A1000

EN16005:2012

safe zone

green tech

energy saving

FAAC

E1SL fw.3.0
SDK EVO fw.3.0
LK EVO fw.1.2

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This manual was published in 2017.

EC DECLARATION OF CONFORMITY OF A MACHINE

(2006/42/EC ANNEX II P.1, A)

Manufacturer and person authorised to compile the technical file

Company name: FAAC S.p.A. Soc. Unipersonale

Address: Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY

hereby declares that the following machine:

Description: Linear sliding door with 1 or 2 leaves

Model: A1000 CS

complies with the following applicable EU legislations:

Machinery Directive 2006/42/EC (including all applicable amendments)

and that the technical file has been compiled in compliance with part A of Annex VII.
Furthermore, the following harmonised standards have been applied:

EN 16005:2012
EN ISO 12100:2010
EN 60335-2-103:2015
EN 13849-1:2015 PL "c" CAT. 3
EN 13849-2:2012

Bologna, Italy 10-06-2017 CEO

EC DECLARATION OF CONFORMITY

The Manufacturer

Company name: FAAC S.p.A. Soc. Unipersonale

Address: Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY

hereby declares that the following products:

Description: Automation for linear sliding door with 1 or 2 leaves

Model: A1000 KIT; A1000 PA;A1000 CS

comply with the following applicable EU legislations:

EMC Directive 2014/30/EU
Directive ROHS 2 2011/65/EU

Furthermore, the following harmonised standards have been applied:

EN 61000-6-2:2005
EN 61000-6-3:2007+A:2011

Bologna, Italy 10-06-2017 CEO

DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

(2006/42/EC ANNEX II P.1, B)

Manufacturer and person authorised to prepare the relevant technical documentation

Company name: FAAC S.p.A. Soc. Unipersonale

Address: Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY

hereby declares that for the partly completed machinery:

Description: Linear sliding door with 1 or 2 leaves

Model: A1000 KIT

The essential requirements of the machinery directive 2006/42/EC (as amended) which have been applied and satisfied are as follows:

RESS 1.1.2, 1.1.3, 1.1.4, 1.1.5, 1.1.6, 1.2.1, 1.2.3, 1.3.4, 1.5.1, 1.5.11, 1.5.13, 1.6.3, 1.7.1, 1.7.1.2, 1.7.4

and that the relevant technical documentation has been compiled in compliance with part B of Annex VII.

Furthermore, the following harmonised standards have been applied:

EN 16005:2012
EN ISO 12100:2010
EN 60335-2-103:2015
EN 13849-1:2015
EN 13849-2:2012

Finally, the manufacturer declares that the above-mentioned partly completed machinery must not be commissioned until the final machine in which it is to be incorporated has been declared compliant with the requirements of the same Machinery Directive 2006/42/EC.

Bologna, Italy 10-06-2017 CEO

DECLARATION OF INCORPORATION FOR PARTLY COMPLETED MACHINERY

(2006/42/EC ANNEX II P.1, B)

Manufacturer and person authorised to prepare the relevant technical documentation

Company name: FAAC S.p.A. Soc. Unipersonale

Address: Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY

hereby declares that for the partly completed machinery:

Description: Linear sliding door with 1 or 2 leaves

Model: A1000 PA

The essential requirements of the machinery directive 2006/42/EC (as amended) which have been applied and satisfied are as follows:

RESS 1.1.2, 1.1.3, 1.1.5, 1.1.6, 1.2.1, 1.2.3, 1.2.6, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.4.1, 1.4.2.1, 1.5.1, 1.5.2, 1.5.4, 1.5.11, 1.5.13, 1.6.1, 1.6.3, 1.6.4, 1.6.5, 1.7.1, 1.7.1.2, 1.7.4

and that the relevant technical documentation has been compiled in compliance with part B of Annex VII.

Furthermore, the following harmonised standards have been applied:

EN 16005:2012
EN ISO 12100:2010
EN 60335-2-103:2015
EN 13849-1:2015
EN 13849-2:2012

Finally, the manufacturer declares that the above-mentioned partly completed machinery must not be commissioned until the final machine in which it is to be incorporated has been declared compliant with the requirements of the same Machinery Directive 2006/42/EC.

Bologna, Italy 10-06-2017 CEO

CONTENTS

TABLES

1. INTRODUCTION TO THE MANUAL

The instructions manual provides the correct procedures and requirements to be complied with for installation and operation of the system in safe conditions.

Carefully read and comply with all the instructions before starting any activity on the product.

Keep these instructions for future reference.

Unless otherwise specified, the measurements provided in the instructions are in mm.

In writing the instructions manual, due account was taken of the results of the risk assessment conducted by the manufacturer on the entire life cycle of the automation in order to implement effective risk reduction.

The following stages of the life cycle of the automation were considered:

- Consignment reception/handling
- Assembly and installation
- Setting up and commissioning
- Operation
- Maintenance / addressing any failures
- Disposal at the end of the product's life.

The sources of risk arising from installation and use of the automation were taken into account:

- Risks for the installer/maintenance technician (technical personnel)
- Risks for the user of the automation
- Risks for the product's integrity (damage)

1.1 SAFETY RECOMMENDATIONS

The installer/maintenance technician is responsible for the installation/testing of the system and for filling in the system's Register.

SAFETY OF THE INSTALLER/MAINTENANCE TECHNICIAN

Installation must be performed in compliance with Standards currently in force. The installer's safety is connected to environmental and operative conditions that reduce the risks of accidents and severe damage to a minimum.

It should be remarked that most accidents occurring in the workplace are caused by failure to comply with and monitor the most basic and fundamental safety and prevention rules.

The installer/maintenance technician must prove or declare to possess the technical-professional proficiency to perform installation, testing and maintenance activities according to the requirements of these instructions. He or she is bound to read and comply with the instructions manual.

Incorrect installation and/or incorrect use of the product might cause serious harm to people.

Perform installation and other activities adhering to the sequences provided in the instructions manual.

Always comply with all the requirements contained in the instructions and warning tables at the beginning of the paragraphs.

Do not modify the components of the automation in any way.

Only the installer and/or maintenance technician is authorised to open the automation casing.

FAAC disclaims any liability regarding the safety and proper operation of the automation if non-original FAAC components are used.

FAAC supplies a system register form with the A1000 CS.

WORKPLACE SAFETY

The installer/maintenance technician must be in good psycho-physical conditions, aware of and responsible about the hazards that may be engendered when using a machine.

The installation activity requires special work conditions. Furthermore, the suitable precautions must be taken to prevent risks of injury to persons or damage.

It is recommended to always comply with the safety recommendations.

Cordon off the work site and prevent access to the area.

The work area must be kept tidy and must not be left unattended.

Do not wear clothes or accessories - such as ties or bracelets - that might get caught in moving parts.

Always wear the personal protective equipment recommended for the type of activity to be carried out.

Use work instruments in good conditions.

The required level of workplace lighting must be equal to at least 200 lux.

Use the transport and lifting equipment recommended in the instructions manual.

Use safety-compliant portable ladders of adequate size, fitted with anti-slip devices at the top and bottom, equipped with retainer hooks.

USER SAFETY

The person in charge of the automation is responsible for the operation of the system.

He or she is bound to read and comply with the instructions manual.

He/she must be in good psycho-physical conditions, aware of and responsible about the hazards that may be engendered when using a machine.

The required level of ambient lighting must be equal to at least 200 lux.

The person in charge of using the automation must prevent the control devices being used by anyone who has not been specifically authorised and trained to use them. He/she must not allow access to the control devices to persons under age or with reduced psycho-physical abilities, unless under supervision by an adult responsible for their safety.

Do not use the system in case of malfunctioning.

Under no circumstances is the user authorised to perform any work inside the housing of the automation or on any of its components.

The user is not permitted to perform any type of work on the motorisation or on components of the system.

If the system malfunctions, the user must not attempt any kind of repair or take any direct action. He/she must request assistance from the INSTALLER / MAINTENANCE TECHNICIAN.

The user must make sure that maintenance to the system is carried out according to the instructions provided in this manual.

The installer/maintenance technician must provide the user with all the information required to operate the system and for emergency situations.

The installer/maintenance technician must supply the system's Register to the owner.

1.2 MEANING OF THE SYMBOLS USED

Perform the operations and steps described in compliance with safety regulations and the instructions provided so as to prevent the risks indicated by the symbols in the following tables.

1 Symbols: notes and warnings on the instructions

WARNING
It indicates the risk of personal injury or damage to parts. The described operation/step must be carried out in compliance with the instructions provided and with safety regulations.

WARNING ELECTRIC SHOCK HAZARD
Indicates risk of electrocution. The described operation/step must be carried out in compliance with the instructions provided and with safety regulations.

WARNING
Details and specifications to be followed with the utmost attention, in order to ensure correct operation of the system.

PAGE REFERENCE
It refers to the page indicated by the number for details or clarifications.

PICTURE REFERENCE
It refers to the picture indicated by the number.

TABLE REFERENCE
It refers to the table indicated by the number.

WARNING
The batteries and electronic components must not be disposed of with household waste but delivered to authorised disposal and recycling centres.

2 Symbols: tools (type and size)

HEX WRENCH of the specified size (6, 8...)

ALLEN KEY with ROUND HEAD of the specified size (6, 8...)


CIRCLIP PLIERS

FLAT-HEAD SCREWDRIVER of the specified size (6, 8...)

CROSS-HEAD SCREWDRIVER of the specified size (6, 8...)

METAL DRILL BITS of the specified size (6, 8...)

MASONRY DRILL BITS of the specified size (6, 8...)


LEVEL

COUNTERSINK with specified angle (45°...)

THREADING TAP with specified thread (M6, M8...)

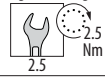

ROUND SAW


GLASS SUCTION CUPS


PALLET FORKS


TOOL with TORQUE ADJUSTMENT
It indicates that a tool with torque adjustment is required where necessary for safety reasons.

TIGHTENING TORQUE VALUE
The torque wrench and the tightening torque in Nm is specified in the figures. E.g.: HEX WRENCH 6 set at 2.5 Nm



3 Symbols: safety signs and symbols (EN ISO 7010)

GENERIC HAZARD
It indicates the risk of personal injury or damage to parts.

ELECTROCUTION HAZARD
It indicates the risk of electrocution due to the presence of live parts.

RISK OF CRUSHING AND MUSCULO-SKELETAL DISORDERS
It indicates the risk of crushing and musculo-skeletal disorders due to lifting heavy parts.

BURNING OR SCALDING HAZARD
It indicates the risk of burning or scalding due to the presence of parts at high temperature.

CRUSHING HAZARD
It indicates the risk of crushing hands/feet due to the presence of heavy parts.

RISK OF CRUSHING HANDS
It indicates the risk of crushing hands due to the presence of moving parts.

CUTTING/AMPUTATION/PIERCING HAZARD
It indicates the risk of cutting due to the presence of sharp parts or using pointed tools (drill).

SHEARING HAZARD
It indicates the risk of shearing due to moving parts.

RISK OF IMPACT/CRUSHING
It indicates the risk of impact or crushing due to moving parts.

FALLING OBJECTS HAZARD
It indicates the risk of impact due to falling objects.

SPENT BATTERIES HAZARD
It indicates a risk for the environment and health arising from spent batteries due to possible leakage of the liquid content.

COLLISION WITH FORKLIFT TRUCKS HAZARD
It indicates a risk of collision/impact with forklift trucks.

4 Symbols: markings on product

Obligation to read the instructions

5 Symbols: Personal Protective Equipment

Personal protective equipment to be worn for protection from any risks (e.g. crushing, cutting, shearing, etc.):

Obligation to wear head protection helmet.

Obligation to wear safety footwear.

Obligation to wear mask/goggles to protect the eyes from the risk of fragments due to the use of drill or welder.

Obligation to wear work gloves.

Obligation to wear ear protectors.

Obligation to wear overalls. Do not wear clothes or accessories - such as ties or bracelets - that might get caught in moving parts.

6 Symbols: markings on packaging

Important warnings for the safety of people and integrity of the load:

Handle with care. Presence of fragile parts.

Store away from water and humidity.

PROHIBITION to stack items.

Maximum number of stackable items, e.g.: 2.

Wear work gloves.

Wear safety footwear.

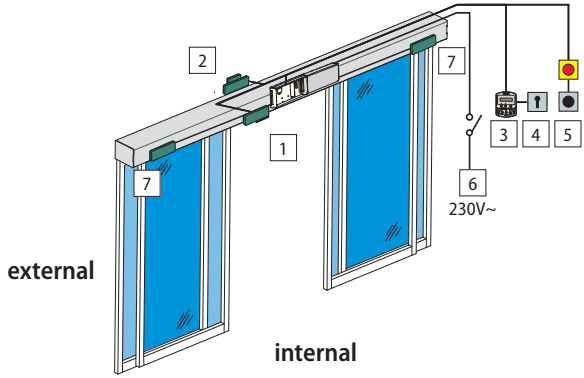
Use pallet trucks.

Use forklift trucks.

20 kg is the MAX weight that 1 person can lift.

Kg _____ WEIGHT of the load.

2. AUTOMATION A1000



1	Internal monitored opening detector and safety in closing (XV1/XDT1)	optional accessory
2	External monitored opening detector and safety in closing (XV1/XDT1)	optional accessory
3	SDK EVO	optional accessory
4	Key switch to lock the SDK EVO	optional accessory
5	Emergency/Key/OPEN control buttons	optional accessories
6	Power supply 230V~	
7	Internal monitored detectors for safe opening (XBFA)	optional accessory

1

2.1 INTENDED USE

The FAAC series A1000 systems are designed to automatically operate, manage and control linear horizontal motion one- or two-leaf sliding doors.

The A1000 series automations are designed to automate entry doors that are used exclusively for pedestrian traffic.

They are compliant with standard EN 16005:2012.

They are suitable for indoor installation, for applications that meet the specifications indicated in **7**.

No other use outside the ones set out above is allowed by the manufacturer.

FAAC declines all liability deriving from misuse or uses other than that for which the automation s intended.

LIMITATIONS FOR USE

Do not use the automation in the presence of the following conditions:

- direct exposure to weathering
- exposure to direct water jets of any type or extent
- outside the technical limitations set out. Specifically, it is forbidden to connect to sources of energy other than those set out.

2.2 UNAUTHORISED USE

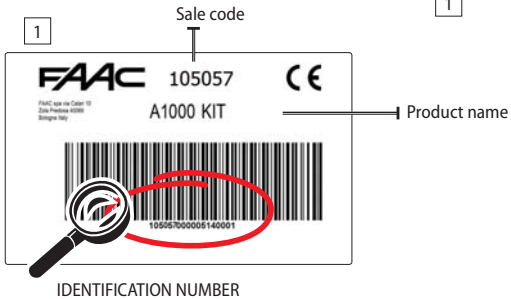
It is forbidden to:

- use the automation for uses other than THE INTENDED USE;
- use the automation for installing smoke and/or fire protection doors (fire doors);
- use the automation with mobile and fixed guards tampered with or removed;
- use the automation in environments in which there is a risk of explosion and/or fire: the presence of flammable gases or fumes is a serious safety hazard (the product is not 94/9/EC ATEX certified);
- integrate other systems and/or commercial equipment not intended;
- use other systems and/or commercial equipment for uses not authorised by the respective manufacturers;
- use commercial devices for purposes other than those set out by the respective manufacturers.

2.3 IDENTIFICATION PLATE

The identification plate ✎2-① is located on the support profile.

If the A1000 KIT is supplied, it is the responsibility of the installer to attach the identification plate in a visible position ✎2- ①.



IDENTIFICATION NUMBER

example:

10505700000114 0001

Sale code

Progressive no. of the month of production

Month and year of production (mm/yy)

✎2

2.4 TECHNICAL SPECIFICATIONS A1000

7 Technical specifications

MODEL	A1000 single leaf	A1000 double leaf
Length * [mm]	from 1500 to 6100	from 1700 to 6100
Depth * [mm]	150	150
Height * [mm]	100	100
Weight** [kg]	MIN. 21 - MAX 47	MIN. 24- MAX. 49
No. of leaves	1	2
MAX. leaf weight [kg]	110	70 +70
Passage opening (Vp) [mm]	from 700 to 3000	from 800 to 3000
Beam length [mm]	Vp x 2 +100	Vp x 2 +100
Maximum framed leaf thickness [mm]	60	60
Power supply voltage	230 V~ (+6% -10%) 50 Hz	230 V~(+6% -10%) 50Hz
MAX absorbed power [W]	140	140
Stand-by power without accessories [W]	3	3
Use frequency	100 %	100 %
Main motor (with encoder)	powered at 36V	powered at 36V
Max. accessories load (excluding SDK EVO)	1A, 24V	1A, 24V
Time/date backup battery	Lithium CR2032 3V	Lithium CR2032 3V
Motion backup battery	NiMh 24V 1800mAh	NiMh 24V 1800mAh
Traction	by toothed belt	by toothed belt
Opening/closing speed adjustment (empty) [cm/s]	10... 75	20... 150
Partial opening adjustment	5%... 95% of total opening	5%... 95% of total opening
Pause time adjustment [s]	0... 30	0... 30
Night pause time adjustment [s]	0... 240	0... 240
Anti-crushing safety device	in opening/closing	in opening/closing
Protection sensors monitoring (EN 16005:2012)	can be bypassed	can be bypassed
Energy Saving function	can be enabled	can be enabled
Low Energy movement	can be enabled	can be enabled
Operating ambient temperature [°C]	-20... +55	-20... +55
Automation protection rating	IP 23 (internal use)	IP 23 (internal use)

* The dimensions and weight of the automation are specified excluding carriage and leaf overall dimensions, which are customisable

** For the specifications of weights in relation to the length of the automation, see **28**.

2.5 TYPES OF SYSTEM SUPPLIED

The FAAC A1000 series automations may be supplied as follows:

- Automation kit: A1000 KIT
- Assembled automation: A1000 PA
- Complete entry door: A1000 CS

INSTALLATION ACCORDING TO THE TYPE OF SYSTEM SUPPLIED

During installation, it is recommended to comply with the order of the sections set out based on the type of purchased supply.

A1000 KIT

A. Pack containing automation components to be assembled on the FAAC support profile.

B. Pack with FAAC profiles purchased in 4.30 m or 6.10 m long bars.

Sequence of installation phases (dedicated sections in the instructions manual)

- Inspection and preparation (§ 3)
- Cutting the profiles (§ 5)
- Installation of the head section: assembly of the components on the support profile (use exclusively FAAC profiles) (§ 6)
- Installation of the head section (§ 8)
- Installation of the leaves (§ 9) - for glass leaves see (§ 10)
- Electronics installation (§ 12)
- Startup (§ 13)

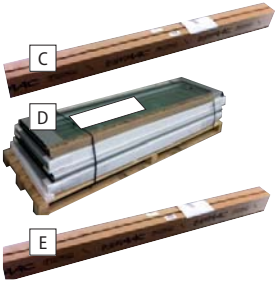
A1000 PA

C. Automation assembled on FAAC* head section.

Sequence of installation phases (dedicated sections in the instructions manual)

- Inspection and preparation (§ 3)
- Installation of the head section (§ 8)
- Installation of the leaves (§ 9) - for glass leaves see (§ 10)
- Electronics installation (§ 12)
- Startup (§ 13)

A1000 CS



C. Automation assembled on FAAC* head section.

D. FAAC leaves (with TK20 or TK50 profiles)

E. Package with TK20 or TK50 profiles for installing the FAAC door wall frame.

Sequence of installation phases (dedicated sections in the instructions manual)

- Inspection and preparation (§ 3)
- Installation of the door wall frame (§ 8) with FAAC - TK50 or TK20 profiles.
- Installation of the head section (§ 8)
- Installation of the leaves (§ 9) - for glass leaves see (§ 10)
- Electronics installation (§ 12)
- Startup (§ 13)

* supplied with the required measurement and with pre-assembled automation components.

A1000 AUTOMATION COMPONENTS

Support profile

It lets you adequately fasten the automation along a load-bearing metal or masonry wall.

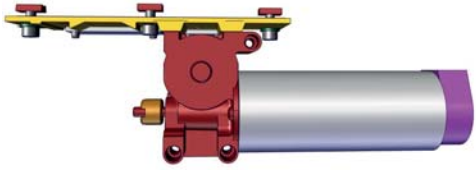
FRONT CASING CLOSING PROFILE

Aluminium profile for front head section closure.
H100 version available.

Plates with screws

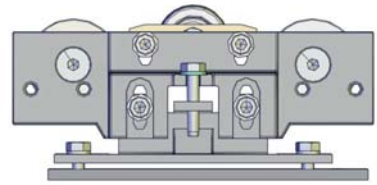
Accessories for installation of components.

Motor with encoder



Return pulley

Leaf Support/Sliding Carriages - (2 for each leaf)



Transmission belt

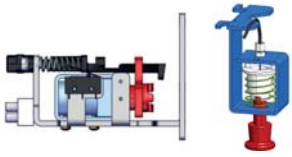
⚠ It is compulsory to use the FAAC belt for the A1000

Control electronics module

E1SL electronic board and power supply unit.

ACCESSORIES

XB LOCK motor block and internal release - OPTIONAL



It acts directly on the Motor, mechanically locking it in order to maintain the leaves in position.

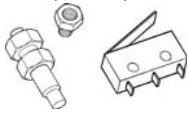
Supplied with internal release device which allows emergency opening to be performed in case of need.

Ready for installing external release.

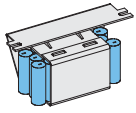
Monitoring - OPTIONAL

The magnetic monitoring sensor detects the door status: closed/not closed It is fitted with connector for connecting a relay (e.g. to connect an alarm system).

The monitoring micro switch on the motor block detects any malfunction. It is ready to remotely activate a light or sound warning.



Emergency battery - OPTIONAL



It allows the automation to operate in case of mains power failure.

SDK EVO - OPTIONAL

Programming and function selector device with display.

LK EVO - OPTIONAL

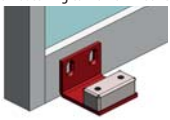
Programming and function selector device without display.

KS EVO - OPTIONAL

Device with function selector key without display.

TK50 - Sliding shoes with bracket - OPTIONAL

For fastening to wall or fixed leaf (supplied in a PAIR).



TK50 - Swivel sliding shoes - OPTIONAL

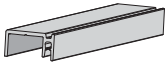
For fastening to the floor (supplied in a PAIR).

TK20 - Sliding shoes with bracket - OPTIONAL

For fastening to fixed leaf (supplied in a PAIR).

Lower guide profile - OPTIONAL

Allows the lower leaf profile to be adapted to the sliding shoe. Supplied in 3.0 m long bars.



Upper profile for connecting the leaf - (1 for each leaf) - OPTIONAL

Accessory to adapt the upper leaf profile to the carriage connections. Supplied in 3.0 m long bars.

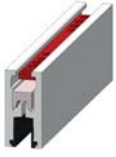
Sweeper for lower guide profile (H19 or H25) - OPTIONAL

Completes the floor guide system.

Glass leaf lower shoes - OPTIONAL

For glass leaf sliding.

