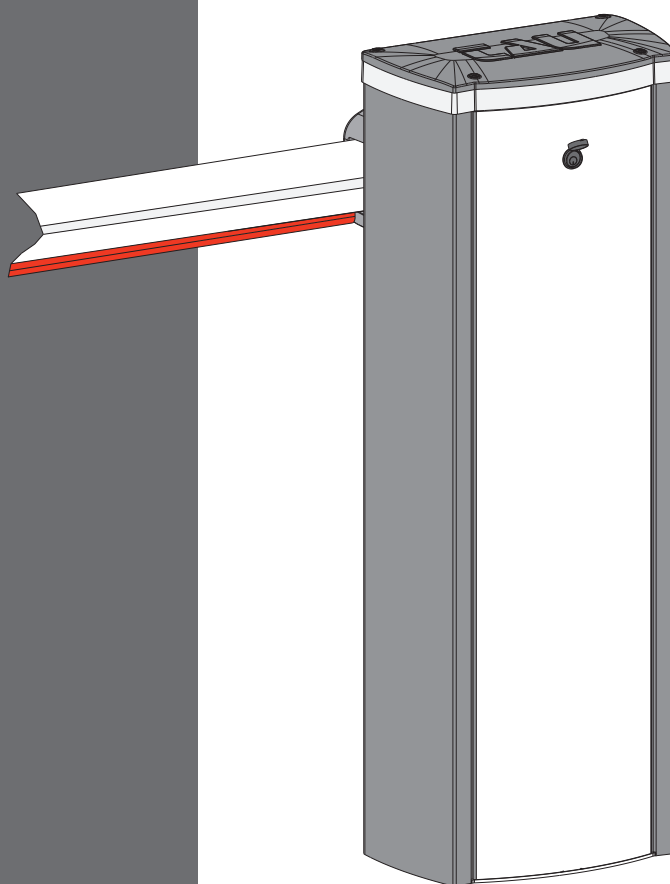


LUXE-M



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The data described in this handbook are purely a guide. TAU reserves the right to change them in any moment. The manufacturer reserves the right to modify or improve products without prior notice. Any inaccuracies or errors found in this handbook will be corrected in the next edition.

When opening the packing please check that the product is intact. Please recycle materials in compliance with current regulations.

This product may only be installed by a qualified fitter. The manufacturer declines all liability for damage to property and/or personal injury deriving from the incorrect installation of the system or its non-compliance with current law (see Machinery Directive).

INSTALLATION WARNINGS. GENERAL SAFETY REQUIREMENTS

- 1) **Carefully read all instructions before installation, as they provide important instructions regarding the safety, installation, operation and maintenance. Incorrect installation or use of the product may lead to serious physical injury.**
- 2) Never leave packaging materials (plastic, polystyrene etc.) within the reach of children as they constitute a potential hazard.
- 3) Keep the instructions in a safe place for future consultation.
- 4) This product has been designed and constructed exclusively for the use specified in this documentation. Any other use not specified herein may impair product integrity and/or constitute a hazard.
- 5) TAU Srl declines all liability for improper use or use other than as specified for this automation.
- 6) Do not install the unit in an explosive environment: the presence of either gas or flammable fumes is a serious safety risk.
- 7) The mechanical elements must comply with the requirements as stated in the standards EN 12604 and EN 12605. For non European member states, in addition to the national reference standards, the above-mentioned standards must be observed to ensure an adequate level of safety.
- 8) TAU Srl is not responsible for failure to observe Good Practice in construction of the gates/doors to be power-operated, nor any deformations occurring during use.
- 9) Installation must be performed in compliance with the standards EN 12453 and EN 12445. For non European member states, in addition to the national reference standards, the above-mentioned standards must be observed to ensure an adequate level of safety.
- 10) Before performing any operations on the system, disconnect from the mains and detach the batteries.
- 11) On the automation power line, install a device for disconnection from the power mains with a gap between contacts equal to or greater than 3 mm. Use of a 6A thermal magnetic circuit breaker with multi-pole switch is recommended.
- 12) Check upline of the system that there is a residual current circuit breaker with a threshold of 0.03 A.
- 13) Ensure that the earthing system is to professional standards and connected to the metal section of the gate/door.
- 14) The automation is equipped with an intrinsic anti-crushing safety device comprising a torque control. The trip threshold must in all cases be checked as stated in the standards specified in point 9.
- 15) The safety devices (standard EN 12978) enable the protection of danger areas from **risks associated with mechanical movements** such as crushing, dragging and shearing.
- 16) The use of at least one luminous indicator is recommended for each system (900T-LED, 800LA, 800LL), as well as a warning notice fixed suitably to the frame structure, in addition to the devices specified in point 15.
- 17) TAU declines all liability for the safety and efficient operation of the automation in the event of using system components not produced by TAU.
- 18) For maintenance, use exclusively original TAU parts.
- 19) Never modify components that are part of the automation system.
- 20) The installer must provide all information regarding manual operation of the system in the event of an emergency and supply the system User with the "User Guide" enclosed with the product.
- 21) Never allow children or other persons to stay in the vicinity of the product during operation.
- 22) Keep all radio controls or other pulse supplier device out of the reach of children to prevent inadvertent activation of the automation.
- 23) Transit should only occur with the automation stationary.
- 24) The user must never attempt to repair or intervene directly on the product; always contact qualified personnel for assistance.
- 25) It is strictly forbidden to use high pressure water cleaners or jets of water in general to clean the automation.
- 26) Maintenance: at least every six months, make a general check of the system, with special reference to the efficiency of the safety devices (including, when envisaged, the operator thrust force) and release mechanisms.
- 27) **All actions not expressly envisaged in these instructions are strictly prohibited.**

1. CONDITIONS OF USE

The LUXE-M automatic barrier has been designed for use in private or public car parks, residential areas or areas of intense traffic.

2. DESCRIPTION AND CHARACTERISTICS

The **LUXE-M** series barriers are electromechanical and are ideal for the control and management of private or public entrances and car parks. **THE USE OF THE EQUIPMENT FOR PURPOSES OR CIRCUMSTANCES OTHER THAN THOSE MENTIONED IS STRICTLY PROHIBITED.**

	LUXE-M	LUXE-ME
Frequency	50 - 60 Hz	
Power	230 V AC $\pm 10\%$	
Absorbed power	250 W	180 W
Motor	18 V DC	230 V AC
Motor absorbed current (max.)	1 A	
Max. torque	155 Nm	240 Nm
Reduction ratio	1/191	1/288,7
Min. opening time	3,5 sec.	4,5 sec.
Protection level	IP 54	
Work cycle	100 %	120/h
Operating temperature	$-20^{\circ}\text{C} \div +55^{\circ}\text{C}$	
Max. round boom lenght	6 m	6 m
Max. elliptical boom lenght	5 m	-
Weight	47 Kg	

 When the system is in the 12V DC mode and is powered by the battery only (in the event of a power failure or when used in conjunction with a photovoltaic panel), the gear motor's output (power and speed) is reduced by approximately 30%.

3. OPTIONAL ACCESSORIES

1. K-800CPLUXESM : Foundation counterplate
2. P-200BATT: Battery 12V
3. P-900OPTIC: Photoelectric cells
4. P-800AT: Adjustable fork support for bar
5. P-800FPT2 (only for LUXE-M + ABT): Wall-mounted fork support for round section bar
6. P-800FPL (only for LUXE-M + AE): Wall-mounted fork support for elliptical bar
7. P-800GA2 (only for LUXE-M + AE): Aluminium bar flap (passage max. 4 m)*
8. P-800LA (only for LUXE-M + AE): LED line for light-signalling
9. P-800PG (only for LUXE-M + AE): Rubber bead for elliptical boom
10. P-900V-LED: LED-Blinkleuchte 18/24 V

* It is not recommended the installation for intensive use.

SPRING	B) M-060MGREEN ($\varnothing$ 5,2 mm) Color: Green RAL 6002	C) M-060MBLU ($\varnothing$ 6,2 mm) Color: Blue RAL 5003
	D) M-060MRED ($\varnothing$ 7 mm) Color: Red RAL 3000	F) M-060MBLACK ($\varnothing$ 8 mm) Color: Black

BAR AND ACCESSORIES	BAR LENGHT	SPRING	DIP-SWITCHES 9-10-11 (K206MA)		
			DIP 9	DIP 10	DIP 11
LUXE-M + 800ABT2 (Round boom) 800ABT2 + 800AT	4 m	B	ON	ON	OFF
	4,5 m	C	ON	ON	OFF
	5 m	C	ON	ON	OFF
	5,5 m	C	ON	ON	OFF
	6 m	D	ON	ON	OFF
	4 m	C	ON	ON	OFF
	4,5 m	C	ON	ON	OFF
	5 m	C	ON	ON	OFF
	5,5 m	D	ON	ON	OFF
	6 m	D	ON	ON	OFF
LUXE-ME + 800ABT2 (Round boom) 800ABT2 + 800AT	4 m	B	ON	ON	OFF
	4,5 m	B	ON	ON	OFF
	5 m	C	ON	ON	OFF
	5,5 m	C	ON	ON	OFF
	6 m	C	ON	ON	OFF

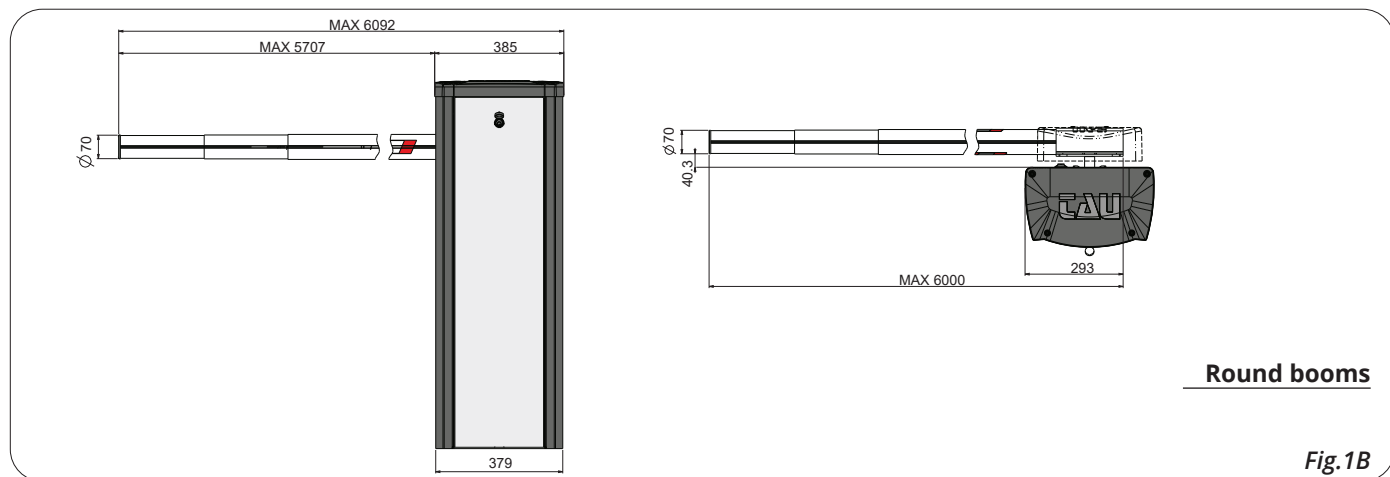
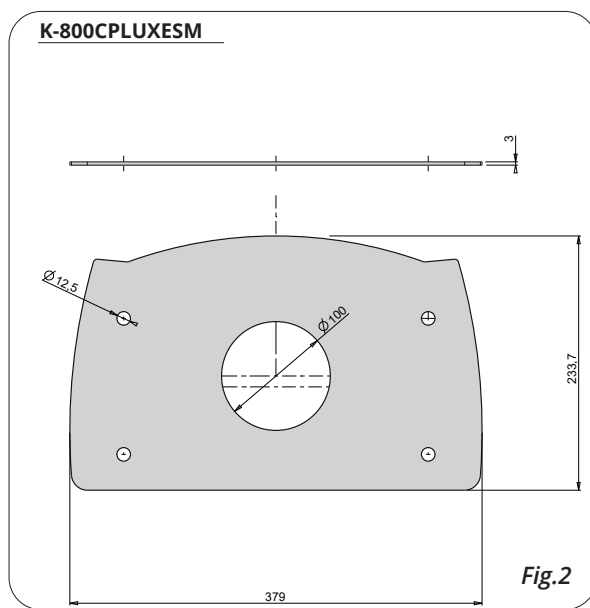
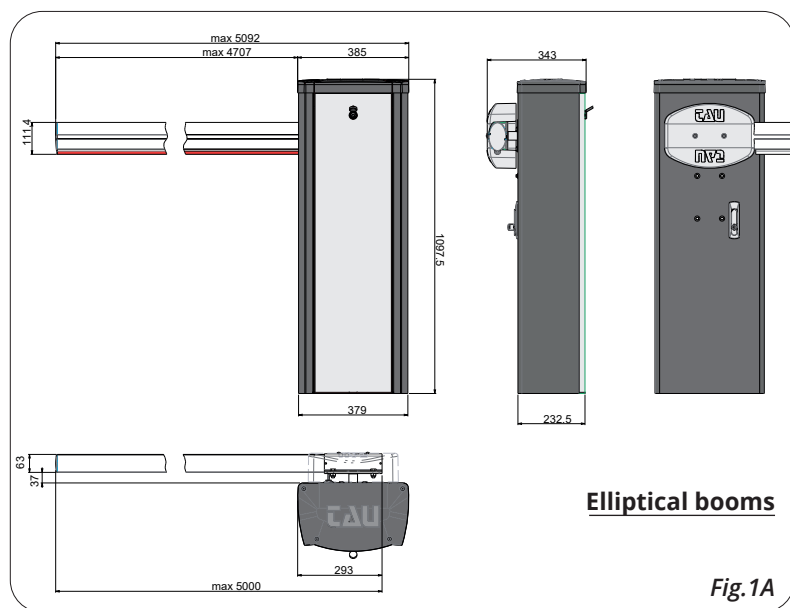
 For boom lengths equal or greater than 5 mt. it must use (mandatory) the ground boom support or the pendulum support.

