

# BRUKERMANUAL VANNBAD OG VARMESKAP



Version: *E10022020m*

# INNHOOLD

Side

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## 1

Instruksjoner for sikker bruk

Dette produktet kan brukes av barn eldre enn 8 år og personer med fysisk eller psykisk handicap forutsatt at de er gitt opplæring i sikker bruk av produktet og hvilke farer som er involvert.

**- Barn skal ikke leke med produktet**

**Rengjøring og vedlikehold skal ikke utføres av barn uten tilsyn**



Dette produktet er laget i samsvar med 2002/95/EC, 2003/108/EC (RoHS) og 2002/96/EC (WEEE) direktivene og medfølgende vedlegg.

Produktet leveres med kabel og støpsel. Løsne den og koble til passende stikkontakt.



**Modellene MxV718, MIVxxx, MHVxxx, MJVxxx, MQVxxx må kobles til av autorisert personell.**



**Stikkontakten som produktet skal tilkobles må være jordet.**



**Modellene MFV718, MVV718 and MDV718 må kobles til en 25A bryter.**

**Modellene MIVxxx, MJVxxx, MQVxxx, MHVxxx må kobles til en 3-fas stikkontakt eller en 3-fas bryter.**



**Hvis tilførselskabel er skadet, må den byttes av leverandør, servicepersonell eller annet kvalifisert personell for å unngå farer.**

**For å beskytte mot overslag fra andre elektriske apparater, er vannbadene utstyrt med ekstra jordings tilkobling på siden, merket med symbolet:**



**Modellene MF, MD, MV, MR, MI, MH, MJ og MQ er utstyrt med en tilbakeslagsventil for tilkobling til vann nettet med et maksimalt trykk på 2000KPa.**



**Sjekk at tømmeventilen er tett og stengt før det fylles opp vann .Maksimalt vannnivå vises med tegn inni alle vannbad modellene..**

**Vannivået må ikke overstige nivå indikatoren.**



**Forlat aldri produktet uten vann!**



**For vannbadene, sjekk hyppig at elementene er fullstendig dekket under vann. Hvis vannet har fordampnet, vil termostaten vise "ALE", det kommer lydsignal og effekten til elementet slås av. I dette tilfellet merk følgende, fyll ikke inn vann mens produktet er i drift, fordi elementet kan bli ødelagt. Skru av produktet og fyll på vann når elementene har blitt kalde.**

## 2

### Rengjøring



**Før rengjøring skal alltid produktet være elektrisk frakoblet.**



For riktig drift og beskyttelse av produktet anbefales **hyppig rengjøring**.

**Bruk ikke skarpe** eller lignende redskaper som kan bety skade på produktet.



Vask innvendig og utvendig med **mildt såpevann**.

**Bruk ikke vaskemidler som inneholder klor eller syrer. Disse kan gi korrosjon på rustfrie overflater.**



**Bruk aldri høytrykkspyler til rengjøring.**

**Periodisk rengjør vannbadets varmeelement med avkalkingsmiddel. Ellers vil effekten på elementet etter hvert gradvis svekkes.**

## 3

Vedlikehold

***Før vedlikehold skal alltid produktet være elektrisk frakoblet.***

Sjekk periodisk funksjonen på termostaten. Tegn på koking i vannbadet betyr at temperaturen er for høy. Koble fra produktet og tilkall **kvalifisert tekniker**.



***Produktet har ikke deler som enkelt kan fikses. For alle tekniske problemer skal kvalifisert tekniker kontaktes.***

## 4

Feilsøking

I tilfelle feil funksjon, kontakt di leverandør og beskriv problemet. Husk å noter modell og serie nummer før du tar kontakt.

Typeskiltet med de tekniske data er plassert inni produktet.



## 5

### Innledning

Takk for at du har kjøpt dette produktet. Når du velger dette produktet, har du valgt alle fordelene med varmeteknologi som sikrer deg kvalitet, holdbarhet og pålitelighet.

For å gjøre deg kjent med egenskapene på ditt nye produkt, anbefales at du leser nøye gjennom denne manualen.

