51, N) Defective I/O board Defective circulation pump Contactor to electric additional heat sticks in closed position	Vent the heating system as per instructions in manual, top up with water in heating system Clean system filter/filter ball SC1 Check adjuster valves/radiator thermostats Replace fuse F1 Replace pressure switch Check cut-out temperature (96°C) Replace overheat protection Disconnect PWM signal on terminal 36,37 on I/O board, circulation pump should increase to 100% Replace fuse F50 Check for 230 V on terminal 01 (51, N) on I/O board Replace I/O board Replace circulation pump Check / replace contactor
Customer	5247		Alarm Z2 electric cassette E2 tripped overheat protection / pressure switch	Alarm when overheat protection electric element or system pressure switch MC1 broken in Air module 2.	See alarm 5246 above	See action for alarm 5246 above
Customer	5249		Warning your heat pump Z1 is not working optimally because your heat curve or hot water setting is set too high.		Heat curve/hot water temperature set too high Dirt in system filter/filter ball SC1	Check/adjust temperatures Clean system filter/filter ball SC1
Customer	5251		Warning your heat pump Z2 is not working optimally because your heat curve or hot water setting is set too high.		Heat curve/hot water temperature set too high Dirt in system filter/filter ball SC1	Check/adjust temperatures Clean system filter/filter ball SC1
Installer	5252		Warning Heat pump Z1 limited by low heating medium flow (check filter)	Warning when heat transfer fluid delta >13K in heating mode, or >7K in cooling mode.	Poor circulation in heat transfer system/heating system	Check adjuster valves/radiator thermostats
Installer	5265		Warning Heat pump board Z1 disconnected	Poor connection or interference on CAN bus between heat pump and inner part.	Bad contact in CAN bus connections on Installer board/ I/O board heat pump Failure on CAN bus cable between tower and heat pump Wrong type of CAN bus cable Can bus cable placed together with power supply to heat pump Incorrect earthing of CAN bus cable	Check CAN bus connections on Installer board/ I/O board heat pump Replace CAN bus cable between tower and heat pump Replace to correct type of cable Separate Can bus and power cable by at least 100 mm Remove/connect cable shield to/from earth
Customer	5266		Alarm Heat pump board Z1 disconnected	Alarm after 3 warnings in 3 hours or failure for 15 minutes	See causes for warning 5265 above	See action for warning 5265 above
					Bad contact in CAN bus connections on Installer board/ I/O board heat pump 2	Check CAN bus connections on Installer board/ I/O board heat pump 2

Installer	5267		Warning Heat pump board Z2 disconnected	Poor connection or interference on CAN bus between heat pump 2 and inner part.	<table border="1"> <tr><td>Failure on CAN bus cable between tower and heat pump 2</td><td>Replace CAN bus cable between tower and heat pump 2</td></tr> <tr><td>Wrong type of CAN bus cable</td><td>Replace to correct type of cable</td></tr> <tr><td>Can bus cable placed together with power supply to heat pump 2</td><td>Separate Can bus and power cable by at least 100 mm</td></tr> <tr><td>Incorrect earthing of CAN bus cable</td><td>Remove/connect cable shield to/from earth</td></tr> </table>	Failure on CAN bus cable between tower and heat pump 2	Replace CAN bus cable between tower and heat pump 2	Wrong type of CAN bus cable	Replace to correct type of cable	Can bus cable placed together with power supply to heat pump 2	Separate Can bus and power cable by at least 100 mm	Incorrect earthing of CAN bus cable	Remove/connect cable shield to/from earth								
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Customer	5268		Alarm Heat pump board Z2 disconnected	Alarm after 3 warnings in 3 hours or failure for 15 minutes	<table border="1"> <tr><td>See causes for warning 5267 above</td><td>See action for warning 5267 above</td></tr> </table>	See causes for warning 5267 above	See action for warning 5267 above														
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Customer	5269		Alarm Z1 electric cassette EE has high temperature	Alarm when sensor TC1>87°C. Alarm resets when TC1<80°C.	<table border="1"> <tr><td>Dirt in system filter/filter ball SC1</td><td>Clean system filter/filter ball SC1</td></tr> <tr><td>Poor circulation in heat transfer system/heating system</td><td>Check adjuster valves/radiator thermostats</td></tr> <tr><td>Defective TC1 sensor</td><td>Check sensor TC1 with relevant sensor table/replace sensor TC1</td></tr> </table>	Dirt in system filter/filter ball SC1	Clean system filter/filter ball SC1	Poor circulation in heat transfer system/heating system	Check adjuster valves/radiator thermostats	Defective TC1 sensor	Check sensor TC1 with relevant sensor table/replace sensor TC1										
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Customer	5270		Alarm Z2 electric cassette EE has high temperature	Alarm when sensor TC1>87°C. Alarm resets when TC1<80°C electric additional heat/tower 2.	<table border="1"> <tr><td>See causes for alarm 5269 above</td><td>See action for alarm 5269 above</td></tr> </table>	See causes for alarm 5269 above	See action for alarm 5269 above														
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Customer	5271		Alarm Heating system 1 high flow temperature	Alarm when sensor T0 > "Max flow set point" by 5 K.	<table border="1"> <tr><td>Defective T0 sensor</td><td>Check sensor TC0 with relevant sensor table/replace sensor TC0</td></tr> <tr><td>3-way valve VW1 does not switch from HW position</td><td>Check function on 3-way valve VW1</td></tr> <tr><td>Check that terminal 53 (O3) on I/O board gives 230 V in HW mode</td><td>If 230 V in HW mode replace VW1 motor/part/cable</td></tr> <tr><td>Check that terminal 53 (O3) on I/O board gives 230 V in HW mode</td><td>If 230 V not available in HW mode replace I/O board</td></tr> <tr><td>Overheat protection has tripped</td><td>Reset overheat protection</td></tr> </table>	Defective T0 sensor	Check sensor TC0 with relevant sensor table/replace sensor TC0	3-way valve VW1 does not switch from HW position	Check function on 3-way valve VW1	Check that terminal 53 (O3) on I/O board gives 230 V in HW mode	If 230 V in HW mode replace VW1 motor/part/cable	Check that terminal 53 (O3) on I/O board gives 230 V in HW mode	If 230 V not available in HW mode replace I/O board	Overheat protection has tripped	Reset overheat protection						
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Customer	5272		Alarm External additional heat EM does not work	Alarm external additional heat/overheat protection Alarm at 230 V on terminal 64 on installer board inner part.	<table border="1"> <tr><td>See causes for alarm 5246</td><td>See action for alarm 5246</td></tr> <tr><td>Tripped fuse in distribution box</td><td>Replace/reset fuse in distribution box</td></tr> </table>	See causes for alarm 5246	See action for alarm 5246	Tripped fuse in distribution box	Replace/reset fuse in distribution box												
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Customer	5273		Alarm Heat pump Z1 phase guard alarm	Alarm for phase loss, only 3-phase models. 1-phase: L1 missing = inner part no voltage. L3 missing = heat pump no voltage.	<table border="1"> <tr><td>Tripped fuse in tower</td><td>Reset fuse in tower</td></tr> <tr><td>Phase(s) missing on input terminal heat pump</td><td>Check all phases available on input terminal in heat pump</td></tr> <tr><td>Phase(s) missing on input terminal on EMI filter in inverter</td><td>Check all phases available on input terminal on EMI filter</td></tr> <tr><td>If there is voltage on all phases on EMI filter the inverter is faulty</td><td>Replace inverter</td></tr> </table>	Tripped fuse in tower	Reset fuse in tower	Phase(s) missing on input terminal heat pump	Check all phases available on input terminal in heat pump	Phase(s) missing on input terminal on EMI filter in inverter	Check all phases available on input terminal on EMI filter	If there is voltage on all phases on EMI filter the inverter is faulty	Replace inverter								
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If there is voltage on all phases on EMI filter the inverter is faulty	Replace inverter																				
Customer	5274		Alarm Heat pump Z2 phase guard alarm	Alarm as above, for heat pump 2.	<table border="1"> <tr><td>See causes for alarm 5273</td><td>See action for alarm 5273</td></tr> </table>	See causes for alarm 5273	See action for alarm 5273														
