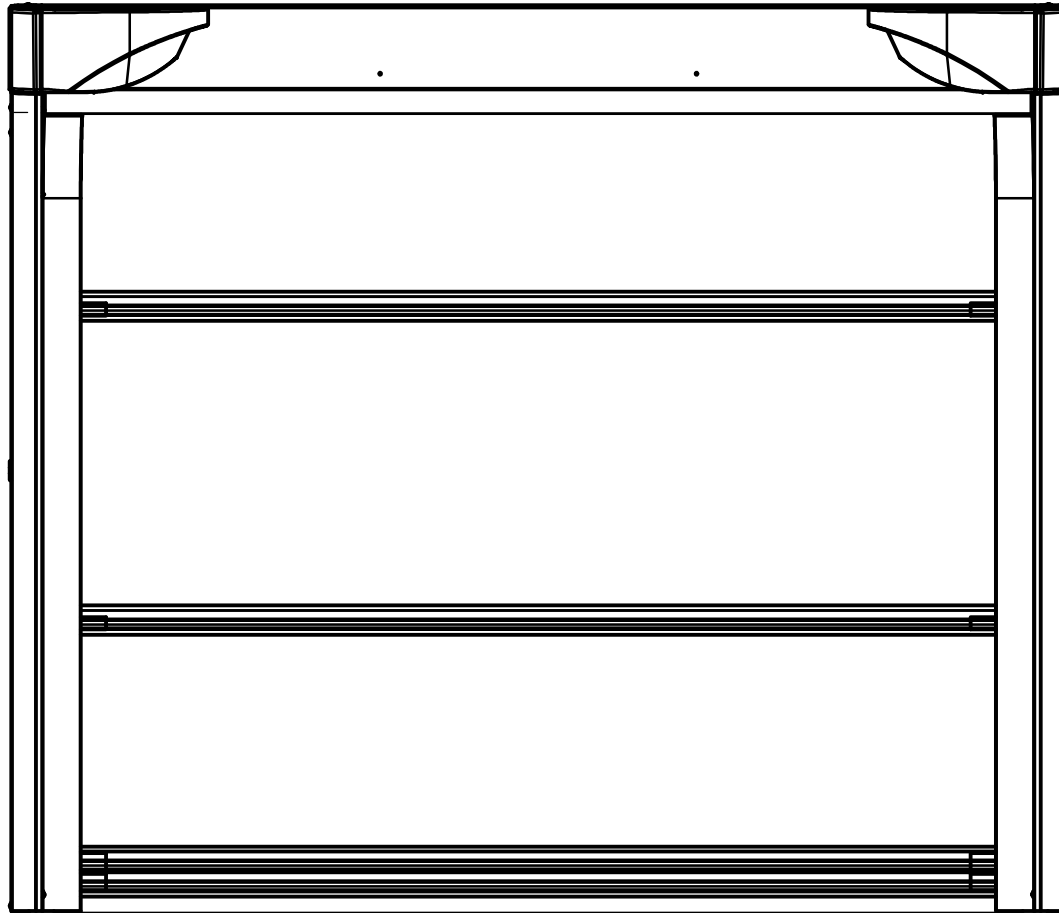




V3010

Electrical diagram

BK 370 M FUE-1 UPS

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Doors assembly with inverter

