



© ELECTROLUX HOME PRODUCTS

Customer Care - EMEA

Training and Operations Support

Technical Support

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1 INTRODUCTION

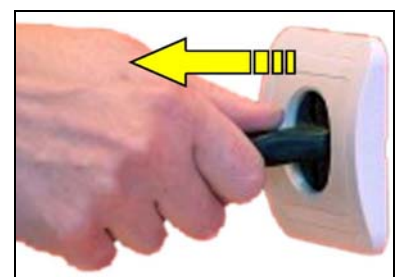
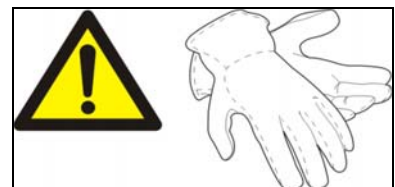
1.1 Purpose of this manual

The purpose of this manual is to provide service personnel (who already have the basic knowledge necessary for repairing refrigerators and freezers) with information on appliances equipped with the ERF2501 electronic control system.

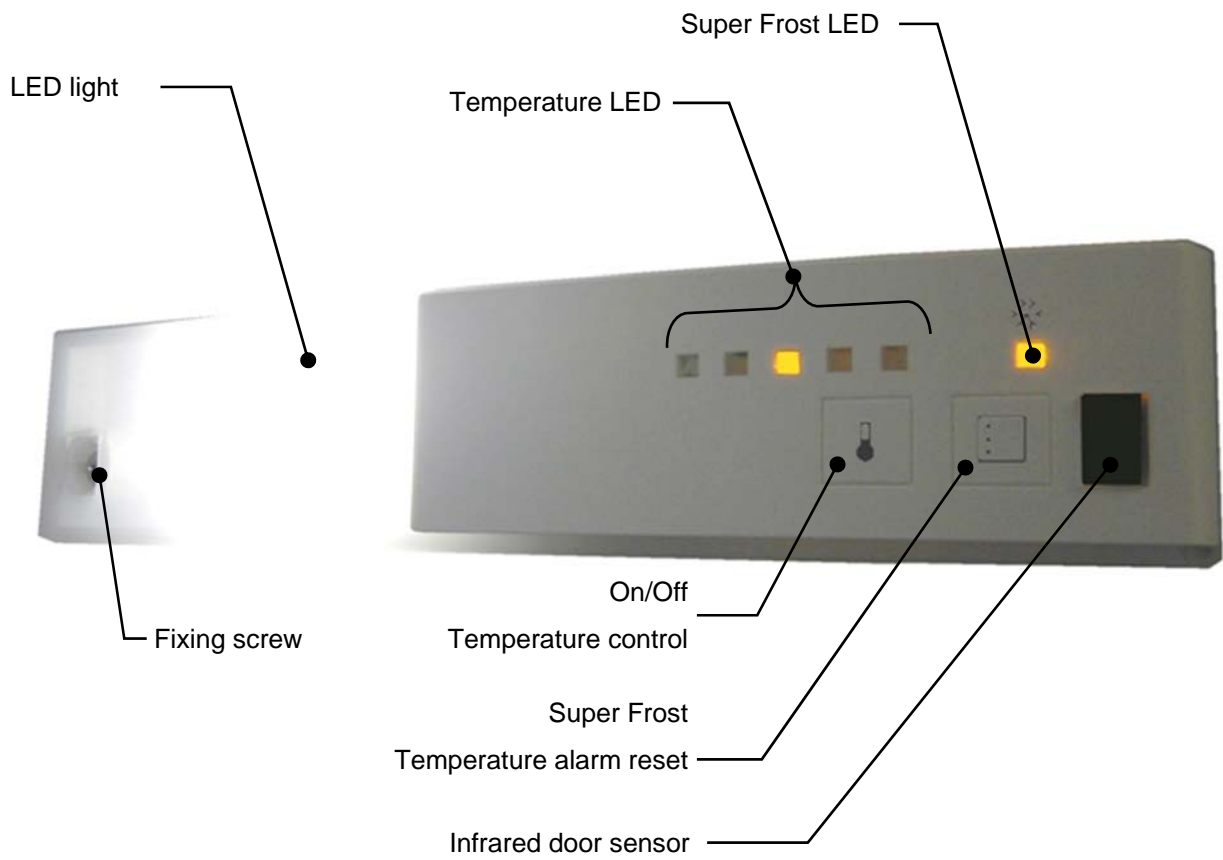
1.2 Cautions



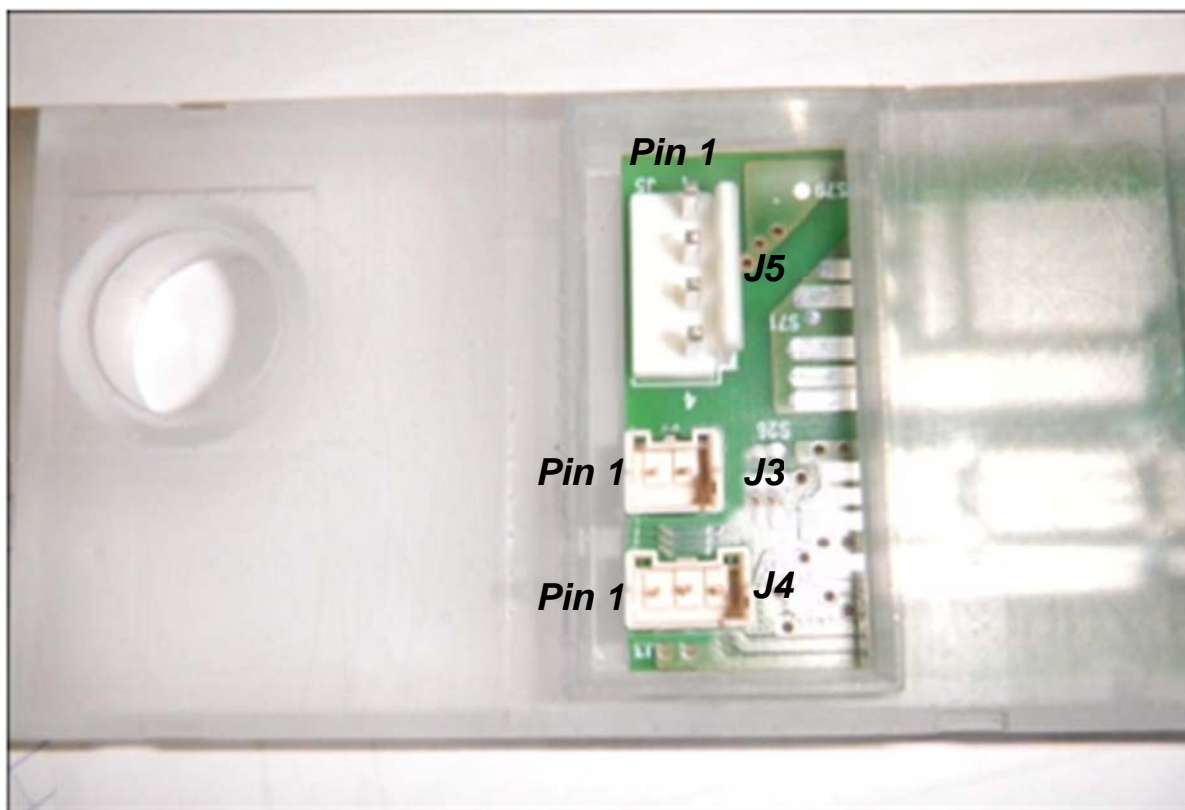
- **Before starting work on an appliance, check that the earth in the lodgings is working properly by using an appropriate tool and follow the instructions described/illustrated on the Electrolux Learning Gateway portal**
- <http://electrolux.edvantage.net>
- **When the work is finished check that the appliance's safety conditions have been reinstated, as though it were straight off the assembly line.**
- **In the event of replacing electrical parts, carefully check that the earthing and all the connections have been re-connected professionally.**
- **In the event of handling/replacing the electronic circuit board, use the ESD kit (Cod. 405 50 63-95/4) to avoid electrostatic discharges damaging the electronic circuit board - see S.B. No. 599 72 08-09.**
- **All the work to be performed inside the appliance requires specific skills and knowledge and may only be carried out by qualified and authorised service engineers.**
- **Some of the components in the mechanical part could cause injuries, so wear suitable protection and proceed with caution.**
- **This platform is not fitted with an ON/OFF switch. Before you access internal components, take the plug out of the socket to disconnect the power supply.**
- **When replacing components, please refer to the code shown in the list of spare parts relating to the appliance.**
- **If you need to lay down the appliance to carry out work, lie it on its back**



