Repair Instructions

To replace a Dixell return air sensor in a Lab/Pharmacy Fridge

To suit: TPR/TLR-360/520/750/950/1150/1500

Approvals		
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Safety Reminder

Replacing the Dixell Return air sensor requires the technician to hold a suitable electrical licence.

These instructions do not purport to address all potential safety issues, if any, associated with the product's use. It is the responsibility of the user of these instructions to establish appropriate safety and health practices and determine the applicability of regulatory limitations before use.
Before attempting any of the following, perform the actions listed below:
• Turn OFF power to the machine.
• Unplug the machine.

Summary

These instructions are for replacing a return air sensor on TPR and TLR cabinets 360/520/750/950/1100/1150/1500 with Dixell controllers.

Tools Required	
Screw driver	Phillips Head
Screw driver	Large Flat head
Allen Key	5 mm
Spanner	7/8th Open ended
Wire Snips	
Safety Step	

Kit Contents		
Item	Description	Quantity
41728	NTC Sensor Probe - black rubber tip	1
	Red Bootlace Ferrule	1
	Pin Crimp Connector	1

Section 1: Preparation

Turn off the power and remove the plug from the outlet. To access the controller you will need to remove the top panel. In some cases you will need a safety step or step ladder to be able to remove this panel safely.

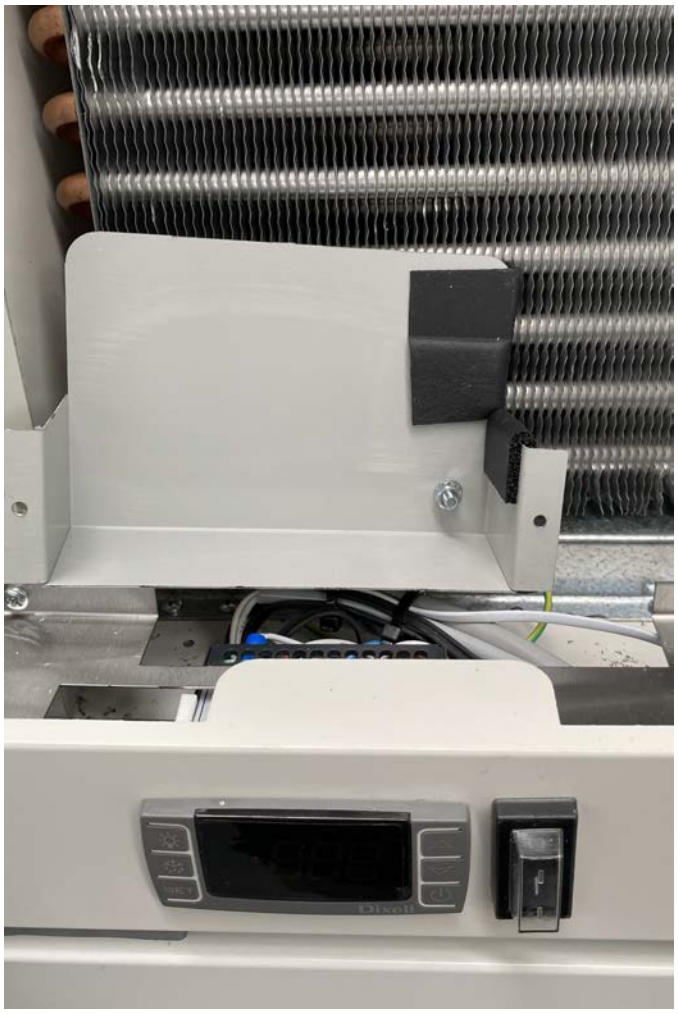
Slide the panel up which will free it from the locating blocks on the cabinet.

Pull the panel forward free of the blocks. This will allow you to access the controller

Section 2: Remove the sensor

Once the panel is removed you will see a metal plate covering the controller.

To remove this plate to be able to access the controller, undo the screws on either side of the plate. You DO NOT need to unscrew the green earth wire on the back of the plate.



After removing the screws, lift the plate to reveal the controller. The plate can be placed behind the controller on the evaporator coil or to the side.

You will find two white fixing clips on either side of the controller. To unlatch the tabs of these clips, slightly push the white tabs of these clips inwards toward the controller. Then, you will be able to slide the clips off the back of the controller.

After removing the white clips, push the controller through the front panel to access the wires.

In order for you to have complete access to the sensor wires, you will need to remove them from under the fascia and move them to the side. This will provide you with sufficient slack to adjust the wires as required.

Remove the four screws (2 on either side) so you can remove the top cover of the fridge and gain access to the evaporator enclosure. This only applies to 360 cabinets. The other sizes do not have this cover.

Using a 5mm Allen Key, remove the screws that secure the cover of the evaporator enclosure.