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Customer	5275		Alarm Anode does not work	Alarm on voltage > 1 Volt DC on terminal 45, 46 on installer board longer than 6 hours.	<table border="1"> <tr><td>Diode on anode board shines red</td><td>Check connections/cabling on terminal X2 and anode rod in tank</td></tr> <tr><td>Check LED is green on anode board</td><td>If diode is green, check that</td></tr> <tr><td>If voltage &gt; 1 V DC on terminal 45, 46 on installer board, installer board is malfunctioning</td><td>Replace installer board</td></tr> <tr><td>No green LED on anode board</td><td>Check there is 230 V on terminal X1 on anode board</td></tr> <tr><td>If there is 230 V on terminal X1 on anode board and LED is green, the anode board is malfunctioning</td><td>Replace anode board</td></tr> <tr><td>Dirty/clogged air heat exchanger on heat pump</td><td>Clean air heat exchanger on heat pump</td></tr> </table>	Diode on anode board shines red	Check connections/cabling on terminal X2 and anode rod in tank	Check LED is green on anode board	If diode is green, check that	If voltage > 1 V DC on terminal 45, 46 on installer board, installer board is malfunctioning	Replace installer board	No green LED on anode board	Check there is 230 V on terminal X1 on anode board	If there is 230 V on terminal X1 on anode board and LED is green, the anode board is malfunctioning	Replace anode board	Dirty/clogged air heat exchanger on heat pump	Clean air heat exchanger on heat pump				
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Customer	5283		JR1 Alarm Clean heat pump Z2	Alarm when JR1 > 65°C in cooling mode in heat pump 2.	<table border="1"> <tr><td>Blocked/low air flow to air heat exchanger on heat pump</td><td>Ensure adequate air flow over air heat exchanger.</td></tr> <tr><td>Fan not working</td><td>Activate test outdoor unit</td></tr> <tr><td>Fan without 230V</td><td>Check there is 230V on output PL3 terminal 32 (78, N)</td></tr> <tr><td>Fan without 0-10V signal</td><td>Check there is 0-10V on output PL3 PWM terminal 20 (20, 26) as per test outdoor unit</td></tr> <tr><td>Fan defective</td><td>If there is voltage as above, replace fan</td></tr> <tr><td>I/O board not working</td><td>If there is voltage as above, replace I/O board</td></tr> <tr><td>Poor/loss of circulation in heat transfer system/heating system</td><td>Check adjuster valves/radiator thermostats</td></tr> </table>	Blocked/low air flow to air heat exchanger on heat pump	Ensure adequate air flow over air heat exchanger.	Fan not working	Activate test outdoor unit	Fan without 230V	Check there is 230V on output PL3 terminal 32 (78, N)	Fan without 0-10V signal	Check there is 0-10V on output PL3 PWM terminal 20 (20, 26) as per test outdoor unit	Fan defective	If there is voltage as above, replace fan	I/O board not working	If there is voltage as above, replace I/O board	Poor/loss of circulation in heat transfer system/heating system	Check adjuster valves/radiator thermostats		
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Poor/loss of circulation in heat transfer system/heating system	Check adjuster valves/radiator thermostats																				
Installer	5285		Warning freeze protection is active	Warning if TC3 < 5°C. Warning resets when TC3 and TC1 > 7°C.	<table border="1"> <tr><td>Defective TC3 sensor</td><td>Check sensor TC3 with relevant sensor table/replace sensor TC3</td></tr> <tr><td>Defective I/O board, no PWM signal</td><td>Check for 230 V on terminal 01 (51, N) on I/O board</td></tr> <tr><td>Defective I/O board, no PWM signal</td><td>Disconnect PWM signal on terminal 36,37 on I/O board, circulation pump should increase to 100%</td></tr> <tr><td>Defective I/O board, 230 V missing on terminal 01 (51, N)</td><td>Check for 230 V on terminal 01 (51, N) on I/O board</td></tr> <tr><td>Defective I/O board</td><td>Replace I/O board</td></tr> <tr><td>Defective circulation pump</td><td>Replace circulation pump</td></tr> <tr><td>Dirty/clogged air heat exchanger on heat pump</td><td>Clean air heat exchanger on heat pump</td></tr> </table>	Defective TC3 sensor	Check sensor TC3 with relevant sensor table/replace sensor TC3	Defective I/O board, no PWM signal	Check for 230 V on terminal 01 (51, N) on I/O board	Defective I/O board, no PWM signal	Disconnect PWM signal on terminal 36,37 on I/O board, circulation pump should increase to 100%	Defective I/O board, 230 V missing on terminal 01 (51, N)	Check for 230 V on terminal 01 (51, N) on I/O board	Defective I/O board	Replace I/O board	Defective circulation pump	Replace circulation pump	Dirty/clogged air heat exchanger on heat pump	Clean air heat exchanger on heat pump		
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I/O board not working	If there is voltage as above, replace I/O board																				
Dirty/clogged air heat exchanger on heat pump	Clean air heat exchanger on heat pump																				
Customer	5293		JR0 Alarm Clean heat pump Z1	Alarm when JR0 > -27 °C in heating mode	<table border="1"> <tr><td>Blocked/low air flow to air heat exchanger on heat pump</td><td>Ensure adequate air flow over air heat exchanger.</td></tr> <tr><td>Fan not working</td><td>Activate test outdoor unit</td></tr> <tr><td>Fan without 230V</td><td>Check there is 230V on output PL3 terminal 32 (78, N)</td></tr> <tr><td>Fan without 0-10V signal</td><td>Check there is 0-10V on output PL3 PWM terminal 20 (20, 26) as per test outdoor unit</td></tr> <tr><td>Fan defective</td><td>If there is voltage as above, replace fan</td></tr> <tr><td>I/O board not working</td><td>If there is voltage as above, replace I/O board</td></tr> <tr><td>Room temperature set too low, flow temperature T0 &lt; dew point</td><td>Adjust room temperature to over dew point</td></tr> <tr><td>Short circuit in cabling/humidity sensor</td><td>Measure Ohms on</td></tr> </table>	Blocked/low air flow to air heat exchanger on heat pump	Ensure adequate air flow over air heat exchanger.	Fan not working	Activate test outdoor unit	Fan without 230V	Check there is 230V on output PL3 terminal 32 (78, N)	Fan without 0-10V signal	Check there is 0-10V on output PL3 PWM terminal 20 (20, 26) as per test outdoor unit	Fan defective	If there is voltage as above, replace fan	I/O board not working	If there is voltage as above, replace I/O board	Room temperature set too low, flow temperature T0 < dew point	Adjust room temperature to over dew point	Short circuit in cabling/humidity sensor	Measure Ohms on
Blocked/low air flow to air heat exchanger on heat pump	Ensure adequate air flow over air heat exchanger.																				
Fan not working	Activate test outdoor unit																				
Fan without 230V	Check there is 230V on output PL3 terminal 32 (78, N)																				
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Fan defective	If there is voltage as above, replace fan																				
I/O board not working	If there is voltage as above, replace I/O board																				
Room temperature set too low, flow temperature T0 < dew point	Adjust room temperature to over dew point																				
Short circuit in cabling/humidity sensor	Measure Ohms on																				

Installer	5294		Warning Dew point monitor has tripped	>2.5V DC on terminal MK2 (34,35) dew point monitor in Installer board	Installer board not working	Measure voltage on terminal MK2 (34, 35 on Installer board with cable to humidity sensor disconnected. If voltage is less than 2.5 V DC disconnect Installer board)
Customer	5295		Alarm Dew point monitor has tripped	Alarm after 30 minute warning	See causes for warning 5294	See action for warning 5294
Customer	5296		Cooling mode Alarm heat pump Z1. Fault on 4-way valve, cannot switch to cooling	Alarm if TR3>TR4 and TC3>TC0 after 5 minutes in cooling mode	Coil to 4-way valve not working Check function of 4-way valve 230 V lost on terminal VR4 (81, N) Fault on sensor (TR3, TR4, TC3, TC0) 4-way valve jams/not working	Check resistance in magnetic coil on 4-way valve (1.3-1.5 kOhm), if not replace coil. Activate test outdoor unit, see separate document Replace I/O board Check sensor is in correct position, check sensor value with relevant sensor table and temperature Replace 4-way valve
Customer	5297		Alarm heat pump Z1. Fault on 4-way valve, cannot switch to heating	Alarm if TR4>TR3 and TC0>TC3 after 5 minutes in heating mode	Check function of 4-way valve Fault on sensor (TR4, TR3, TC0, TC3) 230 V on terminal VR4 during cooling mode/defrosting 4-way valve jams/not working	Activate test outdoor unit, see separate document Check sensor is in correct position, check sensor value with relevant sensor table and temperature Replace I/O board Replace 4-way valve
