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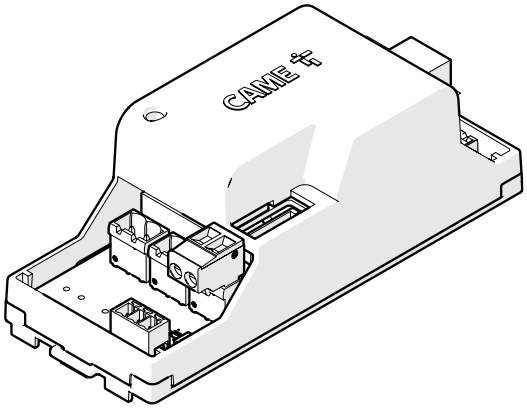
FA02405-EN

Device for operation during power outages and for energy saving with CAME brushless gearmotors



801XC-0250

INSTALLATION MANUAL

EN English

CONTENTS

GENERAL PRECAUTIONS

Read the instructions for each product in the package carefully before beginning the installation and carry out the procedures as specified by the manufacturer.

Installation, programming, commissioning and maintenance must only be carried out by qualified, expert technicians and in full compliance with the applicable law. • Wear anti-static clothing and footwear if performing work on the circuit board. • Before carrying out any cleaning or maintenance, or replacing any parts, disconnect the power supply and any batteries. • Before connecting or disconnecting the board, disconnect the mains power supply and any batteries. • Only use this product for its intended purpose. Any other use is hazardous. • Came S.p.A. is not liable for any damage caused by improper, erroneous or unreasonable use. • The products must be installed professionally in accordance with best practices. • The product, in its original packaging supplied by the manufacturer, must only be transported in a closed environment (railway carriage, containers, closed vehicles). • If the product malfunctions, stop using it and contact customer services at https://www.came.com/global/en/contact-us or via the telephone number on the website.

🕮 The manufacture date is provided in the production batch printed on the individual product labels. If necessary, contact us at https://www.came.com/global/en/contact-us.

🕮 The general conditions of sale are given in the official CAME price lists.

General precautions for products with batteries

The battery life depends on storage time and usage frequency. • Do not expose the batteries to fire, high temperatures or mechanical stresses (cuts, crushing) that may result in an explosion or leakages of flammable liquid or gas. • When replacing the batteries, use the same type and match up the poles correctly. The batteries may explode if they are replaced with the wrong type. • Please dispose of flat batteries correctly.

Dismantling and disposal

Dispose of the packaging and the device responsibly at the end of its life cycle, in compliance with the laws in force in the country where the product is used. The recyclable components are marked with the material symbol and ID.
THE DATA AND INFORMATION IN THIS MANUAL MAY BE CHANGED AT ANY TIME AND WITHOUT NOTICE.
MEASUREMENTS ARE IN MILLIMETRES, UNLESS STATED OTHERWISE.

PRODUCT DATA AND INFORMATION

Description

Control board for operation during power outages, for recharging the batteries and for energy saving in standby mode.

Intended use

After the LBNX battery charger has been connected to the BKX operator or to the ZLB24SA control panel, the product complies with Regulation (EU) 2023/826 regarding ecodesign requirements for energy consumption in standby and off mode for household and office equipment.

📖 The LBNX B battery charger cannot be used for the following products: 801MS-0690 (BKX08AGF), 801MS-0700 (BKX12AGM), 801MS-0710 (BKX08RGF) and 801MS-0720 (BKX12RGM) with firmware version 1.0.14 or earlier.Do not use with HW versions before J21410.

📖 The LBNX B battery charger cannot be used for the following products: 801QA-0170 (ZLB24SA) and 801QA-0180 (ZLB24SR) with firmware version 1.1.4 or earlier.Do not use with HW versions before J20944.

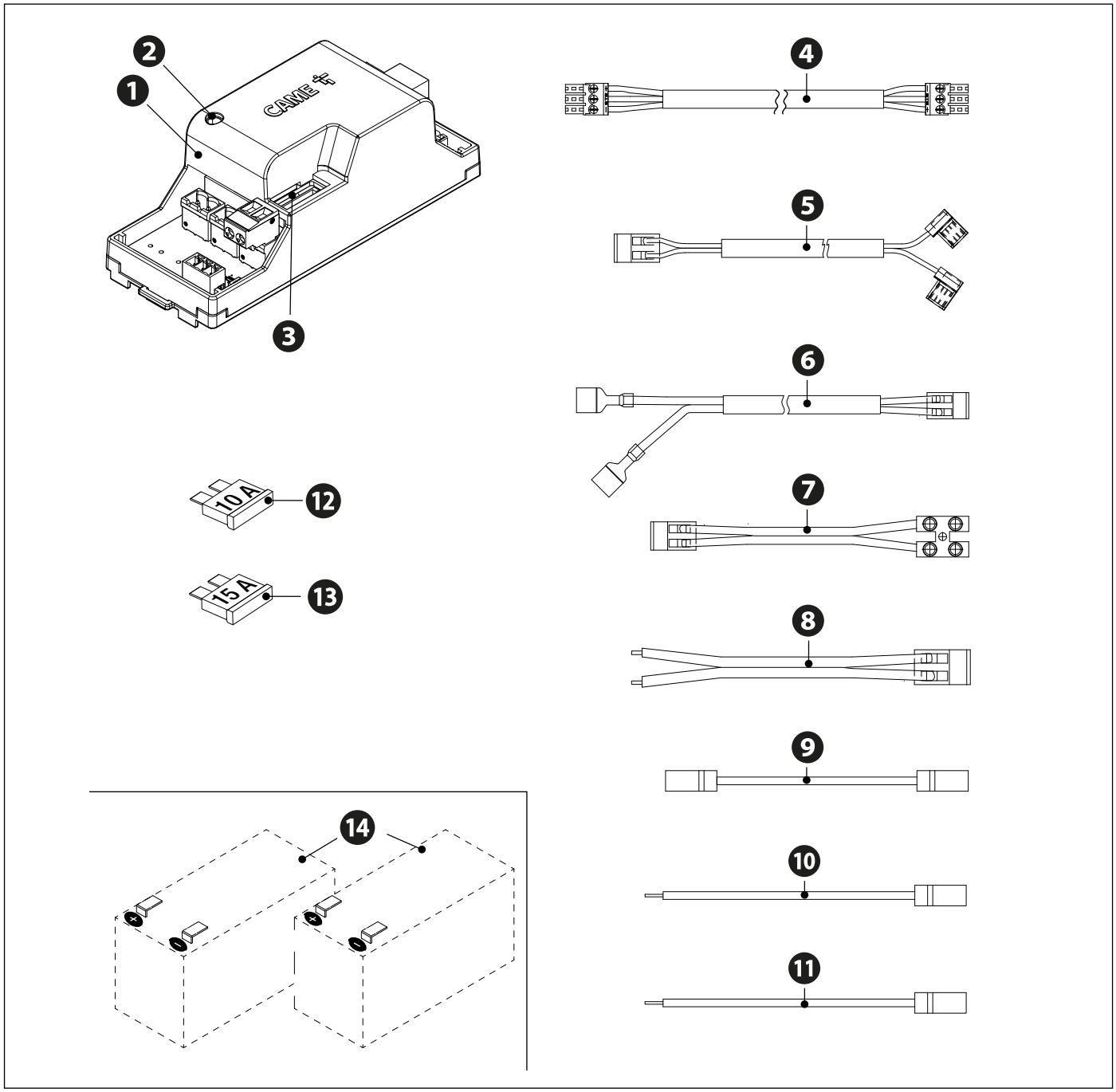
Description of parts

❶ LBNX board
❷ Status LEDs
❸ Fuse holder
❹ STB cable
❺ LBNX board power supply cable
❻ Extension cable for connecting to the transformer primary
❼ Extension cable for connecting to the transformer secondary
❽ Power supply cable for control board
❾ Jumper wire for batteries
❿ Red wire for battery
⓫ Black wire for battery
⓬ 10A fuse (*)
⓭ Fuse 15A (**)
⓮ Emergency batteries (***)

(*) Use in systems with BKX gearmotors.

(**) Use in systems with FROG-X gearmotors.

(***) Not supplied (see the technical data table for information on the type of battery to be used)



Technical data

MODELS	LBNX B	LBNX B
Type	Battery chargers to power BKX operators.	Battery chargers to power FROG-X gearmotors.
Current draw (A)	5	7,2
Maximum current draw (A)	8 For 5 seconds, during thrust.	15 For 3 seconds, during thrust.
Operating temperature (°C)	-20 ÷ +55 Battery efficiency decreases by 30% at temperatures below -10°C. Average battery life reduces by 50% at temperatures above 40°C.	-20 ÷ +55 Battery efficiency decreases by 30% at temperatures below -10°C. Average battery life reduces by 50% at temperatures above 40°C.
Storage temperature (°C) *	-25 ÷ +70	-25 ÷ +70
Average life (cycles) **	100000	100000
Protection rating (IP) ***	20	20
Number of batteries	2	2
Battery type	Sealed lead battery, maintenance free	Sealed lead battery, maintenance free
Battery capacity (Ah)	5	7,2
Battery voltage (V)	12	12
Battery size (mm)	90	151
Minimum charging voltage of 2 x 12 V batteries in series (V)	18 Below this voltage, the battery is automatically disconnected.	18 Below this voltage, the battery is automatically disconnected.
Maximum charging voltage of 2 x 12 V batteries in series (V)	28	28
Battery storage capacity (Ah)	5 After 6 hours of blackout, the operator can perform at least 3 manoeuvre cycles.	7,2 After 6 hours of blackout, the operator can perform at least 3 manoeuvre cycles.
Battery full recharge time (h)	~15	~20

(*) Before installing the product, keep it at room temperature where it has previously been stored or transported at a very high or very low temperature.