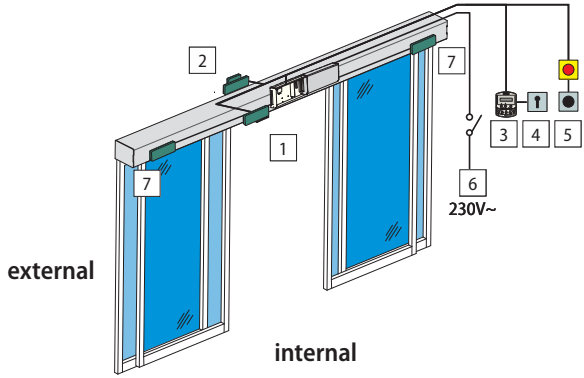
Glass leaf gripper - OPTIONAL



ENGLISH

Translation of the original instructions

3. INSPECTION AND PREPARATION



1	Internal monitored opening detector and safe closing (XV1/XDT1)	included in the supply
2	External monitored opening detector and safe closing (XV1/XDT1)	optional accessory
3	SDK EVO	optional accessory
4	Key switch to lock the SDK EVO	optional accessory
5	Emergency/Key/OPEN control buttons	optional accessories
6	Power supply 230V~	
7	Internal monitored detectors for safe opening (XBFA)	optional accessory

3

3.1 PRELIMINARY INSPECTION

Prior to installation, check soundness of the load bearing masonry structure and door. Perform any required work to assure:

- solidity, stability and absence of any risk of detachment or collapse of the masonry structure, fixed door frame and automation
- level flooring, without any friction/hindrance to smooth leaf sliding
- absence of sharp edges (cutting hazard)
- absence of protruding parts (hooking/entrainment hazard)

3.2 ARRANGEMENT OF ELECTRICAL CABLES

Before performing any operation on the system, disconnect the power supply.

The electrical system must be compliant with the regulations in force in the Country of installation (EN 60335-1...)

The power mains of the automation must be fitted with a multi-pole power switch with a switch-contact gap of at least 3 mm. It is advisable to use a 6A circuit breaker with a multi-pole power switch.

Ensure there is a residual current device with a 0.03 A threshold upstream of the system.

Ensure the earthing system is constructed in a workmanlike manner and connect the structure's metal parts to it.

Lay the electrical cables for connecting the accessories and the electrical power supply **3**.

Protect cables by means of suitable ducting.

Place control accessories within the automation's visual range. These devices must always be accessible, even with the door open.

Comply with the following heights from the ground:

- control accessories = minimum 150 cm
- emergency buttons = max 120 cm

4. TRANSPORT AND RECEIPT OF THE GOODS

HANDLE PACKAGES

Always comply with instructions on the package.

The NET WEIGHT is indicated on the package.

PALLETISED SUPPLY

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS

SINGLE PACKAGE

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS

For manual lifting, there should be 1 person for every 20 kg to be lifted.

UNPACK AND HANDLE

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS

For manual lifting, arrange for an adequate number of people for the weight of the leaf: 1 person for every 20 kg to be lifted.

1. Open and remove all packaging elements.
2. Make sure that all components requested are present and undamaged (**14**).

If the goods supplied are non-compliant, proceed as indicated in the General Conditions of Sale listed in the sales catalogue and which can be consulted on the website www.faacgroup.com.

The unpackaged goods must be handled manually.

Should transport be required, the products must be suitably packaged.

Discard the packaging after use in the appropriate containers in compliance with waste disposal regulations.

The packaging materials (plastic, polystyrene, etc.) must not be left within reach of children as they are potential sources of danger.

5. CUTTING THE PROFILES

If the A1000 KIT has been supplied, the profiles must be cut to the size indicated. This operation is performed in the shop. After cutting, assemble the components to the support profile.

Handling instructions: **17**.

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS

Use a circular or linear saw cutting machine with blade suitable for cutting metals.

It is forbidden to use a hand saw.

Only use equipment in good conditions and fitted with all the required safety devices.

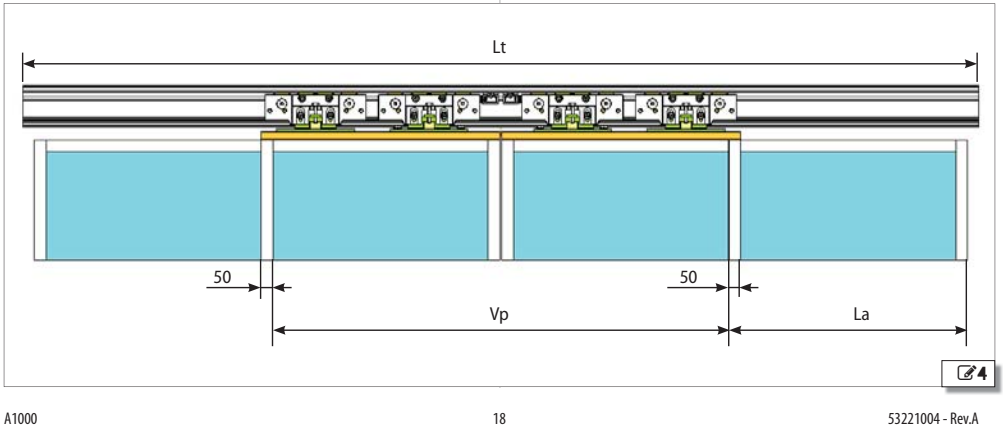
Always comply with the instructions provided by the equipment's manufacturer.

Cutting operations may only be performed by personnel authorised to use the equipment.

Cut to size according to the measurements indicated in **8**.

8 Profile cutting measurements

Profile to be cut	Cutting measurement [mm]
- Support profile	**Lt = Vp x 2 + 100**
- Head section cover	The head section length (Lt) must be calculated based on the measurement of the transit space (Vp).
- Self-supporting profile (OPTIONAL)	100 mm is the overlap between leaves (50 + 50). If the overlap is different, the Lt measurement varies accordingly. The passage opening measurement (Vp) taken on the installation must already be known when placing the order since the profiles can be supplied in 4300 mm or 6100 mm long bars. If installed with side profiles, the support profile must be cut to: Lt - 2mm
- Leaf connection profile (OPTIONAL) - Lower guide profile (OPTIONAL)	**La** The leaf width measurement (La) depends on the transit space measurement (Vp), on the number of leaves and the planned overlap.



6. ASSEMBLING THE HEAD SECTION

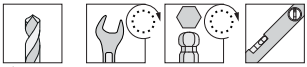
If the A1000 KIT has been supplied, the components must be installed on the support profile. This operation is performed in the shop. The assembled head section is then moved to the installation site.

For handling instructions see 17.

RISKS

PERSONAL PROTECTIVE EQUIPMENT

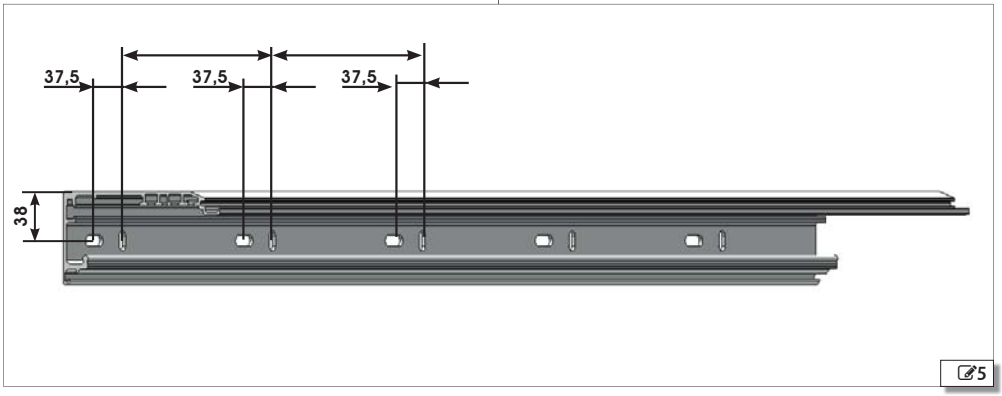
REQUIRED TOOLS



Ø 18 mm 6-8-10-13 5

A torque wrench must be used to achieve the specified fastening torques (Nm).

For manual lifting, arrange for an adequate number of people for the weight of the leaf: 1 person for every 20 kg to be lifted.



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6.1 ASSEMBLING THE COMPONENTS

Keep to the positions indicated in the relevant diagram: 105/106/107.

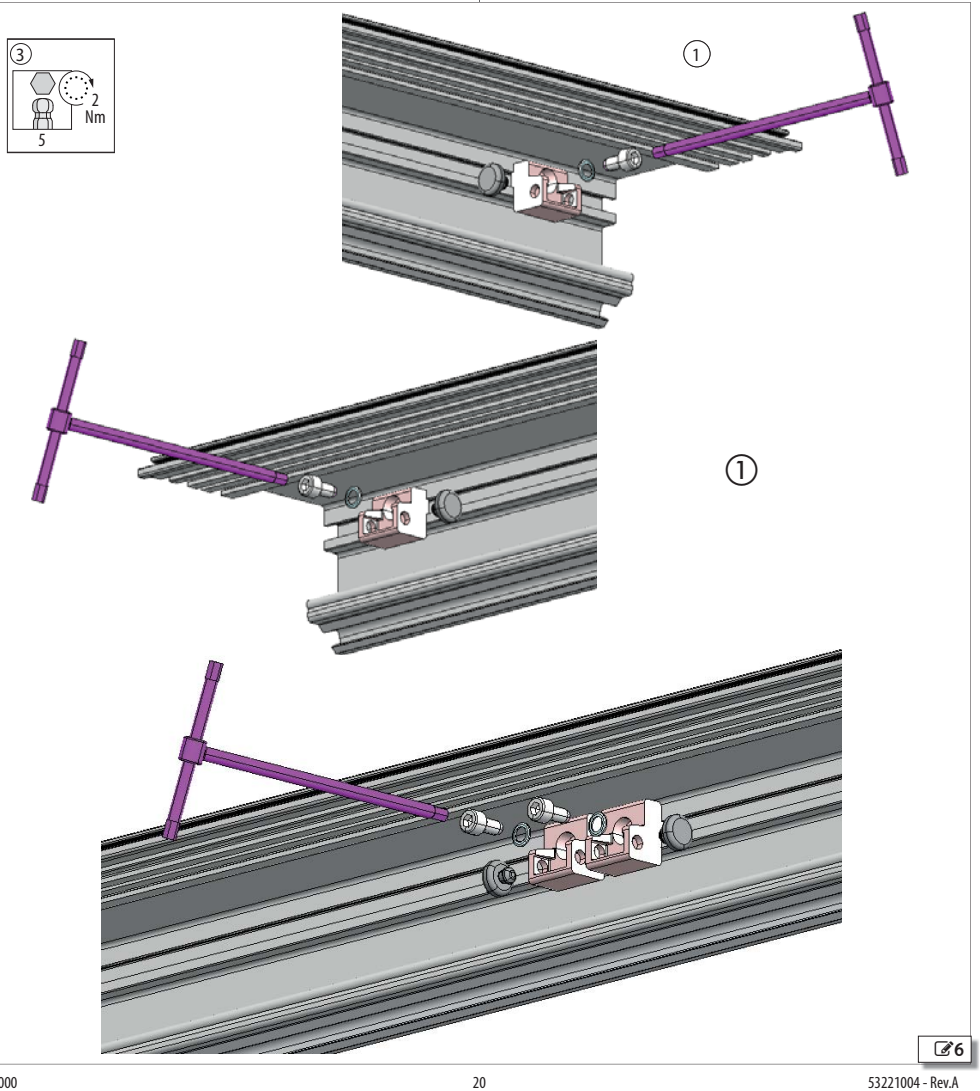
MECHANICAL STOPS

SINGLE LEAF: 2 mechanical stops are required. Place them at the two ends of the profile to begin with.

DOUBLE LEAF: 4 mechanical stops are required. Place 2 of them at the two ends of the profile and 2 in the middle to begin with.

1. Insert the mechanical stops from the side or front 6-①.
2. Make sure that they are resting in the correct position on the profile - 6-② and temporarily fasten each mechanical stop 6-③.

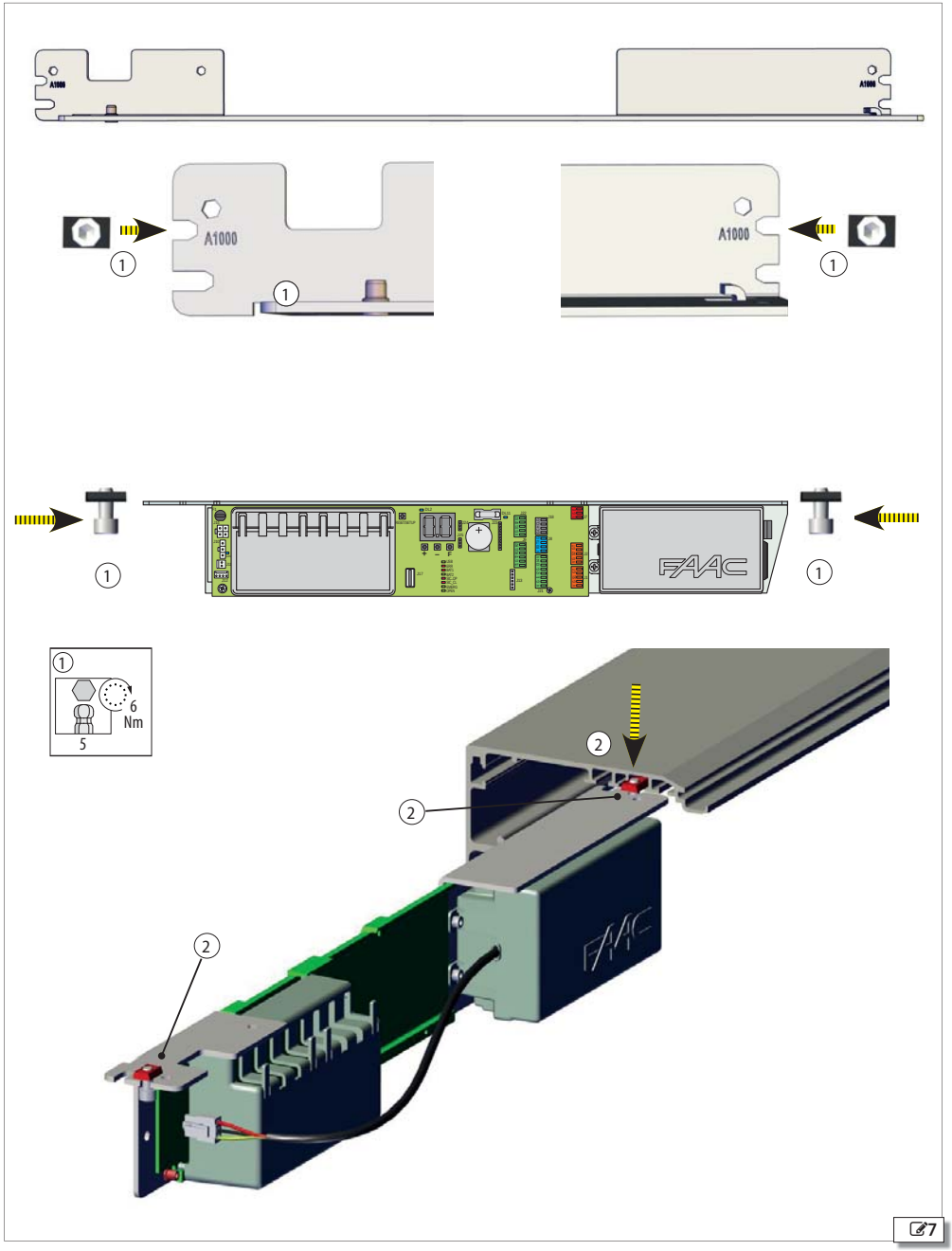
After assembling the leaves, the stops' positions must be adjusted.



6

ELECTRONICS MODULE

1. Insert the screws and plate into the 2 slots indicated by A1000 ✎**7**-①.
2. Insert the electronics module into the profile from the side using the 2 plates ✎**7**-②.



✎**7**

SAFETY CABLES AND SPACERS

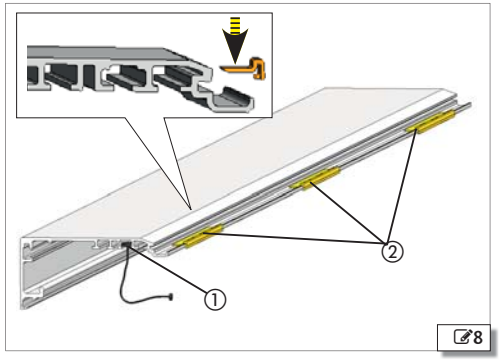
1. Insert the end of each cable into the support profile 8-①.
2. Insert 2 vibration damper spacers 8-② onto the edge of the profile. In the case of profiles longer than 3 m, add a spacer in the middle 8-③.

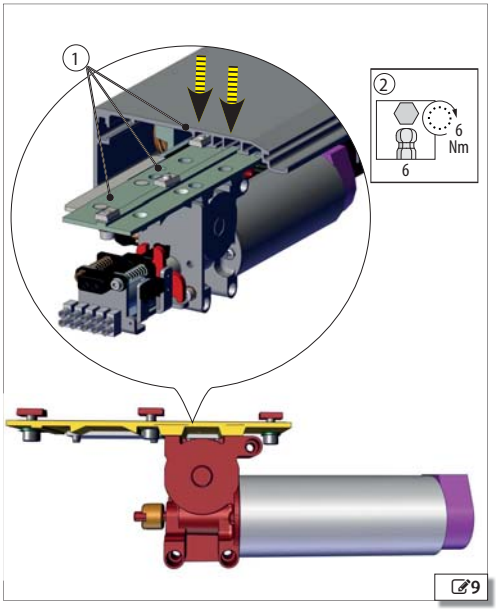
MOTOR

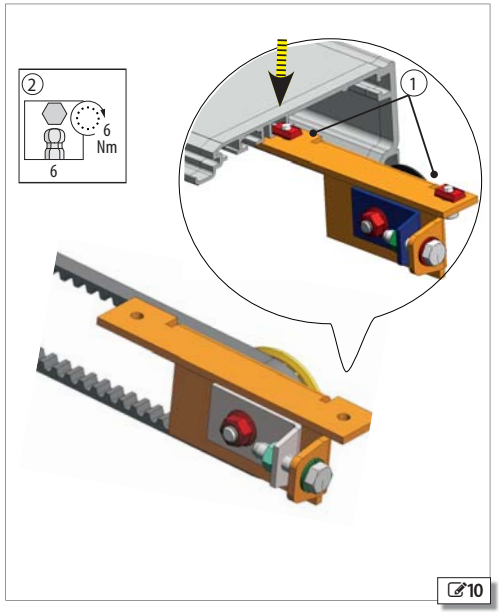
1. Insert the motor in the side of the support profile.
2. Fasten using the 3 plates with screws 9-①

RETURN PULLEY

1. Insert the return pulley from the side 10-①.
2. Fasten using the 2 plates with screws 10-①.







MOTOR RELEASE MONITOR

(OPTIONAL ACCESSORY)

Install the micro switch on the motor block ✎**11**.

INTERNAL RELEASE

Double leaf applications.

For passage openings (Vp) of between 800 and 1000 mm, it is recommended to install the release at the end opposite Motor_1.

For passage openings (Vp) of between 1000 and 3000 mm, it is recommended to install the release close to Motor_1.

Release knobs are available for H100 or H140 covers. The method of assembly and adjustment is the same for both versions.

The knob must be unscrewed and removed to open the automation casing after mounting the internal release.

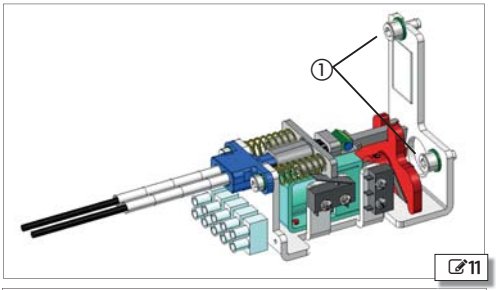
1. Turn the adjustment nut, with the relative locknut ✎**12**-①.
2. Extract about 20 cm steel cable from the sheath. Insert the cable into the adjustment nut and pass it into the release device ✎**12**-②.
3. Tighten the screw ✎**12**-③ to lock the steel cable.
4. Move the black cable sheath against the adjustment screw and screw the adjustment screw fully into the bracket.
5. Insert two plates into the profile ✎**13**-① and install the release knob on the side bracket.
6. Lock the knob: pull and turn it by 90° ✎**12**. The knob must maintain this position.
7. Run the cable with sheath into the suitable cable ducts up to the motor block. Avoid bending the sheath too tightly.
8. Bring the cable with sheath close to part ② ✎**14** and remove any excess sheath.
9. Feed the cable into the guide ✎**14**-② so that the sheath is in contact with it. Insert the cable into the clamp ③.
10. Pull the block ⑧ as far as it will go, compressing the springs. Tighten the clamp screw ③ to lock the steel cable.
11. Cut the excess steel cable.

XB LOCK MOTOR BLOCK OPERATION TEST

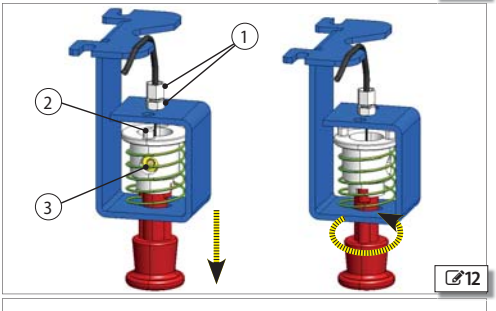
The motor must be free to move: motor block not engaged in the motor shaft coupling.

- Use the adjustment nut to regulate the tension of the cable ✎**12**-①.
- Unlock the knob by turning it 90° and ensure the release is working.
- Pull the knob to make sure that the door opening micro switch is activated ✎**14**-④).

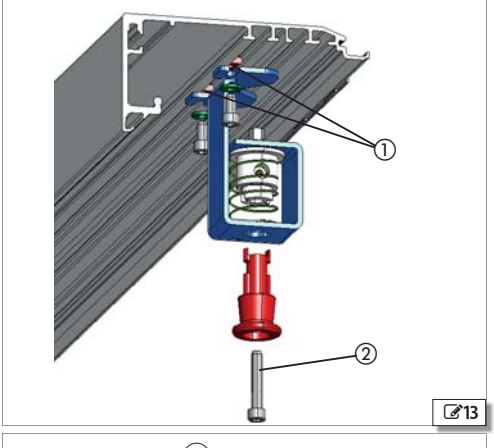
If installation of the external release is required, use suitable key buttons. Insert the release cable in the suitable housing in the motor block.



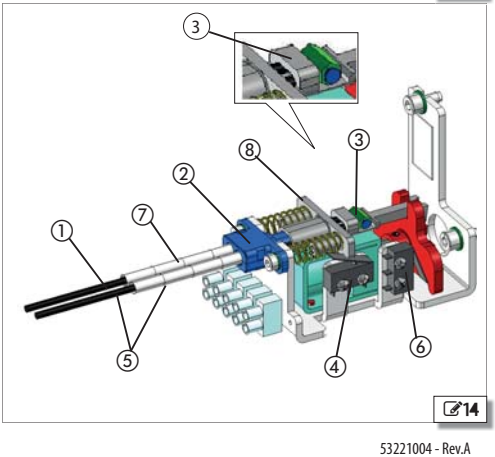
✎**11**



✎**12**



✎**13**



✎**14**

COVER DRILLING

Make a 18 mm diameter hole on the lengthways marking of the cover ✎15-①.

The hole must be centred with respect to the release knob.

CLOSED DOOR MONITOR SENSOR

(OPTIONAL ACCESSORY)

Assemble the magnet on the carriage closest to the closing stop.