2 GENERAL CHARACTERISTICS



3 CONNECTORS



J5

- Pin 1 220 L
- Pin 2 220 N
- Pin 3 Compressor
- Pin 4 Balancing resistor

J3

- Pin 1 GND
- Pin 2 +12 VDC

J4


- Pin 1 NTC Fridge
- Pin 2 +5V
- Pin 3 NTC Evaporator
- Pin 4 +5V

4 SERVICE MODE


4.1 Service mode activation


- If the appliance is connected to the power supply, unplug it.
- Wait 10 seconds before reconnecting the appliance to the power supply.

- After reconnecting the appliance to the power supply wait about 5 seconds.

- Press the  key for more than 7 seconds.
- All the LEDs will light up indicating that diagnosis mode has been activated correctly.


- If you press the  key again all the LEDs will turn off.

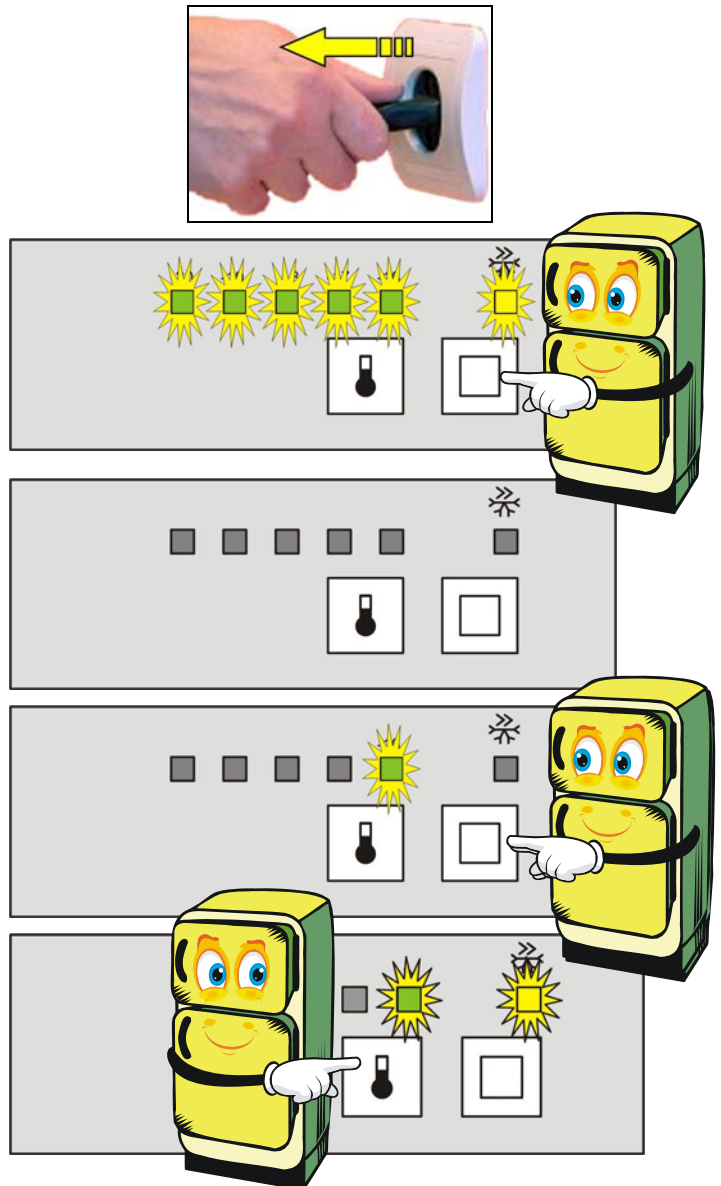
- By pressing the  button again, the first available option will be selected depending on the model.