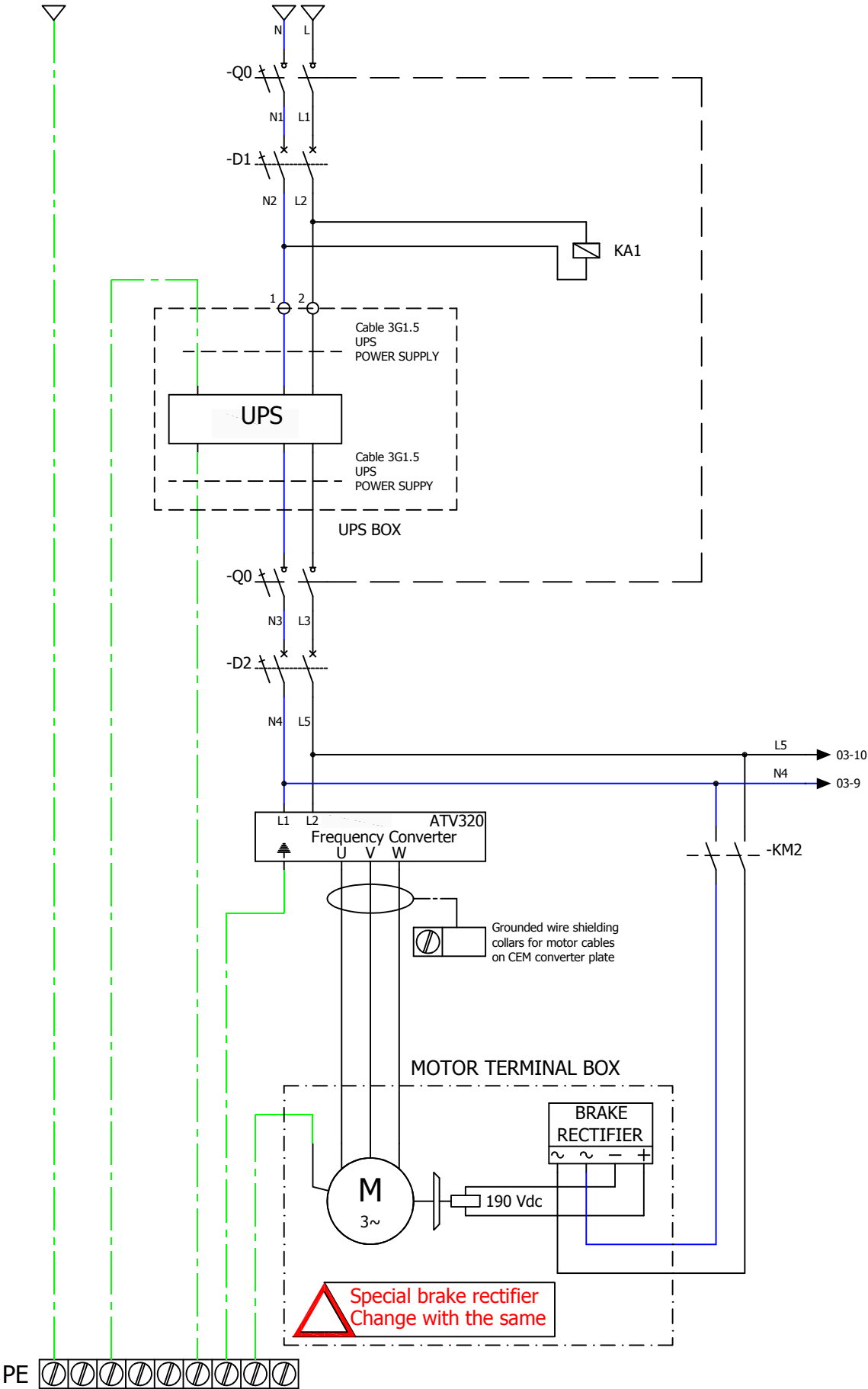
230V SINGLE PHASE +PE Power supply

The assembly, the wiring of all devices of the door and the operation tests must be done without UPS.

To do this, connect the two plugs on the control box together.

Once the assembly, the wiring and the tests done, connect, power off, the two plugs on the control box to the UPS box. Turn on the power supply and the inverter and do an opening test on the inverter.

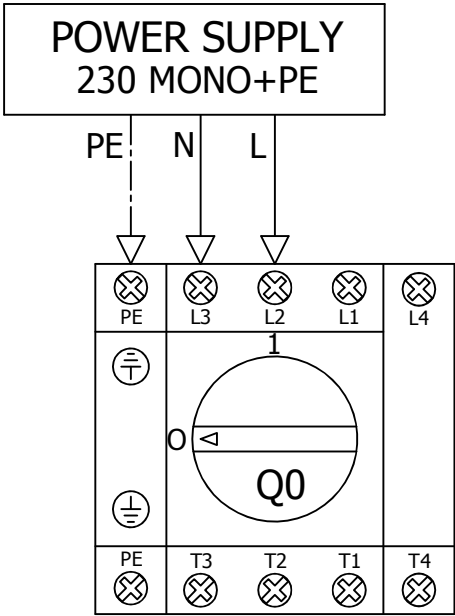
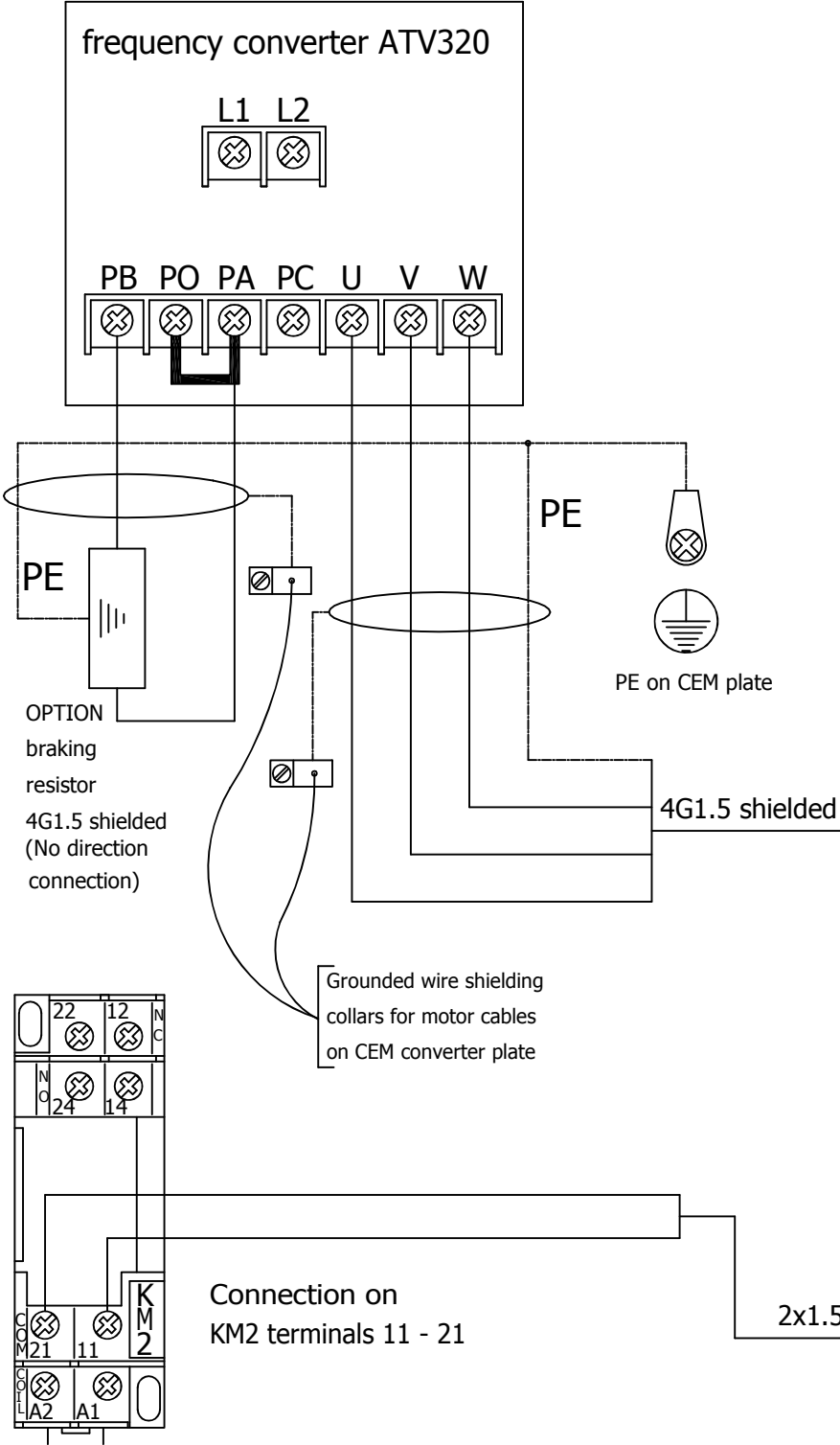
Power Supply 230V Single Phase+PE