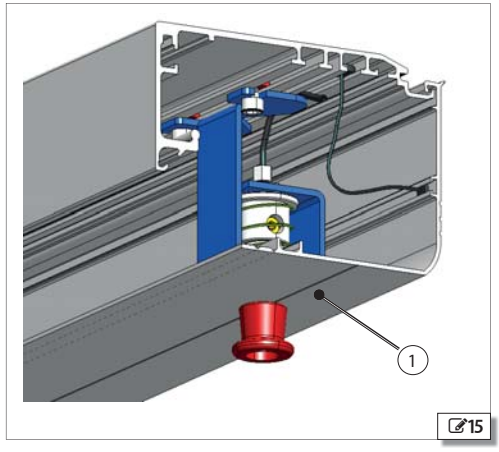
1. Screw the magnet ✎16-① onto the carriage (use the threaded hole normally used to attach the belt).
2. Install the sensor onto the bracket using the plastic nuts ✎16-②.
3. Insert a threaded plate with screw into seat on the support profile and fasten the bracket ✎16-③.

After installing the door the position must be checked to ensure sensor and magnet are aligned when the door is closed.

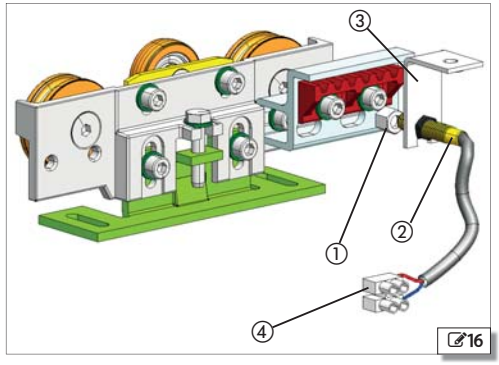
EMERGENCY BATTERY KIT

1. Insert two plates into the support profile as shown in ✎17.
2. Fasten the battery support onto the support profile using the 2 screws and washers (provided).

Check the date on the label on the emergency battery through the window on the battery support plate. ✎17-③ 97



✎15



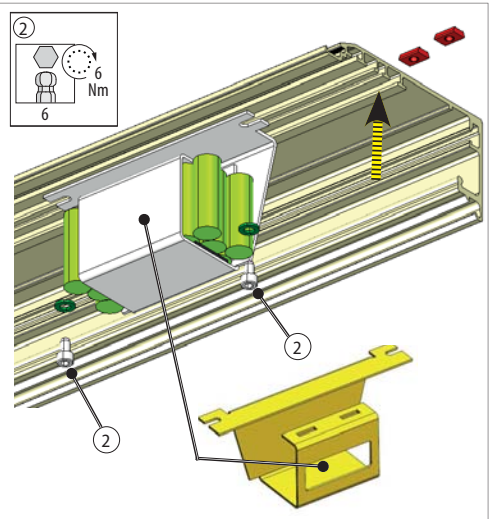
✎16

IDENTIFICATION NUMBER
example:

75501500 2015

Sale code

year of manufacture (yyyy)



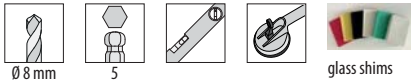
✎17

7. ASSEMBLING THE A1000 CS FRAME

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS



A torque wrench must be used to achieve the specified fastening torques (Nm).

When ordering the door frame, remember to take into account that the opening safety clearances must be as indicated in standard EN 16005:2012 since no opening protection detectors can be installed on the A1000 door.

For manual lifting, arrange for an adequate number of people for the weight of the leaf: 1 person for every 20 kg to be lifted.

7.1 ENTRY WITH TK50 PROFILES

PRELIMINARY OPERATIONS

1. Check soundness of the installation opening (Masonry, Structural Metal Work etc.).
2. Take the measurements of the opening.

The door frame must be fastened to the structure with suitable fasteners (dowels, self-tapping screws etc.).

3. Measure the door frame and compare them with the opening measurements.
4. Check floor levelness with a spirit level.

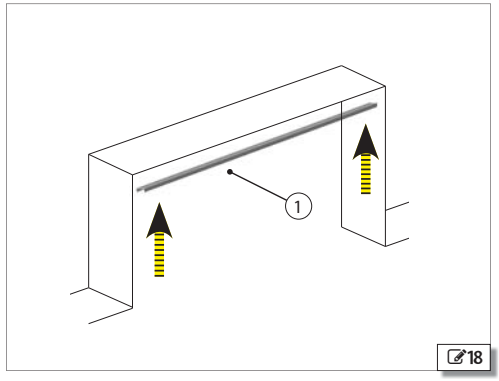
Ensure there are no hydraulic coils or electrical conduits under the floor at the planned drill points.

ASSEMBLING THE FRAME

The supply includes:

- upper head section with reinforcement counter-plate for A1000
- 2 mobile leaves assembled with or without glazing
- 2 fixed side leaves without glazing to be assembled with upper head section
- seal for fixed glass leaves
- frame assembly screws kit

1. Mount the upper balancing profile on the opening (STD solution) **19-** ①.
2. Fasten with appropriate screws with minimum 500 mm pitch.
3. Assemble the entry door parts, consisting of 2 leaves open at the top and connect it to the head section connection profile, by means of the connecting bracket shown **19-** ②. Join the head section to the profile using the supplied screw kit.
4. Lift the assembled entry door.
5. Place the entry door in the opening and insert it into the top balancing profile.
6. Check levelness with a spirit level.
7. Fasten the side balancing profiles using suitable screws next to the grub screws **20-**③.



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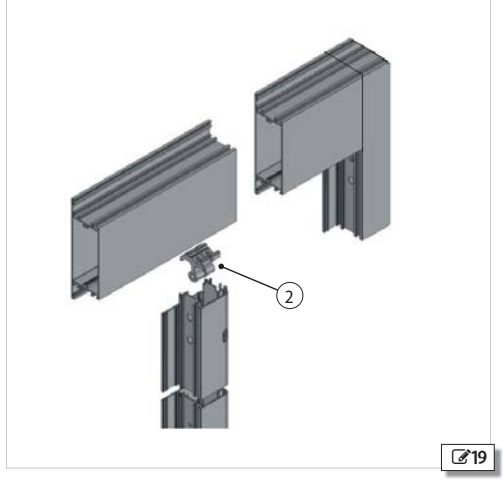


19

8. Check verticality with a spirit level.
9. Adjust the distance between the leaf profile and balancing profile using the grub screws on the profile **20**-③. This adjustment corrects any flaws on the wall surface.
10. Check proper vertical and horizontal alignment.
11. Fasten the fixed leaf sides as shown in **20**-④.

If the balancing profile needs to be cut, pay attention to the alignment of the holes, which have a variable spacing. It is recommended to make the reference marks for the cut starting from the top.

FASTENING THE FIXED LEAVES

Fixed leaves may be:
- with low skirting
- with high skirting

Fasten the fixed leaf to the floor by drilling the leaf **21**-③ and fasten it using suitable screws and dowels.
- Use adequate wall bits and dowels with screws.

Ensure there are no hydraulic coils or electrical conduits under the floor at the planned drill points.

MOUNTING MOBILE LEAVES

Mount the leaves as described in § 9 **29**.

GLAZING INSTALLATION

1. Place the 3 shims in the lower part of the profile **21**-②.
2. Place the glazing on the shims. **22**- ③④

Handle the glazing adhering to the safety warnings in the Safety chapter.

3. Secure the glass using the beading supplied **22**-⑤.
4. Insert the beading along the entire length of the perimeter.

The seal must be inserted with the spline side towards the inside of the profile **22**-①.

ASSEMBLY OF THE HEAD SECTION TO THE UPPER PROFILE

Mount the assembled head section onto the upper profile by means of suitable attachments.

After mounting the head section, perform all procedures to secure the leaf to the carriages as set out in the chapters concerning kit assembly.

Refer to chapter § 8 also for all the adjustment procedures.

7.2 ENTRY DOOR WITH TK20 PROFILES

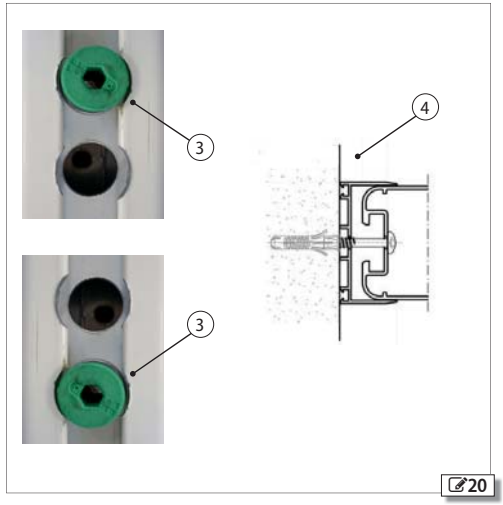
PRELIMINARY OPERATIONS

1. Check soundness of the installation opening (Masonry, Structural Metal Work, etc.).
2. Take the measurements of the opening.

The frame must be fastened to the structure with suitable attachments.

Ensure there are no hydraulic coils or electrical conduits under the floor at the planned drill points.

3. Measure the door frame and compare them with the opening measurements.
4. Check floor levelness with a spirit level.



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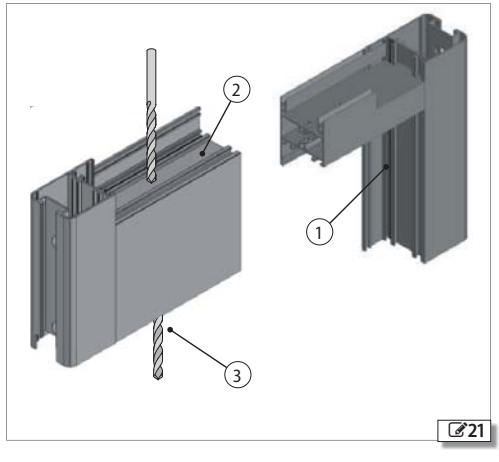

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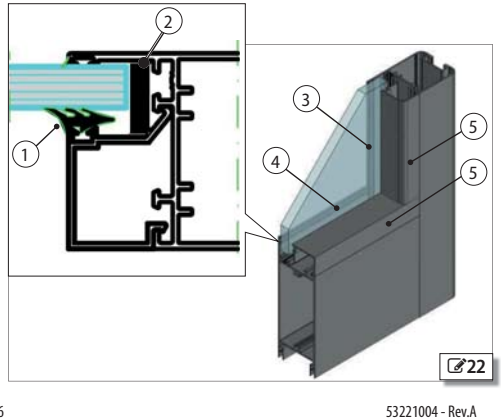

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ASSEMBLING THE FRAME

The supply includes:

- 4 leaves (2 fixed leaves and 2 mobile leaves with installed glazing).
- side and upper balancing profiles
- alignment profile
- fixed leaf beading
- floor shoe

1. Install the upper balancing profile **23**-①.
2. Install the side balancing profiles **23**-②.
3. Mount the floor profile **23**-③.
4. Insert the fixed leaf by tilting it and inserting it into the top profile **24** ① ② ③.
5. Place horizontally then fasten the leaf.
6. Mount the upper labyrinth profile **24**-⑤.

MOUNTING MOBILE LEAVES

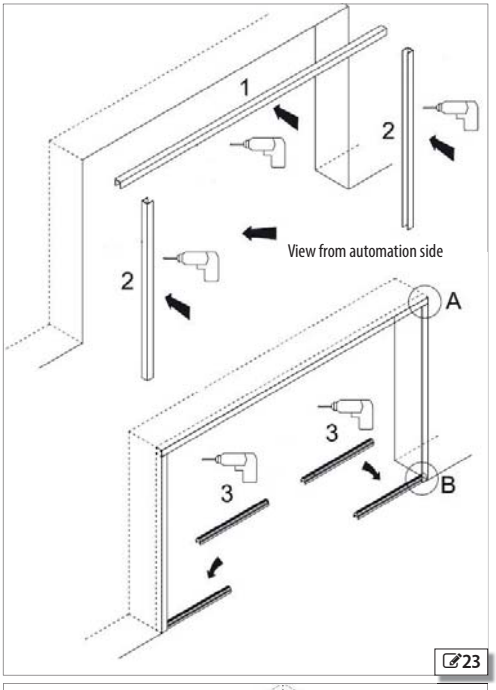
Mount the leaves as described in § 9 **29**.

ASSEMBLY OF THE HEAD SECTION TO THE UPPER PROFILE

Mount the assembled head section onto the upper profile by means of suitable attachments.

After mounting the head section, perform all procedures to secure the leaf to the carriages as set out in the chapters concerning kit assembly.

For all the adjustment procedures, also refer to chapter § 8 **28**.



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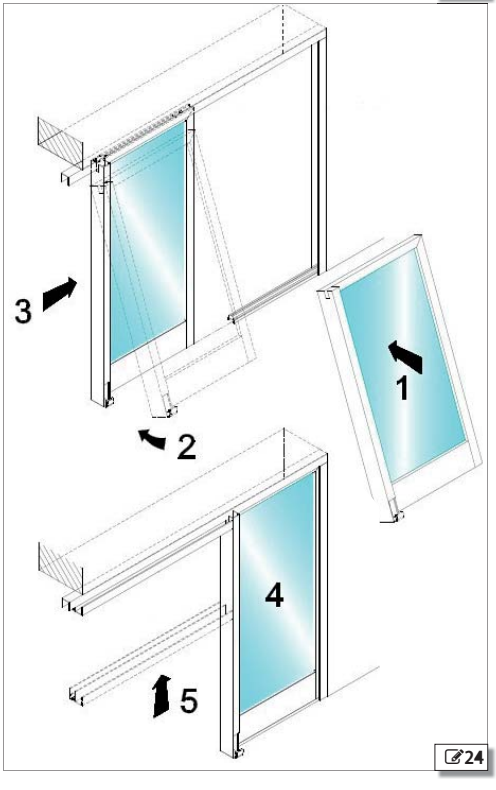

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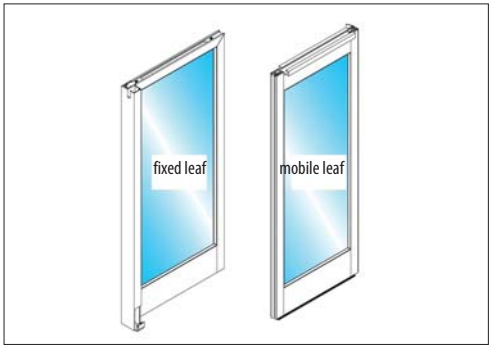
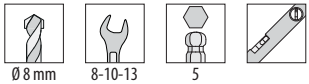


8. INSTALLING THE HEAD SECTION

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS



For manual lifting, there should be 1 person for every 20 kg to be lifted.

8.1 PRELIMINARY OPERATIONS

1. To be able to perform fastenings, the casing and electronics module must be temporarily disassembled and the components must be moved as they are a hindrance.

To make subsequent replacing easier, mark components' positions.

- With the automation on the ground, extract the safety cables and remove the casing.
- Loosen the screws of the electronics module and remove it.
- Loosen the screws of the components that are a hindrance (e.g. motors) and slide them along the profile.

2. Establish the fastening height of the support profile:
see installation diagrams **102** **103** **104**

The minimum distance between the top of the support profile and the ceiling must be 80 mm **25**.
Check the horizontal with a spirit level.

3. Proceed according to the intended type of installation.

8.2 FASTENING TO THE WALL

The supporting wall must be adequate for the weight of the entry door (automation with leaves). It is recommended to use dowels with adequate screws and tightening torque.

1. Lift the support profile to the established fastening height.
2. Mark the drilling points on the wall.

Check the horizontal with a spirit level.

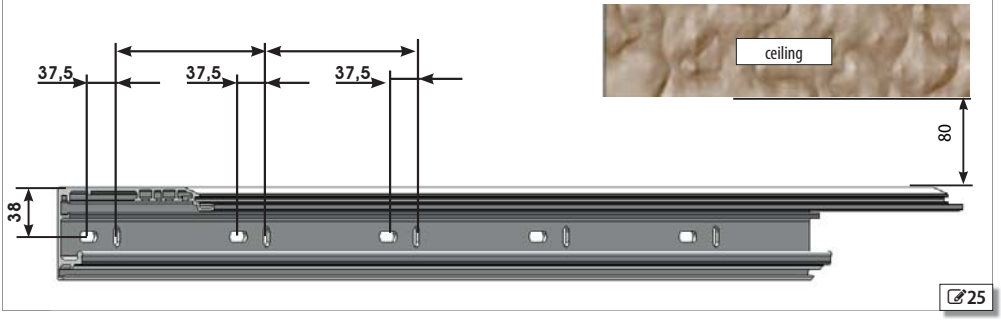
3. Drill the holes on the wall.
   - Use suitable drill bits for the wall material.
4. Lift the support profile. Start fastening at a vertical slot at one end and a horizontal slot at the other end.

Check the horizontal with a spirit level.

5. First fasten it in the centre and then fasten it at the other points, alternating vertical and horizontal slots at a distance of 200 mm **25**.

Upon completing head section installation, reposition the components you have moved and reassemble the electronics module in the correct position.
Finally, fit again the safety cables and the casing.

Screws and dowels not supplied.

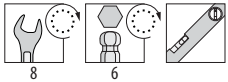


9. INSTALLING THE LEAVES

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS



For manual lifting, there should be 1 person for every 20 kg to be lifted.

9.1 MOUNTING THE LOWER SHOES

SHOE WITH TK50 BRACKET

For fastening to the wall or the fixed leaf ✎**26**.

- use suitable screws (not provided).

TK50 SWIVEL SHOE

For fastening to the floor ✎**27**.

- use suitable screws (not provided).

SHOE WITH TK20 BRACKET

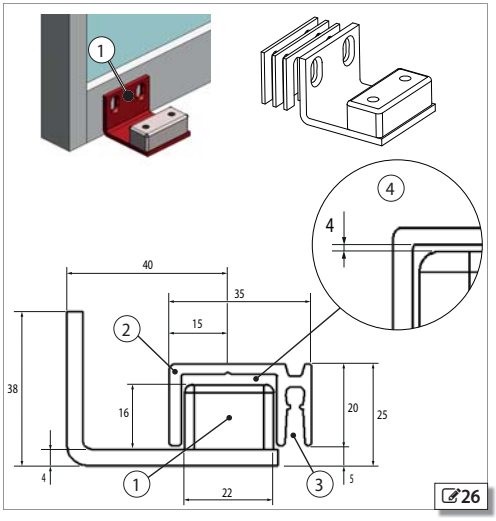
For fastening to the fixed leaf ✎**28**.

- use suitable screws (not provided).

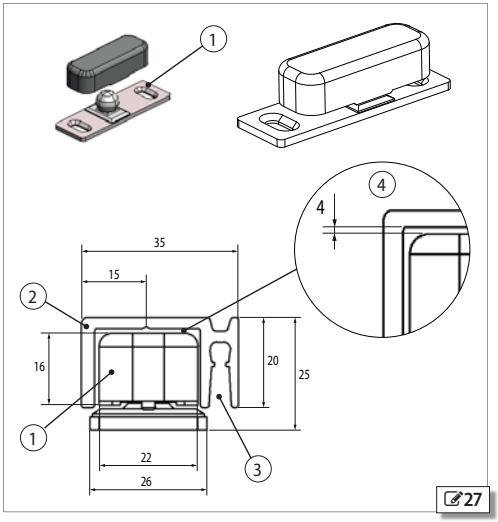
Check leaf verticality.

When the leaf is open or closed, the shoe must be fully inside the lower leaf profile.

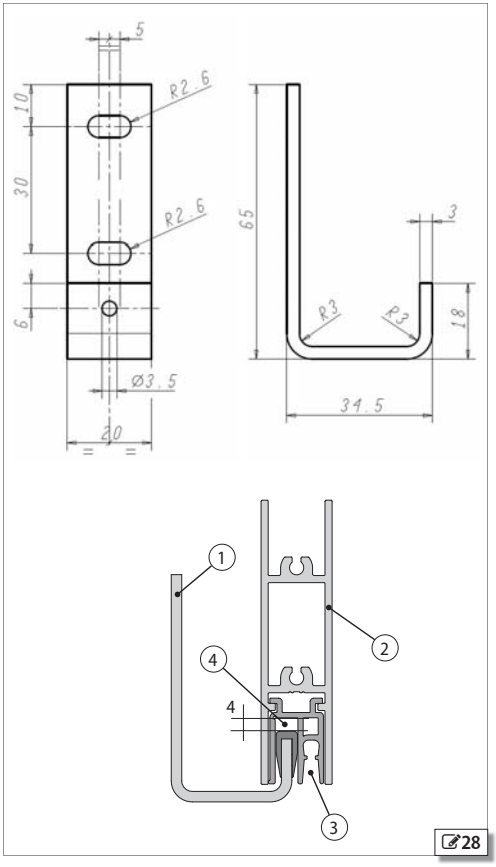
The distance between the shoe and the lower profile must be 4mm (ref. ④ ✎**26**-✎**27**-✎**28**).



✎**26**



✎**27**



✎**28**

ENGLISH

Translation of the original instructions

9.2 MOUNT PROFILES ON THE LEAVES

Before installing the leaves, ensure there is no cutting or dragging hazard.
Check leaf verticality.
Remove any protrusions and/or sharp edges on the frame and leaves.

1. Position and fasten the attachment profile onto the top of the leaf ✎**29**.

Use suitable screws for the weight of the leaf with adequate tightening torque.

2. Position and fasten the lower guide profile onto the bottom of the leaf ✎**30**.

9.3 MOUNT THE LOWER SWEEPER

(OPTIONAL ACCESSORY)

1. Cut the sweeper to the same length as the leaf.
2. Insert the brush into the appropriate housing in the lower guide profile ✎**30**-①.

GLASS LEAVES

For installation of glass leaves see the dedicated section: § 10 **32**.

9.4 INSTALLING THE LEAVES

Install each leaf as described below.

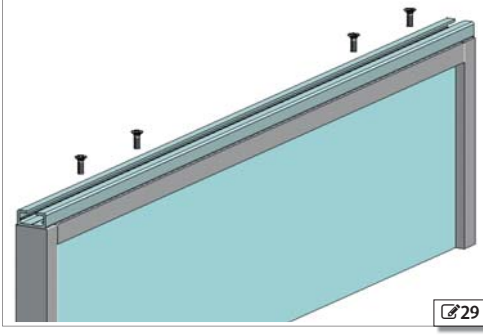
1. Disassemble the 2 carriages:
   - Remove the 2 fastening screws ✎**31**-①.
   - Separate the top plate of the carriage from the bottom plate ✎**31**-①.
2. Slowly insert the lower plates of the carriage into the profile ✎**31**-①.
3. Adjust the position of the two plates on the leaf.
   - Keep to the measurements indicated in diagrams ✎**91** ✎**92** ✎**93**

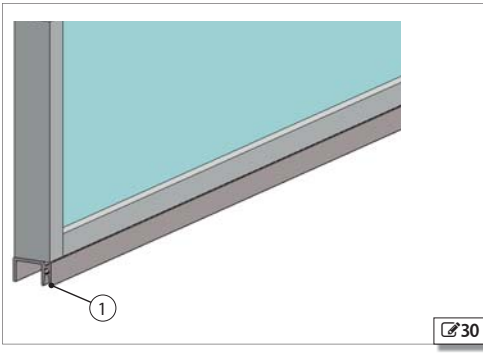
   and the positions shown in figures:
   - ✎**94** for RIGHT single leaf automations
   - ✎**95**for LEFT single leaf automations
   - ✎**96** for DOUBLE leaf automations
4. Fasten the plates of the carriages using the 2 screws ✎**31**-①.

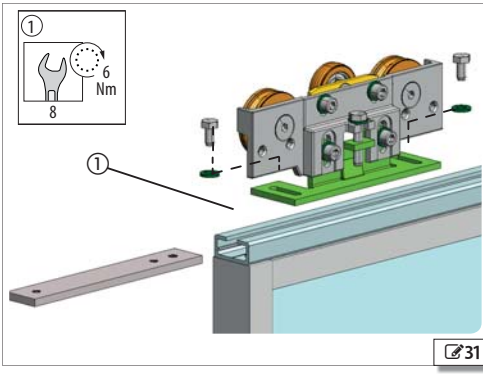
For manual lifting, there should be 1 person for every 20 kg to be lifted.