Vi håper du blir fornøyd med ditt nye produkt.

Ta vare på brukermanualen. I tilfelle produktet selges til ny eier, husk å med levere denne manualen.

## 6

### Les nøye følgende instruksjon før bruk

Dette produktet brukes til å oppbevare ferdig laget mat på passende temperatur i et vanntett basseng, med å plassere GN kontainere over eller med luft varme i varmeskap. Vann eller luft blir varmet med element som er kontrollert med en termostat. Vannbadet kan enten være mobilt eller plassert på et nøytralt eller varmeskap, med eller uten display topp.

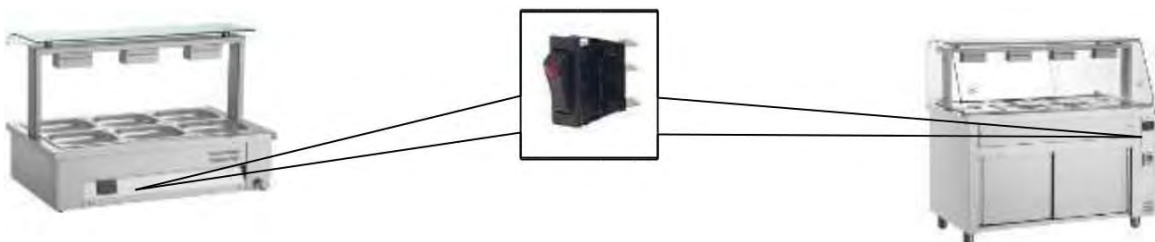
## 7

### Oppstart

Hold inne on/off bryteren. Termostaten gjennomfører en selvtest i noe sekunder (nedtelling).



For lys, bruk bryteren til høyre på termostaten.



## 8

### Steng av produktet i en lengre periode

I dette tilfellet er det nødvendig å:

- ✓ Sett produkter på OFF.
- ✓ Koble fra elektrisk
- ✓ Tøm produktet og rengjør som beskrevet overfor.
- ✓ Fjern flekker fra matrester som senere er vanskelig å vaske bort.

Read carefully these instructions before installing and using this device and keep them for future reference. Attention to installation and electrical wiring. Use this device only as described in this document and never use itself as a security device. The device must be disposed of in accordance with local standards for the collection of electrical and electronic equipment.



### DESCRIPTION

LRB is a heating controller for heated cupboards and Bain-marie, suitable for all applications and has the following specifications: one NTC/PTC temperature sensor which controls the room temperature; 3 indication digits with resolution 0.5°C and 4 buttons; one digital input for water level control; a buzzer in case of an alarm; 2 relays: external resistance relay 30A 250VAC which is restrained on the plastic box of the controller with a holding frame and one ON/OFF relay 10A 250VAC.

### THERMOSTAT'S DIMENSIONS

ATTENTION: Read carefully the technical specifications and make sure that the working conditions are appropriate. According to safety standards, the device must be fastened in such a way that it cannot be removed without the use of tools.



Dimensions are in mm. The device is mounted in panel hole 29x71mm and it is restrained with plastic side brackets.



### INDICATIONS AND BUTTONS FUNCTION

Display indications	
	resistance ON
	fan ON
	alarm ON
	malfunction ON



Keyboard	
	enter/exit the parameter's menu confirm new value of a parameter
	display the parameter's value
	down arrow mute buzzer ON/OFF cabinet
	up arrow

For more indications regarding the alarms please see the alarm's table at page 2.

### ADJUSTING ROOM'S TEMPERATURE – SET POINT

1. Press to display the first parameter SPo.
2. Press to display its value. With or change its value.
3. Press to save the new value. The cabinet is working properly with the new adjustment.

### INDUSTRIAL FACTORY SETTINGS OF CABINET

If the alarm "Pro" appears on screen, please enter one of the following programs based on your cabinet's model:

1. Choose from the following table the corresponding program of your cabinet.
2. Press to display the first parameter SPo. Press once and the parameter Cod is displayed.
3. Press to display its value and press to enter the cabinet's program. Press to store the cabinet's program to parameter Cod.
4. Press again to exit the parameter menu. All appropriate settings are now stored and the cabinet is working properly.