Power

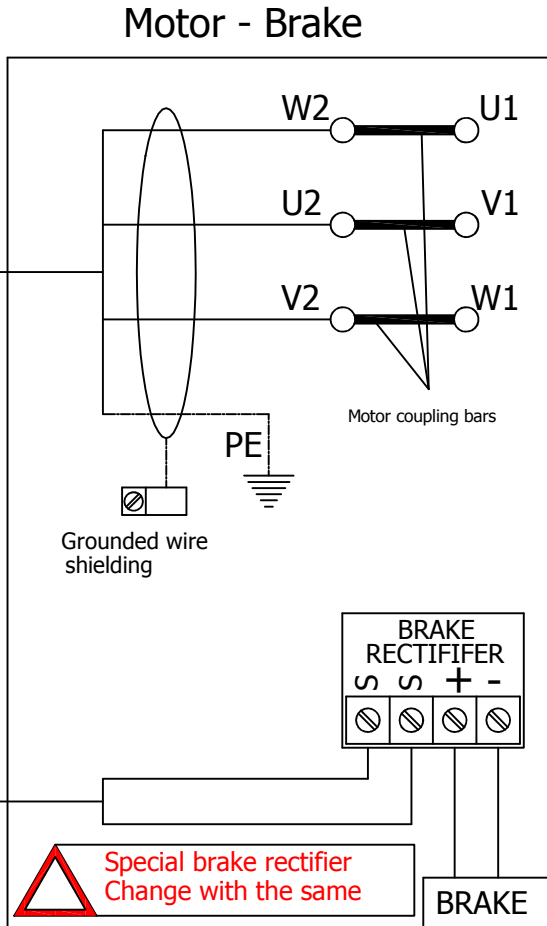
The general circuit must be at either 16A C curve

Reverses the 2 wires on the U-V-W terminals of the frequency converter if the motor does not turn in the right direction



GENERAL BREAKER/SWITCH AND EMERGENCY STOP

Motor single speed 230400V 0.37kW
6P In 2.2A brake 190VDC
Full-wave brake rectifier