(**) The average product life is a purely indicative estimate. It applies to compliant usage, installation and maintenance conditions. It is also influenced by other factors, such as climatic and environmental conditions (where present, see the MCBF table).

(***) The device has the same insulation class as the product it has been designed for (BKX and FROG-X series).

📖 All stated technical characteristics refer to an ambient temperature of 20°C (±5°C).

📖 Usage conditions affect the performance of lead batteries. These include: temperature, current draw, charge level and battery age, and can significantly affect the data shown.

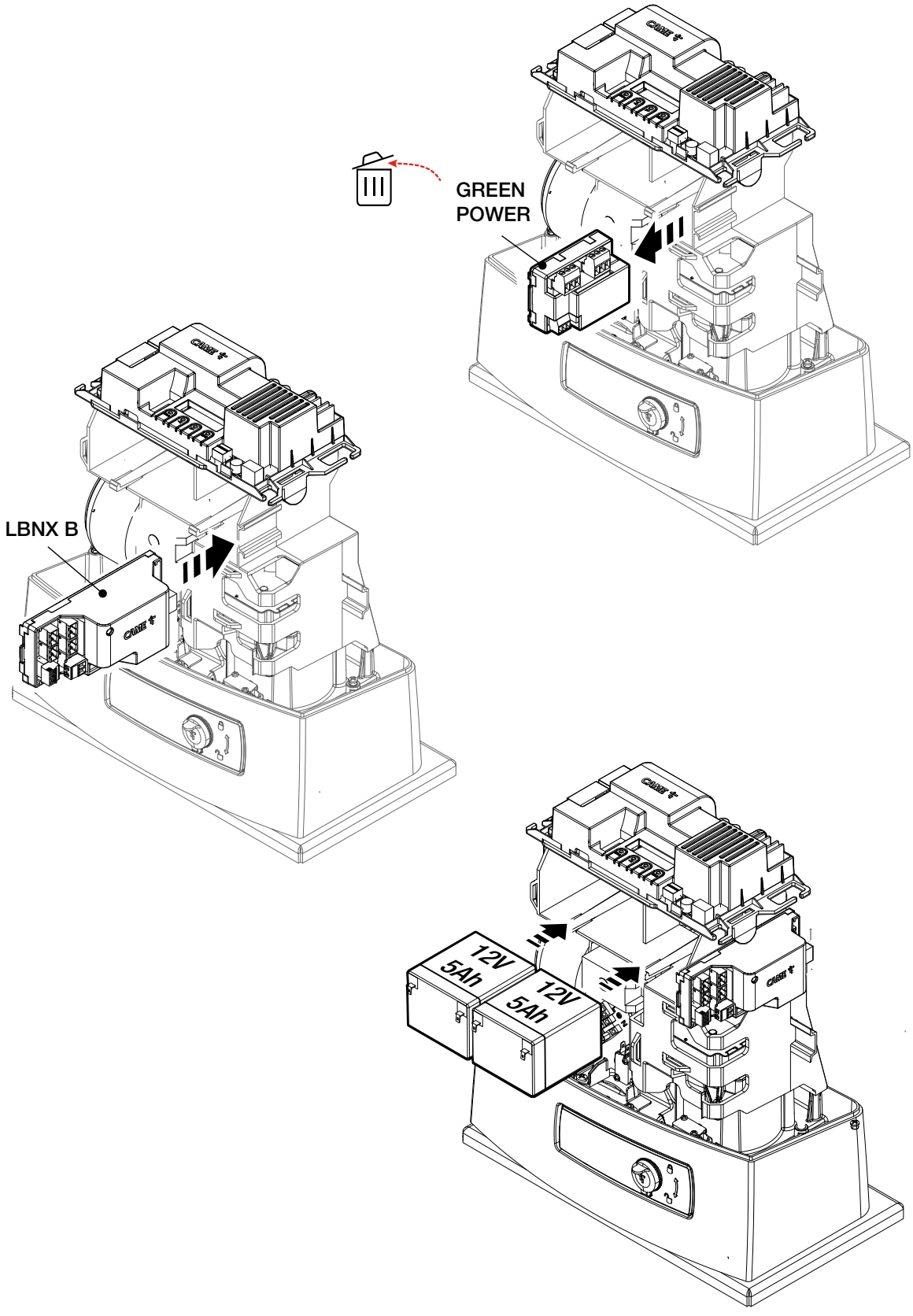
📖 Batteries may have different characteristics. Always check the type of batteries used carefully.

By way of example, standard batteries such as Fiamm and Yuasa batteries generally have the following characteristics:
- Charging temperature: 0°C to +40°C;
- Discharging temperature: -20°C to +50°C (at -20°C, available capacity may drop to 50% or below);
- Storage temperature: -20°C to +50°C;
- Average life: approximately 1,000 charging cycles, with a depth of discharge of 30%.

Installation

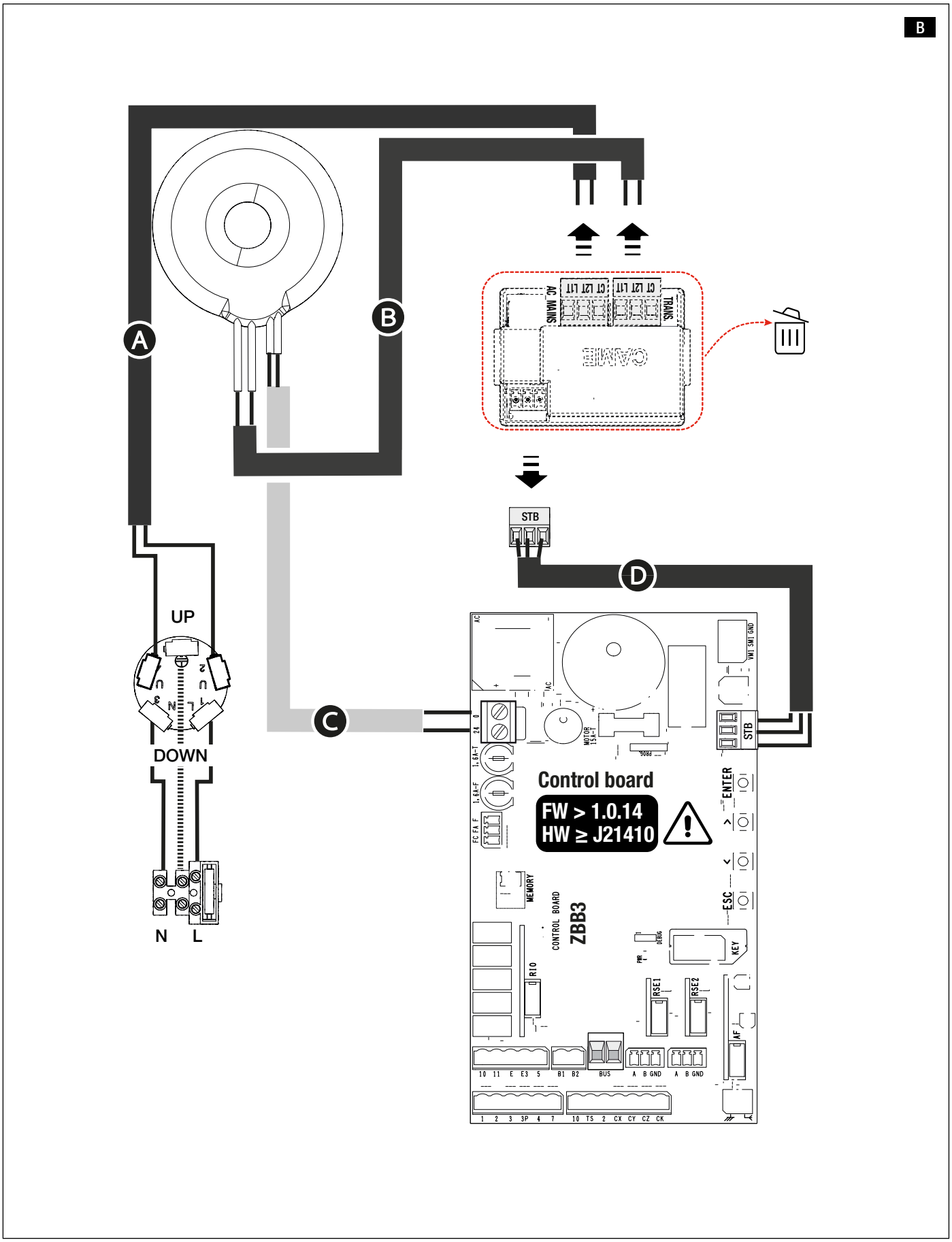
Replace the Green Power module with the LBNX B board and position the batteries as shown in the figure. **A**