Cabinet's model	Program
Bain-Marie (without water level sensor)	31
Heated Cupboard	32
Bain-Marie (with water level sensor)	33
Startup program	40

### ON/OFF THERMOSTAT

1. Press for 3 seconds to activate or deactivate the cabinet.

## PARAMETER TABLE

No	Code	description	min	max	UOM	INDUSTRIAL FACTORY SETTINGS			
						Bain-Marie (without water level sensor)	Heated Cupboard	Bain-Marie (with water level sensor)	Startup program
						Program 31	Program 32	Program 33	Program 40
1	<b>SPo</b>	SET POINT: room temperature setting	SLo	SHi	°C/°F	75	70	75	10
2	Cod	Access code to the following parameters Cod = 22.	0	255	-	22	22	22	22
3	SLo	Lower setting limit of SPo	-50.0	SHi	°C/°F	25	25	25	10
4	<b>SHi</b>	Maximum setting limit of SPo	SLo	150	°C/°F	90	72	90	90
5	diF	Differential of room temperature SPo (thermostat delay)	0.1	25.5	°C/°F	5	3	5	5
6	AJ1	Room sensor offset	-9.9	15.5	°C/°F	0	3	0	0
7	LAo	Relay ON/OFF operation and fan indication on screen 0 = relay ON and fan indication turns ON 1 = relay OFF and fan indication turns OFF	0	1	-	1	0	1	0
8	dEC	Temperature indication in integer or decimal form 0 = integer display 1 = decimal display	0	1	-	0	0	0	0
9	Sen	Sensor type NTC/PTC 0 = PTC 1 = NTC	0	1	-	0	0	0	0
10	C_F	Temperature measurement unit: toggling between °C/°F do not adjust the SPo automatically, it must be changed by the user 0 = °C 1 = °F	0	1	-	0	0	0	0
11	AtE	Water level control 0 = OFF 1 = ON	0	1	-	0	0	1	0
12	Pro	<b>Cabinet's program is displayed</b> (industrial factory settings) – the parameter cannot be programmed	-	-	-	31	32	33	40

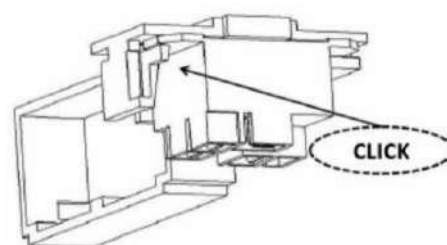
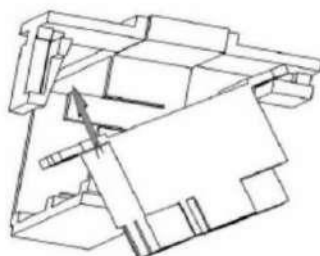
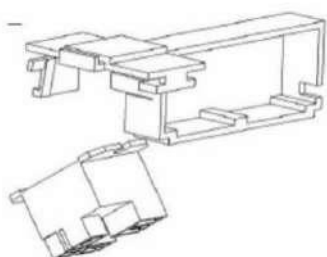
## ALARM TABLE

1	LF1	Room sensor malfunction
2	ALE	Low water level alarm: the heating relay is switched OFF (see WATER LEVEL CONTROL page 2)
3	Pro	Enter program alarm: enter a program based on your cabinet model (see INDUSTRIAL FACTORY SETTINGS OF CABINET page 1)
4	EEr	Error in memory RAM: re-enter the SPo of the cabinet (see ADJUSTING ROOM'S TEMPERATURE – SET POINT page 1)

The alarms are automatically deactivated once the cause of the alarm disappears.

## RELAY HOLDING COMPONENTS

The relay holding components consist of a plastic frame and a plastic base restraint. Three relays can be restrained on the frame simultaneously. The relay is secured over the frame with the help of the restraint and then the frame is secured over the controller's shell. The connections of the relay should be facing down to be protected from falling liquid, as in the following pictures.





