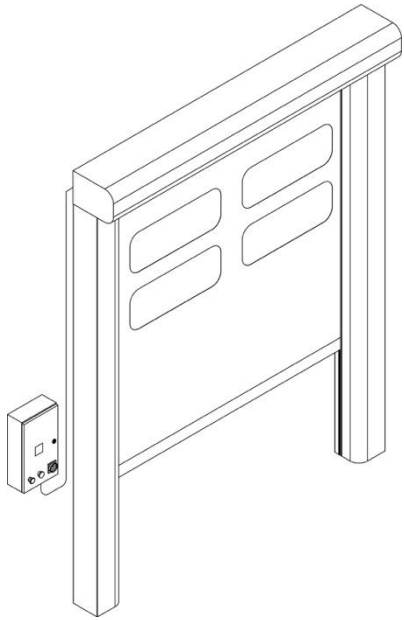
# INSTALLATION AND USER MANUAL



## INDUSTRIAL HIGH SPEED DOOR

**Model: Dynamicroll® CB125 TM**

BMP EUROPE Srl
Strada della Freisa, 1
14019 – Villanova d'Asti (AT) ITALY

(Translation from original)

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- ANNEX B – VISUAL CHECKS AND TESTS
- ANNEX C – MAINTENANCE BOOK

## 1. INTRODUCTION

This guide was written and printed out from “BMP EUROPE Srl” and even partial reproduction is forbidden. The original is filed at “BMP EUROPE Srl”. Manufacture can change contents without any notice.
This guide is an integral part of the machine and must be stored with care and made available to the user.

## 2. TRAINING

It is the customer responsibility to ensure that all personnel who will be expected to operate or maintain the equipment participate in training and instruction sessions and become trained operators.
All personnel operating, inspecting, servicing or cleaning this equipment must be properly trained in operation and machine safety.
Before operating this equipment, read the operating instructions in the equipment technical manual.

## 3. GENERAL SAFETY INSTRUCTION

Understand the LOCKOUT/TAGOUT procedure and use it before inspecting, maintaining, servicing or cleaning the equipment to help prevent anyone from accidentally turning on power to the machine.
Know how the equipment functions and understand the operating processes.
Know how to shut down the equipment. Emergency stop button is located on the machinery.
Know where this stop is located.
Understand the equipment safety labels and heed them
Wear the appropriate personal protective equipment for the job to be performed (if required)
Ensure that nothing you are wearing could get caught in the machinery.
When working on or around all equipment, avoid wearing loose clothing, jewelry, unrestrained long hair, or any loose ties, scarves or articles that may be caught in moving parts.
For new equipment, check plant voltage with the voltage specified on the machine. Electrical specifications for your machine are printed on the CE marking.

## 4. SAFETY SIMBOLS

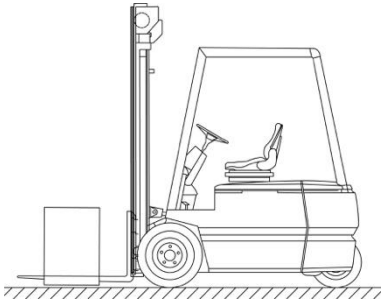
| | |
|---|---|
| **DANGER** | Indicates a hazardous situation which, if not avoided, WILL result in death or serious injury |
| **WARNING** | Indicates a hazardous situation which, if not avoided, COULD result in death or serious injury |
| **CAUTION** | Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury |
| **NOTICE** | Indicates information considered important but not hazard related |

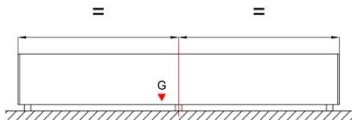
## 5. TERMS AND DEFINITIONS

| | |
|---|---|
| **Trained operator** | An authorised person, which can use the machine and the according equipment |
| **Trained technician** | Person, adequately trained by the manufacturer, qualified for knowledge and practical experience, and with instructions to carry out the required installation correctly and safely |
| **Maintenance book** | Book that contains general data related to a specific equipment and have an adequate space where register the result of inspection, testing, maintenance and any repair or modification to the machine |
| **Owner** | Natural or legal person that has the door and that is responsible for its operation and use |
| **Maintenance** | All operations sufficient to ensure correct and safe operation of the machinery and its component after installation. Maintenance includes adjustements,repair or replacement for usury or accidental distruction,of components |

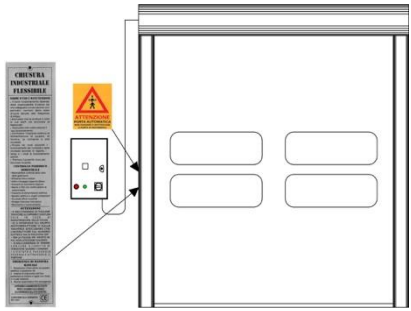
## 6. MOVING

The machine must be moved considering the weight and the possible movements that it could have during the movement. Use proper lifting and transporting devices for equipment. Check the position of the forks according to the center of gravity of the machine. Before starting installation, check the integrity of the product.






## 7. LABELS



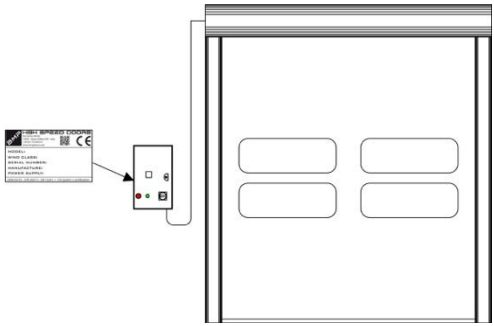

NOTE: Labels are an integral part of the use and maintenance manual. Always check the presence of labels and provide for replacement in case of removal or wear (unreadable labels).

## 8. TECHNICAL SPECIFICATIONS

**CE Marking and position**

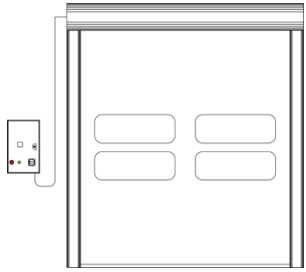



1 Model identification
2 Wind class identification
3 Univocal serial number identification
4 Construction year identification
5 Power supply identification



CE marking is inside control panel

**Type**



| | 230 V – BMP1 V03 | 400 V – BMP2_V04/05/06 |
|---|---|---|
| POWER SUPPLY | 230 V AC 1 PH | 400 V AC / 230 V AC 3 PH |
| | 50/60 Hz | 50/60 Hz |
| | 16 A | 10 A – 16 A |
| | 0,75 - 1,5 kW | 0,75 - 1,5 – 2,2 kW |
| | IP54 | IP54 |
| | IP54 | IP54 |
| | from -20 °C to +50 °C | from -20 °C to +50 °C |

| Motor type | Motor connection | W Brake | W Motor | Dispersion to ⏚ |
|---|---|---|---|---|
| 0,75 kW |  | 453 | 10,8 | 0 |
| 1,50 kW | | 285 | 4,5 | 0 |
| 2,20 kW | | 301 | 2,9 | 0 |

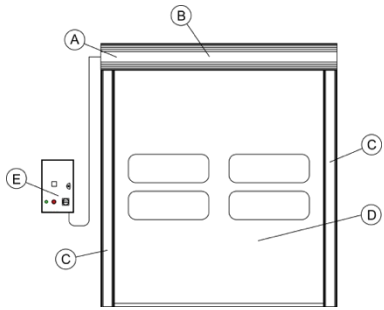
In case of delta connection, change the motor connection to star and carry out the test.

**NOTICE** **400 V / 230 V Ø 4 mm² min**

**Weight**

The weight varies according to the size of the door. The weight of the door is indicated on the packaging.

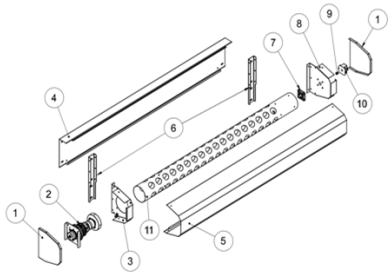
**Main components**




| | |
|---|---|
| A | Motor unit * |
| B | Top heading |
| C | Columns |
| D | Curtain |
| E | Control panel |

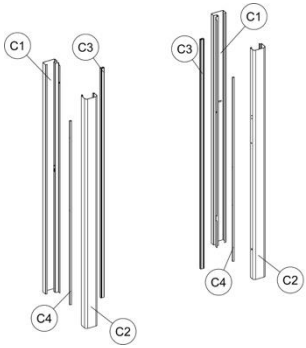
A* - Motor position

TOP HEADING AND MOTOR UNIT

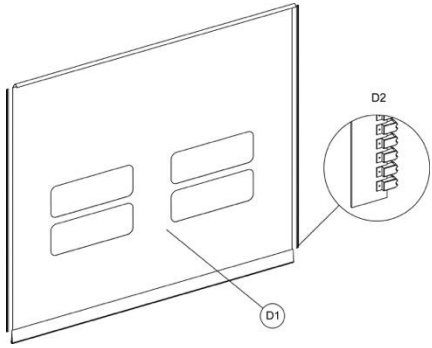



| | | | |
|---|---|---|---|
| 1 | Side plate | 7 | Bearing |
| 2 | Motor | 8 | Bearing side plate |
| 3 | Motor side plate | 9 | Encoder magnet |
| 4 | Back transom | 10 | Encoder |
| 5 | Cover transom | 11 | Drum |
| 6 | Fixing bracket | | |