BAR AND ACCESSORIES		BAR LENGHT	SPRING	DIP-SWITCHES 9-10-11 (K206MA)		
				DIP 9	DIP 10	DIP 11
LUXE-M + 800AE (Elliptical boom)	800AE + 800PG + 800AT	4 m	B	ON	ON	OFF
		4,5 m	C	ON	ON	OFF
		5 m	D	ON	ON	OFF
	800AE + 800PG + 800FPL	4 m	C	ON	ON	OFF
		4,5 m	D	ON	ON	OFF
		5 m	D	ON	ON	OFF
	800AE + 800GA2 + 800AT	4 m	D	ON	ON	OFF
		4,5 m	-	-	-	-
		5 m	-	-	-	-
	800AE + 800GA2 + 800FPL	4 m	D	ON	ON	OFF
		4,5 m	-	-	-	-
		5 m	-	-	-	-
	800AE + 800AT + 800LABTSE	4 m	D	ON	ON	OFF
		4,5 m	D	ON	ON	OFF
		5 m	D	ON	ON	OFF

For bars with useful passage exceeding 5m, it is **COMPULSORY** to use the 800RA reinforcement.
 With mobile support (800FPL) or rack (800GA2), it is **COMPULSORY** to use the 800RA reinforcement.
 For boom lengths equal or greater than 5 mt. it **MUST USE** (compulsory) the ground boom support or the pendulum support.
ATTENTION: FOR ELLIPTIC BOOM IS REQUIRED THE RUBBER PROFILE (800PG4 - 800PG8).
ATTENTION: PASSAGE WIDTH EQUALS BAR LENGTH LESS 289 mm (see pic. 1

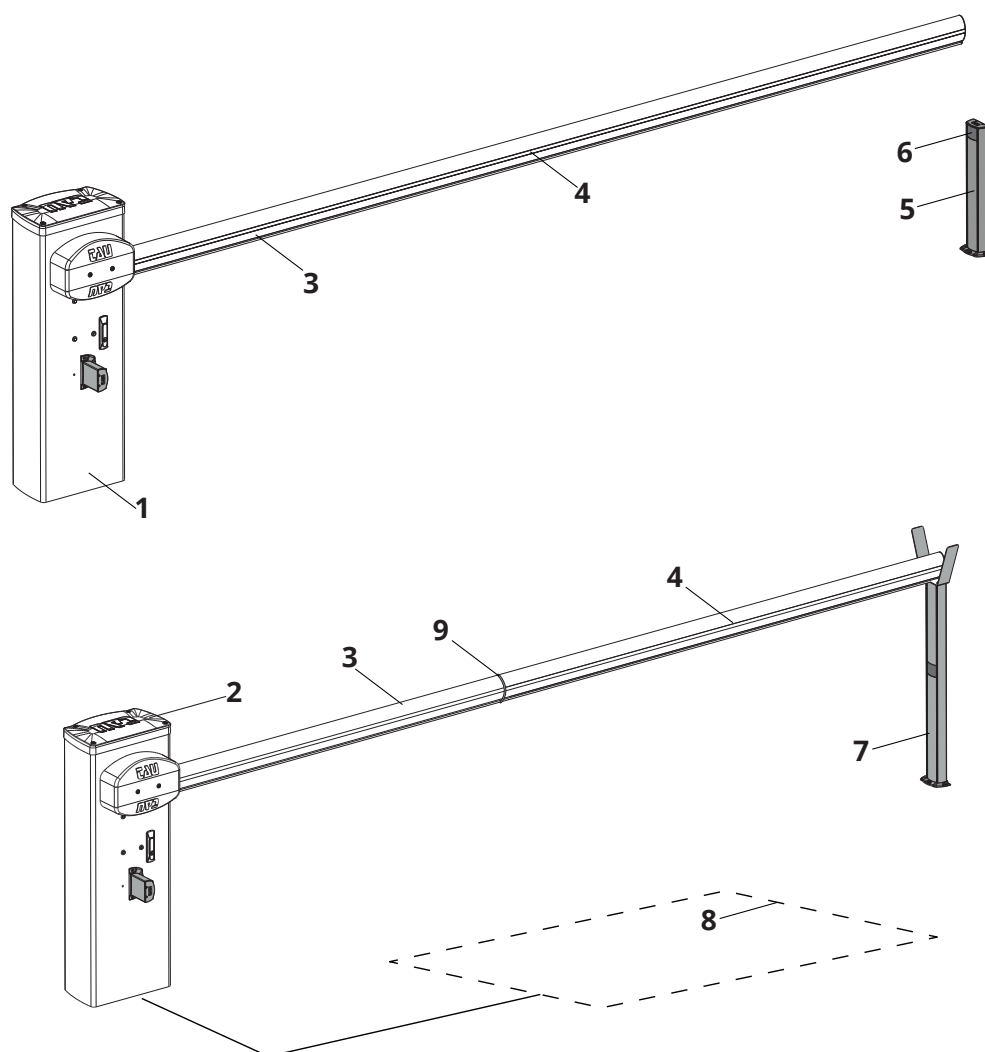
4. OVERALL DIMENSIONS

The main dimensions of the barrier are indicated in pic. 1; pic.2 illustrates the dimensions of the foundation base plate.



5. TYPICAL SYSTEM

- | | | | |
|---|---|---|-------------------|
| 1 | Barrier cabinet | 6 | Photocells |
| 2 | Control panel | 7 | Bar rest (fixed) |
| 3 | Round section aluminium boom
Elliptical section aluminium boom | 8 | Metal mass sensor |
| 4 | LED strip | 9 | Bar gasket |
| 5 | Photocell pillar | | |



6. INSTALLATION

! Installation must be carried out by skilled and qualified personnel in compliance with the regulations in force.

6.1 Preliminary checks

For the safety and correct operation of the automation, check the following:

- While moving the barrier must meet no obstacle or aerial power cables;
- The characteristics of the ground must guarantee sufficient hold for the foundation plinth;
- A suitable omnipolar circuit breaker with a distance greater than 3mm between contacts must be provided to isolate the supply;
- There must be no pipes or electrical cables in the area where the plinth foundation is excavated;
- If the barrier is exposed to passing vehicles, provide suitable protection to avoid accidental collisions;
- Check there is an efficient earthing device to connect the cabinet;
- There must be suitable piping and tracks for electrical cables to guarantee they are not damaged.

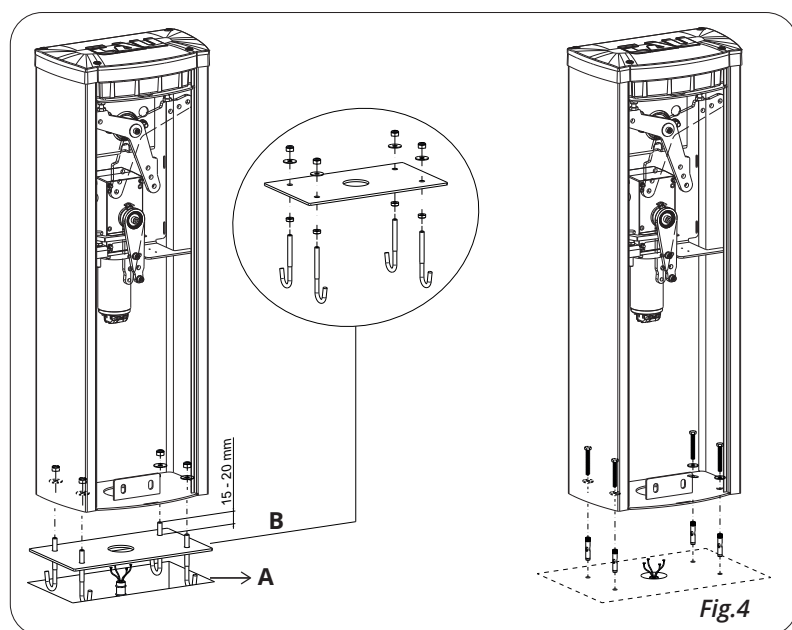
6.2 Cables typology

Connection	Type of cable	Cable l. 1 < 10 m	Cable l. 10 < 20 m	Cable l. 20 < 30 m
230v supply	FROR CEI 20-22 CEI EN 50267-2-1	3 x 1,5 mm ²	3 x 2,5 mm ²	3 x 4 mm ²
Photocell transmitters		2 x 0,5 mm ²	2 x 0,5 mm ²	-
Photocell receivers		4 x 0,5 mm ²	4 x 0,5 mm ²	-
Accessory 24v power supply		2 x 0,5 mm ²	2 x 1 mm ²	-
Control devices		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Aerial	RG58	Cable supplied		
Metal mass sensor	See relative instructions			

NOTE: If the length of the cables is not as stated in the table, determine the cable section on the basis of the real draw of the connected devices and in compliance with the IEC EN 60204-1 Standard.

As to the connections with numerous loads on the same line (in sequence), dimensions must be recalculated on the basis of the real draw and distance. As to the connection of any products not dealt with in this manual, the documents attached to the products themselves must be consulted.

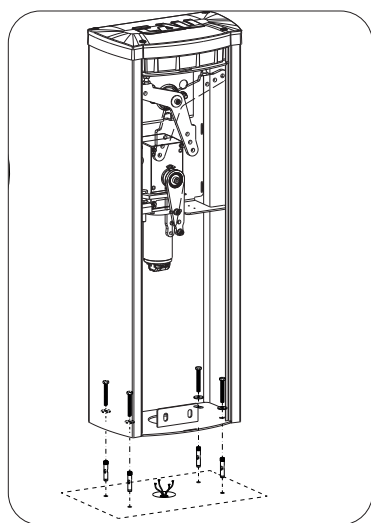
6.3 Automation base preparation



Wall the foundation plate so that the barrier door and the releasing handle are easy to access.

Create a rectangular, suitably sized floor slab (A pic.4) with the holes for the exiting cables. Use the foundation counterplate (B pic. 4), with the 4 anchors supplied to be buried in concrete; or, once the floor slab is completed, fix the cabinet to the barrier with 4 M10x120 foundation plugs (C pic. 4). The slab thickness must be at least 10cm and can be increased as required.

6.4 Installation of the barrier group



Without bar and spring, the barrier must be positioned as follows:

- remove nuts and washers from the protruding bolts, position the cabinet on the base and fix it. Check it is anchored securely and correct if necessary.

Note: it is advisable to install the cabinet with the door on the side more easily accessible.

