KÜPPERSBUSCH
AFTER-SALES SERVICE

Integrated built-in/ built-under appliances with Quick-Set installation system

GB

VKS-H	Technical manual Built-in/built-under appliances		H8-420-14-01
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General information on built-in and built-under appliances

The European Guidelines

The legal basis is represented by the EU frame guideline 92/75/ECM and the execution guideline 94/2/EU "Energy labelling and uniform product information for electrical household refrigerator-freezer combinations".

Information for the user

New information presented in the sales room in the form of energy labels and tabular technical data lists included in the sales documents enable the user to evaluate energy consumption and further important characteristics of an appliance at a glance and make respective comparisons. Thus, the environmental acceptability will still become more important for the buying decision .

How the industry proceeds:

The manufacturers shall provide the trade with the label free of charge. The label consists of two parts: the neutral manufacturer base label and the appliance-specific data strip. The base labels required for your appliances exihibited for sale (50 pieces/unit) can be ordered free of charge at:

Energielabel
Kühl- und Gefriergeräte
D-60579 Frankfurt am Main

The respective data strips are supplied together with the appliances.
In addition, the appliance-specific data are indicated in the sales documents.

How the trade proceeds:

The task of the trade is to mark the appliances exhibited in its sales rooms, and only these, with the label. For this purpose, base label and appliance-specific data strip are combined and located at a well visible position on the appliance. Catalogue sellers have to print specific data of the label in their catalogues.

How the classification is established:

The classification of an appliance depends on its energy consumption and the size of the individual temperature compartments. The operand is not the actual capacity as indicated on the label but rather the so-called corrected useful capacity. In this way the fact that compartments with different temperatures cause a higher or lower energy consumption is considered.

The corrected useful capacity is the sum of the volumes of the individual compartments each weighted with a determined factor.

The most important factors are:

Refrigerator section	1.00
1-star freezer compartment	1.55
2-star freezer compartment	1.85
3- or 4-star freezer compartment	2.15
No-Frost-freezer compartment	2.58
Cellar compartment	0.75
Fresh storage compartment near 0°C	1.25

The ACTUAL energy consumption [kWh/year] is put into relation with a RATED energy consumption (average value defined by EU guideline for an appliance of the respective type and size) under consideration of the corrected useful capacity. This relation value, indicated in percent, is decisive for the classification.

Class A	below 55 %	
Class B	55 % to 75 %	
Class C	75 % to 90 %	
Class D	90 % to 100 %	(average consumption = 100%)
Class E	100 % to 110%	
Class F	110 % to 125 %	
Class G	above 125 %	

An example:

Fridge-freezer combination with refrigerator section of 236 litres, 4-star freezer compartment of 74 litres and an ACTUAL energy consumption of 329 kWh/year:

Corrected useful capacity:	236 litres x 1.00 + 74 litres 2.15 = 395.1 litres
Standard consumption:	610 kWh/year (RATED energy consumption defined by EU guideline = 100 % value)
Classification:	329 kWh/year: 610 kWh/year = 53.9 % - Class A

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1. Advantages of built-in appliances

1.1 General

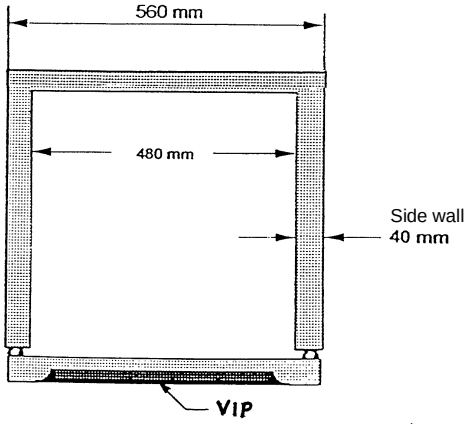
- Flexibility to meet special customer requirements
- Low energy consumption with great useful capacity
- Very easy, quick and safe integration of the appliances into the niches
- New Quick-Set fixed furniture door system, quick and easy door assembly (patented)
- Low noise level (-2 dBA)
- Easy-to-clean interior
- Appliances are suitable for temperature classes N, SN, ST (no condensation)
- Additional drawer basket (rollers) (IKE 239-4)
- Overall European market covering

1.2 Vacuum insulation panel

- Fibre glass laminate has been vacuum-packed in stainless steel foil
- Energy consumption is reduced by up to 26 %
- 7 times higher insulation value than current polyurethane foam
- Made of materials that are generally recognized as safe
- 100 % recyclable

1.3 Environmental acceptability

- Our vacuum panel of fibre glass laminate is 100 % recyclable.
- This super insulation neither contains HCFC nor any other environmentally harmful materials
- Super insulated built-in refrigerators



2. Light/thermostat unit of the built-in appliances

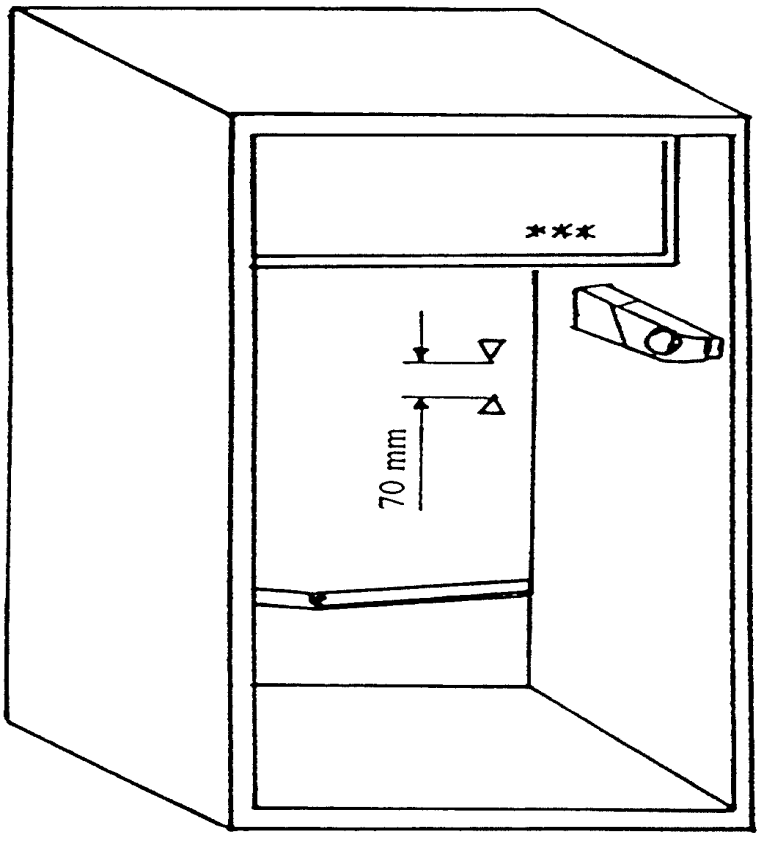
2.1 Marked measuring point for thermostat monitoring

Two arrows have been engraved on the rear wall of the inner container which indicate the measuring area for the thermostat monitoring.