- Press the  key to turn the load on or off


The yellow LED to the right will light up.

If the actuator does not start working check that the power supply reaches it in order to avoid replacing a part

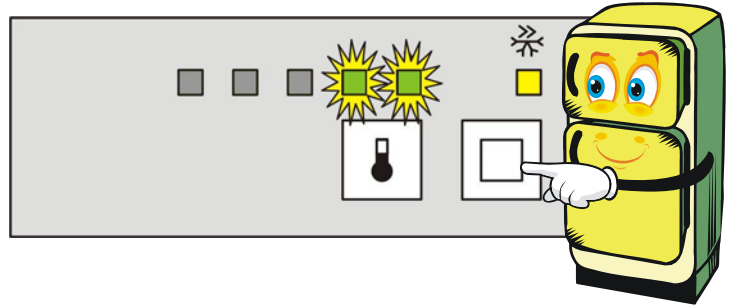
- Press the  key to turn off the selected programme



- When you press the  key again the next option appears.
The LED or the combination of LEDs which light up varies according to the model.

- Press the  key to turn the load on or off

- It is impossible on these platforms to pass from one function to another by going backwards, so if you need to go back to a previously activated test, you need to complete the sequence until you return to the required LED combination.
- It is possible, if you wish, to turn on several components simultaneously.



4.2 LED combinations in service mode

You will find all the commands available on the various appliances in these tables divided up by type, capacity loads - low voltage actuators - digital input - sensors.

Not all the commands can be found on every model so on a lot of appliances certain LED combinations cannot be viewed.