COLUMNS

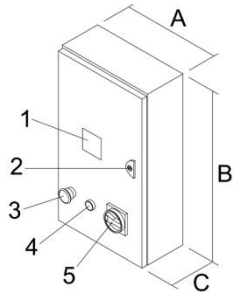



CURTAIN




| | | | | | |
|---|---|---|---|---|---|
| C1 | Column back | C3 | Polyzen guide | D1 | Curtain |
| C2 | Column cover | C4 | Safety light curtain | D2 | Zip |

CONTROL PANEL




Metallic control box
A = 300 mm
B = 490 mm
C = 135 mm

PVC control box
A = 300 mm
B = 380 mm
C = 120 mm

Front of control panel
1 - Display
2 - Lock
3 – EMERGENCY STOP button
4 – Opening/closing button (START)
5 – Main switch (GS)

**Safety devices and guards**

Safety devices:

- Photocells
- Curtain top sensor
- Wireless safety edge
- Safety light curtain

Guards:

- Top heading cover
- Columns cover
- Motor cover

**NOTICE** Standard safety devices depend on size of the door



**WARNING**

**DO NOT REMOVE FIXED GUARDS**.
The manufacturer assumes no responsibility for the use of the machine without fixed protections. Immediately restore the protections that are damaged or worn.

## 9. INTENDED USES AND USAGES LIMITS

The automation is an industrial door with vertical movement designed to close internal or external compartments, which allow the passage between two rooms. The passage is generally intended for logistic, such as for example trucks, forklifts, AGVs etc., or of people. The mixed passage through the door is allowed only if it is safe; In this case a risk analysis by the user is necessary to make the passage safe. The door must be used for the purpose for which it was designed. Any other use is to be considered improper and therefore dangerous. The manufacturer declines all responsibility for damage resulting from improper, incorrect or unreasonable use. The use of the door as an emergency exit is not foreseen, since it is not homologated.

## 10. INSTALLATION

**NOTICE** Installation must be done by trained technician

**General safety instruction**

For the mechanical installation, suitable means must be used for lifting the automation and for accessing the parts at height. Check that the structure on which the door is installed is suitable to support the weight of the machine, also taking into account dynamic and static phenomena.
Electrical connections and adjustments must be made respecting what is indicated in this document and respecting Good Technique. Before connecting the power supply, make sure that the plate data correspond to that of the electricity distribution network.
Provide a suitably sized switch / disconnector on the power supply.
Check that the power supply line is protected by a differential device and by overcurrent protection. Connect the door to an effective earthing system.
At the end of the installation, the installer must provide all information relating to the automatic, manual and emergency operation of the door and give the user of the system the use and maintenance manual.

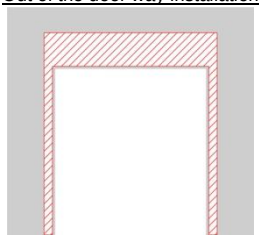


**CAUTION** A WRONG INSTALLATION CAN BE A SOURCE OF DANGER DURING THE OPERATION OF THE MACHINE

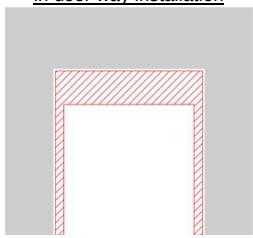
**Installation mode**

Before proceeding with the installation operations, it is necessary to check the dimensions of the compartment with respect to the dimensions of the door. Check for any protrusions.

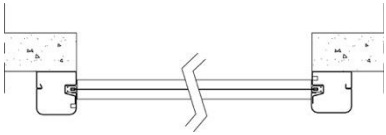
Out of the door way installation

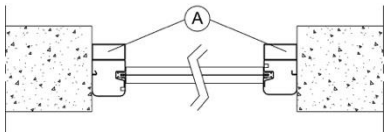


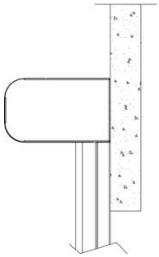
In door way installation

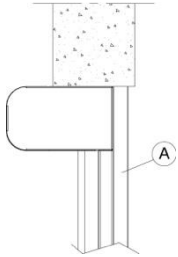


Structure Size door





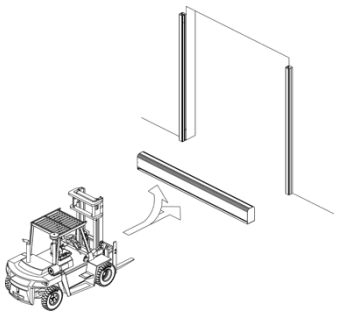





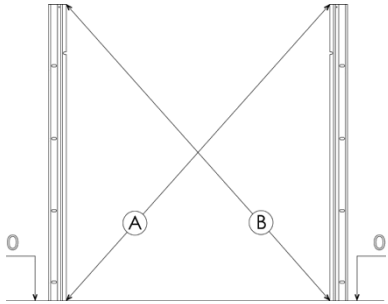

**A** Support frame

**Fixing**

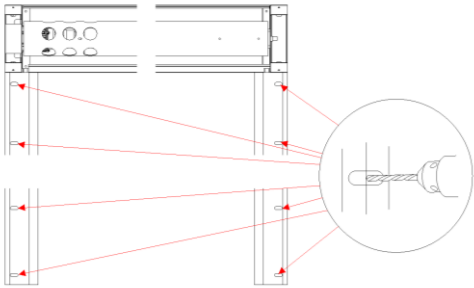
Before installing the door, check that the floor, the existing walls or the support structure have the necessary strength requirements, suitable to support the weight of the door, also considering the dynamic thrusts due to normal operation and to any impacts. Possibly make the necessary structural changes that must be made before giving rise to the installation.



First fasten the columns temporarily to the support structure (ex. the wall) and then lift the top heading with a suitable means.

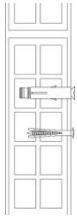



Make sure that the support surface is planar; check the geometry of the columns and the horizontality of the top heading and proceed with the fixing as described below.
**(A=B ± 5mm)**

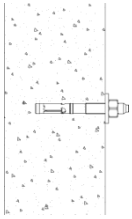


Drill the holes on the buttonhole axis, to then make the appropriate final adjustments.

Fixing examples:



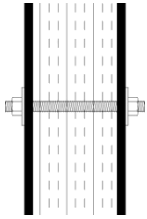
**On brick**



**On concrete**

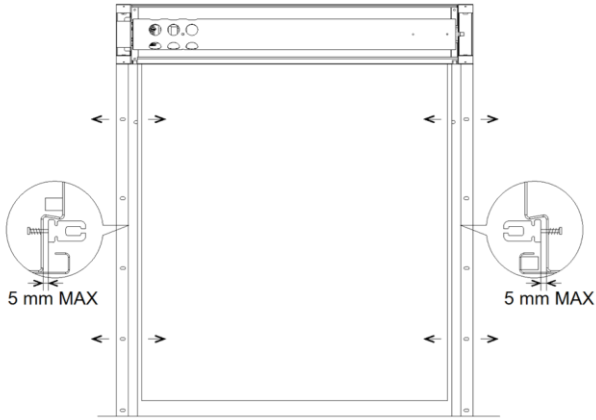


**On iron**



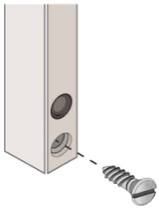
**On isolated Plasterboard / insulated panel**

**Curtain tension**




Check the correct tensioning of the curtain, and correct if necessary, by acting on the two lateral guides, then fix the columns definitively. If the curtain does not slide or slide with difficulty, adjusting the compression of the springs decreases the tension of the curtain, as previously described.

**Safety light curtain fixing**



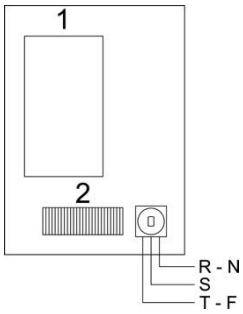
Front mount - M 3,5 x 30 mm screw (use only supplied screws)




Plan view – safety light curtain installation

If the door is equipped with safety light curtain, these are already installed on the columns.