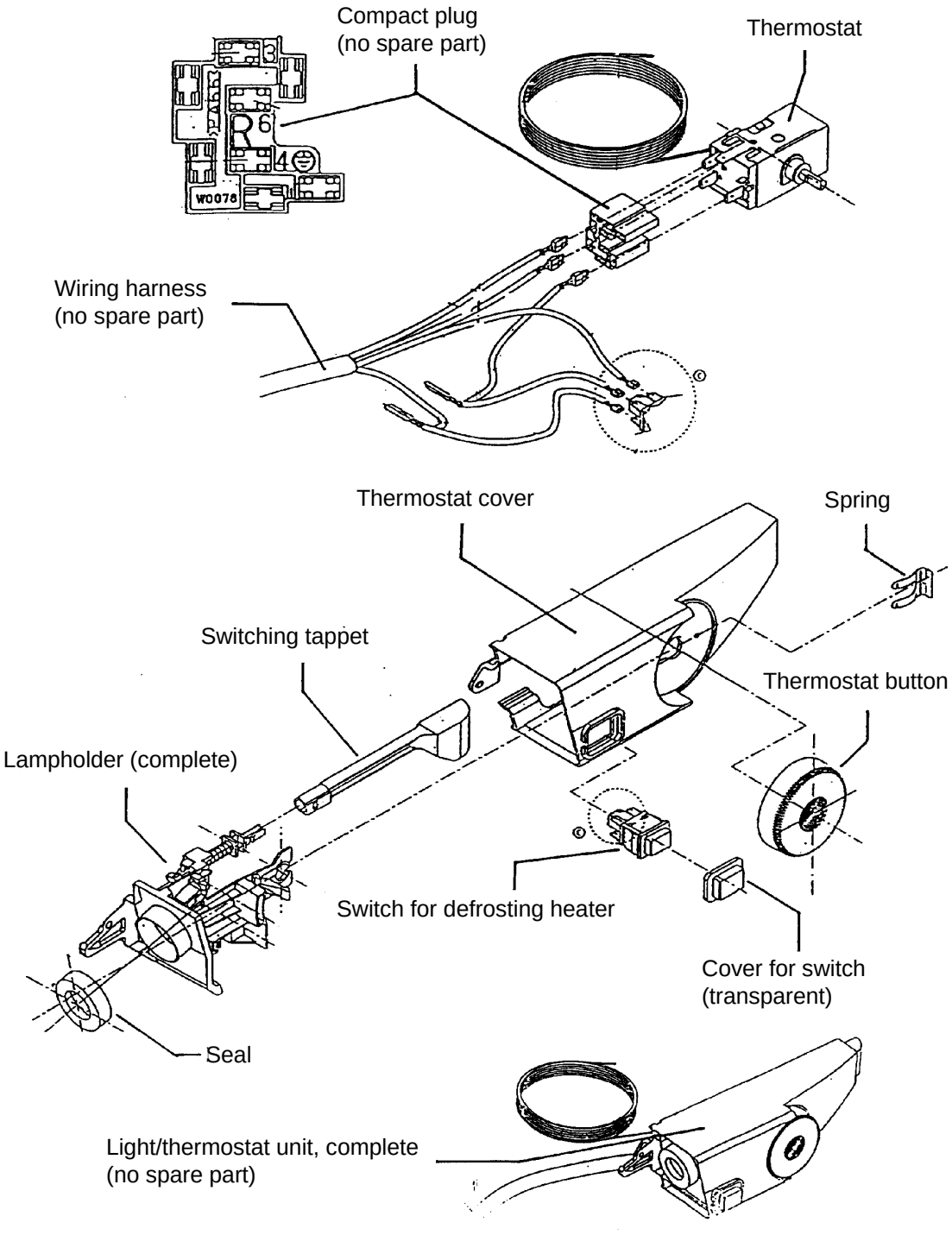
2.2 Note for monitoring the thermostat switching values

The measuring area at the rear wall of the inner container must be dry!

Fix the thermometer detector (thermal element) by means of an adhesive tape of min. 3 cm width in the measuring area (70 mm). "Scotch tape" is especially suitable for this purpose. The measured switching-off values can be up to 2K warmer than the actual values. The switching-on values are indicated almost precisely.



2.3 Light/thermostat unit of the built-in appliances



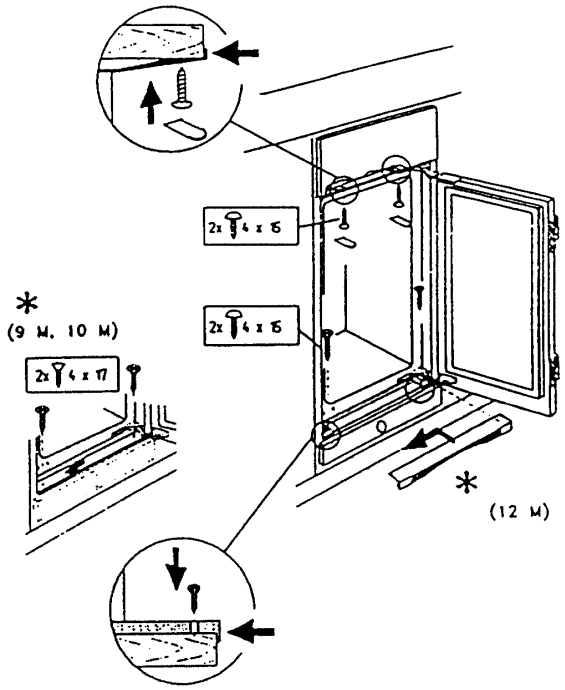
3. QUICK-SET installation system

- An installation template is no longer required.
- No markings have to be made by the service technician.
- The appliance may not be pushed too far into the cupboard (top and bottom stop).
- The furniture door is installed directly in a perpendicular position.
- Only one service technician is required, a "holder" is no longer needed!
- Adjustment is not performed behind the door sealing, but at a visible point (at the side). Before assembly is completed, the adjusting device will be covered.
- There are no loose sheets any longer (assembly plates are factory-mounted).
- No more predrilling by kitchen furniture manufacturers required.
- Assembly time reduced by 50 %!

3.1 Depth stop

Top and bottom depth stop

4-point fastening



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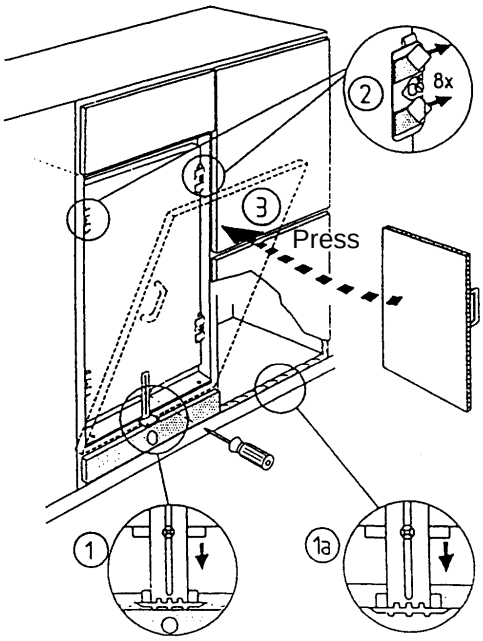
3.2 Assembly of the furniture door

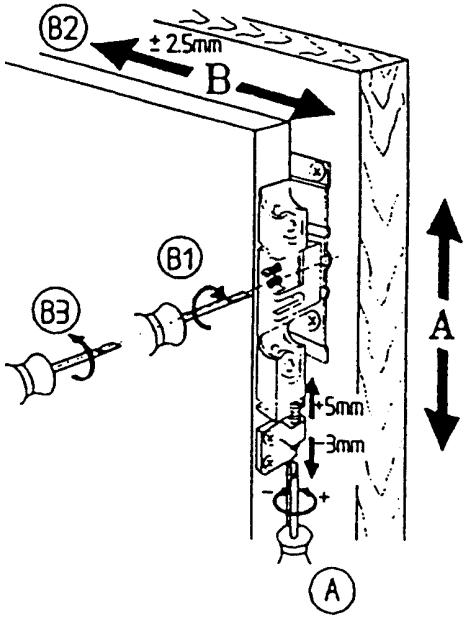
without template



3.3 Adjustment of the furniture door

All adjusting screws are thread screws "M6".

1 turn = adjustment of 1 mm



<u>Lateral adjustment +/-2.5 mm</u>

In case of subsequent readjustment turn the screw "B1" one rotation to the right beforehand.