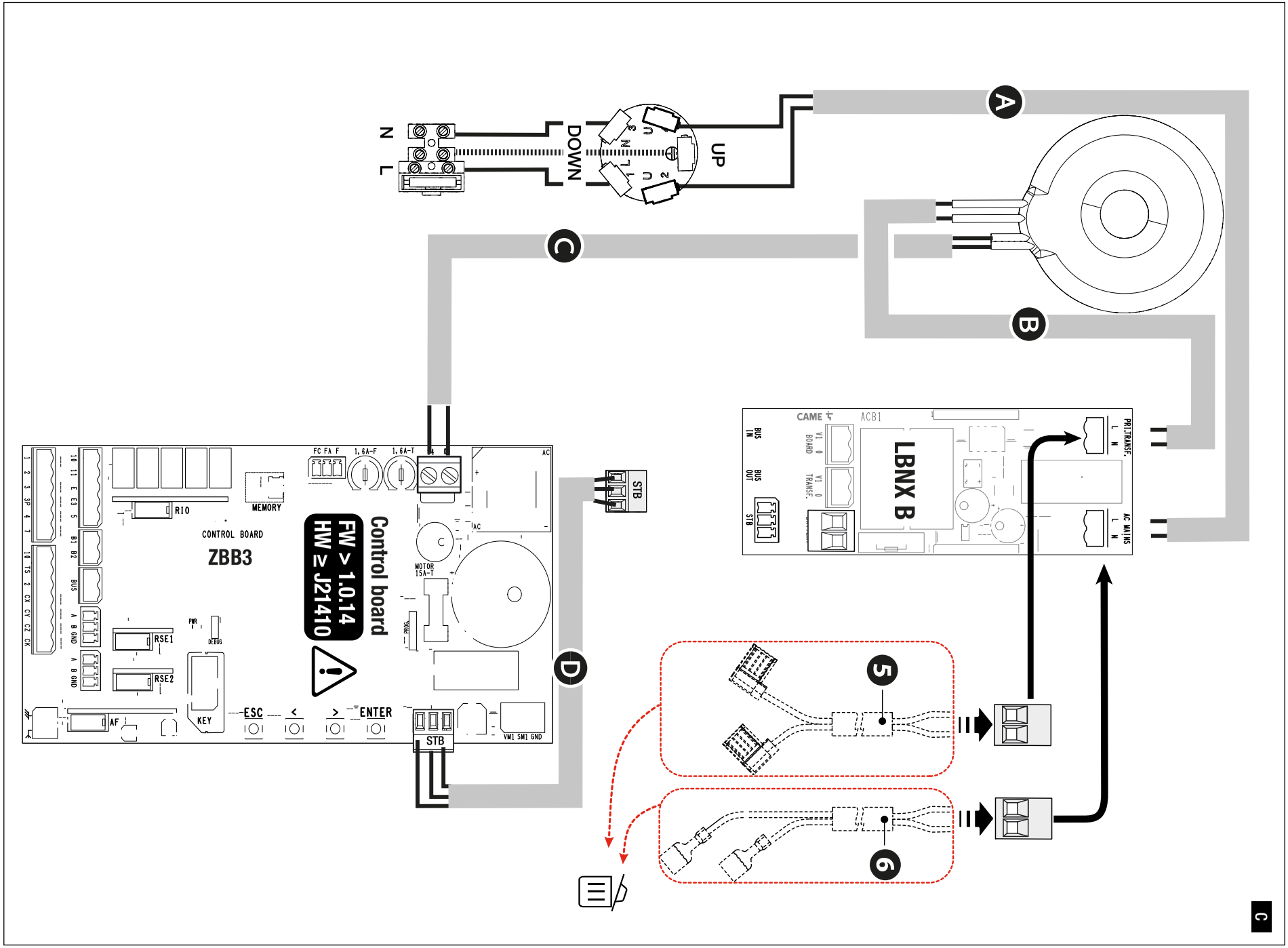
A

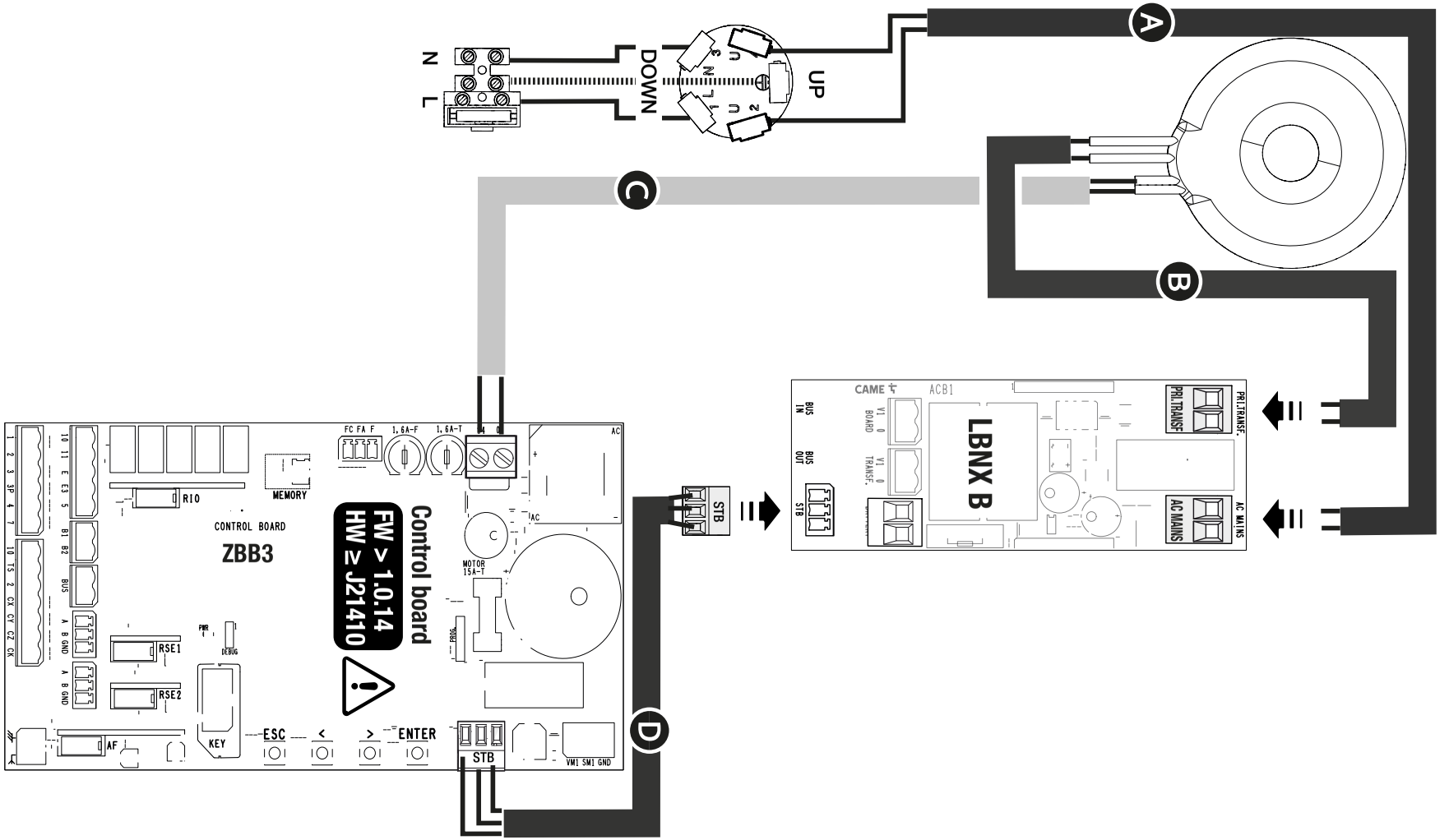


Electrical connections

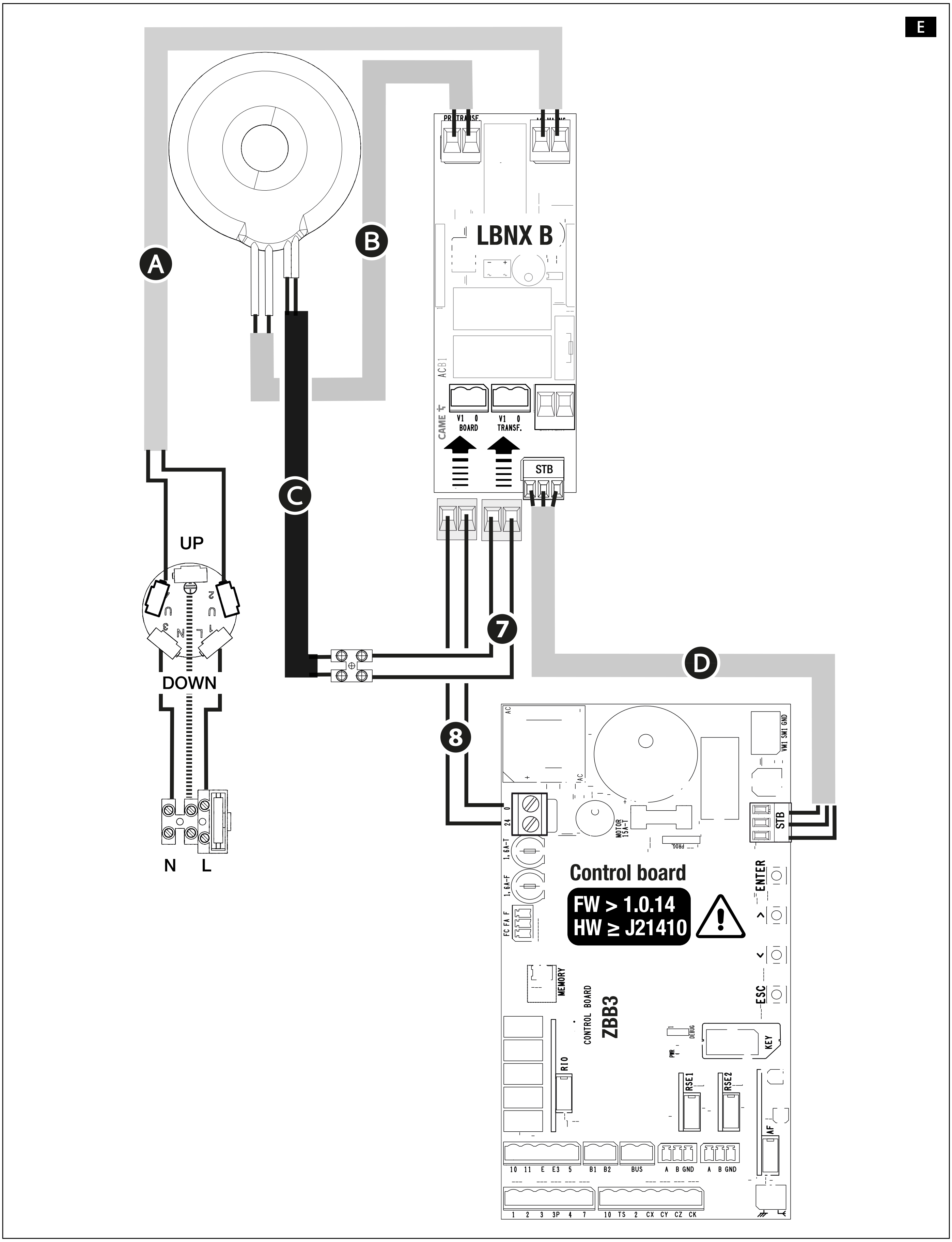
Warning! Before connecting the LBNX board, disconnect the Green Power module and remove it.
Follow the procedure as shown in the figure. **B C D E F**



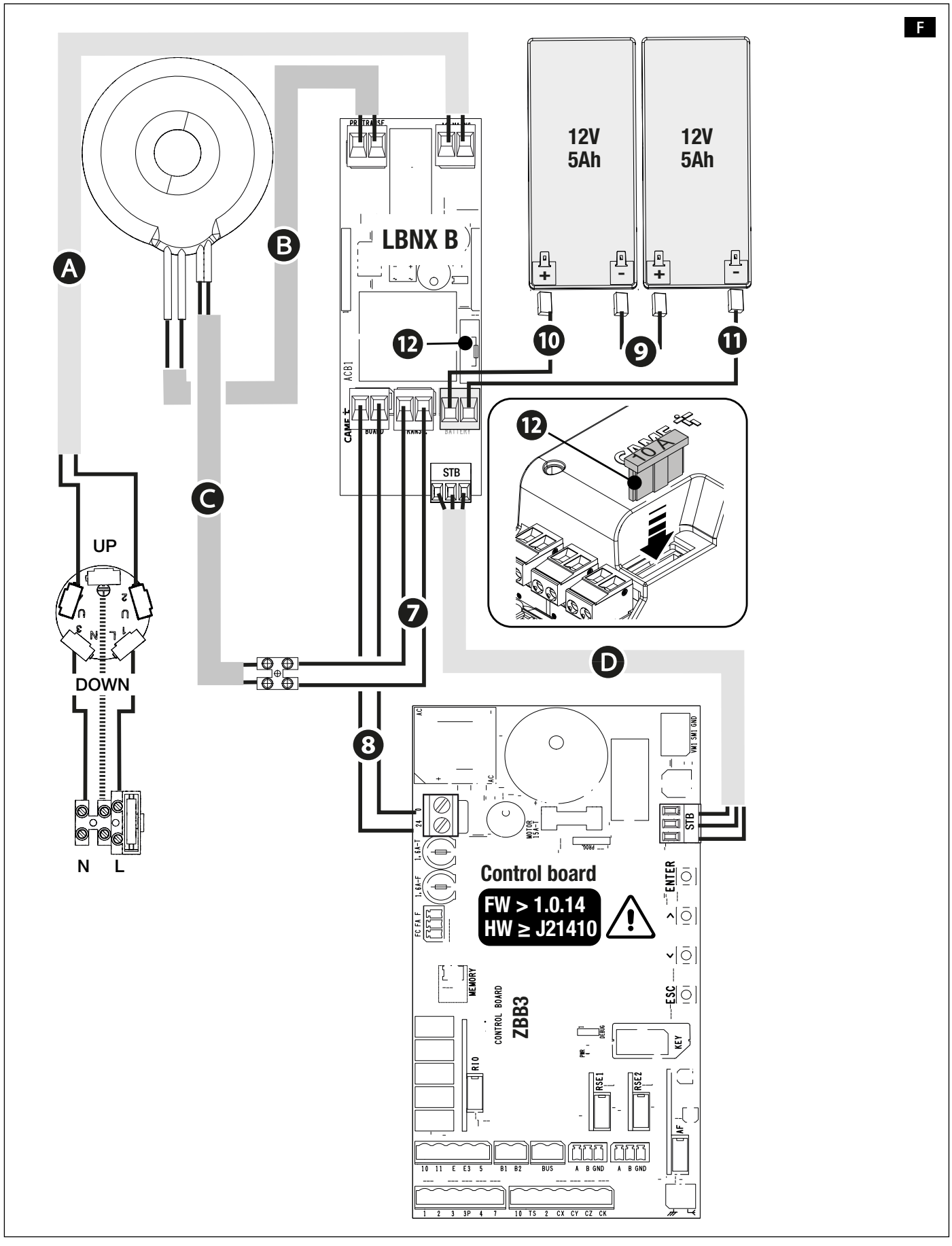

A
B
C
D
N
L
DOWN
UP
STB
CAME
ACB1
LBNX B
BUS IN
BUS OUT
STB
PRI.TRANSF.
AC MAINS
CONTROL BOARD
ZBB3
Control board
FW > 1.0.14
HW ≥ J21410
RIO
MEMORY
RSE1
RSE2
KEY
AF
ESC
ENTER
STB
MOTOR
15A-T
5
6
C


N
L
DOWN
UP
A
B
C
D
CONTROL BOARD
ZBB3
FW > 1.0.14
HW ≥ J21410
Control board
MEMORY
RIO
RSE1
RSE2
KEY
AF
ESC
ENTER
STB
LBNX B
ACB1
PRI.TRANSF.
AC MAINS