## WATER LEVEL CONTROL

When the water level of the cupboard drops below the electrode, the resistance relay switches OFF, the buzzers is activated and the alarm "ALE" appears on screen. Only when water is added and reaches the desired level, the alarm "ALE" disappears and the resistance relay switches ON based on the SPo.

## PROGRAMMING A PARAMETER

**ATTENTION:** to gain full access to the parameter's menu, the 2<sup>nd</sup> parameter Cod must be adjusted to 22 (see parameter table page 2).

1. Press to enter the parameter menu.
2. Choose the parameter you want to adjust by pressing or and press to display its value.
3. Press or to change its value and then press to store the new value.  
Press if you want to cancel the new value and the parameter's name is displayed.
4. Press to exit the parameter menu.

## TECHNICAL SPECIFICATIONS OF THE THERMOSTAT

Power supply: 230VAC 50/60Hz / Maximum power consumption: 3W

It is recommended using a power supply safety fuse: 0.5A (not included)

Room and evaporator temperature sensors NTC 10K 1% 25°C IP68 with rubber tube and temperature range -37÷+110°C (-34÷+230°F) or PTC 1K 25°C with metal tube and temperature range -50÷+110°C (-58÷+230°F) / Accuracy: ±0.5°C

Digital input for water level control / Alarm buzzer

2 relays: external resistance relay 30A res. 250VAC normally open contact / relay 10A res. normally open contact / Max current load 16A

Connections: cable cross section 2.5 mm<sup>2</sup> for all relays / cable cross section from 0.25 to 1.0 mm<sup>2</sup> for the sensor

Connections with terminal blocks using cable with cable cross section up to 2.5 mm<sup>2</sup> / It is recommended using a torque wrench with maximum torque 0.4Nm

Operating temperature: -15÷+55°C / Storage temperature: -20÷+80°C

Dimensions front 79x36mm and depth 79mm / Protection IP 65 front

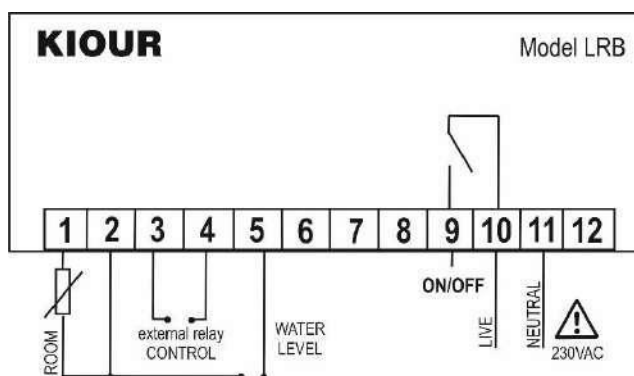
The device is mounted on panel hole 29x71mm and it is restrained with plastic side brackets.

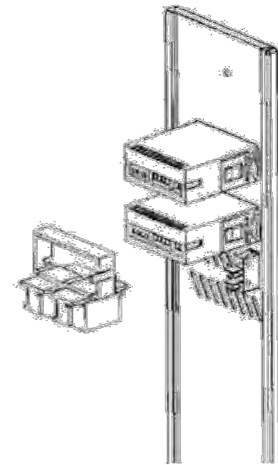
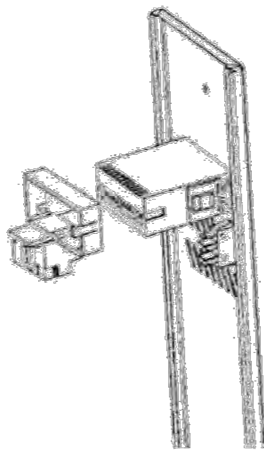
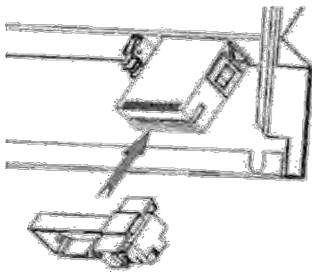
Firmware: V1