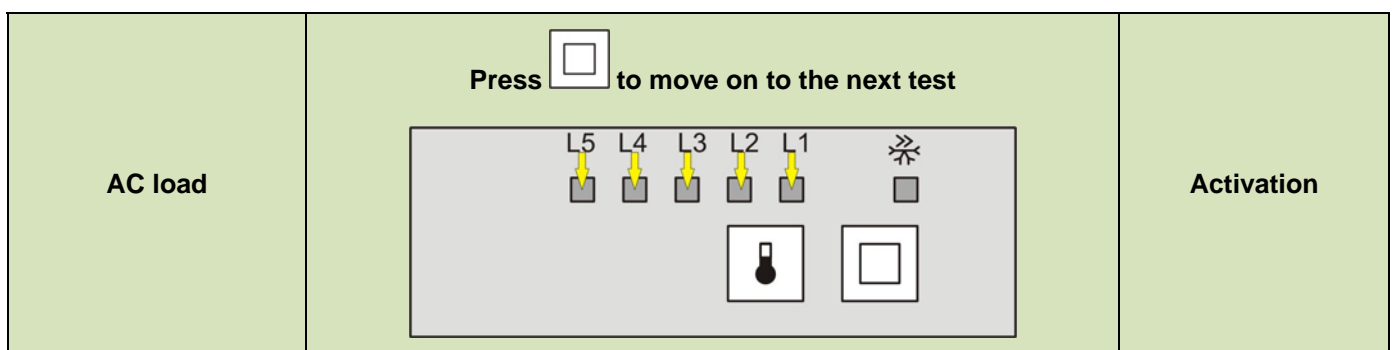
4.2.1 Load control



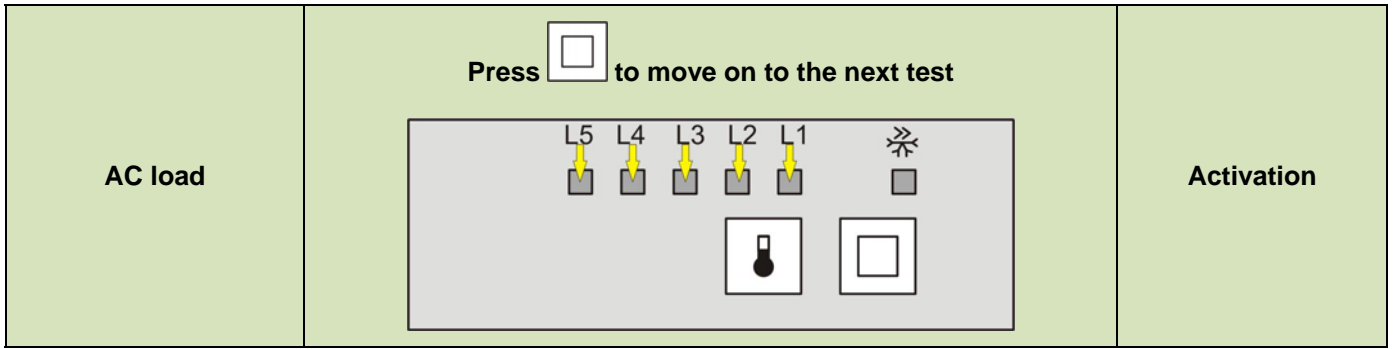
Turning a load on or off does not mean it does or does not work.












































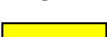





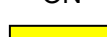
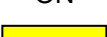





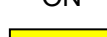
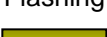













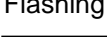
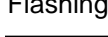


The activation supplies electricity to the load, but in order to be certain that it is actually broken we first need to use a tester to check whether the power supply is getting through and whether there is voltage absorption.

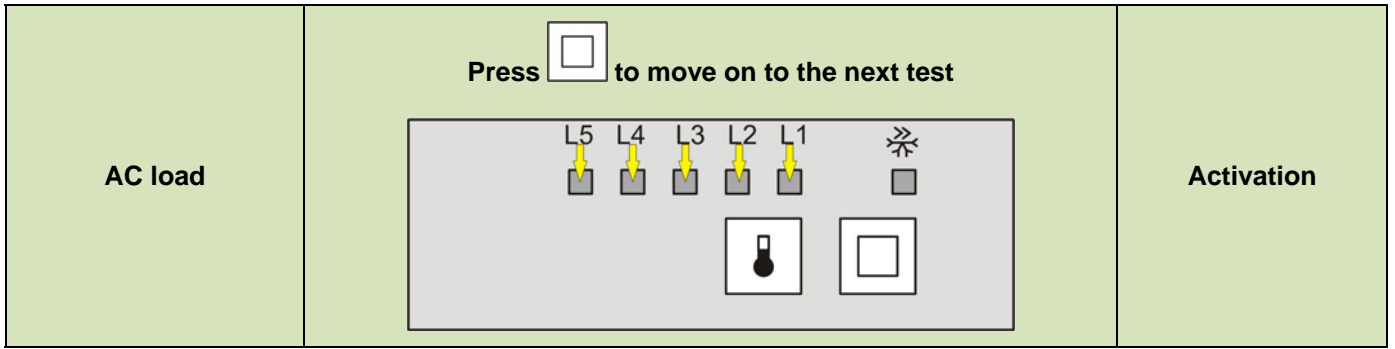
If, for example, we activate the refrigerator compressor and this does not work, we can use a tester to see whether the problem is caused by the motor or the power board.