Adjust the counter wheel ✎**34**.

Screws not supplied.







9.5 ADJUSTING THE LEAVES AND CARRIAGES

Act on the carriages to adjust height and depth of the leaves.

Adjust the counter wheel to prevent the carriage coming off the sliding guide.

HEIGHT OF THE LEAVES

The carriages allow leaf height to be adjusted by ± 7.5 mm.

1. Slightly loosen the two screws **32**-①.
2. To lift the leaf, turn the screw ② clockwise. To lower the leaf, turn screw ② anti-clockwise.
3. Tighten the two screws **32**-①.

DEPTH OF THE LEAVES

1. Loosen the 2 screws **33**-①.
2. Move the leaf on the two slots at the base of the carriages as desired.
3. Tighten the 2 screws **33**-①.

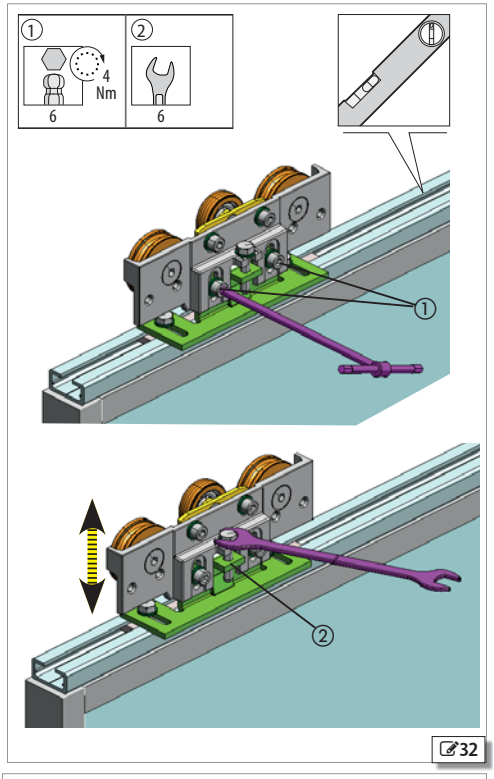
After the adjustments check the vertical and horizontal positions of the leaf with a spirit level.

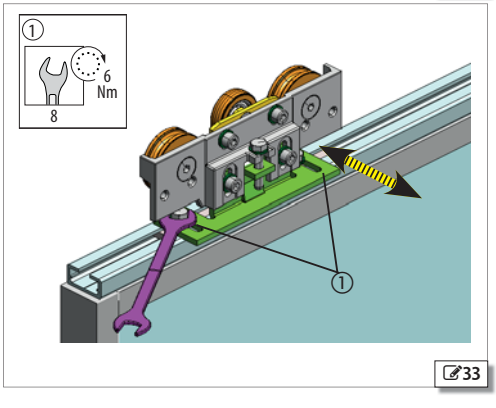
COUNTER WHEEL

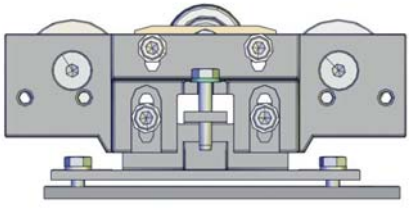
1. Loosen the screws **34**-①.
2. Adjust the height by raising or lowering the wheel support. **34**-②.
   - The wheel must be brought close to the top profile **34**-③. It is recommended to place a 0.5 mm shim between wheel and profile. Remove the shim upon completing adjustment.
3. Tighten the screw **34**-①.

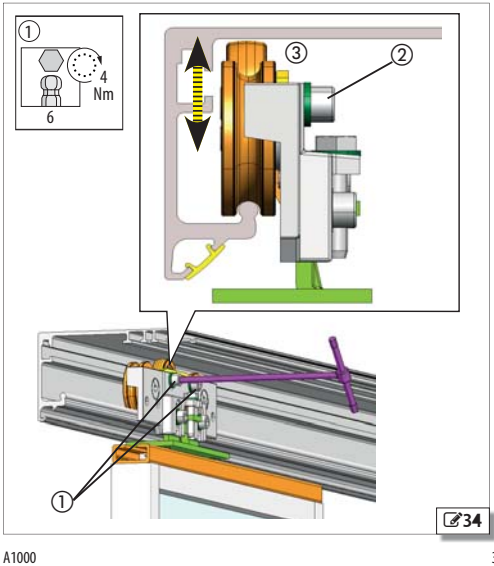
Manually move the leaves to ensure the counter wheel runs freely along the entire stroke. Ensure there are no friction points with the surface of the support profile.

When installation has been completed, apply the FAAC stickers that were supplied with automatic door to the glass leaves.









ENGLISH

Translation of the original instructions

10. INSTALLING THE GLASS LEAVES

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS

For manual lifting, there should be 1 person for every 20 kg to be lifted.

Comply with the glass thickness = 10-11 mm.

1. The glass must be drilled as shown 🖉**35**-①.
2. Insert a bush in each hole in the glass 🖉**35**-②.
3. Make 2 holes on the profiles of the gripper 🖉**35**-③-④.
4. Cut 2 pieces of glass beading with the length equal to L.
5. Drill holes in the seals in correspondence to the holes in the glass 🖉**35**-⑤
6. Insert the 2 seals into the profiles 🖉**35**-⑥.
7. Clean the glass, insert the gripper.

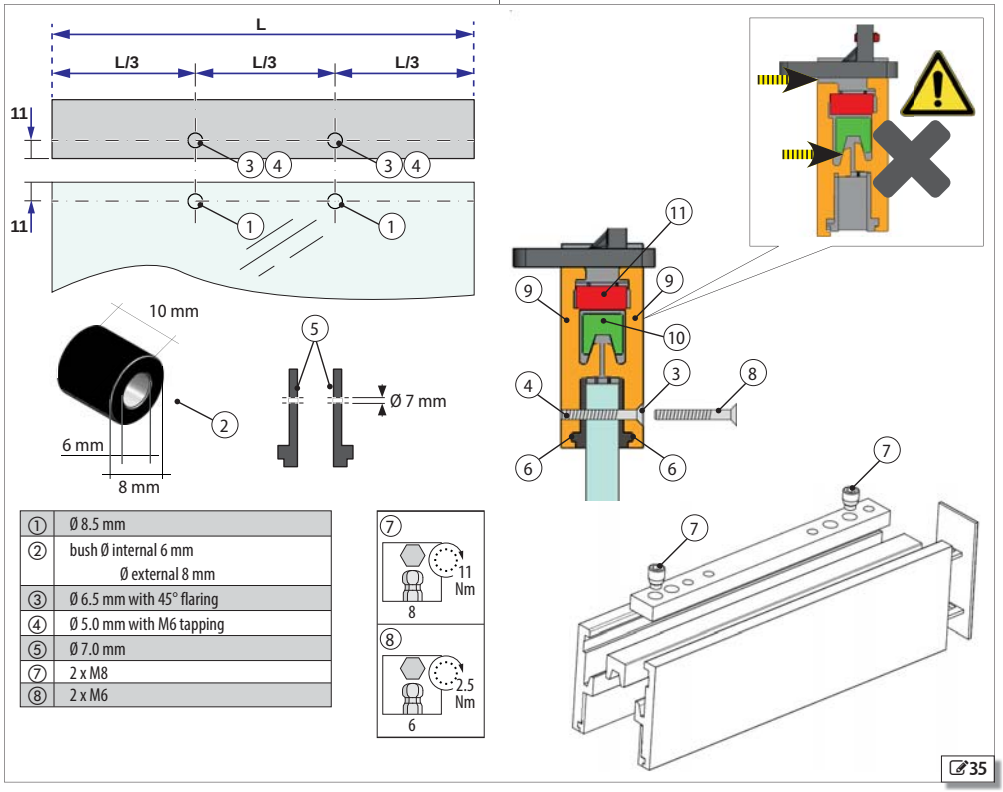
Ensure the beading is in its housing.

8. Assemble the gripper as follows: Insert elements ⑩ and ⑪ into the 2 plates ⑨.
9. Tighten the 2 grub screws 🖉**35**-⑦
10. Part ⑪ must be aligned with the fixing holes on the carriage 🖉**36**-③
11. Insert 2 galvanised countersunk head screws into the holes 🖉**35**-⑧.

The glass must be fully inserted until it touches the clamps on its upper profile. If the grip of the clamp on the glass is not correct, the glass might fall. The two clamp profiles must be aligned.

Install each leaf as described below.

12. Adjust the counter wheel to prevent the carriage from falling.
13. Place the lower plate onto the glass leaf.
    - Keep to the measurements indicated in diagrams :
    - 🖉**94** - **105** for RIGHT single leaf automations
    - 🖉**95** - **106** for LEFT single leaf automations
    - 🖉**96** - **107** for DOUBLE leaf automations.
14. Fasten the lower plate onto the leaf gripper using the 2 screws 🖉**36**-③



①	Ø 8.5 mm
②	bush Ø internal 6 mm Ø external 8 mm
③	Ø 6.5 mm with 45° flaring
④	Ø 5.0 mm with M6 tapping
⑤	Ø 7.0 mm
⑦	2 x M8
⑧	2 x M6

For manual lifting, arrange for an adequate number of people for the weight of the leaf: 1 person for every 20 kg to be lifted.

Use suitable glazing suction cups.

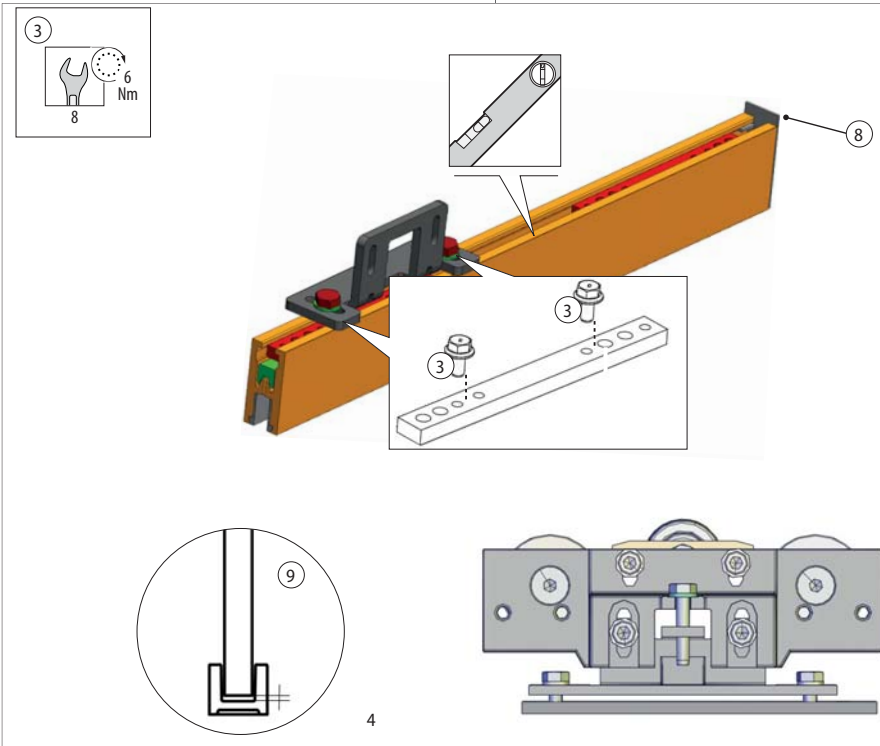
15. Adjust the counter wheel, see **31**).
16. Insert the end cover **36**-⑧.

Check leaf verticality.

When the leaf is open or closed, the shoe must be fully inside the lower leaf profile.

The distance between glass and lower shoe must be 4mm **36**-⑨.

When installation has been completed, apply the FAAC stickers supplied with the automatic door to the glass leaves.



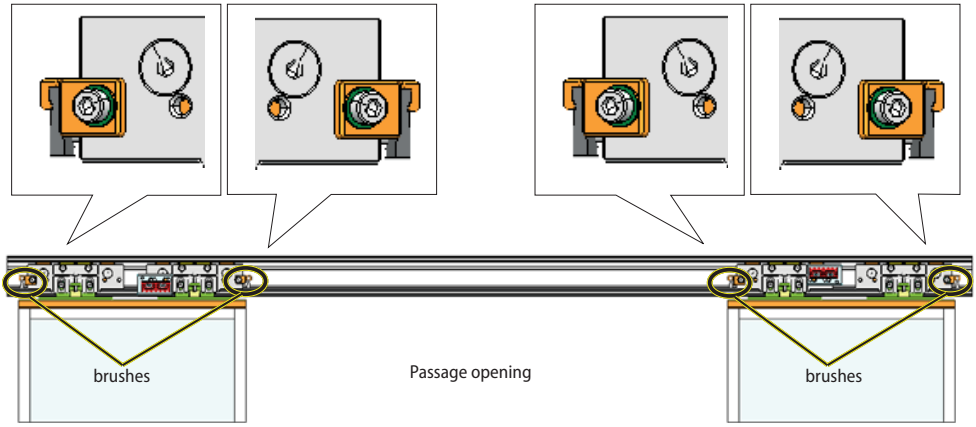
36

10.1 MOUNTING THE BRUSHES

For double leaf automations: ✎37.
For single leaf automations: ✎37.

Double leaf

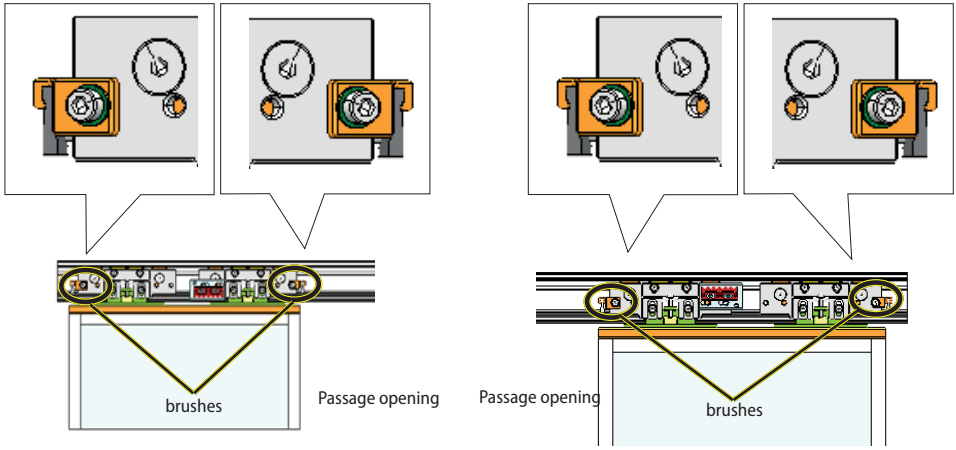
A



Left opening single leaf

Right opening single leaf

B



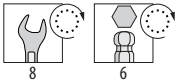
✎37

11. ASSEMBLE THE BELT, CASING AND ACCESSORIES

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS



Do not place hands between: the pulley and belt or between the sliding guide and carriage wheels.

11.1 MOUNTING THE BELT

Close the leaves at the centre line (closing point in case of single leaf).

Move the leaves by hand and ensure the movement is smooth and friction-less along the stroke.

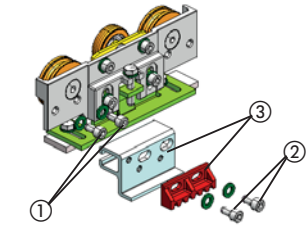
It is mandatory to use a FAAC belt for the A1000

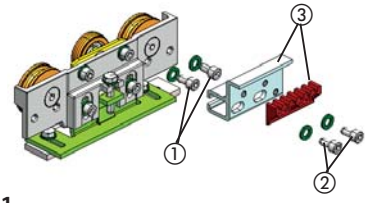
1. Place one end of the belt over the pulley of the motor. Fasten the two ends using the fittings ✎**38**(1) and screws ✎**38**(2).
2. Position the assembled fitting with the belt on the carriage. Keep to the positions indicated in ✎**38** and fasten using the screws ✎**38**-③.

In case of double leaf, the belt joint must be fastened on the lower fitting (on the left leaf).

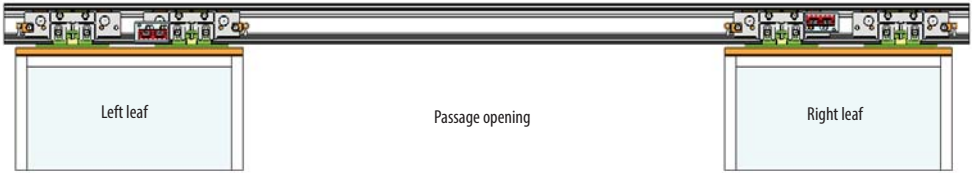
The position of the belt fitting determines the opening direction.

3. Position the belt also on the pulley of the second motor.



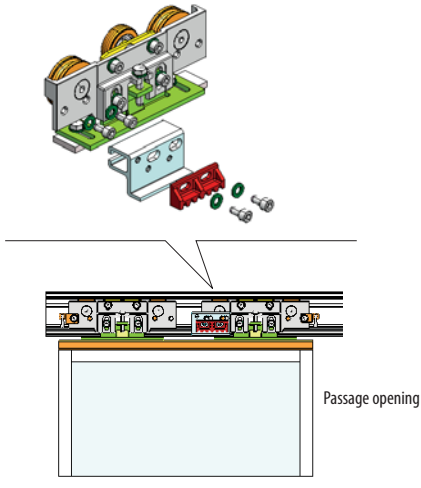


Double leaf with rM = 1 (Default)

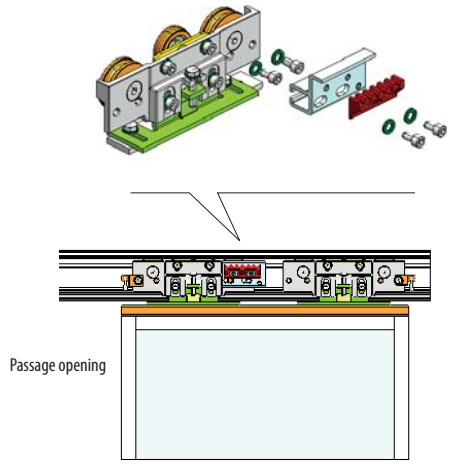


Double leaf with rM = -1

✎38



Single leaf - LH opening with rM = 1 (Default)
Single leaf - RH opening with rM = -1



Single leaf - RH opening with rM = 1 (Default)
Single leaf - LH opening with rM = -1

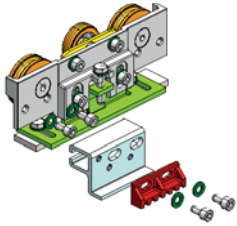
ADJUSTING THE BELT

Open and close manually a few times: the belt must remain in its seat flush with the pulley.

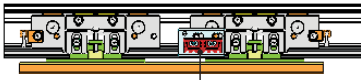
When the belt is installed, operate the leaves with care to prevent crushing your fingers between the carriage wheels and the sliding guide and between the pulley and belt.

SINGLE LEAF WITH LH OPENING / DOUBLE LEAF

1. Connect the belt fitting to the carriage.
2. Attach a 1kg weight in the centre of the upper section of the belt.
3. Adjust the tension of the belt until the measurement of arrow f corresponds to the indications in ▦ **9**.
4. In the case of a double leaf: after adjustment, mount the second upper belt fitting and connect it to the carriage.

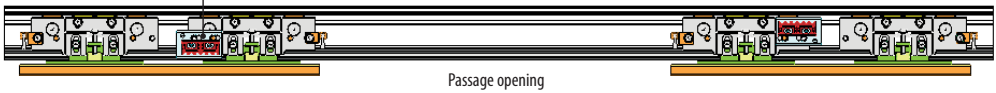


Single leaf - LH opening

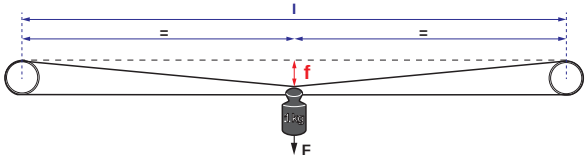


Passage opening

Double leaf

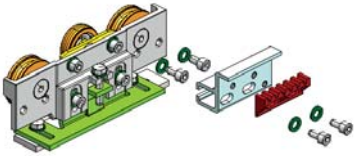


Passage opening

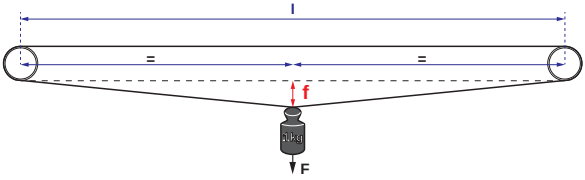


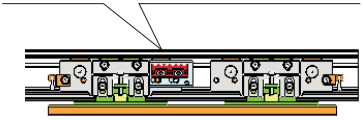
SINGLE LEAF WITH RH OPENING

1. Connect the belt fitting to the carriage.
2. Apply a 1 kg weight in the centre of the belts lower section.
3. Adjust the tension of the belt until the measurement of arrow **f** corresponds to the indications in ▦ **9**.



Single leaf - RH opening





Passage opening

11.2 BELT TENSIONING

1. To tension the belt correctly, proceed as follows.
2. Loosen the nut 39 -①.
3. Adjust the screw and nut 39-② to tension or slacken the belt.
4. Attach a **1 kg** weight in the centre of the lower section of the belt.
5. Measure the arrow **f** and adjust the screw 39 -② using a hex spanner until obtaining the measurement specified in the table.
6. After adjustment, tighten the screw 39-①.
7. Carry out a few cycles and make sure the belt remains in its seat flush with the pulley on the main motor and on the return pulley.

Caution - make sure that the belt remains flush with the pulleys of the main motor and the return pulley.

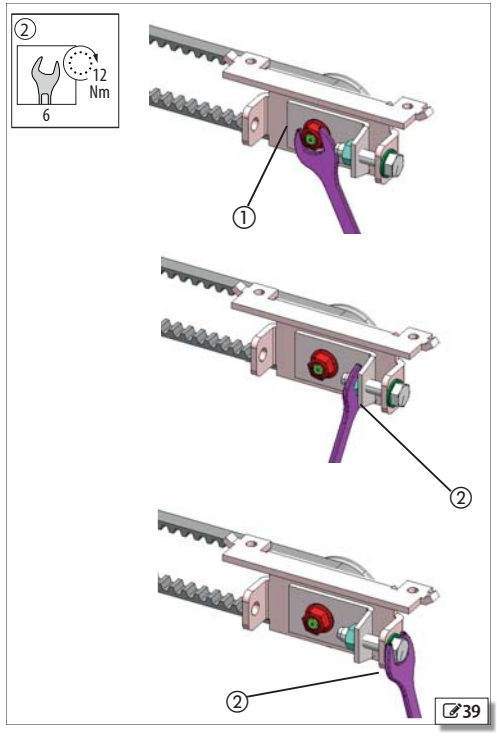
8. If the belt is not flush with the pulleys, loosen the fastening screws of the return pulley bracket 39 -③
9. Rotate the return pulley bracket clockwise.
10. Tighten the return pulley bracket fastening screws.
11. Perform a few cycles again and check that the belt remains flush with the pulley.

Close the door and ensure:

- the closing point between the two leaves matches with the centre line of the support profile.
- complete opening and closing is possible.

In case of deviation, check the position and correct connection of the belt fittings.

When the belt is new tensioning adjustment must be repeated after the first 100 cycles.