Installer	5298		Warning Heat pump Z1 pressure too high on JR1	Warning if JR1>67°C (44 bar G).	Dirt in system filter/filter ball SC1 Poor circulation in heat transfer system/heating system Air in heat transfer system/heating system Fault on sensor TC3, TC0, T0 VW1 does not switch from hot water to heat Defective Installer board Defective Installer board, no PWM signal Defective Installer board, 230 V missing on terminal 01 (51, N) Defective Installer board	Clean system filter/filter ball SC1 Ensure adequate flow Vent the heating system as per instructions in manual, top up with water in heating system Check sensor value with relevant sensor table and actual Check VW1 position A=hot water, B=radiator Check that terminal 53 gives 230 V only for hot water Disconnect PWM signal on terminal 36,37 on Installer board, circulation pump should increase to 100%, if not replace circulation pump Check for 230 V on terminal 01 (51, N) on Installer board Replace Installer board
Customer	5299		Alarm Heat pump Z1 pressure too high on JR1	Alarm if JR1>67°C (44 bar G) 3 times in 2 hours	See warning 5298 above	See action for warning 5298 above
Installer	5300		Warning Heat pump Z2 high pressure switch has tripped	Warning if HP switch MR1 cuts out (44 bar)	Pressure switch not working Failure/poor connection in cabling between MR1 and inverter Failure/poor connection in cabling between MR1 and inverter	Broken circuit <43bar = replace pressure switch Check cabling/connections between MR1 and inverter Check that high pressure switch is closed
Customer	5301		Alarm Heat pump Z2 high pressure switch has tripped	Alarm if HP switch MR1 2 warning in 3 hours heat pump 2	See warning 5298, alarm 5299 above	See action for warning 5298, alarm 5299 above
Installer	5302		Warning Z1 high temperature on compressor driver	Internal high temperature in inverter, > 80°C gives warning	Poor heat transfer to cooling coil	Check screw union to cooling coil
Customer	5303		Alarm Z1 high temperature on compressor driver	Internal high temperature protection in inverter. > 80°C 3 warning in 3 hours, or warning active > 30 minutes gives alarm.	See warning 5302 above Defective inverter	See action for warning 5302 above Replace inverter
Installer	5304		Warning Z2 high temperature on compressor driver	Internal high temperature in inverter heat pump 2, > 80 °C gives warning	See warning 5302 above	See action for warning 5302 above
Customer	5305		Alarm Z2 high temperature on compressor driver heat pump 2	Internal high temperature protection in inverter. > 80°C 3 warning in 3 hours, or warning active > 30 minutes gives alarm.	See alarm 5303 above	See action for alarm 5303 above
Installer	5310		Warning heat pump Z1 high hot gas temperature	Warning if TR6 > max temp (90 or 115°C) for more than 60 seconds	Suction gas overheating too high Check suction gas overheating	Check that suction gas overheating does not exceed 10C continuously Suction gas overheating = TR5-JR0
Customer	5311		Alarm heat pump Z1 high hot gas temperature	Alarm after 3 warnings in 3 hours (TR6 > 90, 115°) or warning active longer than 30 minutes.	See warning 5310 above	See action for warning 5310 above
Installer	5312		Warning heat pump Z2 high hot gas temperature	Warning if TR6 > max temp (90 or 115°C) for more than 60 seconds heat pump 2	Suction gas overheating too high Check suction gas overheating	Check that suction gas overheating does not exceed 10C continuously Suction gas overheating = TR5-JR0
Customer	5313		Alarm heat pump Z2 high hot gas temperature	Alarm after 3 warnings in 3 hours (TR6 > 90, 115°) or warning active longer than 30 minutes heat pump 2	Suction gas overheating too high	Check that suction gas overheating does not exceed 10C continuously Suction gas overheating = TR5-JR0
Installer	5314		Warning heat pump Z1 hot gas sensor TR6 failure	Warning failure (>364 kOhm) on sensor TR6 after 3 faults in 2 hours.	Check suction gas overheating Hot gas sensor TR6/signal cable failure.	Check suction gas overheating = TR5-JR0 Check sensor TR6/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
Installer	5315		Warning heat pump Z1 hot gas sensor TR6 short circuit	Warning short circuit (>350 kOhm) on sensor TR6 after 3 faults in 2 hours.	Hot gas sensor TR6/signal cable short circuited. Signal cable to hot gas sensor TR6 short circuited I/O board not working	Check sensor TR6/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal Repair/replace signal cable to hot gas sensor TR6 Replace I/O board
Customer	5316		Alarm heat pump Z1 hot gas sensor TR6 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TR6	See possible causes for cause code 5314, 5315	See possible action for cause code 5314, 5315
Installer	5317		Warning heat pump Z2 hot gas sensor TR6 failure	Warning failure (>364 kOhm) on sensor TR6 heat pump 2 after 3 faults in 2 hours	Hot gas sensor TR6/signal cable failure. Screw terminal on I/O board to hot gas sensor TR6 not tightened Hot gas sensor TR6/signal cable failure. I/O board not working	Check sensor TR6/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal Check screw terminal Replace hot gas sensor TR6 Replace I/O board
			Warning heat pump Z2 hot gas sensor TR6	Warning short circuit (<350 Ohm) on sensor	Hot gas sensor TR6/signal cable short circuited.	Check sensor TR6/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal

Installer	5318		Warning heat pump Z1 hot gas sensor TR6 short circuited	Warning short circuit (<390 Ohm) on condenser sensor TC3 after 3 faults in 2 hours.	<p>Hot gas sensor TR6 short circuited</p> <p>Signal cable to hot gas sensor TR6 short circuited</p> <p>I/O board not working</p>
Customer	5319		Alarm heat pump Z2 hot gas sensor TR6 heat pump 2 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TR6	<p>See possible causes for cause code 5317, 5318</p>
Installer	5320		Warning heat pump Z1 condenser sensor TC3 failure	Warning failure (>390 kOhm) on condenser sensor TC3 after 3 faults in 2 hours	<p>Condenser sensor TC3/signal cable failure.</p> <p>Screw terminal on I/O board to condenser sensor TC3 not tightened</p> <p>Condenser sensor TC3/signal cable failure.</p> <p>I/O board not working</p>
Installer	5321		Warning heat pump Z1 condenser sensor TC3 short circuited	Warning short circuit (<390 Ohm) on condenser sensor TC3 after 3 faults in 2 hours.	<p>Condenser sensor TC3/signal cable short circuited.</p> <p>Condenser sensor TC3 short circuited</p> <p>Signal cable to condenser sensor/sensor TC3 short circuited</p> <p>I/O board not working</p>
Customer	5322		Alarm heat pump Z1 condenser sensor TC3 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on condenser sensor TC3	<p>See possible causes for cause code 5320, 5321</p>
Installer	5323		Warning heat pump Z2 condenser sensor TC3 failure	Warning failure (>390 kOhm) on condenser sensor TC3 heat pump 2 after 3 faults in 2 hours	<p>Condenser sensor TC3/signal cable short circuited</p> <p>Condenser sensor TC3 short circuited</p> <p>Signal cable to flow sensor T0 short circuited</p> <p>I/O board not working</p>
Installer	5324		Warning heat pump Z2 condenser sensor TC3 short circuited	Warning short circuit (<390 Ohm) on condenser sensor TC3 heat pump 2 after 3 faults in 2 hours.	<p>Condenser sensor TC3/signal cable short circuited.</p> <p>Condenser sensor TC3 short circuited</p> <p>Signal cable to condenser sensor/sensor TC3 short circuited</p> <p>I/O board not working</p>
Customer	5325		Alarm heat pump Z2 condenser sensor TC3 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on condenser sensor TC3	<p>See possible causes for cause code 5323, 5324</p>
Installer	5330		Warning heat pump Z1 communication error to compressor driver	Warning if > 20% of data sent to inverter returns with error (wrong answer or no answer)	<p>No voltage to outdoor part</p> <p>Interference on MOD bus</p> <p>Incorrect CAN bus cable routing between IDU, ODU</p>
Customer	5331		Alarm heat pump Z1 communication error to compressor driver	Alarm if communication lost or > 30% of data sent to inverter returns with error (wrong answer or no answer)	<p>No voltage to outdoor part</p> <p>Interference on MOD bus</p> <p>Incorrect CAN bus cable routing between IDU, ODU</p> <p>I/O board not working</p> <p>Inverter not working</p>
Installer	5332		Warning heat pump Z2 communication error to compressor driver	Warning if > 20% of data sent to inverter heat pump 2 returns with error (wrong answer or no answer)	<p>No voltage to outdoor part</p> <p>Interference on MOD bus</p> <p>Incorrect CAN bus cable routing between IDU, ODU</p>
Customer	5333		Alarm heat pump Z2 communication error to compressor driver	Alarm if communication lost or > 30% of data sent to inverter heat pump 2 returns with error (wrong answer or no answer)	<p>No voltage to outdoor part</p> <p>Interference on MOD bus</p> <p>Incorrect CAN bus cable routing between IDU, ODU</p> <p>I/O board not working</p> <p>Inverter not working</p>