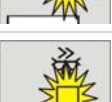


	L5	L4	L3	L2	L1		
Refrigerator compressor	■	■	■	■	ON ■	Press 	
Freezer compressor	■	■	■	■	Flashing ■	Press 	
<p><i>Check if the heating element is working only if the appliance is colder than 5°C</i></p>							
Heating element	■	■	■	ON ■	■	Press 	
Refrigerator light	■	■	■	ON ■	ON ■	Press 	
AC Evaporator fan	■	■	■	ON ■	Flashing ■	Press 	
AC refrigerator fan	■	■	■	Flashing ■	■	Press 	



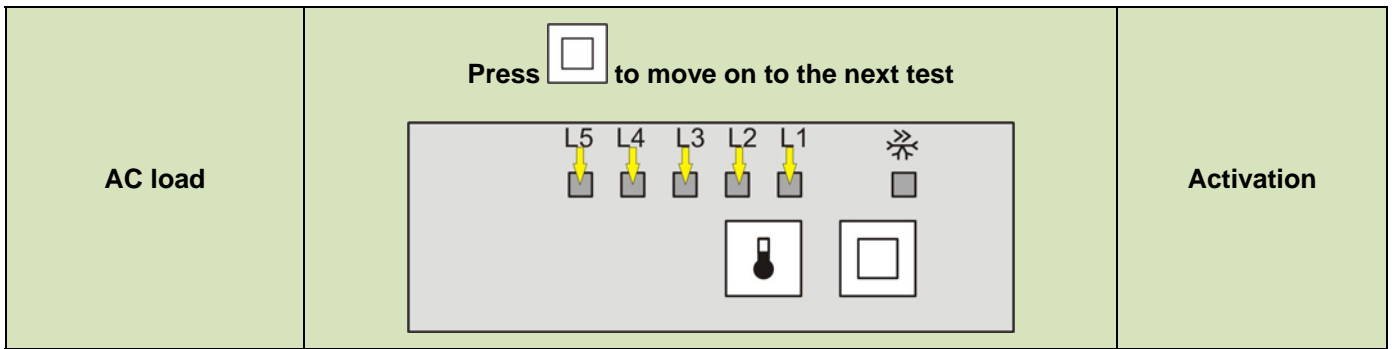
	L5	L4	L3	L2	L1		
Evaporator solenoid valve				Flashing 	ON 	Press 	
AC zero degrees fan				Flashing 	Flashing	Press 	
Water tap			ON 			Press 	
Freezer light			ON 		ON 	Press 	
Worm shaft motor						Press 	
Ice knob			ON 	ON 		Press 	
AC condenser fan			ON 	ON 	ON 	Press 	
Function not yet implemented			ON 	ON 	Flashing 	Press 	
Balancing resistance			ON 	Flashing 		Press 	
Function not yet implemented			ON 	Flashing 	ON 	Press 	
Condenser solenoid valve			ON 	Flashing 	Flashing 	Press 	














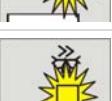








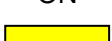

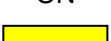
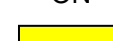

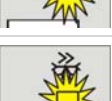
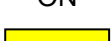
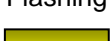
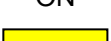





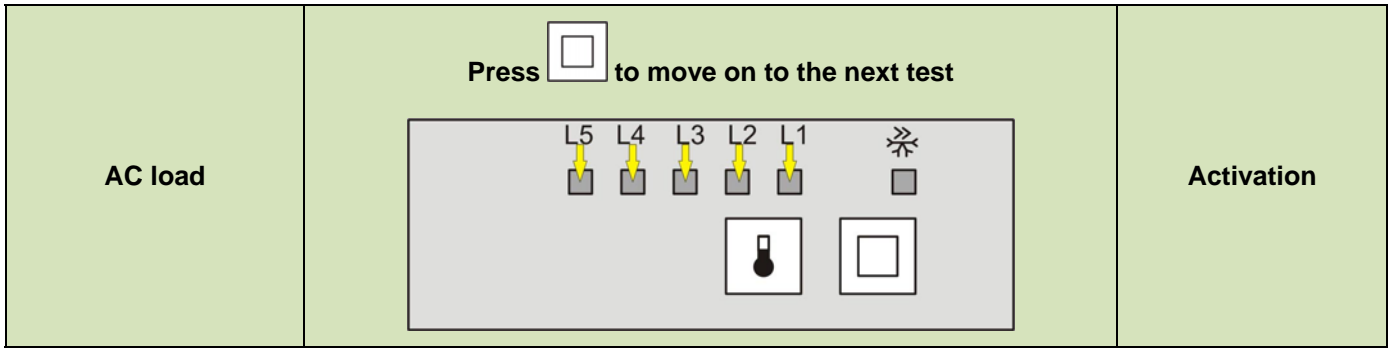
	L5	L4	L3	L2	L1		
Freezer Compressor		ON 	Flashing 			Press 	
Refrigerator compressor		ON 	ON 	Flashing 	Flashing 	Press 	






















