Connected Efficiency

CAREL

Contractor Training Program

heaterSteam (UR) Troubleshooting Guide

Code	Alarm	Cause	Possible solution	Reset	Alarm relay	Action
ALC01	Autotest failed alarm	Probable problems with: feedwater, level control, fill solenoid valve **Note:** check the alarm log for any warnings relating to the events that generated the alarm (autotest warning, level sensor warning, low production warning)	Make sure that the unit receives water Switch the unit off and clean the level control and the fill valve	Restart required	Closed	Total shutdown
ALC02	High conductivity warning	High water conductivity warning	Check feedwater conductivity If necessary, feature a suitable water treatment system The problem cannot be solved by softening the feedwater	Manually reset the warning	Open	Signal only
ALW03	High conductivity alarm	High feedwater conductivity alarm	Switch the unit off and clean the electrodes that measure the water conductivity If the problem persists, change the origin of the feedwater or feature a suitable treatment system (demineralisation, even partial) The problem cannot be solved by softening the feedwater		Restart required	Closed
ALC03	Level sensor malfunction alarm	The level sensor may not be working correctly	Switch the unit off and clean the cylinder, the level sensor and the fill solenoid valve Check correct water supply to the cylinder	Restart required	Closed	Total shutdown
ALC04	High heater temperature	The PTC probes in the heaters have measured an excess temperature Klixon activated	Manually reset the Klixon The problem depends on operation without water or excessive scale on the surface of the heaters Switch the unit off and, when it has cooled down, clean the cylinder, the heaters and the level control, making sure the components are intact Check that the electrical and water connections are in order and that the unit is powered correctly It may be necessary to replace the PTC sensors	Stop - restart required	Closed	Total shutdown
ALB01	No water alarm	No feedwater	Check that the supply pipe to the humidifier and the internal tubing are not blocked or choked and that there is enough pressure (0.1-0.8 MPa, 1-8 bars) Check operation of the fill solenoid valve Check that there is not excessive back-pressure in the steam outlet, preventing water from entering the cylinder due to gravity Check that the steam outlet pipe is not choked or that there are no pockets of condensate Check that the level sensor is working correctly, clean if necessary	Manual/ Automatic	Closed	Stop production
ALB02	Low production alarm	Input power not available; with the unit on, there is no steam production or water preheating; Float blocked in high level position.	With the unit off and disconnected from the mains power supply, check that there are no defective or faulty electrical connections Check electrical continuity of the heaters Clean the level sensor	Manual	Closed	Stop production

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ALA01	Main probe broken or disconnected alarm	Main room probe not connected or damaged	Check probe connection and the type of control selected	Manual	Closed	Stop production
ALA02	Limit probe broken or disconnected alarm	Limit probe or second probe not connected or damaged	Check probe connection and the type of control selected the type of control choice	Manual	Closed	Stop production
ALA03	Pre-heating probe broken or disconnected alarm	NTC water temperature probe not connected or damaged	Check preheating operation and the settings of the parameters on screen eb02;	Automatic	Closed	Stop production
ALH01	High humidity/ temperature warning	High humidity in the room (high temperature with temperature control)	Check operation of the probe and the limits set on screen c01	Automatic	Open	Signal only
ALH02	Low humidity warning	Low humidity in the room	Check operation of the probe and the limits set on screen c01	Automatic	Open	Signal only
ALH03	High limit humidity warning	High humidity at outlet	Check the operation of the outlet limit probe	Automatic	Open	Signal only
ALW01	Foam warning	Entrainment of foam in the cylinder during boiling	The entrainment of foam is generally due to the presence of surfactants in the water (lubricants, solvents, detergents, water treatment or softening agents) or an excessive concentration of dissolved salts. Purge the feedwater lines Clean the cylinder	Automatic	Open	Signal only
ALT01	Maintenance pre-alert	Planned maintenance reminder	Stop the unit and carry out complete maintenance on the humidifier, then reset the "cylinder operating hours" counter (screen ea07)	Automatic (reset operating hours)	Open	Signal only. Shutdown unit in relation of the water hardness.
ALW02	Cylinder full warning	Cylinder full of water to the high level sensor on the cover, without humidification request	Check the fill valve for leaks Check whether the high level sensor is dirty Check that there is no condensate return along the steam pipe	Automatic	Open	Signal only
ALA04	Conductivity meter warning	Conductivity meter not connected or damaged	Check the connection of the conductivity meter for measuring feedwater conductivity	Manual	Open	Stop production
ALR01	Controller memory damaged warning	Problem in the electronic controller	Replace the controller	Automatic	Open	Signal only
ALP01	Wireless probe 1 offline	No communication with probe 1	Check binding between probe and access point, check the battery. Check the probe signal level.	Automatic	Closed	Signal only
ALP02	Wireless probe 2 offline	No communication with probe 2	Check binding between probe and access point, check the battery. Check the probe signal level.	Automatic	Closed	Signal only
ALP03	Wireless probe 3 offline	No communication with probe 3	Check binding between probe and access point, check the battery. Check the probe signal level.	Automatic	Closed	Signal only
ALP04	Wireless probe 4 offline	No communication with probe 4	Check binding between probe and access point, check the battery. Check the probe signal level.	Automatic	Closed	Signal only
ALN01	No model	Model not set	Set a model	Automatic when is selected the model	Closed	Stop production
ALN01	Network alarm on unit 1	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN02	Network alarm on unit 2	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN03	Network alarm on unit 3	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN04	Network alarm on unit 4	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN05	Network alarm on unit 5	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN06	Network alarm on unit 6	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN07	Network alarm on unit 7	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN08	Network alarm on unit 8	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only

