CAME

SWING DOOR OPERATOR

FA00008-EN

ASSEMBLY AND INSTALLATION MANUAL

FLUO-SW

EN English

1. INTRODUCTION

Before you begin to install or start an automatic pedestrian doors, an inspection must be carried out on site by qualified personnel, for making measurements of the compartment wall, door and drive.

This inspection is to assess the risk and to select and implement the most appropriate solutions according to the type of pedestrian traffic (intense, narrow, one-way, bi-directional, etc..), The type of users (elderly, disabled, children, etc..), in the presence of potential hazards or local circumstances.

To assist installers in applying the requirements of European Standard EN 16005 concerning the safe use of automatic pedestrian doors, we recommend consulting the guides E.D.S.F. (European Door and Shutter Federation) available on www.edsf.com.

1.1 GENERAL SAFETY INSTRUCTION

This installation manual is intended for professionally competent personnel only. Before installing the product, carefully read the instructions.

Bad installation could be hazardous. The packaging materials (plastic, polystyrene, etc.) should not be discarded in the environment or left within reach of children, as these are a potential source of hazard.

Before installing the product, make sure it is in perfect condition. Do not install the product in an explosive environment and atmosphere: gas or inflammable fumes are a serious hazard risk.

Before installing the automations, make all structural changes relating to safety clearances and protection or segregation of all areas where there is risk of being crushed, cut or dragged, and danger areas in general.

Make sure the existing structure is up to standard in terms of strength and stability. CAME S.p.A. is not responsible for failure to use Good Working Methods in building the frames to be motorised or for any deformation occurring during use.

The safety devices (safety sensor, photocells, etc.) must be installed taking into account: applicable laws and directives, Good Working Methods, installation premises, system operating logic and the forces developed by the motorised door.

Apply hazard area notices required by applicable regulations.

Each installation must clearly show the identification details of the automatic pedestrian door.

1.2 EC MARKING AND EUROPEAN DIRECTIVES

CE

CAME automations for swing pedestrian door, are designed and manufactured in compliance with the safety requirements of the European standard EN 16005 and are CE-marked in accordance with the Electromagnetic Compatibility Directive (2014/30/UE).

The automation CAME also include a Declaration of Incorporation according to the Machinery Directive (2006/42/EC).

Pursuant to Machinery Directive (2006/42/CE) the installer who motorises a door or gate has the same obligations as the manufacturer of machinery and as such must:

- prepare the technical file which must contain the documents indicated in Annex V of the Machinery Directive; (The technical file must be kept and placed at the disposal of competent national authorities for at least ten years from the date of manufacture of the pedestrian door);

- draft the EC declaration of conformity in accordance with Annex ll-A of the Machinery Directive and deliver it to the customer;

- affix the CE marking on the power operated door in accordance with point 1.7.3 of Annex l of the Machinery

All data and information contained in this manual have been drawn up and checked with the greatest care. However CAME S.p.A. cannot take any responsibility for eventual errors, omissions or inaccuracies due to technical or illustrative purposes.

CAME S.p.A. reserves the right to make changes and improvements to their products. For this reason, the illustrations and the information appearing in this document are not definitive.

This edition of the manual cancels and replaces all previous versions. In case of modification will be issued a new edition.

DICHIARAZIONE DI INCORPORAZIONE allegato /DECLARATIONOF INCORPORATION annex / ERKLÄRUNG FÜR DEN EINBAU anhang / DECLARATION D'INCORPORATION annexe / DECLARACIÓN DE INCORPORACIÓN anexo / DECLARAÇÃO DE INCORPORAÇÃO anexo / DEKLARACJA WBUDOWANIA załączniku / INBOUWVERKLARING bijlage IIB - 2006/42/CE

Fabbricante / Manufacturer / Hersteller / Fabricant / Fabricante / Fabricante / Wytwórca / Fabrikant

Came S.p.a.

Indirizzo / address / adresse / adresse / direcciòn / endereço / adres / adres

Via Martiri della Libertà 15 31030 - Dosson di Casier Treviso - Italy

CAME
safety&comfort

DICHIARA CHE L'AUTOMAZIONE PER PORTE A BATTENTE / DECLARES THAT THE OPERATOR FOR SWING DOORS / ERKLÄRT DASS DIE DREHTÜRANTRIEB / DECLARE QUE LE AUTOMATISME POUR PORTES BATTANTES / DECLARA QUE LAS AUTOMATIZACIÓN PARA PUERTAS BATIENTES / DECLARA QUE AS AUTOMATIZAÇÕES PARA PORTAS A BATENTE / OSWIADCZA ZE NAPĘD DO DRZWI SKRZYDŁOWYCH / VERKLAART DAT DE AUTOMATISERING VOOR KLAPDEUREN

PBB2 ; PBBS2 ; PBB3

E' CONFORME ALLE DISPOSIZIONI DELLE SEGUENTI DIRETTIVE / IT COMPLIES WITH THE PROVISIONS OF THE FOLLOWING DIRECTIVES / DEN VORGABEN DER FOLGENDEN RICHTLINIEN ENTSPRECHEN / IL EST CONFORMES AUX DISPOSITIONS DES DIRECTIVES SUIVANTES / CUMPLEN CON LAS DISPOSICIONES DE LAS SIGUIENTES DIRECTIVAS / ESTÃO DE ACORDO COM AS DISPOSIÇÕES DAS SEGUINTES DIRECTIVAS / SA ZGODNE Z POSTANOWIENIAMI NASTEPUJACYCH DYREKTYW EUROPEJSKICH / VOLDOEN AAN DE VOORSCHRIFTEN VAN DE VOLGENDE RICHTLIJNEN:

- COMPATIBILITA' ELETTROMAGNETICA / ELECTROMAGNETIC COMPATIBILITY / ELEKTROMAGNETISCHE VERTRÄGLICHKEIT / COMPATIBILITÉ ÉLECTROMAGNÉTIQUE / COMPATIBILIDAD ELECTROMAGNÉTICA / COMPATIBILIDADE ELETROMAGNÉTICA / KOMPATYBILNOŚCI ELEKTROMAGNETYCZNEJ / ELEKTROMAGNETISCHE COMPATIBILITEIT : 2014/30/UE.

Riferimento norme armonizzate ed altre norme tecniche / Refer to European regulations and other technical regulations / Harmonisierte Bezugsnormen und andere technische Vorgaben / Référence aux normes harmonisées et aux autres normes techniques / Referencia normas armonizadas y otras normas técnicas / Referência de normas harmonizadas e outras normas técnicas / Odnosne normy ujednolicone i inne normy techniczne / Geharmoniseerde en andere technische normen waarnaar is verwezen

EN 61000-6-2:2005
EN 61000-6-3:2007+A1:2011
EN 62233:2008
EN 60335-1:2012+A11:2014
EN 60335-2-103:2015
EN 16005:2012
EN ISO 13849-2:2013

RISPETTA I REQUISITI ESSENZIALI APPLICATI: / MEET THE APPLICABLE ESSENTIAL REQUIREMENTS: / DEN WESENTLICHEN ANGEWANDTEN ANFORDERUNGEN ENTSPRECHEN: / RESPECTENT LES CONDITIONS REQUISES NECESSAIRES APPLIQUEES: / CUMPLEN CON LOS REQUISITOS ESENCIALES APLICADOS: / RESPEITAM O REQUISITOS ESSENCIAIS APLICADOS: / SPEŁNIAJA PODSTAWOWE WYMAGANE WYRUNKI: / VOLDOEN AAN DE TOEPASBARE MINIMUM EISEN:

1.1.3; 1.1.5; 1.2.1; 1.2.2; 1.3.2; 1.3.7; 1.3.8.1; 1.4.1; 1.4.2; 1.5.1; 1.5.6; 1.5.8; 1.5.9; 1.5.9; 1.5.13; 1.6.1; 1.6.3; 1.6.4; 1.7.1; 1.7.2; 1.7.4

PERSONA AUTORIZZATA A COSTITUIRE LA DOCUMENTAZIONE TECNICA PERTINENTE / PERSON AUTHORISED TO COMPILE THE RELEVANT TECHNICAL DOCUMENTATION / PERSON DIE BEVOLLMÄCHTIGT IST, DIE RELEVANTEN TECHNISCHEN UNTERLAGEN ZUSAMMENZUSTELLEN / DOCUMENTATION TECHNIQUE SPECIFIQUE D'AUTORISATION A CONSTRUIRE DE / PERSONA FACULTADA PARA ELABORAR LA DOCUMENTACIÓN TÉCNICA PERTINENTE / PESSOA AUTORIZADA A CONSTITUIR A DOCUMENTAÇÃO TÉCNICA PERTINENTE / OSOBA UPOWAZNIONA DO ZREDAGOWANIA DOKUMENTACJI TECHNICZNEJ / DEGENE DIE GEMACHTIGD IS DE RELEVANTE TECHNISCHE DOCUMENTEN SAMEN TE STELLEN.

CAME S.p.a.

La documentazione tecnica pertinente è stata compilata in conformità all'allegato VIIB. / The pertinent technical documentation has been drawn up in compliance with attached document VIIB. / Die relevante technische Dokumentation wurde entsprechend der Anlage VIIB ausgestellt. / La documentation technique spécifique a été remplie conformément à l'annexe IIB / La documentación técnica pertinente ha sido rellenada en cumplimiento con el anexo VIIB. / A documentação técnica pertinente foi preenchida de acordo com o anexo VIIB. / Odnosna dokumentacja techniczna została zredagowana zgodnie z załacznikiem VIIB. / De technische documentatie terzake is opgesteld in overeenstemming met de bijlage VIIB.

CAME S.p.a. si impegna a trasmettere, in risposta a una richiesta adeguatamente motivata delle autorità nazionali, informazioni pertinenti sulle quasi macchine, e / Came S.p.A., following a duly motivated request from the national authorities, undertakes to provide information related to the quasi machines, and / Die Firma Came S.p.A. verpflichtet sich auf eine angemessen motivierte Anfrage der staatlichen Behörden Informationen über die unvollständigen Maschinen, zu übermitteln, und / Came S.p.A. s'engage à transmettre, en réponse à une demande bien fondée de la part des autorités nationales, les renseignements relatifs aux quasi machines / Came S.p.A. se compromete a transmitir, como respuesta a una solicitud adecuadamente fundada por parte de las autoridades nacionales, informaciones relacionadas con las cuasimáquinas / Came S.p.A. compromete-se em transmitir, em resposta a uma solicitação motivada apropriadamente pelas autoridades nacionais, informações pertinentes às partes que componham máquinas / Came S.p.A. zobowiazuje sie do udzielenia informacji dotyczacych maszyn nieukonczonych na odpowiednio umotywowana prosbe, zlozona przez kompetentne organy panstwowe / Came S.p.A. verbindt zich ertoe om op met redenen omkleed verzoek van de nationale autoriteiten de relevante informatie voor de niet voltooide machine te verstrekken,

VIETA / FORBIDS / VERBIETET / INTERDIT / PROHIBE / PROIBE / ZABRANIA SIE / VERBIEDT

la messa in servizio finchè la macchina finale in cui deve essere incorporata non è stata dichiarata conforme, se del caso alla 2006/42/CE. / commissioning of the above mentioned until such moment when the final machine into which they must be incorporated, has been declared compliant, if pertinent, to 2006/42/CE / die Inbetriebnahme bevor die „Endmaschine" in die die unvollständige Maschine eingebaut wird, als konform erklärt wurde, gegebenenfalls gemäß der Richtlinie 2006/42/EU. / la mise en service tant que la machine finale dans laquelle elle doit être incorporée n'a pas été déclarée conforme, le cas échéant, à la norme 2006/42/CE. / la puesta en servicio hasta que la máquina final en la que será incorporada no haya sido declarada de conformidad de acuerdo a la 2006/42/CE / a colocação em funcionamento, até que a máquina final, onde devem ser incorporadas, não for declarada em conformidade, se de acordo com a 2006/42/CE. / Uruchomienia urzadzenia do czasu, kiedy maszyna, do której ma byc wbudowany, nie zostanie oceniona jako zgodna z wymogami dyrektywy 2006/42/WE, jesli taka procedura była konieczna. / deze in werking te stellen zolang de eindmachine waarin de niet voltooide machine moet worden ingebouwd in overeenstemming is verklaard, indien toepasselijk met de richtlijn 2006/42/EG.

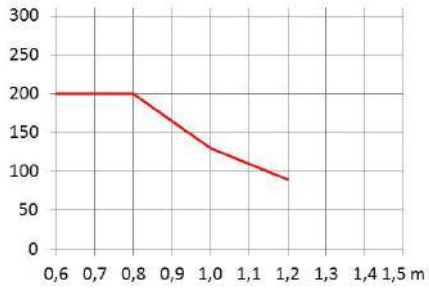
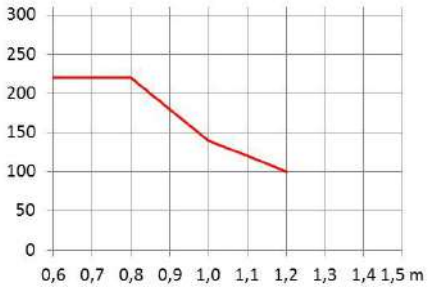
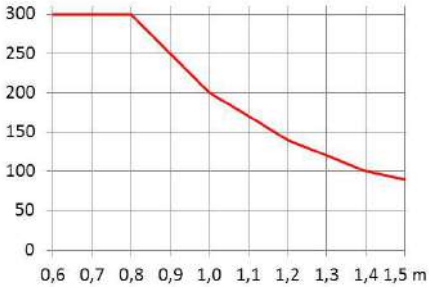
Dosson di Casier (TV)
27 Gennaio / January / Januar / Janvier / Enero / Janeiro / Styczeń / Januari 2017

Amministratore Delegato / Managing Director / General Direktor / Directeur Général / Director General / Administrador Delegado / Dyrektor Zarzadzajacy / Algemeen Directeur

Andrea Menuzzo

Fascicolo tecnico a supporto / Supporting technical dossier / Unterstützung technische Dossier / soutenir dossier technique / apoyo expediente técnico / apolar dossier técnico / wspieranie dokumentacji technicznej / ondersteunende technische dossier: 001PBBS2

2. TECHNICAL DATA

PPB2	PBBS2	PBB3
Automation type: LIGHT (for internal use, not exposed to wind pressure)	Automation type: SPRING (with closing spring)	Automation type: HEAVY
Dimensions: 82 x 117 x 443 mm (Height x Depth x Length)	Dimensions: 135 x 118 x 503 mm (Height x Depth x Length)	Dimensions: 104 x 118 x 463 mm (Height x Depth x Length)
200 kg x 0,8 m 	220 kg x 0,8 m 	300 kg x 0,8 m 
Opening and closing time: 2 – 6 s	Opening and closing time: 2 – 6 s	Opening and closing time: 2 – 6 s
Duty class: Continuous operation Intermittent operation: S3 = 100%	Duty class: Continuous operation Intermittent operation: S3 = 100%	Duty class: Continuous operation Intermittent operation: S3 = 100%
Power supply: 100–240 Vca 50/60 Hz Rated power: 40 W Stand-by: 8 W	Power supply: 100–240 Vca 50/60 Hz Rated power: 70 W Stand-by: 8 W	Power supply: 100–240 Vca 50/60 Hz Rated power: 70 W Stand-by: 8 W
Rated load: 20 Nm	Rated load: 23 Nm	Rated load: 40 Nm
Protection rating: IP 20	Protection rating: IP 20	Protection rating: IP 20
Operating temperature: -15 °C +50 °C	Operating temperature: -15 °C +50 °C	Operating temperature: -15 °C +50 °C
Parameter Settings: Buttons and Display	Parameter Settings: Buttons and Display	Parameter Settings: Buttons and Display
Connections to control and safety devices: Dedicated connecting terminals	Connections to control and safety devices: Dedicated connecting terminals	Connections to control and safety devices: Dedicated connecting terminals
Power output for accessories: 12 Vdc (1 A max)	Power output for accessories: 12 Vdc (1 A max)	Power output for accessories: 12 Vdc (1 A max)
Memory for settings and saving: Micro SD standard	Memory for settings and saving: Micro SD standard	Memory for settings and saving: Micro SD standard
Function selector device with transponder key: 001PBBA04	Function selector device with transponder key: 001PBBA04	Function selector device with transponder key: 001PBBA04
Battery power device for emergency opening: 001PBBA03	Battery power device for emergency opening: 001PBBA05	Battery power device for emergency opening: 001PBBA05

N.B. The technical data above refer to average conditions of use and cannot be certain in each case. Each automatic entrance variables such as: friction, balancing and environmental conditions that may substantially change both the duration and the quality of the operation of the automatic or some of its components, including the automation. The installer must to adopt adequate safety coefficients for each particular installation.