ENGLISH

Translation of the original instructions

9 A1000 belt tensioning (measurements in mm)

RH single leaf Pulley centre distance (I)	Belt length	f
1000	2140	17
1080	2300	19
1160	2460	20
1240	2620	22
1320	2780	23
1400	2940	24
1480	3100	26
1560	3260	27
1640	3420	29
1720	3580	30
1800	3740	31
1880	3900	33
1960	4060	34
2040	4220	35
2120	4380	37
2200	4540	38
2280	4700	40
2360	4860	41
2440	5020	42
2520	5180	44
2600	5340	45
2680	5500	47
2760	5660	48
2840	5820	49

LH single leaf Pulleys centre distance (I)	Belt length	f
1000	2140	17
1080	2300	19
1160	2460	20
1240	2620	22
1320	2780	23
1400	2940	24
1480	3100	26
1560	3260	27
1640	3420	29
1720	3580	30
1800	3740	31
1880	3900	33
1960	4060	34
2040	4220	35
2120	4380	37
2200	4540	38
2280	4700	40
2360	4860	41
2440	5020	42
2520	5180	44
2600	5340	45
2680	5500	47
2760	5660	48
2840	5820	49

Double leaf Pulleys centre distance (I)	Belt length	f
1250	2640	22
1320	2780	23
1390	2920	24
1460	3060	25
1530	3200	27
1600	3340	28
1670	3480	29
1740	3620	30
1810	3760	31
1880	3900	33
1950	4040	34
2020	4180	35
2090	4320	36
2160	4460	38
2230	4600	39
2300	4740	40
2370	4880	41
2440	5020	42
2510	5160	44
2580	5300	45
2650	5440	46
2720	5580	47
2790	5720	49

11.3 ADJUSTING THE MECHANICAL STOPS

The adjustment of the mechanical stops is indispensable for correct operation of the automation.

The carriages must come into contact with the mechanical stops positioned at stroke end in opening and closing.

STOPS ON OPENING

1. Loosen the screw ✎**40**- ① to release the mechanical stop.
2. Open the leaf completely ✎**41**-①.
3. Bring the pad of the mechanical stop and the carriage into contact ✎**41**-②.
4. Tighten the screw to lock the mechanical stop ✎**40**-①.

SINGLE LEAF CLOSING STOPS

With closed door the carriage must be in full contact with the mechanical stop.

1. Loosen the screw to release the mechanical stop ✎**40**-①.
2. Close the leaf.
3. Bring the pad of the mechanical stop and the carriage into contact ✎**41**-②.
4. Tighten the screw to lock the mechanical stop ✎**41**-①.

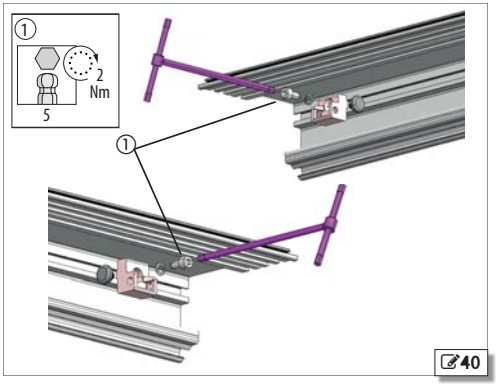
DOUBLE LEAF CLOSING STOPS

In double leaf automations, the leaves must close at the head section centre line.

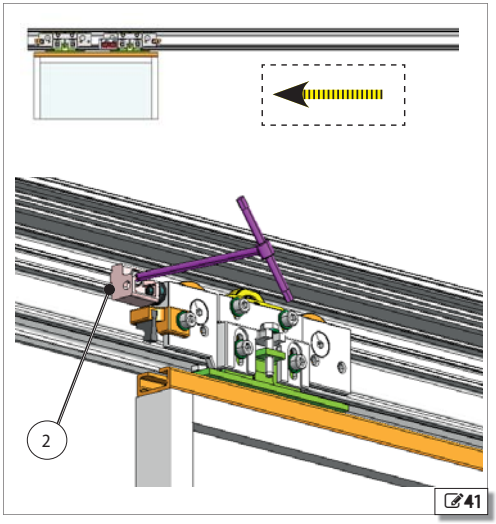
1. Move the leaves in the closed door position.
2. For each leaf, ensure the carriage is in full contact with the closing stop pad.

Should adjustment be required:

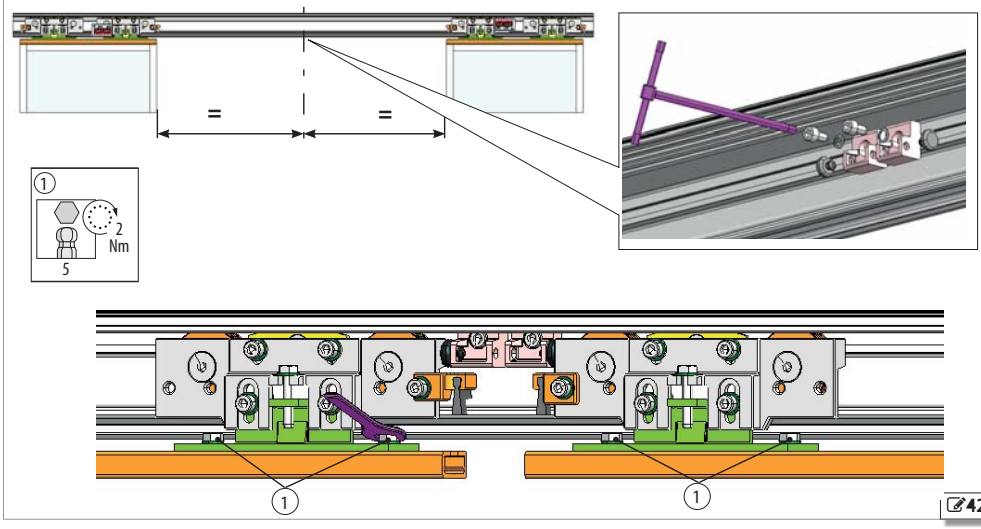
3. Bring the pad of the mechanical stop and the carriage into contact ✎**42**-②.
4. Tighten the screw to lock the mechanical stop ✎**40**-①.



✎**40**



✎**41**



✎**42**

11.4 MOUNTING THE SIDE PROFILES

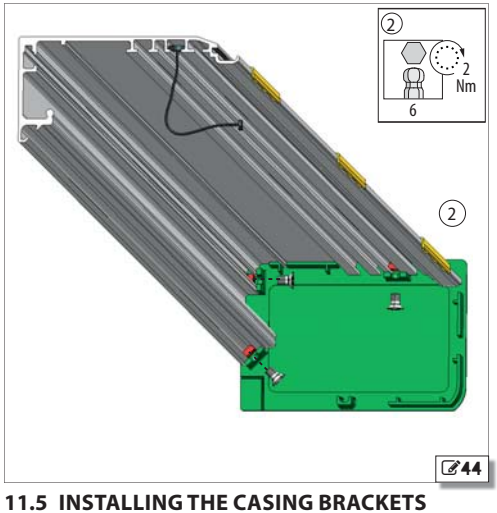
The side profiles enable the casing to remain closed.

If there are no side profiles, cover mounting brackets should be used.

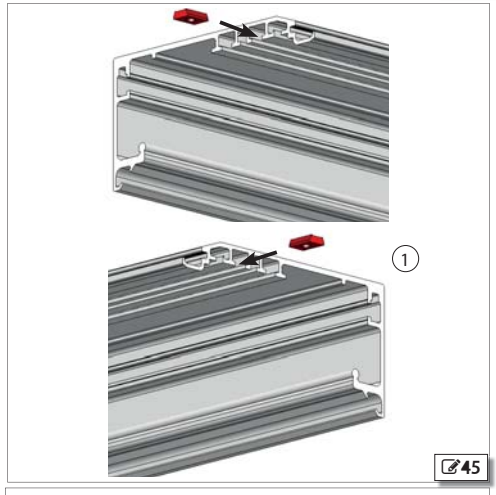
1. Place 6 plates on the support profile (for profiles longer than 3m) **43**-①.
2. Mount the side profiles for H100 casings on the ends of the support profile.
3. Fasten each side profile using the 3 screws provided **44**-②.

Use at least one central bracket **46**-② for profiles longer than 3 m.

43



44



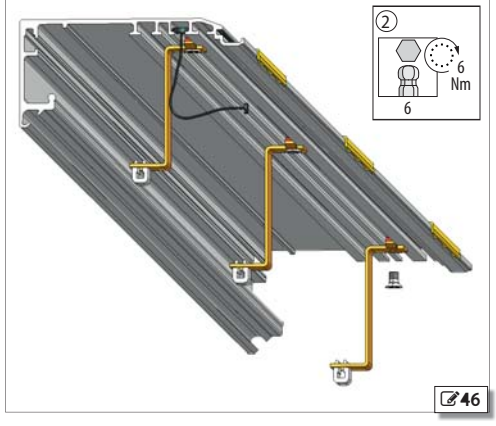
45

11.5 INSTALLING THE CASING BRACKETS

The brackets enable the casing to be closed if side profiles are not used.

Brackets are available for H100 covers.
It is recommended to use a central bracket for profiles longer than 3 m.

1. Place 2 plates **45**-① on the support profile (for profiles longer than 3 m, a third plate should be added).
2. Mount the brackets and fasten them using the screws provided **46**-②.



46

11.6 FITTING THE COVER

On the profile there must be:
- the safety cables
- the spacers
- the side profiles or the cover fastening brackets

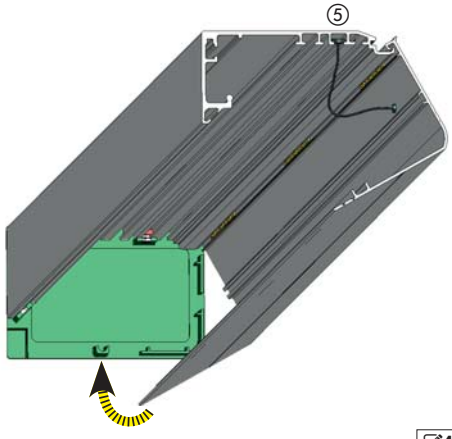
1. Place the cover on the profile ✎**47** or ✎**48**.
2. Hold the cover in the open position ✎**49**-②③ (lift it, then push it into the profile).
3. Fasten the safety cables to the cover ✎**47**-⑤ and close the cover.

The safety cables must be correctly installed to protect from the risk of accidental casing fall.

Push the cover slightly in order to insert the blocks into the brackets or side profiles ✎**47** or ✎**48** .

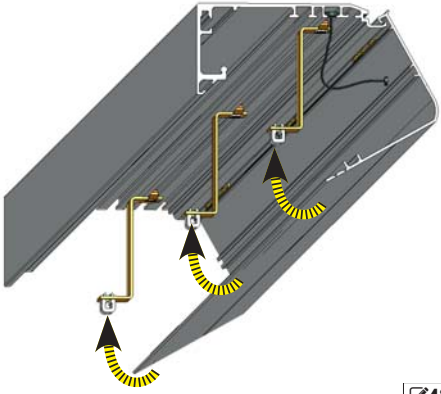
The markings on the casing allow it to be adapted to varying leaf thickness. The breaking points ✎**50**-⑥ make it possible to remove the profile section in excess.

Installing the cover.

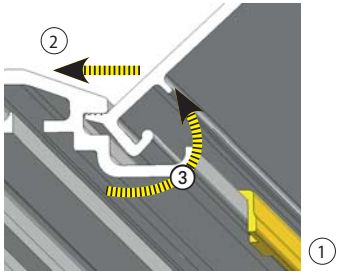


✎**47**

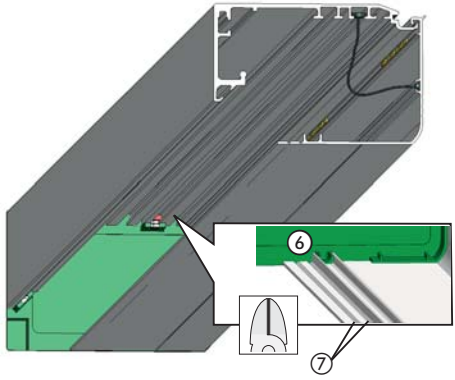
Installation with side profiles and central bracket.



✎**48**



✎**49**



✎**50**

ENGLISH

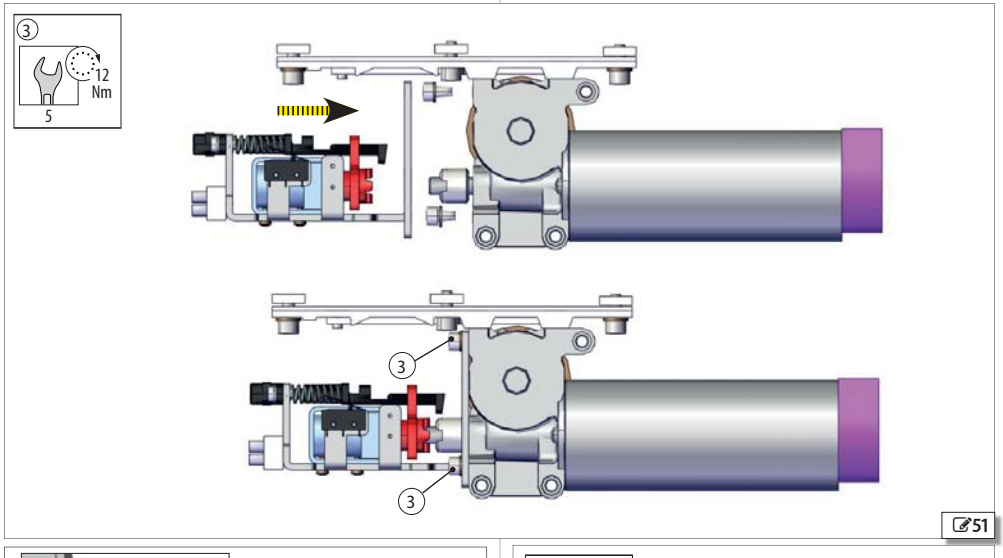
Translation of the original instructions

11.7 INSTALLING THE XB LOCK MOTOR BLOCK

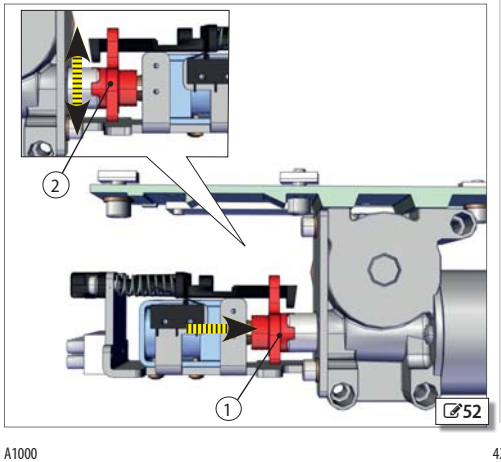
1. Install the motor block by resting it on the motor body and securing it using the two M5 screws **51**-③ .
2. Close the leaves.
3. Manually push the lever **52**-① towards the motor shaft. Check correct coupling.
4. Move the motor block lever to check the clearance between the motor shaft and the motor block coupling **52**-②. If it is incorrect, adjust it as described below. **53**-③.
5. Fasten the motor block using the two M5 screws **51**-③ .

11.8 ADJUSTING THE XB LOCK MOTOR BLOCK

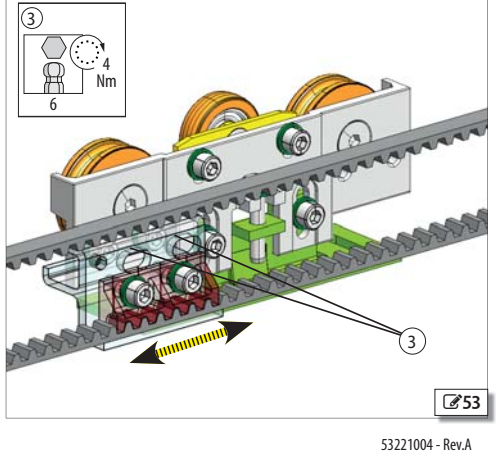
1. Loosen the two screws **53**-③ that connect the belt fitting to the carriage (on both carriages in the case of a double leaf).
2. Slightly move the belt fitting horizontally until there is a clearance between the coupling of the motor shaft and the motor block by moving the motor block lever **51**-②.
3. re-tighten the screws that were previously loosened.



51



52

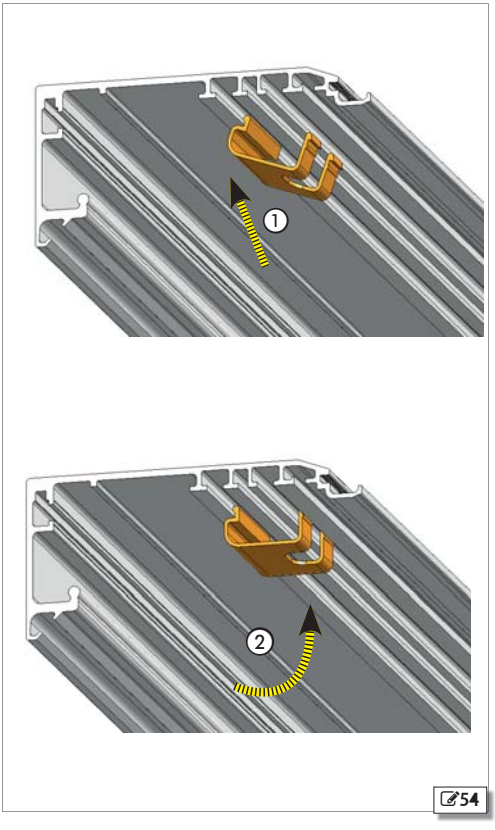


53

11.9 MOUNTING THE CABLE GLAND GUIDES

The guides prevent interference between cables and moving parts.

Install the electric cable guides inside the support profile 54-① and ②).



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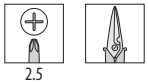
12. ELECTRONICS INSTALLATION E1SL

RISKS

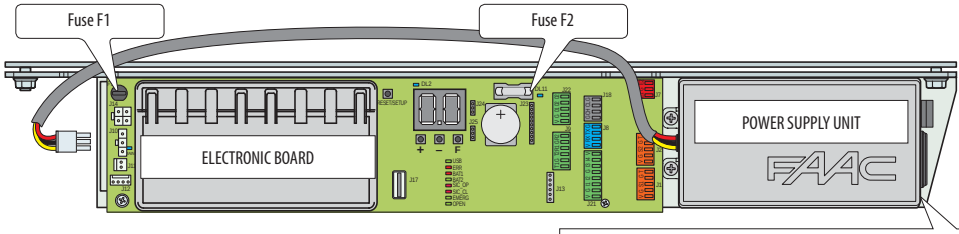
PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS



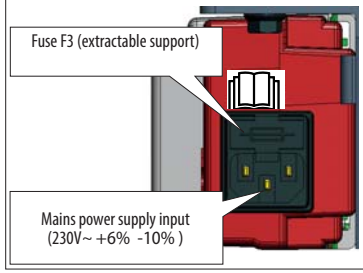
ALWAYS DISCONNECT THE POWER SUPPLY before working on the board. Turn the power on only after having completed all the connections and preliminary start-up checks (53).

12.1 E1SL ELECTRONIC MODULE



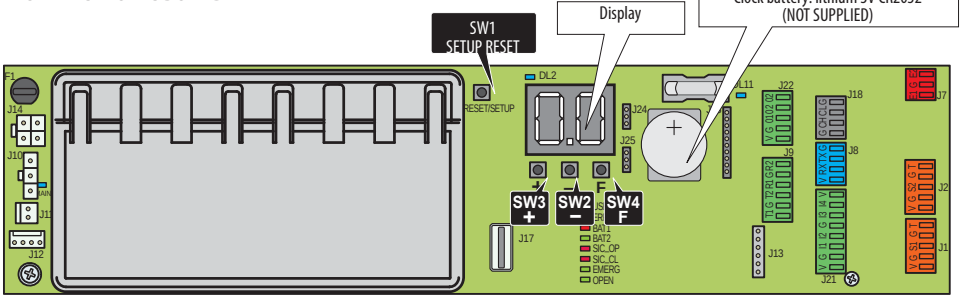
Fuses		
F1	battery protection	8 A T (delayed)
F2	accessory protection	2 A F (quick)
F3	power supply unit primary protection	2.5 A T (delayed)

A spare fuse is provided (in the extractable support)



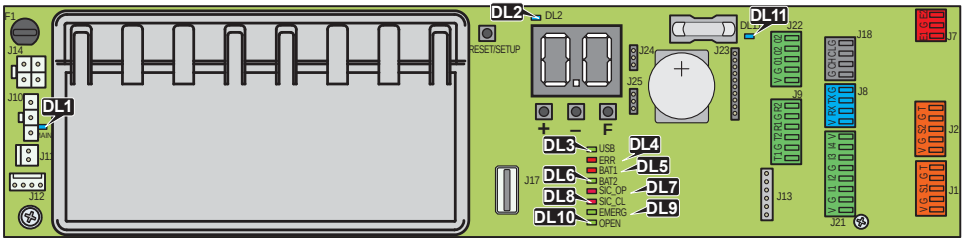
55

E1SL ELECTRONIC BOARD



Buttons	
SW1	SETUP / RESET
SW2	"–" (scrolls programming values)
SW3	"+" (scrolls programming values)
SW4	"F" (programming: scrolls functions/confirms values)

56



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10 LEDs on the board

Name	Description	Statuses	
DL1 main (BLUE)	MAIN: power supply unit input	* main power supply ON	main power supply OFF
DL2 (BLUE)	+5V: board power	* present	absent
DL3 (GREEN)	USB: storage device	device present	* device absent
DL4 (RED)	ERR: Error/Alert in progress	error	* no error/alert
		indication	
DL5 (RED)	BATT1: battery status	battery discharged	* battery charged
		battery use	battery discharged with no mains power supply
DL6 (GREEN)	BATT2: battery charger status	battery charger at rest	battery charger not working due to mains power down or fault
		battery charger working	
DL7 (RED)	SIC_OP: safety on opening	input active (sensors busy)	* input not active (sensors not busy)
DL8 (RED)	SIC_CL: safety on closing		
DL9 (GREEN)	EMERG: emergency	input active (door opened in emergency)	* input not active
DL10 (GREEN)	OPEN: open button	input active (Open impulse)	* input not active
DL11 (BLUE)	VACC: accessories power (+ 24V ⎓)	* present	absent

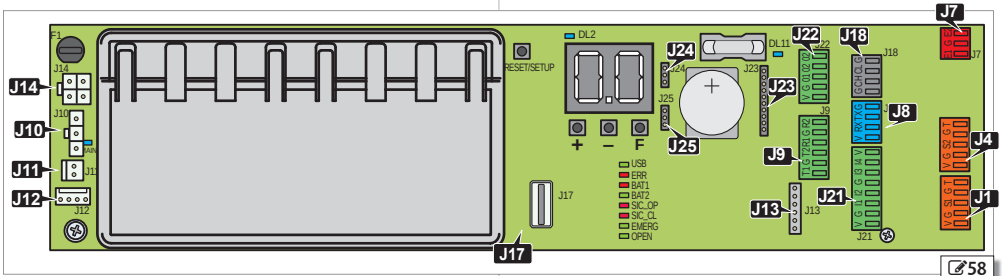
LED statuses:

on	flashing	* = standby condition	
off	in sleep mode: off with blinking every 5 s		

ENGLISH

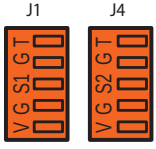
Translation of the original instructions

12.2 TERMINAL BOARDS AND CONNECTORS



IMPORTANT The maximum total load of accessories connected to board V (+24V ⎓) must not exceed 1A. (except SDK-EVO)

J1 J4 - INPUTS S1-S2



T	TEST
G	GND Power supply negative and Common contacts
S1 **S2**	Configurable inputs S1-S2
G	GND Power supply negative and Common contacts
V	**+24V** ⎓ (accessories power supply)

Default inputs for safety in closing devices § 12.5. IMPORTANT: Use monitored safety devices compliant with standard EN 16005:2012

J7 - INPUTS E1 -E2

E2	Configurable input E2
G	GND Accessories power supply negative and Common contacts
E1	Configurable input E1

Inputs recommended for emergency functions

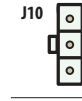
J8 - SDK EVO - LK EVO - KS EVO

G	GND Accessories power supply negative and Common contacts
TX	Data transmission
RX	Data reception
V	+24V ⎓ accessories power supply

J9 - XFA BUTTON PHOTOCELLS

R2	2nd pair receiver connection
G	GND Receiver negative
R1	1st pair receiver connection
T2	2nd pair transmitter connection
G	GND Transmitter negative
T1	1st pair transmitter connection

J10 - MAIN POWER SUPPLY 36V - 4A



+36V ⎓
Switching power supply unit connection

J11 - MOTOR

J11	
	M1 Motor connection

J12 - MOTOR ENCODER

J12	
	M1 Motor encoder connection

J13 - XB LOCK/ XM LOCK MOTOR BLOCK AND MONITORING (OPTIONAL)

J13	
	Connection for XB LOCK /XM LOCK motor block with monitoring (OPTIONAL)

J14 - EMERGENCY BATTERY

The board maintains battery charge, but does not charge batteries when discharged.