Installer	5347		Warning heat pump Z1 input voltage too low	Warning if input AC voltage to inverter < 165V for 10 sec. Warning reset after 2 minutes if input AC voltage > 190 V	<p>Poor contact in voltage supply to IDU/ODU</p> <p>Low input mains voltage</p>
Installer	5350		Warning heat pump Z1 asynchronous drive on compressor	Warning compressor motor (Synchronous motor) not synchronous, after 5 unsuccessful attempts to start	<p>Gap in cabling between compressor and inverter</p> <p>Gap in cabling between compressor and inverter</p> <p>Oil/fluid in compressor when trying to start</p> <p>Compressor sensor TR1 shows wrong value</p> <p>If I/O board has been replaced, incorrect adjustment of rotary encoder on I/O board</p>
Customer	5351		Alarm heat pump Z1 asynchronous drive on compressor	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes. Resets after 4 minutes if cause does not remain	<p>See possible causes for cause code 5350</p>
					See possible action for action code 5350

Installer	5352		Warning heat pump Z2 asynchronous drive on compressor heat pump 2	Warning compressor motor (Synchronous motor) not synchronous, after 5 unsuccessful attempts to start heat pump 2	Gap in cabling between compressor and	Check cabling/connections
					Gap in cabling between compressor and inverter	Check cabling/connections between compressor and inverter
					Oil/fluid in compressor when trying to start	Compressor sensor TR1 shows wrong value
					Compressor sensor TR1 shows wrong value	Check compressor sensor TR1 with relevant sensor table and actual temperature
					If I/O board has been replaced, incorrect adjustment of rotary encoder on I/O board	Check adjustment with relevant wiring diagram
Customer	5353		Alarm heat pump Z2 asynchronous drive on compressor	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes. Resets after 4 minutes if cause does not remain	See possible causes for cause code 5352	See possible action for action code 5352
Installer	5354		Warning heat pump Z1 overcurrent compressor	Warning if inverter registers overcurrent >42 A DC to compressor >20 microseconds. Warning resets after 4 minutes if cause does not remain	Failure/short circuit in cabling between inverter and compressor	Check cabling between inverter and compressor
					Electrical fault in compressor	Measure resistance between windings and earth. With resistance < 10kOhm replace compressor
					Inverter not working	Replace inverter
Customer	5355		Alarm heat pump Z1 Overcurrent compressor	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	See possible causes for cause code 5354	See possible action for action code 5354
Installer	5356		Warning heat pump Z2 overcurrent compressor	Warning if inverter registers overcurrent >42 A DC to compressor >20 microseconds heat pump 2. Warning resets after 4 minutes if cause does not remain	Failure/short circuit in cabling between inverter and compressor	Check cabling between inverter and compressor
					Electrical fault in compressor	Measure resistance between windings and earth. With resistance < 10kOhm replace compressor
					Inverter not working	Replace inverter
Customer	5357		Alarm heat pump Z2 Overcurrent on compressor	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	See possible causes for cause code 5356	See possible action for action code 5356
Installer	5360		Warning heat pump Z2 PFC overcurrent on compressor driver	Warning if input AC current > 31A 6 times. Resets after 4 minutes if fault does not remain	Short dip in power supply/mains	In event of repeated warnings contact electricity supplier
					Internal fault in inverter	Replace inverter
Customer	5361		Alarm heat pump Z2 PFC overcurrent on compressor driver	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	See possible causes for cause code 5360	See possible action for action code 5360
Customer	5362		Info heat pump Z1 overvoltage	Info if DC bus voltage >40 V > 30 seconds. Resets after 4 minutes if DC bus voltage < 380 V	Too high voltage to heat pump	Check main fuses for poor contact
					Too high input mains voltage	In event of repeated warnings contact electricity supplier
Installer	5366		Warning heat pump Z1 low overheating	Warning if suction gas overheating < 2°C and hot gas overheating < 20°C	Motor not correctly installed	Check valve motor
					Check that valves open/close in correct order	Activate test outdoor unit
					Expansion valve motor defective	Measure resistance between cable orange, red, yellow and black to grey. 46Kohm = ok, in event of failure or short circuit replace valve motor
					Expansion valve VR1 open too much/sticks in open position	With repeated warnings replace expansion valve
Customer	5367		Alarm heat pump Z1 low overheating	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	See possible causes for cause code 5366	See possible action for action code 5366
Installer	5368		Warning heat pump Z2 low overheating	Warning if suction gas overheating < 2°C and hot gas overheating < 20°C heat pump 2	Motor not correctly installed	Check valve motor
					Check that valves open/close in correct order	Activate test outdoor unit
					Expansion valve motor defective	Measure resistance between cable orange, red, yellow and black to grey. 46Kohm = ok, in event of failure or short circuit replace valve motor
					Expansion valve VR1 open too much/sticks in open position	With repeated warnings replace expansion valve
Customer	5369		Alarm heat pump Z2 low overheating	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	See possible causes for cause code 5368	See possible action for action code 5368
Installer	5374		Warning heat pump Z1 freeze protection of condenser	Warning if TC3 < 5°C. Warning resets when TC3 and TC1 > 7°C.	Poor/loss of circulation in heat transfer system/heating system	Check adjuster valves/radiator thermostats
					Dirt in system filter/filter ball SC1	Clean system filter/filter ball SC1
					Air in heat transfer system/heating system	Vent the heating system as per instructions in manual, top up with water in heating system.
					Defective TC3 sensor	Check sensor TC3 with relevant sensor table/replace sensor TC3
					Defective I/O board, 230 V missing	Check for 230 V on terminal 01 (51, N) on I/O board
					Defective I/O board, no PWM signal	Disconnect PWM signal on terminal 36,37 on I/O board, circulation pump should increase to 100%
					Defective I/O board, 230 V missing on terminal 01 (51, N)	Check for 230 V on terminal 01 (51, N) on I/O board
					Defective I/O board	Replace I/O board
Customer	5375		Alarm heat pump Z1 freeze protection of condenser	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	Defective circulation pump	Replace circulation pump
					See possible causes for cause code 5374	See possible action for action code 5374
Installer	5376		Warning heat pump Z2 freeze protection of condenser	Warning if TC3 < 5°C heat pump 2. Warning resets when TC3 and TC1 > 7°C.	Poor/loss of circulation in heat transfer system/heating system	Check adjuster valves/radiator thermostats
					Dirt in system filter/filter ball SC1	Clean system filter/filter ball SC1
					Air in heat transfer system/heating system	Vent the heating system as per instructions in manual, top up with water in heating system.
					Defective TC3 sensor	Check sensor TC3 with relevant sensor table/replace sensor TC3
					Defective I/O board, 230 V missing	Check for 230 V on terminal 01 (51, N) on I/O board
					Defective I/O board, no PWM signal	Disconnect PWM signal on terminal 36,37 on I/O board, circulation pump should increase to 100%
					Defective I/O board, 230 V missing on terminal 01 (51, N)	Check for 230 V on terminal 01 (51, N) on I/O board
					Defective I/O board	Replace I/O board
Customer	5377		Alarm heat pump Z2 freeze protection of condenser	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes heat pump 2	Defective circulation pump	Replace circulation pump
					See possible causes for cause code 5376	See possible action for action code 5376
Customer	5378		Warning Heat pump Z1 failed defrosting	Warning if TR24 < 25°C or pressure sensor PH1 < 30°C after 800 seconds in defrosting. Warning after 3 times in 3 hours, or if conditions are active for 30 minutes.	Too low temperature in heating system	Open more thermostats on heating system
					Sensor TL2 defective	Check sensor TL2 with relevant sensor table and actual temperature. In event of deviation replace sensor TL2.

Customer	5380		Warning Heat pump Z2 failed defrosting	Warning if TR24 < 25°C or pressure sensor PH1 < 30°C after 800 seconds in defrosting. Warning after 3 times in 3 hours, or if conditions are active for 30 minutes heat pump 2.	Too low temperature in heating system Sensor TL2 defective	Open more thermostats on heating system Check sensor TL2 with relevant sensor table and actual temperature. In event of deviation replace sensor TL2.