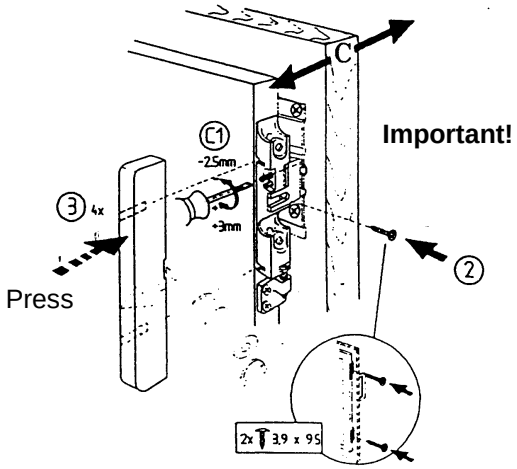
<u>Height adjustment +5 mm / -3 mm</u>

(adjusting screw "A")

Depth adjustment +3 mm / -2.5 mm

(adjusting screw "C1")

In case of a subsequent readjustment the fastening screw "2" must absolutely be loosened beforehand.



Important!

3.4 Disassembly of the furniture door

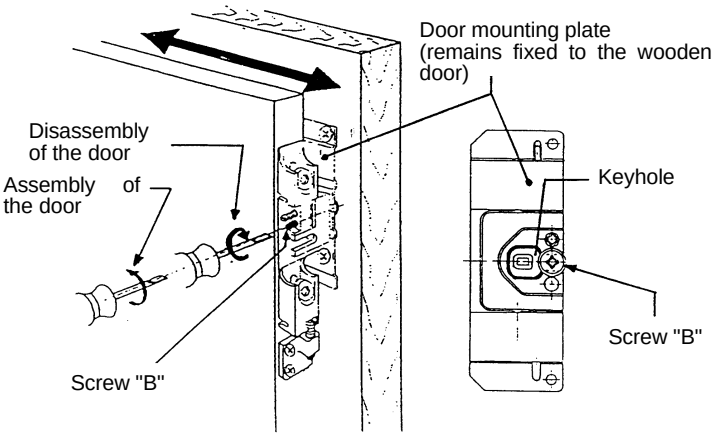
Turn screw "B" at all four adjustment housings **4 rotations** to the right.

Shift wooden door to the left- or righthand side and remove it towards the front (keyholes).

3.5 Assembly of the furniture door

Insert the two screw heads "B" at the side with the handle into the keyholes of the door assembly plates, slightly press-on the door and slide it in the direction of the hinge. Coarsely centre the wooden door and tighten all four screws "B" by turning them to the left.

Note:
Readjustment of the depth and height dimension of the wooden door is not required, since these adjustments are not changed during the disassembly of the wooden door.



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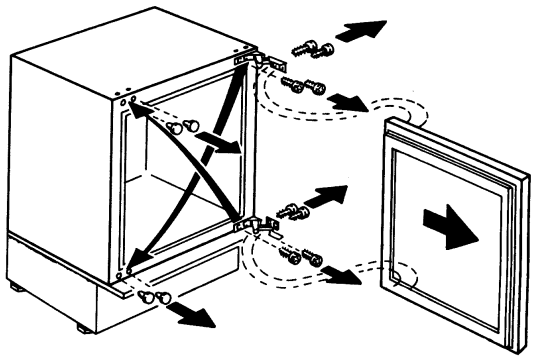
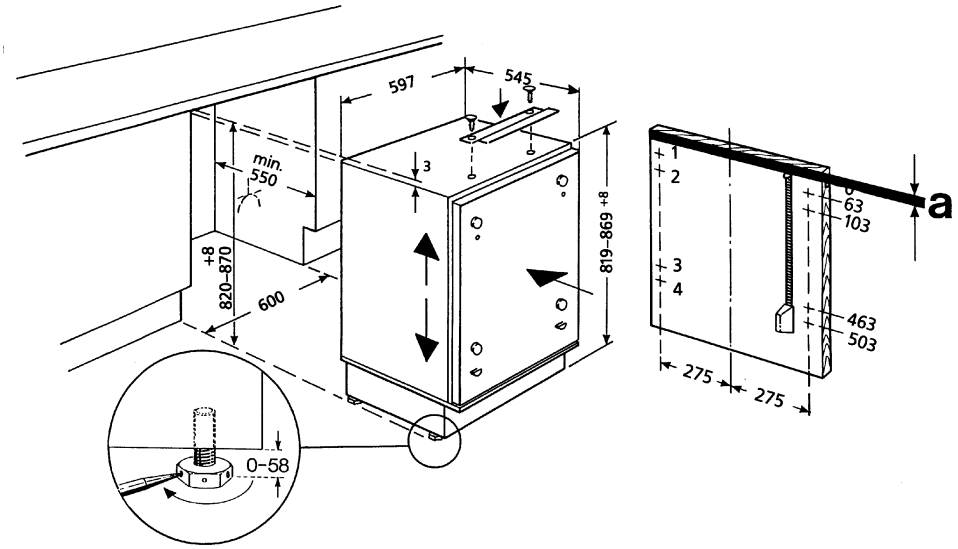
4. Installation instructions of built-under appliances

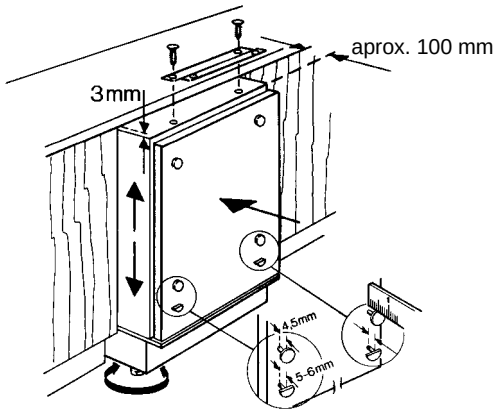
4.1 Changeover of the door hinging before installation of the appliance



Dimensions for installation without template

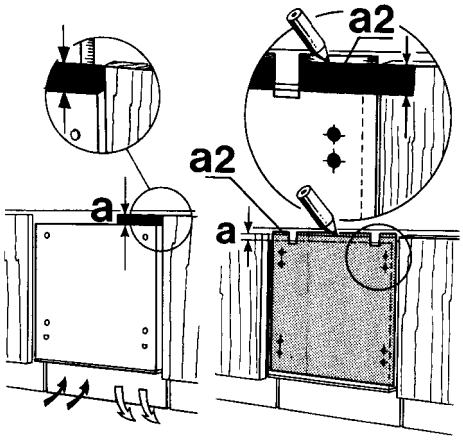


Detail

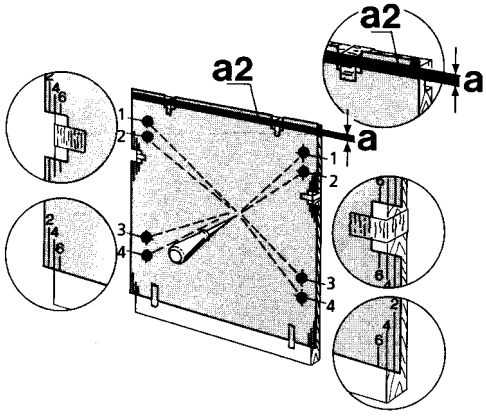


Measure "a" on adjacent cupboard.

Mark "a2" on template.



Place template so that "a2" is in line with the upper edge of the door (mark points 1 - 4).