**Control panel components**



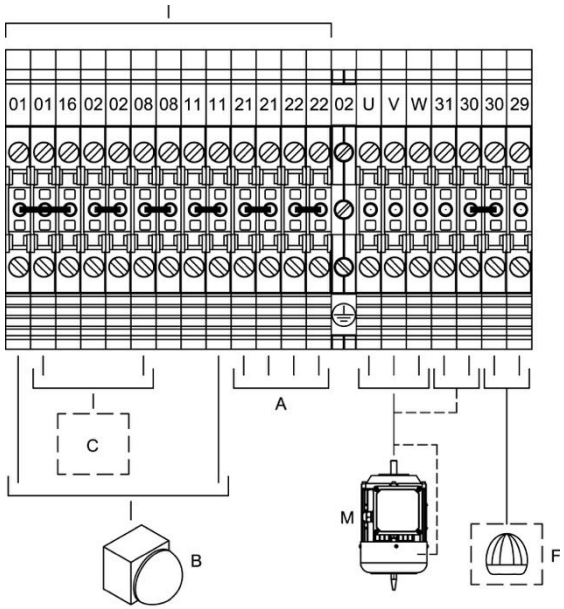

1 – Control board

2 – Clamps

3 – Power supply / door lock

Metallic control panel clamps

Not present on PVC panel




A – Control card connectios

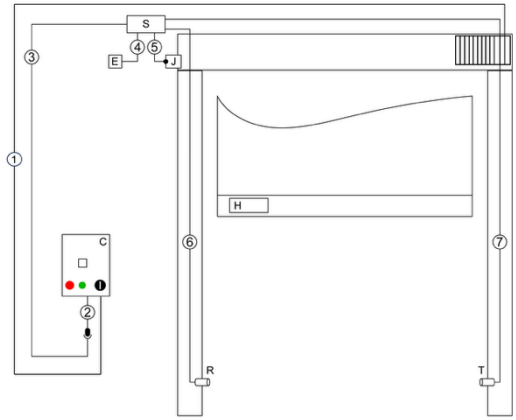
B – Push button on the opposite side

C – Opening button

F – Flashing lamp

M – Motor

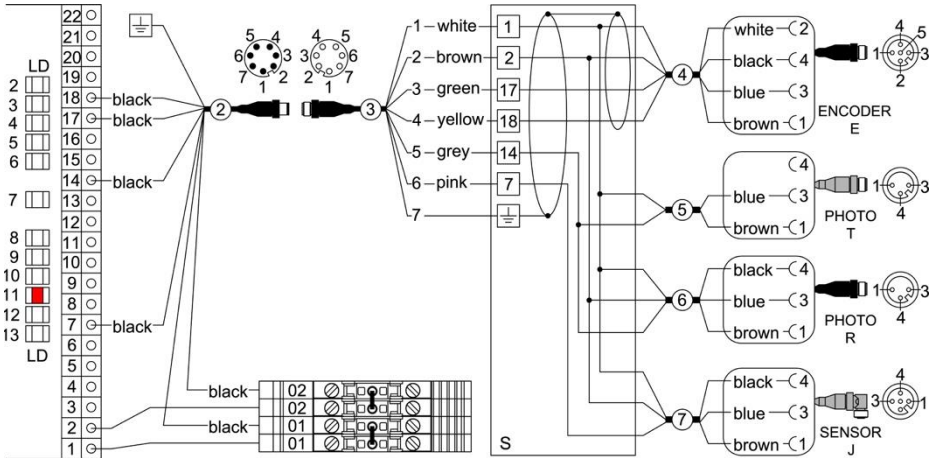
**Electrical connections [ENCODER + PHOTOCELLS (SPIDER CABLE)]**



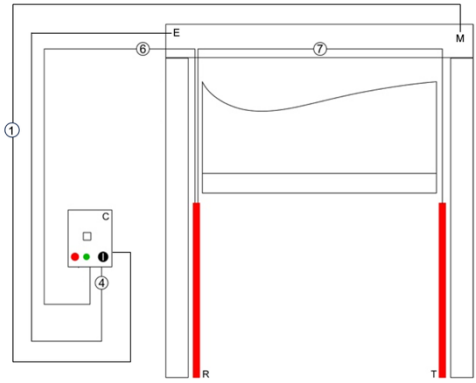

C Control panel
S Signals distributor connection *Spider*
E Encoder
J Curtain top sensor
R Infrared photocell receiver
T Infrared photocell transmitter
H Wireless safety edge transmitter

| | Wiring | Sections |
|---|---|---|
| 1 | Motor and brake supply cable | 4G x 1,5 mm² + 2 x 0,5 mm² |
| 2 | Control panel / Mobile connector cable | 7 x 0,5 mm² |
| 3 | Mobile connector / Distribution connection *Spider* | 7 x 0,34 mm² |
| 4 | Encoder cable | 4 x 0,34 mm² |
| 5 | Curtain top sensor cable | 3 x 0,34 mm² |
| 6 | Photocell receiver cable | 3 x 0,34 mm² |
| 7 | Photocell transmitter cable | 2 x 0,34 mm² |

Spider cable connections detail



**Electrical connections [ENCODER + SAFETY LIGHT CURTAIN]**

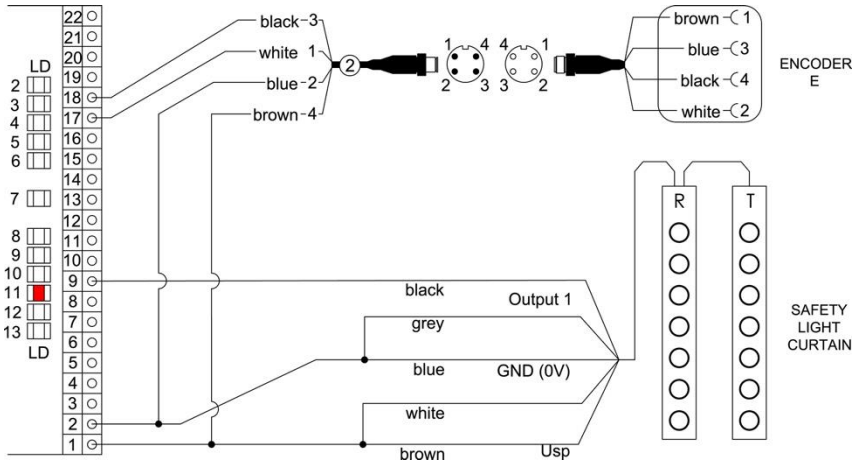



**Devices list**

| | | | |
|---|---|---|---|
| C | Control panel | E | Encoder |
| M | Motor/Blake | R | Safety light curtain receiver |
| | | T | Safety light curtain transmitter |

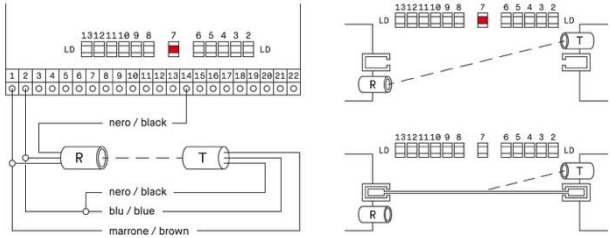
| **Wiring** | | **Sections** |
|---|---|---|
| 1 | Motor and brake supply cable | 4G x 1,5 mm² + 2 x 0,5 mm² |
| 4 | Encoder cable | 4 x 0,34 mm² |
| 6 | Safety light curtain receiver cable | 6 x 0,34 mm² |
| 7 | Safety light curtain transmitter cable | 4 x 0,34 mm² |

Encoder cable connections + safety light curtain detail



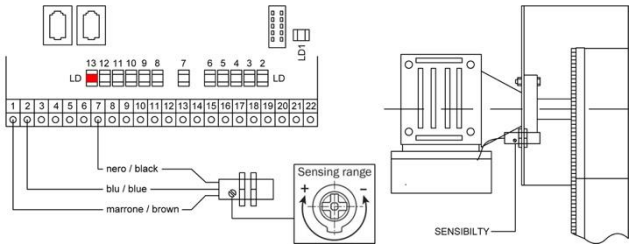
## Electrical connections [DEVICES WITHOUT SPIDER CABLE]

### INFRARED PHOTOCELLS




The pair of photocells must be mounted as shown in the drawing, so that when the curtain is closed the photocell is engaged. Visualization through LD7.

### CURTAIN TOP SENSOR

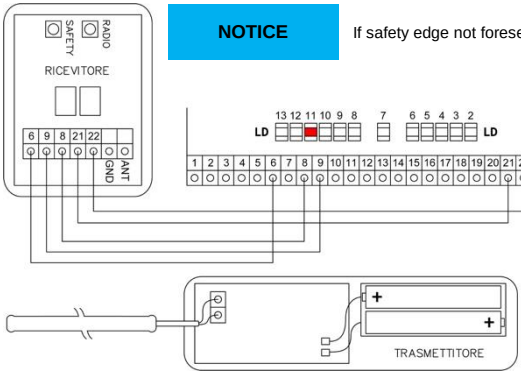



The curtain top sensor detects that the curtain has not slipped during closing. Adjust the positioning in the slotted hole and the sensitivity using the appropriate trimmer (SENSIBILITY).

**NOTICE**

Visualization through LD13 if top sensor isn't expected jumper 7-13.

### WIRELESS SAFETY EDGE




**NOTICE** If safety edge not foreseen, jumper 9-15

1. Apply power (green LED ON) and insert the batteries in the transmitter.
2. The system is already programmed from the factory. Test the correct operation by pressing the edge (visualization trought LD11).

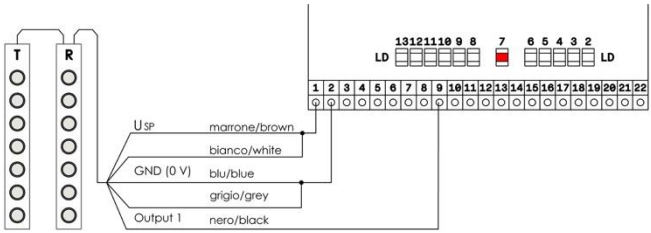
Setting

a. Press SAFETY button on the receiver. The memory remains open for 10 seconds (red LED ON)

b. Press the safety edge to memorize the transmitter code.

c. If correct programming, the red LED flashes quickly for 3 seconds. Test the operation by pressing the safety edge.