Customer	5387		Alarm heat pump Z1 compressor driver is too hot	Warning if internal temperature sensor in PFC module inverter > 80°C for 10 seconds	Poor heat transfer to cooling coil In event of repeated alarm, defective inverter	Check screw union to cooling coil Replace inverter
Customer	5389		Alarm heat pump Z2 compressor driver is too hot	Warning if internal temperature sensor in PFC module inverter > 80°C for 10 seconds heat pump 2	Poor heat transfer to cooling coil In event of repeated alarm, defective inverter	Check screw union to cooling coil Replace inverter
Installer	5394		Warning heat pump Z1 Internal compressor driver fault 1	Warning if inverter registers overcurrent >42 A DC to compressor >20 microseconds. Warning resets after 4 minutes if cause does not remain	Failure/short circuit in cabling between inverter and compressor Electrical fault in compressor Inverter not working	Check cabling between inverter and compressor Measure resistance between windings and earth. With resistance < 10kOhm replace compressor Replace inverter
Customer	5395		Alarm heat pump Z1 Internal compressor driver fault 1	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	See possible causes for cause code 5394	See possible action for action code 5394
Installer	5396		Warning heat pump Z2 Internal compressor driver fault 1	Warning if inverter registers overcurrent >42 A DC to compressor >20 microseconds heat pump 2. Warning resets after 4 minutes if cause does not remain	Failure/short circuit in cabling between inverter and compressor Electrical fault in compressor Inverter not working	Check cabling between inverter and compressor Measure resistance between windings and earth. With resistance < 10kOhm replace compressor Replace inverter
Customer	5397		Alarm heat pump Z2 Internal compressor driver fault 1	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	See possible causes for cause code 5396	See possible action for action code 5396
Installer	5408		Warning heat pump Z1 air intake temperature sensor TL2 failure	Warning after 3 faults (>170 kOhm) in 2 hours air intake sensor TL2 failure	Air intake sensor TL2/signal cable failure. Screw terminal on I/O board to air intake sensor TL2 not tightened Air intake sensor TL2/signal cable failure. I/O board not working	Check sensor TL2/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal Check screw terminal Replace air intake sensor/signal cable sensor TL2 Replace I/O board
Installer	5409		Warning heat pump Z1 air intake temperature sensor TL2 short circuited	Warning short circuit (<900 Ohm) on air intake sensor TL2 after 3 faults in 2 hours.	Air intake sensor TL2/signal cable short circuited. Air intake sensor TC3 short circuited Signal cable to air intake sensor/sensor TL2 short circuited I/O board not working	Check sensor TL2/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal Check ohm value with relevant sensor table and actual temperature/replace air intake sensor TL2 Repair/replace signal cable/sensor to condenser sensor TL2 Replace I/O board
Customer	5410		Alarm heat pump Z1 air intake temperature sensor TL2 faulty	Alarm after 3 faults in 2 hours, or 15 minutes failure/short circuit on sensor TC0.	See possible causes for cause code 5408, 5409	See possible action for action code 5408, 5409
Installer	5411		Warning heat pump Z2 air intake temperature sensor TL2 failure	Warning after 3 faults (>170 kOhm) in 2 hours air intake sensor TL2 heat pump 2 failure	Air intake sensor TL2/signal cable failure. Screw terminal on I/O board to air intake sensor TL2 not tightened Air intake sensor TL2/signal cable failure. I/O board not working	Check sensor TL2/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal Check screw terminal Replace air intake sensor/signal cable sensor TL2 Replace I/O board
Installer	5412		Warning heat pump Z1 air intake temperature sensor TL2 short circuited	Warning short circuit (<900 Ohm) on air intake sensor TL2 heat pump 2 after 3 faults in 2 hours.	Air intake sensor TL2/signal cable short circuited. Air intake sensor TL2 short circuited Signal cable to air intake sensor/sensor TL2 short circuited I/O board not working	Check sensor TL2/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal Check ohm value with relevant sensor table and actual temperature/replace air intake sensor TL2 Repair/replace signal cable/sensor to condenser sensor TL2 Replace I/O board
Customer	5413		Alarm heat pump Z1 air intake temperature sensor TL2 faulty	Alarm after 3 faults in 2 hours, or 15 minutes failure/short circuit on sensor TC0.	See possible causes for cause code 5411, 5412	See possible action for action code 5411, 5412
Installer	5414		Warning heat pump Z1 fluid line in heating mode sensor TR3 failure	Warning failure (>179 kOhm) on sensor TR3 after 3 faults in 2 hours	Sensor TR3/signal cable failure. Screw terminal on I/O board to sensor TR3 not tightened Sensor TR3/signal cable failure. I/O board not working	Check sensor TR3/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal Check screw terminal Replace sensor TR3 Replace I/O board
Installer	5415		Warning heat pump Z1 fluid line in heating mode sensor TR3 short circuited	Warning short circuit (<390 Ohm) on sensor TR3 after 3 faults in 2 hours.	Heat transfer fluid in sensor TR3/signal cable short circuited. Sensor TR3 short circuited Signal cable/sensor TR3 short circuited I/O board not working	Check sensor TR3/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal Check ohm value with relevant sensor table/replace sensor TR3 Replace sensor TR3 Replace I/O board
Customer	5416		Alarm heat pump Z1 fluid line in heating mode sensor TR3 faulty	Alarm after 3 faults in 2 hours, or 15 minutes failure/short circuit on sensor TR3.	See possible causes for cause code 5414, 5415	See possible action for action code 5414, 5415
Installer	5417		Warning heat pump Z2 fluid line in heating mode sensor TR3 failure	Warning failure (>179 kOhm) on sensor TR3 heat pump 2 after 3 faults in 2 hours	Sensor TR3/signal cable failure. Screw terminal on I/O board to sensor TR3 not tightened Sensor TR3/signal cable failure. I/O board not working	Check sensor TR3/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal Check screw terminal on I/O board Replace sensor TR3 Replace I/O board
Installer	5418		Warning heat pump Z2 fluid line in heating mode sensor TR3 short circuited	Warning short circuit (<390 Ohm) on sensor TR3 heat pump 2 after 3 faults in 2 hours.	Heat transfer fluid in sensor TR3/signal cable short circuited. Sensor TR3 short circuited Signal cable/sensor TR3 short circuited I/O board not working	Check sensor TR3/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal Check ohm value with relevant sensor table/replace sensor TR3 Replace sensor TR3 Replace I/O board
Customer	5419		Alarm heat pump Z2 fluid line in heating mode sensor TR3 faulty	Alarm after 3 faults in 2 hours, or 15 minutes failure/short circuit on sensor TR3.	See possible causes for cause code 5417, 5418	See possible action for action code 5417, 5418

Installer	5420		Warning heat pump Z1 fluid line in cooling mode sensor TR4 failure	Warning after 3 faults (>170 kOhm) in 2 hours sensor TR4 failure	Sensor TR4/signal cable failure.	Check sensor TR4/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
					Screw terminal on I/O board to sensor TR4 not tightened	Check screw terminal on I/O board
					Air intake sensor TR4/signal cable failure.	Replace sensor/signal cable sensor TR4
					I/O board not working	Replace I/O board
Installer	5421		Warning heat pump Z1 fluid line in cooling mode sensor TR4 short circuited	Warning short circuit (<900 Ohm) on sensor TR4 after 3 faults in 2 hours.	Sensor TR4/signal cable short circuited.	Check sensor TR4/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
					Sensor TR4 short circuited	Check ohm value with relevant sensor table and actual temperature/replace sensor TR4
					Signal cable/sensor TR4 short circuited	Replace signal cable/sensor to sensor TR4
					I/O board not working	Replace I/O board
Customer	5422		Alarm heat pump Z1 fluid line in cooling mode sensor TR4 faulty	Alarm after 3 faults in 2 hours, or 15 minutes failure/short circuit on sensor TR4.	See possible causes for cause code 5421, 5421	See possible action for action code 5420, 5421
Installer	5423		Warning heat pump Z2 fluid line in cooling mode sensor TR4 failure	Warning after 3 faults (>170 kOhm) in 2 hours sensor TR4 heat pump 2 failure	Sensor TR4/signal cable failure.	Check sensor TR4/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
					Screw terminal on I/O board to sensor TR4 not tightened	Check screw terminal on I/O board
					Air intake sensor TR4/signal cable failure.	Replace sensor/signal cable sensor TR4
					I/O board not working	Replace I/O board
Installer	5424		Warning heat pump Z2 fluid line in cooling mode sensor TR4 short circuited	Warning short circuit (<900 Ohm) on air intake sensor TL2 heat pump 2 after 3 faults in 2 hours.	Sensor TR4/signal cable short circuited.	Check sensor TR4/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
					Sensor TR4 short circuited	Check ohm value with relevant sensor table and actual temperature/replace sensor TR4
					Signal cable/sensor TR4 short circuited	Replace signal cable/sensor to sensor TR4
					I/O board not working	Replace I/O board