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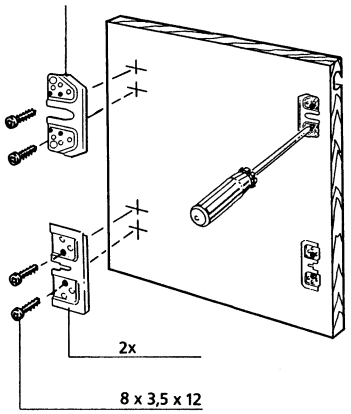
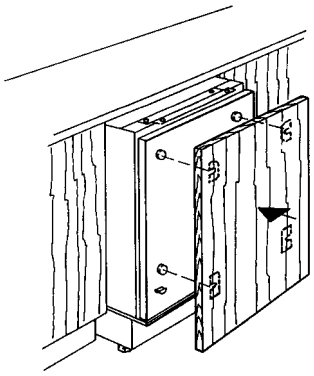
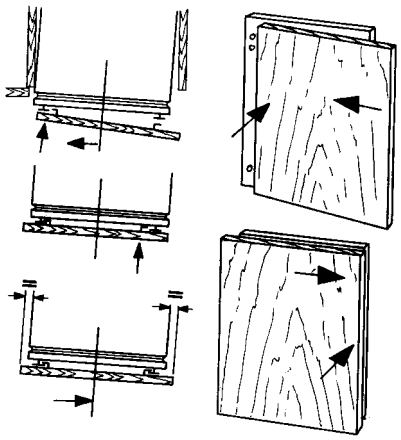
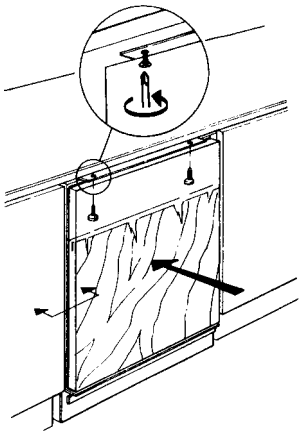
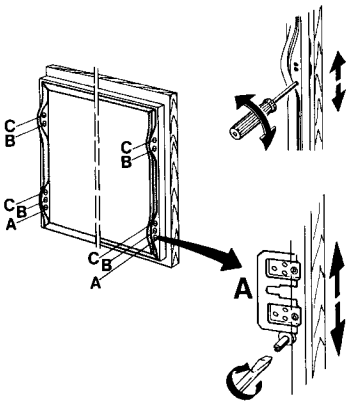


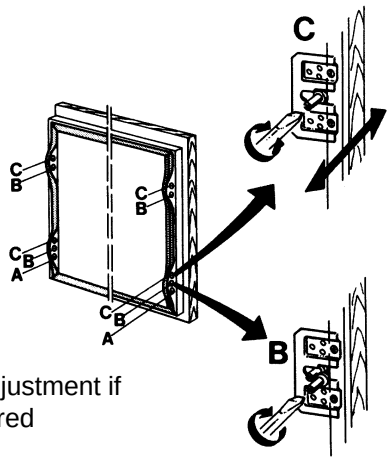


4.2 Assembly of door shell





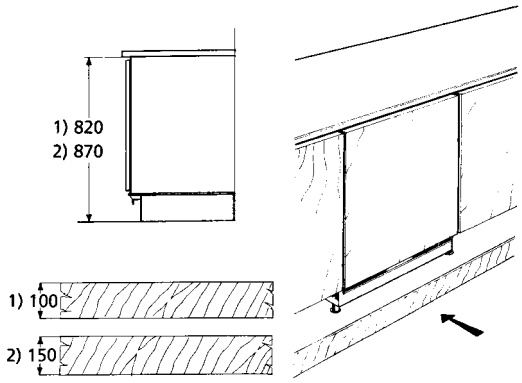




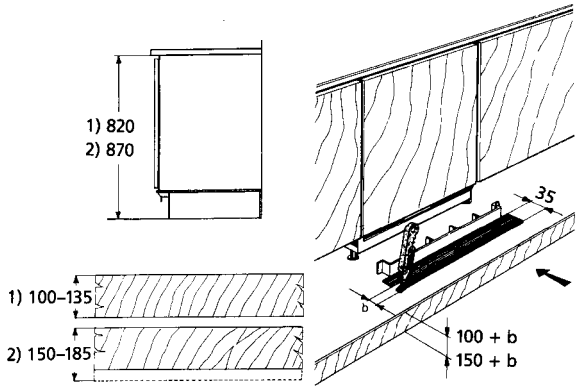
Readjustment if required

4.3 Assembly of plinth strips

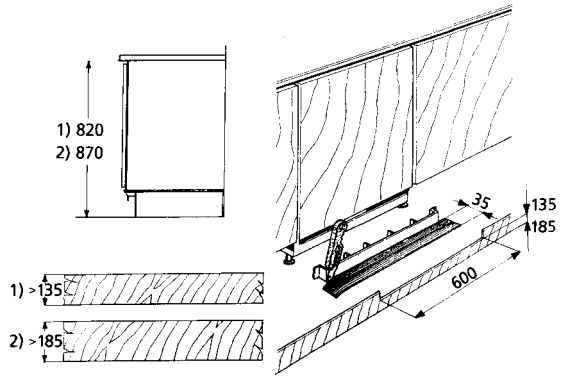
Variant A: Continuous plinth strip

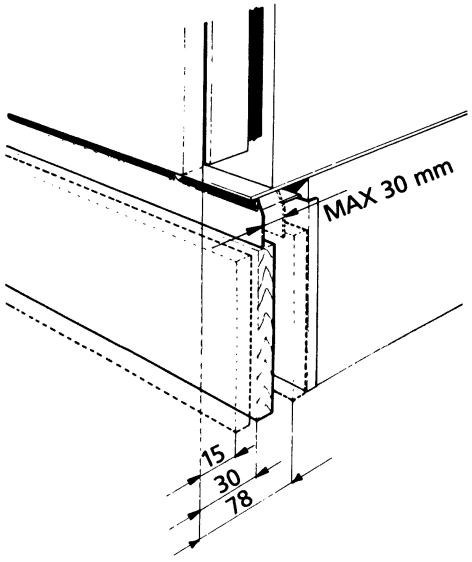


Variant B: Continuous plinth strip, ventilation grid shortened



Variant C: Continuous plinth strip cut out, ventilation grid shortened





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5. Technical Information

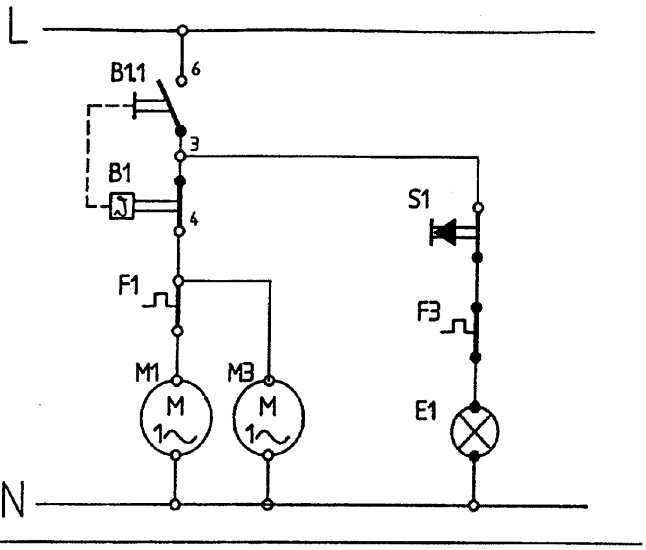
Model		IKU 158-4	IKU 168-4	IGU 138-4		
Product no.		8551 003 01020	855100101020	855302401020		
From poduct date						
Dimensions	(H x W x D) mm	850/600/550	850/ 600/550	850/600/550		
Gross capacity	l	136	113	113		
Net capacity	l	131	100	100		
Refrigerating agent	R 600 a					
Amount of refrigerating agent	g	36	36	40		
Switching-on values of thermostat (min/max)	°C	+6	+6	-17,5/ -25		
Switching-off values of thermostat (min/max)	°C	-14/-29	-14/-29	-26/-35		
Electr. connections						
Voltage / Frequency	V / Hz	220/ 240V / 50 Hz				
Energy consumption (24 h)	kWh	0,42	0,79	0,79		
Refrigerating capacity	W	86	54	86		
Freezing capacity (24 h)	kg			12		
Circuit diagram						

