ems55*advanced* - Troubleshooting Quick Guide

User interface

Note: The motion sensor is integrated with the ems controller (ems55*advanced*) or remote (ems55R*advanced*).

LED indicators

	Compressor.	**On** when the compressor is running.
	Fan.	**On** when the evaporator fan is running.
	Saving mode temperature disable.	**On** if the saving mode temperature is disabled.
	Motion.	**On** when motion detected.

Buttons

	Set		**Up**
	Defrost (Starts a manual defrost)		**Down** (Also cancels alarms)

Power up sequence

1		Checks all the display elements are working.
2		Displays the firmware version. (Example)
3		Displays the checksum. (Example)

Normal operation

During normal operation the EMS will display one of the messages below. If one of the below messages is not displayed the EMS has registered and alarm or fault.

	Ready mode (Displays USE or temperature)
	Saving mode
	Defrost mode
	Door open
	Freeze up protection If evaporator frozen, ensure appliance sensor is connected properly. Disconnect appliance sensor and ensure display shows **PF1**. Otherwise, replace the controller.

Alarms and troubleshooting

The EMS controller can display messages to aid fault diagnosis. If an alarm sounds and the EMS controller displays any of the alarms below, contact your service provider.

	Refrigeration system failure
	Condenser high temperature alarm (requires a condenser sensor)
	Appliance sensor failure
	Condenser sensor failure (if used)
	Evaporator sensor failure (if used)
	Over voltage alarm (SHI) or **under voltage alarm** (SLO), if used. Note that the compressor does not run in over or under voltage conditions.
	Door open alarm
Cooler lights do **not** switch on	If EMS controller is in the ready mode, ensure that the light switch inside the cooler switched on.
No power	Check for 12 to 13VAC at the rear connector of the ems controller.

Elstat, Astra Business Centre, Roman Way, Preston, Lancashire, PR2 5AP, United Kingdon
Telephone: +44 (0) 161 22 77 200
www.elstatgroup.com

Menu access

Coca-Cola branded controllers

To access the menu:

1. Press and hold the **Set** button until PAS is displayed.
    - Press the **Set** button three times (x3).
    - Press the **Up** button twice (x2).
    - Press the **Down** button once (x1).
    - Press the **Defrost** button four times (x4).
2. Ensure that **PS** is displayed, and the use the **Down** button to scroll through the menus.

At the end of the menu list, the controller returns to normal operation display.

Half reset

To clear the self-learning matrix and to restart the learning period:

1. Access the menu, using the password and use **Down** to scroll to the **Hr** menu.
2. Press **Set** and ensure that **PAS** is displayed
3. Re-enter the button sequence of the password:
    - Press the **Set** button three times (x3).
    - Press the **Up** button twice (x2).
    - Press the **Down** button once (x1).
    - Press the **Defrost** button four times (x4).
4. Ensure that the controller reboots.

Test routine

To test the relays, temperature sensors, and motion sensor:

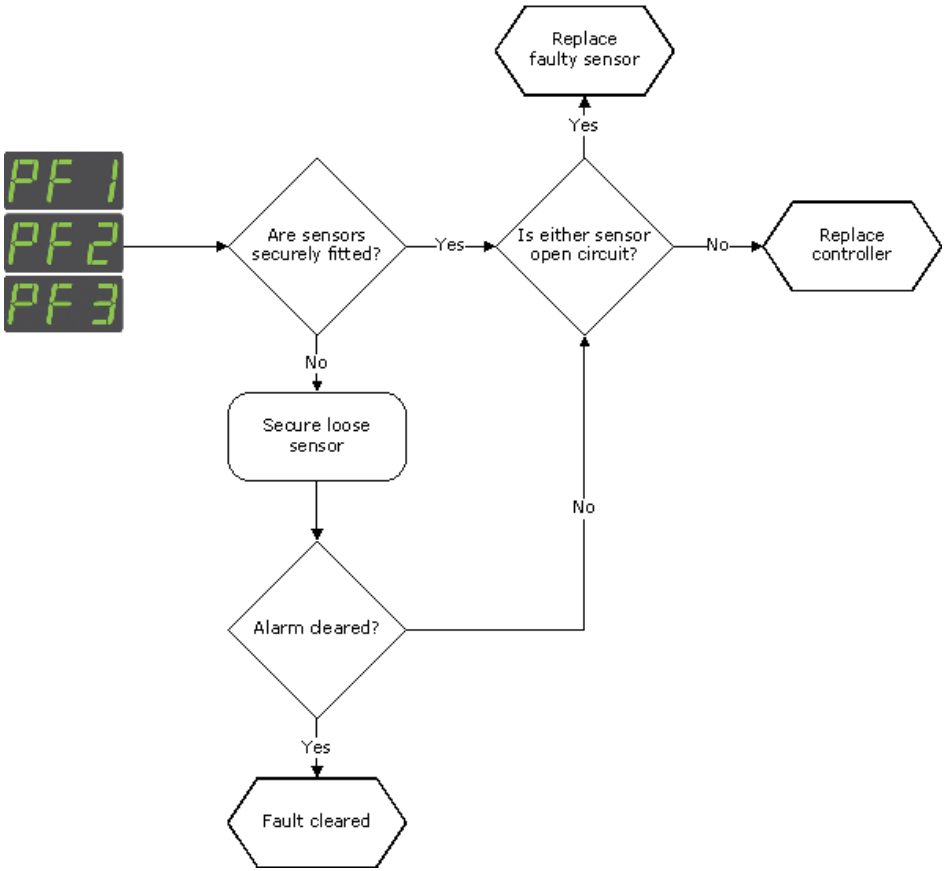
1. Access the menu and press **Down** once to **tst**.
2. Press set and check display shows **888**.
3. Press **Set** and **Defrost** at the same time to start the relay test **rel**. Then:
    - Press **Up** to test the lights.
    - Press **Set** to test the compressor.
4. Press **Defrost** to exit the relay test.
5. Press **Set** and **Defrost** at the same time to test the analogue inputs **AnA**.
    - Press **Up** and then press **Set** to view the *appliance sensor* temperature.
    - Press **Down** to test the *door switch*; display shows **dO** for open door and **CLO** for closed door. Opening and closing the door should make the display alternate between the two.
    - Press **Defrost** to test the *condenser sensor*.
6. The display should show the current condenser temperature, or **PF2** if faulty.
7. Press **Set** and **Defrost** at the same time to test the motion detector **Pir**.
8. Press **Defrost** and then wave hand in front of the motion sensor. Check that the displayed number increases.
9. Press **Set** and **Defrost** at the same time to exit the test mode.