Power terminal

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BK 370 M FUE-1 UPS

J1	J2	J3	J4	J5
49 GND	49 GND	41 Eclairage	16 FCDO	7 A URG
48 400V	48 400V	40 CL2	15 FDCF	6 A URG
47 230V	47 230V	39 CL1	14 COM	5 SELEC.
46 0V	46 0V	38 COM	13 STOP	4 COM
45 OPTI0N2	45 OPTI0N2	37 24Vac	12 COM	3 FERM F
44 OPTI0N1	44 OPTI0N1	36 24Vac	11 FERM	2 OUV F
43 OPTI0N1	43 OPTI0N1	35 0Vac	10 OUV	1 COM
42 Eclairage	42 Eclairage	34 0Vac	9 OUV	
41 Eclairage	41 Eclairage	33 TEST	8 COM	
40 CL2	40 CL2	32 TEST	7 A URG	
39 CL1	39 CL1	31 DT/2H0	6 A URG	
38 COM	38 COM	30 COM	5 SELEC.	
37 24Vac	37 24Vac	29 SB	4 COM	
36 24Vac	36 24Vac	28 SH	3 FERM F	
35 0Vac	35 0Vac	27 +12V	2 OUV F	
34 0Vac	34 0Vac	26 COM	1 COM	
33 TEST	33 TEST	25 TEST		
32 TEST	32 TEST	24 COM		
31 DT/2H0	31 DT/2H0	23 C3		
30 COM	30 COM	22 C2		
29 SB	29 SB	21 C1		
28 SH	28 SH	20 +12V		
27 +12V	27 +12V	19 COM		
26 COM	26 COM	18 TEST		
25 TEST	25 TEST	17 COM		
24 COM	24 COM	16 FCDO		
23 C3	23 C3	15 FDCF		
22 C2	22 C2	14 COM		
21 C1	21 C1	13 STOP		
20 +12V	20 +12V	12 COM		
19 COM	19 COM	11 FERM		
18 TEST	18 TEST	10 OUV		
17 COM	17 COM	9 OUV		
16 FCDO	16 FCDO	8 COM		
15 FDCF	15 FDCF	7 A URG		
14 COM	14 COM	6 A URG		
13 STOP	13 STOP	5 SELEC.		
12 COM	12 COM	4 COM		
11 FERM	11 FERM	3 FERM F		
10 OUV	10 OUV	2 OUV F		
9 OUV	9 OUV	1 COM		
8 COM	8 COM			

- Respect the dip switch and jumper as indicated in the diagram

Receiver :

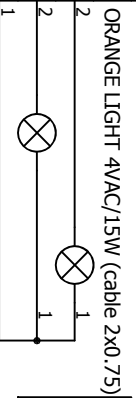
- Switchs 1 and 2 on ON
- Jumper of power selection : 12V position
- Selection Jumper for outputs 1 and 2 : Mec position

Transmitter :

- Switchs 1 on ON and 2 on OFF

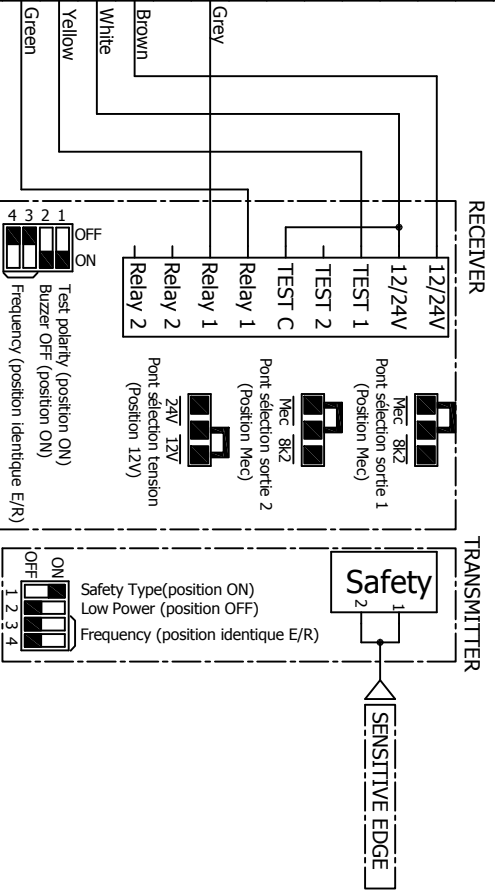
Receiver / Transmitter :

- Same setting on switches 3 and 4
- Mounting the seal given on transmitter gland
- Mounting the 6 screws on the transmitter cover
- The accessory cover seal is mounting on the receiver
- The transmitter cover has a preassembled silicone seal



The receiver and the transmitter are not paired Learning on paragraph 5

30W MAX POWER ON THE 24 VCA SUPPLY

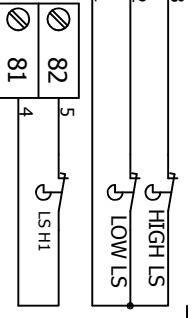


LOW SAFETY PHOTOCELL C1
(black cable) (grey cable)

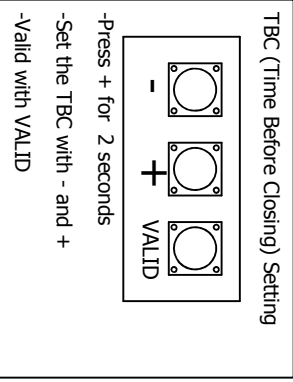
R1

E1

LIMIT SWITCH (cable 4x0.75)



AUTO OPENING



Leave slack of all cables of electrical components

Control terminal

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5. LEARNING

5.1 Learning of the transmitters on the first relay of the receiver

1 : Check that the DIP 3 and 4 cof the transmitter and the receiver are set in the same way