Model		IKE 169-4	IKE 149-4	IKE 239-4	IKE 219-4	ITE 119-4
Product no.		8551108 01000	855110901000	855111001010	855110701010	855311301000
From product date						
Dimensions	(H xW x D) mm	870/565/550	870/565/550	1221/565/550	1221/565/550	870/565/550
Gross capacity	l	157	140	221	207	108
Net capacity	l	155	136	219	202	91
Refrigerating agent	R 600 a					
Amount of refrigerating agent	g	22	28	26	35	40
Switching-on values of thermostat (min/max)	°C	+4,5/+4,5	+4,5/+4,5	+4,5/+4,5	+4,5/+4,5	-16,5/-24
Switching-off values of thermostat (min/max)	°C	-12/-26	-12/-26	-12/-26	-12/-26	-26/-34
Electr. connections						
Voltage / Frequency	V / Hz	220/ 240V / 50 Hz				
Energy consumption (24 h)	kWh	0,42	0,63	0,44	0,71	0,75
Refrigerating capacity	W	54	82	47	82	86
Freezing capacity (24 h)	kg		2		2	16
Circuit diagram						

6. Circuit diagrams

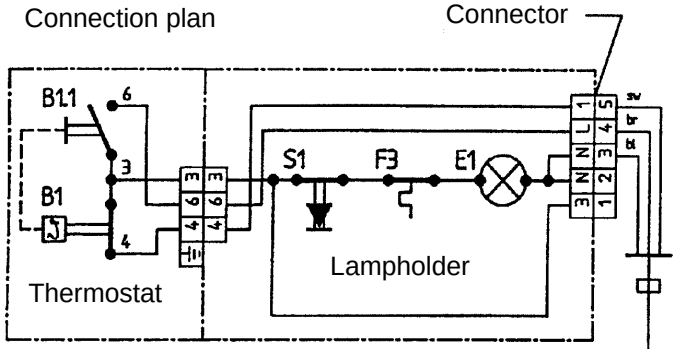
6.1 IKU 168-4

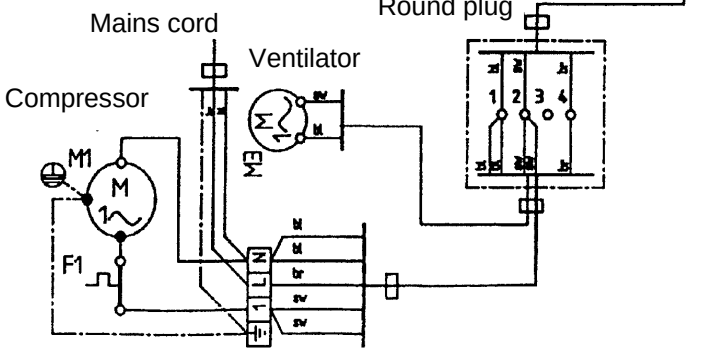
Circuit diagram



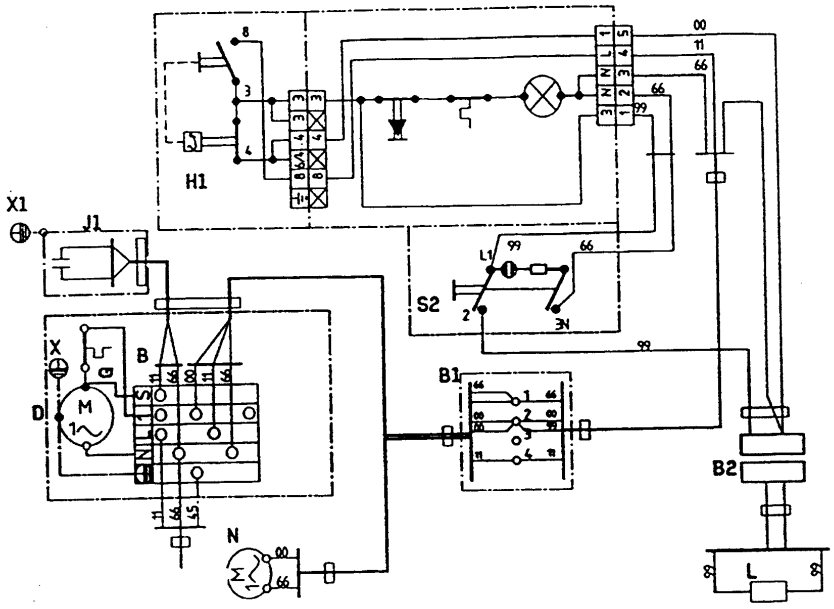
Connection plan

Connector

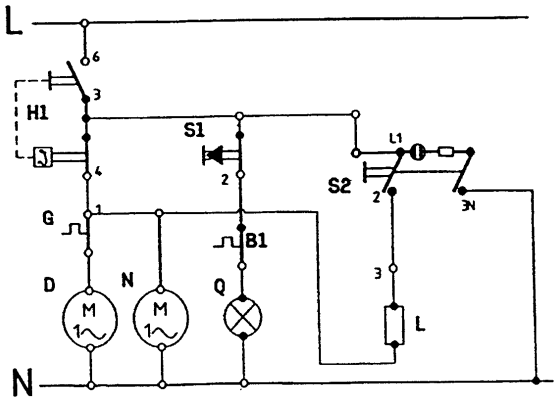




6.2 IKU 158-4



D	Compressor
F	Starting relay
F1	PTC
G	Motor protection
H	Refrigerator thermostat
H1	Thermostat
H7	Room thermostat
J1	Operating capacitor
L	Foil heater
N	Fan
P	Light button
Q	Lamp
S2	Switch with pilot light (yellow)
A	Plug
B	Terminal box
B1	Terminal box
B2	Terminal box
X	Compressor earthing
x1	Thermostat earthing
00	Black
11	Brown
22	Red
33	Orange
45	Yellow-green
66	Blue
77	Violet
88	Sky blue
99	White



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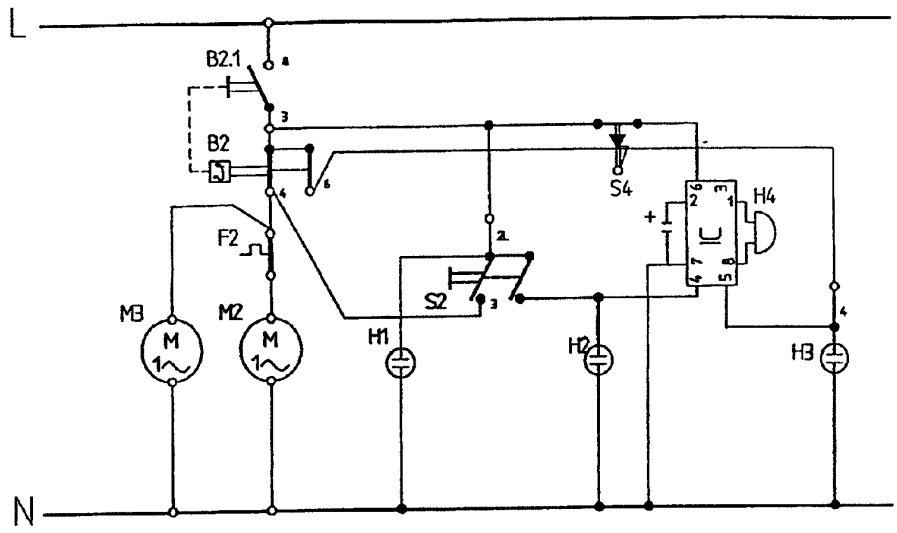
Explanation of abbreviations