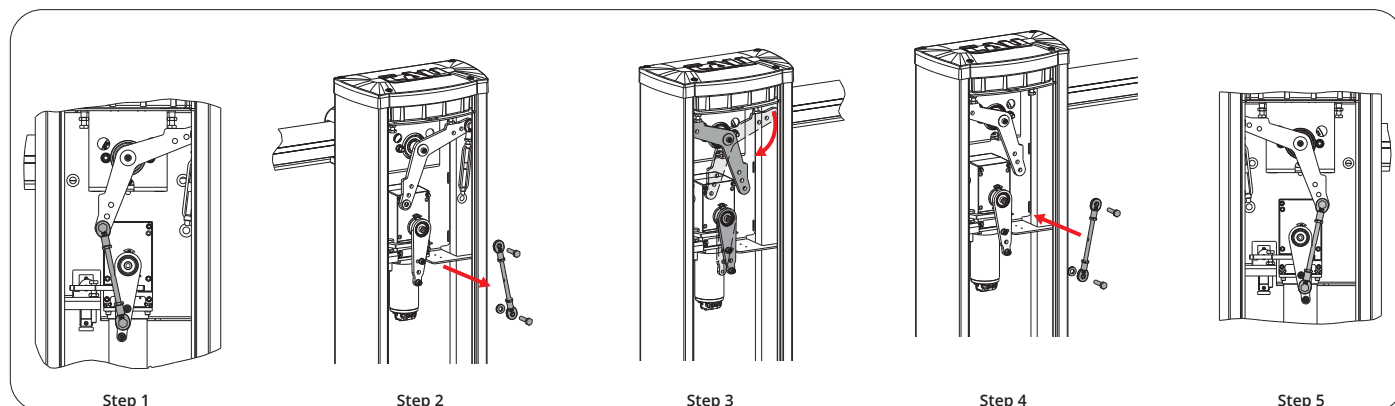
- Open the door with the relative key and remove.

LUXE-M is normally delivered RIGHT (RH), with the bar support in a horizontal position. Right-hand barriers (RH) are barriers that have the cabinet on the right-hand side viewed from the inside of the passageway (the door is normally on the inside). If it is necessary for it to be LEFT (LH), the opening must be inverted.

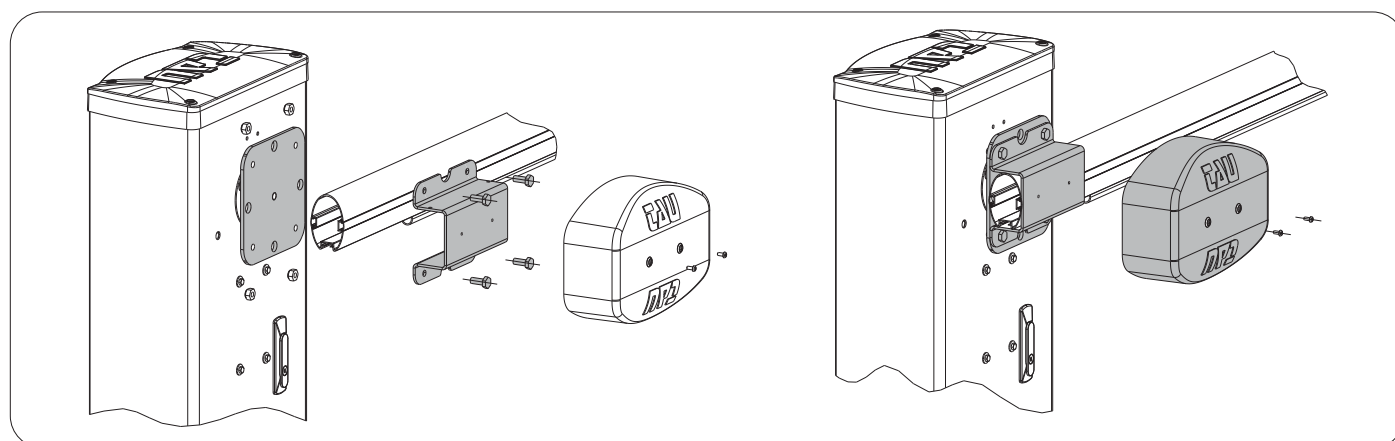
6.5 Modification of the barrier with opening to the left (SX)

After releasing the automation (see the "Manual release" chapter), proceed as follows:

- 1_ Remove the connecting rod by taking away the fixing screws and lower the rocker arm until it stops. Crank the handle as shown in the picture, rotate the lever 180° to the previous position and tighten it to the opposite side of the rocker arm.
- 2_ Once the opening direction has been modified, invert the motor connections (see K206MA instructions). If the barrier must be modified from LH to RH, the operations are the same.



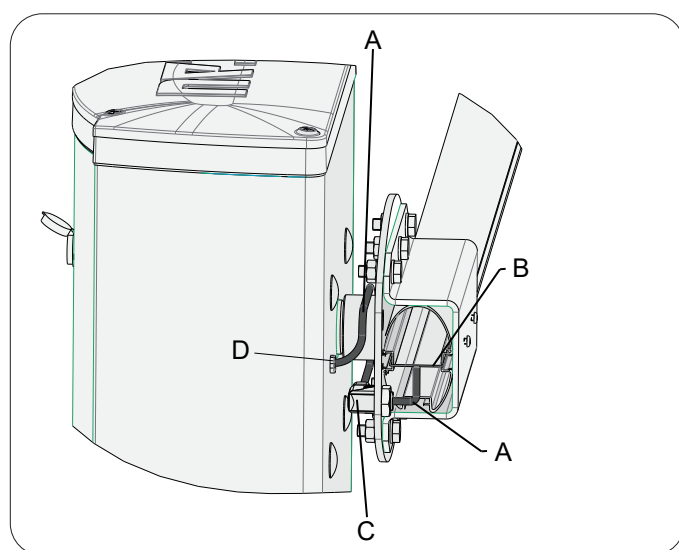
6.6 Bar fixing



All operations must be carried out with the power OFF.

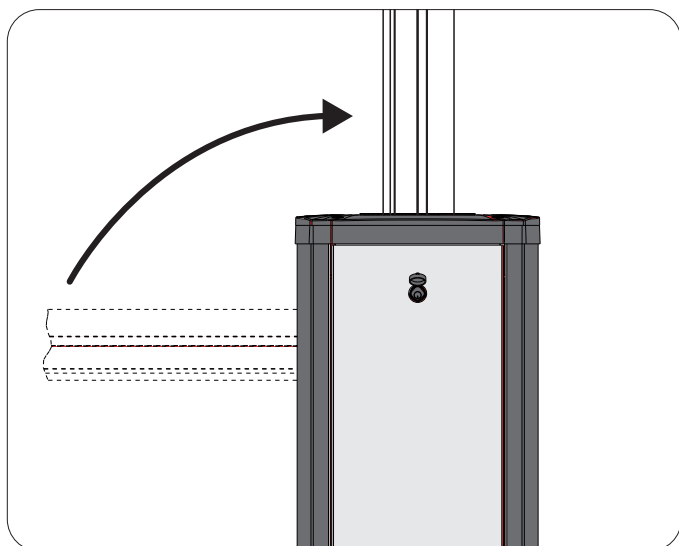
After releasing the automation (see the "Manual release" chapter), proceed as follows:

- 1_ using a support, bring the bar in the horizontal position (wholly assembled and with all the accessories) near the bar support and fix with the omega bracket and the screws supplied;
Note: the bar must be inserted for the whole length of the omega bracket.



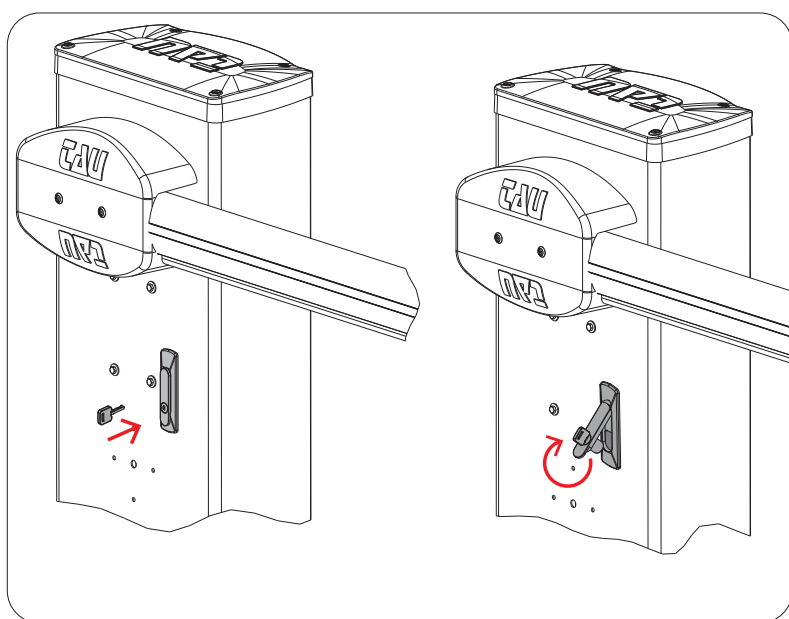
- 2_ LUXE-M + AE: when the omega bracket is fixed, and after removing the protective cap, pass the LED cable through the hole on the cabinet (to take the cable to the control unit, refer to figure) then fit the cover and secure it with the screws supplied;

- A) Position the led connection cable "A".
- B) LED stripes
- C) 90° articulated cable gland
- D) Tear proof cable seal



- 3_ place the bar in a vertical position and block the gearmotor (see the "Manual release" chapter).

6.7 Manual release



WARNING! Releasing and any other manual operation must be carried out only with the bar fitted. It is absolutely forbidden to operate the barrier without the bar fitted.

- 1_ Insert the supplied key;
- 2_ turn the handle approx. 330° clockwise. (if initially it seems to resist, give the handle greater strength, no breakage of any kind will be caused).

Always rotate the release handle to the limit before manually acting on the boom.

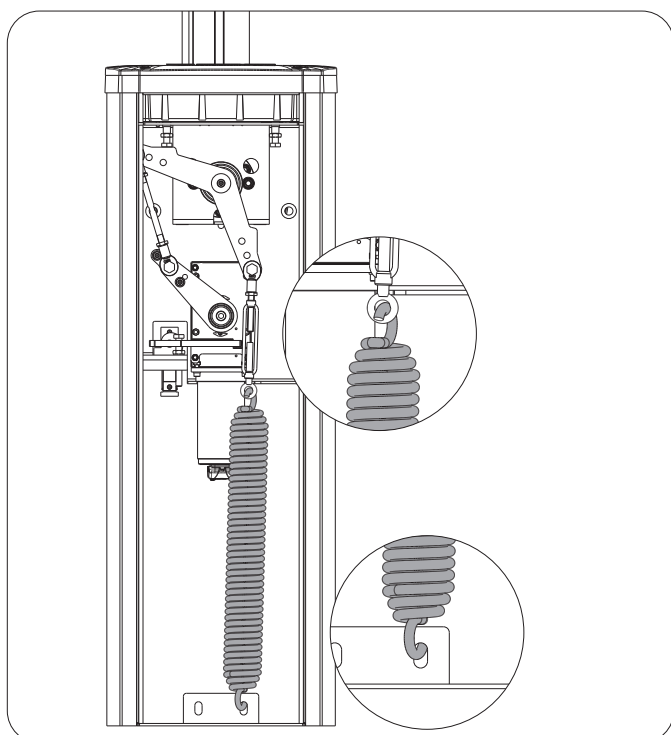
Once released, the boom must automatically move to the equilibrium position (approx. 45°).



WARNING! Releasing can be potentially dangerous for the user when for any reason whatsoever (bar badly fitted during installation, bar broken due to an accident, etc.) the springs do not guarantee balancing any longer!

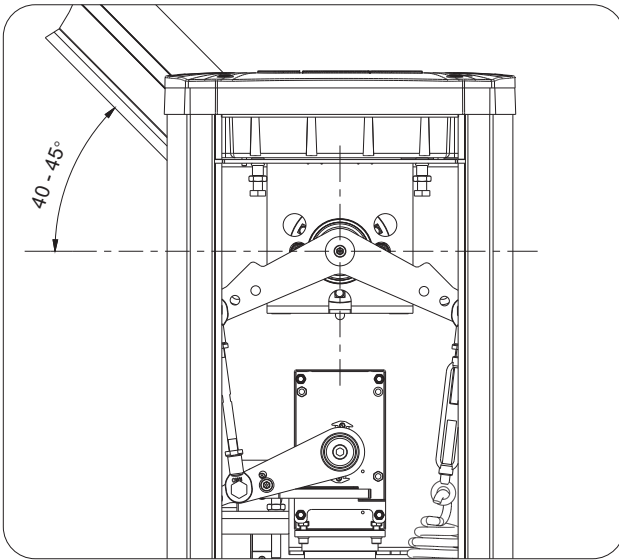
They can cause the bar coupling and/or the bar itself to rotate suddenly.