To check the charge status see LEDs DL5 and DL6 (45).

J14	
	Emergency battery connection

J17 - USB PORT

J17	
	Connection of the USB memory device

J18 - INTERCOM

J18		
	**G**	**GND** Accessories power supply negative and Common contacts
	CH	**CH** CANBUS High Channel
	CL	**CL** CANBUS Low Channel
	G	**GND** Accessories power supply negative and Common contacts

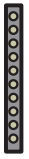
J21 - INPUTS I1-I2-I3-I4

J21		
	**V**	+24V ⎓ accessories power supply
	I4	Configurable **input I4**
	I3	Configurable **input I3**
	G	**GND** Accessories power supply negative and Common contacts
	I2	Configurable **input I2**
	I1	Configurable **input I1**
	G	**GND** Accessories power supply negative and Common contacts
	V	+24V ⎓ accessories power supply

J22 - CONFIGURABLE OUTPUTS

J22		
	**O2**	**Output2** NC/NO configurable relay output (programming)
	O2	**Output2** NC/NO configurable relay output (programming)
	O1	**Output1** configurable (programming)
	G	**GND** Accessories power supply negative and Common contacts
	V	+24V ⎓ accessories power supply

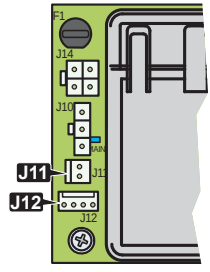
J23 J24 J25 - OPTIONAL MODULES

J23 	Module connection G-COM / WI-COM / Net-COM
J24 	
J25 	

12.3 MOTOR AND ENCODER

1. Connect motor M1 to connector J11.
2. Connect the encoder cable of motor M1 to connector J12. ✎59

WARNING: TESTS THE ENCODER CONNECTION BEFORE MOVEMENT



✎59

12.4 XB LOCK MOTOR BLOCK AND MONITORING (OPTIONAL)

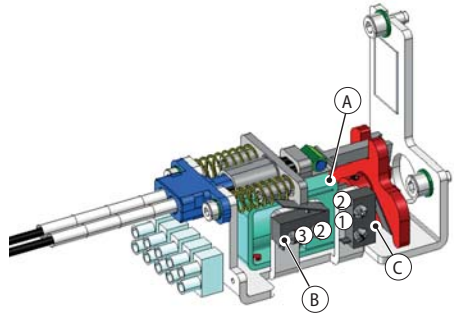
ALWAYS DISCONNECT the power supply and disconnect the emergency battery before connecting or disconnecting the motor block in order to avoid damaging the device.

1. Connect the motor release monitor (IF INSTALLED) to the release terminal block ✎60-C.
2. Connect the motor block to the control board using the wired connector ✎60-②.
3. Program the motor block operation (EL) and enable monitoring (SU) (IF INSTALLED).

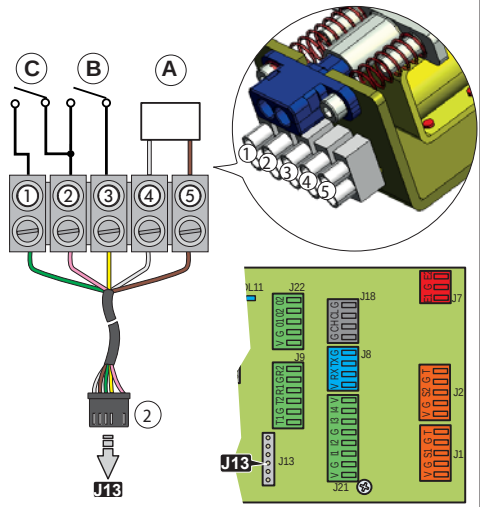
A	no= XB LOCK motor block disabled. 1 = XB LOCK motor block closed in NIGHT-TIME mode 2 = XB LOCK motor block closed in NIGHT-TIME and ONE-DIRECTIONAL mode. 3 = XB LOCK motor block closed in NIGHT-TIME mode and with leaves open 4 = XB LOCK motor block closed at the end of each movement.
B	Manual release microswitch
C	SU=4 (monitoring enabled - IF INSTALLED)

If the motor block malfunctions, the system signals ERROR 26 on the display and on SDK EVO.

If there is a power failure, the position of the motor block remains unchanged. The motor block is always open in manual mode.

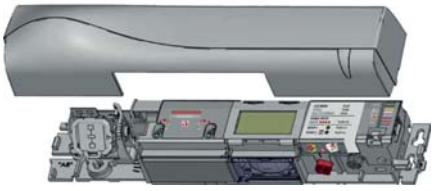


①	green	C	Motor block monitoring (IF INSTALLED)
②	pink	B	Manual release microswitch
③	yellow		
④	white	A	Motor block coil
⑤	brown		



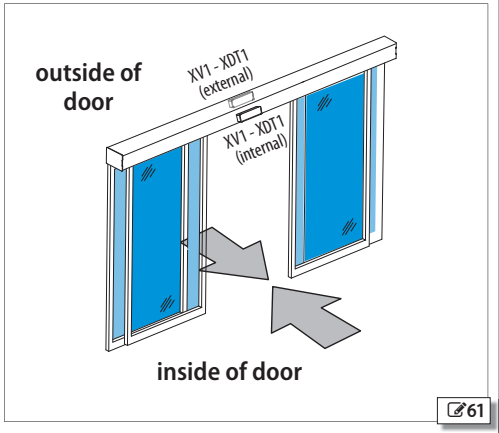
✎60

12.5 XV1-XDT1 EXIT AND ENTRY DETECTORS
(DEFAULT CONFIGURATION)

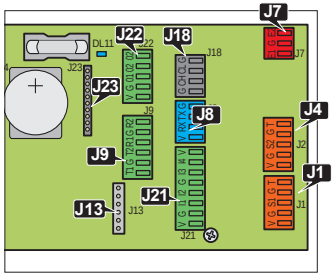


Use the XV1 or XDT1 exit and entry detector for opening and safety in closing, in compliance with EN 16005:2012 and DIN18650.

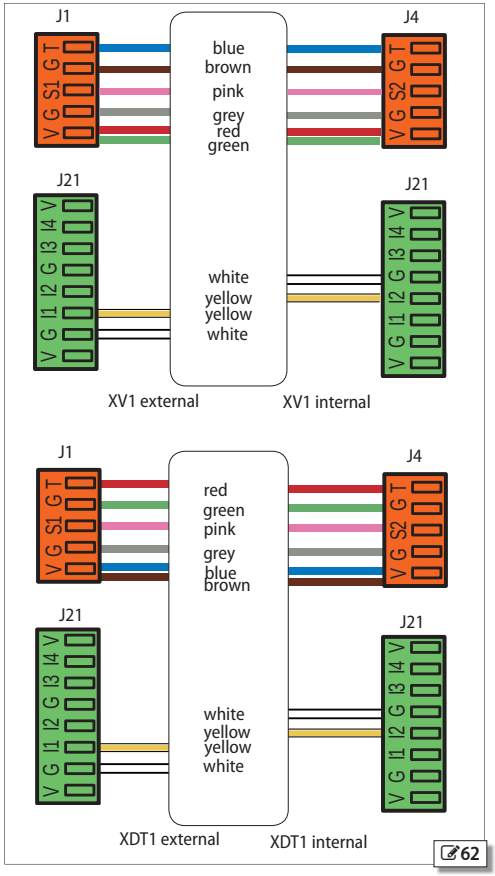
It is recommended not to activate the "narrow pavement" function which combines radar and infrared detection for opening.



61



WARNING: IT IS OBLIGATORY TO INSTALL PROTECTIVE BARRIERS IN THE MOVEMENT AREAS IN THE EVENT CONTACT WITH PERSONS IS NOT ALLOWED.



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DEFAULT PROGRAMMING ON E1SL BOARD

From Board	from SDK EVO
P1=20 1F=4	**S1-S2 safeties** **S1 Function** = Closing Safety **S1 Test** = Enabled **S1 NO/NC** = NC
P2=20 2F=4	**S2 Function** = Closing Safety **S2 Test** = Enabled **S2NO/NC** = NC
C1=1	**INPUTS I1-I2** **I1** = External sensor contact **I2**= Internal sensor contact
C2=4	**I1 NO/NC** = NO **I2 NO/NC** = NO

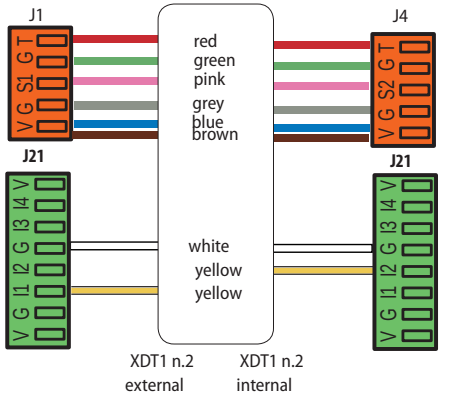
ENGLISH

Translation of the original instructions

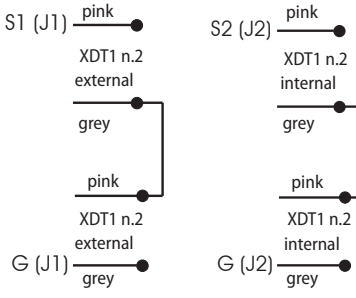
12.6 2 XDT1 EXIT DETECTORS AND 2 XDT1 ENTRY DETECTORS

Use this configuration if the width of the passage opening is such that it requires 2 detectors instead of 1.

Use 2 XDT1 exit detectors for opening and safety in closing and 2 XDT1 entry detectors for opening and safety in closing, in compliance with EN 16005:2012 and DIN18650.



Connect the 2 external XDT1 units and the 2 internal XDT1 units as in indicated in the following diagram.



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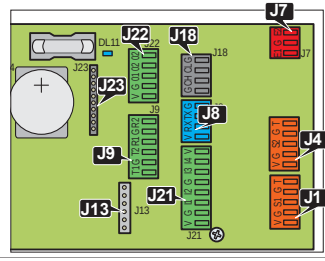
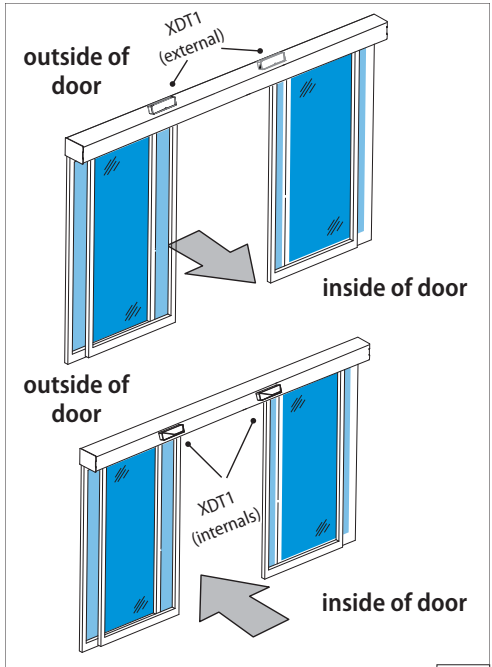
WARNING: IT IS OBLIGATORY TO INSTALL PROTECTIVE BARRIERS IN THE MOVEMENT AREAS IN THE EVENT CONTACT WITH PERSONS IS NOT ALLOWED.





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PROGRAMMING THE E1SL board

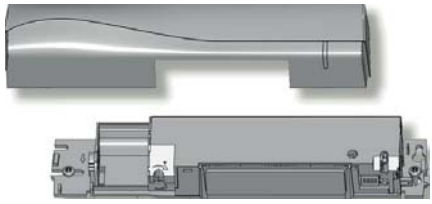
Programming from the board or SDK EVO: XDT1

From Board	SDK EVO
P1=20 1F=Y	**S1-S2 safeties** **S1 Function** = Closing Safety **S1 Test** = Enabled **S1 NO/NC** = NC
P2=20 2F=Y	**S2 Function** = Closing Safety **S2 Test** = Enabled **S2 NO/NC** = NC

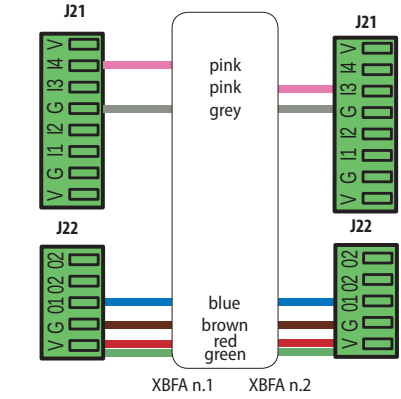
From Board	SDK EVO
C1=1 C2=4	**INPUTS I1-I2** **I1** = External sensor contact **I2**= Internal sensor contact **I1 NO/NC** = NO **I2 NO/NC** = NO

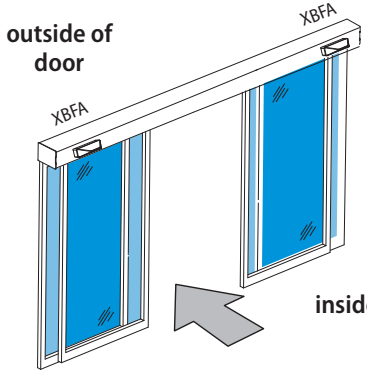
12.7 XBFA DETECTORS FOR SAFETY IN OPENING

Use this configuration to protect the opening movement space using the safety detectors.



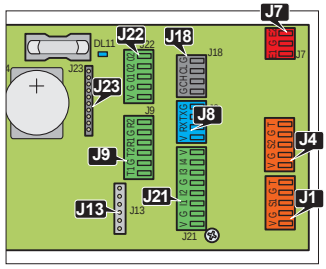
Use the XBFA detectors for safety in opening in compliance with EN 16005:2012 and DIN18650.





65

WARNING: IT IS OBLIGATORY TO INSTALL PROTECTIVE BARRIERS IN THE MOVEMENT AREAS IN THE EVENT CONTACT WITH PERSONS IS NOT ALLOWED.



PROGRAMMING THE E1SL BOARD

Programming can only be carried out only via the SDK EVO.

From Board	SDK EVO
	Inputs 01
o1=5	**01 Function** = TEST
	01 NO/NC = NO
	INPUTS I3-I4
C3=2I 3F=4	**I3** = Safety on opening
	I3 NO/NC = NC
	I3 TEST =Enabled
C4=2I 4F=4	**I4** = Safety on opening
	I4 NO/NC = NC
	I4 TEST =Enabled

12.8 J9 - XFA BUTTON PHOTOCELLS

Photocells are not permitted as safety devices in European Community countries in which the EN 16005:2012 standard is in force. Specifically, photocells are considered as auxiliary devices, complementary to safety.

In extra-European countries where the EN 16005:2012 standard is not in force, traditional photocells and sensors can be used.

Button photocells are constantly monitored by the door's control electronic board, which controls correct operation at each movement.

Connect the photocells and enable them in programming bP 66 or 67.

NO PHOTOCELL - If no button photocells are used, leave the inputs of connector J9 free and set the function bP = no.

12.9 J7 - INPUTS E1 -E2

The EMERGENCY control has priority over any other input, in any operating condition and mode, except MANUAL operation.

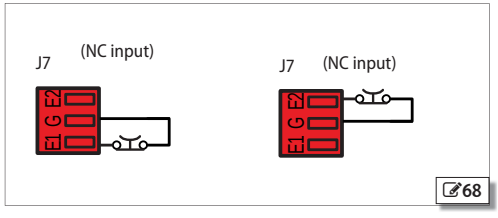
An input (E1 and /or E2 recommended) configured as emergency causes the door to OPEN / STOP/ CLOSE ,depending on how has been programmed.

It remains active as long as the control is pressed.

1. Connect an NO or NC type contact push-button.
2. Enable input E1 E2 and select from 30 to 35.
3. The two controls E1 and E2 are independent.

For specific functions of the inputs see § 14.2

The NO contact can be programmed via the SDK EVO.



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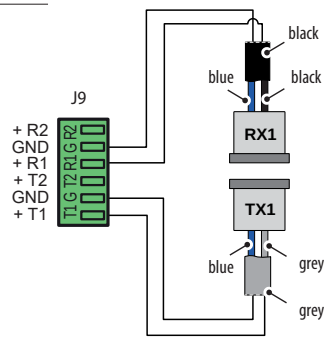
1 pair of button photocells

bP = 1

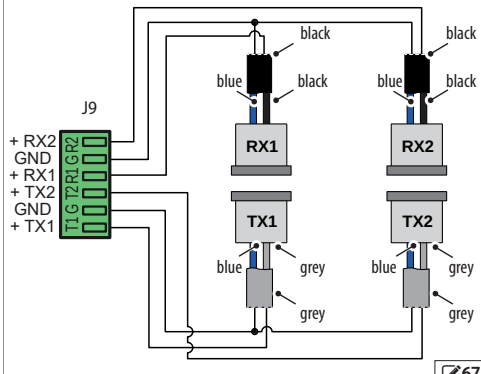


66

	CABLE colour
TX - transmitter	grey and blue (grey sheath)
RX - receiver	black and blue (black sheath)

2 pairs of button photocells

bP = 2



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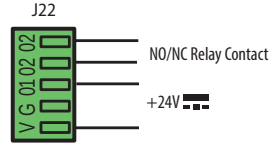
12.10 J22 - CONFIGURABLE OUTPUTS

02	**Output 02** configurable
02	Relay **Output 02** configurable
01	**Output 01** configurable
G	**GND** Accessories power supply negative and Common contacts
V	+24V ⎓ accessories power supply

The operation of 01 and 02 can be programmed for NC mode using SDK EVO

01 and 02 specifications:

- 01 Open Collector output with Max load 100mA to be connected between 01 and V.
- 02 relay contact with Max load 2A to be connected between 02 and 02.



- 01 Open Collector output with Max load 100mA to be connected between 01 and V.
- 02 relay contact with Max load 2A to be connected between 02 and 02.

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13. STARTUP

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS

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PRELIMINARY CHECKS PRIOR TO COMMISSIONING

Before commissioning the system, regular and friction-less door movement must be ascertained.

Manually check the leaves slide smoothly, with the mains power supply and motors disconnected.

13.1 SWITCHING ON AND SYSTEM SETUP

1. Position the leaves so that they are partially open.
2. Connect the electric motor and the motor encoder.
3. Connect the 230 V~ mains power supply.

The board turns on.

The display shows the following in sequence for 5 seconds:

- bo (Bootloader)
- FW version (2 digits separated by a point)
- LO flashing = system requires setup
- **Select the type of door from the display menu of E1SL board or from the SDKEVO.**

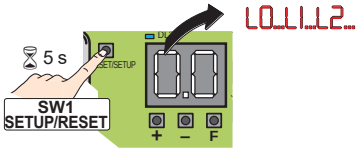
The setup cycle can be carried out.

If the door OPENS instead of CLOSING, reverse the direction of rotation of the motor using parameter rM.

Setup CANNOT be carried out in NIGHT-TIME and MANUAL mode and with emergency inputs active.

4. Access the programming mode and make any modifications that may be necessary (▦ **11** and ▦ **12**).

5. Start the SETUP



Press the button SW1 until L1 appears.

The door performs SETUP and the ongoing phases are displayed: LO... L1... L2.

When the SETUP has been completed, the display shows the status of the automated system (see ▦ **14**).

During SETUP, safety detectors are ignored apart from the emergencies. To prevent any hindrance to motion, keep at a distance and prevent anyone from going near the system.

CHECKS FOLLOWING SETUP

Check correct operation of the following:

- safety detectors
- devices connected to the inputs
- emergency
- configurable outputs (O1-O2)
- any connected control devices.

SAVING THE CONFIGURATION

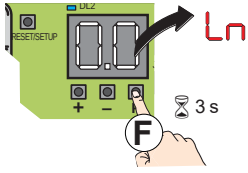
At the end of functional tests, download the full configuration of the system.

Use the DOWNLOAD procedure indicated on (🖳 **72**).

13.2 BASIC / ADVANCED PROGRAMMING

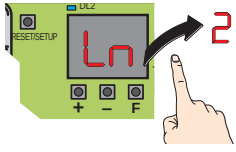
BASIC programming (see ▦ 11)

1. Press F until the first basic function is displayed.

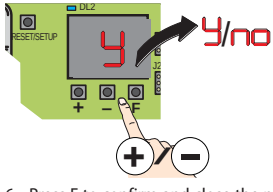


The function code remains displayed as long as it is pressed

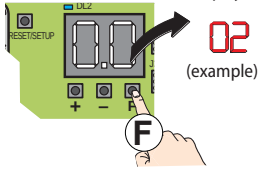
2. Release F. The default value is displayed (or another programmed one)



3. Use buttons + or − to modify the value of a function.
4. Press F to confirm the value displayed. Go to the next function. The modified value becomes effective immediately. Proceed in the same way for all the functions. The last function (St) allows you to end the programming.
5. In St select y or no using the +/− buttons:
   - y = save the new program
   - no = DO NOT save the new program

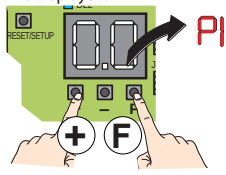


6. Press F to confirm and close the program. It takes you back to the automation status display (▦ **14**).



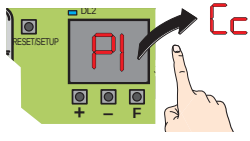
Advanced Programming (see ▦ 12)

1. Press and hold F and + as well, until the first advanced function is displayed.

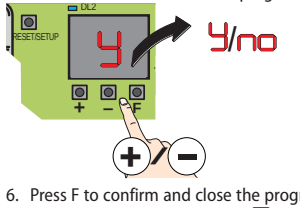


The function code remains displayed as long as it is pressed

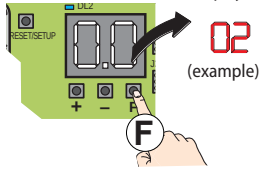
2. Release F and +. The default value appears (or another programmed one)



3. Use buttons + or − to modify the value of a function.
4. Press F to confirm the value displayed. Go to the next function. The modified value becomes effective immediately. Proceed in the same way for all the functions. The last function (St) allows you to end the programming.
5. In St select y or no using the +/− buttons:
   - y = save the new program
   - no = DO NOT save the new program



6. Press F to confirm and close the program. It takes you back to the automation status display (▦ **14**).



Programming time expiration

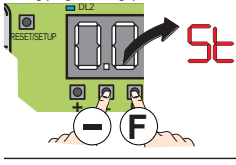
Programming is interrupted after 10 minutes if buttons +, − and F have not been pressed. The display returns to the automation status view and any UNSAVED changes have to be re-entered.