The controller then resets and displays **USE** or the *appliance sensor* temperature.

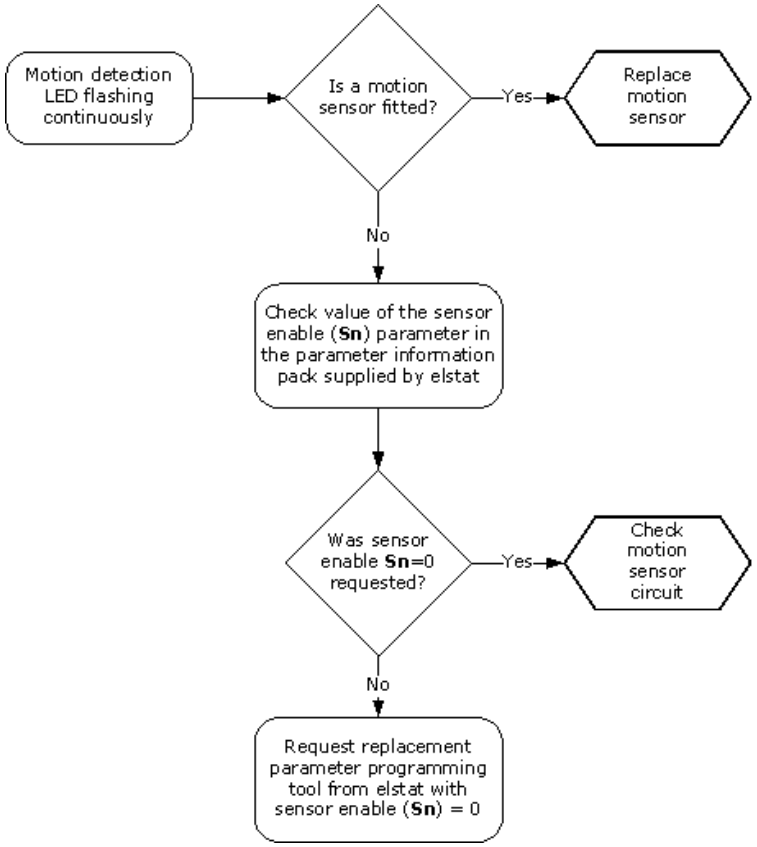
For further information, refer to the latest product documentation.