6.8 Spring fitting



Now proceed with the assembly of the spring, hooking it to the screw with eyelet and to the hole on the metal sheet at the base of the cabinet, then carry out a first preload by hand-turning the central body of the tie rod and the eyelet.

6.9 Bar balancing



Continue with bar balancing.

Before balancing the bar, check with the table in paragraph "3. Optional accessories" the congruence between the chosen spring, the accessories to be applied and distance are adequate. Correct balancing is essential for the barrier to work properly.



This operation must be carried out only when the bar has been installed permanently with all its accessories.

operate the manual release (see the "Manual release" chapter) keeping at a safe distance. The rod must move by itself to 45°, otherwise load/unload the spring (if the rod tends to rise above 45° the spring must be unloaded by turning the central body clockwise; on the contrary, if it doesn't reach 45°, the spring must be loaded by turning the central body counterclockwise). Lower the rod and release it, check that it has reached 45°.



If a load is needed that is greater/lower than that permitted when balancing, move the eyelet into the hole on the right or left to increase/decrease the load capacity.

Continue with the electrical connections to the control panel (see the chapter on electrical connections).

Note: check the spring works correctly.

IMPORTANT! For a correct operation of the barrier, when the boom is in vertical position the spring must not be completely unloaded.



6.10 Stop adjustment

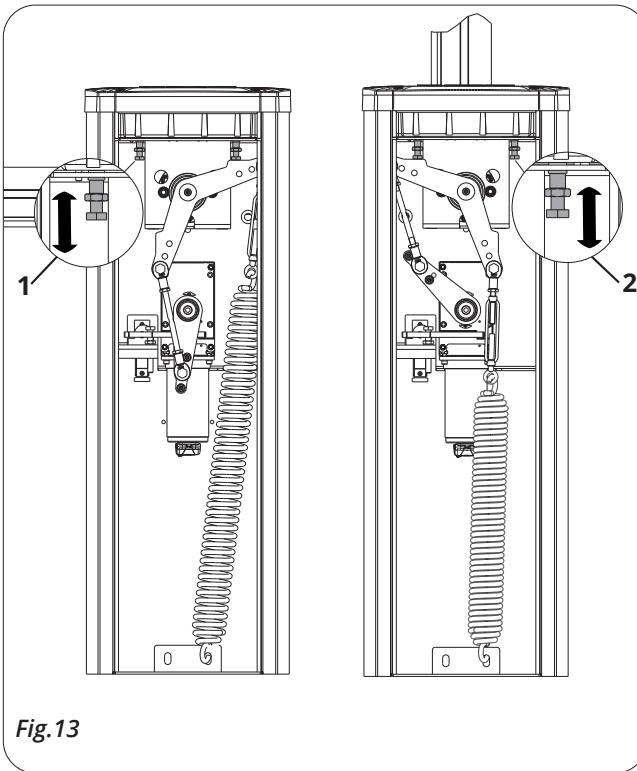


Fig.13

The barrier is normally supplied with the stops already adjusted for perfect travel.

If the plate has not been cemented properly, the bar might not be perfectly horizontal or vertical and the installation might not be successful from an aesthetic point of view.

To correct the vertical position (=opening), close the bar, open the door and rotate the free screw (1 pic. 13) in a clockwise (to increase the bar travel) or anticlockwise direction (to reduce the bar travel).

Similarly, to correct the horizontal position (=closing), open the bar and adjust the free screw (2 pic. 13).

After checking and adjusting the bar opening and closing operation, tighten the locknuts under the screws.



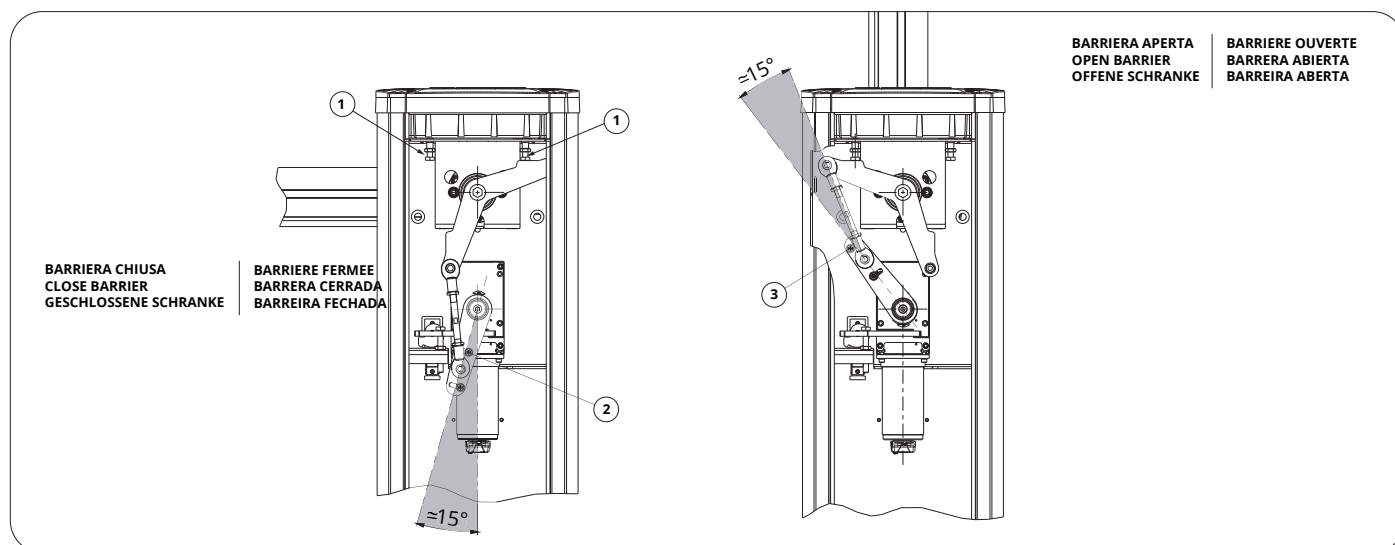
Whenever the position of the mechanical stops is modified, the saving procedure on the control card must be performed (see K206MA instructions).

When adjustment has been completed, carry out the saving procedure onto the control card (see K206MA instructions), checking the correct position of the bar from the second automatic operation (the first is used by the control unit to accept the new stops); repeat the procedure as required.

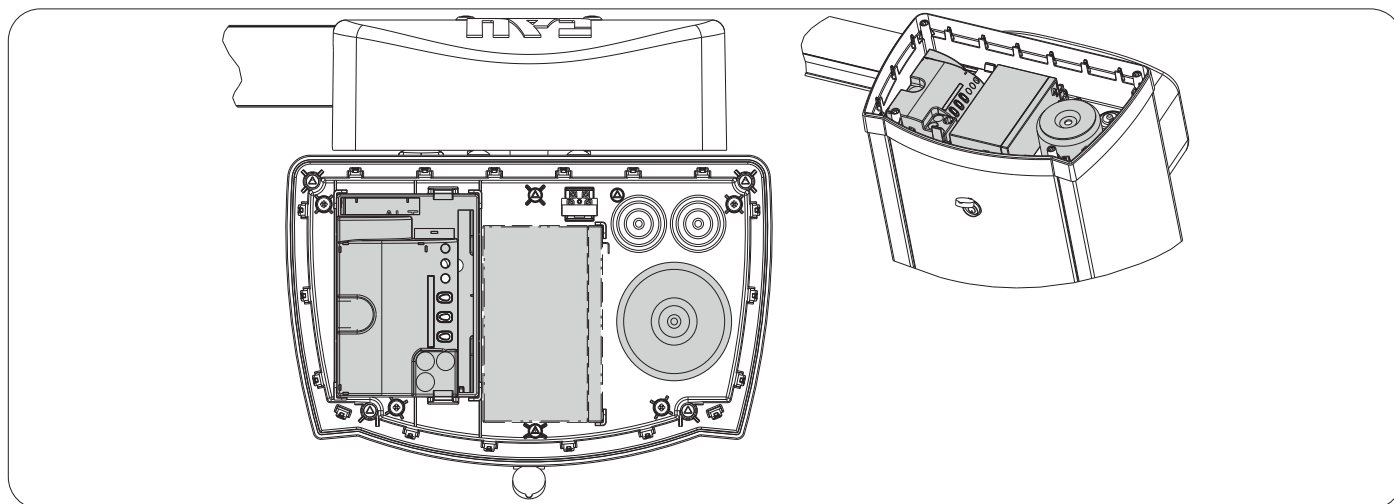
When all the mechanical and electronic installation is complete, fix the cabinet cover, reposition the door and lock.

6.11 Adjustment of the safety locks

1. Adjust the opening and closing limit switches (1)
2. Fix the screws (2) and (3) on the crank near the joint, but without leaning, maintaining the minimum angle indicated in the figure in the two positions in closing (2) and opening (3)
3. If you are unable to respect the minimum angle indicated, vary the length of the connecting rod by screwing or unscrewing the two joints.



6.12 Electrical connections



All devices, supply included, must be installed up to standard and in compliance with the regulations in force. Separate the power cables from the control cables, above all if the paths are long (over 50m). As to the cable section (aerial excluded), TAU recommends: supply 1.5mm², other cables 0.5mm², follow anyway IEC 364 and the installation regulations in force in your country. To access the control card, remove the cabinet cover after removing the locking screws and washers. It is then possible to reach the connections.

Note: internal connections are already made and tested. The supply, external photocell, LEDs and any remote controls must be connected and the card must be programmed.

6.13 Last operations

When the correct operation of all devices controlling the bar has been checked, make sure everything is reset before handing over to the users. Place signs warning people about the barrier where they can be easily read.

7. USE

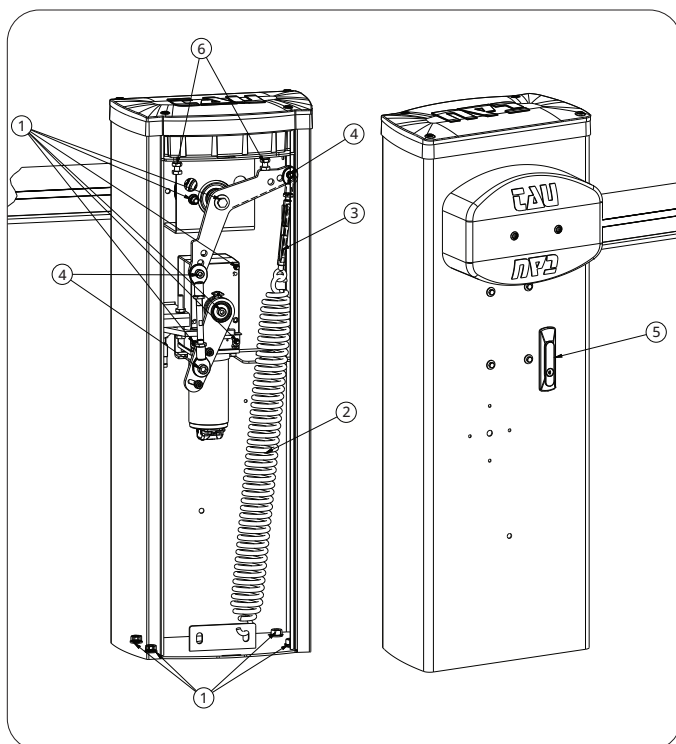
The barrier has been exclusively designed to limit the flow of vehicles and/or persons in restricted entrances by means of a bar. In the event of blackout, functioning can be guaranteed by means of an optional 12V dry battery.