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ALN09	Network alarm on unit 9	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN10	Network alarm on unit 10	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN11	Network alarm on unit 11	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN12	Network alarm on unit 12	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN13	Network alarm on unit 13	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN14	Network alarm on unit 14	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN15	Network alarm on unit 15	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN16	Network alarm on unit 16	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN17	Network alarm on unit 17	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN18	Network alarm on unit 18	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN19	Network alarm on unit 19	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALN20	Network alarm on unit 20	Network unit alarm (see the specified unit for details)	Carry out the checks based on the alarm displayed on the unit in question	Automatic	Open	Signal only
ALP05	Wireless probe 1 battery	Battery discharged on wireless probe 1	Check battery charge, replace if necessary;	Automatic	Open	Signal only
ALP06	Wireless probe 2 battery	Battery discharged on wireless probe 2	Check battery charge, replace if necessary;	Automatic	Open	Signal only
ALA07	Supervisor offline	The supervisor is offline	Check supervisor connection and communication parameters	Automatic	Closed	Stop production
ALC05	High boiler temperature (>110°C)	The boiler temperature has reached the critical threshold	Check operation of the NTC probe on the boiler. Check that there is water in the boiler during production request. Verify correct operation of the level sensor.	Stop, restart required	Closed	Stop production
ALW08	No drain to dilute (if micro-filling active)	A drain to dilute cycle has not yet been performed	Perform a drain to dilute cycle	Automatic	Open	Signal only

Tab. 1.a

Additional Troubleshooting Information

Note: Use safe work practices and follow LOTO procedures before making any wiring alternations to the unit.

1. **Unit main switch is on, but screen is off and blank:**
   - √ Check for incoming voltage. It must be within 10% +/- of nominal voltage rating.
   - √ Check for 24 VAC output on low voltage side of transformer.
   - √ Check for 24 VAC at M1 terminals on controller board.
   - √ Check display communication / power cable is securely connected to controller and display, replace if necessary.

2. **Display is lit up and energized, but displays no text, graphics or shows "NO LINK", "UNIT VERSION MISMATCH" or there are yellow triangles with exclamation points overlaying the display graphics:**
   - √ Check display communication / power cable is securely connected to controller and display, replace if necessary.
   - √ Call Carel technician to verify display is addressed properly (717-664-0500, option 1).

3. **Unit display "MAIN PROBE BROKEN", "LIMIT PROBE BROKEN" or shows a faulty rH reading on the display:**
   - √ Verify the control signals are terminated properly at the controller input and sensor or BMS output (refer to owner's manual for wiring information).
   - √ Verify the control signal type matches the configuration setup on the unit's controller (refer to the owner's manual for controller signal configuration information).

4. **Unit is operational but no steam is being generated:**
   - √ Check the water level sensor to verify propoer water level in the tank. If there is no water entering the tank or the level sensor float is stuck down, the unit will not produce steam.
   - √ Verify the wiring to the resistive elements are securely connected at the terminals (refer to owner's manual for canister wiring configurations).

If further assistance is needed, call 717-664-0500 and selecting option 1 to speak with a Carel technician.