3. STANDARD INSTALLATION

Rif.	Code	Description
1	PBB2	PBB2 automation (Light) for swing doors
	PBBS2	PBBS2 automation (Spring) for swing doors
	PBB3	PBB3 automation (Heavy) for swing doors
2	001PBBA01	Sliding arm
3	001MR8534	Infrared safety sensor L = 340 mm
	001MR8570	Infrared safety sensor L = 700 mm
	001MR8590	Infrared safety sensor L = 900 mm
4	001MR8106	Unidirectional microwave opening sensor
	001MR8107	Bidirectional microwave opening sensor
5	001PBBA04	Electronic function selector with transponder key
-	001PBBA03	Battery power device for PBB2 automation
	001PBBA05	Battery power device for PBBS2 and PBB3 automation

Note: Components and codes are those most commonly used in systems for automatic swing doors. The full range of equipment and accessories is also available in the sales list.

The given operating and performance features can only be guaranteed with use of CAME S.p.A. accessories and safety devices.

4. ASSEMBLY PROCEDURE OF THE AUTOMATION

Check the stability, the weight of the leaf and that the movement is smooth and without friction (if necessary to reinforce the frame). Any closing door device must be removed or completely deactivated.

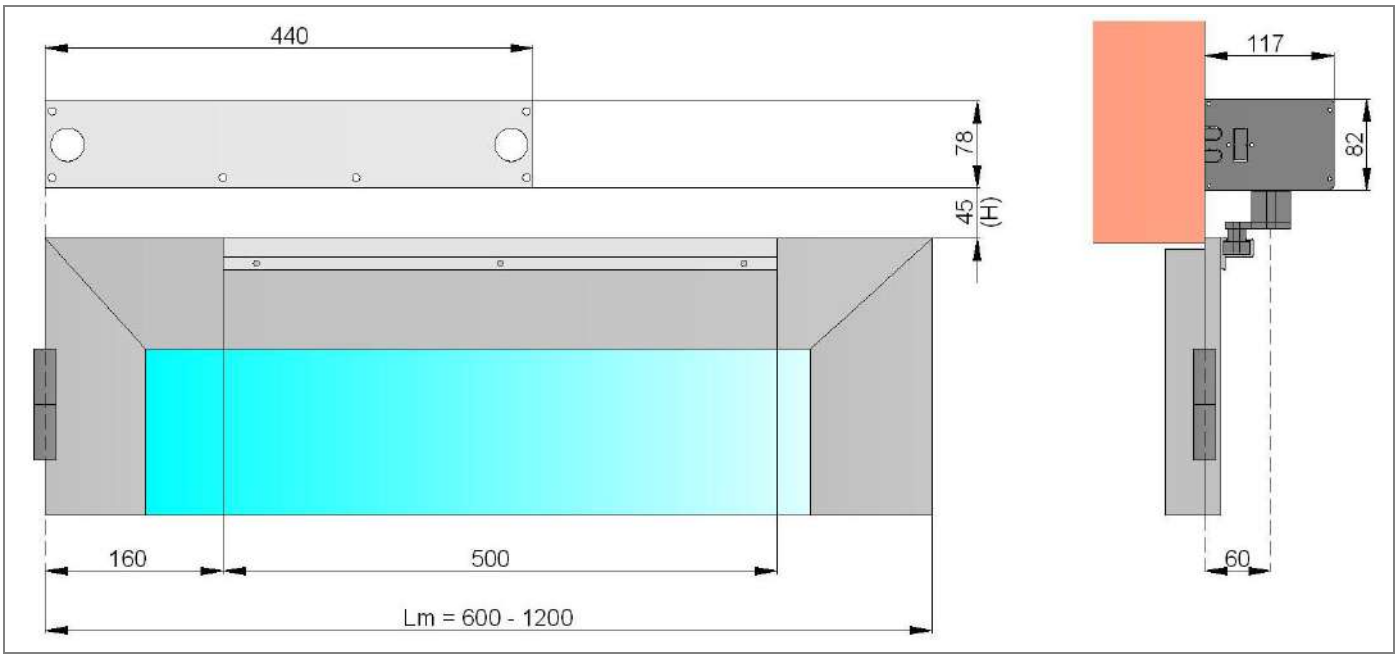
Check the correct operation in case of installation on doors that divide environments at different pressures.

4.1 INSTALLATION OF PBB2 AUTOMATION WITH 001PBBA01 SLIDING ARM

Use the sliding arm to pull with doors which open inside (view from the automation).

Remove the cover and fix the automation in a stable and leveled way to the wall using the measurements shown in the figure; refer to the axis of the door hinges.

Fix the sliding arm on the door as shown in the figure. Insert the sliding arm in the guide and fix to the automation.



Note: if necessary, you can change the measure H, between the automation and the door, by replacing the spacer, using the codes listed in the table.

(H)	PBB2 automation
28	001PBBA01 + 001PBBA06
45	001PBBA01
62	001PBBA01 + 001PBBA08

Move the door manually, and verify the correct opening and closing smoothly.

Adjust the opening mechanical stop inside the sliding arm.

CLOSING OF THE AUTOMATION COVER

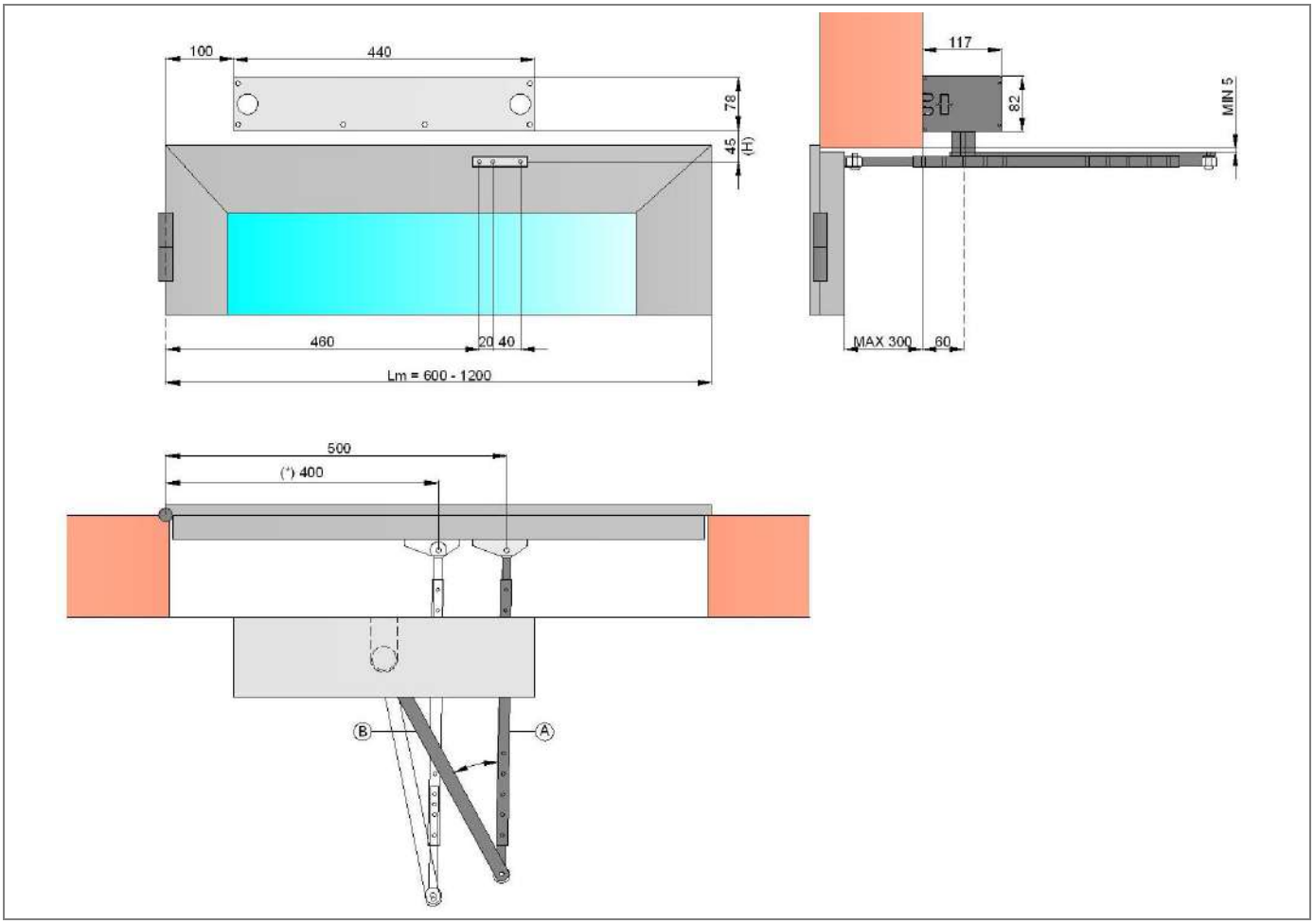
Fix the cover to the heads at the lower holes (or at the lateral holes), using the screws 2,9 x9,5 not supplied by us.

4.2 INSTALLATION OF PBB2 AUTOMATION WITH 001PBBA02 ARTICULATED ARM

Use the articulated arm to push with doors which open outside (view from the automation).

Remove the cover and fix the automation in a stable and leveled way to the wall using the measurements shown in the figure; refer to the axis of the door hinges.

Fix the bracket of the articulated arm on the door, using the measurements shown in the figure.



Note: if necessary, you can change the measure H, between the automation and the door, by replacing the spacer, using the codes listed in the table.

(H)	PBB2 automation
28	001PBBA02 + 001PBBA06
45	001PBBA02
62	001PBBA02 + 001PBBA08

Fix the articulated arm to the automation, and fix the other end of the articulated arm to the door.

Move the door in the closed position, and adjust the length of the half-arm [A] so that the angle between the two half-arms [A] and [B] is the greater possible.

(*) To increase the opening force it is possible to reduce the angle and reduce the measurement of fixing of the articulated arm, as shown in figure.

Move the door manually, and verify the correct opening and closing smoothly.

Install the opening mechanical stop (not supplied by us).

Note: the mechanical stop on the floor must be fixed in a visible position and must not create tripping hazard.

CLOSING OF THE AUTOMATION COVER

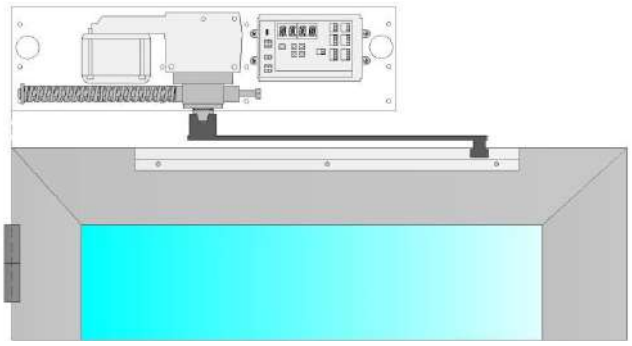
Fix the cover to the heads at the lower holes (or at the lateral holes), using the screws 2,9 x9,5 not supplied by us.

4.3 INSTALLATION OF PBBS2 AUTOMATION WITH 001PBBA01 SLIDING ARM

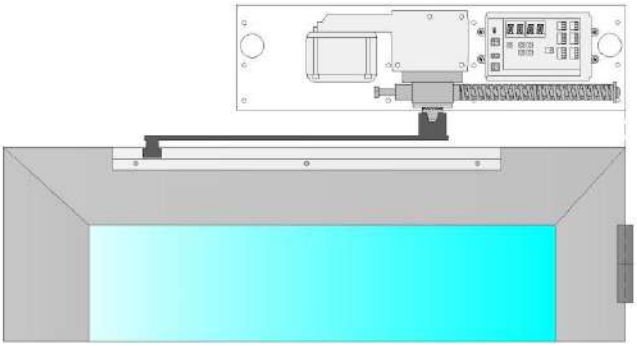
Use the sliding arm to pull with doors which open inside (view from the automation).