Furthermore, it also comprises electrical equipment and therefore must be approached and used with caution and foresight. In particular we recommend:

- not to touch the equipment with wet hands and/or bare or wet feet;
- not to perform the automatic or semiautomatic function in the presence of known or suspected malfunctions;
- not to pull the cable to disconnect the equipment;

- not to let children, or those unable, use the cabinet keys or controls (including remote controls) even if only to play with;
- not to operate the barrier until it is completely in view;
- not to enter within the operating range while it is moving, wait for it to stop;
- not to rest against the bar or cabinet for any reason, even when the barrier is inactive and do not remain within the operating range of the barrier;
- not to let children or animal play within the operating range of the barrier;
- not to use the barrier for purposes (e.g. lifting of weights or persons) other than those foreseen. The manufacture holds no responsibility what so ever for damages caused by the said actions;
- to perform periodic maintenance by specialised personnel;
- if there is a fault, turn off the power supply. Use the manual manoeuvre only if safe. Do not attempt to resolve the problem yourself, contact a qualified technician of the manufacturer or authorised by the manufacturer. In any case, make sure that the spare parts are original so that the safety of the barrier is not compromised..

8. MAINTENANCE AND DURABILITY OF THE PRODUCT



Product durability:

The durability of the product is influenced by the severity of use. In any case, the durability estimate for use in medium-hard conditions is **3.000.000 cycles**.

The durability estimate does not represent any explicit guarantee on the actual duration of the product.

Ordinary maintenance frequency:

Interventions of ordinary maintenance every 150.000 cycles or every 6 months:

- Remove the mains power and any buffer batteries, then carry out the following checks and replace the worn parts if necessary:
 - Check the balance of the boom (see chapters "Bar fixing, Spring fitting and Bar balancing";
 - Check the electrical connections and if the ground connections are still intact;
 - Check the correct functioning of the circuit breaker and the differential switch.
 - Check the tightening of the bolts. (1)
 - Check the correct fixing of the spring (2) and tie rods and if they are still intact (3).
 - Check the wear of the mechanical stops and the adjustment of the limit switches (see chapters "Electric limit switches - adjustment (LUXE-SE) and Mechanical stops adjustment"). (6)
 - Clean and grease the joint (4)
 - Check the manual release (5)
 - Clean the photocell eye using a damp cloth. Do not use solvents or other corrosive products.
 - Eliminate any plants or weeds within the barrier's range of action and check if the warning sign is intact.

- Restore the mains power and check:
 - The intervention of safety devices and light signals.
 - Obstacle detection.
 - Possible risk of lifting.
 - Dangerous situations and force limitations according to EN 12445

Interventions of ordinary maintenance every 300.000 cycles or every 36 months:

- Remove the mains power and any buffer batteries, then carry out the following checks and replace the worn parts if necessary.
- Carry out all the points indicated above on "Interventions of ordinary maintenance every 150.000 cycles or every 6 months".
 - Replace the balancing spring (2).

9. TROUBLESHOOTING

This paragraph deals with the most probable causes of common faults, in order to promptly re-establish the barrier. In any case the indicated case study is incomplete (both from a cause point of view as well as a fault point of view).

a_ The barrier is blocked (open, closed or half-open):

- 1_ no power supply;
- 2_ inefficient commands;
- 3_ blown power supply fuse;
- 4_ photocells (also enabled during opening) active because they are incorrectly aligned and/or covered (grass, etc);

b_ the barrier continues to open and close;

- 1_ check the false contacts of the remote control buttons and the key selector switches that remain on;
- c_ the barrier remains open;
 1_ the photocells are active because they are not aligned and/or dirty (mud, etc) and/or covered (grass, etc);
- d_ the barrier has difficulty in opening;
 1_ the bar balancing spring needs adjusting;
- e_ the barrier lifts/lowers more than the foreseen limits;
 1_ the mechanical limit switches need adjusting (see chapter "LIMIT SWITCH ADJUSTMENT").

10. DECOMMISSION

When the barrier has reached the end of its useful life it should be removed and the reusable materials should be recycled. Pay attention to that which is stipulated by local and/or national laws and regulations. Care should be taken when recycling the following parts:

- cabinet painted with epoxy paint
- methacrylate flashing light dome
- ABS control unit box
- electronic cards
- 12V dc dry battery (lead acid)
- lithium grease inside the reduction gear
- minor plastic and/or rubber connections and protections.

RESPECT THE ENVIRONMENT!

DISMANTLING WARNINGS: the barrier dismantling operations must respect the safety measures: therefore, disconnect the power supply before proceeding. Slacken (not completely) the springs adjusting tie-rods so that the bar can be comfortably and safely removed. Then unscrew the blocking screws on the base of the cabinet in order to process as desired.

11. TRANSPORT

The bar, which can be purchased on request, is packed separately from the barrier that is packaged in a cardboard box. Care and attention must be taken throughout the handling phase. Ideally, a manual or motorised trolley should be used for lifting and movement. The items must be stored upright, even for short periods, respecting the direction that is indicated on the packaging and taking into consideration that high centres of gravity cause instability. The bar must be stored making sure that there are no protruding parts or loads that could damage it. Once unpacked, make sure that it is intact. Do not discard the packaging, but rather recycle it following local laws.



WARNING: to prevent suffocation or similar dangers, do not allow children to handle the packaging.

GUARANTEE: GENERAL CONDITIONS

TAU guarantees this product for a period of 24 months from the date of purchase (as proved by the sales document, receipt or invoice).

This guarantee covers the repair or replacement at TAU's expense (ex-works TAU: packing and transport at the customer's expense) of parts that TAU recognises as being faulty as regards workmanship or materials.

For visits to the customer's facilities, also during the guarantee period, a "Call-out fee" will be charged for travelling expenses and labour costs.

The guarantee does not cover the following cases:

- If the fault was caused by an installation that was not performed according to the instructions provided by the company inside the product pack.
- If original TAU spare parts were not used to install the product.
- If the damage was caused by an Act of God, tampering, overvoltage, incorrect power supply, improper repairs, incorrect installation, or other reasons that do not depend on TAU.
- If a specialised maintenance man does not carry out routine maintenance operations according to the instructions provided by the company inside the product pack.
- Wear of components.

The repair or replacement of pieces under guarantee does not extend the guarantee period.

In case of industrial, professional or similar use, this warranty is valid for 12 months.

MANUFACTURER'S DECLARATION OF INCORPORATION
(in accordance with European Directive 2006/42/EC App. II.B)

TAU S.r.l.

Via E. Fermi, 43 - 36066 Sandrigo (Vi) ITALY

Electromechanical actuator
Road Barriers
General environment
Electronic control unit and radioreceiver

Type: *LUXE-M*

Commercial name: *AUTOMATIC BARRIER*

Has been produced for incorporation on an access point (*automatic barrier*) or for assembly with other devices used to move such an access point, to constitute a machine in accordance with the Machinery Directive 2006/42/EC.

Also declares that this product complies with the essential safety requirements of the following EEC directives:

- 2014/30/EU Electromagnetic Compatibility Directive

and, where required, with the Directive:

- 2014/53/EU Radio equipment and telecommunications terminal equipment

Also declares that *it is not permitted to start up the machine* until the machine in which it is incorporated or of which it will be a component has been identified with the relative declaration of conformity with the provisions of Directive 2006/42/EC.

The following standards and technical specifications are applied:

EN 61000-6-2; EN 61000-6-3; EN 60335-1; ETSI EN 301 489-1 V1.9.2; ETSI EN 301 489-3 V1.6.1;

EN 300 220-2 V2.4.1; EN 12453:2000; EN 12445:2000; EN 60335-2-103.

The manufacturer undertakes to provide, on sufficiently motivated request by national authorities, all information pertinent to the quasi-machinery.

Legal Representative

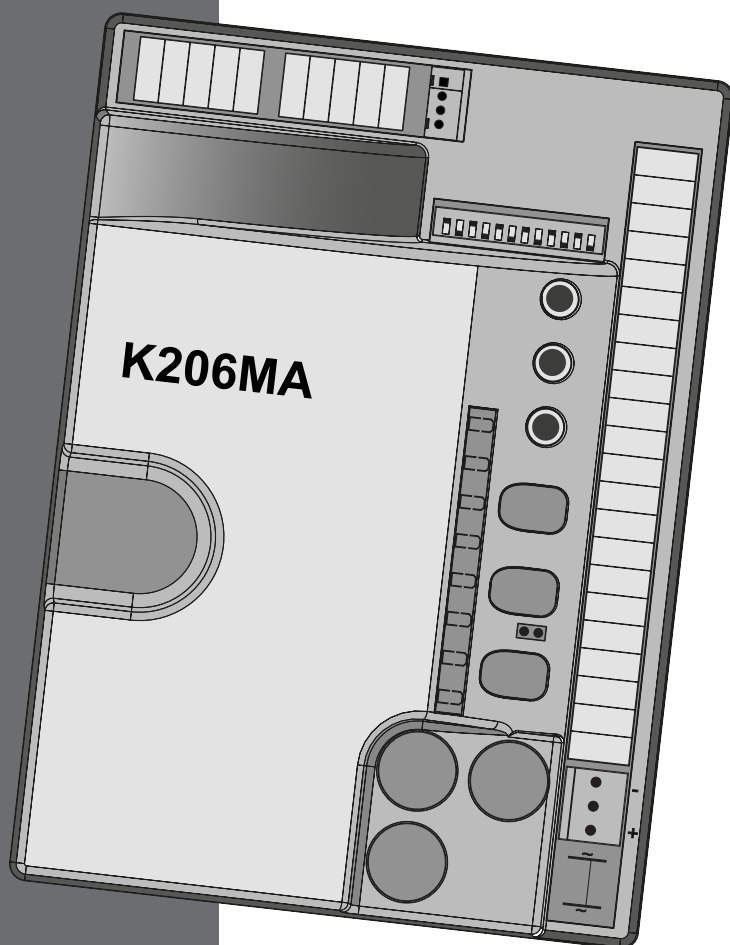

Loris Virgilio Danieli

Name and address of person authorised to draw up all pertinent technical documentation:

Loris Virgilio Danieli - via E. Fermi, 43 - 3606 Sandrigo (Vi) Italia

K206MA

Ver. Firmware 9.06



D-MNLOK206MA 04-02-2025- Rev.32

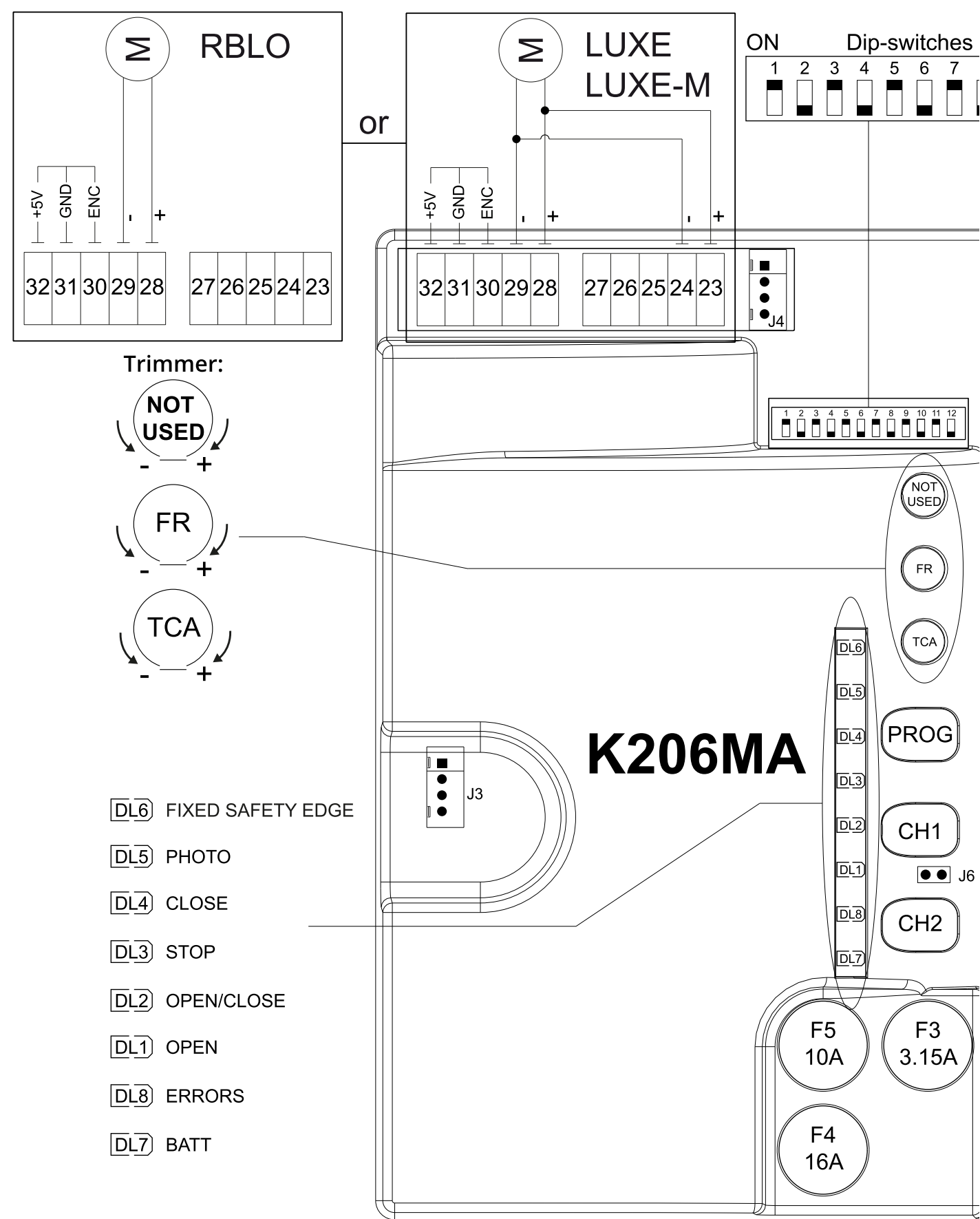
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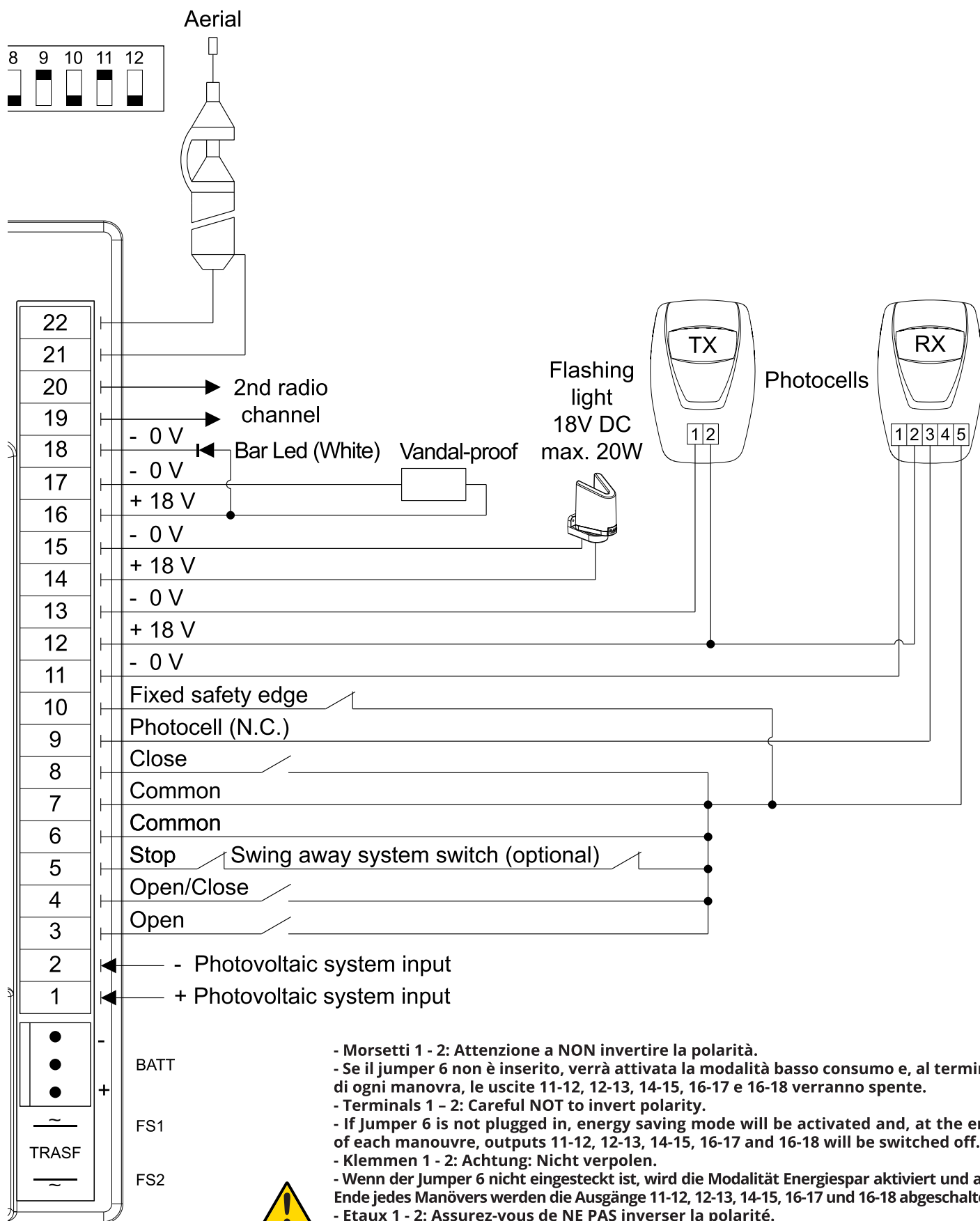


MADE IN
ITALY



SCHEMA CABLAGGIO K206MA / K206MA WIRING DIAGRAM / SCHALTPLAN DER K206MA





- Morsetti 1 - 2: Attenzione a NON invertire la polarità.
- Se il jumper 6 non è inserito, verrà attivata la modalità basso consumo e, al termine di ogni manovra, le uscite 11-12, 12-13, 14-15, 16-17 e 16-18 verranno spente.
- Terminals 1 - 2: Careful NOT to invert polarity.
- If Jumper 6 is not plugged in, energy saving mode will be activated and, at the end of each manouvre, outputs 11-12, 12-13, 14-15, 16-17 and 16-18 will be switched off.
- Klemmen 1 - 2: Achtung: Nicht verpolen.
- Wenn der Jumper 6 nicht eingesteckt ist, wird die Modalität Energiespar aktiviert und am Ende jedes Manövers werden die Ausgänge 11-12, 12-13, 14-15, 16-17 und 16-18 abgeschaltet.
- Eaux 1 - 2: Assurez-vous de NE PAS inverser la polarité.
- Si el puente 6 no está insertado, se activará el modo de bajo consumo y, al final de cada maniobra, las salidas 11-12, 12-13, 14-15, 16-17 y 16-18 se desconectarán.
- Bornes 1 - 2: Tenga cuidado en NO invertir la polaridad.
- Si le cavalier J6 n'est pas inséré, la fonction modalité consommation réduite sera activée et, à la fin de chaque manœuvre, les sorties 11-12, 12-13, 14-15, 16-17 et 16-18 seront désactivées.
- Terminais 1 - 2: Cuidado NÃO inverter a polaridade.
- Se o jumper J6 não está conectado, ele irá alternar para o modo de baixo consumo de energia e, ao final de cada manobra, as saídas 11-12, 12-13, 14-15, 16-17 e 16-18 serão desligados.

WARNINGS

This manual is designed to assist qualified installation personnel only. It contains no information that may be of interest to final users. This manual is attached to the K206MA control unit mounted on the LUXE or RBLO(X) automatic bar, therefore it may not be used for different products!

Important warnings:

Disconnect the mains power supply to the board before accessing it.

The K206MA control unit is suitable for the control of a direct-current electromechanical gearmotor for the automation of sliding gates.

Any other use is considered improper and is consequently forbidden by current laws.

Please note that the automation system you are going to install is classified as “machine construction” and therefore is included in the application of European directive 2006/42/EC (Machinery Directive).

This directive includes the following prescriptions:

- Only trained and qualified personnel should install the equipment;
- the installer must first make a “risk analysis” of the machine;
- the equipment must be installed in a correct and workmanlike manner in compliance with all the standards concerned;
- after installation, the machine owner must be given the “declaration of conformity”.

This product may only be installed and serviced by qualified personnel in compliance with current, laws, regulations and directives.

When designing its products, TAU observes all applicable standards (please see the attached declaration of conformity) but it is of paramount importance that installers strictly observe the same standards when installing the system.

Unqualified personnel or those who are unaware of the standards applicable to the “automatic gates and doors” category may not install systems under any circumstances.

Whoever ignores such standards shall be held responsible for any damage caused by the system!

Do not install the unit before you have read all the instructions.

INSTALLATION

Before proceeding, make sure that the mechanical part is working perfectly and that the boom has been properly balanced.

Note: it is compulsory to earth the system and to observe the safety regulations that are in force in each country.

CAUTION:

- **do not use single-wire cables (single conductor), eg. intercom ones, in order to avoid interruptions on the line and false contacts;**
- **do not reuse old pre-existing cables.**

IF THESE ABOVE INSTRUCTIONS ARE NOT FOLLOWED IT COULD PREJUDICE THE PROPER WORKING ORDER OF THE EQUIPMENT AND CREATE HAZARDOUS SITUATIONS FOR PEOPLE. FOR THIS REASON THE “MANUFACTURER” DECLINES ALL RESPONSIBILITY FOR ANY MALFUNCTIONING AND DAMAGES THUS RESULTING.

1. CONTROL PANEL FOR AUTOMATIC BARS

- LOGICS WITH MICROPROCESSOR
- STATUS OF INPUTS SIGNALLLED BY LEDs
- INCORPORATED FLASHING CIRCUIT
- ENCODER SENSOR FOR SELF-LEARNING OF TRAVEL
- 433.92 MHz 2 CHANNEL BUILT-IN RADIO RECEIVER (CH)
- BATTERY CHARGER BOARD (INTEGRATED)
- BATTERY CONNECTOR
- DIAGNOSTICS OF MALFUNCTIONS SIGNALLLED BY LED
- POSSIBILITY OF ENERGY SAVING OPERATION
- COMPATIBILITY WITH OUR APPS: TAUOPEN AND TAUAPP

ATTENTION:

- **do not use single cables (with one single wire), ex. telephone cables, in order to avoid breakdowns of the line and false contacts;**
- **do not re-use old pre-existing cables;**

2. INTRODUCTION

The K206MA board has two working modes, selectable through the J6 jumper (see wiring diagram).

- J6 Jumped: standard mode, i.e. the control unit is powered all the time;
 J6 Not jumped: low-energy mode, i.e. the control unit is switched off after each operation and on after each command (mode where power is supplied by other energy sources, ex. batteries charged by a photovoltaic panel).

Once the connection is achieved, in low-energy mode, press the PROG button briefly:

- All the green LEDs must be on (each of them corresponds to a Normally Closed input). The go off only when the controls to which they are associated are operated. Except for the green led DL4, which corresponds to CLOSE input (a Normally Open contact).
- All the red LEDs (and the green led DL4) must be off (each of them corresponds to a Normally Open input). The light up only when the controls to which they are associated are operated.

3. TECHNICAL CHARACTERISTICS

Board power supply	13,5V AC - 50 Hz
Max. absorption DC motor	14 Ah - 18V DC
Fast acting fuse for protection of input power supply 13,5V AC (F4 - 5x20)	F 16A
Fast acting fuse for battery charger protection (F5 - 5x20)	F 10A
Fast acting fuse for protection of auxiliary circuits 18V DC (F3 - 5x20)	F 3.15A
Motor power supply circuits voltage	18V DC
Auxiliary device circuits supply voltage	18V DC
Logic circuits supply voltages	5V DC
Operating temperature	-20 °C ÷ +55 °C

4. CONNECTIONS TO TERMINAL BOARD

Terminals	Function	Description
FS1 - FS2	POWER SUPPLY	13,5V AC control unit power supply input – Fed by the toroidal transformer and protected by the fuses on the 230V AC power supply.
1 - 2	AUX INPUT	external power input (ex. Photovoltaic system 12V DC). NB: In the latest versions of the control boards, the voltage change through jumper J7 is no longer necessary (make sure whether it is present on the control board or not). ATTENTION: POWERING THE CONTROL UNIT WITH AN EXTERNAL SOURCE, ALL THE OTHER 18V DC OUTPUTS BECOME THE SAME AS THE OUTSIDE VOLTAGE.
3 - 6	OPEN	OPEN button N.O. input – Controls the total opening of the barrier. (3= OPEN - 6= COM)
4 - 6	OPEN/CLOSE	OPEN/CLOSE button N.O. input – Controls the opening and closing of the barrier and is regulated based on the function of dip-switches 2 and 4. (4= O/C - 6= COM)
5 - 6	STOP	STOP button N.C. input – Stops the bar in any position, temporarily preventing the automatic closure, if programmed. Bridge the connectors if not used. (5= STOP - 6= COM)
7 - 8	CLOSE	CLOSE button N.O. input – Controls the total closure of the barrier. (7= COM - 8= CLOSE)
7 - 9	PHOTOCELLS	N.C. photocell input - it cuts in during the closing. Bridge the connectors if not used. (7= COM - 9= FOT) Note: the photocell transmitter must always be supplied by terminals no. 12 and no. 13, since the safety system test (phototest) is carried out on it. Without this connection, the control unit does not work. To override the testing of the safety system, or when the photocells are not used, set dip-switch no. 6 to OFF.