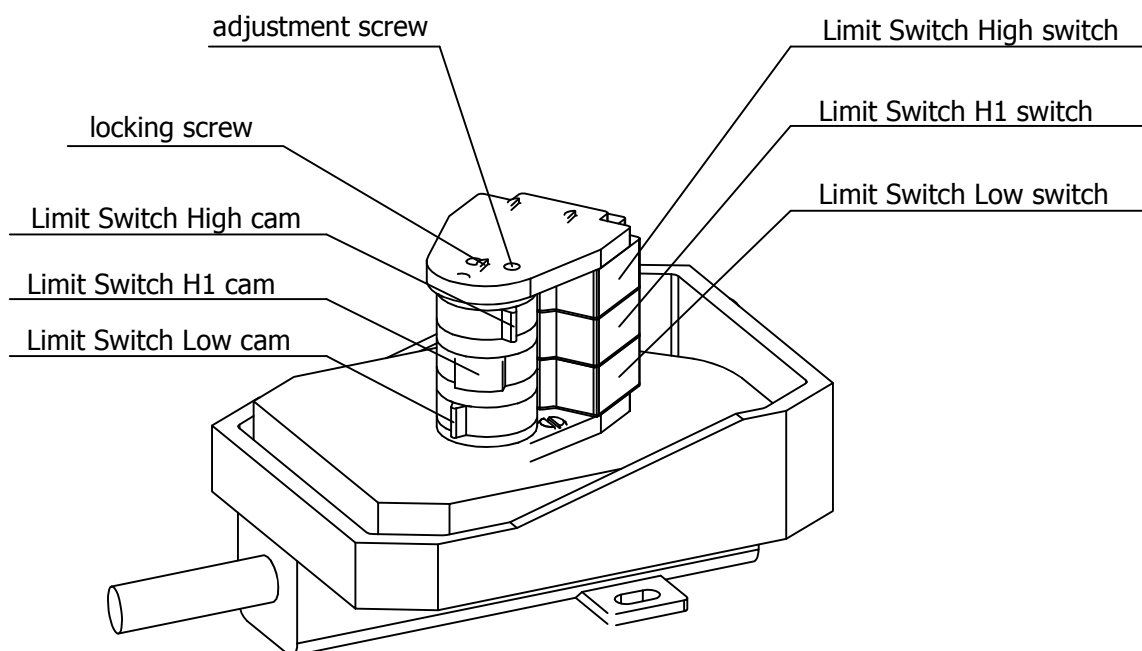
2 : Press and keep pressed
the key present on the receiver ➡ The receiver emits **1** BIP

3 : **Release** the key on the receiver

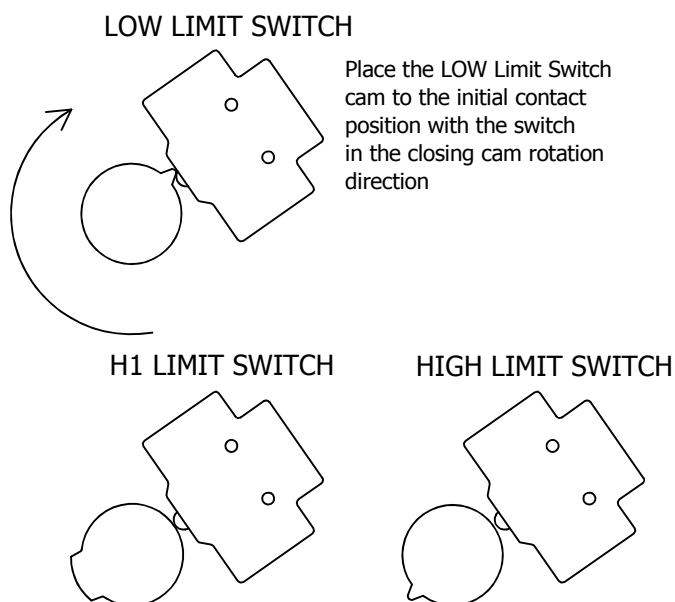
4 : Press and keep pressed
The transmitter key ➡ The receiver emits **2** BIPS

3 : **Release** the key of the transmitter ➡ The leraning ended correctly

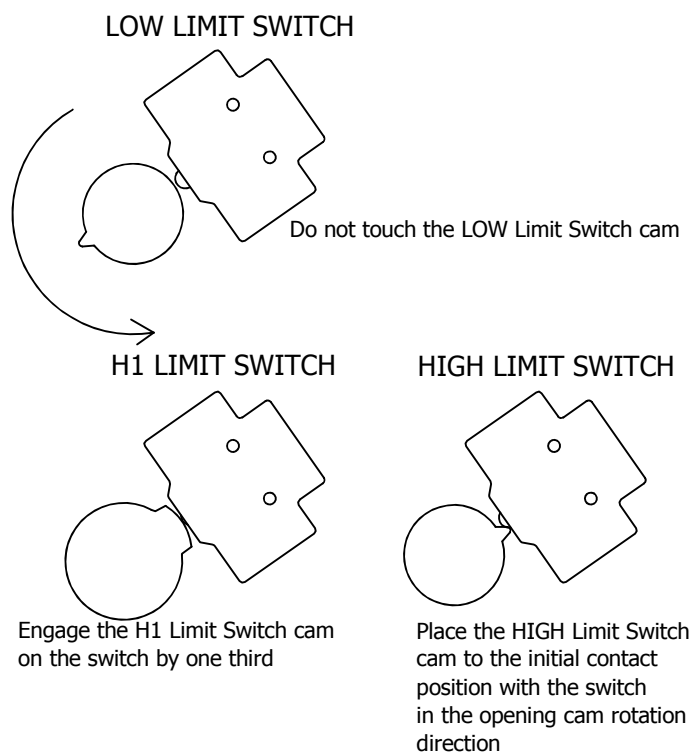
Adjustment and wiring of 3 positions limit switch with frequency converter