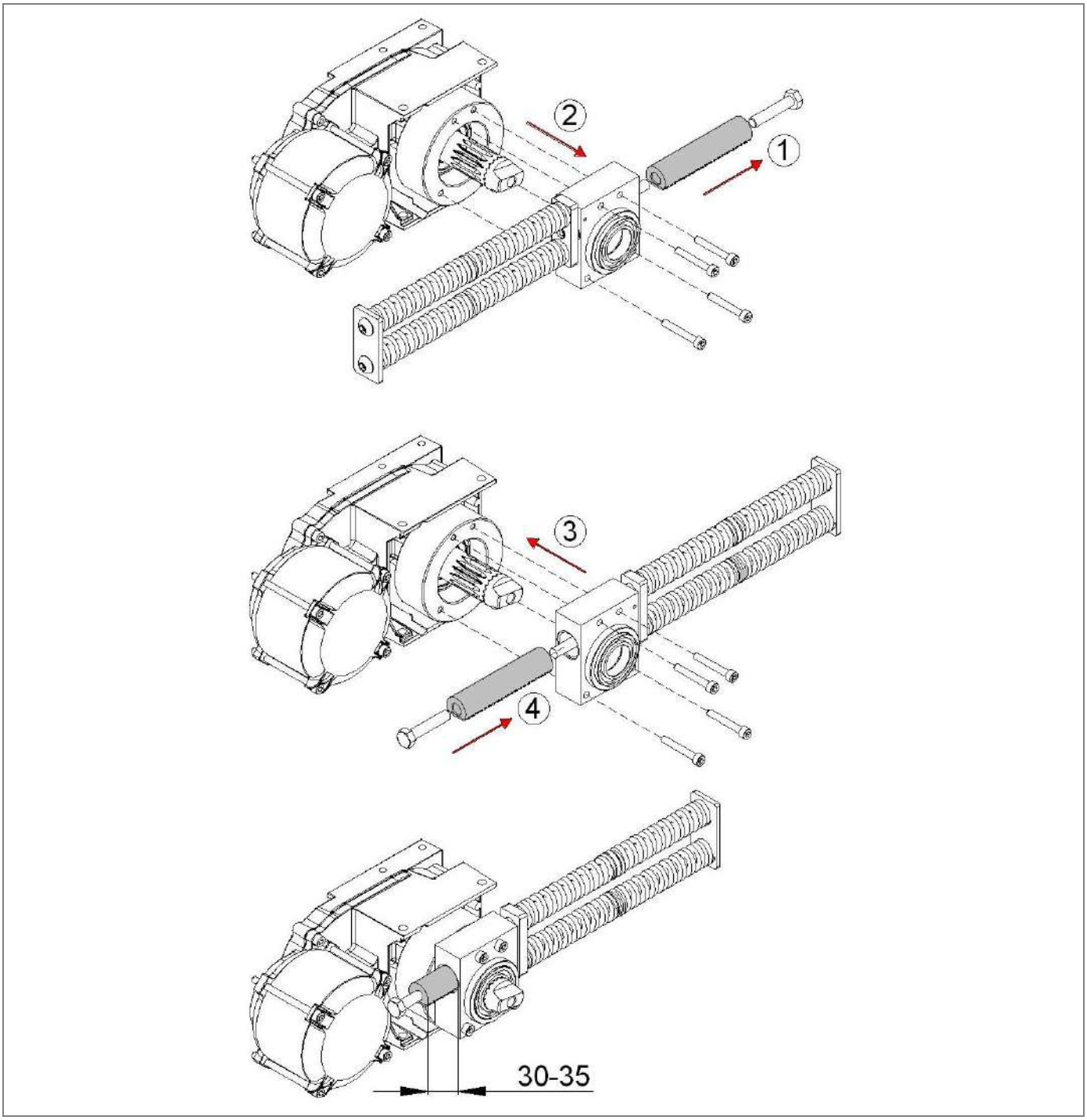
If the door has the hinge on the right, disassemble the gear motor group from the automation and move the spring group from the left side to the right side of the automation, as shown in the figure.

Factory setting



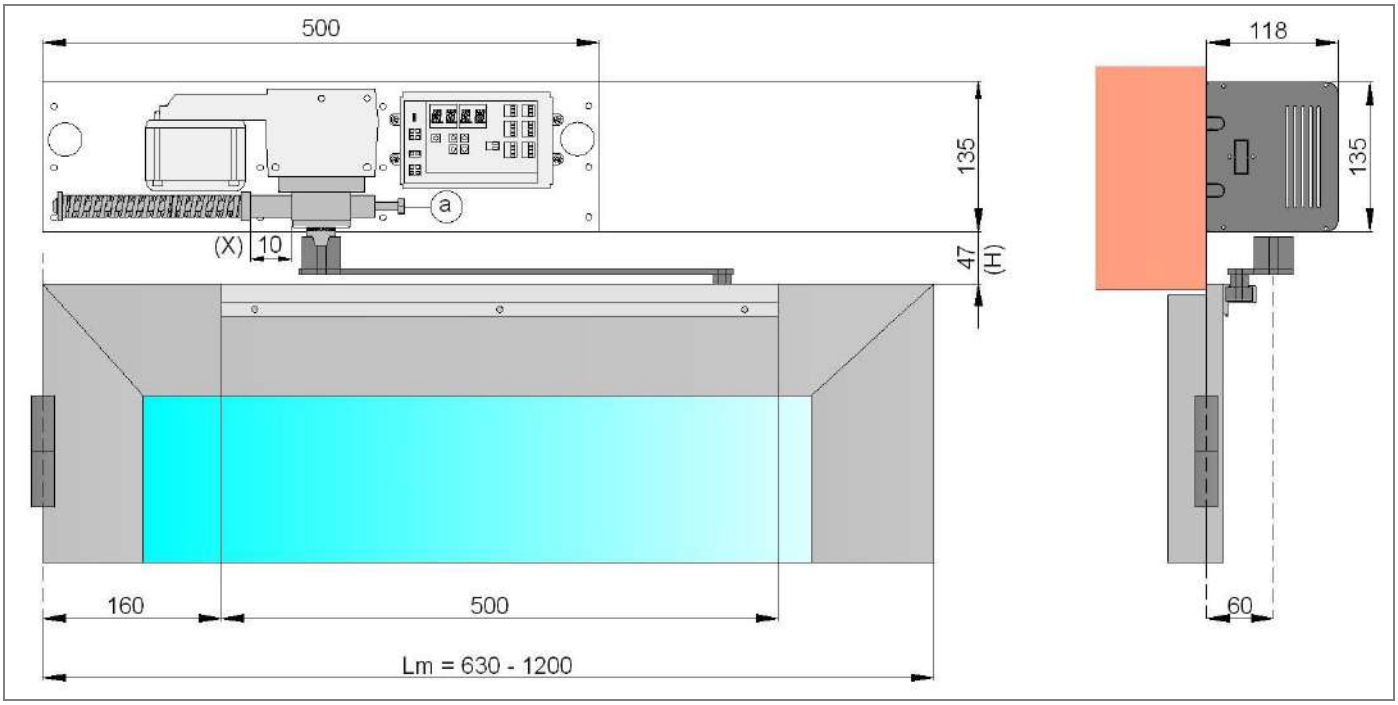
Hinge on the right





Remove the cover and fix the automation in a stable and leveled way to the wall using the measurements shown in the figure; refer to the axis of the door hinges.

Fix the sliding arm on the door as shown in the figure. Insert the sliding arm in the guide and fix to the automation (use the screw M8 x 50)



Note: if necessary, you can change the measure H, between the automation and the door, by replacing the spacer, using the codes listed in the table.

(H)	PBBS2 automation
30	001PBBA01 + 001PBBA06
47	001PBBA01
64	001PBBA01 + 001PBBA08

PRE-CHARGING OF THE CLOSING SPRINGS

Tighten the screw [a] and compress the springs of about X = 10 mm, as shown in the figure.

Move the door manually, and verify the correct opening and closing force.

Adjust the opening mechanical stop inside the sliding arm.

CLOSING OF THE AUTOMATION COVER

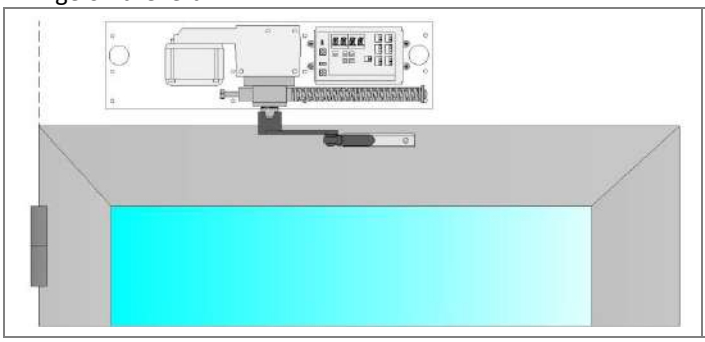
Attach the cover profile to the base profile. To prevent the cover from being opened without the use of a tool, you can secure the cover to the heads at the holes, using the screws 2,9 x9,5 not supplied by us.

4.4 INSTALLATION OF PBBS2 AUTOMATION WITH 001PBBA02 ARTICULATED ARM

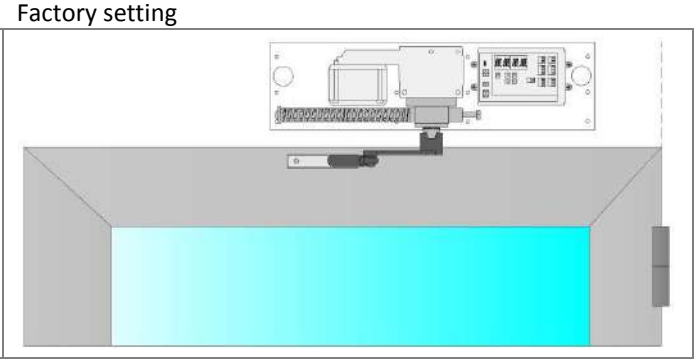
Use the articulated arm to push with doors which open outside (view from the automation).

If the door has the hinge on the left, disassemble the gear motor group from the automation and move the spring group from the left side to the right side of the automation, as described in chapter 4.5.

Hinge on the left

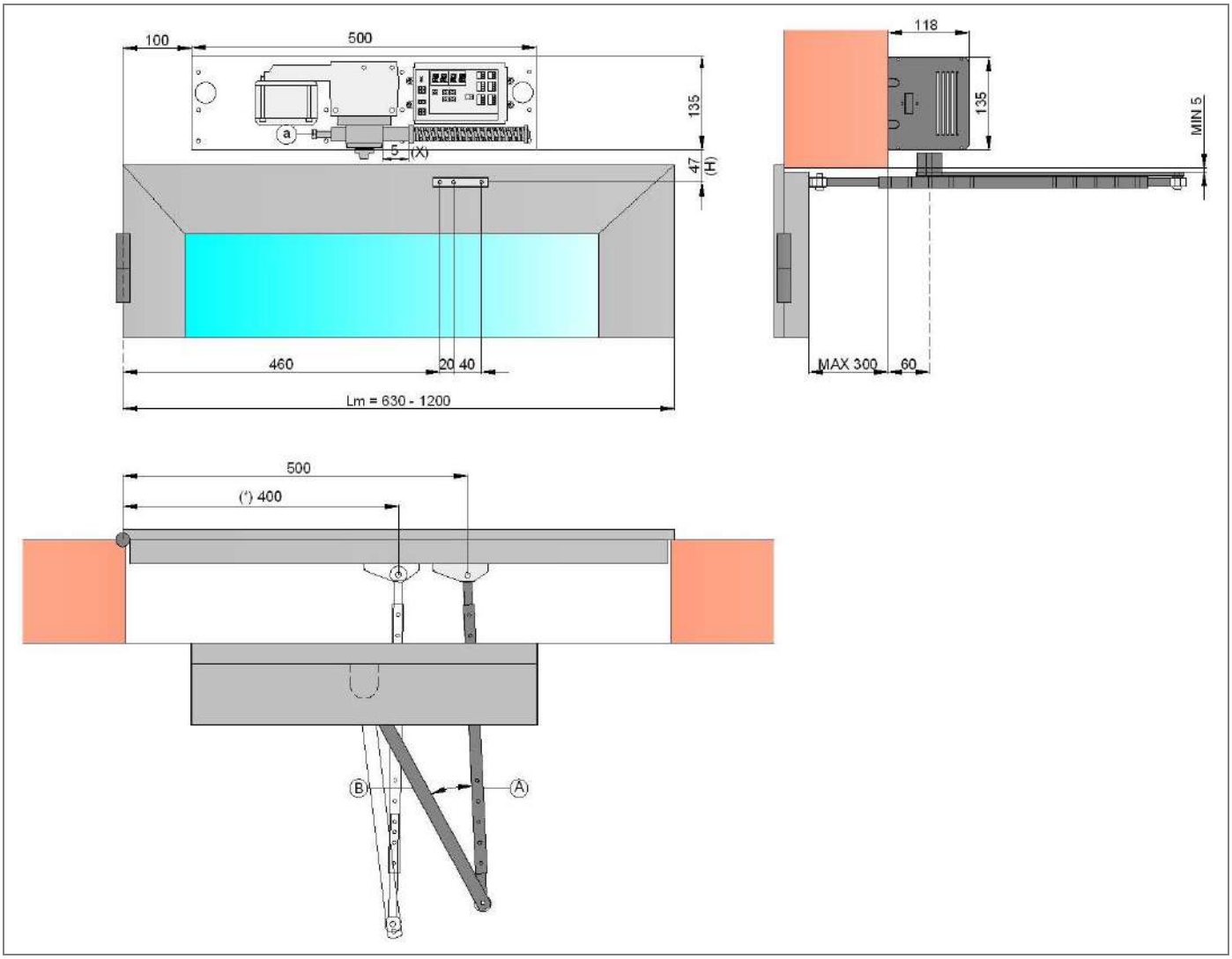


Factory setting



Remove the cover and fix the automation in a stable and leveled way to the wall using the measurements shown in the figure; refer to the axis of the door hinges.

Fix the bracket of the articulated arm on the door, using the measurements shown in the figure.



Note: if necessary, you can change the measure H, between the automation and the door, by replacing the spacer, using the codes listed in the table.

(H)	PBBS2 automation
30	001PBBA02 + 001PBBA06
47	001PBBA02
64	001PBBA02 + 001PBBA08

Fix the articulated arm to the automation (use the screw M8 x 50), and fix the other end of the articulated arm to the door.

Move the door in the closed position, and adjust the length of the half-arm [A] so that the angle between the two half-arms [A] and [B] is the greater possible.

(*) To increase the opening force it is possible to reduce the angle and reduce the measurement of fixing of the articulated arm, as shown in figure.

PRE-CHARGING OF THE CLOSING SPRINGS

Tighten the screw [a] and compress the springs of about X = 5 mm, as shown in the figure.

Move the door manually, and verify the correct opening and closing force.

Install the opening mechanical stop (not supplied by us).

Note: the mechanical stop on the floor must be fixed in a visible position and must not create tripping hazard.

CLOSING OF THE AUTOMATION COVER

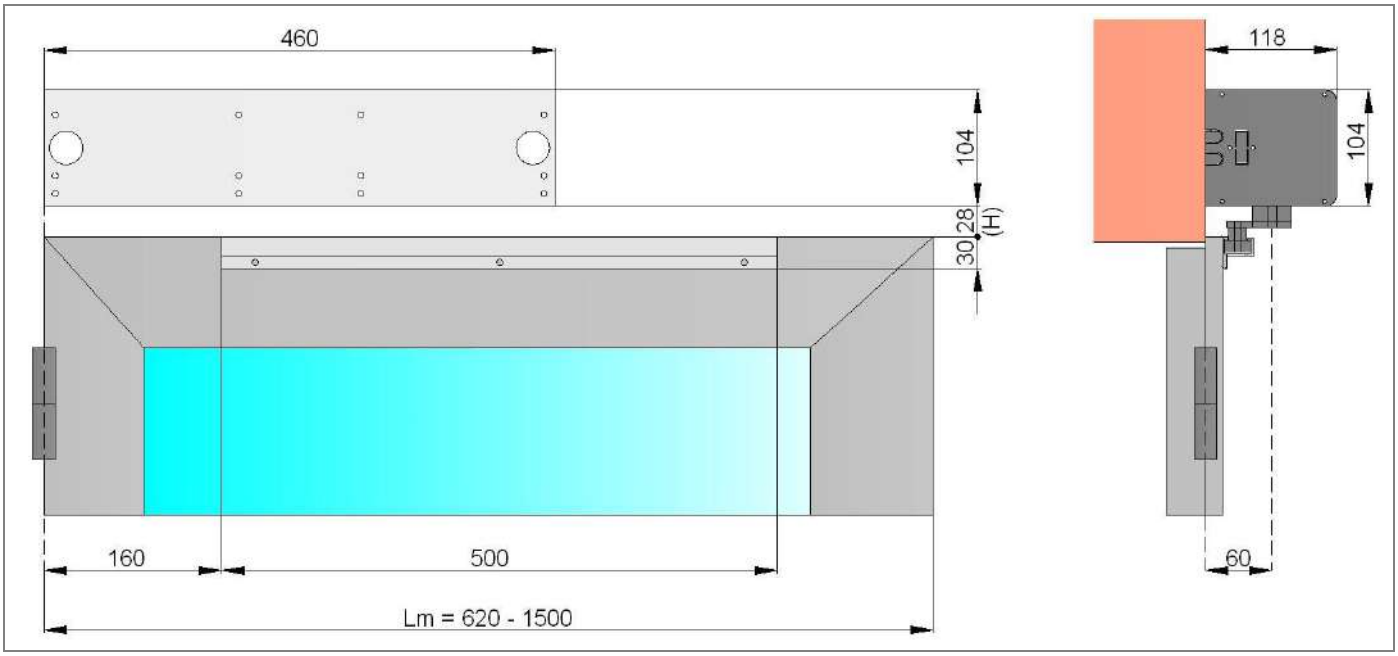
Attach the cover profile to the base profile. To prevent the cover from being opened without the use of a tool, you can secure the cover to the heads at the holes, using the screws 2,9 x9,5 not supplied by us.