Power failure during programming

If power supply fails while programming is ongoing, UNSAVED modifications must be performed again.

Immediately exit programming

During programming, press F and − simultaneously until the exit from programming function St is activated.



11 BASIC programming fw version 3.0 or later

BASIC	Function	CF1	CF2	CF3	CF4	CF5
CF	**Door type** no =no selection 1 = A1000 2 = A1400 3 = RKE 1400 4 = SF1400 5 =Rototranslating (not available) ⓘ The default values are reloaded if the parameter is modified.	no	no	no	no	-
dF	**DEFAULT configuration** The standard configuration is selected: no = no Standard configuration in use Y= standard configuration in use	Y	Y	Y	Y	-
Ln	**SELECT NUMBER OF LEAVES (displayed only for CF=4)** 1 = 1 leaf 2 = 2 leaves ⓘ If the parameter is modified, SETUP must be performed.	-	-	-	4	-
Lt	**SELECT PASSAGE OPENING (displayed only for CF=4)** 1 = Narrow passage opening with 1 leaf <=65cm / with 2 leaves <=130cm 2 = Average passage opening with 1 leaf >65cm <75cm / with 2 leaves >130cm< 150cm 3 = Wide passage opening with 1 leaf >=75cm / with 2 leaves >= 150cm	-	-	-	4	-
rn	The direction of rotation of the motor is selected: 1 = STANDARD rotation (*with belt fittings as per the configuration) -1 = NON-STANDARD rotation (*with belt fittings DIFFERENT to the configuration) ⓘ The choice becomes effective immediately. If the parameter is modified after SETUP has been performed, error 38 is generated.	1	1	1	1	-
PO	**PARTIAL OPENING (not available for CF=4)** Set the opening percentage in Partial operating mode no= 100% opening Adjustable from 20% to 95% (MAX) of complete opening Step = 5%	50	50	50	-	-
PA	**PAUSE TIME** This allows you to adjust the pause time of the fully open door. Adjustable from 0 to 30 s. Step = 1 s	2	2	2	2	-
ES	**Energy Saving** no = not enabled Y = enabled	no	no	no	no	-
Pn	**NIGHT PAUSE TIME** In night-time mode, if opening is done with the Key command, the door remains open for the time set with this function. Adjustable from 0 s to 4 minutes (MAX). from 0 to 58 s, step = 2 s; time displayed in seconds. from 58 to 4.0 minutes, step = 10 s; time displayed in minutes and tens of seconds: e.g. 1.2 = 1 minute and 20 seconds.	10	10	10	10	-
CS	**CLOSING SPEED** Adjustable from 1 (minimum) to 10 (MAX).	5	5	5	5	-

ⓘ The pause time is only active in automatic operation mode.

ENGLISH

Translation of the original instructions

BASIC Function		CF1	CF2	CF3	CF4	CF5
OS	**OPENING SPEED** Adjustable from 1 (minimum) to 10 (MAX).	10	8	8	5	-
CF	**CLOSING FORCE** Adjustable from 1 (minimum) to 10 (MAX).	5	5	5	5	-
OF	**OPENING FORCE** Adjustable from 1 (minimum) to 10 (MAX).	8	8	8	8	-
tF	**FORCE TIME on OBSTACLE for CF and OF** Adjustable from 0.1 to 3.0 sec. in 0.1 second steps.	1.0	1.0	2.0	1.0	-
dr	**ACCELERATION RAMP in OP and CL** Adjustable from 1 (minimum) to 10 (MAX).	6	6	6	4	-
Ar	**ACCELERATION RAMP in OP and CL** Adjustable from 1 (minimum) to 10 (MAX).	8	8	5	8	-
C1	**INPUT I1 CONFIGURATION** NO input (Programmable via SDK EVO other selections and as NC contact) no = input not enabled 1 = EXTERNAL OPEN 4 = INTERNAL OPEN 7 = Automatic OPEN 8 = Semi-automatic OPEN 9 = Pharmacy (**not available for CF=4**) 10 = KEY 11 = partial OPEN (**not available for CF=4**) 20 = Closing Safety (NC) 21 = Opening Safety (NC) 30 = EMERGENCY OPENING (NC) 31 = EMERGENCY OPENING with MEMORY (NC) 32 = EMERGENCY STOP (NC) 33 = EMERGENCY STOP with MEMORY (NC) 34 = EMERGENCY CLOSING (NC) 35 = EMERGENCY CLOSING with MEMORY (NC) 40 = ALWAYS OPEN operating mode 41 = EXIT ONLY operating mode 42 = ENTRY ONLY operating mode 43 = NIGHT-TIME operating mode 44 = MANUAL operating mod 45 = PARTIAL operating mode (**not available for CF=4**) 46 = Interlock operating mode(*) 60 = Timer 61 = Reset (*) the input becomes active ONLY if the Interlock function has been programmed via the Intercom with SDK EVO. Note : For specific functions of the inputs see § 14.2	1	1	1	1	-
IF	**SAFETY INPUT TEST I1** parameter displayed only if C1 = 20 or 21 Y = test enabled no = test not enabled	no	no	no	no	-
C2	**INPUT I2 CONFIGURATION** Allows parameter C2 to be set. See options as in C1	4	4	4	4	-

BASIC Function	CF1	CF2	CF3	CF4	CF5
2F **SAFETY INPUT TEST I2** parameter displayed only if C2 = 20 or 21 y = test enabled no = test not enabled	no	no	no	no	-
C3 **INPUT I3 CONFIGURATION** Allows parameter C3 to be set. See options as in C1	10	10	10	10	-
3F **SAFETY INPUT TEST I3** parameter displayed only if C3 = 20 or 21 y = test enabled no = test not enabled	no	no	no	no	-
C4 **INPUT I4 CONFIGURATION** Allows parameter C4 to be set. See options as in C1	7	7	7	7	-
4F **SAFETY INPUT TEST I4** parameter displayed only if C4 = 20 or 21 y = test enabled no = test not enabled	no	no	no	no	-
PF **PHARMACY OPEN** (**not available for CF=4**) Parameter displayed only if one of the inputs C1 ,C2, C3 ,C4, P1, P2, E1 or E2 is configured as Pharmacy OPEN. Adjustable from 5% to 95% (MAX) of complete opening Step = 5% ⓘ The input configured as Pharmacy functions in NIGHT-TIME mode; the other operating modes are equivalent to an input configured as AUTOMATIC OPEN	20	20	20	20	-
St **EXIT PROGRAMMING** It lets you exit programming, and decide whether to save or not the modifications made. y = save (only if there are NO configuration errors) no = do not save Press F to confirm. After exit, the display shows automation status: 00 CLOSED 01 OPENING 02 OPEN 03 PAUSED 04 in NIGHT PAUSE 05 CLOSING 06 OPEN or STOPPED or CLOSED in EMERGENCY 07 in MANUAL mode 08 in NIGHT mode 10 System TEST in progress 11 STOPPED 12 safety devices TEST in progress 13 Door ERROR (Press + and - simultaneously to display the active ERROR) L0-L2 PHASES L0, L1, L2 SETUP IN PROGRESS . in SLEEP mode (point flashing)	y	y	y	y	-

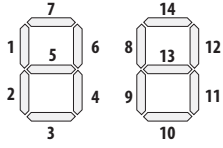
12 ADVANCED programming fw version 3.0 or later

ADVANCED Function		CF1	CF2	CF3	CF4	CF5
P1	**INPUT S1 CONFIGURATION** Allows parameter P1 to be set. See options as in C1	20	20	20	20	-
1F	**INPUT S1 TEST** parameter displayed only if P1 = 20 or 21 Y = test enabled no = test not enabled	Y	Y	Y	Y	-
P2	**INPUT S2 CONFIGURATION** Allows parameter P2 to be set. See options as in C1	20	20	20	20	-
2F	**INPUT S2 TEST** parameter displayed only if P2 = 20 or 21 Y = test enabled no = test not enabled	Y	Y	Y	Y	-
Ot	**OPERATION OF SAFETIES ON OPENING** 1 = STOP (stops movement during opening) 2 = LOW ENERGY (motion slowed down)	2	2	2	2	-
bP	**BUTTON PHOTOCELLS (OPTIONAL)** no = no photocell 1 = 1 pair of photocells 2 = 2 pairs of photocells ⓘ The test is NOT carried out on the button photocells.	no	no	no	no	-
E1	**INPUT E1 CONFIGURATION** Allows parameter E1 to be set. See options as in C1	no	no	no	no	-
1F	**INPUT E1 TEST** parameter displayed only if E1 = 20 or 21 Y = test enabled no = test not enabled	no	no	no	no	-
E2	**INPUT E2 CONFIGURATION** Allows parameter E2 to be set. See options as in C1	no	no	no	no	-
2F	**INPUT E2 TEST** parameter displayed only if E2 = 20 or 21 Y = test enabled no = test not enabled	no	no	no	no	-
bA	**BATTERY KIT (NOT active in NIGHT-TIME mode)** Operation of the battery NOT in NIGHT-TIME mode with a mains power outage. no = not enabled 1 = immediately perform OPENING motion 2 = immediately perform CLOSING movement 3 = with discharged battery last OPENING movement 4 = with discharged battery last CLOSING movement	no	no	no	no	-

ADVANCED Function			CF1	CF2	CF3	CF4	CF5
bn	**NIGHT-TIME BATTERY KIT** Parameter displayed only if bA is not no. Operation of the battery in NIGHT-TIME mode with power outage. 1 = immediately perform OPENING motion 2 = immediately perform CLOSING movement 3 = with discharged battery last OPENING movement 4 = with discharged battery last CLOSING movement		4	4	4	4	-
EL	**MOTOR BLOCK (OPTIONAL)** ✎ **60 ref. C** no = not enabled 1 = XB LOCK motor block closed in NIGHT-TIME mode 2 = XB LOCK motor block closed in NIGHT-TIME and ONE-DIRECTIONAL mode. 3 = XB LOCK motor block closed in NIGHT-TIME mode and with leaves open. 4 = XB LOCK motor block closed at the end of each movement. 5 = XM LOCK motor block closed in NIGHT-TIME mode 6 = XM LOCK motor block closed in NIGHT-TIME and ONE-DIRECTIONAL mode. 7 = XM LOCK motor block closed in NIGHT-TIME mode and with leaves open. 8 = XM LOCK motor block closed at the end of each movement. **(Items 5,6,7 and 8 are not available for CF=1)**		no	no	no	no	-
SU	**MONITORING OF** XB LOCK/XM LOCK **MOTOR BLOCK (OPTIONAL)** Not displayed if EL = no or different from XB LOCK no = not enabled Y = enabled	EL=1-2-3-4	no	no	no	no	-
		EL=5-6-7-8	Y	Y	Y	Y	-
dN	**DOUBLE MOTOR KIT ACTIVATION** no = second motor kit not enabled Y = second motor kit enabled (**not available for CF=4**)		-	no	no	no	-
nd	**NIGHT-TIME MODE DELAY** When night-time mode is set, the internal detector remains active for the time set with this function to allow one opening only. The internal detector is disabled immediately after opening and in any case upon expiry of the set delay. Adjustable from 0 to 59 s. Step = 1 s from 1.0 m to 4.0 m Step = 0,1 m		10	10	10	10	-

ADVANCED Function		CF1	CF2	CF3	CF4	CF5
o1	**CONFIGURABLE OUTPUT OUT1 (J22)** NO output(**) (**) Programmable as NC via SDK EVO no = not enabled 1 = GONG 2 = BOARD ERROR/FAULT 3 = BATTERY operation (with bA different from no) 4 = EMERGENCY active 5 = TEST of safety devices configured on inputs I1, I2, I3, I4. 6 = door NOT CLOSED 7 = door OPEN 8 = door moving 9 = light (activated for 60 s) ((activation time can be changed via SDK EVO) 10 = INTRUSION in progress (*) 11 = At least one Safety In Closing Active 12 = At least one Safety In Closing Active or one Safety in Opening On	6	6	6	6	-
o2	**CONFIGURABLE OUTPUT OUT2 (J22)** NO output(**) (**) Programmable as NC via SDK EVO no = not enabled 1 = GONG 2 = BOARD ERROR/FAULT 3 = BATTERY operation (with bA different from no) 4 = EMERGENCY active 5 = TEST of safety devices configured on inputs I1, I2, I3, I4. 6 = door NOT CLOSED 7 = door OPEN 8 = door moving 9 = light (activated for 60 s) ((activation time can be changed via SDK EVO) 10 = INTRUSION in progress (*) 11 = At least one Safety In Closing Active 12 = At least one Safety In Closing Active or one Safety in Opening On	2	2	2	2	-

(*) Output activated Only from SDK EVO with KEEP CLOSED function .

ADVANCED Function		CF1	CF2	CF3	CF4	CF5
in	**Inputs status** The display segments correspond, each one has an input and indicating whether it is active or not:  **1** = S1 input **2** = S2 input **3** = manual release input **4** = always off **5** = Emergency 1 input **6** =always off **7** = always off **8** = I1 input **9** = I2 input **10** = FSW input **11** = I3 input **12** = I4 input **13** = Emergency 2 input **14** = always off	-	-	-	-	-
St	**EXIT PROGRAMMING** It lets you exit programming, and decide whether to save or not the modifications made. Y= save (only if there are NO configuration errors) no = do not save Press F to confirm. After exit, the display shows automation status.	Y	Y	Y	Y	Y

*) EP **value:**
programming with the SDK EVO offers a wider number of options compared to the board. The board does not display the values that are not available and indicates all of them with EP (External Program). Programming with the board allows you to overwrite EP values by choosing an available value with the +/− buttons.

14. SYSTEM FUNCTIONALITY/CONFIGURATIONS

14.1 OPERATING MODE

The operating modes that can be activated from the SDK EVO are as follows:

Selection is carried out by pressing the keys on the fixed part of the programmer; the function is identified by the corresponding symbol switching on.

- NIGHT

The door closes and motor block is activated (if present). The internal and external radar are disabled.

The Key control causes opening and closing again after the night-time pause time.

- MANUAL

The sliding leaves are free and may be manually operated.

- AUTOMATIC

The door opens (partially or totally) then closes again after the set pause time (default 2 sec.).

Pause time adjustment from 0 to 30 sec.

- DOOR OPEN

The door opens and remains open.

- TWO-DIRECTION AUTOMATIC

Pedestrian transit occurs in both directions; the internal and external radars are enabled.

- ONE-DIRECTION AUTOMATIC ;

The pedestrian transit way opens in one direction only

(EXIT ONLY) the external radar is disabled.

(ENTRY ONLY) the internal radar is disabled.

- TOTAL OPENING 100%

The door opens fully.

- PARTIAL OPENING %

The door performs reduced openings (default 20%).

Adjustment from 20% to 95% of total opening with 5% steps.

Function	Door Status	Internal Sensor	External Sensor	KEY
MANUAL	--------	no effect	no effect	no effect
TOTALLY OPEN 100%	OPEN	no effect	no effect	no effect
TOTAL TWO-DIRECTION AUTOMATIC 100%	OPEN	pause counting restarts	pause counting restarts	pause counting restarts
	CLOSED	total opening and closure again after pause time	total opening and reclosing after the pause time	total opening and reclosing after the pause time
PARTIAL TWO-DIRECTION AUTOMATIC %	PARTIAL OPENING	pause counting restarts	pause counting restarts	pause counting restarts
	CLOSED	partial opening and closure again after pause time	partial opening and reclosing after the pause time	partial opening and closure again after pause time
AUTOMATIC ONE-DIRECTIONAL TOTAL (EXIT ONLY) 100%	OPEN	pause counting restarts	no effect	pause counting restarts
	CLOSED	total opening and closure again after pause time	no effect	total opening and reclosing after the pause time
AUTOMATIC ONE-DIRECTIONAL PARTIAL (EXIT ONLY) %	PARTIAL OPENING	pause counting restarts	no effect	pause counting restarts
	CLOSED	partial opening and closure again after pause time	no effect	partial opening and closure again after pause time
TOTAL ONE-DIRECTIONAL AUTOMATIC (ENTRY ONLY) 100%	OPEN	no effect	pause counting restarts	pause counting restarts
	CLOSED	no effect	total opening and reclosing after the pause time	total opening and reclosing after the pause time
AUTOMATIC ONE-DIRECTIONAL PARTIAL (ENTRY ONLY) %	PARTIAL OPENING	no effect	pause counting restarts	pause counting restarts
	CLOSED	no effect	partial opening and reclosing after the pause time	partial opening and closure again after pause time
NIGHT	CLOSED	no effect	no effect	total opening and closure again after night pause time
PARTIAL NIGHT-TIME %	CLOSED	no effect	no effect	partial opening and closure again after night pause time
PARTIAL OPENING %	PARTIAL OPENING	no effect	no effect	no effect

14.2 INPUTS CONFIGURATION

Inputs refers to managing the connection with the closing and opening safety devices and the opening activation devices, safety devices and other devices that can be activated on inputs I1, I2, I3 and I4 ✎**70** S1,S2,E1,E2 and selectable as NO or NC contacts.

(NC only from SDKEVO).

Input DISABLED (no)

the input is NOT considered in this mode.

ALWAYS OPEN operating mode input (40)

- When the input is active, it forces an ALWAYS OPEN operating mode to be set.
- When the input is deactivated, it forces a TOTAL TWO-DIRECTION AUTOMATIC operating mode to be set.

EXTERNAL OPEN input (1)

- With the active input configured in this way, the leaves must open and remain open as long as the input is active.
- If this input is deactivated, the pause time elapses and the leaves close again.
- the ENERGY SAVING mode can be activated on this input.
- this input is NOT considered in NIGHT-TIME or EXIT ONLY modes.
- activation of this input lights up the OPEN green LED on the board.

TOTALAUTOMATIC ONE-DIRECTIONAL **mode input ONLY OUTPUT (41)**

- When the input is active, it forces an EXIT ONLY operating mode to be set.
- When the input is deactivated, it forces a TWO-DIRECTIONAL operating mode to be set.

TOTAL AUTOMATIC ONE-DIRECTIONAL mode input ONLY INPUT (42)

- When the input is active, it forces an ENTRY ONLY operating mode to be set.
- When the input is deactivated it forces a TWO-DIRECTIONAL operating mode to be set.

AUTOMATIC OPEN input (7)

- With the active input configured in this way, the leaves must open and remain open as long as the input is active.
- When the input is deactivated, the pause time elapses and the leaves close again.
- the ENERGY SAVING mode CANNOT be activated on this input.
- this input is NOT considered in NIGHT-TIME mode
- activation of this input lights up the OPEN green LED on the board.

SEMI-AUTOMATIC OPEN input (8)

- With the active input configured in this way, the leaves must open and remain open.
- the ENERGY SAVING mode CANNOT be activated on this input.
- the TOTAL or PARTIAL function can be selected on this input.
- this input is NOT considered in NIGHT-TIME mode
- activation of this input lights up the OPEN green LED on the board.

PHARMACY OPEN input (9)

- With the active input configured in this way, the operation is as follows:

1. In normal operation it is AUTOMATIC OPEN function
2. In NIGHT-TIME function the leaves open in the percentage selected and after the pause time the leaves close again.

- activation of this input lights up the OPEN green LED on the board.

KEY input (10)

- in NIGHT-TIME mode the input is active and has the same function as AUTOMATIC OPEN.
- With the active input of an input configured in this way, during NIGHT-TIME function the leaves must open and remain open as long as the input is active.
- With the active input of an input configured in this way, during normal operation the leaves must open and remain open as long as the input is active.
- If this input is deactivated, the night pause time elapses and the leaves close again.
- the ENERGY SAVING mode CANNOT be activated on this input.
- activation of this input lights up the OPEN green LED on the board.

CLOSING SAFETY input (20)

- With the active input of an input configured in this mode, the functions are as follows:

1. during a closing motion the leaves are inverted.
2. with the leaves open closure is prevented
3. the time selected is reapplied if in a pause status

- if selected on the input, a TEST procedure is run before a closing motion.
- Deactivating this input immediately closes the leaves again if the ENERGY SAVING function is active; otherwise the leaves close again after total or partial opening.
- activation of this input lights up the SIC_CL red LED on the board.

OPENING SAFETY input (21)

The operation of this input depends on parameter Ot ▦ **11**

1. with OPENING SAFETY in STOP the motion is stopped (status 11) and this status remains until the safeties on opening are not disengaged.
2. with OPENING SAFETY in LOW ENERGY the motion proceeds slowly until fully opened.

- If the test is enabled, the device is checked to make sure that it is working before an opening movement.
- In NIGHT-TIME function activation of an input configured in this mode during opening stops the motion. If this operation is not completed due to active safeties in opening, it will wait until it can be completed, but if this cannot happen because the night-time pause time set is exceeded, the leaves return to the closed position.
- activation of this input lights up the SIC_OP red LED on the board.

INTERNAL OPEN input (4)

- With the active input configured in this way, the leaves must open and remain open as long as the input is active.
- If this input is deactivated, the pause time elapses and the leaves close again.
- the ENERGY SAVING mode can be activated on this input.
- this function is NOT activated in NIGHT-TIME mode except the interval of time for switching to NIGHT-TIME FUNCTION.
- activation of this input lights up the OPEN green LED on the board.

OPENING EMERGENCY input WITHOUT MEMORY (30) AND WITH MEMORY (31)

- With the input active, the leaves open
- **The Emergency priority order is as follows: Open , Stop , Close.**
- The input configured as OPENING EMERGENCY behaves differently depending on whether it is programmed with or without memory:

1. without memory, once the input is no longer active, the leaves no longer remain Open and return to their previous status.
2. with memory, once the input is deactivated the leaves remain Open until the RESET command is given.

- Opening is always TOTAL.

EMERGENCY STOP input WITHOUT MEMORY (32) AND WITH MEMORY (33)

- With the input active, the leaves remain stationary.
- **The Emergency priority order is as follows: Open , Stop , Close.**
- The input configured as EMERGENCY STOP behaves differently depending on whether it is programmed with or without memory:

1. without memory, once the input is no longer active, the leaves no longer remain in Stop status and return to their previous status.
2. with memory, once the input is deactivated the leaves remain in Stop status until the RESET command is given.

CLOSING EMERGENCY input WITHOUT MEMORY (34) AND WITH MEMORY (35) input.

- With the input active, the leaves close.
- **The Emergency priority order is as follows: Open , Stop , Close.**
- The input configured as CLOSING EMERGENCY behaves differently depending on whether it is programmed with or without memory:

1. without memory , once the input is deactivated the leaves no longer remain Closed and return to their previous status.
2. with memory, once the input is deactivated the leaves remain Closed until the RESET command is given.

- these functions are active in NIGHT-TIME mode.
- these functions are not active in MANUAL mode.
- activation of this input lights up the EMERG green LED on the board.

PARTIAL TWO-DIRECTIONAL AUTOMATIC**operating mode input (45)**

- With the input active, it forces a PARTIAL operating mode.
- When this input is deactivated, it forces a TOTAL operating mode to be set.

NIGHT-TIME MODE input (43)

- With the active input configured in this way, it forces the NIGHT-TIME operating mode to be set.
- When this input is deactivated, one exits from NIGHT-TIME mode.

MANUAL MODE input (44)

- With the active input configured in this way, it forces the manual operating mode to be set.
- When this input is deactivated, one exits from MANUAL mode.

Interlock operating mode input (46)

- The input becomes active only if the Interlock function is programmed from the Intercom menu via SDK EVO .

TIMER input (60)

- With this input active the TIMER function is on.
- When this input is deactivated, the TIMER function is turned off.