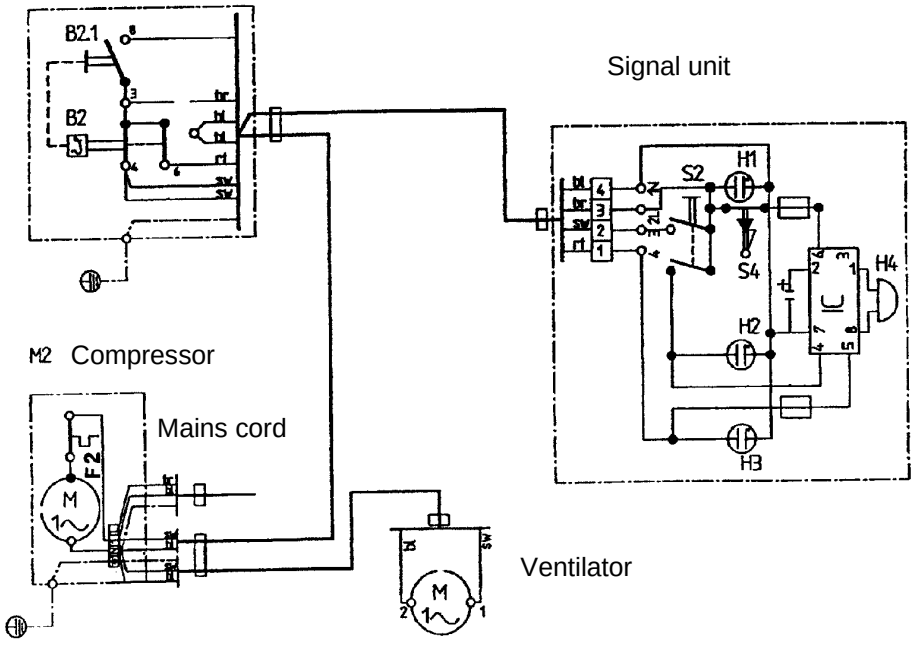
B 1	Temperature regulator - refrigeration
B 1.1	Switching-off contact (temperature regulator)
B 2	Temperature regulator - freezing
B 2.1	Switching-off contact (temperature regulator)
B 2.2	Signal contact (temperature regulator)
B 3	Electronic thermostat
B 3.1	Thermostat module
B 3.2	Operation and display module
B 4	Fixed thermostat for ambient temperature
E 1	Lighting
E 2	Defrosting heater
E 3	Front frame heater
E 4	Trough heater
E 5	Diaphragm unit heater
E 6	Front plate heater
E 7	Bottom heater
E 8	Winter heater
F 1	Overload protection M 1
F2	Overload protection M 2
F 3	Thermal cut-out (Light/thermostat combination)
F 4	Thermal cut-out (plinth cabinet)
H 1	Pilot light green
H 2	Pilot light yellow
H 3	Pilot light red
H 4	Acoustic signal (buzzer)
K 1	Starting relay M 1
K 2	Starting relay M 2
K 3	Switchover relay
M 1	Compressor - refrigeration
M 2	Compressor - freezing
M 3	Fan motor
M 4	Radial fan
Q 1	Main switch
R 1	Detector - super circuit (NTC)
R 2	Detector - standard circuit (NTC)
S 1	Light button
S 2	Froster button
S 3	Buzzer switch (temperature increase)
S 4	Buzzer switch (door open)
S 5	Switch for winter heater

6.3 IGU 138-4

Circuit diagram



Connection plan



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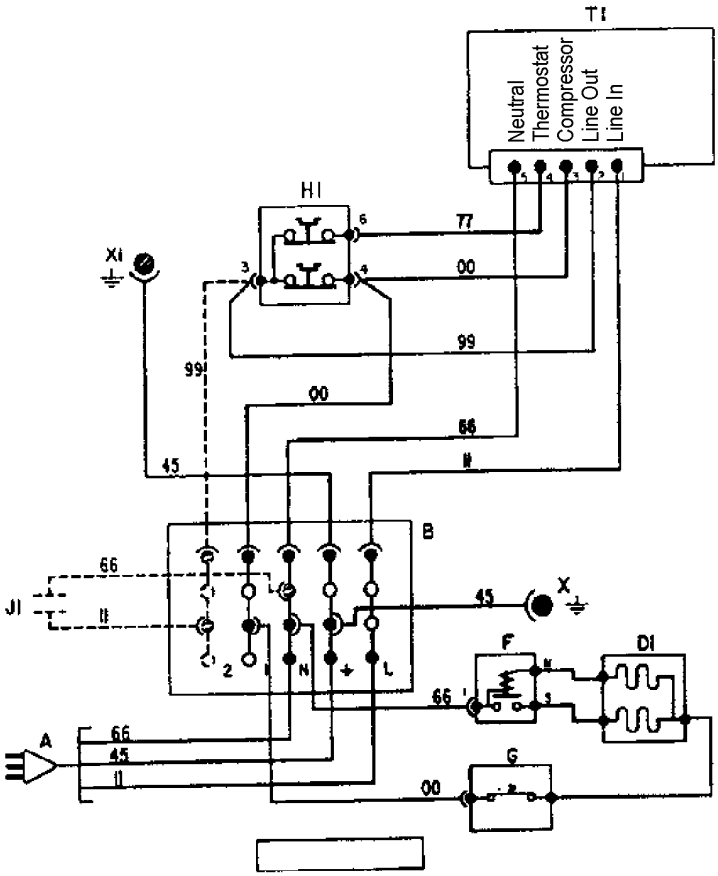
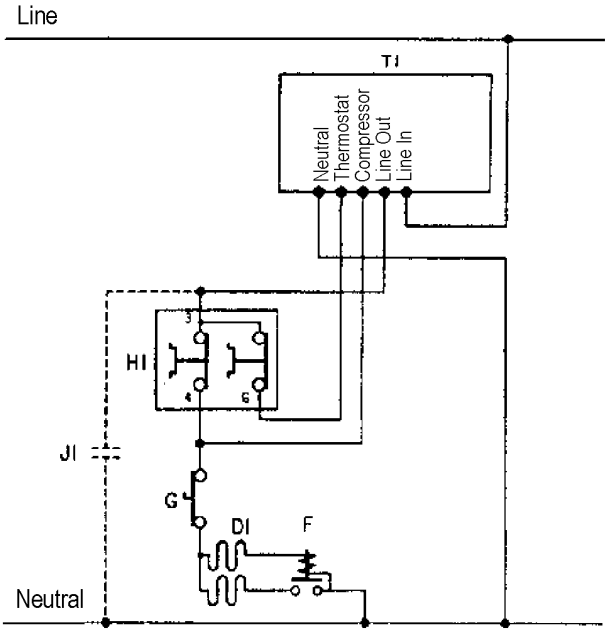
6.4 ITE 119-4