1/ Adjustment of Limit Switch Door Closed



2/ Adjustment of Limit Switch Door Open

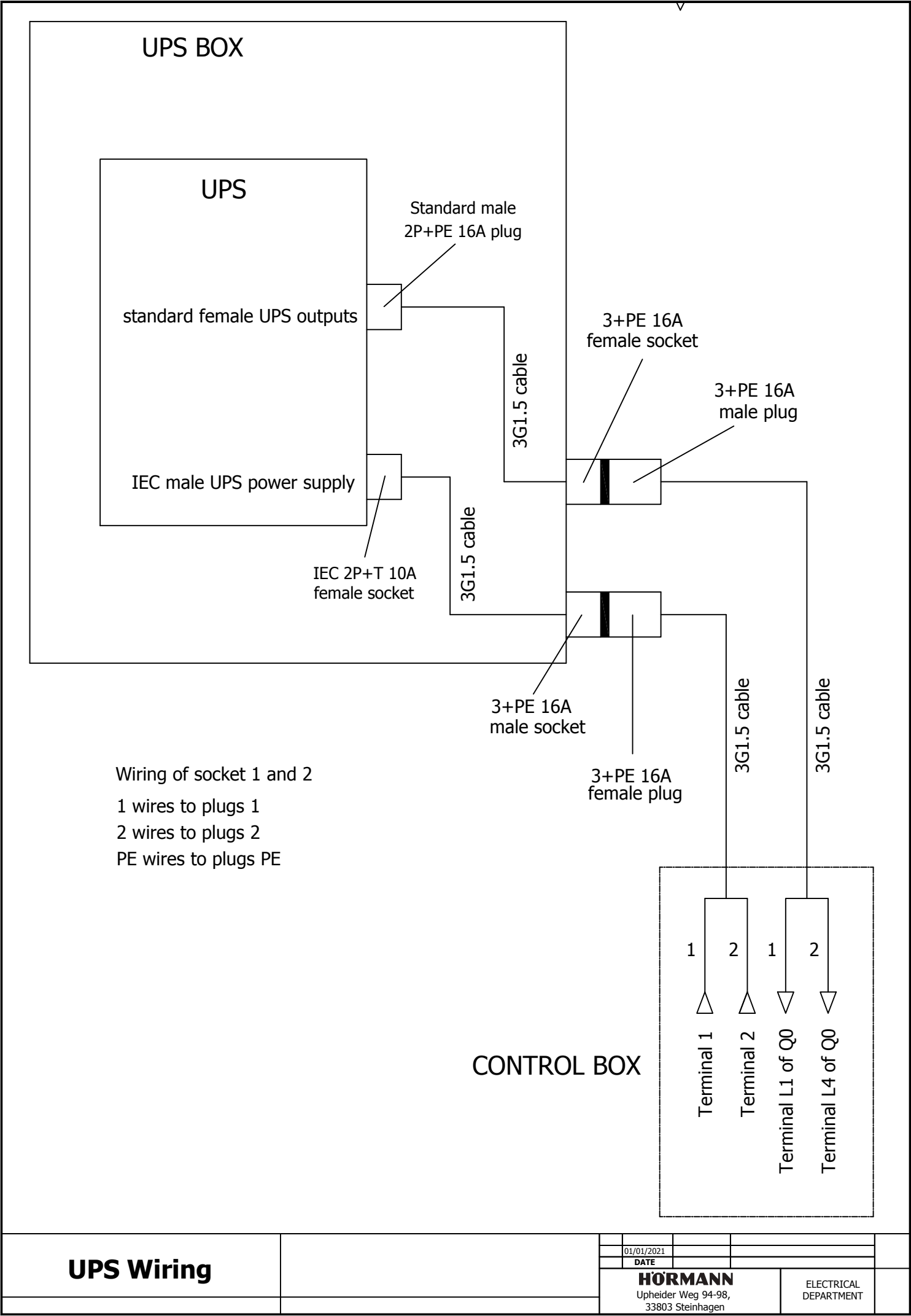


LS Adjustment

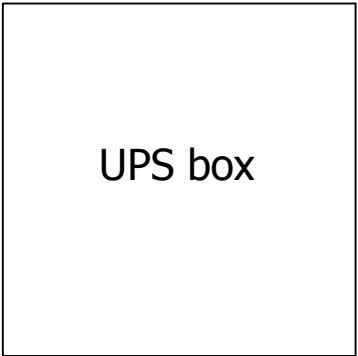
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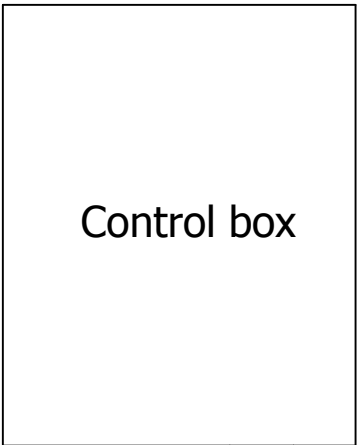