D

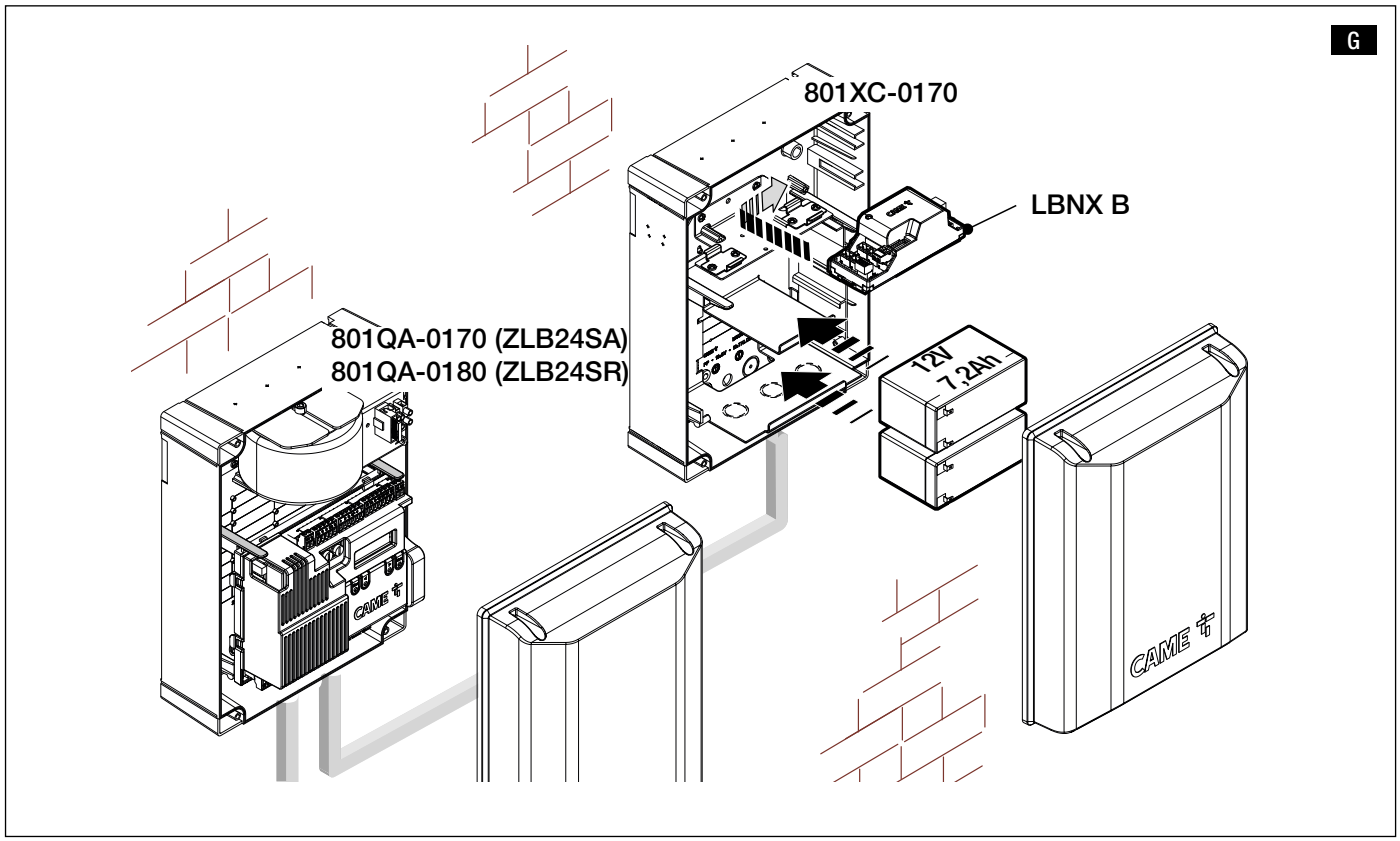

E
A
B
C
D
7
8
UP
DOWN
N
L
LBNX B
V1 0 BOARD
V1 0 TRANSF.
STB
Control board
FW > 1.0.14
HW ≥ J21410
ZBB3
CONTROL BOARD
ENTER
ESC
MEMORY
KEY
RSE1
RSE2
AF
RIO
0
24
10 11 E E3 5
B1 B2
BUS
A B GND
1 2 3 3P 4 7
10 TS 2 CX CY CZ CK

⚠ Insert the 10 A fuse in the fuse holder.



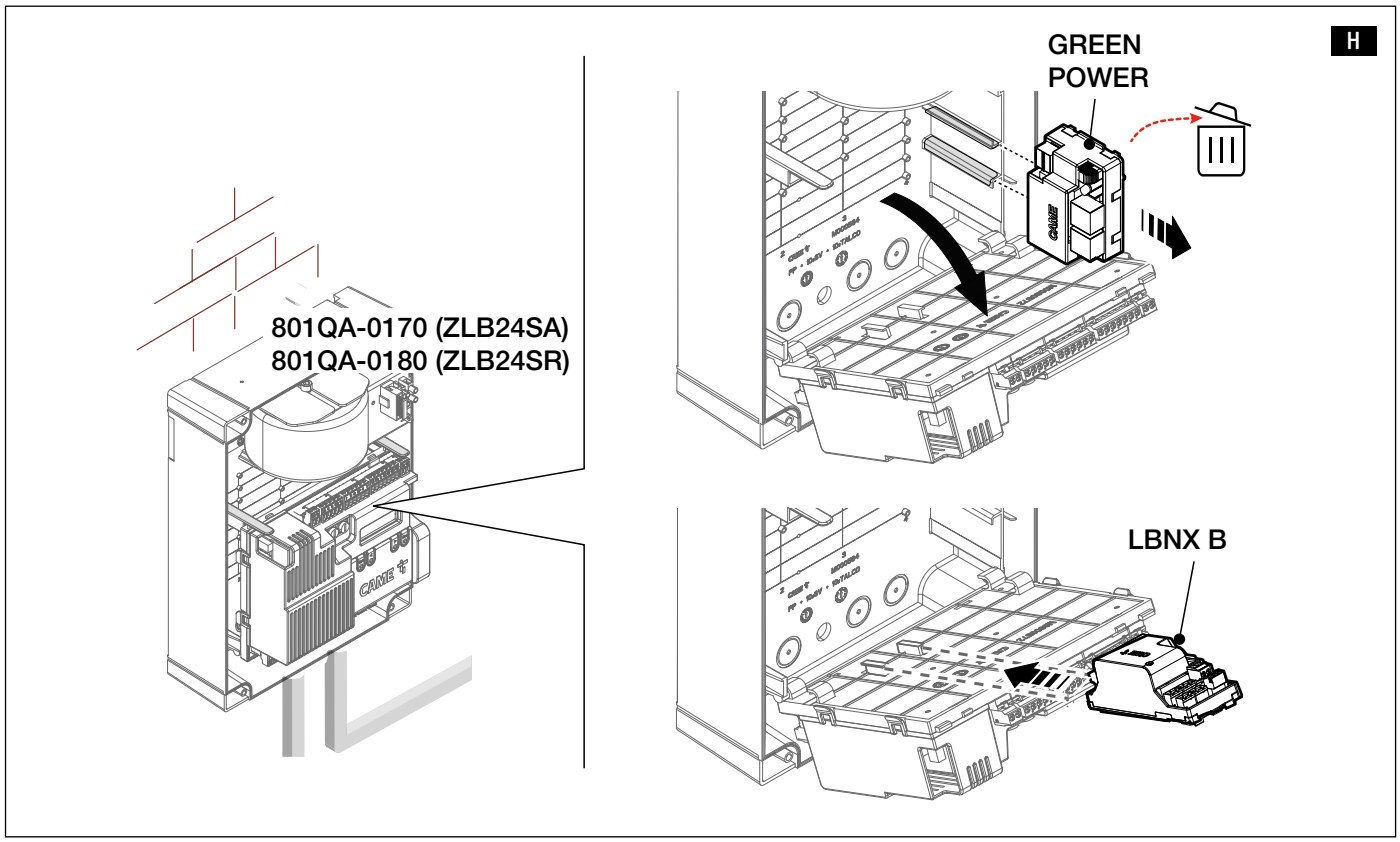
Installation

Position the LBNX board and batteries in the casing code 801XC-0170 (not supplied). G



The board can also be inserted in the back of the board holder on the control board. H

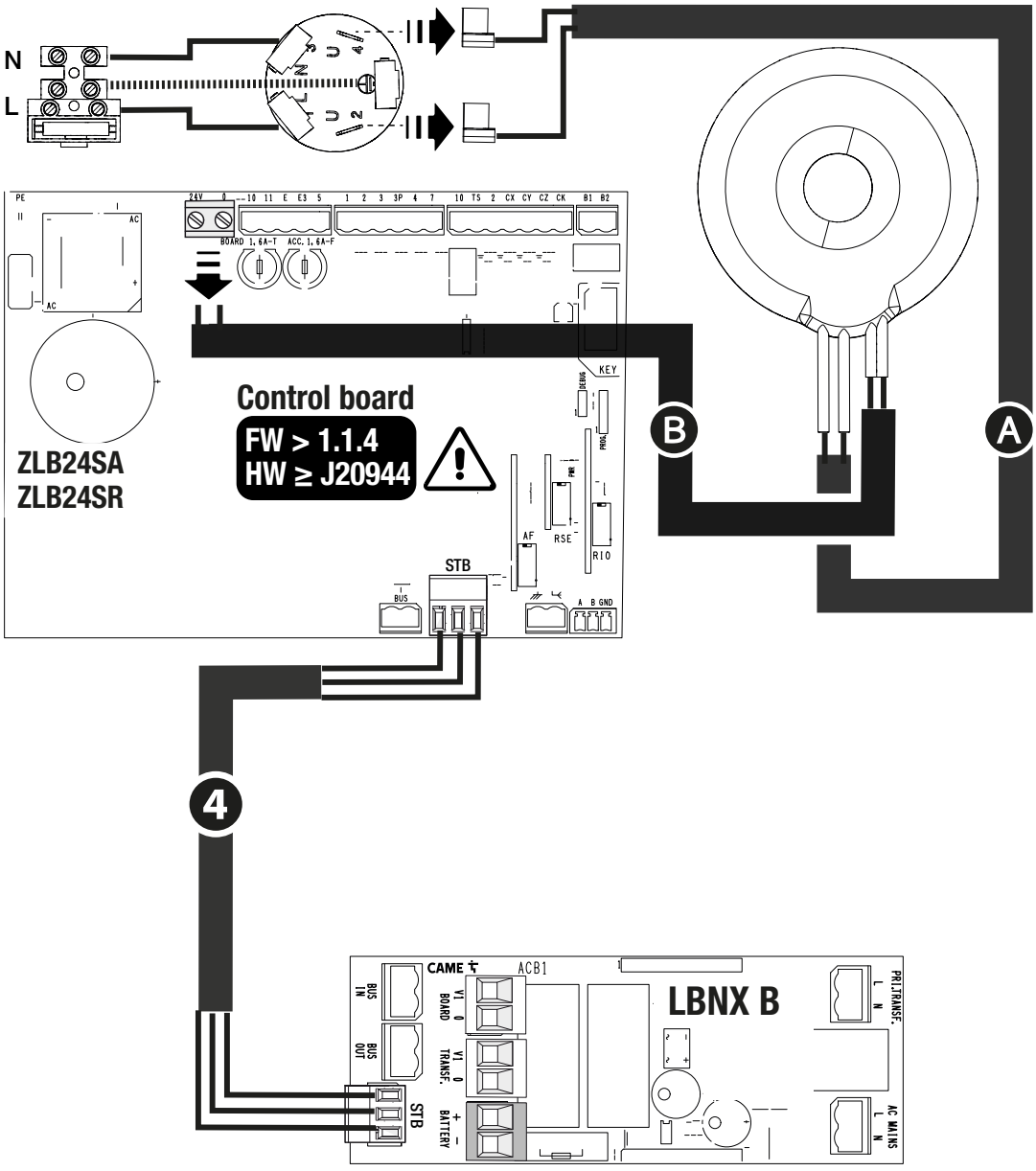
Warning! If a Green Power module is installed on the control panel, remove it.