## ELECTRICAL DIAGRAMS

**ATTENTION:** according to safety standards, the device must be properly positioned and protected from any contact with electrical parts. The device must be fastened in such a way that it cannot be removed without the use of tools. Disconnect the main safety switch of the installation before proceeding to any maintenance. Disconnect the power supply of the device before proceeding to any maintenance. Do not place the device near heat sources, equipment containing strong magnets, in areas affected by direct sunlight or rain. Prevent electrostatic discharges and sharp objects from been inserted to the device. Separate signal cables from power supply cables to prevent electromagnetic disorders. Signal cables must never be in the same pipe with the power supply cables.

Thermostat LRB



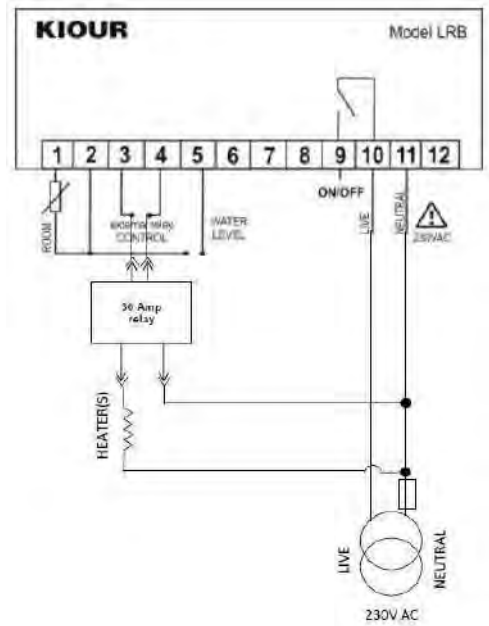
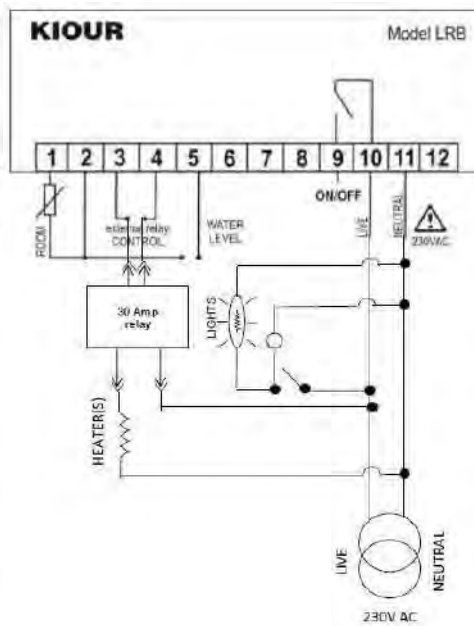
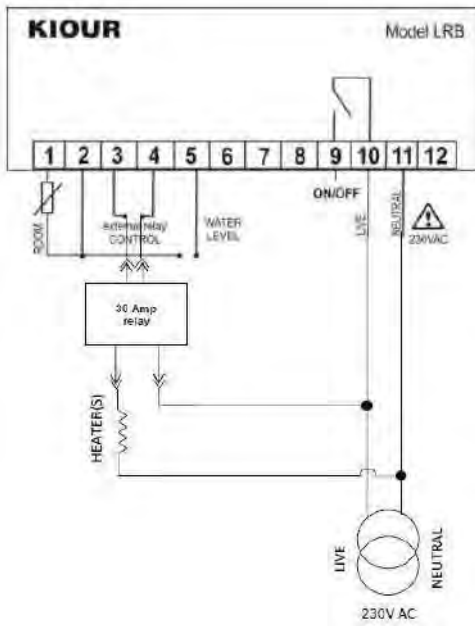