Customer	5425		Alarm heat pump Z2 fluid line in cooling mode sensor TR4 faulty	Alarm after 3 faults in 2 hours, or 15 minutes failure/short circuit on sensor TR4 heat pump 2.	See possible causes for cause code 5421, 5421	See possible action for action code 5420, 5421
Installer	5426		Warning heat pump Z1 suction gas sensor TR5 failure	Warning failure (>179 kOhm) on sensor TR5 after 3 faults in 2 hours	Sensor TR5/signal cable failure.	Check sensor TR5/signal cable ohm value with sensor table with actual temperature disconnected from I/O board terminal
					Screw terminal on I/O board to sensor TR5 not tightened	Check screw terminal on I/O board
					Sensor TR5/signal cable failure.	Replace sensor TR5
					I/O board not working	Replace I/O board
Installer	5427		Warning heat pump Z1 suction gas sensor TR5 short circuited	Warning short circuit (<390 Ohm) on sensor TR5 after 3 faults in 2 hours.	Sensor TR5/signal cable short circuited.	Check sensor TR5/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
					Sensor TR5 short circuited	Check ohm value with relevant sensor table/replace sensor TR5
					Signal cable/sensor TR5 short circuited	Replace sensor TR5
					I/O board not working	Replace I/O board
Customer	5428		Alarm heat pump Z1 suction gas sensor TR5 faulty	Alarm after 3 faults in 2 hours, or 15 minutes failure/short circuit on sensor TR3.	See possible causes for cause code 5426, 5427	See possible action for action code 5426, 5427
Installer	5429		Warning heat pump Z2 suction gas sensor TR5 failure	Warning failure (>179 kOhm) on sensor TR5 heat pump 2 after 3 faults in 2 hours	Sensor TR5/signal cable failure.	Check sensor TR5/signal cable ohm value with sensor table with actual temperature disconnected from I/O board terminal
					Screw terminal on I/O board to sensor TR5 not tightened	Check screw terminal on I/O board
					Sensor TR5/signal cable failure.	Replace sensor TR5
					I/O board not working	Replace I/O board
Installer	5430		Warning heat pump Z2 suction gas sensor TR5 short circuited	Warning short circuit (<390 Ohm) on sensor TR5 heat pump 2 after 3 faults in 2 hours.	Sensor TR5/signal cable short circuited.	Check sensor TR5/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
					Sensor TR5 short circuited	Check ohm value with relevant sensor table/replace sensor TR5
					Signal cable/sensor TR5 short circuited	Replace sensor TR5
					I/O board not working	Replace I/O board
Customer	5431		Alarm heat pump Z2 suction gas sensor TR5 faulty	Alarm after 3 faults in 2 hours, or 15 minutes failure/short circuit on sensor TR3.	See possible causes for cause code 5429, 5430	See possible action for action code 5429, 5430
Installer	5432		Warning heat pump Z1 pressure sensor low pressure JR0 failure	Warning if voltage < 0.5V on terminal 17 on IO board	Gap in cabling/terminal 17,19 on IO board	Check cabling and terminal connections 17, 19 on IO board
					IO board defective	Check that terminal 19 gives 5V DC to terminal 17 with pressure switch disconnected, if voltage <0.5V, replace IO board
					Pressure sensor JR0 defective	Check that terminal 19 gives 5V DC to terminal 17 with pressure switch disconnected, if voltage = 5V, replace pressure sensor
Customer	5434		Alarm heat pump Z1 pressure sensor low pressure JR0 faulty	Alarm after 3 faults in 2 hours, or 15 minutes constant failure	See possible causes for cause code 5432	See possible action for action code 5432
Installer	5435		Warning heat pump Z2 pressure sensor low pressure JR0 failure	Warning if voltage < 0.5V on terminal 17 on IO board heat pump 2	Gap in cabling/terminal 17,19 on IO board	Check cabling and terminal connections 17, 19 on IO board
					IO board defective	Check that terminal 19 gives 5V DC to terminal 17 with pressure switch disconnected, if voltage <0.5V, replace IO board
					Pressure sensor JR0 defective	Check that terminal 19 gives 5V DC to terminal 17 with pressure switch disconnected, if voltage = 5V, replace pressure sensor
Customer	5437		Alarm heat pump Z2 pressure sensor low pressure JR0 faulty	Alarm after 3 faults in 2 hours, or 15 minutes constant failure	See possible causes for cause code 5435	See possible action for action code 5435
Installer	5438		Warning heat pump Z1 pressure sensor high pressure JR1 failure	Warning if voltage < 0.5V on terminal 16 on IO board	Gap in cabling/terminal 16,18 on IO board	Check cabling and terminal connections 16, 18 on IO board
					IO board defective	Check that terminal 19 gives 5V DC to terminal 17 with pressure switch disconnected, if voltage <0.5V, replace IO board
					Pressure sensor JR1 defective	Check that terminal 19 gives 5V DC to terminal 17 with pressure switch disconnected, if voltage = 5V, replace pressure sensor
Customer	5440		Alarm heat pump Z1 pressure sensor high pressure JR1 faulty	Alarm after 3 faults in 2 hours, or 15 minutes constant failure	See possible causes for cause code 5438	See possible action for action code 5438
					Gap in cabling/terminal 16,18 on IO board	Check cabling and terminal connections 16, 18 on IO board

Installer	5441		Warning heat pump Z2 pressure sensor high pressure JR1 failure	Warning if voltage < 0.5V on terminal 16 on IO board heat pump 2	IO board defective	Check that terminal 19 gives 5V DC to terminal 17 with pressure switch disconnected, if voltage <0.5V, replace IO board
					Pressure sensor JR1 defective	Check that terminal 19 gives 5V DC to terminal 17 with pressure switch disconnected, if voltage = 5V, replace pressure sensor
Customer	5443		Alarm heat pump Z2 pressure sensor high pressure JR1 faulty	Alarm after 3 faults in 2 hours, or 15 minutes constant failure	See possible causes for cause code 5441	See possible action for cause code 5441
Customer	5445		Alarm heat pump Z1 Buzzer alarm fan	Alarm if 230 V lost on terminal 34 (74, 75) IO board	Fan blocked	Check that fan is not physically blocked
					Check fan as per test outdoor unit	Activate test outdoor unit
					I/O board defective	Check there is 230V on input PL3 SSM terminal 34 (75, N)
					I/O board defective	If there is no voltage as above, replace I/O board
					Fan without 230V	Check there is 230V on output PL3 terminal 32 (78, N)
					Fan without 0-10V signal	Check there is 0-10V on output PL3 PWM terminal 20 (20, 26) as per test outdoor unit
					Fan defective	If there is voltage as above, replace fan
Installer	5446		Hoses between inner part and heat pump Z1 are switched	Alarm if TC3 < 1°C from TCO, and PH1 > 7°C > TC3 longer than 30 seconds	Hoses (riser/return) between heat pump and inner part switched	Fit hoses to correct connections
					Defective sensor TC3, TCO	Check position of sensor, check sensor as per relevant sensor table and actual temperature, in event of deviation replace sensor
Installer	5448		Refrigerant shortage heat pump Z1	Alarm after 20 minutes if expansion valve VR0 is open > 20% of calculated value.	Not enough refrigerant in heat pump	Check amount of refrigerant, activate "Evacuate/fill" function when emptying/filling refrigerant
					Leak on cooling circuit	Check/rectify leak
Customer	5450		Condensation drain blocked in heat pump Z1	T26 does not increase as per specifications after defrosting	Condensation drain in heat pump blocked	Check/clear drain
					Heating cable in condensation drain defective, drain frozen	Check/replace heating cable
					No voltage to heating cable	Check there is 230V on output EA1 terminal 26 (79, N) on manual operation of heating cable
Customer	5451		Flow too low through heat pump Z1 when defrosting	Alarm if temperature difference between TCO and TC3 > 5°C is longer than 60 seconds during defrosting	Too low temperature in heating system	Open more thermostats on heating system
					Dirt in system filter/filter ball SC1	Clean system filter/filter ball SC1
					Air in heating system	Vent the heating system as per instructions in manual, top up with water in heating system.
					ö	Check adjuster valves/radiator thermostats
					Defective I/O board, no PWM signal to circulation pump	Disconnect PWM signal on terminal 36,37 on I/O board, circulation pump should increase to 100%
					Defective I/O board, 230 V missing on terminal 01 (51, N) on I/O board	Check for 230 V on terminal 01 (51, N) on I/O board
					Defective I/O board	Replace I/O board
Customer	5452		Internal fault on inverter to compressor in heat pump Z1	Buzzer alarm internal fault in inverter	Defective inverter	Replace inverter
					Low/no voltage to heat pump	Check main fuses for poor contact/tripped fuses
Customer	5453		No voltage to heat pump Z1	Warning if input AC voltage to inverter < 165V for 10 sec. Warning reset after 2 minutes if input AC voltage > 190 V	Low input mains voltage	In event of repeated warnings contact electricity supplier
Customer	5454		Condensation drain blocked in heat pump Z2		Condensation drain in heat pump blocked	Check/clear drip pan/drain
					Heating cable in condensation drain defective, drain frozen	Check/replace heating cable
					No voltage to heating cable	Check there is 230V on output EA1 terminal 26 (79, N) on manual operation of heating cable
Customer	5455		Flow too low through heat pump Z2 when defrosting	Alarm if temperature difference between TCO and TC3 > 5°C is longer than 60 seconds during defrosting heat pump 2	Too low temperature in heating system	Open more thermostats on heating system
					Dirt in system filter/filter ball SC1	Clean system filter/filter ball SC1
					Air in heating system	Vent the heating system as per instructions in manual, top up with water in heating system.