7 - 10	SENSITIVE EDGE	SENSITIVE EDGE input (resistive sensitive edge or fixed edge); It works only during the closing phase and causes the total reopening of the boom. Bridge the terminals if not used. In case of an active automatic closing: After the first intervention of the fixed edge and the consequent total opening, the boom will try an automatic closing. If the CF contact is engaged again, the automation will reopen up to the opening limit switch and temporarily disable the automatic closing. It will return to normal operation only after the first maneuver of the automation, which requires a manual command. (7 = COMMON - 10 = SENSITIVE EDGE)
11 - 12 **	AUX	auxiliary circuits output 18 V DC max. 15 W for photocells, receivers, etc... (11= NEGATIVE - 12= POSITIVE)
12 - 13 **	TX PHOTOCELLS	18V DC output for transmitter photocell – phototest - max. no. 1 photocell transmitters. (12 = POSITIVE - 13 = NEGATIVE)
14 - 15 **	FLASHING LIGHT (LED CABINET LUXE)	18V DC max. 20W output for flashing light supply, flashing signal supplied by the control unit, rapid for closing, slow for opening. (14 = POSITIVE - 15 = NEGATIVE)
16 - 17* **	ELECTROMAGNET (VANDAL-PROOF)	Output for vandal-proof 18V DC, 3 W max; Output for electromagnet to be connected to the end of the rod to hold the barrier closed (vandal-resistant device). With the barrier closed, the electromagnet is constantly powered. Every time a command is given, the electromagnet is turned off before the motor starts running. (16= POSITIVE - 17= NEGATIVE)
16 - 18* **	BAR LED (WHITE)	bar LED power output. (16=POSITIVE - 18= NEGATIVE). See instructions LA4/8 LARG 4/8
19 - 20*	2 nd CH RADIO	2 nd radio channel output - for control of an additional automation or for switching on lights, etc... (N.O. clean contact) Warning: to connect other devices to the 2nd Radio Channel (area lighting, pumps, etc.), use an additional auxiliary relay (see note at end of paragraph). WARNING: the default outlet is active monostable 2 sec. To switch it to active bistable or to modify the activation time it is necessary to use the TAUPROG hand-held programmer (see relative instructions).
21 - 22	AERIAL	plug-in radio-receiver aerial input , for 433.92 MHz receivers only. (21 = GROUND - 22 = SIGNAL)
23 - 24 - 28 - 29	MOTOR	motor supply output 18V DC max. 50 W. (23-28 = POSITIVE - 24-29 = NEGATIVE). See note below.
25 - 26 - 27	OPTIONAL ENCODER	encoder supply and input (25 = WHITE signal - 26 = BLUE negative - 27 = BROWN positive). See note below.
30 - 31 - 32	MAIN ENCODER	encoder supply and input (30 = WHITE signal - 31 = BLUE negative - 32 = BROWN positive).
J3	MEMORY CARD	Quick plug-in for MEMORY CARD connection for transmitters codes.
J4	AUX	Quick coupling for the connection of the T-WIFI, T-CONNECT and T-COMM devices

* The outlets can be configured using the TAUPROG (see relative instructions). The standard configuration is shown in the table.

** If Jumper 6 is not plugged in, energy saving mode will be activated and, at the end of each manouvre, outputs **11-12, 12-13, 14-15, 16-17** and **16-18** will be switched off.



Terminals 23-24 must be used in parallel to 28-29 in the case of LUXE automatic barriers (you have to observe the same polarity between the 2 outputs).

Terminals 25-26-27 are available if the circuit present on the K206MA relative to the encoder, terminals 30-31-32, is faulty

IMPORTANT:

- Do not connect auxiliary relays or other devices to the 18 V DC output (terminals 11 – 12) to avoid malfunctions of the control unit. Use separated power supply / transformers instead;
- do not connect switching feeders or similar apparatus close to the barrier that may be a source of disturbance;

5. LOGIC ADJUSTMENTS

Make the logic adjustments.

Note: when any adjusting devices (trimmers or dip-switches) on the control panel are operated, a complete manoeuvre must be carried out in order for the new settings to take effect.

TRIMMER

FR. obstacle detection sensitivity adjustment.



Note: by rotating the TRIMMER FR. clockwise the sensitivity of the gearmotor to obstacles diminishes and therefore the thrust force increases; **vice-versa, by rotating it counter-clockwise, the sensitivity of the gearmotor to obstacles increases** and therefore the thrust force diminishes.



T.C.A. Automatic Closing time adjustment: from about 0,1 to 12 seconds (see dip-switch no. 1);

Dip switch

1	AUTOMATIC CLOSING	On	when completely open, closure is automatic after the set time on the T.C.A. trimmer has past.
		Off	the closing manoeuvre requires a manual command.
2	2 / 4 STROKE	On	when the automation is operating, a sequence of opening/closing commands causes the bar to OPEN-CLOSE-OPEN-CLOSE, etc.
		Off	in the same conditions, the same sequence of commands causes the bar to OPEN-STOP-CLOSE-STOP-OPEN-STOP, etc. (step-by step function) (see also dip switch 4).
3	CLOSES AGAIN AFTER THE PHOTOCELL	On	after the photocell is activated (input 7 - 9), the automation closes automatically after 1 seconds.
		Off	function off.
4	NO REVERSE	On	the automation ignores the closure command during opening and auto-close time.
		Off	the automation responds as established by dip switch No. 2.
5	PRE-FLASHING	On	the pre-flashing function is enabled.
		Off	the pre-flashing function is disabled.
6	FOTOTEST	On	the "photocell test" function is enabled.
		Off	the "photocell test" function is disabled. Note: to be used when the photocells are not used.
7	MASTER/SLAVE	On	enables the MASTER mode in the master/slave configuration (see T-COMM instructions).
		Off	enables the standard operation (single motor) or SLAVE mode in the master/slave configuration (see T-COMM instructions).
8	BAR LED	On	when the boom is lifted all LEDs remain OFF.
		Off	when the boom is lifted all LEDs behave as per setting of wire terminals 16-18 (default: FLASHING).

9-10-11 Selection of barrier model and bar length

Dip 9	Dip 10	Dip 11	Modello
Off	Off	Off	LUXE-S bar $\geq 2 \text{ m} \leq 2,5 \text{ m}$
On	Off	Off	LUXE-S bar $> 2,5 \text{ m} \leq 3,5 \text{ m}$ - LUXE-SR 24 Vdc
Off	On	Off	LUXE-S bar (with FPL) $> 3,5 \text{ m} \leq 4 \text{ m}$
On	On	Off	LUXE-M bar $> 3,5 \text{ m} \leq 5 \text{ m}$ (elliptical boom) / $\leq 6 \text{ m}$ (round boom)
Off	Off	On	LUXE bar $\geq 4 \text{ m} \leq 4,5 \text{ m}$ (including accessories)
On	Off	On	LUXE bar $> 4,5 \text{ m} \leq 5,5 \text{ m}$ (including accessories)
Off	On	On	LUXE bar $> 5,5 \text{ m} \leq 6,5 \text{ m}$ (including accessories)
On	On	On	LUXE bar $> 6,5 \text{ m}$ (including accessories)



IMPORTANT: In case the boom length change, a new setting of the dips # 9, 10 and 11 will be required. Before the new setup, however, it is necessary to proceed to a **HARD RESET** (see page 23) of the controller.

12	<i>SENSITIVE EDGE</i>	On	RESISTIVE SENSITIVE EDGE (terminal No. 10).
		Off	FIXED EDGE (NC contact – terminal No. 10). Note: if not used, keep the DIP in the OFF position.

6. MEMORIZATION PROCEDURE

NOTE: Before starting the memorization procedure, make sure that the barrier boom is perfectly balanced and that the mechanical limit switches of the boom are adjusted both in opening and closing (see barrier assembly instructions).

WARNING: After powering the control panel, wait 2 seconds before you start performing the adjustment operations.

When you have completed the installation procedures:



Check the position of dip-switches 9, 10 and 11. Dip-switches must be set according to the barrier model and the bar length (see table of dip-switches 9-10-11, "Logic adjustments" section).

It is recommended to start the learning process with the bar down.

Press without releasing the PROG button till the DL8 LED starts flashing (yellow):

- the automation starts to open slowly looking for the opening limit stop;



If the automation closes instead of opening, stop the run of the gate (by cutting the photocells or closing the STOP contact), invert the polarity of the motor, take the gate in the closed position (on the mechanical stop) and restart the procedure from the beginning.

Note: if the automation does not work, check the input connections. The DL6, DL5 and DL3 green LEDs must be on.

- once the limit stop is reached, the automation starts closing looking for the closing limit stop (in this phase the control unit gathers all the parameters regarding the run);
- the automation carries out one complete opening to optimize the opening power;
- after a short pause, the automation carries out one complete closure to optimize the closing power.

WARNING:

- The procedure can be stopped by pressing the STOP button.
- During the various stages of the operation, if the sensor is activated saving is stopped. To restart the procedure from the beginning (with the DL8 yellow LED flashing), use the AP/CH control, the remote control (if programmed) or press the PROG button briefly.



Please remember that an obstacle during saving is interpreted as a mechanical limit stop (the system does not start any safety operation, it just stops the motors). Make sure you don't stand near the bar during saving.

7. K206MA CHARACTERISTICS

TIMER-OPERATED OPENING AND CLOSING CYCLES

The opening/closing of the automation can be controlled by means of a timer that has a free N.O. output contact (relay). The timer must be connected to terminals 4 - 6 (OPEN/CLOSE button) and can be programmed so that, at the desired opening time, the relay contact closes until the desired closing time (when the timer's relay contact opens, enabling the automatic closing of the gate).

Note: the automatic closing function must be enabled by setting Dip-switch no. 1 to ON).

BATTERY CHARGER BOARD (INTEGRATED)

If the battery is connected the automation will operate in any case if there is no mains power supply. If the voltage drops below 11.3 Vdc, the automation ceases to operate (the control unit remains fed); whereas, when the voltage drops below 10.2 Vdc, the card completely disconnects the battery (the control panel is no longer fed).

OBSTACLE DETECTION

Obstacle detection function that can be set using the FR trimmer: intervening during the automation closing phase, it causes the total opening.



WARNING: the control panel logics may interpret mechanical friction as an obstacle.

8. DIAGNOSTICS LED

DL1 - Red	OPEN button LED signal
DL2 - Red	OPEN/CLOSE button LED signal
DL3 - Green	STOP button LED signal
DL4 - Green	CLOSE button LED signal
DL5 - Green	PHOTOCELL LED signal
DL6 - Green	SENSITIVE EDGE LED signal

LED - DL7

Apart from highlighting the presence of the battery, LED DL7 displays any mistakes with a series of pre-set flashes in various colours:

Key: ● led always on; ○ led flashing;

● always on: (green)	fully-charged battery, main voltage present;
● always on: (yellow)	battery charging;
○ 1 flash every 4 seconds: (green)	fully-charged battery, no main voltage; <i>Check the main voltage;</i>
○ 1 flash every 4 seconds: (yellow)	power supply through photovoltaic panel (terminals 1-2), battery charger disabled
○ 1 flash every 2 seconds: (red)	low battery; <i>Charge the battery, replace the battery;</i>
○ fast flashing: (red)	faulty battery; <i>Replace the battery;</i>

LED - DL8

The DL8 LED indicates mistakes in the board logic with a series of pre-set flashes in different colours:

Key: ● led always on; ○ led flashing;

○ 1 flash every 4 seconds: (green)	normal operation;
---------------------------------------	--------------------------

● / ● alternate flashing: (red/green)	saving to be performed;
● fast flashing: (yellow)	learning process;
● 1 flash: (red)	phototest error <i>Disable phototest (dip-switch 6 OFF), check the operation of the photocells and their connection;</i>
● 1 flash: (yellow)	unknown status, next operation REALIGNMENT;
● 2 flashes: (red)	obstacle for motor; <i>Check there are no obstacles on the path of the bar and its balancing;</i>
● 3 flashes: (red)	no motor encoder signal; <i>Check wiring, check encoder by TEST-ENCODER (optional);</i>
● 4 flashes: (red)	no motor signal; <i>Check wiring, check the motor rotates freely and is powered directly by the battery, check fuse F5;</i>
● 5 flashes: (red)	max current limit for motor exceeded; <i>Excessive absorption peaks of the gearmotor, check there are no obstacles on the bar path, check the current absorption of the motor when in a no-load condition and when applied to the bar;</i>
● 6 flashes: (yellow)	master/slave communication error; <i>Check wiring between the controllers, efficiency of slave controller (fuses), efficiency of interface boards;</i>
● 7 flashes (red):	Sensitive edge safety intervention <i>A command pulse is required to carry out the closure;</i>
● 8 flashes: (red)	Eeprom external memory fault; <i>Replace the external memory module;</i>
● 8 flashes: (yellow)	Eeprom data error (internal/external); <i>Perform procedure RADIO MEMORY RESET;</i>

Apart from the logic mistakes, the DL8 LED indicates also the status of the control unit during the saving of the radio controls.