4.5 INSTALLATION OF PBB3 AUTOMATION WITH 001PBBA01 SLIDING ARM

Use the sliding arm to pull with doors which open inside (view from the automation).

Remove the cover and fix the automation in a stable and leveled way to the wall using the measurements shown in the figure; refer to the axis of the door hinges.

Fix the sliding arm on the door as shown in the figure. Insert the sliding arm in the guide and fix to the automation.



Note: if necessary, you can change the measure H, between the automation and the door, by replacing the spacer, using the codes listed in the table.

(H)	PBB3 automation
28	001PBBA01
45	001PBBA01 + 001PBBA08
62	001PBBA01 + 001PBBA09

Move the door manually, and verify the correct opening and closing smoothly.

Adjust the opening mechanical stop inside the sliding arm.

CLOSING OF THE AUTOMATION COVER

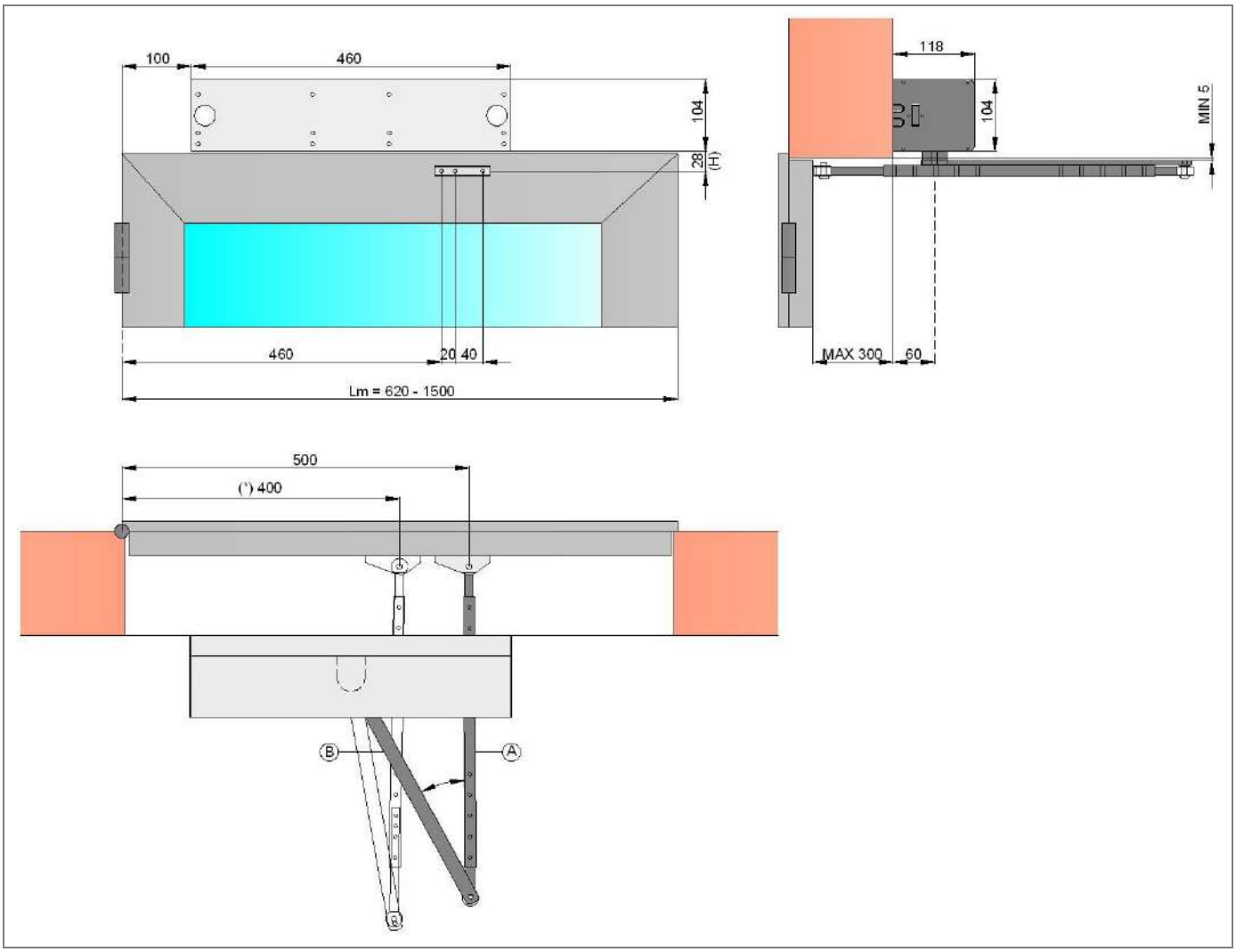
Attach the cover profile to the base profile. To prevent the cover from being opened without the use of a tool, you can secure the cover to the heads at the holes, using the screws 2,9 x9,5 not supplied by us.

4.6 INSTALLATION OF PBB3 AUTOMATION WITH 001PBBA02 ARTICULATED ARM

Use the articulated arm to push with doors which open outside (view from the automation).

Remove the cover and fix the automation in a stable and leveled way to the wall using the measurements shown in the figure; refer to the axis of the door hinges.

Fix the bracket of the articulated arm on the door, using the measurements shown in the figure.



Note: if necessary, you can change the measure H, between the automation and the door, by replacing the spacer, using the codes listed in the table.

(H)	PBB3 automation
28	001PBBA02
45	001PBBA02 + 001PBBA08
62	001PBBA02 + 001PBBA09

Fix the articulated arm to the automation, and fix the other end of the articulated arm to the door.

Move the door in the closed position, and adjust the length of the half-arm [A] so that the angle between the two half-arms [A] and [B] is the greater possible.

(*) To increase the opening force it is possible to reduce the angle and reduce the measurement of fixing of the articulated arm, as shown in figure.

Move the door manually, and verify the correct opening and closing smoothly.

Install the opening mechanical stop (not supplied by us).

Note: the mechanical stop on the floor must be fixed in a visible position and must not create tripping hazard.

CLOSING OF THE AUTOMATION COVER

Attach the cover profile to the base profile. To prevent the cover from being opened without the use of a tool, you can secure the cover to the heads at the holes, using the screws 2,9 x9,5 not supplied by us.

5. INSTALLATION OF BATTERY POWER DEVICE

5.1 Fix inside automation, on left side, the battery power device.

5.2 Connect the battery power device to the BAT connector of the electronic control, using the supplied cable.

5.3 Ensure that the battery is connected to the electronic board.

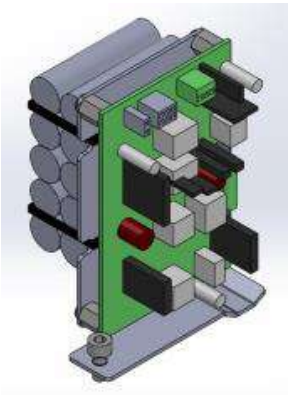
8.4 Connect the automation to the power supply and wait at least 30 minutes to let the battery recharge. Make sure that removing the power supply, the door is working with battery power device, in mode choice using the BTMD menu.

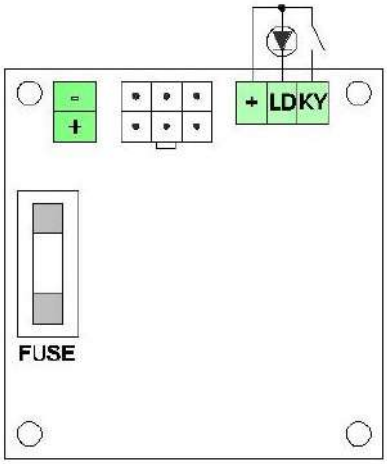
Note: to allow recharging, the battery power device must always be connected to the electronic control. In case of long periods of inactivity of the automatic door, disconnect the battery from the electronic board.

5.5 If desired, you can connect a LED to signal the presence of the battery (not supplied) between the terminals [+] and [LD] as shown in the figure. In the presence of mains power, the LED makes a blink every 10 seconds, while in the absence of mains power, the LED remains lit.

5.6 In the absence of mains power, battery operation is disabled when the charge level of the battery is too low.

If desired, you can connect a N.O. contact to reactivate the battery operation (example a key switch, not supplied) between the terminals [+] and [KY] as shown in Figure.





6. ELECTRICAL CONNECTIONS OF ELECTRIC LOCK

The automations for swing doors are compatible with most of the electric locks available in the market. Verify that power supply of the electric lock is 12Vdc or 24Vdc, and that the maximum current is 1 A.

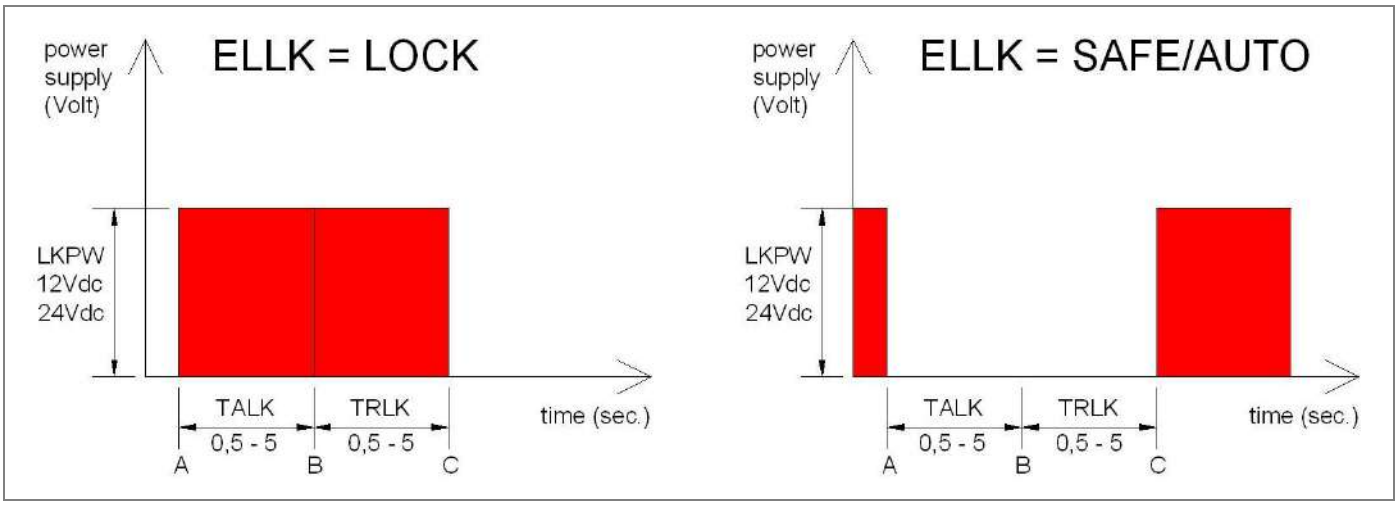
- Connect the electric lock to terminals LK + and –LK of the CB03 electronic control.
- Set the electric lock power supply, using menu: ADV > LKPW > 12Vdc or 24Vdc.
- Set the type of electric lock operation, using menu: ADV > ELLK > LOCK or SAFE/AUTO.
- Set the operating time of the electric lock, using menu: ADV > TRLK > from 0,5 to 5,0 seconds.
- Set the start of the door opening delay time, using menu: ADV > TALK > from 0,5 to 5,0 seconds.

In the figure are shown the timing of the electric lock operation:

A = start of opening pulse and electric lock power supply on/off,

B = start of door opening,

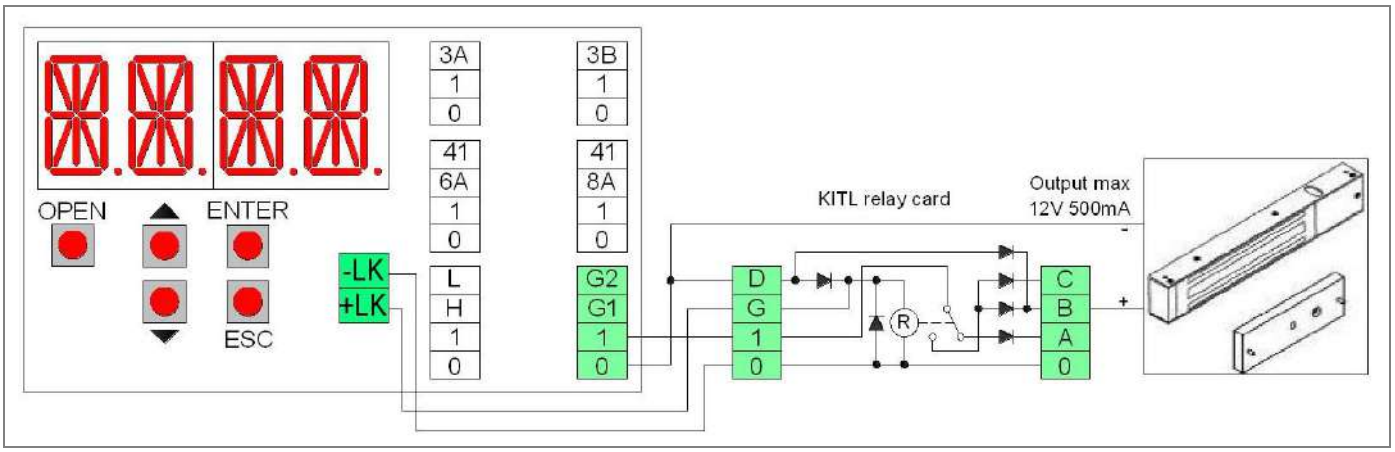
C = end of electric lock power supply on/off.