### SAFETY LIGHT CURTAIN



**Electrical connections [ACCESSORIES]**

Opening laser TOF/SPOT



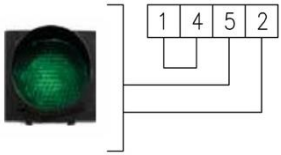

Microwave radar_1



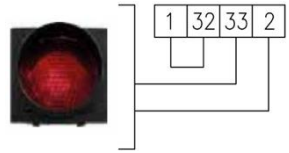

Radar a microonde _2



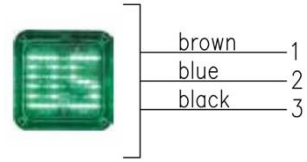

Traffic light
Green: closed door
Red: open door



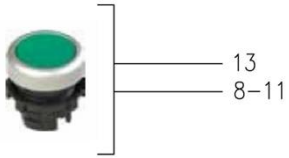

Traffic light
Green: open door
Red: closed door




LED Traffic light



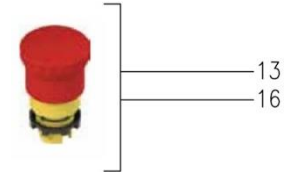

"Open" green button



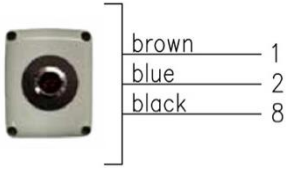

"Open" black button



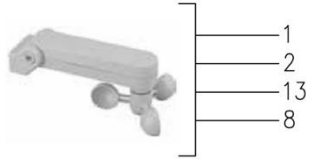

Retaining "stop" button



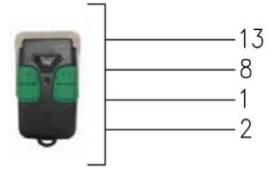

Touch button



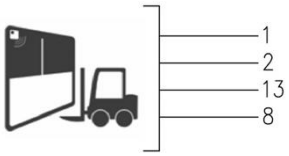

Anemometer



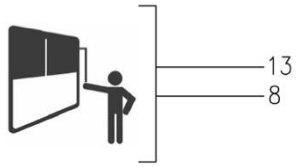

Radio remote control / Radio receiver



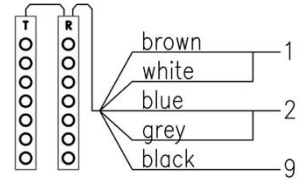

Magnetic loop




Cable pull

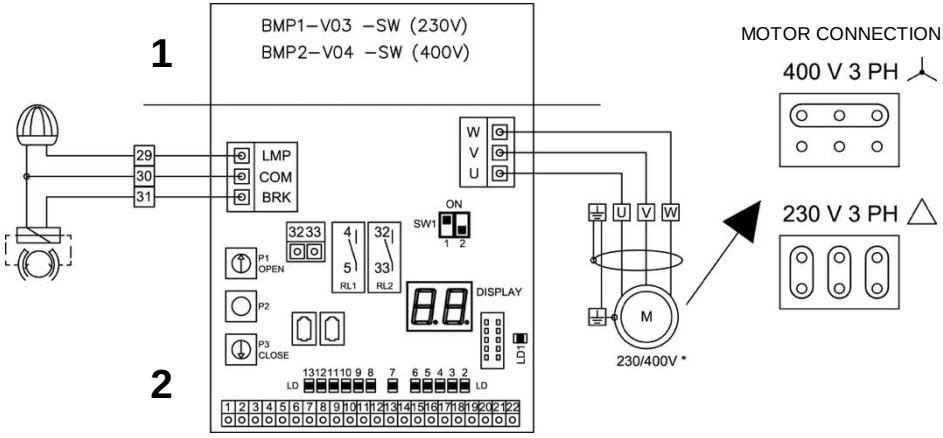



Safety light curtain

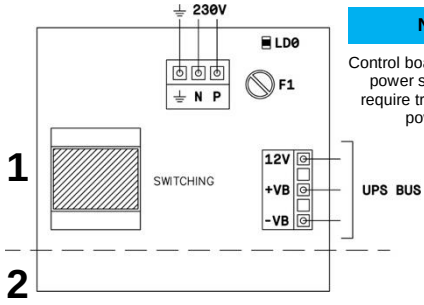


## 11. CONTROL BOARD

**NOTICE** Part indicated with number 2 is common to all types of control board, part 1 changes according to the control board installed



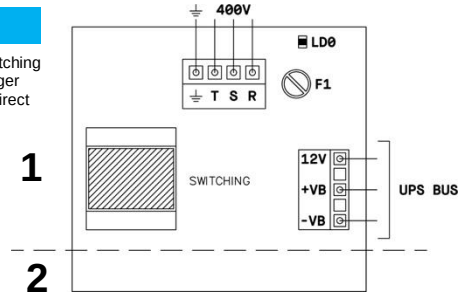

**BMP1 – V03 –SW (230 V)**




**NOTICE**

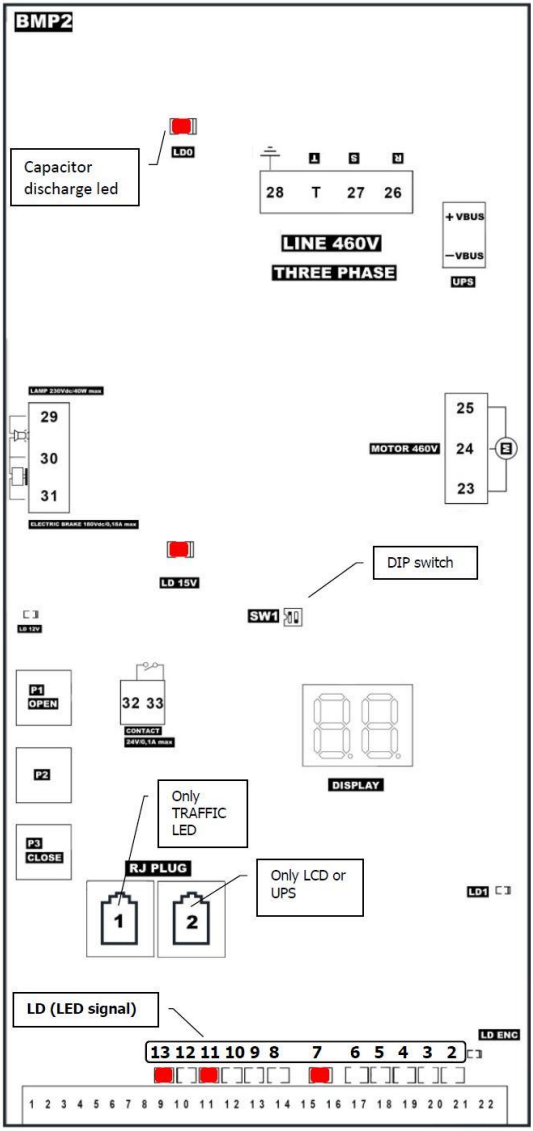
Control boards with switching power supply no longer require transformer, direct power supply

**BMP2_V04/05/06 –SW (400 V)**




| Clamp | Description | BMP1-V03 | BMP2_V04/05/06 |
|---|---|---|---|
| P-N / R-S-T | Main supply | 230V AC | 400V AC |
| 12V | Signal supply from UPS | 12V DC | 12V DC 1A |
| +VB -VB | Supply bus from UPS (optional) | 320V DC | 560V DC |
| U - V - W | Three-phase motor | 230V – 0,75/1,5kW | 400V – 0,75/1,5/2,2 kW |
| LMP - 29 30 | Flashing lamp | 230V AC [RMS] | 230V AC [RMS] |
| BRK - 30 31 | Brake | 110V DC [RMS] | 110V DC [RMS] |
| F1 | Fuse | 10A (230V) | – |
| LD0 | Capacitor discharging signaling | – | – |

**Electrical power connection - Dip Switch SW1 function and LED meaning BMP2_V04/05/06**




| | POWER SUPPLY |
|---|---|
| 26 | R - 208-460V±10% 50/60Hz |
| 27 | S - 208-460V±10% 50/60Hz |
| T | T - 208-460V±10% 50/60Hz |
| 28 | GROUND CONNECTION |
| | **MOTOR** |
| 25 (A)<br>24 (B)<br>23 (C) | 380V: A, D, C, B — 230V: A, C, B |
| 380V | A RED, B BLACK, C GREEN — RED, BLACK, GREEN |
| 230V | A RED — RED, B BLACK — BLACK, C GREEN — GREEN |
| | **FLASHING LIGHT / BRAKE** |
| 29<br>30 | FLASHING 230V (NO LED) |
| 30<br>31 | BRAKE 103V DC |

| | DIP SW1 Function | |
|---|---|---|
| DIP 1 OFF | BRAKE CONTROL DISABLED |  |
| DIP1 ON | BRAKE CONTROL ACTIVATED (short circuit extra consumpion AL0051/brake open, no |  |
| DIP2 OFF | NEGATIVE BRAKE (standard) |  |
| DIP2 ON | POSITIVE BRAKE |  |