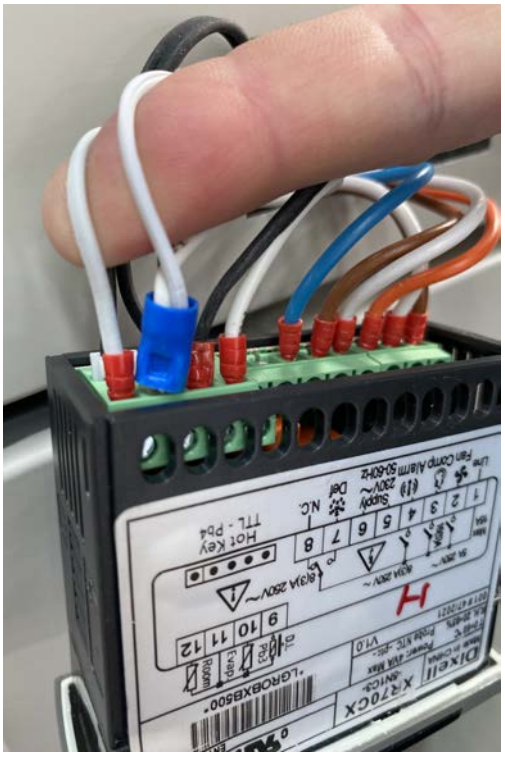
Note: Some fridges have the evaporator cover held on by a bolt. Undo this using a 7/8th Spanner.




Using a large flat head screw driver, slide the end of the screw driver in between the foam tape and the top of evaporator enclosure and lever it upwards. This will break the seal and then allow you to remove the lid to the evaporator enclosure.


With the cover off, you will see the evaporator coil, the evaporator fan and the silver tube which contains the Dixell Hot Key sensor. The return air, Dixell sensor is on the other side of the evaporator and fixed to bracket against the wall (see the yellow circle).

To remove the Dixell sensor, first cut the cable ties that fix it to the bracket. Then, carefully remove the putty around the conduit that the sensor wire passes through from the evaporator enclosure to the front of the fridge. However, make sure to keep the putty as you will need it later to seal the area around the new sensor.



The bottle sensor, door switch and the return air sensor (Black NTC Dixell sensor) are connected in the same common terminal 11 via pin crimp connector. To remove this you have to cut the connector. Once you cut this wire, thread it through the conduits leading into the evaporator enclosure and then this will allow you to remove the bottle sensor completely. You will also have to remove the other wire from terminal 10.