					Poor circulation in heat transfer system/heating system	Check adjuster valves/radiator thermostats
					Defective I/O board, no PWM signal to circulation pump	Disconnect PWM signal on terminal 36,37 on I/O board, circulation pump should increase to 100%
					Defective I/O board, 230 V missing on terminal 01 (51, N) on I/O board	Check for 230 V on terminal 01 (51, N) on I/O board
					Defective I/O board	Replace I/O board
Customer	5456		Internal fault on inverter to compressor in heat pump Z2	Buzzer alarm internal fault in inverter heat pump 2	Defective circulation pump	Replace circulation pump
					Defective inverter	Replace inverter
Installer	5458		Warning Z2 hot water sensor TW1 failure	Warning failure (>179 kOhm) on sensor TW1 heat pump 2 after 3 faults in 2 hours.	Hot water sensor TW1/signal cable failure.	Check sensor TW1/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Screw terminal on I/O board to hot water sensor TW1 not tightened	Check screw terminal
					Hot water sensor TW1/signal cable failure.	Replace flow sensor TW1
					I/O board not working	Replace I/O board
Installer	5459		Warning Z2 hot water sensor TW1 short circuited	Warning short circuit (<390 Ohm) on sensor TW1 heat pump 2 after 3 faults in 2 hours.	Hot water sensor TW1/signal cable short circuited.	Check sensor TW1/signal cable ohm value with sensor table with inner part disconnected from I/O board terminal
					Heat transfer fluid in sensor TW1 short circuited	Check ohm value with relevant sensor table/replace heat transfer fluid in sensor TW1
					Signal cable to heat transfer fluid out sensor TW1 short circuited	Repair/replace signal cable to heat transfer out sensor TW1
					I/O board not working	Replace I/O board
Customer	5460		Alarm Z2 hot water sensor TW1 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TW1 heat pump 2	See possible causes for cause code 5458, 5459	See possible action for cause code 5458, 5459

Customer	5461		Alarm heat pump Z2. Fault on 4-way valve, cannot switch to cooling	Alarm if TR3>TR4 and TC3>TC0 after 5 minutes in cooling mode heat pump 2	Coil to 4-way valve not working	Check resistance in magnetic coil on 4-way valve (1.3-1.5 kOhm), if not replace coil
					Check function of 4-way valve	Activate test outdoor unit, see separate document
					230 V lost on terminal VR4 (81, N)	Replace I/O board
					Fault on sensor (TR3, TR4, TC3, TC0)	Check sensor is in correct position, check sensor value with relevant sensor table and temperature
					4-way valve jams/not working	Replace 4-way valve
Customer	5462		Alarm heat pump Z2. Fault on 4-way valve, cannot switch to heating	Alarm if TR4>TR3 and TC0>TC3 after 5 minutes in heating mode heat pump 2	Check function of 4-way valve	Activate test outdoor unit, see separate document
					Fault on sensor (TR4, TR3, TC0, TC3)	Check sensor is in correct position, check sensor value with relevant sensor table and temperature
					230 V on terminal VR4 during cooling mode/defrosting	Replace I/O board
					4-way valve jams/not working	Replace 4-way valve
Customer	5463		Alarm heat pump Z1 defrost Clean heat pump outdoor part	Alarm if timer for defrosting exceeds 800 seconds 3 times, or if 3 defrostings needed in minimum time for heat production	Evaporator blocked with ice	Melt ice carefully with hot water
					Too low temperature in heating system	Open more thermostats on heating system
					Dirt in system filter/filter ball SC1	Clean system filter/filter ball SC1
Customer	5465		No voltage to heat pump Z2	Warning if input AC voltage to inverter < 165V for 10 sec heat pump 2 Warning resets after 2 minutes if input AC voltage > 190 V	Low/no voltage to heat pump	Check main fuses for poor contact/break
					Low input mains voltage	In event of repeated warnings contact electricity supplier
Customer	5500		Floor heating thermostat on external input tripped	Alarm on closing of external input 1-3 on I/O board, depending on selection.	Safety thermostat for floor heating has tripped	Reset thermostat, adjust heat curve if necessary
Customer	5501		JR0 Alarm Clean heat pump Z2	Alarm when JR0 < -27 °C in heating mode heat pump 2	Blocked/low air flow to air heat exchanger on heat pump	Ensure adequate air flow over air heat exchanger.
					Check fan as per test outdoor unit	Activate test outdoor unit
					Fan without 230V	Check there is 230V on output PL3 terminal 32 (78, N)
					Fan without 0-10V signal	Check there is 0-10V on output PL3 PWM terminal 20 (20, 26) as per test outdoor unit
					Fan defective	If there is voltage as above, replace fan
					I/O board not working	If there is no voltage as above, replace I/O board
					Electric heater in drip pan not working	Measure resistance of electric heater, 75W-720 Ohm, 50W-1070 Ohm, in event of failure replace electric heater
Customer	5502		Electric heater in drip pan in heat pump Z2 not working	Sensor TA4 does not exceed 5°C during defrosting heat pump 2	Sensor TA4 not working	Check sensor position and sensor value with relevant sensor table and actual temperature
					I/O board not working	Check there is 230V on output EA0 terminal 27 (80, N) on manual operation of drip pan heater
					I/O board not working	If there is no voltage as above, replace I/O board
Installer	5503		Warning Problem with connection to load monitor	Communication between Installer board and load monitor lost for 30 seconds	Incorrect cabling/connections	Check cabling/connections
					Bad contact in CAN bus connections on Installer board tower and load monitor	Check CAN bus connections on Installer board tower and load monitor
					Failure on CAN bus cable between Installer board tower and load monitor	Replace CAN bus cable between Installer board tower and load monitor
					Wrong type of CAN bus cable	Replace to correct type of cable
Customer	5504		Alarm Connection to load monitor disconnected	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	Can bus cable placed together with power supply to heat pump	Separate Can bus and power cable by at least 100 mm
						See possible action for action code 5432
Customer	5505		Electric heater in drip pan in heat pump Z1 not working	Sensor TA4 does not exceed -2 °C during defrosting	Electric heater in drip pan not working	Measure resistance of electric heater, 75W-720 Ohm, 50W-1070 Ohm, in event of failure replace electric heater
					Sensor TA4 not working	Check sensor value with relevant sensor table and actual temperature
					I/O board not working	Check there is 230V on output EA0 terminal 27 (80, N) on manual operation of drip pan heater
					I/O board not working	If there is no voltage as above, replace I/O board
Installer	5506		Compressor does not start	Alarm if compressor has not started in 2 minutes after start signal sent	Temporary malfunction inverter	Replace and switch on voltage to heat pump
					Internal fault in inverter	Replace inverter
Installer	5507		MR1 high pressure alarm B in heat pump Z1	Warning if HP switch MR1 cuts out (44 bar)	Pressure switch not working	Broken circuit <43bar = replace pressure switch
					Failure/poor connection in cabling between MR1 and inverter	Check cabling/connections between MR1 and inverter
					Failure/poor connection in cabling between MR1 and inverter	Check that high pressure switch is closed
Customer	5508		MR1 high pressure alarm A in heat pump Z1	Alarm if HP switch MR1 2 warnings in 3 hours	See warning 5507 above	See action for warning 5507 above
Installer	5509		MR1 high pressure alarm B in heat pump Z2	Warning if HP switch MR1 cuts out (44 bar)	Failure in cable /pressure switch MR1	Measure/total Ohms pressure switch at first Molex connector, closed = ok
					Pressure switch not working	Broken circuit <43bar = replace pressure switch
					Failure/poor connection in cabling between MR1 and inverter	Check cabling/connections between MR1 and inverter
					Failure/poor connection in cabling between MR1 and inverter	Strap input MR1 in inverter, warning should disappear if not replace inverter
Customer	5510		MR1 high pressure alarm A in heat pump Z2	Alarm if HP switch MR1 2 warning in 3 hours heat pump 2	Pressure switch not working	Broken circuit <43bar = replace pressure switch
					Failure/poor connection in cabling between MR1 and inverter	Check cabling/connections between MR1 and inverter
					Failure/poor connection in cabling between MR1 and inverter	Check that high pressure switch is closed

Installer	5512		Condensing temperature outside envelope in heat pump Z1	Warning if temperature on PH1 > highest permitted actual envelope longer than 30 seconds	Evaporation temperature too low in relation to condensing temperature	Outdoor temperature probably too low. See diagram chapter 4 in installation manual
Customer	5513		Condensation too high in heat pump Z1	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	Evaporation temperature too low in relation to condensing temperature	Outdoor temperature probably too low. See diagram chapter 4 in installation manual
					Flow too high/low delta in heating system	Adjust temperature/flow
Installer	5514		Low pressure warning JR0 in heat pump Z1	Warning if PL1 < lowest permitted actual envelope (-27°C) longer than 30 seconds	Blocked/low air flow to air heat exchanger on heat pump	Ensure adequate air flow over air heat exchanger.