ELECTRICAL DIAGRAMS

Table B-M without glass

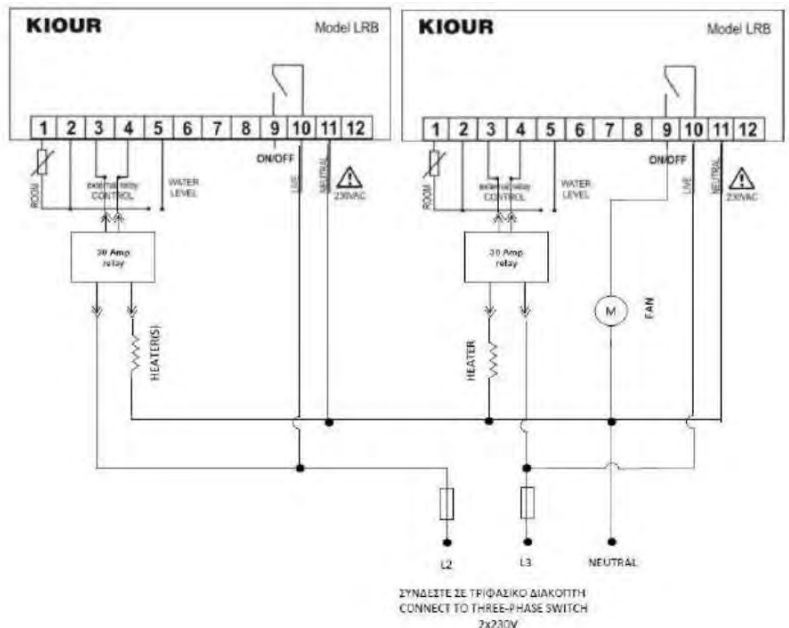
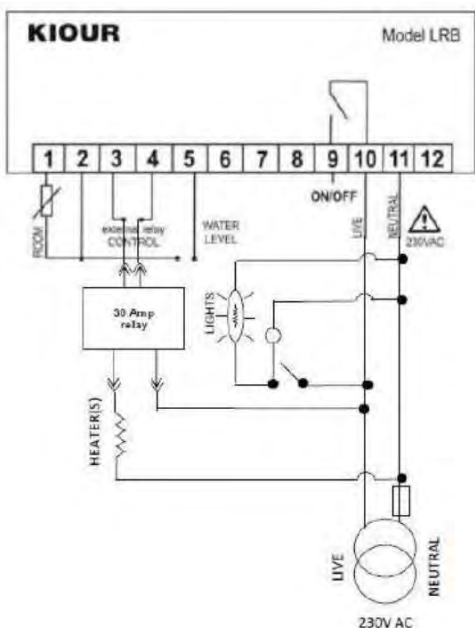
Table B-M with glass