Section 3: Installation

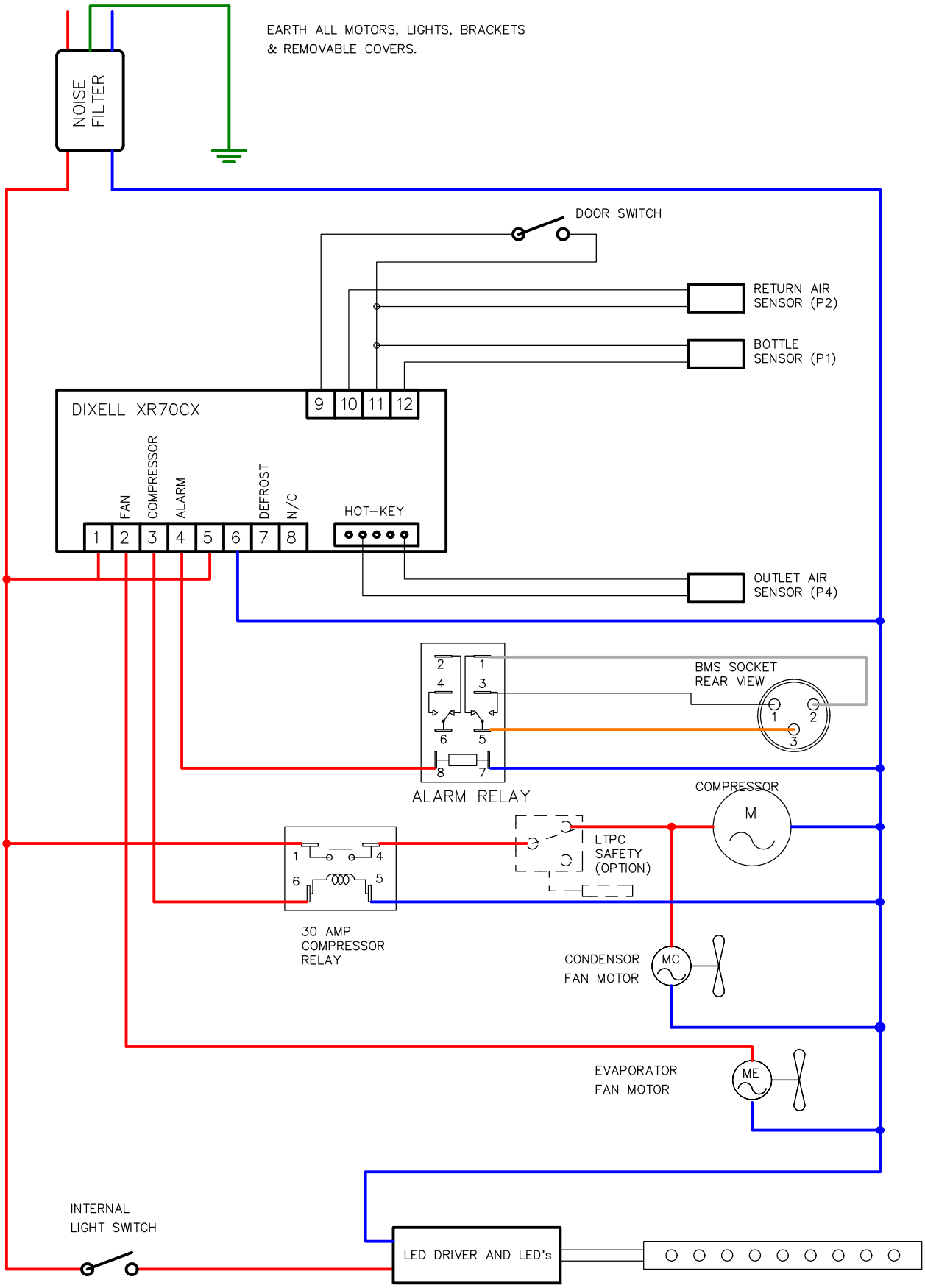


Please reattach the wires from the door switch, bottle sensor and the return air sensor (Black NTC Dixell sensor) to the common terminal 11. To do this, join the three wires together using a pin crimp connector and reattach them to the back of the Dixell Controller. The other wire from the return air sensor will require a bootlace ferrule and be attached to terminal 10. For reference, you can find a wiring schematic further on in this guide. After connecting the wires, slide the reattached controller back through the front panel.

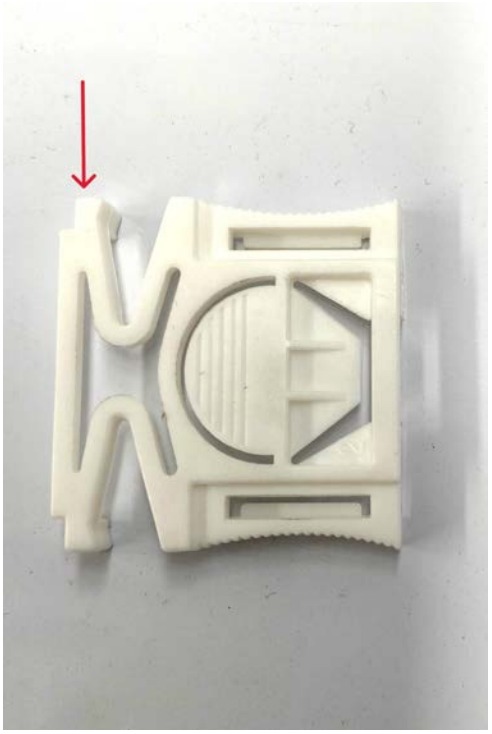


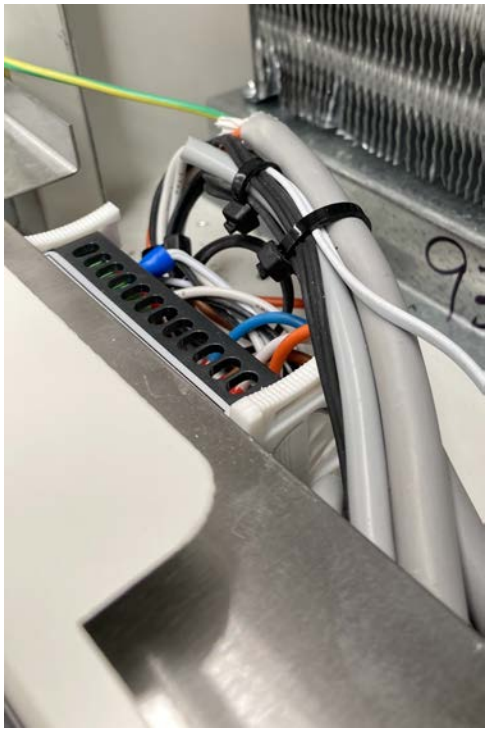
Insert the new Dixell sensor into the evaporator enclosure. Seal the surrounding holes with the original putty.

Attach the black wire under the white wall bracket and fasten the sensor to the metal bracket with cable ties.