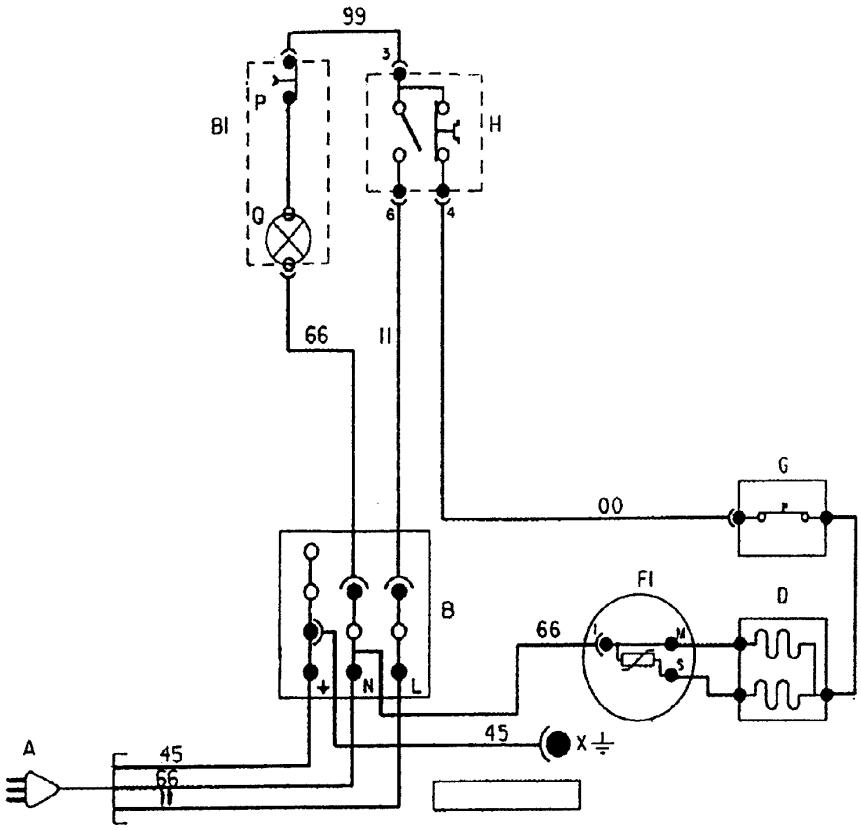
DI	Compressor - freezer
F	Starting relay
G	Motor protection
HI	Thermostat - freezer
JI	Capacitor
TI	Control module
A	Plug
B	Connecting block
X	Compressor earth connection
XI	Thermostat earth connection

00	black
11	brown
22	red
33	orange
45	yellow-green
66	blue
77	violet
88	sky blue
99	white

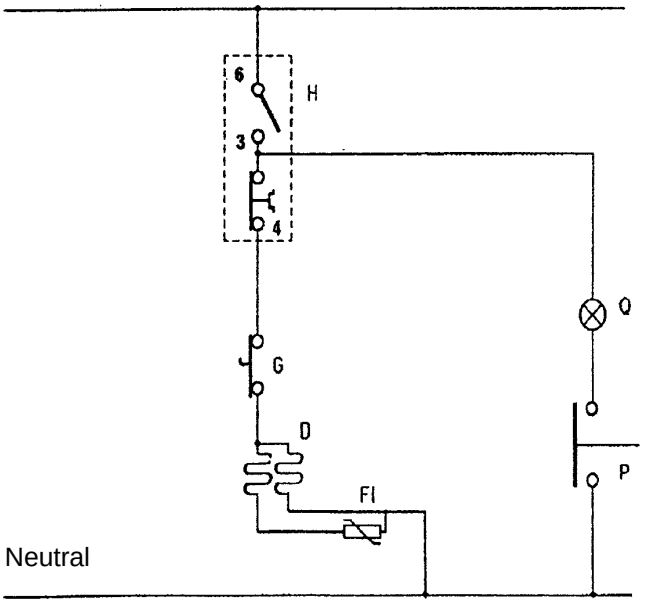


4619 500 87080A

6.5 IKE 169-4

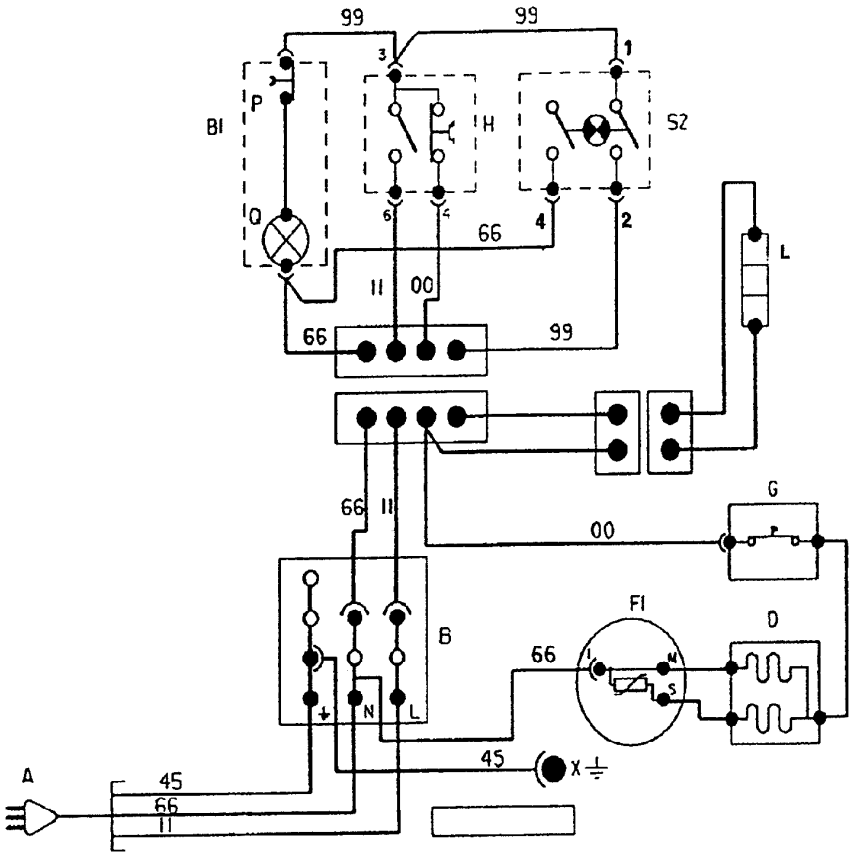


A	Plug
B	Connecting block
BI	Connecting block
D	Compressor - freezer
FI	PTC
G	Motor potection
H	Thermostat
P	Light button
Q	Lamp
X	Compressor earth connection
00	black
11	brown
45	yellow-green
66	blue
99	white