Floor B-M without glass

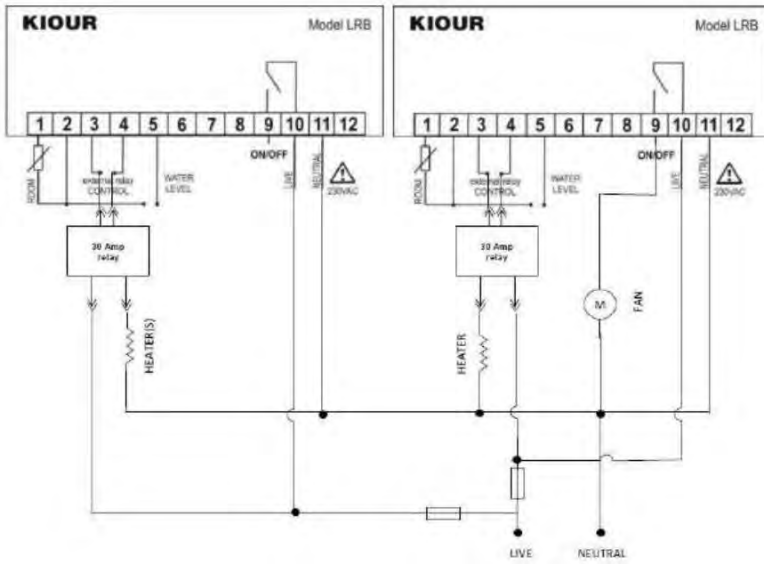


Floor B-M with glass

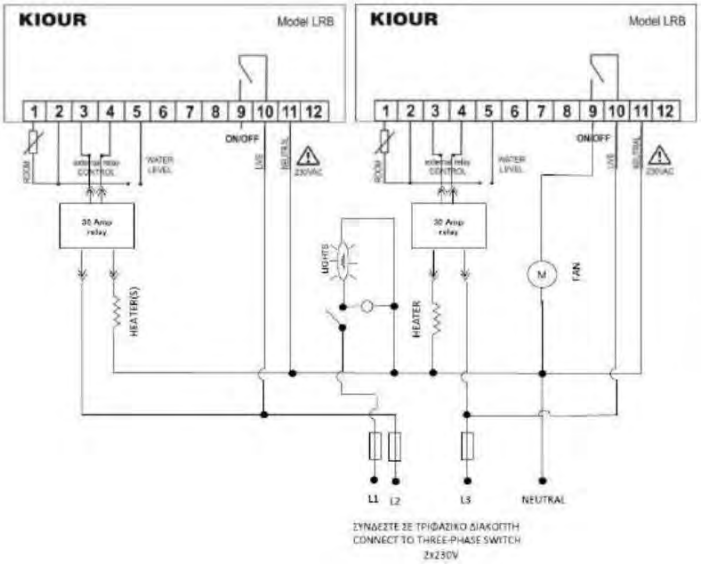
Floor B-M without glass with heated cupboard 3PH



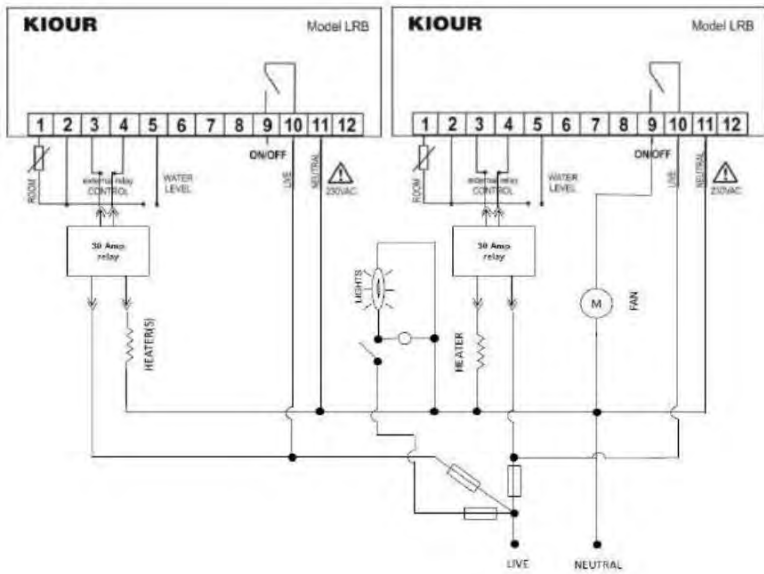
Floor B-M without glass with heated cupboard 1PH



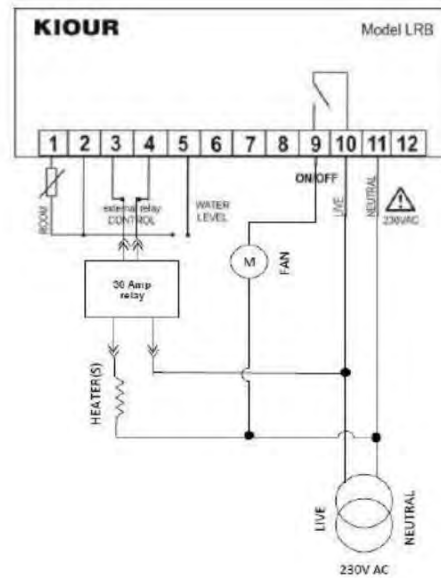
Floor M-M with glass with heated cupboard 3PH



Floor B-M with glass with heated cupboard 1PH



Heated cupboard





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