● always on: (green)	channel CH1 waiting to be saved;
● fast flashing: (green)	CH1 channel memory full;
● always on: (yellow)	channel CH2 waiting to be saved;
● fast flashing: (yellow)	CH2 channel memory full;
● flashing: (green)	CH1 channel waiting to be cancelled;
● always on: (green)	cancelling of channel CH1 in progress;
● flashing: (yellow)	CH2 channel waiting to be cancelled;
● always on: (yellow)	cancelling of channel CH2 in progress;

When LEDs DL7 and DL8 flash at the same time they indicate:

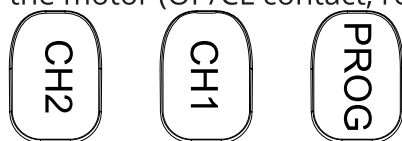
flashing ● + ● : (red + red)	factory reset procedure waiting for confirmation;
flashing ● + ● : (yellow + yellow)	waiting for total cancellation of the radio channels;

Multiple errors are signalled by a 2-second pause between signals.

Should the encoder (obstacle detection) activates while closing, the controller will reverse the direction and slowly open until the boom reaches its fully opened position. Auto Close function will be deactivated until a further command pulse is given. In case of 5 consecutive safety interventions the controller will progressively increase the Auto Close delay. Once the closing has been successfully achieved, the Auto Close delay will go back to standard setting.

9. ABSORPTION CHECK FUNCTION (from 5.17 release onwards)

This function allows to monitor the absorption during a complete cycle in order to value the motor stress. To activate this function press and hold for 2 seconds simultaneously CH1, PROG, CH2 and then start the motor (OP/CL contact, remote, PROG button).



The absorption registered is shown according to the following diagram:

Level	DL7	DL8
	○ (Off)	○ (Off)
	● (Green)	○ (Off)
	● (Green)	● (Green)
	● (Green)	● (Yellow)
	● (Yellow)	● (Green)
	● (Yellow)	● (Yellow)
	● (Yellow)	● (Red)
	● (Red)	● (Yellow)
Hard to move gate	● (Red)	● (Red)

After 5 minutes from the function activation, the board automatically resumes to the standard LED visualization (to resume manually press simultaneously CH1, PROG and CH2).

10. RESTORING AUTOMATIC OPERATION

Should the Bar need to be operated manually, use the release system. After the manual operation:

- after a Mains Power Failure, such as a black-out (controller remains disconnected for a certain time), the automation will be moving slowly to allow the Controller to establish its Limits (REALIGNMENT);
- after a Manual Operation without Mains Power Failure (controller remains connected) it will take 1 complete cycle to complete the realignment procedure. During this cycle, Limits and Soft-Stops will not be working.

11. 433.92 MHz BUILT-IN RADIO RECEIVER

The radio receiver can learn up to a maximum of 30 rolling codes (S-2RP, S-4RP, K-SLIM-RP, T-4RP) which can be set on the two channels as required.

The first channel directly commands the control board for opening the automatic device; the second channel commands a relay for a N.O. no-voltage output contact (terminals 19 - 20, max. 24V AC, 1 A).

LEARNING SYSTEM FOR RADIO CONTROL DEVICES

CH1 = OPEN/CLOSE

CH2 = 2nd channel

CH1+CH2 = CH3 = close

- 1_ press button CH1 briefly to associate a radio control device with the OPEN/CLOSE function;
- 2_ the (green) DL8 LED is ON to indicate the code learning mode has been activated (if no code is entered within 10 seconds the board exits the programming function);
- 3_ press the button of the relative radio control device;
- 4_ the (green) DL8 LED turns off to indicate saving is complete and then on again immediately waiting for other radio control devices (if this is not the case, try to re-transmit or wait 10 seconds and restart from point 1);
- 5_ to memorise codes to other radio control devices, press the key to be stored on other devices within 2-3 sec. After this time (DL8 LED turns off) must repeat the procedure from point 1 (up to a maximum of 30 transmitters);
- 6_ if you wish to save on the 2nd channel, repeat the procedure from point 1 using the CH2 key instead of CH1 (in this case the DL8 LED is yellow);

- 7_ if you wish to save on the 3rd channel, repeat the procedure from point 1 using the CH2+CH1 key (in this case the DL8 LED is red);
- 8_ to exit the learning mode without memorising a code, press button CH1 or CH2 briefly.



If the maximum number of radio controls is reached (30), the LED DL8 will begin to flash rapidly for about 3 seconds but without performing memorisation.

REMOTE PROGRAMMING BY MEANS OF T-4RP, K-SLIM-RP, S-2RP AND S-4RP (V 4.X)

With the new version of software V 4.X it is possible to carry out the remote self-learning of the new version of transmitters T-4RP, K-SLIM-RP, S-2RP and S-4RP (V 4.X), that is without pressing the receiver's programming buttons.

It will be sufficient to have an already programmed transmitter in the receiver in order to start the procedure of remote programming of the new transmitters. Follow the procedure written on the instructions of the transmitter T-4RP, K-SLIM-RP, S-2RP and S-4RP (V 4.X).

CANCELLING CODES FROM RADIO CONTROL DEVICES

- 1_ keep button CH1 pressed for 3 seconds in order to cancel all the associated radio control devices;
- 2_ LED DL8 flashes slowly to indicate that the cancellation mode has been activated;
- 3_ press button CH1 again for 3 seconds;
- 4_ LED DL8 turns off for approx. 3 seconds and then remains steady to indicate that the code has been cancelled;
- 5_ repeat the procedure from point 1 using button CH2 to cancel all the associated radio control devices;
- 6_ to exit the learning mode without memorising a code, press button CH1 or CH2 briefly.

MEMORY CAPACITY

The code memory capacity* can be expanded from 30 to 126, 254 or 1022 codes (transmitters) by replacing the memory cards as follows (plug them onto J3 connector, see wiring diagram):

126	codes	Art.	250SM126
254	codes	Art.	250SM254
1022	codes	Art.	250SM1022

* Control units are supplied with a standard built-in 30-code memory. The memory card for enhancing the code memory capacity must be ordered separately.



WARNING: Control unit must be turned OFF to insert / remove a memory card.
IMPORTANT: when a memory card is used, the control unit's built-in 30 codes memory is disabled.

RADIO MEMORY RESET:

- press without releasing keys CH1 and PROG till LEDs DL7 and DL8 start flashing quickly with a yellow light. At this point release the keys and press them again till the LEDs go off confirming the operation is complete (if they are not pressed the board reverts to normal operation after about 12 seconds);

HARD RESET (factory setting):

- press without releasing keys CH2 and PROG till LEDs DL7 and DL8 start flashing quickly with a red light. At this point release the keys and press them again till the LEDs go off (reset in progress), confirming the operation is complete (if they are not pressed the board reverts to normal operation after about 12 seconds); When the unit starts again saving will be required;



In case of Hard Reset the memory of the radio receiver will not be erased: all existing transmitters remain programmed.

12. MALFUNCTIONS: POSSIBLE CAUSES AND SOLUTION

The automation does not start

- a- Check there is 230V AC power supply with the multimeter.
- b- Check, in the standard mode, that the NC contacts on the board are really normally closed (3 green LEDs on).
- c- Set dip-switch 6 (phototest) OFF.
- d- Increase the FR trimmer to the limit.
- e- Check that the fuses are intact with the multimeter.

The radio control has very little range

- a- Check that the ground and the aerial signal connections have not been inverted.
- b- Do not make joints to increase the length of the aerial wire.
- c- Do not install the aerial in a low position or behind walls or pillars.
- d- Check the state of the radio control batteries.

The gate opens the wrong way

Invert the motor connections on the terminal block, terminals 28 - 29 and terminals 23 - 24 (if used).

13. GUARANTEE: GENERAL CONDITIONS

TAU guarantees this product for a period of 24 months from the date of purchase (as proved by the sales document, receipt or invoice).

This guarantee covers the repair or replacement at TAU's expense (ex-works TAU: packing and transport at the customer's expense) of parts that TAU recognises as being faulty as regards workmanship or materials.

For visits to the customer's facilities, also during the guarantee period, a "Call-out fee" will be charged for travelling expenses and labour costs.

The guarantee does not cover the following cases:

- If the fault was caused by an installation that was not performed according to the instructions provided by the company inside the product pack.
- If original TAU spare parts were not used to install the product.
- If the damage was caused by an Act of God, tampering, overvoltage, incorrect power supply, improper repairs, incorrect installation, or other reasons that do not depend on TAU.
- If a specialised maintenance man does not carry out routine maintenance operations according to the instructions provided by the company inside the product pack.
- Wear of components.

The repair or replacement of pieces under guarantee does not extend the guarantee period.

In case of industrial, professional or similar use, this warranty is valid for 12 months.

MANUFACTURER'S DECLARATION OF INCORPORATION
(in accordance with European Directive 2006/42/EC App. II.B)

Manufacturer:
Address:

TAU S.r.l.
Via E. Fermi, 43 - 36066 Sandrigo (Vi) - ITALY

Declares under its sole responsibility, that the product: *Electronic control unit*
designed for automatic movement of: *Road barriers*
for use in a: *General environment*

complete with: *Radioreceiver and battery charger board*

Model: *K206MA*
Serial number: *see silver label*

Type: *K206MA*
Commercial name: *Control panel for automatic barriers*

Has been produced for incorporation on an access point (*automatic barrier*) or for assembly with other devices used to move such an access point, to constitute a machine in accordance with the Machinery Directive 2006/42/EC.

Also declares that this product complies with the essential safety requirements of the following EEC directives:

- **2014/35/EU Low Voltage Directive** - **2014/30/EU Electromagnetic Compatibility Directive**

and, where required, with the Directive - **2014/53/EU Radio equipment and telecommunications terminal equipment**

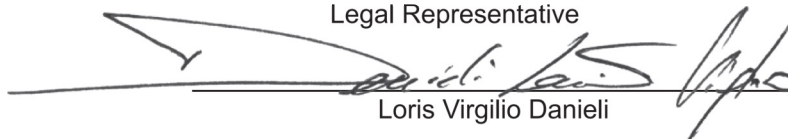
Also declares that ***it is not permitted to start up the machine*** until the machine in which it is incorporated or of which it will be a component has been identified with the relative declaration of conformity with the provisions of Directive 2006/42/EC.

The following standards and technical specifications are applied: EN 61000-6-2; EN 61000-6-3; EN 60335-1; ETSI EN 301 489-1 V1.9.2; ETSI EN 301 489-3 V1.6.1; EN 300 220-2 V2.4.1; EN 12453:2000; EN 12445:2000; EN 60335-2-103.

The manufacturer undertakes to provide, on sufficiently motivated request by national authorities, all information pertinent to the quasi-machinery.

Sandrigo, 24/01/2018

Legal Representative


Loris Virgilio Danieli

Name and address of person authorised to draw up all pertinent technical documentation:

Loris Virgilio Danieli - via E. Fermi, 43 - 36066 Sandrigo (Vi) Italy

ENGLISH