Remove the polyester tabs in the UPS box



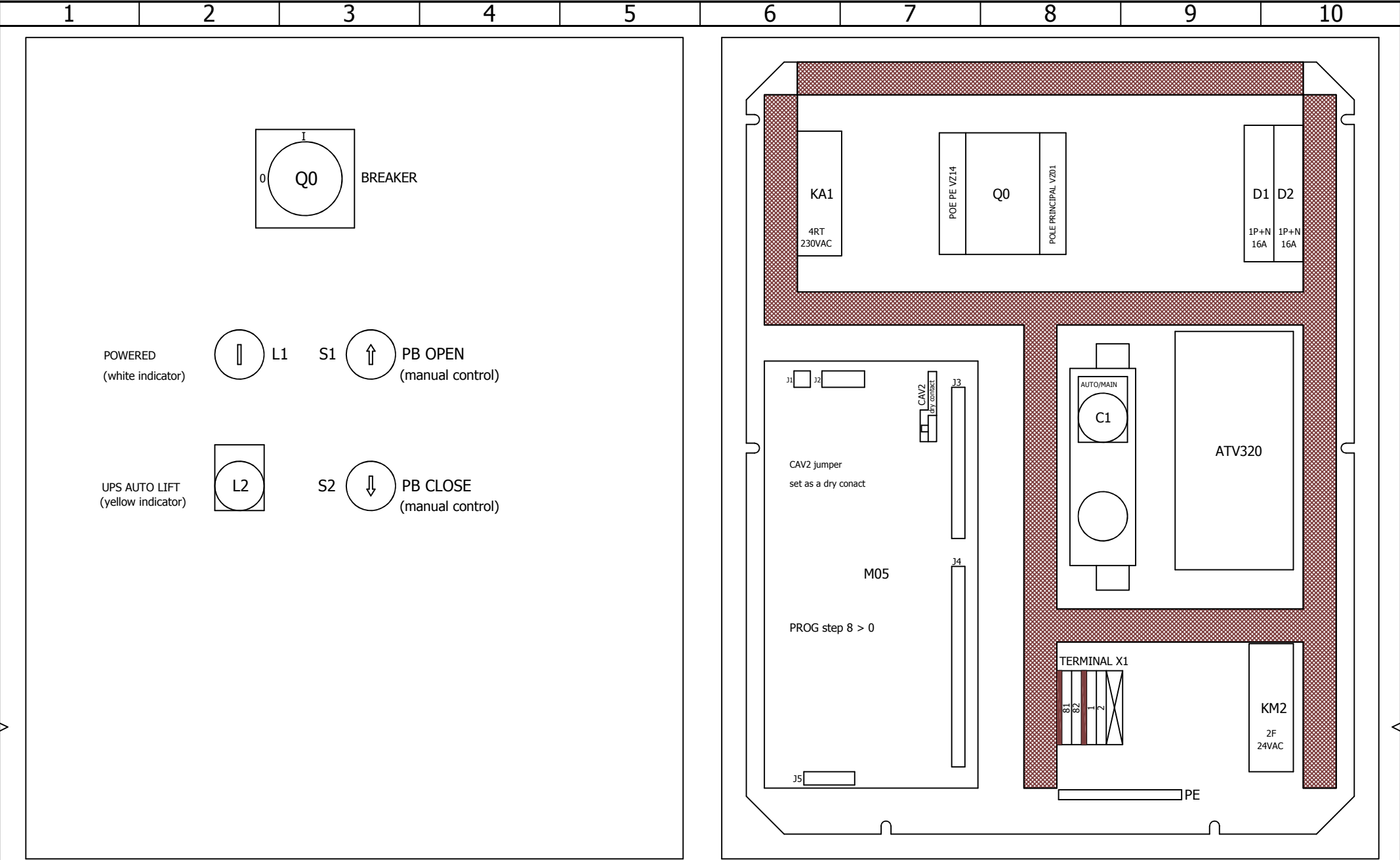
230V single-phase
power supply

Sockets 1 and 2



Place the inverter box above, to the right or to the
left of the control box and connect plugs 1 and 2
leaving the control box to the inverter box