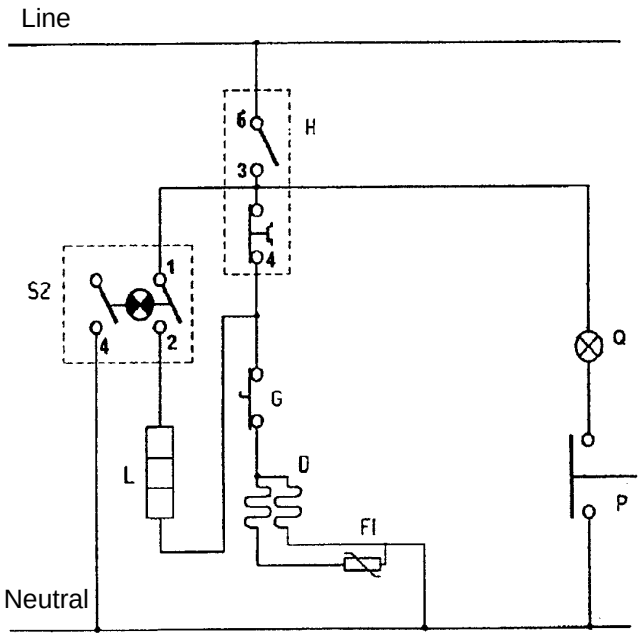


4619 500 85370

6.6 IKE 149-4

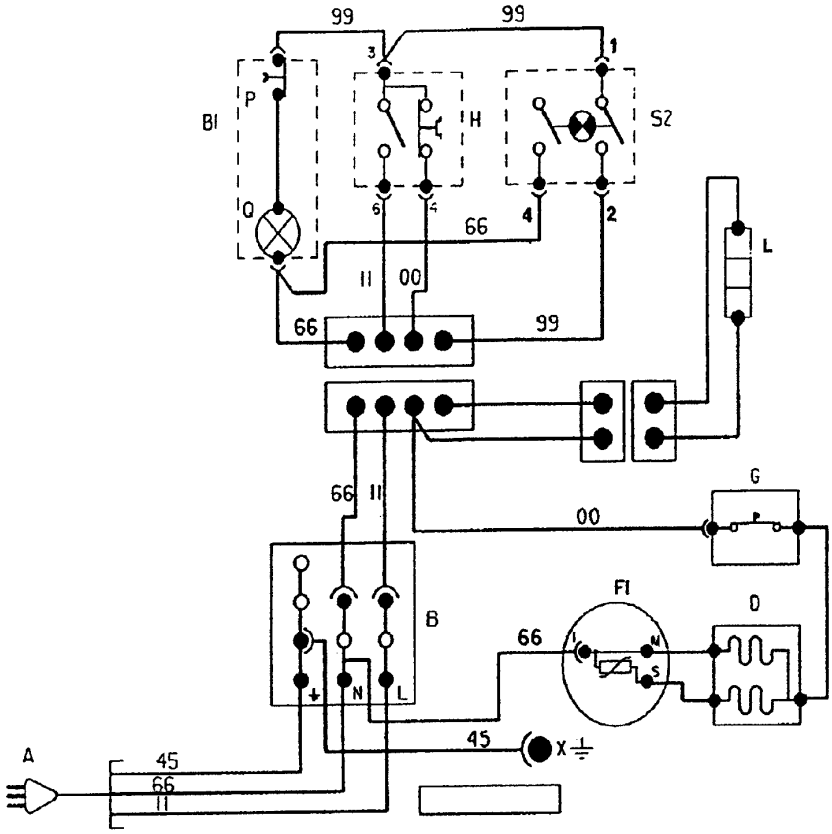


A	Plug
B	Connecting block
BI	Connecting block
D	Compressor - freezer
FI	PTC
G	Motor potection
H	Thermostat
L	Defrosting heater
P	Light button
Q	Lamp
S2	Switch with pilot lamp (yellow)
X	Compressor earth connection
00	black
11	brown
45	yellow-green
66	blue
99	white

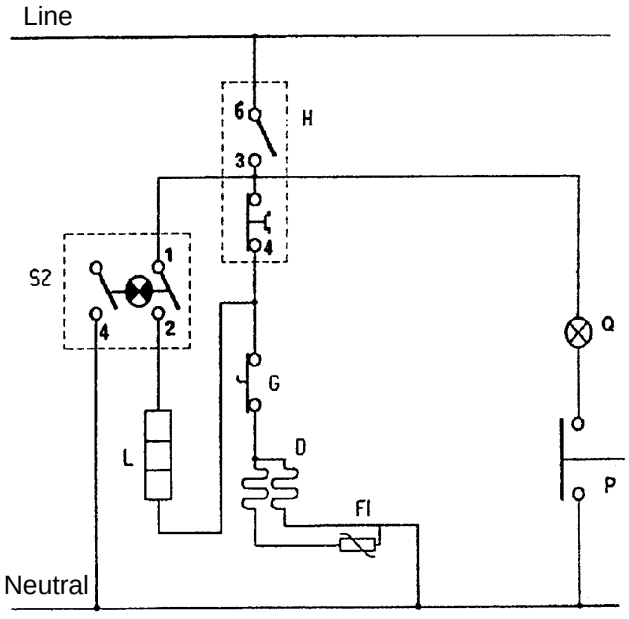


4619 500 85380

6.7 IKE 219-4

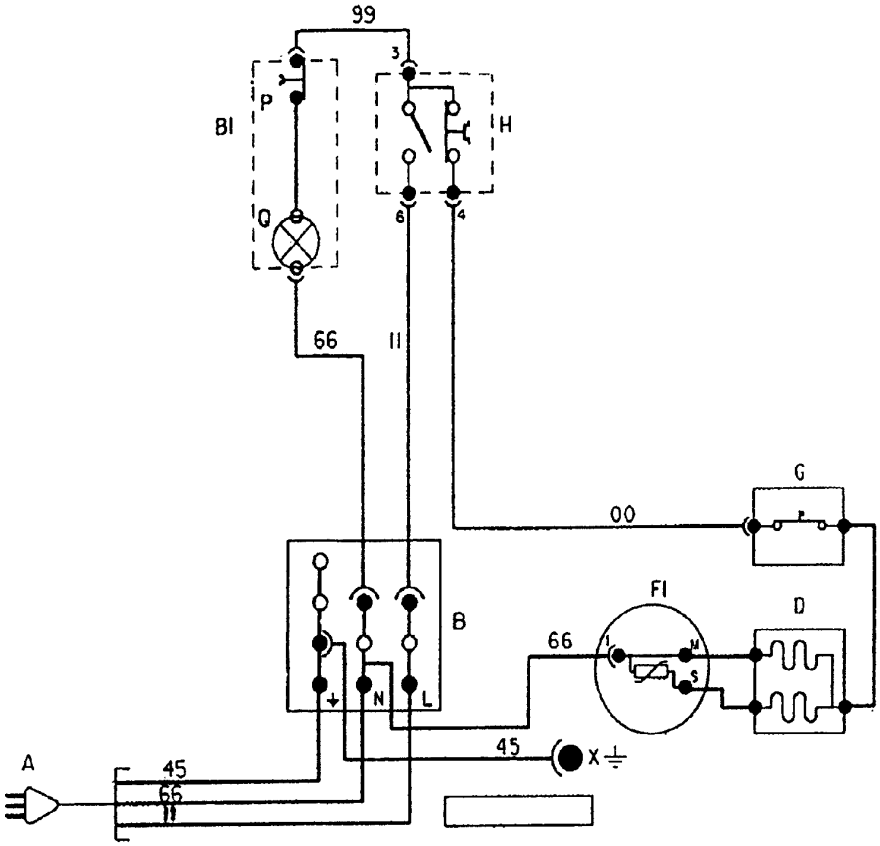


A	Plug
B	Connecting block
BI	Connecting block
D	Compressor - freezer
FI	PTC
G	Motor potection
H	Thermostat
L	Defrosting heater
P	Light button
Q	Lamp
S2	Switch with pilot lamp (yellow)
X	Compressor earth connection
00	black
11	brown
45	yellow-green
66	blue
99	white

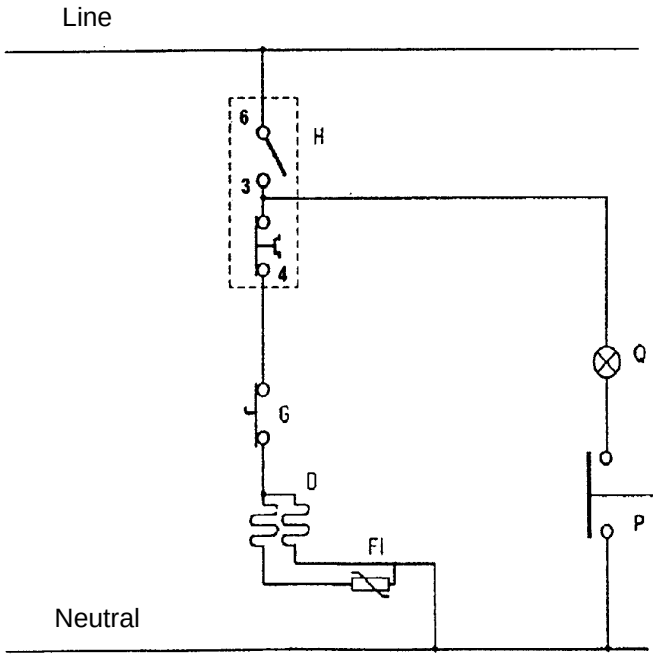


4619 500 85380

6.8 IKE 239-4



A	Plug
B	Connecting block
BI	Connecting block
D	Compressor - freezer
FI	PTC
G	Motor potection
H	Thermostat
P	Light button
Q	Lamp
X	Compressor earth connection
00	black
11	brown
45	yellow-green
66	blue
99	white



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