4.2.2 Digital output test

All the digital outputs of the parts connected to electronics are automatically switched to off at the start of the test.

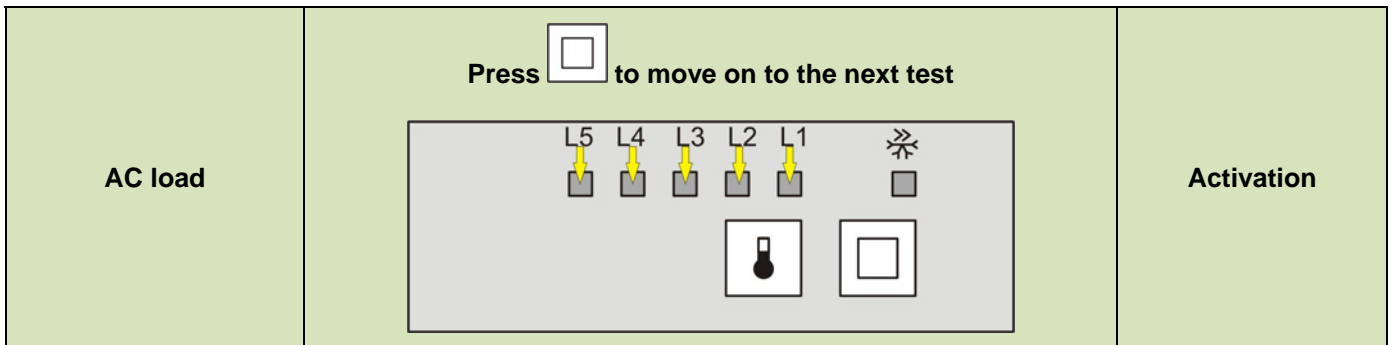









	L5	L4	L3	L2	L1		
Low voltage LED refrigerator light		ON 	Flashing 		ON 	Press 	
Low voltage light in zero degrees compartment		ON 	Flashing 		Flashing 	Press 	
Low voltage evaporator fan		ON 	Flashing 	ON 		Press 	
Low voltage refrigerator fan		ON 	Flashing 	ON 	ON 	Press 	
Low voltage fan in zero degrees compartment		ON 	Flashing 	ON 	Flashing 	Press 	



	L5	L4	L3	L2	L1		
Low voltage condenser fan		ON 	Flashing 	Flashing 		Press 	
Low voltage LED freezer light		ON 	Flashing 	Flashing 	Flashing 	Press 	
Low voltage air filter fan		ON 				Press 	


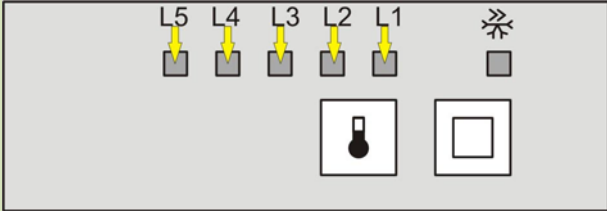
4.2.3 Regulator control
























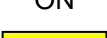
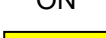




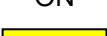
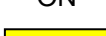