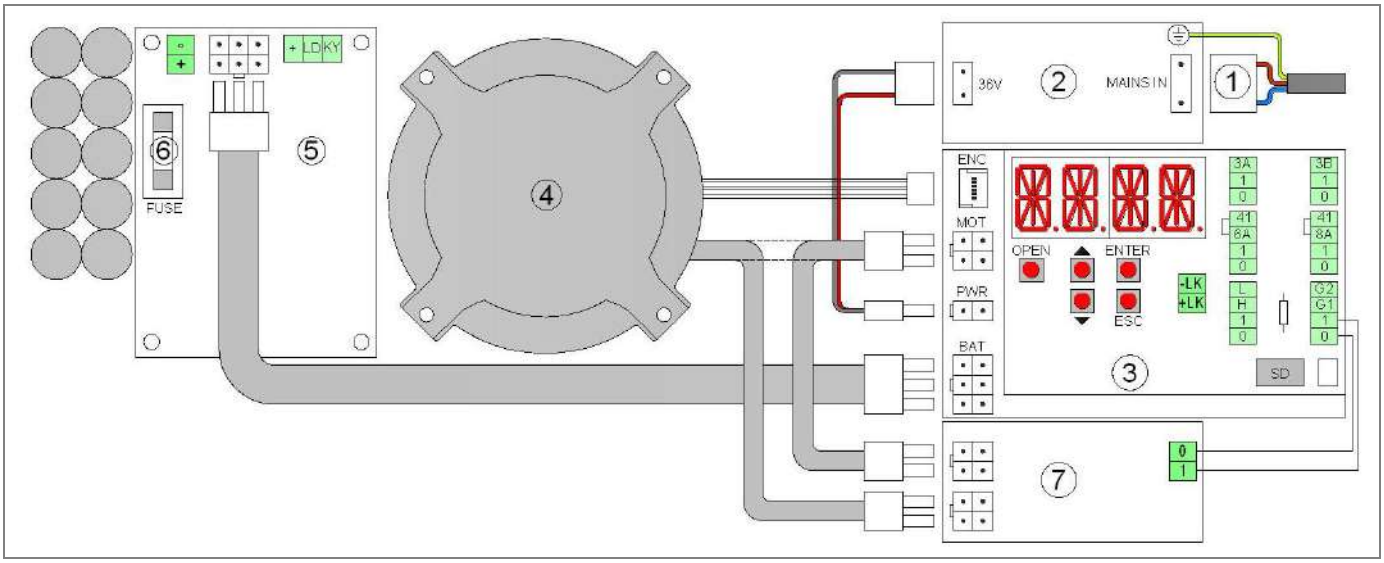
6.1 ELECTRICAL CONNECTIONS OF ELECTROMAGNET 12 Vdc

In case the electromagnet used requires a stabilized power supply of 12 Vdc (with absorption of 500 mA max), use the KITL relay card and make the connections shown in the figure.

- Set from menu: ADV > ELLK > SAVE or AUTO.
- Set from menu: ADV > LKPW > 12.



7. ELECTRICAL CONNECTIONS



Rif.	Code	Terminals	Description
1		MAINS IN	Cable for connection to the power supply.
2		PWR	Switching power supply 36V 65W (for PBB2 automation) Switching power supply 36V 75W (for PBBS2 and PBB3 automation)
3			Electronic control
4		MOT	Brushless motor (for PBB2 automation) Brushless motor (for PBBS2 and PBB3 automation)
		ENC	Angular sensor
5	001PBBA03 001PBBA05	BAT	Battery power device (for PBB2 automation) Battery power device (for PBBS2 and PBB3 automation)
6		FUSE	Battery fuse 5x20 - F10A
7		MOT	Braking card (for PBBS2 automation)

7.1 GENERAL SAFETY ELECTRICAL PRECAUTIONS

Installation, electrical connections and adjustments must be completed in conformity with Good Working Methods and with regulations in force.

Before making power connections, check that the rating corresponds to that of the mains supply. A multipolar disconnection switch with a contact opening gap of at least 3 mm must be included in the mains supply. This switch must be protected from unauthorized activations.

Check that upstream of the electrical installation an adequate residual current circuit breaker and an overcurrent cut out are fitted.

When requested, connect the automation to an effective earthing system carried out as indicated by current safety regulations.

During installation, maintenance and repair operations, cut off the power supply before opening the cover to access the electrical parts.

To handle electronic parts, wear earthed antistatic conductive bracelets. CAME S.p.A. declines all responsibility in the event of components which are not compatible with the safe and correct operation of the product.

For repairs or replacements of products only original spare parts must be used.

7.2 POWER SUPPLY ELECTRICAL CONNECTION

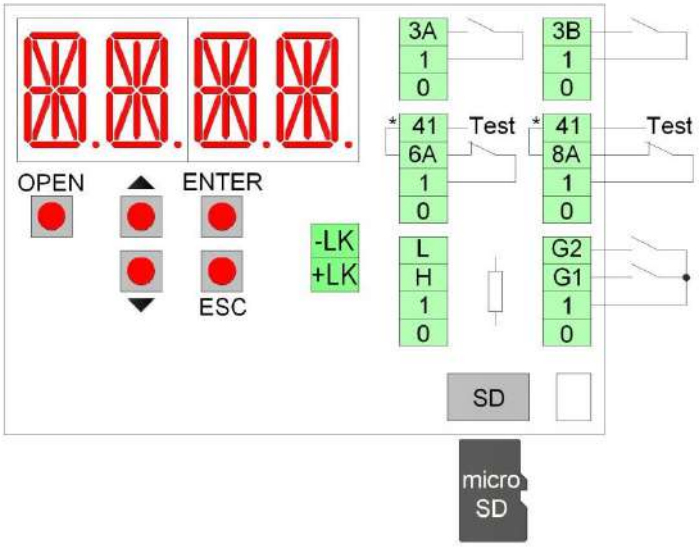
Use the supplied cable for connection to electricity.

If the path of the power cord is outer portion automation, drill the cap on the suitable area, and route the power cable through a channel (not supplied by us) to the junction box.

Make sure there are no sharp edges that might damage the power cable.

The connection to the mains supply in the outer portion automation, should be an independent channel, separated from the connections to control and safety devices.

7.3 ELECTRONIC CONTROL TERMINALS



Note: The terminals with the same number are equivalent.
The electronic control comes with the jumpers on the terminals with an asterisk [*]. When connecting safety devices remove the jumpers of the corresponding terminals.

Terminals	Description
0 – 1	Output 12 Vdc for external powering accessories. The maximum absorption of 1 A corresponds to the sum of all the terminals 1 (+12V).
1 – 3A	Contact N.O. opening A side (interior side).
1 – 3B	Contact N.O. opening B side (outer side).
1 – 8A	Closing safety contact N.C. The opening of the contact causes the reversal of the movement. Note: connect safety devices with test (see terminal 41), and remove the jumper 41 - 8A.
1 – 6A	Opening safety contact N.C. The opening of the contact stops the movement during the opening phase; the door closes after 3s. If the automation is closed, the opening of the contact prevents the opening. Note: connect safety devices with test (see terminal 41), and remove the jumper 41 - 6A.
41	Output test (+12 V). Connect the safety devices with test (in accordance with EN 16005), as indicated in the following chapters. Note: in case of devices without test, connect the N.C. contact to terminals 41 - 8A or 41 - 6A.
1 – G1	Input terminal provided for general use.
0 – G1	Output terminal (12 Vdc, 20 mA max) provided for general use. Using the ADV > STG1 menu you can choose a specific function to the G1 terminal.
1 – G2	Input terminal provided for general use. Using the ADV > STG2 menu you can choose a specific function to the G2 terminal.
1 – 29	Reset contact N.O. Closure and release the contact starts the learning operation of the door.
0 – 1 – H – L	Bus connection to the function selector.
+LK / -LK	Output 12V-24V (1A max) for electric lock.
SD	Standard admission for memory cards Micro SD. Allows saving the door settings and loading the firmware updates.

Buttons	Description
OPEN	Open the door.
↑	Scroll the menu and increase of selected values.
↓	Scroll the menu and reduction of selected values.
ENTER	Button to select the menu and save the selected data.
ESC	Exit the menu.

7.4 ELECTRICAL CONNECTION OF 001PBBA04 FUNCTION SELECTOR

Connect the 0-1-H-L terminals of the function selector, by cable (not supplied by us), to the 0-1-H-L terminals of the electronic control.

Note: for lengths over 10 m, use a cable with 2 twisted-pairs.

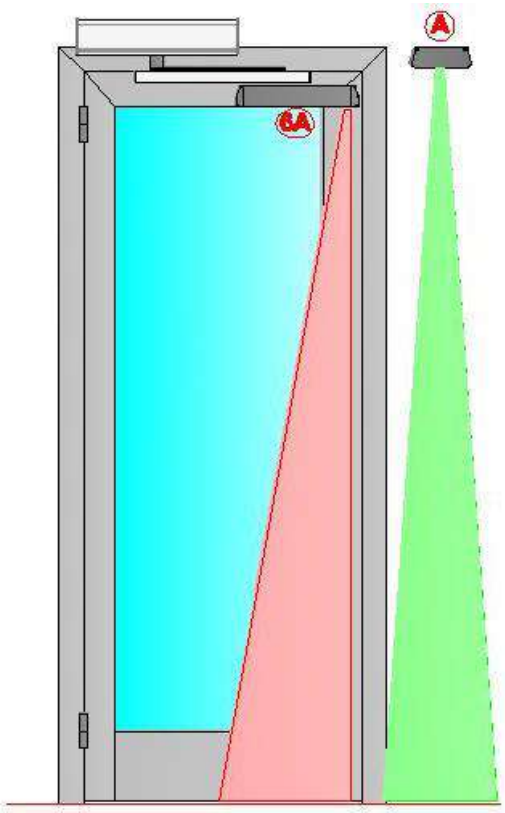
After connecting, the function selector is working. If you want to limit the use only by authorized personnel, proximity badges (13,56MHz ISO15693 and ISO14443 Mifare) must be activated by the function selector menu (max 50 badges).

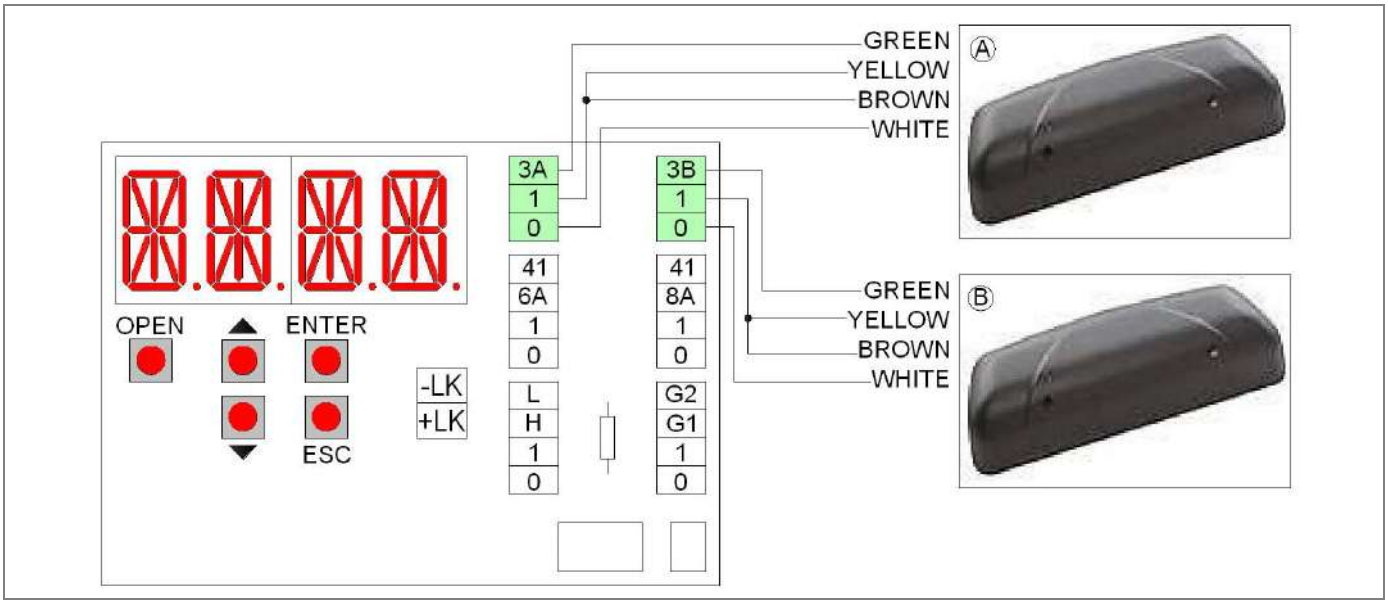
The function selector allows the following settings.

Symbol	Description
	Open Door. When selected, the symbol lights up, the door is permanently open. Note: the doors can still be handled manually.
	Automatic bi-directional operation. When selected, the symbol lights up and the doors full open automatic in bidirectional mode. Reset. Select the symbol for 5 seconds, the automation performs the self-test and the automatic learning.
	Closed door. When selected, the symbol lights up and controls the permanent closure of the door. If the electric lock is present, the door is closed and locked. Note: using the menu SEL > DLAY you can adjust the delay time to close the door.
	Automatic partial operation. In the case of a door with 2 automations, when selected, the symbol lights and allows the automatic operation of only one leaf.
	Automatic one-way operation. When selected, the symbol lights up and automatic operation of the door in one-way mode.
	Function selector is not active. The symbol lights up when the function selector is not active. To activate the temporary operation of the function selector is necessary to approach the badge, or select for 3 seconds the logo.
	Activation of the function selector. Select the logo for 3 seconds (the lock symbol light off), the function selector is activated for 10 seconds. Expired the time the function selector switches off (the lock symbol lights up).
	Authorized activation of function selector. Appproach the badge (the lock symbol light off), the function selector is activated for 10 seconds. Expired the time the function selector switches off (the lock symbol lights up).
	Battery signal. Battery symbol off = the door is operating with the mains supply Battery symbol on = the door is operating with battery power Battery symbol flashing = the battery is low or disconnected
	Information signal. Information symbol on = it is necessary to perform the ordinary maintenance of the door. Information symbol flashing = shows the presence of alarms (as described in chapter 13.5): - 1 flash = failure of electronic control or locking device; - 2 flashes = mechanical failure; - 3 flashes = failure of sensor safety test; - 4 flashes = motor overtemperature.

7.5 ELECTRICAL CONNECTION OF 001MR8204, 001MR8003, 001MR8106, 001MR8107 OPENING SENSOR

Connect the sensor using the supplied cable to the terminals of the electronic control as follows:
white wire = terminal 0
brown wire = terminal 1
yellow wire = terminal 1
green wire = terminal 3A or 3B
For more information, check the installation manual of the sensor.