For command type see pag. 25 (OPERATING MODE)

| Clamp | Description | Signalling LED |
|---|---|---|
| 1 | +12 V DC (+) (COM) 1° automatic fuse in case of extra consumption or short circuit | |
| 2 | 0V DC (-) | |
| 3 | LAMP_RGB serial communication | |
| 4 - 5 | Contact close at door close, adjustable by programmer. Interlock connection | |
| 6 | +12 V DC (COM) | |
| 7 - NC | Anti-jamming sensor | **LD13** |
| 8 - NO | Open - every input restart count automatic close | **LD12** |
| 9 - NC | Light barrier auto off 500mm | **LD11** |
| 10 | UPS activation (10-13 - J6 UPS card) | **LD10** |
| 11 - NO | START command (open) (Running Options 000308 close) | **LD9** |
| 12 - NO | Pedestrian START command | **LD8** |
| 13 | +12 V DC (COM) | |
| 14 - NC | Photocell - Auto off if cross during close (memorize the cross point) | **LD7** |
| 15 | +12 V DC (COM) | |
| 16 - NC | STOP | **LD6** |
| 17 | Encoder (when ok led partially on) | **LD4** |
| 18 | Encoder (when ok led partially on) | **LD5** |
| 19 | Extra run - close contact during standard run if off (open) stop extra run | **LD3** |
| 20 - NO | Free input assignable from keypad programmer | **LD2** |
| 21 | +12V DC Accessories supply | BMP1 – V03 SW |
| 22 | -0V DC Accessories supply | BMP1 – V03 SW |
| 21 | +12V DC (same 1) | BMP2_V04/05/06 SW |
| 22 | -0V DC (same 2) | BMP2_V04/05/06 SW |
| 29 | Flashing lamp | |
| 30 | Common | |
| 31 | Brake | |
| 32 - 33 | Close Contact at opened door | |

**CAUTION** CONNECT THE NC NOT USED INPUTS TO THE COMMON INPUT (COM)

**Check the encoder software version:**
By framing the QR code on the FIX_03 encoder, the software version residing in the encoder will be displayed.



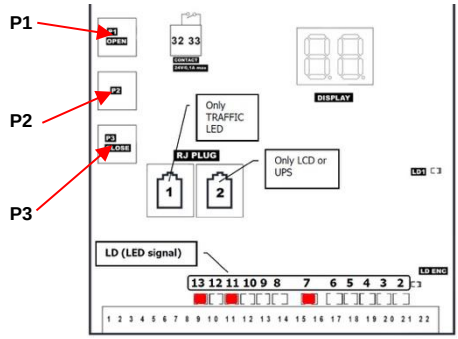

**NOTICE** Verify it is 1_7 or later

**A = Check the inverter software version:**

Verify (read in the highlighted part below) that it is 02.21.3805 or later



**Manual Jog and display**




Push P1 o P3 button to activate Jog

| Button | Action | Description |
|---|---|---|
| P1 | Jog Open Command | Opening command. Dead Man used in the installation phase for door positioning / Internal menù scrolling. |
| P2 | Teaching | Keeping the key pressed for 5sec, you enter learning mode (see teaching procedures) / Selection of the internal menù with STOP command (see display functions) |
| P3 | Jog Close Command | Closing command. Dead man used in the installation phase for door positioning / Internal menù scrolling |

| DIGIT | STATUS | NOTE |
|---|---|---|
| **UPS** | UPS opening | |
| **UPS-** | Opened UPS mode | Door remains open due to blackout |
| **UPSF** | UPS Fault | Door remains open. Since the UPS is faulty, it could not open in the event of a blackout |
| **UPSC** | UPS closing | |
| **UPSO** | UPS obstacle | The door should close in UPS but there is an obstacle |
| **C** | Closed | |
| **SE** | Service expired | Door maintenance required |
| **Sn** | Service soon | Indicates cycles remaining before "service" |
| **O** | Opened | |
| **OP** | Open | |
| **nn** | Pause time | |
| **PE** | Pedestrian | |
| **CL** | Closing | |
| **St** | Stop | When the key is pressed, total number of cycles performed by the door is shown |
| **J** | Jog | The door is moved with the P1 and P3 keys on the board |
| **ALnnnn** | Alarm | Alarm code (see table on page 5) on 4 digits follows |
| **tA** | Teach | Door mesure teaching |
| **tP** | Teach pedestrian | |
| **r2** | Reset 2 Al Boot | The user performed a partial reset while keeping all the previous options |
| **r3** | Reset 3 Al Boot | The user performed a complete reset |
| **r4** | Reset 4 Al Boot | The user has performed a service reset |
| **-.-** | Teaching required | The card needs learning procedure |

Display functions with Stop pressed

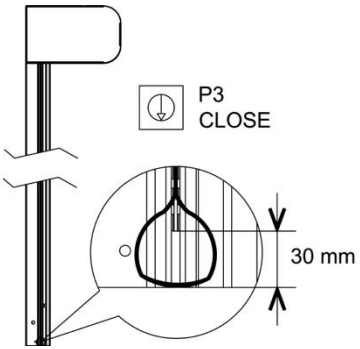
Once STOP has been pressed, the main parameters can be adjusted using the buttons on the card. With STOP pressed, after the cycles count, press P2 for at least 3 sec, the letters will appear on the display as in the table below. You pass from one parameter to the next by pressing P2. Releasing the STOP, the card saves the set values and returns to normal operation.

| DIGIT | STATUS | NOTE |
|---|---|---|
| **UPS** | UPS opening | |
| **UPS-** | Opened UPS mode | Door remains open due to blackout |
| **UPSF** | UPS Fault | Door remains open. Since the UPS is faulty, it could not open in the event of a blackout |
| **UPSC** | UPS closing | |
| **UPSO** | UPS obstacle | The door should close in UPS but there is an obstacle |
| **C** | Closed | |
| **SE** | Service expired | Door maintenance required |
| **Sn** | Service soon | Indicates cycles remaining before "service" |
| **O** | Opened | |
| **OP** | Open | |
| **nn** | Pause time | |
| **PE** | Pedestrian | |
| **CL** | Closing | |
| **St** | Stop | When the key is pressed, total number of cycles performed by the door is shown |
| **J** | Jog | The door is moved with the P1 and P3 keys on the board |
| **ALnnnn** | Alarm | Alarm code (see table on page 5) on 4 digits follows |
| **tA** | Teach | Door mesure teaching |
| **tP** | Teach pedestrian | |
| **r2** | Reset 2 Al Boot | The user performed a partial reset while keeping all the previous options |
| **r3** | Reset 3 Al Boot | The user performed a complete reset |
| **r4** | Reset 4 Al Boot | The user has performed a service reset |
| **-.-** | Teaching required | The card needs learning procedure |

**Setting (open/close position and dwell time setting)**

| Action | Display | LD1 |
|---|---|---|
| **1 Setting closed door position** | | |
| **1.a** Drive the curtain in closed door by P3 | Jc | off |
| Check that the zip is 30 mm from the ground (vedi figura) | | |
| **1.b** Push P2 for 5 seconds until LD1 flashes quickly | tE/tA | flashes |
| **2 Setting opened door position and dwell time** | | |
| **2.a** Drive the curtain in opened door by P1. Check the bottom edge, it must be at least 50 mm over the reinserting cut into the guide (see figure) | Jo | flashes |
| **2.b** Push P2 (impulsive) | tE/tA | flashes |
| Wait needed dwell time | 1-2-3… | flashes |
| Push P2 (impulsive) giving the closing command | tE/tA | flashes |
| The door will close up to the closed door position | C | flashes |
| Give a command OPEN/START to check the complete cycle | OP | |