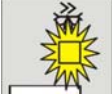



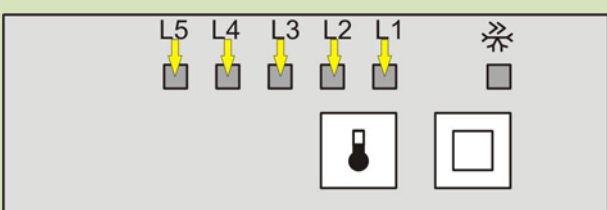
	L5	L4	L3	L2	L1		
Damper regulator		ON 			Flashing 	Press 	

4.2.4 Sensor control

Unlike the loads and digital outputs, the sensors are not activated electronically by pressing a key and their activation is signalled by a yellow LED which lights up to the right.







Sensor	<p>Press  to move on to the next test</p> 	The LED lighting up means the sensor is on.
---------------	---	--

	L5	L4	L3	L2	L1	
Refrigerator door	ON 	ON 		ON 		
Freezer door	ON 	ON 		ON 	ON 	
Zero degrees door	ON 	ON 		ON 	Flashing 	
Ice generator	ON 	ON 		Flashing 	ON 	
Spatula	ON 	ON 		Flashing 	Flashing 	
Rapid drink cooler	ON 	ON 	ON 			

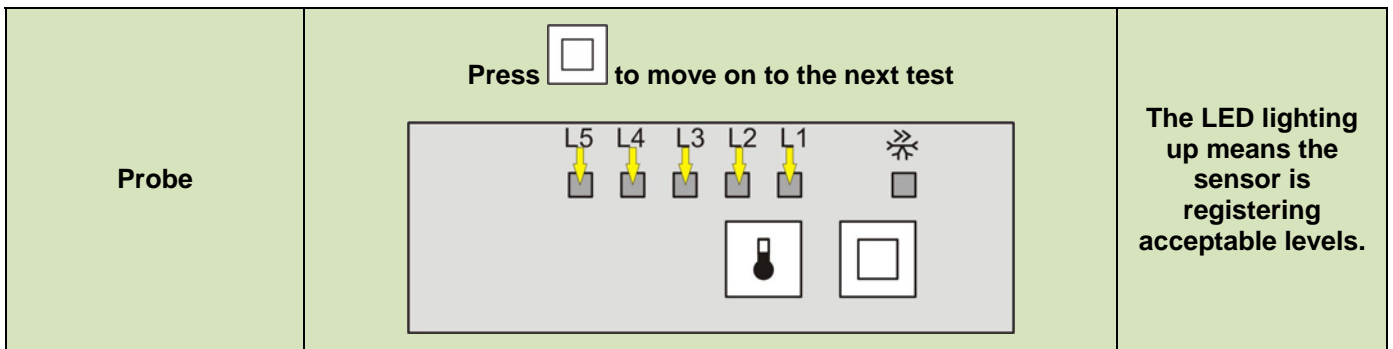
Sensor	<p>Press  to move on to the next test</p> 	The LED lighting up means the sensor is on.
---------------	---	--




If the circuit breaker is open the LED is lit up
Check if it is working only if the appliance is colder than 5°C

	L5	L4	L3	L2	L1	
Circuit breakers	ON 	ON 		Flashing 		

4.2.5 Probe control



	L5	L4	L3	L2	L1	
Air probe Refrigerator	Flashing 	ON 	ON 		Flashing 	
Air probe Freezer	Flashing 	ON 	ON 	ON 		
Evaporator probe Refrigerator	Flashing 	ON 	ON 	ON 	ON 	
Air probe Zero degrees	Flashing 	ON 	ON 	ON 	Flashing 	
Probe Living environment	Flashing 	ON 	ON 	Flashing 		
UI Living environment	Flashing 	ON 	ON 	Flashing 	ON 	
Evaporator probe Freezer	Flashing 	ON 	Flashing 			
Probe Ice maker	Flashing 	ON 		ON 		

5 REVISIONS:

Revision	Date	Description	Approved by	Date
00	02/2012	Document creation		