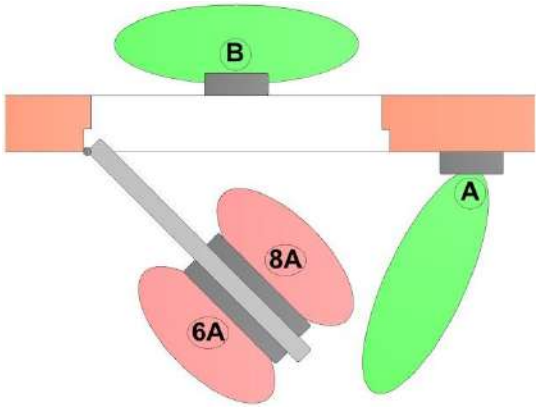


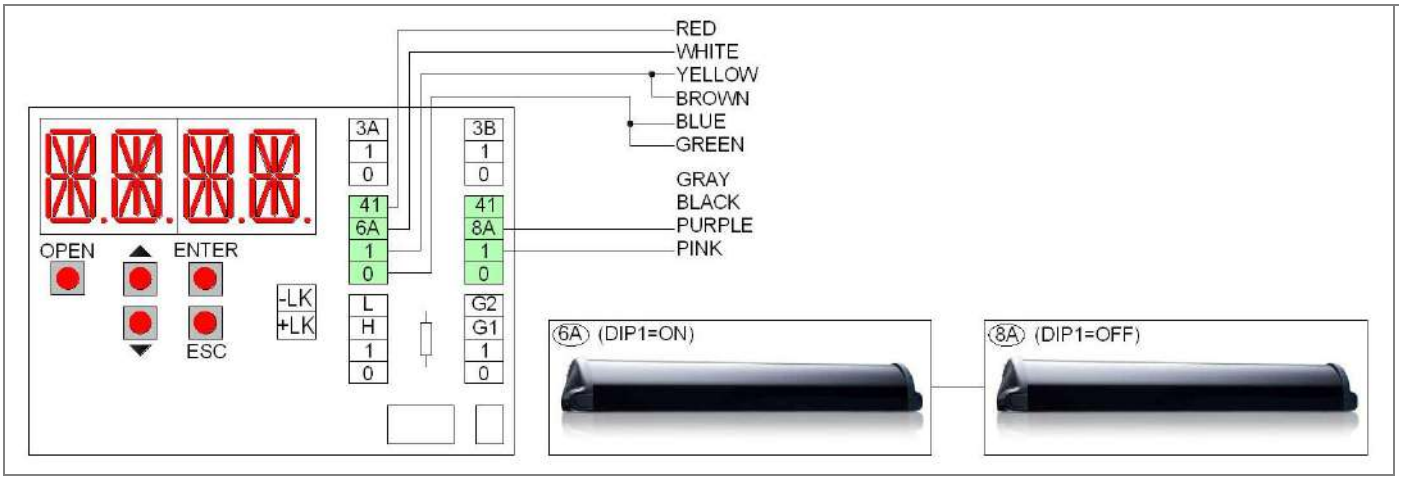
7.6 ELECTRICAL CONNECTION OF 001MR8534, 001MR8570, 001MR8590 SAFETY SENSOR

The safety sensors should be installed directly on the door swing, and protect both the opening and the closing of the door swing.

If you install two sensors, they are connected to each other via the supplied cable, and only one of them is connected to the terminals of the electronic control as shown below.

For more information, check the installation manual of the sensor.





6A SENSOR (WITH DIP1=ON)

Connecting the safety opening sensor 6A (set DIP1=ON) of the swing door.

green wire = terminal 0

blue wire = terminal 0

brown wire = terminal 1

yellow wire = terminal 1

white wire = 6A terminal (remove the jumper 41-6A)

red wire = terminal 41

pink wire = do not connect

purple wire = do not connect

gray wire = do not connect

black wire = do not connect

8A SENSOR (WITH DIP1=OFF)

Connecting the safety closing sensor 8A (set DIP1=OFF) of the swing door.

green wire = terminal 0

blue wire = terminal 0

brown wire = terminal 1

pink wire = terminal 1

purple wire = 8A terminal (remove the jumper 41-8A)

red wire = terminal 41

yellow wire = do not connect

white wire = do not connect

gray wire = do not connect

black wire = do not connect

6A SENSOR (WITH DIP1=ON) + 8A SENSOR (WITH DIP1=OFF)

Connection of 2 safety sensors for opening 6A (set DIP1=ON) and closing 8A (set DIP1=OFF) of the swing door.

green wire = terminal 0

blue wire = terminal 0

brown wire = terminal 1

yellow wire = terminal 1

white wire = 6A terminal (remove the jumper 41-6A)

red wire = terminal 41

pink wire = terminal 1

purple wire = 8A terminal (remove the jumper 41-8A)

gray wire = do not connect

black wire = do not connect

7.7 ELECTRICAL CONNECTION OF A DOOR WITH 2 LEAVES

To coordinate the operation of two automatic swing doors with the closing overlap of the leaves (see figure), procedures as follows.

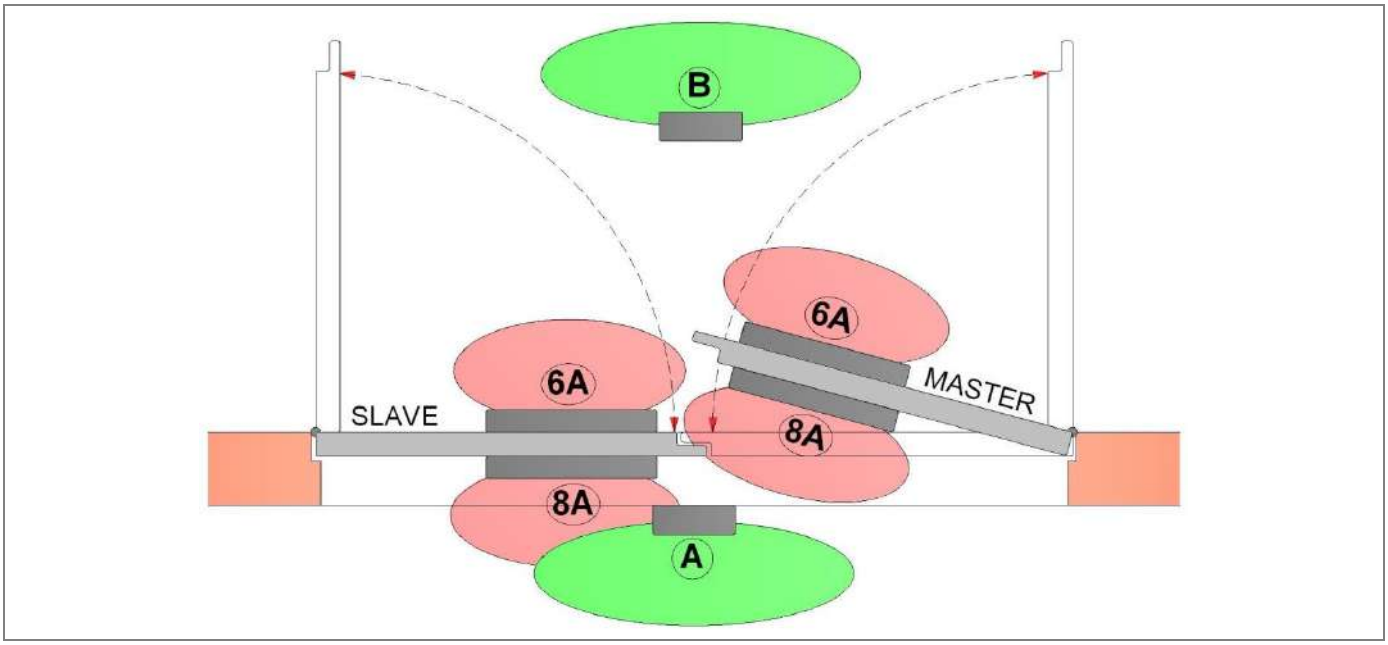
Using a 3-wire cable (not supplied), connect the 2 automations MASTER-SLAVE, as shown in the figure.

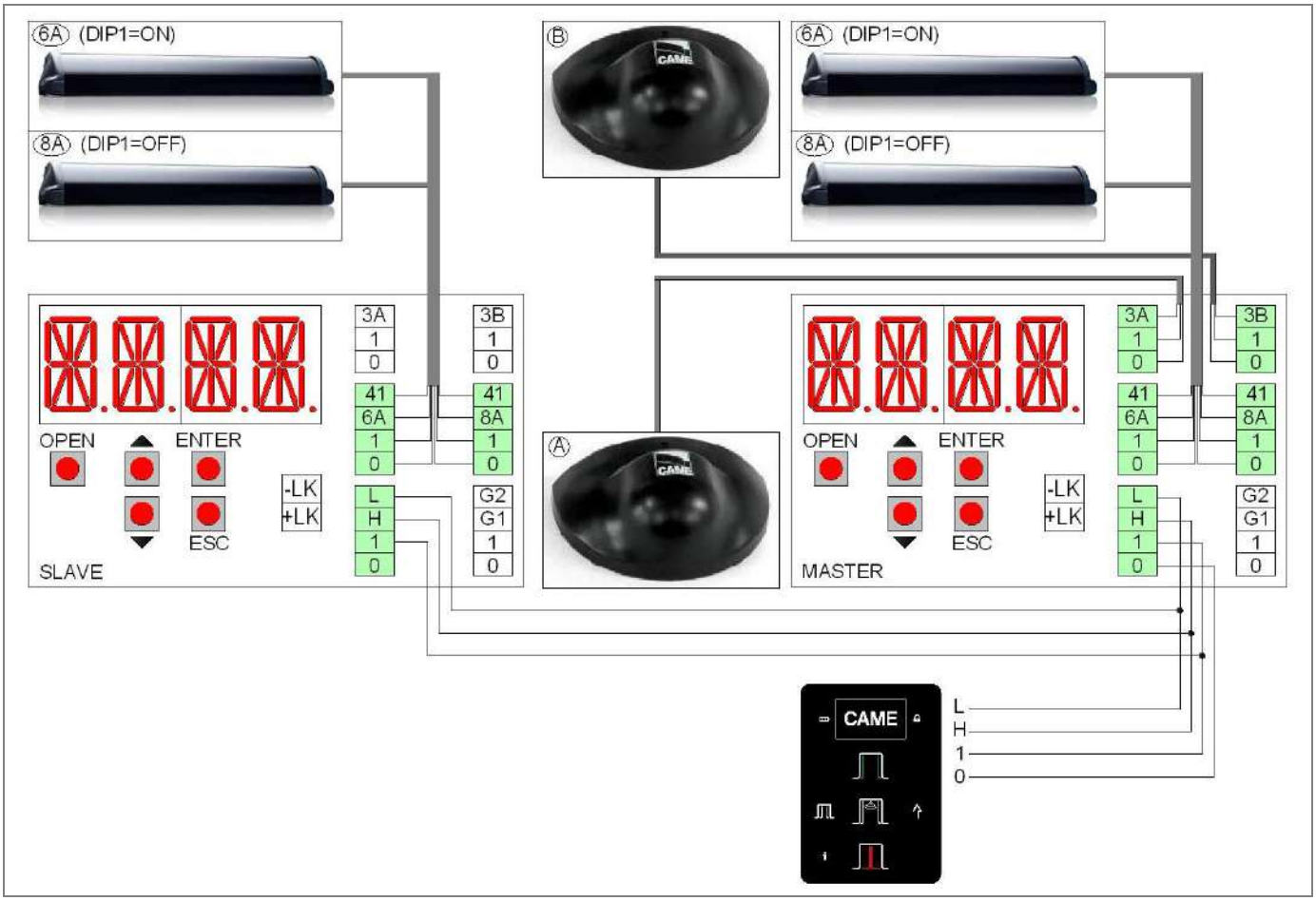
Using the menu of the electronic control, set: ADV> SYNC> MAST on MASTER automation and ADV> SYNC> SLAV on SLAVE automation.

Connect the opening sensors as described in chapter 7.5 and connect the safety sensors as described in chapter 6.6.

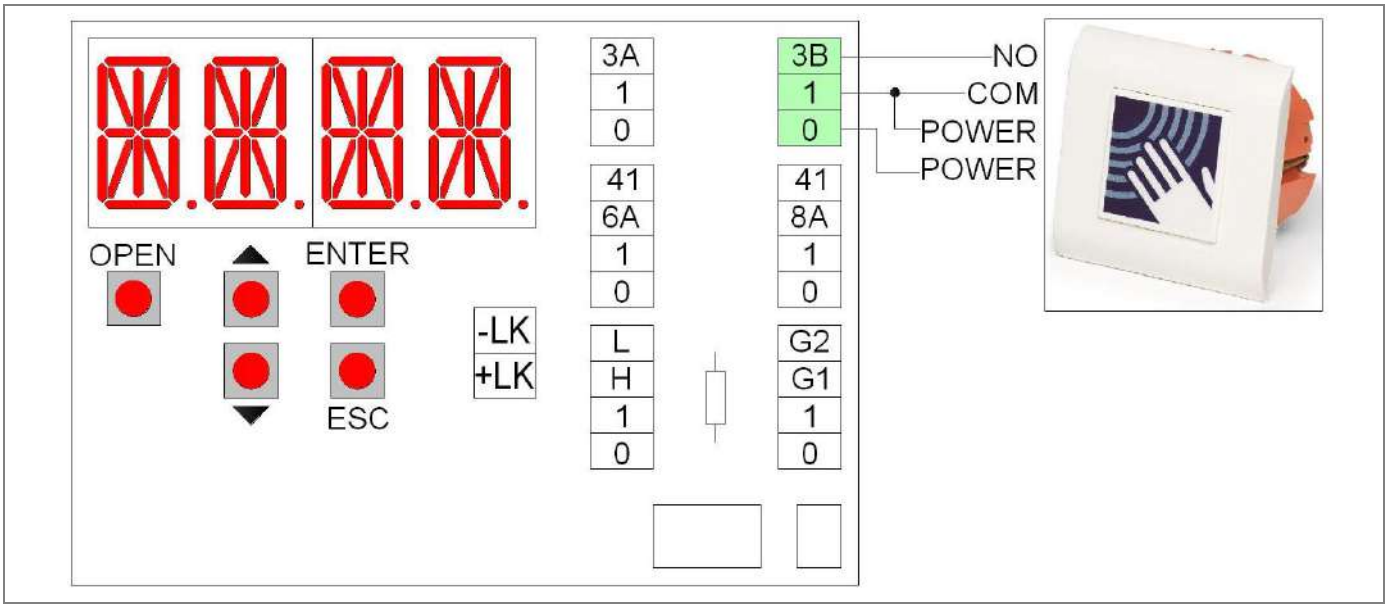
If desired, connect the function selector, as shown in the figure.

Note: the partial opening of only one leaf is referred to the MASTER automation.