Elstat, Astra Business Centre, Roman Way, Preston, Lancashire, PR2 5AP, United Kingdon
Telephone: +44 (0) 161 22 77 200
www.elstatgroup.com

Temperature sensor alarm

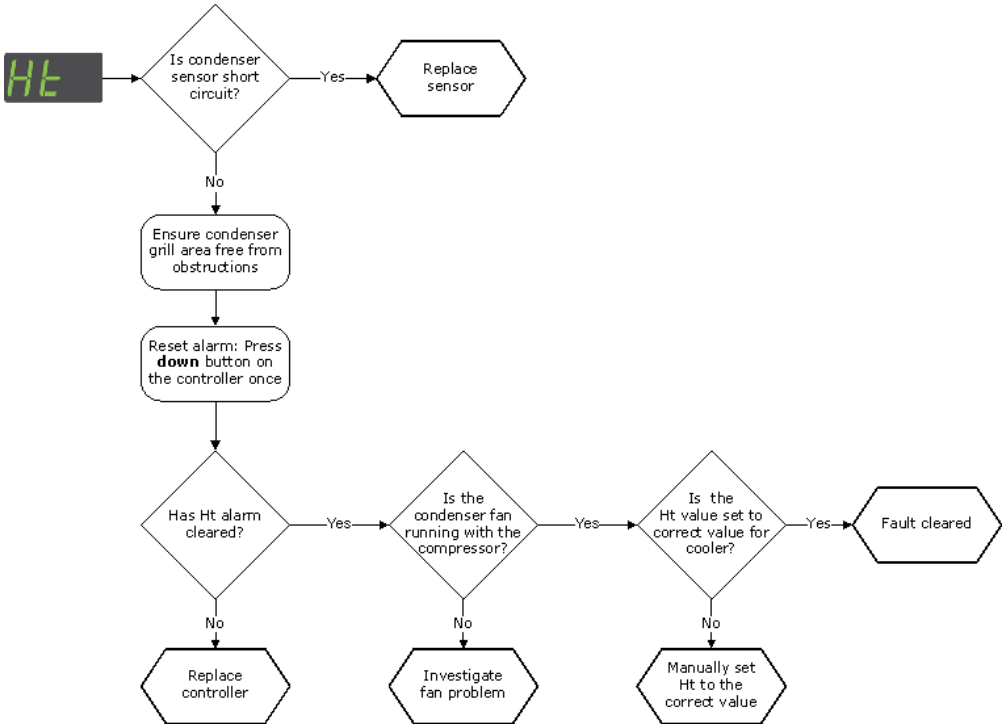


Motion sensor alarm

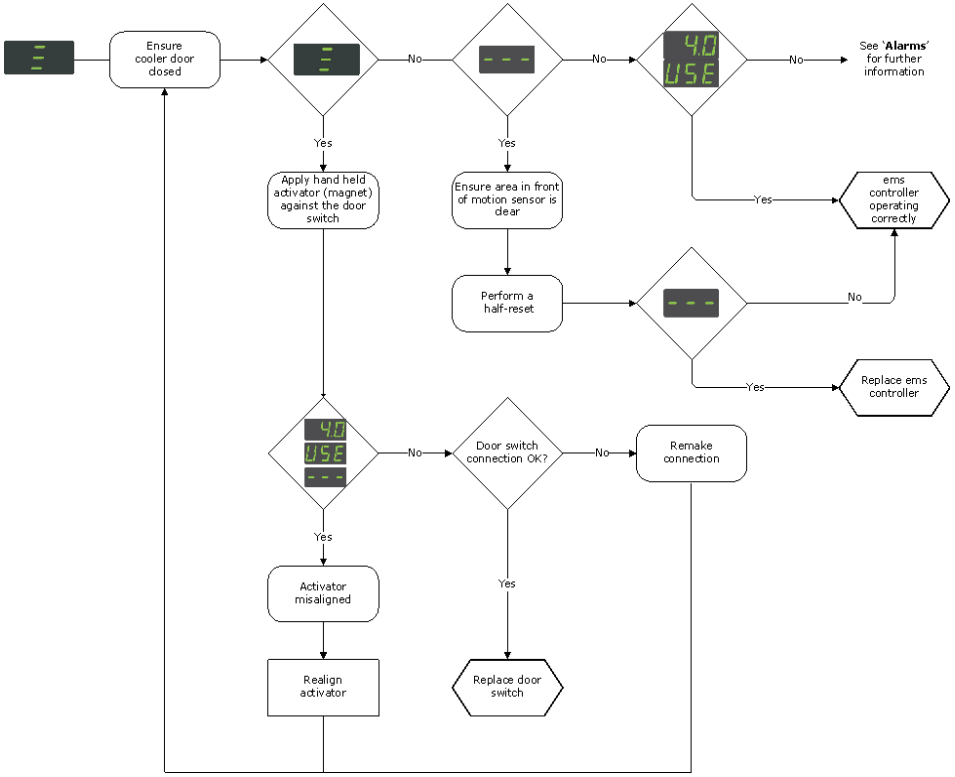


Elstat, Astra Business Centre, Roman Way, Preston, Lancashire, PR2 5AP, United Kingdon
Telephone: +44 (0) 161 22 77 200
www.elstatgroup.com

Condenser high temperature alarm



Door open alarm



Elstat, Astra Business Centre, Roman Way, Preston, Lancashire, PR2 5AP, United Kingdon
Telephone: +44 (0) 161 22 77 200
www.elstatgroup.com