Electrical connections

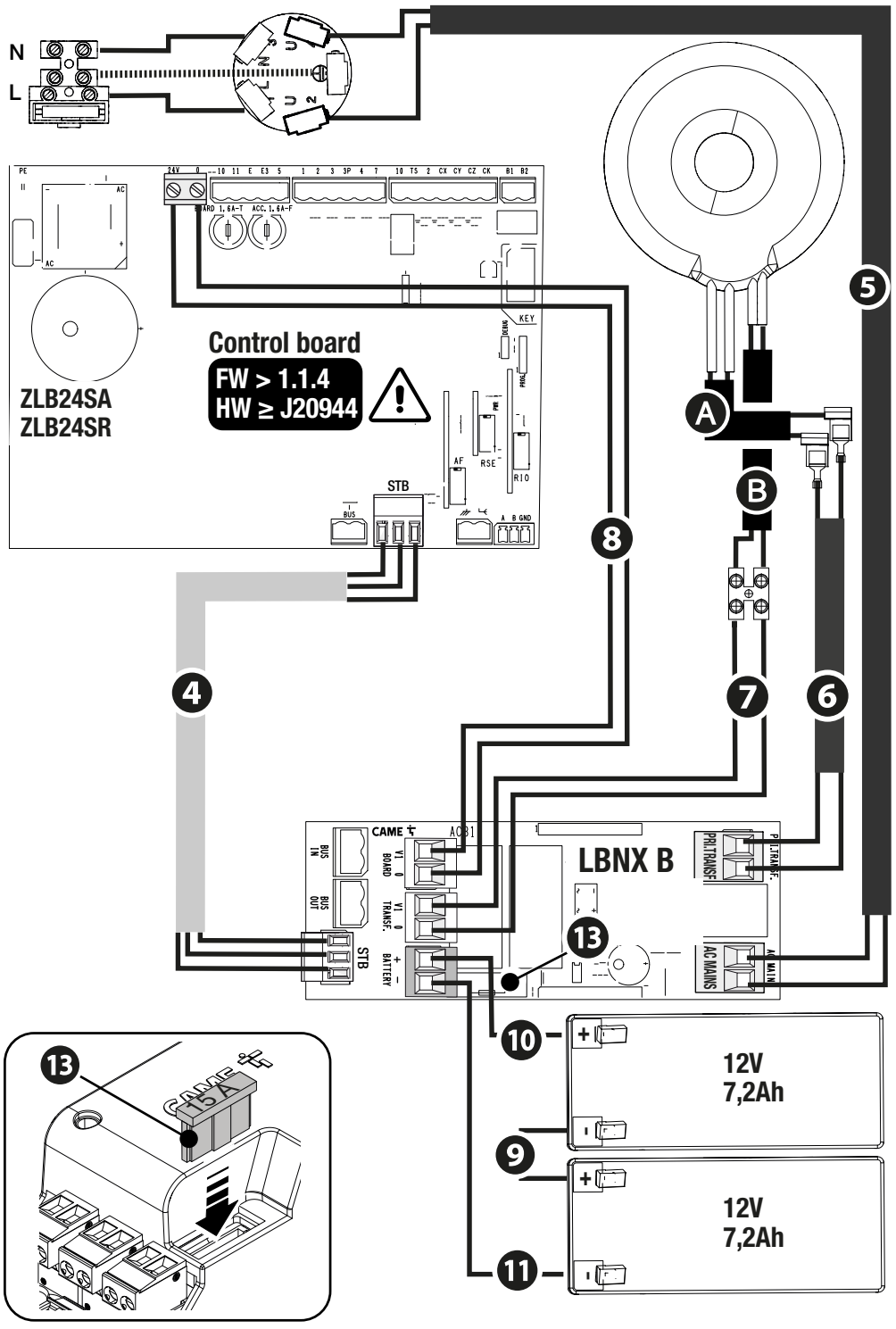
Connect the LBNX board to the control panel as shown in the figure. I J

I



⚠ Insert the 15 A fuse in the fuse holder.

J



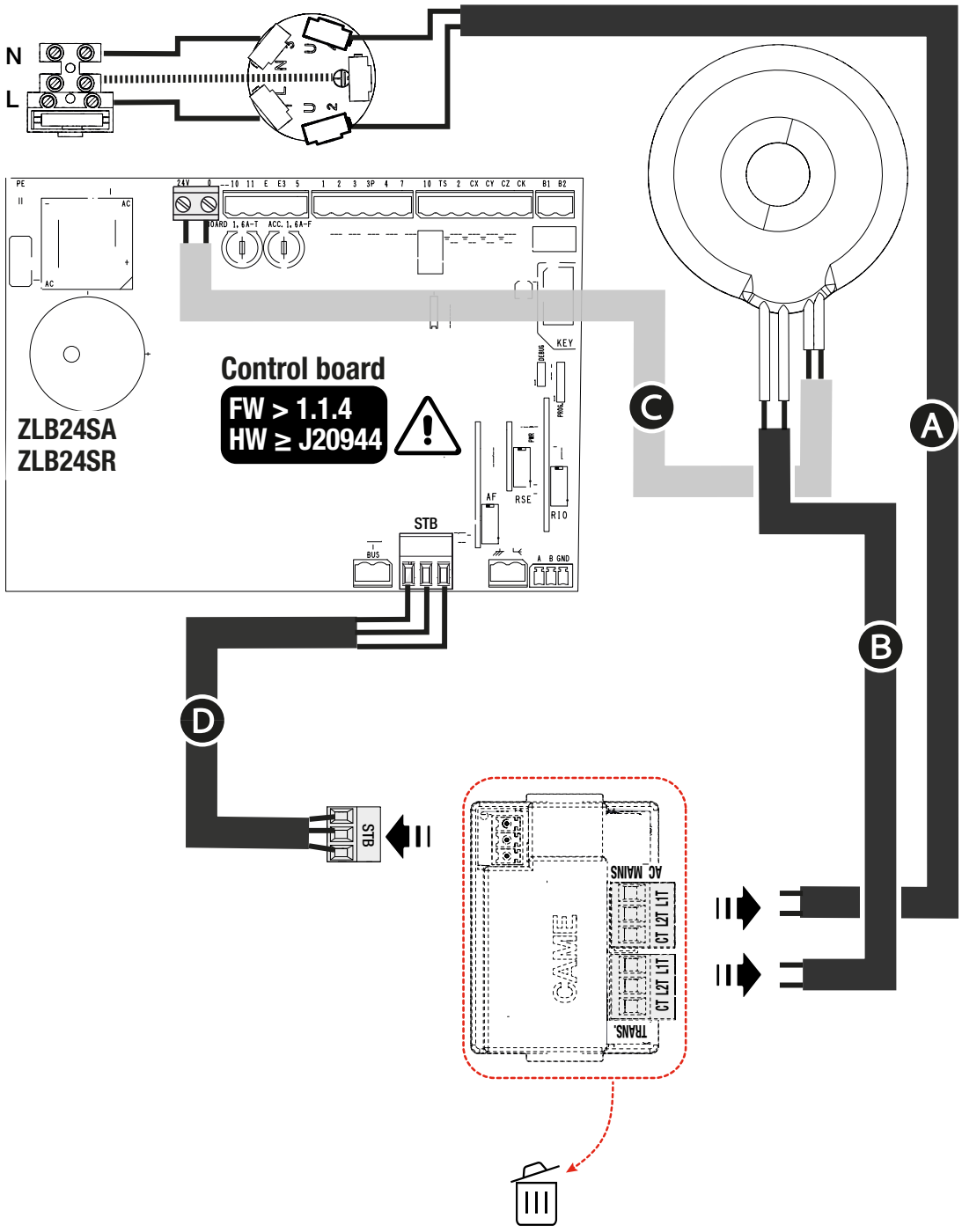
Where the LBNX B board and batteries are installed in the 801XC-0170 box, use cables maximum 2 metres long with a cross section of:

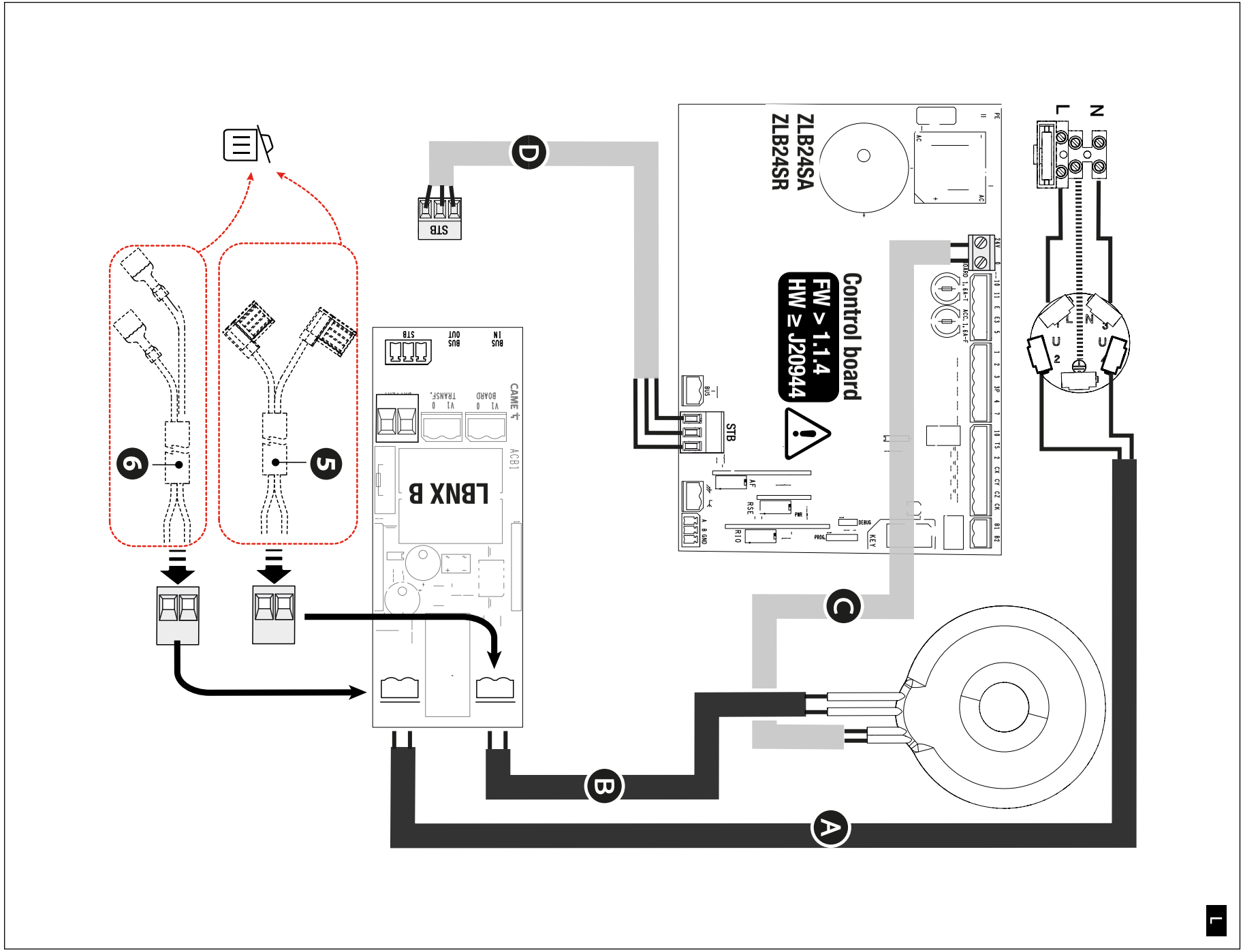
- 2.5 mm2 for cables ❼ and ❽;
- 1.5 mm2 for cables ❺, ❿ and ⓫;
- 1 mm2 for cable ❻;
- 0.75 mm2 for cable ❹.

Warning! If a Green Power module is connected to the control panel, remove it.

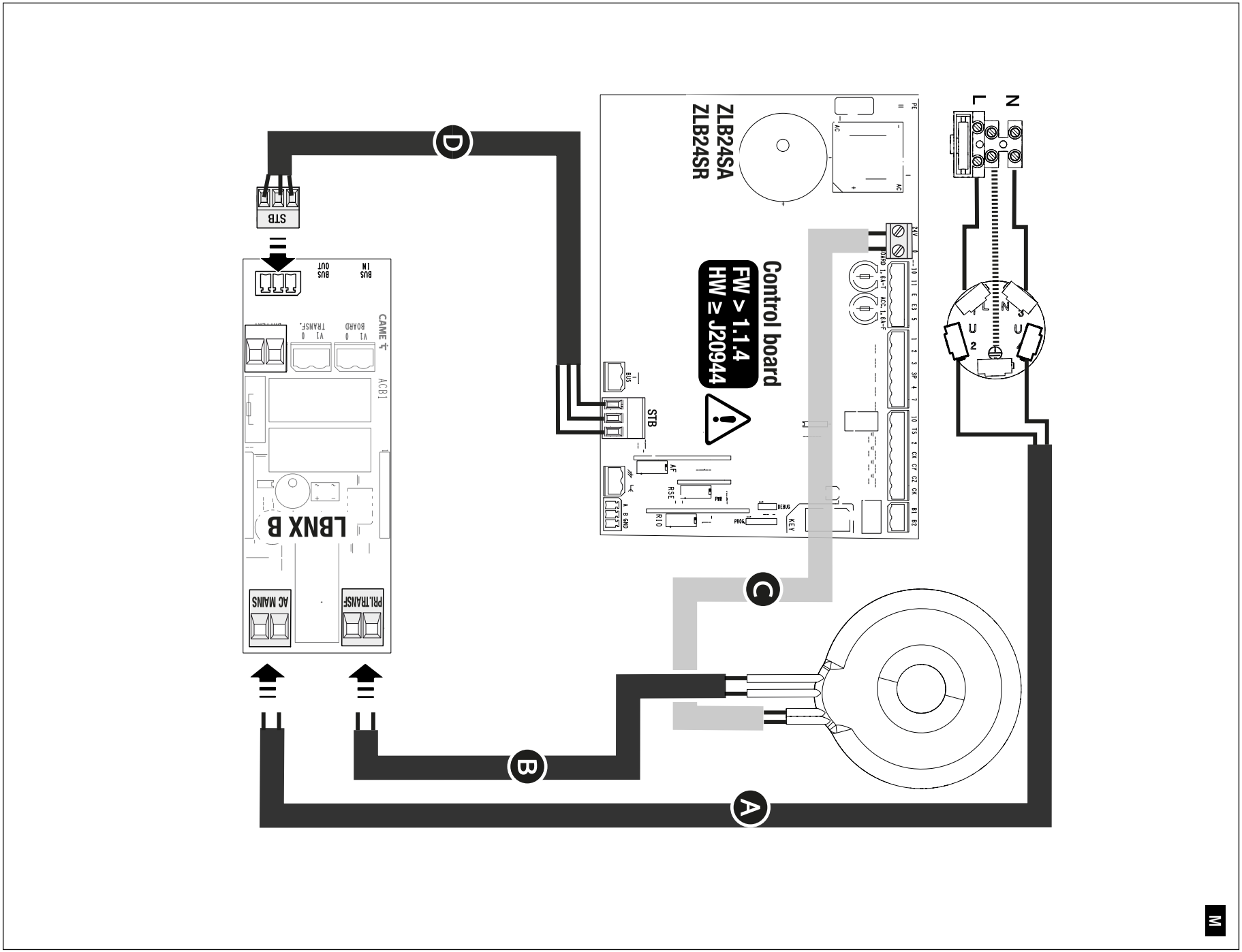
Follow the procedure as shown in the figure. **K L M N O**