**1 - Memorize close door position**

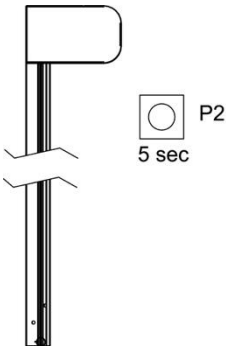








1.a

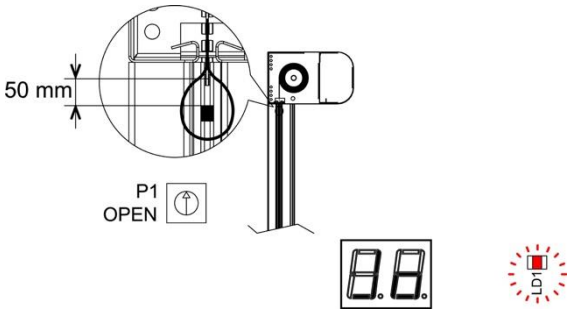






1.b

**2 - Memorize open door position and dwell time**

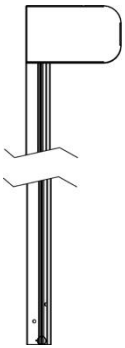



2.a




2.b





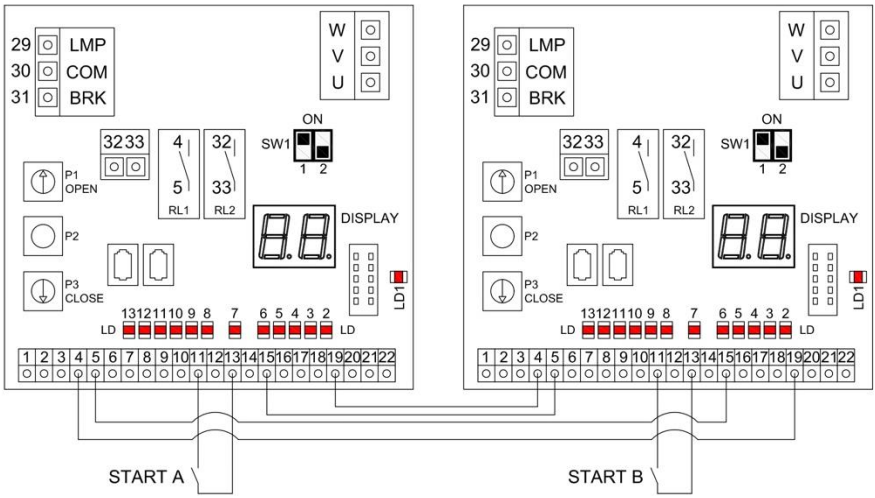

2.c

**Pedestrian opening setting**

| Action | LED | Status |
|---|---|---|
| Connect the pedestrian command between the clamps 13-12 | | |
| Drive the door in closed door position by P3 | | |
| Open the door by P1 up to the needed pedestrian passage position | | |
| Start the setting, pushing P2 for 5seconds | LD2 | flashes quickly |
| Give a command for pedestrian opening (13-12) | | |
| Wait the needed dwell time | | |
| Give a command for pedestrian passage (13-12) to save the timing | | |

**Interlock (needs programmer not provided with the door)**

Interlock system control the locking of two or more doors, so that if one door is open or opening, the remaining doors cannot be opened. You can choose to use automatic or manual mode, and you can connect interlock by wires or wireless using Wi-Fi Interlock with LCD programmer.




AUTO - INTERLOCK:

Connect 2 cards as in the example image, any free input can be connected instead of 19. Activates the interlock mode via the LCD programmer (M05 S31 or adding 80,000 in options1) or with the stop pressed functions (page 21). With the LCD programmer, select the desired input, in this case 19, in the M1 S22 menu on both cards. Now the automatic interlock function is activated: starting one of the doors, the second will not be able to open. When the moving door returns to closed, the second door will receive an input and will automatically open.

MANUAL INTERLOCK:

Once the automatic function has been activated, it is possible to select the manual function: as long as one door is in motion, the second will not be able to move, but once the first door is closed, the second will not open automatically, but will wait for a manual input.
You can activate manual interlock via LCD programmer (M05 S32 or adding 1 in options2) or with stop pressed function (page 21) on both cards.

WIFI INTERLOCK:

Without connecting the wires as in the example, it is possible to use the LCD programmer to use the interlock function on distant doors: activate the function in the M5 S30 menu (without activating auto interlock) on both cards. In order to function, the LCD programmer must be left connected to the cards. You can select group and subgroup if you have 2 or more groups of doors to interlock on M09 S4 and S5 (see LCD manual).

## 12. OPERATING MODES AND ADVANCED SETTINGS

AUTOMATIC CLOSURE

When the START button is pressed, the door carries out the following cycle

OPENING → DWELL TIME (adjustable) → CLOSING

If the door is closing, pressing START to reopen the door

STEP by STEP

Closing door is not automatically and the START button logic is as follows:

START → OPENING DOOR
START → CLOSING DOOR

If the door is closing, pressing START to reopen the door

PEDESTRIAN

When the START button is pressed, the door carries out the following cycle

OPENING → DWELL TIME (adjustable) → CLOSING

If the door is closing, pressing START to reopen the door

**Advanced settings (needs programmer not provided with the door)**

| Livello | Valore | Funzione | Note |
|---|---|---|---|
| Options 1 | xxxx+2 | UPS | Activate UPS function |
| Options 1 | xxxx+8 | START - CLOSE | The START input only close |
| Options 1 | xxxx+20 | TEMPO RICHIUSURA DOPO TRANSITO | Adjust time auto-close after transit. Adjustable by LCD menù M5 S10 |
| Options 1 | xx+400 | PEDESTRIAN OPEN - CLOSE | Standard pedestrian opening and waiting for automatic closing |
| Options 1 | xx+800 | ENCODER TIME CONTROL | Enable control count in the encoder |
| Options 1 | xx+3000 | DEICING | Auto-open. Time adjustable in LCD menù M5 S29 |
| Options 1 | +20.000 | WIFI INTERLOCK | WiFi interlock activated |
| Options 1 | +80.000 | AUTO-INTERLOCK | Connect 2 doors like schematic page 24 |
| Options 1 | +100.000 | AUTOMATIC START | In case of blackout the door come back to close and wait new start |
| Options 1 | +1.000.000 | RADAR DOES NOT OPEN | Input 8 became reversing (NO) |
| Options 1 | +4.000.000 | ALARM RELAY | In case of alarm (31-32) and (4-5) get close |
| Options 2 | xxxx+1 | MANUAL INTERLOCK | The doors wait manual input |
| Options 2 | xxx+20 | SWITCH OFF START AFTER EXTRA CURRENT | Normally the door in automatic after extra current restart in automatic |
| Options 2 | xx+100 | EXTRA LIMIT OPEN | T. 19 must be close all cycle. In case extra open get off and stop open |
| Options 2 | xx+200 | SPIRAL | Spiral door setting |
| Options 3 | xxx+2 | UPS CLOSE | In case of black-out at open door, the door close – No movement in door close |
| Options 3 | xxx+8 | UPS OPEN | UPS manual mode (START open/close) |
| Options 3 | xxx+10 | RADAR “CAPTURE” | Enables recognition of the “CAPTURE” radar wired on pedestrian start entrance 12 |

## 13. ALARMS




Screen 1 Screen 2 Screen 3

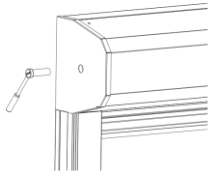
Alarm code is made up of 6 digits, 2 digits forr screen. For the complete reading it is necessary to add the numbers of the 3 screens. In the example shown, the alarm code is "AL 00 01 - Short circuit on board". The first "AL" screen is not shown in the alarm list, which is always the same in the event of an alarm.

| ALARM | DESCRIPTION | SOLUTION |
|---|---|---|
| **0004** | Electronic board failure | Replace the card |
| **0005** | Electronic board failure | Replace the card |
| **0011** | STOP error sequence | Disconnect the 30-31 and 29-30<br>- Check resistance brake line, must be between 150ohm and 3Kohm, if the resistance does not match, replace brake. If match, change the card.<br>- Check resistance to ground connection, if it's not OL (opened) check wiring or replace brake<br>- Check resistance flashing, without lamp must be OL (opened). |
| **0012** | Short-circuit motor | Disconnect motor U-V-W and check resistance between U-V, U-W and V-W phase on motor:<br>- For 0,75KW motor type must be between 7,8ohm and 23ohm<br>- For 1,5KW motor type must be between 3,4ohm and 9,5ohm<br>- For 2,2KW motor type must be between 2,5ohm and 6ohm<br>- Check resistance between motor phases and ground connection, must be OL(opened)<br>- If the value don't match replace the motor.<br>- If the value match, replace the card. |
| **0013 a, b, c, d, e** | Absolute encoder position | Make new learning or replace the encoder |
| **0032** | Overload | - Decrease speed open from 60 to 40 MAX (try intermediate setting)<br>- Increase acceleration ramp from 1 to 3 MAX (try intermediate setting) |
| **0050** | Brake interrupted | - Check safety micro switch below motor<br>- Check the connection<br>- Check brake resistance<br>If brake resistance is ok (see **0011** solution) replace the card. |
| **0051** | Brake overload | - Check brake resistance (see **0011** solution)<br>- Check cable from card to motor, must be 0ohm<br>- Check resistance to the ground connection, must be OL (opened)<br>If all parameter are ok, replace card |
| **0052** | Position underground beyond | - Make correct learning<br>- Check magnet in the encoder<br>- Replace encoder |
| **0053** | Position above open beyond | Same **0052** solution |
| **0055** | UPS version not compatible | Replace UPS card |
| **0056** | Invalid learning | Repeat the door learning sequence |
| **0070** | Invalid learning | Repeat the door learning sequence |
| **0074** | Anti-jam activation | Information about, during close, the jamming system get active (terminal 7) |
| **0076** | Power supply fault | - Check power line during opening (the motor must run)<br>- Check cable power, minimum section wire need be 4mm for 230V and 2,5mm for 400V<br>- Reduce speed open from 60 to 40<br>- Reduce acceleration ramp open |