7.8 ELECTRICAL CONNECTION OF 001MS9502 PROXIMITY SENSOR



Connect the terminals of the sensor, by cable not supplied by us, to the terminals of the electronic control as follows:

terminal POWER = terminal 0

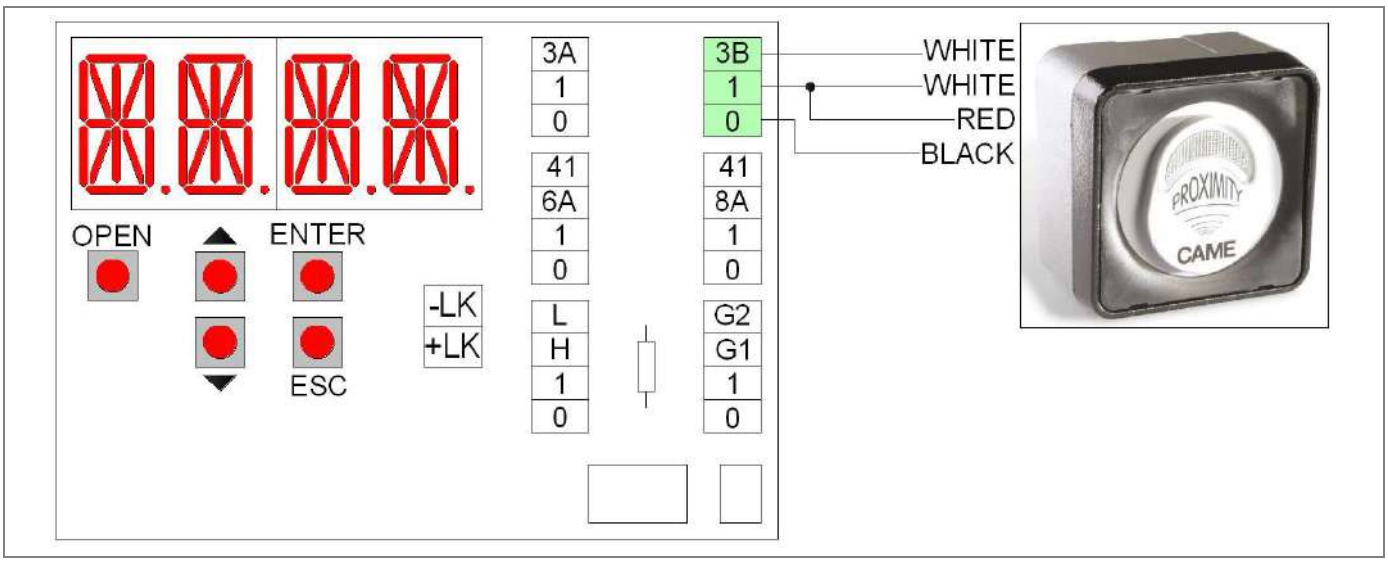
terminal POWER = terminal 1

terminal COM = terminal 1

terminal NO = terminal 3A, or terminal 3B

For more information, check the installation manual of the sensor.

7.9 ELECTRICAL CONNECTION OF 001TSP01 TRANSPONDER PROXIMITLY READER



Connect the badge reader using the supplied cable (Note: lengthen cable not supplied) to terminals of the electronic control as follows:

black wire = terminal 0

red wire = terminal 1

white wire = terminal 1

white wire = terminal 3A, or terminal 3B

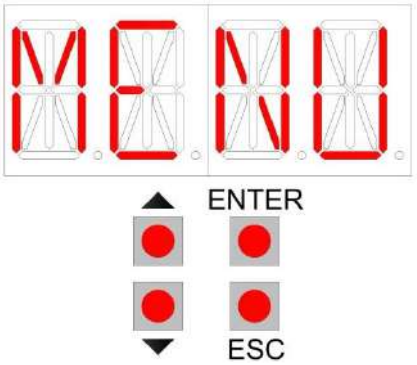
For more information, refer to the installation manual of the transponder reader.

8. ELECTRONIC CONTROL ADJUSTEMENT

The electronic control has 4 buttons and 4 alphanumeric displays to set all the necessary adjustments.

After turning on the electronic control, the display shows the word "MENU". The operation of the four keys are indicated in the table.

Keys	Description
ENTER	Select button, each time you press the button you enter on the selected parameter. Save button, pressing for 1 seconds you "SAVE" the selected value. MENU = Main parameters menu MEM = Memory management menu ADV = Advanced parameters menu SEL = Function selector menu INFO = Information and diagnostics menu
ESC	Exit button, exit from all the parameter or exit from the menu.
↑	Scroll button, each press selects a menu item or increases the value of the selected item.
↓	Scroll button, each press selects a menu item or reduces the value of the selected item.



8.1 BASIC SETTINGS MENU

Using the buttons ↑ and ↓ choose MENU, press ENTER to select and adjust the following main parameters:

Display	Description	Factory settings
DOOR DOOR TYPE	Setting the automation type. Choose between the following values: SW2 = SW2 automation PBB2 (LIGHT) SW4 = SW4 automation PBBS2 (SPRING) SW5 = SW5 automation PBB3 (HEAVY)	SW2
OPEN OPENING DIRECTION	Setting the opening direction. Choose between the following values: ← = door hinged on left → = door hinged on right	←
ARM ARM TYPE	Setting the type of arm. Choose between the following values: PULL = sliding arm PUSH = articulated arm	PULL
VOP OPENING SPEED	Opening speed setting. Choose between the minimum and maximum: minimum value = 15 deg/s maximum value = 70 deg/s	50
VCL CLOSING SPEED	Closing speed setting. Choose between the minimum and maximum: minimum value = 100 mm/s maximum value = 700 mm/s	50
TAC CLOSING TIME	Open door time setting. Choose between the minimum and maximum: NO = the door is always open minimum value = 1 s maximum value = 30 s	1
PUSH MOTOR POWER	Force setting. Choose between the minimum and maximum: minimum value = 1 maximum value = 10	10
LEAF DOOR WEIGHT	Setting the weight of the door. Choose between the following values: MIN = light door MED = medium door MAX = heavy door	MED
RAMP ACCELERATION TIME	Set the acceleration time. Choose between the minimum and maximum values: minimum value = 100 ms (maximum acceleration) maximum value = 2000 ms (minimum acceleration)	400
BTMD BATTERY MODE	Setting operation of battery power device, in absence of electricity. Choose between the following values: NO = battery not connected EMER = emergency open CONT = continuation of normal operation of the door, with last cycle of opening Note: the number of operations with battery, depends on the efficiency of the battery, the weight of the doors and the present friction.	NO

8.2 MEMORY MANAGEMENT MENU

Using the buttons ↑ and ↓ select MEM, press ENTER to select and adjust the following memory management menu.

Display	Description	Factory settings
FSET FACTORY SETTINGS	Restore all settings to factory defaults. Choose between the following values: NO = no restore. YES = restore to factory settings.	NO
FW FIRMWARE UPGRADE	Programming procedure of electronic control. Insert the micro SD memory in the electronic control. From this menu, choose the firmware version you want (from 0200 to - - - -). Press ENTER until it starts the programming procedure that lasts about 30 seconds (the display shows “WAIT • • • •”), at the end the display shows "SAVE". After the procedure, remove the micro SD memory from the electronic control and store it for future use. Note: in the case of programming error or missing firmware (W100), proceed as follows: disconnect the power supply, insert the micro SD memory, give power supply, the programming procedure starts automatically.	- - - -
SIN SETTING INPUT	You can upload the menu settings used in another automation, already stored in the micro SD memory. Choose between the following values: NO = no upload YES = upload the menu settings from the micro SD memory	NO
SOUT SETTING OUTPUT	You can save the menu settings of automation in use, in the micro SD memory. Choose between the following values: NO = no save YES = save the menu settings of automation in the micro SD memory	NO

8.3 ADVANCED PARAMETERS MENU

Using the buttons ↑ and ↓ select ADV, press ENTER to select and adjust the following advanced parameters.

Display	Description	Factory settings
8AEX 8A-EXCLUSION	Exclusion of the operation of the sensor closing safety. Choose between the minimum and maximum values: minimum value = 0% maximum value = 50%	0
6AEX 6A-EXCLUSION	Exclusion of the operation of the sensor opening safety. Choose between the minimum and maximum values: minimum value = 0% maximum value = 50%	0
ST6A 6A-SETTING	Operation of 6A safety command, after the door stop. Choose between the following values: CLOS = automatic closing of the door OPEN = continues the opening of the door	CLOS
ELLK LOCK OPERATION TYPE	Selecting the electric lock. Choose between the following values: NO = electric lock not connected LOCK = standard electric lock (security operation) SAFE = anti-panic electric lock (safety operation) AUTO = anti-panic electric lock (operation matched to the function selector)	NO
LKPW LOCK POWER SUPPLY	Power supply electric lock. Choose between the following values: 12 = 12V electric lock 24 = 24V electric lock	12

Display	Description	Factory settings
TALK LOCK ADVANCE TIME	Time advance operating electric lock. Choose between the minimum and maximum values: minimum value = 0,5 s maximum value = 5,0 s	0.5
TRLK LOCK OPERATION TIME	Operating time of the electric lock. Choose between the minimum and maximum values: minimum value = 0,5 s maximum value = 5,0 s	0.5
LKSH LOCK HOOKING	Setting of closing push for hooking the electric lock. Choose between the following values: NO = no push MIN = light push MED = medium push MAX = heavy push	MED
PUCL PUSH DOOR CLOSED	Setting the push on the closed mechanical stop. Choose between the following values: NO = no push MIN = light push MED = medium push MAX = heavy push XMAX = very heavy push	MIN
PIPP PUSH DOOR OPEN	Setting of the opening push. Choose between the following values: NO = no push YES = push enabled (disabled with ANG)	NO
HOLD HOLD DOOR OPEN	Setting the push of keeping the door open. Choose between the following values: NO = no push MIN = light push MED = medium push MAX = heavy push	MED
PUGO PUSH & GO	Push opening activation. Choose between the following values: NO = off YES = active (disabled with PWAS)	YES
PWAS POWER ASSIST	Manual operation of the door in servo assisted mode (Note: any safety devices are disabled). Choose between the following values: NO = disabled manual operation power-assisted MIN = minimum manual operation power-assisted MED = medium manual operation power-assisted MAX = maximum manual operation power-assisted	NO
ANG OPENING ANGLE	Selecting of the door opening angle. Choose between the following values: NO = the door opens up to the mechanical opening stop 5 … 240 = the door opens up to the selected angle (Note: the value indicated refers to the arm angle and not to the door angle)	NO
TAKO KO-CLOSING TIME	Open door time setting, after the 1-KO command. Choose between the minimum and maximum: minimum value = 1 s maximum value = 30 s NO = the door is always open NO = see MENU > TAC	NO
MOT MOTOR CIRCUIT	Setting the manual friction of the door, by means of the electrical connection of the motor windings. Choose between the following values: OC = manual door opening without friction (motor with open circuit windings) SC = manual door opening with friction (motor with short-circuit windings)	SC

Display	Description	Factory settings
STG1 G1-SETTING	Operation of the G1 terminal. Choose between the following values: NO = no function KO = opening command 1 - G1 KC = closing command 1 - G1 VOPN = N.O. opening limit-switch 1 - G1 STEP = Step-by-step contact N.O. The closing of the 1-G1 contact performs in sequence the opening (disabled automatic closure) and the closing of the door. SAM = Automatic setting command of function selector. The closing of the 1-G1 contact changes the function selector mode (see menu: SEL > SAM1 and SEL > SAM2). EMER = Emergency opening contact N.C. The opening of the 1-G1 contact opens the door. RSET = reset command 1 – G1 CAB = Step-by-step contact N.O. The closing of the 1-G1 contact performs in sequence the closing of the door (disabling 3A/3B terminals, enabling the signaling for occupied cabin) and the opening of the door (enabling 3A/3B terminals, disabling the signaling for occupied cabin). BELL = Output 0-G1 (12Vdc 20mA). The output is activated for 3 seconds when people enter the store (through the sequential activation of the contacts: 1-3B and 1-3A). SIGN = Output 0-G1 (12Vdc 20mA). The output is activated when the door is in the closed or opening position (see menu: ADV > SIGN). SERV = Output 0-G1 (12Vdc 20mA). The output is activated when the door reaches the number of maintenance cycles, set using the menu: INFO> SERV. WARN = Output 0-G1 (12Vdc 20mA). The output is activated when at least one warning remains active for 5 minutes. For remove the alarm signal make a reset or turn off the power supply.	NO
STG2 G2-SETTING	Operation of the G1 terminal. Choose between the following values: NO = no function KO = opening command 1 – G2 KC = closing command 1 – G2 VOPN = N.O. opening limit-switch 1 – G2 STEP = Step-by-step contact N.O. The closing of the 1-G2 contact performs in sequence the opening (disabled automatic closure) and the closing of the door. SAM = Automatic setting command of function selector. The closing of the 1-G2 contact changes the function selector mode (see menu: SEL > SAM1 and SEL > SAM2). EMER = Emergency opening contact N.C. The opening of the 1-G2 contact opens the door. RSET = reset command 1 – G2 CAB = Step-by-step contact N.O. The closing of the 1-G2 contact performs in sequence the closing of the door (disabling 3A/3B terminals, enabling the signaling for occupied cabin) and the opening of the door (enabling 3A/3B terminals, disabling the signaling for occupied cabin).	NO
SIGN DOOR POSITION SIGNAL	Door position indication through the 0-G1 output (see menu: ADV > STG1 > SIGN). Choose between the following values: CLOS = closed door OPEN = open door AIR = door not closed LAMP = moving door CAB = signaling of the occupied cabin (see menu: ADV > STG2 > CAB)	CLOS
T41 SAFETY TEST	Enable test for safety devices (in accordance with EN 16005). Choose between the following values: NO = test disabled YES = test enable	YES

Display	Description	Factory settings
SYNC DOOR SYNCHRO-NIZATION	Door with 2 leaves, setting of master-slave synchronization. Choose between the following values: NO = no synchronization (door with 1 leaf) MAST = automation which opens first SLAV = automation which closes first	NO
SDLY DOOR DELAY	Door with 2 leaves, setting of delay of movement between Master-Slave. Choose between the following values: NO = leaves without overlap MIN = minimum delay MED = medium delay MAX = maximum delay	MED

8.4 FUNCTION SELECTOR MENU

Using the buttons ↑ and ↓ select SEL, press ENTER to select and adjust the following function selector menu.