					Fan not working	Activate test outdoor unit
					Fan without 230V	Check there is 230V on output PL3 terminal 32 (78, N)
					Fan without 0-10V signal	Check there is 0-10V on output PL3 PWM terminal 20 (20, 26) as per test outdoor unit
					Fan defective	If there is voltage as above, replace fan
					I/O board not working	If there is no voltage as above, replace I/O board
Customer	5515		Alarm low evaporation JR0 in heat pump Z1	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	See possible causes for cause code 5514	See possible action for action code 5514
Installer	5517		Wrong compressor driver installed in heat pump Z2	Setting of rotary encoder on I/O board does not match installed inverter	Wrong combination of inverter / I/O board installed in heat pump 2	Check adjustment with relevant wiring diagram
					On replacement of inverter, wrong model of inverter	Check inverter model
					On replacement of I/O board, wrong setting of rotary encoder on new I/O board	Check setting of rotary encoder with replaced I/O board
Installer	5518		Condensing temperature outside envelope in heat pump Z2	Warning if temperature on PH1 > highest permitted actual envelope longer than 30 seconds heat pump 2	Evaporation temperature too low in relation to condensing temperature	Outdoor temperature probably too low. See diagram chapter 4 in installation manual
Customer	5519		Condensation too high in heat pump Z2	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes heat pump 2	Evaporation temperature too low in relation to condensing temperature	Outdoor temperature probably too low. See diagram chapter 4 in installation manual
					Flow too high/low delta in heating system	Adjust temperature/flow
Installer	5520		Low pressure warning JR0 in heat pump Z2	Warning if PL1 < lowest permitted actual envelope (-27°C) longer than 30 seconds heat pump 2	Blocked/low air flow to air heat exchanger on heat pump	Ensure adequate air flow over air heat exchanger.
					Check fan as per test outdoor unit	Activate test outdoor unit
					Fan without 230V	Check there is 230V on output PL3 terminal 32 (78, N)
					Fan without 0-10V signal	Check there is 0-10V on output PL3 PWM terminal 20 (20, 26) as per test outdoor unit
					Fan defective	If there is voltage as above, replace fan
					I/O board not working	If there is no voltage as above, replace I/O board
Customer	5521		Alarm low evaporation JR0 in heat pump Z2	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes heat pump 2	See possible causes for cause code 5520	See possible action for action code 5520
Customer	5522		Wrong combination of heat pump and inner part	Setting of rotary encoder on Installer board does not match installed heat pump	Wrong combination of heat pump / inner part	Check combination
					On replacement of I/O board, wrong setting of rotary encoder on new I/O board	Check setting of rotary encoder with replaced I/O board
					On replacement of Installer board, wrong setting of rotary encoder on new Installer board	Check setting of rotary encoder with replaced Installer board
Installer	5523		Warning heat pump Z1 PFC overcurrent on compressor driver	Warning if input AC current > 31A 6 times. Resets after 4 minutes if fault does not remain	Internal fault in inverter	Replace inverter
Customer	5524		Alarm heat pump Z1 PFC overcurrent on compressor driver	Alarm after 3 warnings in 3 hours, or if warning is active for 30 minutes	See possible causes for cause code 5523	See possible action for action code 5523
Customer	5526		Alarm heat pump Z2 defrost Clean heat pump outdoor part	Alarm if timer for defrosting exceeds 800 seconds 3 times, or if 3 defrostings needed in minimum time for heat production heat pump 2	Evaporator blocked with ice	Melt ice carefully with hot water
Installer	5527		Alarm heat pump Z1 too much refrigerant in heat pump	Alarm if PH1 > 5°C than TC3 and undercooling > than set point, both conditions filled longer than 5 minutes during hot water production	Heat pump overfilled	Empty heat pump and fill with amount as per type plate
Installer	5528		Warning heat pump Z2 compressor sensor TR1 failure	Warning failure (>364 kOhm) on sensor TR1 after 3 faults in 2 hours heat pump 2	Screw terminal on I/O board to compressor sensor TR1 not tightened compressor sensor TR1/signal cable failure. I/O board not working compressor sensor TR1/signal cable short circuited.	Check screw terminal Replace compressor sensor TR1 Replace I/O board Check sensor TR1/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
Installer	5529		Warning heat pump Z2 compressor sensor TR1 short circuit	Warning short circuit (>350 kOhm) on sensor TR1 after 3 faults in 2 hours heat pump 2	Compressor sensor TR1/short circuited Signal cable to compressor sensor TR1 short circuited I/O board not working See possible causes for cause code 5314, 5315	Check ohm value with relevant sensor table and actual temperature/replace compressor sensor TR1 Repair/replace signal cable to compressor sensor TR1 Replace I/O board See possible action for cause code 5314, 5315
Customer	5530		Alarm heat pump Z2 compressor sensor TR1 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TR1 heat pump 2	Compressor sensor TR1/signal cable failure.	Check sensor TR1/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
Installer	5531		Warning heat pump Z1 compressor sensor TR1 failure	Warning failure (>364 kOhm) on sensor TR1 after 3 faults in 2 hours.	Screw terminal on I/O board to compressor sensor TR1 not tightened compressor sensor TR1/signal cable failure. I/O board not working	Check screw terminal Replace compressor sensor TR1 Replace I/O board
Installer	5532		Warning heat pump Z1 compressor sensor TR1 short circuited	Warning short circuit (>350 kOhm) on sensor TR1 after 3 faults in 2 hours	Compressor sensor TR1/signal cable short circuited. Compressor sensor TR1/short circuited Signal cable to compressor sensor TR1 short circuited I/O board not working	Check sensor TR1/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal Check ohm value with relevant sensor table and actual temperature/replace compressor sensor TR1 Repair/replace signal cable to compressor sensor TR1 Replace I/O board
Customer	5533		Alarm heat pump Z1 compressor sensor TR1 faulty	Alarm after 3 faults in 3 hours, or 15 minutes failure/short circuit on sensor TR1	See possible causes for cause code 5531, 5532	See possible action for cause code 5531, 5532
					Screw terminal on I/O board to drip pan sensor TA4 not tightened	Check screw terminal on I/O board

Installer	5534		Warning heat pump Z2 temperature sensor TA4 failure	Warning after 3 faults (>170 kOhm) in 2 hours sensor TA4 failure heat pump 2	Screw terminal on I/O board to drip pan sensor TA4 not tightened  Drip pan sensor TA4/signal cable failure.  I/O board not working	Check screw terminal on I/O board  Replace sensor/signal cable sensor TA4  Replace I/O board
Installer	5535		Warning heat pump Z2 temperature sensor TA4 short circuited	Warning short circuit (>900 kOhm) on sensor TA4 after 3 faults in 2 hours heat pump 2	Drip pan sensor TA4/signal cable short circuited.	Check sensor TA4/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
					Sensor TA4 short circuited	Check ohm value with relevant sensor table and actual temperature/replace sensor TA4
					Signal cable/sensor TA4 short circuited	Replace signal cable/sensor to sensor TA4
					I/O board not working	Replace I/O board
Customer	5536		Alarm heat pump Z2 temperature sensor TA4 faulty	Alarm after 3 faults in 2 hours, or 15 minutes failure/short circuit on sensor TR4 heat pump 2	See possible causes for cause code 5534, 5535	See possible action for action code 5534, 5535
Installer	5537		Hoses between inner part and heat pump Z2 are switched	Alarm if TC3 < 1°C from TC0, and PH1 > 7°C > TC3 longer than 30 seconds	Hoses (riser/return) between heat pump and inner part switched	Check the hose connections
					Defective sensor TC3, TC0	Check sensor as per relevant sensor table and actual temperature, in event of deviation replace sensor
Customer	5538		Warning heat pump Z1 temperature sensor TA4 failure	Warning after 3 faults (>170 kOhm) in 2 hours sensor TA4 failure	Screw terminal on I/O board to drip pan sensor TA4 not tightened	Check screw terminal on I/O board
					Drip pan sensor TA4/signal cable failure.	Replace sensor/signal cable sensor TA4
					I/O board not working	Replace I/O board
					Drip pan sensor TA4/signal cable short circuited.	Check sensor TA4/signal cable ohm value with sensor table and actual temperature disconnected from I/O board terminal
Customer	5539		Warning heat pump Z1 temperature sensor TA4 short circuited	Warning short circuit (<900 Ohm) on sensor TA4 after 3 faults in 2 hours	Sensor TA4 short circuited	Check ohm value with relevant sensor table and actual temperature/replace sensor TA4
					Signal cable/sensor TA4 short circuited	Replace signal cable/sensor to sensor TA4
					I/O board not working	Replace I/O board
					Bad contact in CAN bus connections on Installer board tower and pool board	See possible action for action code 5538, 5539
Customer	5540		Alarm heat pump Z1 temperature sensor TA4 faulty	Alarm after 3 faults in 2 hours, or 15 minutes failure/short circuit on sensor TR4	Failure on CAN bus cable between Installer board tower and pool board	Check CAN bus connections on Installer board tower and pool board
					Wrong type of CAN bus cable	Replace CAN bus cable between Installer board tower and pool board
					Can bus cable placed together with power supply to heat pump	Replace to correct type of cable Separate Can bus and power cable by at least 100 mm
					Incorrect earthing of CAN bus cable	Remove/connect cable shield to/from earth
Customer	5541		Communication with pool board failed	Communication between Installer board and pool board lost for 90 seconds		