| | | |
|---|---|---|
| **0079** | Safety edge activation | Information about, during close, the terminal 9 light barrier get activated<br>If the barrier blinking red constant:<br>- Check 12V (TERMINAL 1-2 MUST BE FROM 16 TO 12 Vcc)<br>- Check the alignment of the column<br>- Check the ground connection, disconnect the ground from the power supply and verify from the door body and the ground must be OL (opened)<br>- CONNECT THE TERMINAL 2 TO THE GROUND<br>- Check extra cable (syncronization and receiver cable MUST STAY AWAY FROM THE MOTOR)<br>- Check environment (don't wash with high pressure water or chemical components the barrier)<br>- Replace the barrier |
| **007A** | UPS power supply fault | UPS battery not full charge<br>- Leave 24hours with power<br>- Change UPS battery<br>- Increase min volt open<br>- Chance frequence UPS |
| **0080 ,81, 82, 83, 84, 85, 86** | Software error | The software needs to be updated |
| **0087** | Overvoltage | - Check power supply (230V+/-10%) or (460V+/-10%)<br>- Reduce the speed close |
| **008D** | Overtemperature | Wait untill the card temperature is ok, if the temperature is ok, replce the card |
| **008F** | Ignition voltage fault | - Check power supply<br>- Make reset 3 push button<br>- Upgrade the card<br>- Change the card |
| **0091, 93, 94, 95, 97** | Software error | The software needs to be updated |
| **0103** | Blocked photocell while teaching | - Check photocell connection<br>- Check LD7 (if photocell is ok must be ON)<br>- Check position photocell (need to be in front)<br>- Check columns position (need to be in line) |
| **010E** | Door stalled | No correct encoder movement<br>- Check encoder magnet (see instruction)<br>- Check brake (remove brake cover and see status and distance ferrodo)<br>- Check gearbox status<br>- Check guide status (need to be clean)<br>- Check zip status (need to be clean)<br>- Not lubricate guide or zip<br>- Reduce speed open |
| **0116, 0117, 0118** | Motor configuration error | The software needs to be updated |
| **0136** | Encoder data communication error | - Check encoder cable status<br>- Check encoder cable shield on terminal 2<br>- Check distance from encoder and card (MAX 20 mt)<br>- Check magnet position in the encoder<br>- Upgrade software<br>- Replace encoder |
| **0138** | Encoder battery fault | Replace encoder |
| **013A** | Lost position encoder | Replace encoder |
| **DISPLAY AND LED SWITCH OFF AND ON** | Low voltage overload | SHORT CIRCUIT LOW VOLTAGE (12V) the cards are equipper by self protection fuse, in case of short circuit switch off and try to reconnect after 3 sec.<br>- Disconnect terminal 1-2 and 21-22 and check if the display stay ON<br>- Check every single device connecting one by one to identify the short circuit line<br>- In case the display remain OFF, replace the card. |

**List valid from version SW ref. 2.22.1705**

## 14. MANUAL OPERATION



**Manual operation**

To operate the curtain in case of power failure or breakdown:

- Switch the GS to disconnect the main supply.
- Insert the ratchet wrench in the rod coupling thereby actuating the micro switch that prevents electrical operation of the door.
- Turn the ratchet wrench until you reach the desired position of the curtain

## 15. NOISE

The sound pressure level produced by the machine is <70 dB (A).

## 16. PERIODIC MAINTENANCE AND CHECKS (USER / TRAINED OPERATOR)

**General safety warnings before carrying out routine maintenance by the installer**

Know how the equipment functions and understand the operating processes.
Know how to shut down the equipment. Emergency stop button is located on the machinery.
Know where this stop is located.
Understand the equipment safety labels and heed them.
Wear the appropriate personal protective equipment for the job to be performed (if required)
Ensure that nothing you are wearing could get caught in the machinery.
When working on or around all equipment, avoid wearing loose clothing, jewelry, unrestrained long hair, or any loose ties, scarves or articles that may be caught in moving parts.
Know where the FIRST AID SAFETY STATION is located.
Before opening control panel be sure that power supply is OFF.

| Description | Procedure | Cadence |
|---|---|---|
| Presence Use and maintenance manual | - | - |
| Presence labels | - | - |
| Presence CE Marcking with serial number of the door | - | - |
| Visual check of the good condition of the main components of the door (motor unit, top heading, columns, curtain, control panel) | Check that the main components are not damaged or worn. | 6 months |
| General cleaning of the system | Check that there are no obstacles or, if installed externally, vegetation within the radius of action of the automation and in any sliding guides of the curtain. | 6 months |
| Cleaning of installed devices (photochells, flashing lamp, ecc…) | Use a damp cloth for external cleaning of the components. Do not use solvents or other chemicals (water only) | 6 months |
| Verification functioning of the safety devices [photocells, safety light barriers (if installed), wireless safety edge (if installed)] | Press START to start the opening and closing cycle. During closing, pass with an object in front of the photocells (or safety light barriers if installed) and check that the inversion or stop occurs. | 6 months |
| Junction and movement points | Lubricate the junction and movement points of the automation accessible to the end user.<br>Access to internal parts protected by guards is prohibited. | 6 months |
| Fixing | Check that the top heading and the columns are well fixed to the support and do not have abnormal movements. | 6 months |

**CAUTION** Checks and interventions other than those indicated above must be carried out by technicians authorized by the manufacturer.

## 17. PRODUCT DISPOSAL AND RECYCLING

The European Parliament Directive 2002/96/EC, also referred to as the “WEEE Directive”, places an obligation on EU-based manufacturers, distributors, retailers and importers of electrical and electronic equipment to integrate the instructions of use of such equipment with information concerning its disposal, re-use, recycling and/or further treatment.
As a main rule, the WEEE Directive requires that the electrical and electronic equipment is disposed of at the end of its useful life in an environmentally responsible manner, so as to enable the re-use or recycling of those parts and materials that have been identified for this purpose.
It is obligatory not to dispose of Waste Electrical and Electronic Equipment (WEEE) with unsorted municipal waste, and to carry out separate collection.
Separate collection is the precondition to ensure specific treatment and recycling of the WEEE.
Pursuant to the WEEE Directive, collection, treatment, recovery and environmentally sound disposal of WEEE from users of products containing electrical and electronic equipment put on the market after the 13th of August 2005, shall be carried out in compliance with the national measures of each EU-Member State implementing the WEEE Directive.

## 18. WARRANTY

The warranty is valid for 12 months from the date of testing, unless otherwise agreed.
The warranty expires in the following cases:

- The machine is not used for the purpose for which it was designed
- Changes to the machine are not authorized by the manufacturer
- Unauthorized interventions
- Installation of components incompatible with the correct functioning of the door
- Use of non-original spare parts

## 19. TECHNICAL ASSISTANCE

BMP EUROPE Srl
Strada della Freisa, 1
14019 – Villanova d’Asti (AT) ITALY
Tel. 0141.948843
Email assistenza@bmpitalia.it

## 20. FACSIMILE CE DECLARATION OF CONFORMITY

**BMP EUROPE SRL - HIGH SPEED DOORS**

**Headquarters:** Strada della Freisa, 1 - 14019 VILLANOVA D'ASTI (AT)
**Legal address:** Corso Vittorio Emanuele II, 52 - 10123 TORINO (TO)
**Tel.** +39 0141 948843
**www.bmpdoors.com - E-mail:** info@bmpeurope.eu - **PEC:** bmpeuropesrl@legalmail.it
**EORI:** IT03389280045 **REX:** ITREXIT03389280045
C.C.I.A.A. Torino R.E.A. TO 1257351 - Social capital of € 2.000.000,00

# CE DECLARATION OF CONFORMITY

The company
BMP EUROPE SRL
Located in
Strada della Freisa, 1
14019 VILLANOVA D'ASTI (AT)

DECLARES

under its own responsability that the new INDUSTRIAL CLOSURE

| | | |
|---|---|---|
| Type: | FLEXIBLE DOOR WITH VERTICAL WINDING | |
| Model: | DYNAMICROLL CB125 | |
| Serial number: | | |
| Construction year: | | |
| Tech. File maintainer: | BMPEUROPE S.R.L. | Strada della Freisa, 1 14019 VILLANOVA D'ASTI (AT) |

Conforms to the following directives

- MACHINERY DIRECTIVE 2006/42/CE
- DIRECTIVE EMC 2014/30/CE
- DIRECTIVE 2014/35/CE - Low voltage

Applied standards

- EN 13241-1 - Industrial, commercial and garage doors and gates - Product standard - Part 1

Harmonized standards applied

- UNI EN ISO 12100 - Safety of machinery - General principles for design - Risk assesment and risk reduction
- CEI EN 60204-1 - Safety of machinery - Electrical equipment of machines - Part 1 General requirements

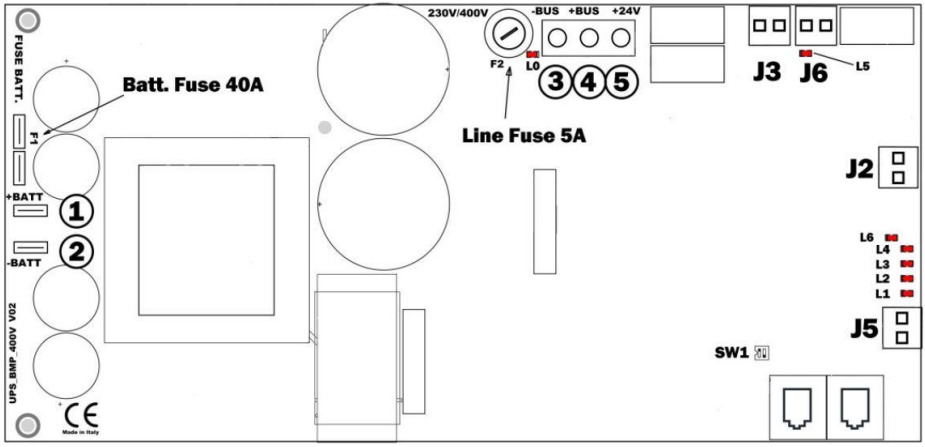
Villanova d'Asti, Benotto Danilo, C.E.O.