Display	Description	Factory settings
MODE SELECTOR MODE	Displaying of operating mode of function selector device. Choose between the following values: NO = no mode OPEN = open door AUTO = automatic bi-directional operation CLOS = closed door 1D = automatic one-way operation PA = automatic partial operation 1DPA = automatic one-way operation and partial	NO
SECL SELECTOR LOCK	How to activate the function selector. Choose between the following values: NO = function selector always accessible LOGO = function selector accessible by selecting the logo for 3 seconds TAG = function selector accessible with badge and numeric code	NO
DLAY DELAY CLOSED DOOR	Setting delay time function closed door. Choose between the minimum and maximum values: minimum value = 1 s maximum value = 5 min	1
TMEM TAG MEMORISE	Saving procedure of badge and numeric code for function selector. Choose between the following values. NO = no saving SMOD = Saving badge and numeric code for activation of the function selector: - press the ENTER button for 1 second, the display shows REDY, - approach the badge to the function selector (in front of the NFC symbol), the display shows the badge code, - wait for 20 seconds or press the ESC button. OPEN = Saving badge and numeric code for activation of priority opening: proceed as SMOD Note: if the badge and the numeric code is not recognized the display shows the message UNKN, or if the badge and the numeric code is already stored will show the message NOK. You can store a total maximum of 50 badges and numeric codes.	NO
TDEL TAG DELETE	Cancellation procedure of badge and numeric code. Choose between the following values. NO = no cancellation YES = badge and numeric code cancellation - press the ENTER button for 1 second, the display shows REDY, - approach the badge to the function selector (in front of the NFC symbol), the display shows the badge code, - wait for 20 seconds or press the ESC button. Note: if the badge and the numeric code is not recognized the display shows the message UNKN.	NO

Display	Description	Factory settings
TMAS TAG MASTER	It is possible to create master badge and master numeric code that allows the saving of the badges and the numeric codes, without the use of the menu. Choose from the following values. NO = no saving MMOD = creation of the master badge and master numeric code to saving badges and numeric codes for function selector activation: proceed as SMOD. MOPE = creation of the master badge and master numeric code to saving the badges and numeric codes of opening priority: proceed as SMOD. Note: if the badge and the numeric code is not recognized the display shows the message UNKN, or if the badge and the numeric code is already stored will show the message NOK. - The use of the master badge is the following: - approach the master badge to the function selector (in front of the NFC symbol), the buzzer emits 2 beeps at the beginning of the storage procedure, - approach the badges, that you want to store, one at a time, to the function selector (in front of the NFC symbol), the buzzer emits 1 beep of confirmation storage, - wait for 20 seconds, the buzzer emits 2 beeps at the end of the storage procedure. Note: if the badge and the numeric code is not stored, the buzzer emits no beeps.	NO
TERA TAG TOTAL ERASE	How to erase all stored badges and numeric codes. Choose between the following values: NO = no erase YES = cancellation of all badges and numeric codes	NO
SAM1 SELECTOR AUTOMATIC MODE	First setting of function selector, when the 1-G1 (1-G2) contact becomes closed. Set the menu ADV > STG1 (STG2) > SAM. Connect the contact of a clock to 1-G1 (1-G2) terminals, and choose between the following values: OPEN = open door AUTO = automatic bi-directional operation CLOS = closed door 1D = automatic one-way operation	CLOS
SAM2 SELECTOR AUTOMATIC MODE	Second setting of function selector, when the 1-G1 (1-G2) contact becomes open. Set the menu ADV > STG1 (STG2) > SAM. Connect the contact of a clock to 1-G1 (1-G2) terminals, and choose between the following values: OPEN = open door AUTO = automatic bi-directional operation CLOS = closed door 1D = automatic one-way operation	CLOS

Display	Description	Factory settings
FW FIRMWARE UPGRADE	Programming procedure of function selector. Insert the micro SD memory in the electronic control. From this menu, choose the firmware version you want (from 0200 to - - - -). Press ENTER until it starts the programming procedure that lasts about 30 seconds (the display shows "WAIT • • • •"), at the end the display shows "SAVE". After the procedure, remove the micro SD memory from the electronic control and store it for future use. Note: in the case of programming error or missing firmware (W103), proceed as follows: disconnect the power supply, insert the micro SD memory, give power supply, and repeat the programming procedure from this menu.	- - - -
VER VERSION	Displaying the firmware version of function selector (eg = 0200).	- - - -
TIN TAG INPUT	You can upload the badges and numeric codes used in another automation, already stored in the micro SD memory. Choose between the following values: NO = no upload YES = upload the badges and numeric codes from the micro SD memory	NO
TOUT TAG OUTPUT	You can save the stored badges and numeric codes in the micro SD memory. Choose between the following values: NO = no save YES = save the stored badges and numeric codes in the micro SD memory	NO

8.5 INFORMATION AND DIAGNOSTICS MENU

Using the buttons ↑ and ↓ select INFO, press ENTER to select and adjust the following information and diagnostics menu.

Display	Description	Factory settings
SHOW DISPLAY INFO	Displaying information of warning and faults. Choose between the following values: CONT = the display shows the active contacts of the terminal blocks and the alarms. WARN = the display shows the alarms only.	CONT
VER VERSION	Displaying the firmware version of electronic control (eg = 0200).	- - - -
CYCL CYCLES	Shows the number of cycles of the door (1 = 1.000 cycles, 9000 = 9.000.000 cycles).	0000
SERV SERVICE SIGNAL	Enabling the signaling of routine maintenance of the door. NO = no signaling 1 = 1.000 cycles / 9000 = 9.000.000 cycles	0000
LOG INFO OUTPUT	You can save the following information in the micro SD memory (swing_log.txt): the last 20 warnings, the menu settings, and the electronic devices connected to automation. Choose between the following values: NO = no save YES = save the information in the micro SD memory	NO
WARN WARNING LIST	Displaying of the last 10 warnings (the warning number 0 is the last): 0.xxx / 1.xxx / 2.xxx / 3.xxx / 4.xxx / 5.xxx / 6.xxx / 7.xxx / 8.xxx / 9.xxx	0. - - -

DISPLAY	SEL	FLASH	WARNING	CHECK
W001	i	1	Encoder error	Check encoder connection
W002	i	1	Motor short circuit	Check the connection of the motor
W003	i	1	Motor control error	Electronic control failure
W010	i	2	Direction reversed	Check the presence of obstacles
W011	i	2	Running too long	Check the connection between the motor and leaf
W012	i	2	Running too short	Check the presence of obstacles
W013	i	2	Overrun	Check the mechanical stops
W100	-	-	Programming error (CB03)	Repeat the programming procedure in MEM > FW menu
W103	-	-	Programming error (FSD1)	Repeat the programming procedure in SEL > FW menu
W127	-	-	Automation reset	The automation performs a self-test
W128		on	No power supply	Check the power supply
W129		1	No battery	Check the battery connection
W130		1	Low Battery	Replace or recharge the battery
W140	i	3	6A safety test failure	Check the safety sensor connection
W142	i	3	8A safety test failure	Check the safety sensor connection
W145	i	4	Motor overtemperature (first step)	The door reduces the speed
W146	i	4	Motor overtemperature (second step)	The door stops
W150	i	2	Obstacle in opening	Check the presence of obstacles
W151	i	2	Obstacle in closing	Check the presence of obstacles
W152	i	2	Door locked open	Check the presence of locks
W153	i	2	Door locked closed	Check the presence of locks
W156	i	2	Door moved manually	Wait about 5 seconds
W160	i	1	Synchronization error	Check the ADV > SYNC menu
W256	i	-	Power on	-
W257	i	-	Firmware update	-
W320	i	on	Signaling of maintenance	Check the INFO > SERV menu
W330	i	1	Tuning between motor and electronics	Wait about 3-30 seconds

9. START-UP PROCEDURE OF THE AUTOMATIC SWING DOOR

9.1 Preliminary checks.

At the end of the installation, move the doors manually and make sure that operation is smooth and without friction. Check the solidity of the structure and the proper attachment of all the screws. Check the correctness of all electrical connections. Make sure you have installed the mechanical stop of the open door.

9.2 Before connecting any security devices, leave the jumper on terminals safety (41-6A, 41-8A).

9.3 Giving power supply and connect the battery, if present.

Note: every time you switch on the automation performs a self-test (from 3 to 30 seconds). The first opening and closing cycle is at low speed to allow the automatic learning.

9.4 To ensure that the electronic control has the factory settings, restore via the menu:

MEM> FSET> YES (confirm by pressing ENTER for 1 second).

Note: if the door is hinged on right, set as follow: MENU > OPEN > → (confirm by pressing ENTER for 1 second).

Note: if the door is with articulated arm, set as follow: MENU > ARM > PUSH (confirm by pressing ENTER for 1 second).

Note: if the door is PBBS2 (SPRING model), set as follow: MENU > DOOR > SW4 (confirm by pressing ENTER for 1 second).

Note: if the door is PBB3 (HEAVY model), set as follow: MENU > DOOR > SW5 (confirm by pressing ENTER for 1 second).

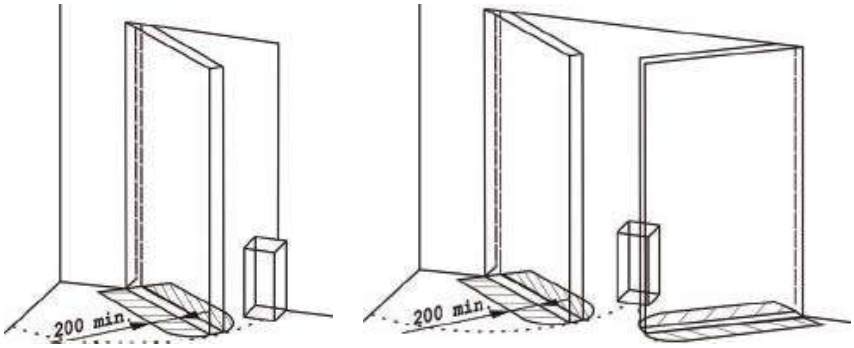
9.5 Perform the menu settings as described in Chapter 8. Use OPEN button to perform the opening door, and verify the correct operation of the door.

Note: the automation automatically detects any obstacles during the closing movement (reversal movement) and opening (stopping movement).

9.6 If present, connect the electric lock of the door to the terminals (-LK \ +LK) of electronic control, and make the settings available in the ADV menu.

9.7 Connect one at a time, control and safety devices to protect the opening and closing cycle of the door, as described in Chapter 7.6, and verify proper operations.

Note: verify that the opening access is properly protected by safety sensors, in accordance with the requirements of the European standard EN16005 (annex C).



9.8 At the end of the automation starting, deliver to the owner the user instructions, including all warnings and information necessary to maintain the security and functionality of the automatic door.

9.9 FLUO-SW automations are feature of label containing the required information by European standards EN16005 and EN60335-2-103.

Note: the manufacturer of the automatic swing door have to add his own label identifying the installation.

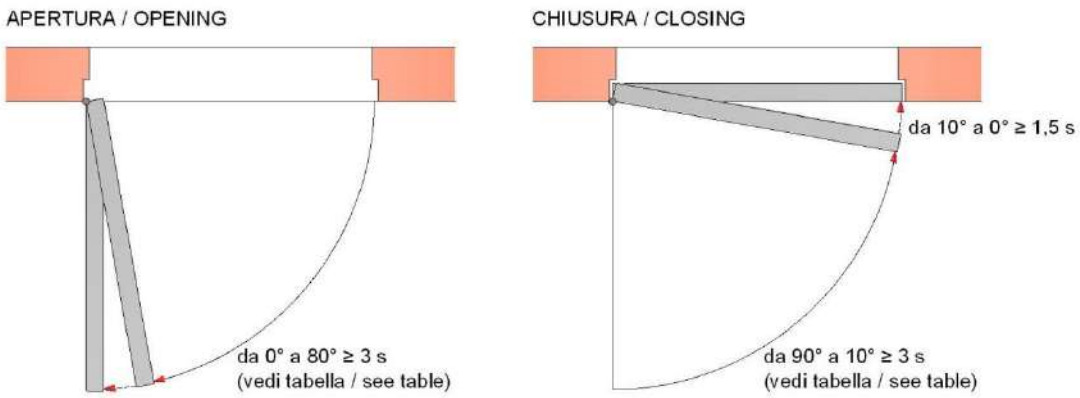
CAME S.p.A. www.came.com
Via Martiri della Libertà,15 -31030 Dosson di Casier TV
Type: **001PBB3** Standard: EN16005
DRIVE UNIT FOR SWING DOOR
Input: 100-240V 50/60Hz Power: 70W
Load: 40Nm S3: 100%
Tmin: -15°C Tmax: +50°C IP20
Lot: 01- 15 s/n: 0000001
CE Year: 2015

10. ADJUSTMENT OF THE KINETIC ENERGY OF THE DOOR

To reduce the kinetic energy of the door make the following adjustments: - adjust the force PUSH ≤ 5;

- adjust the opening speed (VOP) so as to open the door (from 0° to 80°) at the times indicated in the table;

- adjust the closing speed (VCL) so as to close the door (from 90° to 10°) at the times indicated in the table.



Door width	Door weight				
	50 kg	60 kg	70 kg	80 kg	90 kg
0,75 m	3,0 s	3,0 s	3,0 s	3,0 s	3,5 s
0,85 m	3,0 s	3,0 s	3,5 s	3,5 s	4,0 s
1,00 m	3,5 s	3,5 s	4,0 s	4,0 s	4,5 s
1,20 m	4,0 s	4,5 s	4,5 s	5,0 s	5,5 s

11. TROUBLESHOOTING

In addition to the following list of possible problems, there are warnings provided by the display, as described in chapter 7.5.

Problem	Possible causes	Remedy
The automation does not open or close.	No power supply (display off).	Check the power supply.
	Short circuited external accessories.	Disconnect all accessories from terminals 0-1 and reconnect them one at a time (check for voltage 12V).
	The door is locked by bolts and locks.	Check the freely move of the doors
The automation does not perform the functions set.	Function selector incorrectly set.	Check and correct the settings of the function selector.
	Control devices or safety always activated.	Disconnect devices from the terminal and verify the operation of the door.
The movement of the doors isn't linear, or reverse the movement for no reason.	The automation does not successfully perform the automatic learning.	Perform a reset using the command 1-29 , or power off and power on the automation.
The automation opens but does not close	Anomalies during the safety devices test.	Jumper contacts one at a time 41 -6A , 41 - 8A.
	The opening devices are activated.	Verify that the opening sensors are not subject to vibration , do not perform false detections or the presence of moving objects in the field of action.
	The automatic closing doesn't work.	Check the settings of the function selector .
Safety devices not activating.	Incorrect connections between the safety devices and electronic control.	Check that the safety contacts of the devices are properly connected to the terminal blocks and the relative jumpers have been removed.
The automation opens by itself.	The opening and safety devices are unstable or detect moving bodies	Verify that the opening sensors are not subject to vibration , do not perform false detections or the presence of moving bodies in the field of action.

12. AUTOMATIC SWING DOOR ROUTINE MAINTENANCE PLAN

To ensure proper operation and safe use of the automatic swing door, as required by European standard EN16005, the owner has to perform routine maintenance by qualified personnel.

Except for routine cleaning of the door, the responsibility of the owner, all maintenance and repair work must be carried out by qualified personnel.

The following table lists tasks related to routine maintenance, and the frequency of intervention related to an automatic swing door operation with standard conditions. In the case of more severe operating conditions, or in the case of sporadic use of the automatic swing door, the frequency of maintenance can be consistently adequate.

Task	Frequency
Remove the power supply, open the automation and perform the following checks and adjustments. - Check all screws fastening of components within the automation. - Check the state of wear of the hinges (if necessary replace them). - Verify correct mounting of the arm on the door. - In the case of SW4 automation, check the correct force of the closing spring. - If present, verify proper engagement of the electric lock.	Every 6 months or every 500.000 cycles.
Connect the power supply and perform the following checks and adjustments. - Check the correct operation of the control devices and safety. - Check the detection area of the security sensors complies with the requirements of the European standard EN16005. - If present, verify the correct operation of the electric lock. - If present, verify the correct operation of the battery power device (if necessary replace the battery).	Every 6 months or every 500.000 cycles. Note: the verification of the automation security functions and safety devices must be made at least 1 time per year.

All maintenance, replacement, repair, update, etc.. must be written into the proof book, as required by European standard EN16005, and delivered to the owner of the automatic swing door.

For repairs or replacements of products, original spare parts must be used.

12.1 DISPOSAL OF PRODUCTS

For correct disposal of electrical and electronic equipment, batteries and accumulators, the owner must deliver the product to special "collection centres" provided by municipalities.

English *- Manual code:* ***FA00008-EN*** *v.* ***7*** *- 05/2017 -* *© Came S.p.A.*
The data and information in this manual may be changed at any time and without notice.

CAME
safety&comfort

CAME bpt URBACO
parkare DOMOTICOLED

Came S.p.A.

Via Martiri Della Libertà, 15
31030 **Dosson di Casier**
Treviso - Italy
(+39) 0422 4940
(+39) 0422 4941

Via Cornia, 1/b - 1/c
33079 **Sesto al Reghena**
Pordenone - Italy
(+39) 0434 698111
(+39) 0434 698434

www. came.com