UPS Box						
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Control Box

Mark	Quantity	Description	Reference		
-X1-1	1	Terminal end flange	1SNA115116R0700 1SNA118368R1600		
-X1-2	1	Terminal end flange	1SNA115116R0700 1SNA118368R1600		
-X1-81	1	Terminal End flange	1SNA199034R1500 1SNA199336R2000		
-X1-82	1	Terminal End flange	1SNA199034R1500 1SNA199336R2000		
-ATV320	1	ATV320 0,55kW 200V 1ph compact control variable speed drive	ATV320U06M2C		
-C1	1	KeySW 2Pos Key455out L&R PB Body 1NO AUTO-MAIN Label holder	ZB5AG4 ZB5AZ101 ZBY2164		
+L1+Control box	1	ABS Box 400x300	906974		
-D1	1	1P+N 16A circuit-breaker	A9N21025		
-D2	1	1P+N 16A circuit-breaker	A9N21025		
-KA1	1	55.34 - General purpose relays, Plug-in mount, 4 Pole 7 A, AC (50/60 Hz), voltage: 230 V, Contact material Standard AgNi, Contact circuit: CO (nPDT), Options: Lockable test button+mechanical indicator, version: Standard	94.04SMA 55.34.8.230.0040		
-KM2	1	56.32 - Miniature power relays, Plug-in, 2 pole 12 A, AC (50/60 Hz), voltage: 24 V, Contact material Standard AgNi, Contact circuit: NO (DPST-NO) - e1.5mm gap, Options: None, version: Standard"	9672SMA 56.32.8.024.0300		
-L1	1	PLight Head Wht BA9 PLight Body 24VACDC Wht LED Label holder POWERED	ZB5AV01 ZB5AVB1 ZBY2126		
-L2	1	PLight Head Yel LED PLight Body 24VACDC Wht LED Label holder POWERED	ZB5AV053 ZB5AVB1 ZBY2126		
-M05	1	M05 Electronic Card	M05		
-PE	1	Earth bar	04803		
-Q0	1	RED/YELLOW OPERATOR/BEZEL DOOR INTERLOCK VARIO SWITCH BODY 20A LTH VARIO MAIN POLE ATTACHMENT EARTH LINK SHAFT EXTENSION	KCD1PZ KZ32 V01 VZ01 VZ14 VZ17		
-S1	1	PB Head Flush Without Cap PB Body 1NO WHITE CAP ARROW	ZB5AA0 ZB5AZ101 ZBA335		

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Bill Of Materials

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-> Control Box

Mark	Quantity	Description	Reference	article number	Manufacturer
-S2	1	PB Head Flush Without Cap PB Body 1NO BLACK CAP ARROW	ZB5AA0 ZB5AZ101 ZBA334	ACV000450 ACV000168	Schneider Electric

UPS Box

Mark	Quantity	Description	Reference	article number	Manufacturer
=	1	Female IEC 2P+T 10A socket	33701	ACV003675	EBENOID
=	1	2P+PE 16A male plug	050285	ACV001778	Legrand
-Socket 1	1	Male socket 3+PE 16A female plug	932.322.100 CA 3 GS 934.125.100 CA 3LD	ACV000408 ACV000207	Hirschmann
-socket 2	1	Female socket 3+PE 16A male plug	932.321.100 CA 3 GD 934.124.100 CA 3LS	ACV000212 ACV000208	Hirschmann
-UPS	1	Inverter 1200VA	ELP1200FR	ACV003674	EATON
+L1+UPS Box	1	ABS 400x400x170 IP65 inverter box	CAB ABSQ 4040 17G	ACV000206	FIBOX

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ELECTRICAL DEPARTMENT

COMMISSIONING



Door control box fitted with a UPS system using an integrated inverter.



Access to the door control box and the emergency power supply box is prohibited to unauthorized persons.

Switch on the mains voltage of the Control box

- 1- Main switch **Q0** and the circuit-breakers **D1 and D2** of the control box **MUST BE OFF**
- 2- Connect mains power, **230V SINGLE + PE** to main switch **Q0**
(See the page 02 of the door electrical diagram)
- 3- Fixed and wire the UPS Box
(See the page 07 of the door electrical diagram)
- 4- Wire all electrical components of the door control box
(See from pages 02 to 06 of the door electrical diagram)
- 5- **Door in « MANUAL mode » Select by the key Switch C1 (« MANU » LED ON on the keypad)**



Check that the input of general switch Q0 is indeed 230 V single-phase mains powered

- 6- Switch on Main switch Q0 and then the D1 and D2 circuit-breaker of the door control box
- 7- The door control box is now mains powered.
- 8- Set all the door parameters. Refer to STEP 17 of the notice.



Door adjustments MUST be made from the mains power and under no circumstances using emergency power. D2 MUST BE OFF

- 9- Switch the door control box to AUTO mode (Select by the key Switch C1 (« MANU » LED OFF on the keypad)

Fit and switch on the UPS box once the door works perfectly

- 1- Turn on the inverter by holding down the ON button on the left-hand side until you hear a beep (the ON button is flashing with a continuous beeping)
- 2- Activate the door with the UPS by switching back on Main switch **Q0** then circuit-breakers **D1 and D2**
- 3- Test the emergency power supply by switching off the D1 circuit-breaker with the C1 “auto/man” key switch set to AUTO.
(Opening on emergency power supply at 0.4m/s))

IMPORTANT

1/ 1/ the automatic opening using UPS in case of power failure only works in AUTO position (“MANU” LED OFF on the keypad), with the inverter on and D2 circuit-breaker ON

Par conséquent :

- **Door in AUTO mode (Select by C1 keyswitch, « MANU » LED OFF on keypad)**
- **Do not leave keys in the C1 “auto/man” key switch in the door control box**
- **the door control box must always be locked**

2/ Fully charge the UPS system

On first use or after opening the door using the UPS system, the inverter will require 8 hours charging for full autonomy.

To preserve autonomy the inverter must always be connected to the mains power supply.

Good to know :

- The L1 indicator yellow light shows when the door opens automatically using the inverter
- The door can be opened or closed using the UPS when set to MAN mode (Select by C1 keyswitch, « MANU » LED ON on keypad) with the keypad.



CAUTION: the door will remain in its current position when the inverter is fully discharged