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**ANNEX A – UPS_BMP_400V USER AND INSTALLATION MANUAL**

**Auxiliary board**

Auxiliary board that allows the automation to be opened in the event of a power line failure.

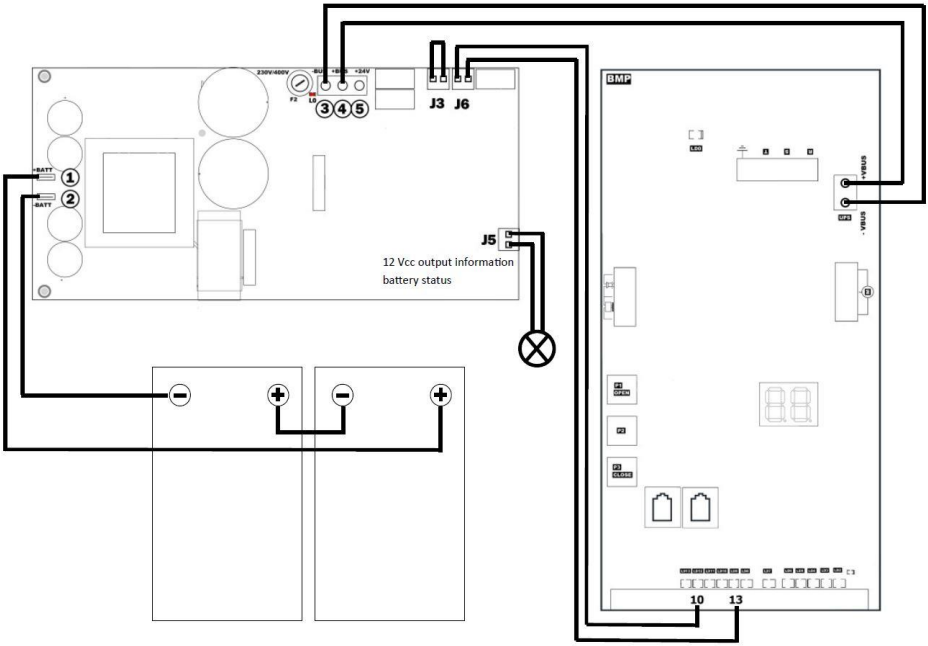



**CAUTION** BEFORE CONNECTING THE BOARD OR WORKING ON THE EQUIPMENT, DISCONNECT THE LINE VOLTAGE AND DISCONNECT THE BATTERIES. CHECK THAT THE LEDS ON THE BOARD ARE ALL OFF.

**Clamps**

| Terminal N. | Connection | |
|---|---|---|
| 1 (+BATT) | Battery + 24V (red wire 2,5mm²) | |
| 2 (-BATT) | Battery - 0V (black wire 2,5mm²) | |
| 3 (-BUS) | To be connect BMP1 or BMP2 main card 0V (black wire 1,5mm²) | |
| 4 (+BUS) | To be connect BMP1 or BMP2 main card 400V (brown wire 1,5mm²) | |
| 5 (+24V) | Not used | |
| J3 | Automatic open (N.C.) | Manual open (N.O.) connect external push button |
| J6 | To be connected 10-13 main card | |
| J2 | Not used | |
| J5 | 12 Vcc output information battery status | |

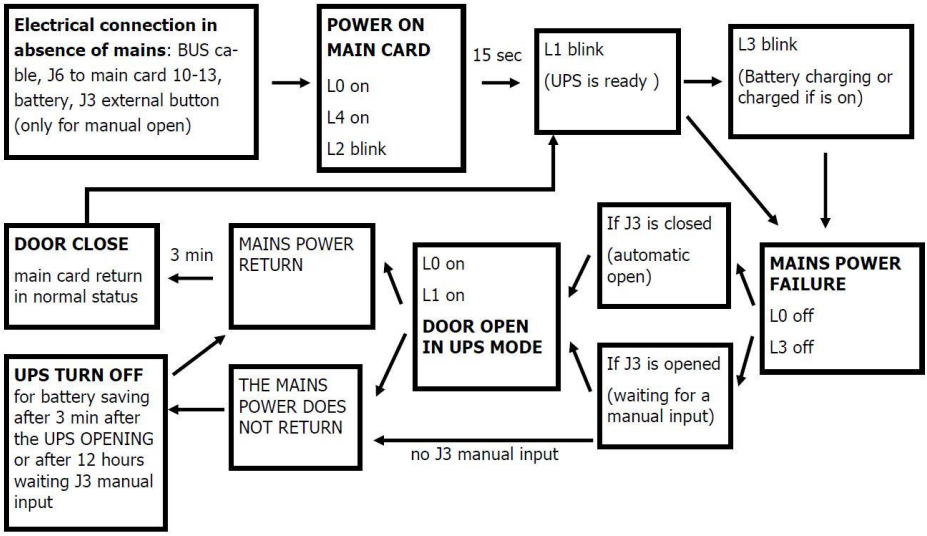
**Connection diagram**




**Led**

| | |
|---|---|
| **L0** | Power supply from BMP1/BMP2 (Attention! 400Vdc) |
| **L1** | BUS voltage generation for UPS mode operation |
| **L2** | Not used |
| **L3** | Battery status: OFF (recovery / battery absent), ON (battery charged), FLASHING (battery charging) |
| **L4** | For internal use / testing |
| **L5** | J3 contact signaling for automatic opening (if on, automatic opening is active) |
| **L6** | Microcontroller activity / UPS alarm signaling for diagnostics / internal use |

**Working cycle**




**Display**

| DIGIT | STATUS | NOTE |
|---|---|---|
| **UPS** | UPS opening | |
| **UPS-** | Opened UPS mode | Door remains open due to blackout |
| **UPSF** | UPS Fault | Door remains open. Since the UPS is faulty, it could not open in the event of a blackout |
| **UPSC** | UPS closing | |
| **UPSO** | UPS obstacle | The door should close in UPS but there is an obstacle |
| **C** | Closed | |
| **SE** | Service expired | Door maintenance required |
| **Sn** | Service soon | Indicates cycles remaining before "service" |
| **O** | Opened | |
| **OP** | Open | |
| **nn** | Pause time | |
| **PE** | Pedestrian | |
| **CL** | Closing | |
| **St** | Stop | When the key is pressed, the total number of cycles performed by the door is shown |
| **J** | Jog | The door is moved with the P1 and P3 keys on the board |
| **ALnnnn** | Alarm | Alarm code (see main card instruction) on 4 digits follows |
| **tA** | Teach | Door mesure teaching |
| **tP** | Teach pedestrian | |
| **r2** | Reset 2 Al Boot | The user performed a partial reset while keeping all the previous options |
| **r3** | Reset 3 Al Boot | The user performed a complete reset |
| **r4** | Reset 4 Al Boot | The user has performed a service reset |
| **-.-** | Teaching required | The main card needs learning procedure |

## ANNEX B – VISUAL CHECKS AND TESTS

(Photocopy this check list and attach it to the maintenance register for each maintenance)

| TECHNICAL DOCUMENTATION | OK | NOTE |
|---|---|---|
| Verification presence of the use and maintenance manual | O | |
| Verification presence of the CE marking with the door identification number | O | |

| SECTIONING, COMMAND AND EMERGENCY STOP | OK | NOTE |
|---|---|---|
| Suitability of emergency control devices | O | |
| Suitability of control devices PUSH BUTTON START - RADAR - MAGNETIC LOOP ... etc. | O | |
| Suitability of circuit disconnecting devices | O | |

| CONTROL PANEL | OK | NOTE |
|---|---|---|
| Identification and integrity of the control panel | O | |
| Integrity of the components installed in the control panel | O | |
| Integrity and suitability of internal connections | O | |
| Integrity and suitability of optical - acoustic devices | O | |

| SAFETY DEVICES | OK | NOTE |
|---|---|---|
| Integrity and functioning of the safety photocells | O | |
| Integrity and functioning of the wireless safety edge | O | |
| Integrity and functioning of the safety light barriers | O | |
| Integrity and functioning of the top sensor | O | |

| STRUCTURES AND CURTAINS | OK | NOTE |
|---|---|---|
| Integrity and suitability of the fixing screws | O | |
| Integrity and suitability of the junction and movement points, gearbox, motor..etc | O | |
| Integrity and suitability of the columns, top heading...ecc | O | |
| Integrity and suitability of the curtain, zip, weldings..ecc | O | |
| Cleaning of plastic materials (photocells, flashing light etc.) | O | |

**ANNEX C – MAINTENANCE BOOK**




| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 1 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 2 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

| | N° cycles/ | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 3 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 4 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 5 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 6 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 7 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 8 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 9 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 10 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 11 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 12 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 13 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 14 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 15 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 16 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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| | N° cycles | Date | Executing company | Stamp and signature |
|---|---|---|---|---|
| 17 | | | | |

Type of intervention

☐ Ordinary maintenance (attach visual checks and tests sheet) ☐ Repair

☐ Extraordinary maintenance ☐ Other / Modifications*

*In case of substantial modification must be create a new technical file

Intervention description

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