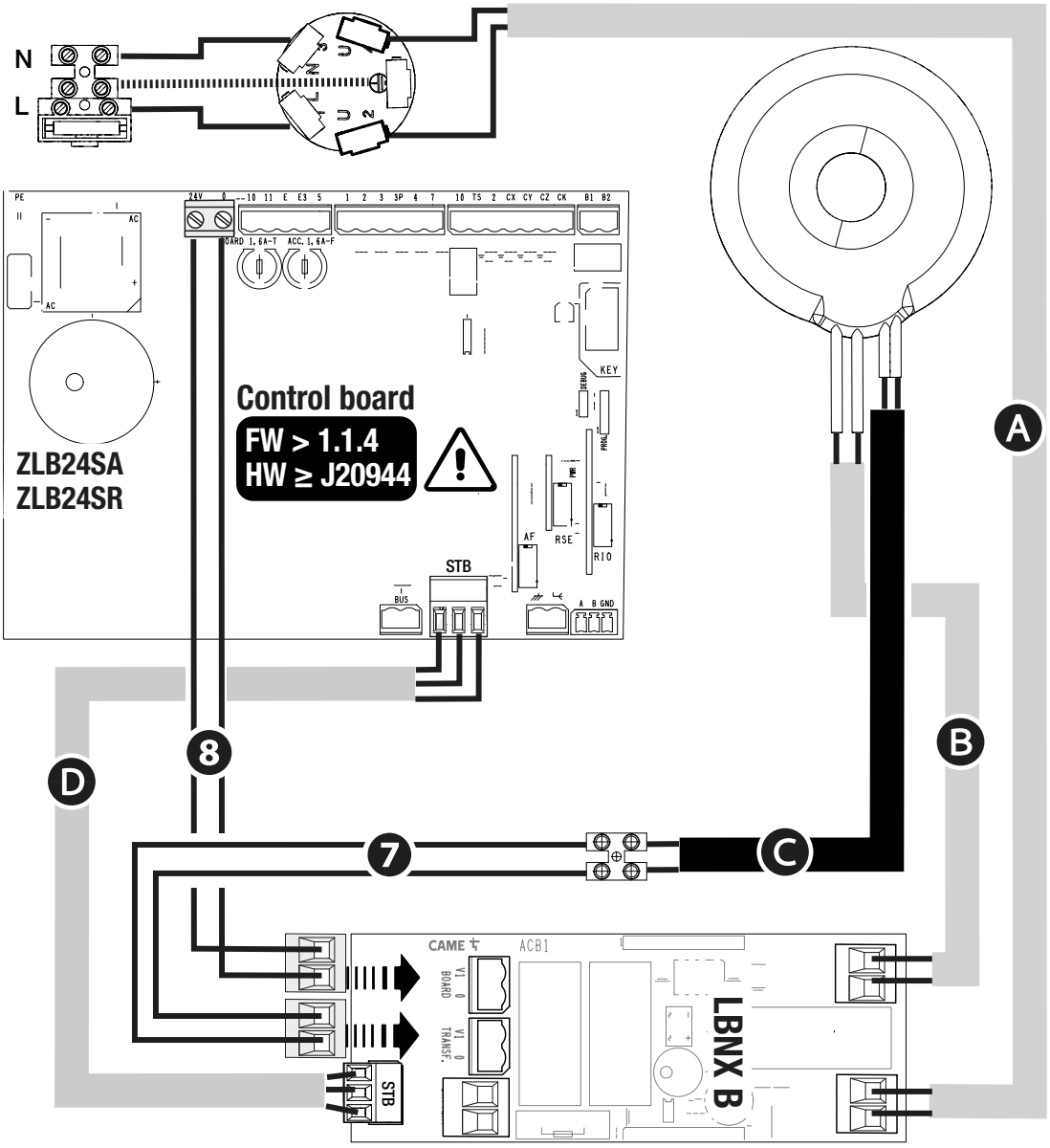
K



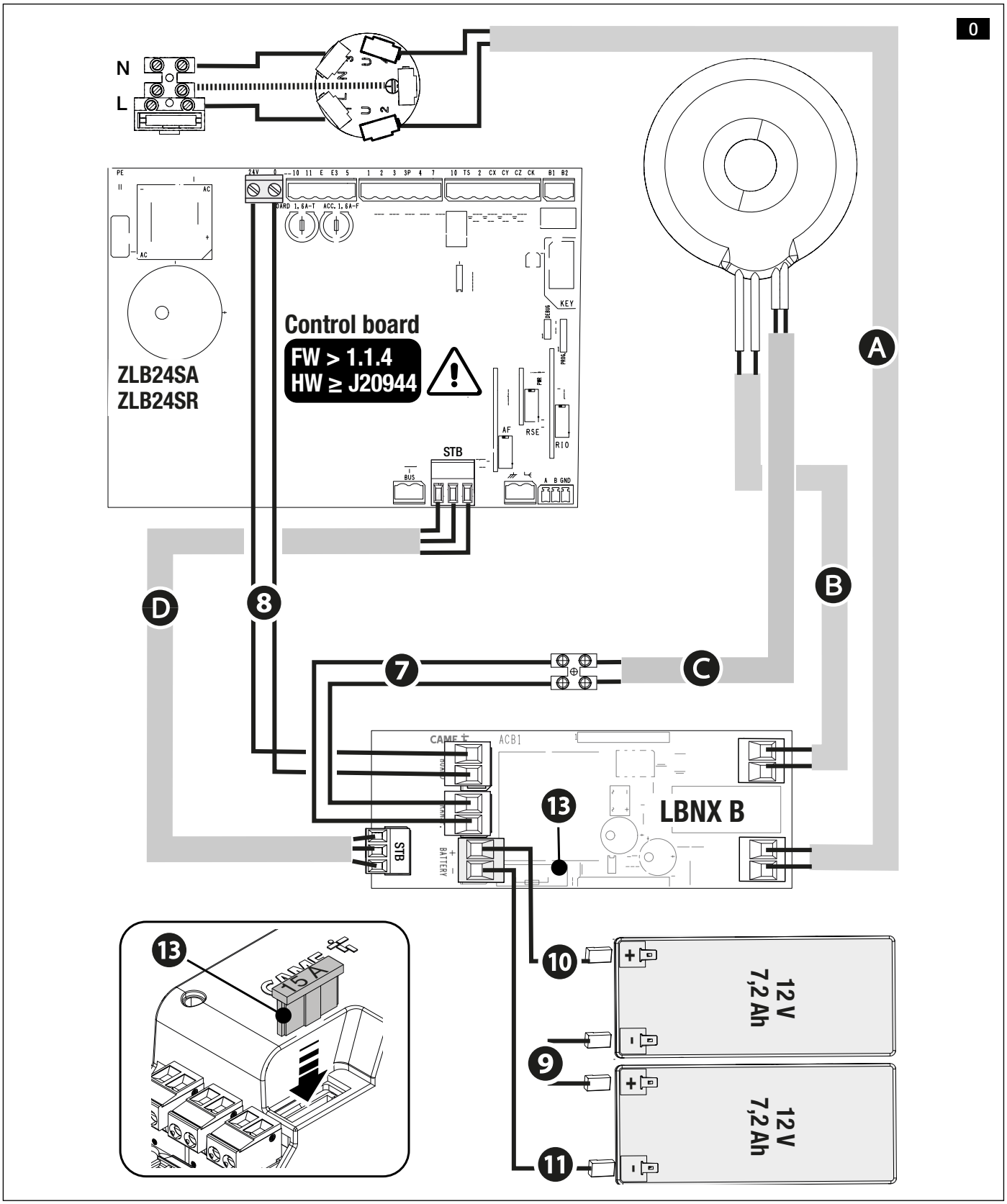

ZLB24SA
ZLB24SR
Control board
FW > 1.1.4
HW ≥ J20944
STB
LBX B
BUS
OUT
IN
L
N
A
B
C
D
5
6

L


ZLB24SA
ZLB24SR
Control board
FW > 1.1.4
HW ≥ J20944
LBNX B
STB
AC MAINS
PRI.TRANSF.
BUS OUT
BUS IN
CAME
ACB1
L
N
A
B
C
D
M


N
L
Control board
FW > 1.1.4
HW ≥ J20944
ZLB24SA
ZLB24SR
STB
A
B
C
D
7
8
LBNX B

⚠ Insert the 15 A fuse in the fuse holder.



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- 1.5 mm2 for cables ❺, ❿ and ⓫;
- 1 mm2 for cable ❻;
- 0.75 mm2 for cable ❹.

OPERATION

With the LBNX board, if there is no mains power supply, the control panel is powered by the batteries. Once the mains power supply has been restored, recharge the batteries.
The LBNX board allows you to reduce consumption by setting standby mode on the control panel. When the system is inactive, the accessories connected to terminals 10-11 and 10-2 are not powered; the SMA24V and RGSM accessories are also deactivated (where present).

Important information!

When operating with batteries, the operator speed is slower.
The battery life depends on how many accessories are connected the how many manoeuvres are performed.

LED status key

Colour	Battery status
Flashing green	Batteries charging.
Green on	Batteries charged.
Blue on	Battery operation during manoeuvre.
Blue flashing (*)	Operation in stand-by mode; accessories connected to 10-11, 10-2 and BUS OUT are deactivated.
Red flashing	Batteries are flat.
Red and green alternate flashing	Batteries disconnected. Batteries need replacing. LBNX board fuse blown.
Red, green and blue alternate flashing (**)	System self-diagnosis. (*)

(*) If the LED flashes when the control board is not powered, this means the operator is not working. The LBNX B battery charger is not communicating with the control board (ZBB3 or ZLB24SA/SR). Check the STB cable connection. ❹

(**) After connecting the system to the power supply, the red, green and blue LEDs will flash alternately for approximately 1 minute. This indicates that self-diagnosis is running (to check the system is operating correctly). If the LEDs don't stop flashing, check the electrical connections have been made as shown in the figure.

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CAME S.P.A.
Via Martiri della Libertà, 15
31030 Dosson di Casier
Treviso - Italy
Tel. (+39) 0422 4940
Fax (+39) 0422 4941
info@came.com - www.came.com