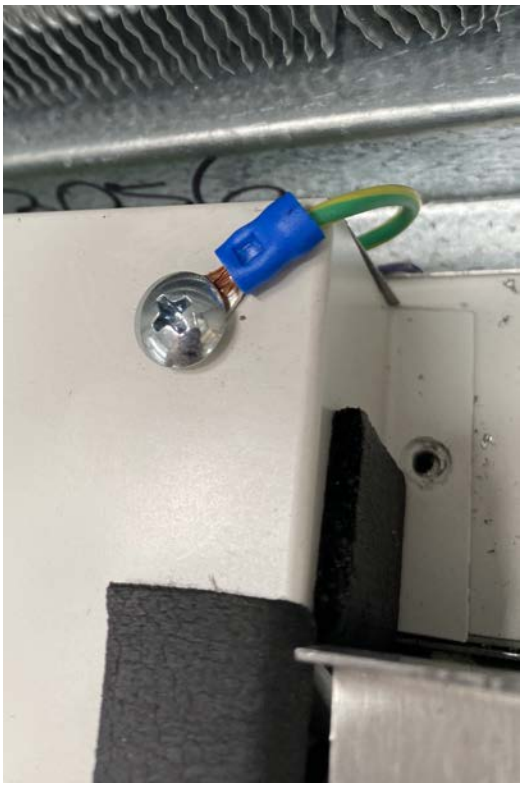
PRODUCT: PHARMACY REFRIGERATORS	
MODELS: TPR 520/750/950/1150 SERIES	22-05-18: Changed BMS wire colour
DESCRIPTION: WIRING DIAGRAM FOR WILLIAMS PHARMACY REFRIGERATORS.	04-07-17: Changed to Dixell Controller. 19-01-16: Changed to AD2-5 Controller 20-5-14: Removed capacitor off transformer.
ISSUE DATE: 22-05-18 DWG.No: TPR 520 to 1150	15-11-10: NEW MODEL NUMBERS.

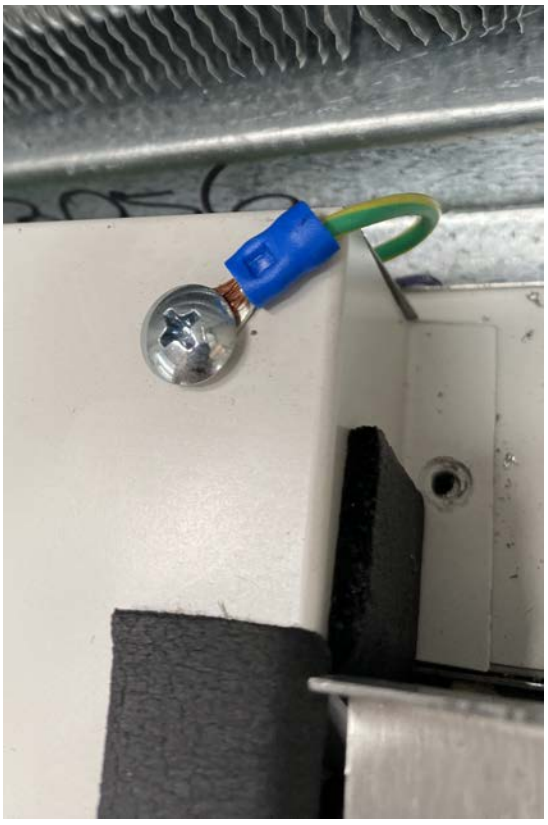




Once the controller is in the front panel, it can be fixed into place. Slide the white clips through the grooves on the side of the controller.

Note: When sliding the clips onto the controller, make sure the side designated with the red arrow in the picture above is slid on first. This the part of the clip that locks the controller in place.





Once the controller in place you can replace the cover. Place the cover over the controller and line up the holes. Once they are lined up, screw the cover down.

Once the controller is in place, you can then place the wires under the fascia neatly.

Install the the evaporator enclosure lid. Make sure that the strip of foam going across the top is placed on top of the evaporator coil. This is to ensure that hot air is cooled through the evaporator rather then go above it. Once the lid is in place you can screw it down.

Screw the cover of the top of the fridge back on (for TPR/TLR-360 cabinets only).

You can reinstall the front panel. Place the panel slightly above it's final position matching the rectangular holes with the locating blocks.

Push the panel forward onto the blocks then slide it down to lock into place.

The panel should now be in place and even on all edges.

Section 4: Power ON

Plug the cabinet back in and turn on the power. Before using the fridge please make sure that the fridge is tested and does not need further calibration.

Section 5: Support and Contact

Repair and Support is available over the telephone Monday through Thursday from 8:30am to 4pm and Friday 8:30am to 2pm. Please contact service@thermoline.com.au for email technical support.
You can also visit our website at www.thermoline.com.au for access to additional useful troubleshooting guides, operating manuals, and technical information.

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