J21

V	+24V ⎓ accessories power supply
I4	**Input4** configurable (programming)
I3	**Input3** configurable (programming)
G	**GND** Accessories power supply negative and Common contacts
I2	**Input2** configurable (programming)
I1	**Input1** configurable (programming)
G	**GND** Accessories power supply negative and Common contacts
V	+24V ⎓ accessories power supply

70

14.3 CONFIGURATION OF J22 OUTPUTS

01 and 02 specifications:

O1 Open Collector output with Max load 100mA to be connected between 01 and V.

(Can be configured from the board and SDK EVO)

O2 relay contact with Max load 2A to be connected between O2 and O2.

(Can be configured from board and SDK EVO)

The OUT1 and OUT2 output signals may be configured as listed below:

Output DISABLED (no)

- keeps the output always off.

Output configured as GONG(1)

- activates and deactivates at 1 sec. intervals when the closing and opening safeties are busy.

Output configured as ERROR(2)

- activates the output when there is any active error or when an intrusion is signalled during the night-time mode of operation.

Output configured as BATTERY(3)

- the output is on when operation is with battery i.e. there has been a power outage.

Output configured as EMERGENCY ACTIVE (4)

- the output is on when an emergency is on.

Output configured as TEST (5)

- activates the output to perform a test (FAIL SAFE) on the inputs configured as closing and opening safeties on which the TEST option has been activated before a closing or opening movement.

Output configured as DOOR NOT CLOSED(6)

- the output is on when the door is in NOT CLOSED status.

Output configured as DOOR OPEN(7)

- the output is on when the door is in open status.

Output configured as DOOR IN MOTION (8)

- the output is on when the door is moving (opening or closing).

Output configured as LIGHT(9)

- the output is on for a programmable time in NIGHT-TIME operation from leaf opening.

Output configured as INTRUSION(10)

- the output is on when an intrusion is in progress (i.e. when the encoder detects an unexpected movement of the door from the closed position over 1 cm.)

Output configured as Safety in Closing (11).

- activates the output when at least one Safety in Closing is On.

Output configured as Safety in Closing or Safety in Opening (12)

- activates the output when at least one Safety in Closing or Safety in Opening is On.

the output is on depending on how it has been programmed:

- normally open means the output contact closes when the output is on

- normally closed means that the output contact opens when the output is on.

14.4 OBSTACLE DETECTION

Obstacle during closing (number of obstacles =0)

The recognition of an obstacle during CLOSING causes the leaves to reverse and the consecutive obstacles count during closing to increase. The force and time parameters used by the motor when an obstacle is detected can be selected.

Error 24 is generated when the programmed number of obstacles in CLOSING is reached.

The number of consecutive obstacles during closing can be reset:

- with RESET command
- upon reaching the CLOSED position
- by changing the operating mode

Obstacle during opening (number of obstacles =0)

If an obstacle is recognised during OPENING the doors stops moving and after 10 seconds it attempts to reopen. Error 24 and then error 31 are generated when the programmed number of obstacles during OPENING is reached.

The number of consecutive obstacles in opening is reset to zero:

- with RESET command
- upon reaching the OPEN position
- by changing the operating mode.
- An obstacle detected during opening in NIGHT-TIME function stops the leaves and after the night-time pause time set they close again. (safeties in closing and inputs not active)

14.5 ANTI-INTRUSION AND PULL&GO

The anti-intrusion is active when the door is manually moved from the CLOSED position.

It is hindered during an attempt to open to return to the closed position and signal 63 is activated.

The anti-intrusion is NOT active in NIGHT-TIME function with battery operation.

The PULL&GO is active when the door is manually moved from the CLOSED position to facilitate opening via activation of the motor.

The anti-intrusion is NOT active in PULL&GO function.

14.6 ELASTIC KIT

For the ELASTIC KIT parameter to be activated requires that the XDEK anti-panic kit has been installed.

For installation and adjustment, refer to the specific instructions for the XDEK .

Once installed, the XDEK allows the anti-panic opening of the leaves in the event of a blackout.

14.7 ENERGY SAVING FUNCTION

The Energy Saving function allows you to decrease the opening/closing times and to limit the number of "false openings" by recognising the pedestrian's direction of movement with respect to the door (approaching, leaving, cross traffic).

This involves an opening movement by external or internal radars. It reverses immediately when the radars are no longer engaged and the presence sensors do not detect that anyone is present.

Obligatory requirements

The Energy Saving function requires:

the use of the one-direction radar detectors inside and outside

the operating mode to be AUTOMATIC.

⚠ To ensure maximum safety adhere to the detector's operating instructions.

ACTIVATING THE ENERGY SAVING FUNCTION

In basic programming:

- set ES = Y.

ⓘ The parameter can be selected from the board or from the SDK EVO.

14.8 LOW ENERGY FUNCTION DURING CLOSING AND OPENING

The Low Energy mode limits the kinetic energy of the leaf and the forces.

The standard EN 16005:2012 in force in European Community countries allows the Low Energy mode to be used as an alternative to using monitored devices.

WARNING: the Low Energy mode of operation is not permitted if most users are elderly, sick, disabled or children.

For this type of user door contact with the user is NOT allowed. Use monitored detectors, or special mechanical protections.

SETTING THE LOW ENERGY FUNCTION DURING CLOSING

CS CF

In basic programming:

- set CS keeping to the MAX closing speed values indicated in **13** according to the weight of the leaf.
- set CF keeping to the maximum closing force value of I.
- set the closing acceleration = 1 ("Closing - Acceleration **89**) via SDK EVO
- set the number of obstacles during closing = 0 ("Consecutive obstacles" **91**) via SDK EVO.

For details refer to standard EN 16005:2012.

SDK EVO can be used.

SETTING THE LOW ENERGY FUNCTION DURING OPENING

OS OF

In basic programming:

- set OS keeping to the MAX closing speed values indicated in **13** according to the weight of the leaf.
- Set OF keeping to the maximum opening force value of I.
- set the opening acceleration = 1 ("Opening - Acceleration **89** via SDK EVO
- set the number of obstacles during opening = 0 ("Consecutive obstacles" **91**) via SDK EVO.

For details refer to standard EN 16005:2012.

SDK EVO can be used.

13 Max. speed settings in Low Energy mode.

Weight of the leaf/leaves [kg]	MAX permitted speed (CS/OS)
10	9
20	8
30	7
from 40 to 50	6
from 60 to 80	5
from 90 to 150	4
from 160 to 240	3

CF / OF also has to be set to I.

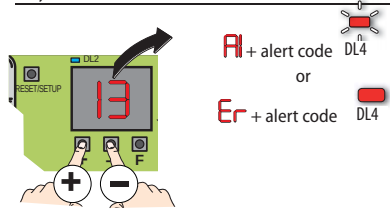
15. DIAGNOSTICS

SYSTEM DIAGNOSTICS: ALERTS, ERRORS

The display reads

- the STATUS of the automation **14**
- the ERRORS that stop the automation from operating are indicated by the STEADY **RED LED DL4**. If several errors are present at the same time, each error is signalled after the previous one has been resolved. See **15**.
- The WARNINGS related to current conditions/phases, identified by the flashing **RED LED DL4** are described in **16**.

To check active ERROR/ALERT code, press and hold + and – simultaneously.



14 Status of the automation

Status of the automation	
00	CLOSED
01	OPENING
02	OPEN
03	in PAUSE
04	in NIGHT-TIME PAUSE
05	CLOSING
06	OPEN, STOPPED or CLOSED in EMERGENCY
07	in MANUAL mode
08	in NIGHT-TIME mode
10	System TEST in progress
11	STOPPED
12	Safety TEST in progress
13	Door ERROR (Press + and - simultaneously to display the ERROR)
L0-L2	PHASES L0, L1, L2 of SETUP in progress (flashing)
.	in SLEEP mode (point flashing)

15 Errors

Error		Required action (perform RESET after the intervention)
1	**Board** failure (*)	Perform RESET. If the problem persists replace the control board.
4	Faulty **accessories power supply (VACC)**	Make sure that there is not a short circuit between pins V and G on the terminal board. Make sure that the current drawn by the accessories connected to the board is within the permitted limits. Check fuse F2. Carry out a RESET. If the problem persists replace the control board.
5	**Microcontroller** error (*)	Make sure that there are no sources of electromagnetic interference that are too close to the board. Update the board with the latest FW version available.
7	**Motor** failure **(*)**	Make sure that the door type has been selected correctly. Make sure that the motor has been connected properly. If the problem persists, replace the motor.
9	VMain low	With the battery pack connected, make sure that the battery kit has been enabled via the board or SDK EVO. Check the mains voltage and the switching power supply unit.
10	**Battery** discharged	Battery charge too low to enable movement (battery mode only). Turn the mains power back on.
11	Test failed **S1 (*)**	Check the connections of the safety device. Check the operation of the safety device. Check the programming of input S1-S2.
12	Test failed **S2 (*)**	
15	**Setup inhibited**	Make sure that a door type has been selected Make sure that the selected operating mode is appropriate (NOT Night-time or Manual mode) Make sure that an emergency input is not active. Make sure that the board is not being powered by the battery.
16	**Encoder** fault (*)	Make sure that the encoder is connected properly. If the fault persists, replace the motor or the board.
18	**Firmware** (FW) not compatible	During the update stage, an incorrect FW has been detected. Check and update again the control board FW. The file on USB storage device is required (72).
19	High **mechanical friction (*)**	Check the leaves slide smoothly with power supply, battery and motors disconnected. Remove any friction. Check the counter wheel.
20	Test failed on **Inputs** configured as safety devices **(*)**	Check the connections and programming of the inputs and the safety device.
22	Select configuration request	You are prompted to set a configuration CF
23	VMain High	Switching power supply unit failure Replace switching power supply unit
24	**Consecutive obstacles in closing**	Check for and remove the obstacle in closing. Manually check that the leaves slide smoothly.
25	**DM_Motor** failure	Replace the DM_Motor (double motor) (only if DM has been activated) **(not available for CF=1)**
26	Motor block failure **(*)**	Make sure that the motor block has been installed correctly Make sure that the motor block has been connected correctly Make sure that the motor block has been configured correctly If warning 59 appears, make sure that the MONITORING KIT has been installed and connected correctly If warning 54 persists, replace the board or the motor block
27	Motor rotation error	Check belt connection to the leaves.
29	**AUX DM (*) board** fault	Check the AUX DM Errors table via SDKEVO. If necessary, update the FW of the main board with the automatic update of the AUX DM board.
31	**Consecutive obstacles in opening**	Check for and remove the obstacle in **opening**. Manually check the leaves slide smoothly.
32	**Motor time out**	Motor without limit switch reference positions; check the mechanical stops Check the motor wiring. If the problem persists, replace the board or motor.
38	Configuration error	Is generated when the type of door or a programming parameter is modified that requires a new SETUP (direction of rotation of the motor, enabling/disabling of the DM KIT for SF1400 passage opening selection). Carry out a new SETUP procedure. Reset the program parameter that was modified.
39	Data in setup memory missing or corrupted	Repeat the SETUP procedure If the problem persists, replace the board or motor.
99	Data deletion in progress (not displayed)	Wait for the data deletion procedure to finish.

If an error is triggered after 30 sec. it causes the board to AUTORESET the errors marked with an (*). 5 attempts are made.

Indication		Intervention required
41	**Date and time missing**	Reset date/time via the SDK EVO.
42	**Clock battery** discharged or missing	Replace the battery to avoid losing the time in case of mains power failure.
44	**Emergency** active	Indicates that an emergency is active
45	**Timer** active	the TIMER is activated
46	**Timer** function in progress	A TIMER function is running
47	**Last movement carried out with battery**	The board has carried out the last programmed movement using the battery.
48	**Night-time** mode operation	Night-time mode operation.
49	**Manual** mode operation	Manual mode operation
50	**Partial** mode operation	Partial mode operation
51	**Obstacle during closure** detected	The door opens again. Check for an obstacle in closing
52	**Obstacle during opening** detected	After 5 sec. the door attempts another opening. Check for an obstacle in opening.
53	Number of maintenance cycles corrupted	Replace the board and carry out maintenance on the system.
54	**Motor block** absorption fault	Perform RESET. Check the motor block
55	Operation in **pharmacy** mode in progress	PHARMACY opening is in progress.
56	**Battery** operation	the indication remains as long as the automation operates on battery with mains power supply down.
57	Searching for strike on opening	the indication remains as long as the stage is ongoing
58	Searching for strike on closing	the indication remains as long as the stage is ongoing
59	Motor block **fault (only with Monitoring Kit)**	Perform RESET. If the problem persists replace the motor block.
60	Maintenance requested	Ordinary or periodic maintenance request.
61	**SDK EVO** / LK EVO / KS EVO **fault**	Check it is the correct device and check the SDK EVO / LK EVO /KS EVO connections. Update the FW (see procedure **72**). If the problem persists, replace the SDK EVO /LK EVO /KS EVO .
62	**Battery charger** failure	Perform RESET. If the problem persists, replace the board.
63	Intrusion in progress	An attempt to manually open the leaves is in progress
65	SETUP in progress	SETUP is in progress.
67	Battery saving	Power to the accessories of the board (Excluding the SDK-EVO) has been disconnected to save the battery and prevent it from discharging rapidly.
68	Safeties test failed	Check that the safety detector is working If the problem persists, replace the detector. In this condition the leaves move at a slower speed.
69	Door open	the door is open for semi-automatic OPEN function.
70	Low batteries level	batteries discharged
71	Intermode Slave	board configured as Slave and the operating mode is that of the Master.
72	Intermode node registration	Wait for the procedure to finish
73	Intermode Node Alarm	Master : At least one node does not respond / Slave : The Master does not communicate.
74	INTERLOCK	INTERLOCK operating mode active.
80	Non-Standard	Non Standard configuration in use.

17 AUX Errors

AUX Errors		Intervention required
200	**UC Failure (Corrupted FW or Corrupted RAM)**	Carry out board reset; if the error persists replace the board.
201	**Faulty AUX Motor**	Check motor wiring. Reset board; if the error persists, replace the AUX motor.
202	High **mechanical friction**	Manually check smooth sliding of the leaves along the entire space acquired during setup
203	**AUX Motor Driver**	Carry out board reset; if the error persists replace the board
204	**Firmware** (FW) not compatible	Update board Firmware
205	Motor Rotation	Check AUX Motor wiring
206	Encoder Fault	Check encoder wiring
216	Communication problems between the 2 boards	Carry out board reset; if the error persists replace the board
217	Incorrect Opening Position	Carry out board reset; if the error persists replace the board
218	Obstacle	Check for any obstacles
219	Incorrect ID	Replace the board
220	VMain	Carry out board reset; if the error persists replace the board
221	Timeout	Carry out board reset; if the error persists replace the board
222	Test VMain	Replace the board

15.2 TROUBLESHOOTING

Below is a guide for any situations not included in the system diagnostics (alerts/errors).

18 Troubleshooting guide

CONDITION	SUGGESTION
SDK EVO off	- there is no mains voltage and the board is operating on the battery with NIGHT-TIME function and is in energy saving mode - connection to the board has been interrupted: check the cables and wiring between the SDK EVO and the board - the board is not working correctly: replace the board
All LEDs are off	- ensure fuse 5x20 T2.5A inside the power supply unit has not tripped - check correct insertion of J1 connector on the board - check connection with power supply unit - the board is not working correctly: replace the board
POWER LED off LED 24V ⎓ on	- no mains power and the board is working on battery - no mains power
the door DOES NOT CLOSE	- the safeties in closing are busy - the emergencies are active - ensure DOOR OPEN operative function has not been selected - ensure MANUAL operative function has not been selected - check motor connection - check presence of motor power supply voltage
The door DOES NOT OPEN	- the safeties in opening are engaged - the emergencies are active - ensure MANUAL operative function has not been selected - ensure NIGHT-TIME operative function has not been selected - check motor connection - ensure the motor block is not blocked - check presence of motor power supply voltage
The door CLOSES instead of OPENING and VICE VERSA	- check the belt fitting on the board and perform a SETUP
The door only moves for short stretches	- check correct insertion of the connector of the encoder - check encoder integrity - check integrity of flat encoder connection cable
The door performs movements at very low speed	- ensure the selected speed levels are as desired - ensure the selected slowing down spaces are as desired
The door accelerates or slows down suddenly during an acceleration in opening and/or closing.	- modify on the display values CF and bF.
The door does not perform SETUP	- door set in NIGHT-TIME function - door set in MANUAL function - active internal or external release - the emergencies are active - motor or encoder not connected, not powered or faulty

16. OPERATIONS ON THE BOARD

16.1 SETUP

The SETUP consists of a series of movements.

WHEN IS SETUP NECESSARY

- when the door automation is first put into operation 53 or after replacing the board
- when the display indicates error I5
- following any travel variation
- when leaf number (LN) is modified
- after a reset to factory settings

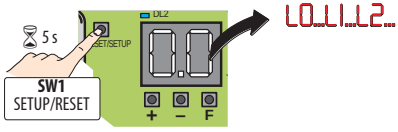
SETUP CANNOT be performed in conditions of:

- Emergency active
- MANUAL mode
- NIGHT-TIME mode
- Power outage.

In this case the board remains in LO status until the cause of the problem has been removed.

HOW TO PERFORM SETUP FROM BOARD

- To perform SETUP from board press button SW1 for 5 s.



SETUP is interrupted (status LO) if one of the following occurs during the procedure:

- activation of an emergency command
- setting NIGHT-TIME or MANUAL mode
- activation of an error during motion.
- Activation of the safeties does not prevent SETUP execution.

To perform the SETUP using SDK EVO refer to 91.

16.2 RESET

Reset is an initialising procedure of board operation.

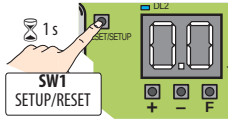
WHEN IS RESET NECESSARY

After automation lock due to:

- a board error with a RESET request

HOW TO PERFORM A RESET FROM THE BOARD

- Press the RESET button SW1 for 1 s and release it.



To perform a RESET using SDK EVO, refer to 69.

16.3 RESTORING FACTORY STATUS

RESTORE brings all board parameters back to factory status.

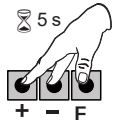
The procedure is irreversible and involves:
- loss of data acquired from SETUP (need to perform SETUP again)
- loss of programming (resetting default values)
- relevant cycle counters are reset to zero
- loss of passwords ("0000" is reset)

WHEN IS RESTORE NECESSARY

When you wish to cancel all settings made on the board.

HOW TO PERFORM RESTORE

1. Disconnect mains power supply and disconnect the emergency battery
2. restore power supply to the board
3. **within the first 4 s after switching on** (while the display shows the FW version) press simultaneously for about 5 s the buttons + – F



4. The display indicates – –
5. release the buttons
6. the display shows automation status.

After restoring factory status perform SETUP.

16.4 UPDATING (UPLOAD)

The USB memory files are copied on the board.

The update files may be downloaded from the website: www.faacgroup.com

The USB device must be formatted with FAT or FAT 32 file system. The NTFS format is not recognised by the control board.

The files required, with their specific names indicated in ▦ **21** must be in the root directory of the USB storage device (not in directories or compressed).

Use a USB with maximum 500mA absorption.

1. When switched on, the board will be in Bootloader mode for a few seconds. This is indicated on the display by bo
2. insert the USB memory device in the J17 connector
3. the USB device is detected and the display shows the letters bo
4. press and release the F button to scroll through the available functions (▦ **19**)
5. Press and hold down the + – buttons simultaneously for at least 3 seconds in order to run the function displayed; the update starts. – – flashes on the display and the USB LED on the board flashes. When finished, the display will show:
   - 4 = if it was carried out successfully
   - no = in the event of errors (**RED LED DL4** on the board is lit).

To display the error code, simultaneously press the 2 buttons + and –.

6. Remove the USB memory device.

16.5 DOWNLOAD

The board files are copied on the USB memory.

The USB device must be formatted with FAT or FAT 32 file system. The NTFS format is not recognised by the control board.

1. When switched on, the board will be in Bootloader mode for a few seconds. This is indicated on the display by bo
2. insert the USB memory device in the J17 connector
3. The USB device is detected and the display shows the letters bo
4. press and release the F button to scroll through the available functions (▦ **20**)
5. Press and hold down the + – buttons simultaneously for at least 3 seconds in order to run the function displayed, until Or or Ad appears on the display.
6. release the buttons and use the + – buttons to select one of the two file saving methods:
   - Or (overwrite) = the file on the board will be saved to the USB storage device by overwriting any existing files with the same name
   - Ad (add) = the file on the board will be saved to the USB storage device in addition to any file already present(*)
7. Press F to save the file in the root of the USB memory
8. Upon completing the operation, the display will show:
   - 4 = if the operation has been completed successfully
   - no = in the event of errors (**RED LED DL4** on the board is lit).

To display the error code, simultaneously press the 2 buttons + and –.

9. Remove the USB memory device.

▦ **19** Updating functions (UPLOAD) from USB

UP	Updating the board firmware required file: E1SL_xx.hex
UE	SDK EVO , LK EVO ,KS EVO firmware update including translations of messages displayed by the device. The names of the files required are: • SDK_xx.hex and SDKL_xx.bin • LK_xx.hex • KS_xx.hex
UC	E1SL board CONFIGURATION UPLOAD. required file: E1SL.prg
Ut	E1SL board TIMER CONFIGURATION UPLOAD. required file: E1SL.tmr

If the board remains in the bo condition, an UPLOAD should be performed.

▦ **20** Download to USB functions

dC	Board CONFIGURATION download to USB storage device. the file is copied: E1SL.prg (*)
dt	TIMER CONFIGURATION Download This function allows you to save the TIMER configuration of the board to the USB storage device. the file is copied: E1SL.tmr (*)
dL	LOG DATA Download This function allows you to save the LOG data of the board to the USB storage device. the file is copied: E1SL.log (*)

(*) If there is already a file with the same name in the root directory of the USB storage device and Ad mode was selected, an incremental number will be added to the new file name. E. g.: if the file E1SL_01.prg already exists, the file E1SL_02.prg will be saved and so on.

▦ **21** Firmware and programming file names

E1SL_xx.hex	board firmware
E1SL.prg	board programming
E1SL.tmr	Timer programming
SDK_xx.hex	SDK EVO firmware
SDKL_xx.bin	SDK EVO language update
LK_xx.hex	LK EVO firmware
KS_xx.hex	KS EVO firmware

22 BOOTLOADER Errors

Error		Intervention required
81	**Update files missing**	**Check for files on the USB memory Key**
82	**File writing error**	**Download the files to the USB storage device again.**
83	Device being updated incorrect or missing	The connected device is incompatible or not connected.
85	**Firmware update error**	**File read error Repeat update procedure**
88	**File reading error**	**File corrupted or not the right one for the device to be updated**
90	**Password error**	**Password file different to the one on the board**
91	**Board failure**	**Replace board**
96	**Microcontroller fault**	**Replace board**
97	**USB Error**	**USB memory key not recognised.** **USB key faulty or not f**ormatted with the FAT or FAT 32 file system.

17. INTERCOM (CANBUS)

PROGRAMMING ONLY WITH SDKEVO

■ **Description**

The E1SL board is capable of communicating with other E1SL units via an Intercom network connection. This enables the following functions to be used (Programming/Intercom/Function menu):

- INTERMODE: a master door from which to set the operating mode for all the others that are connected to the network.
- INTERLOCK: two single doors, where the opening of one is subject to the closing of the other and vice versa

Every network-connected E1SL should be programmed for the same Intercom mode.

■ **Connection**

The units in the network are connected via 3 cascade connected-wires between the J18 connectors of the E1SL boards **71**

The sequence in which the units are wired is unimportant, but it is essential that a CASCADE connection is used.

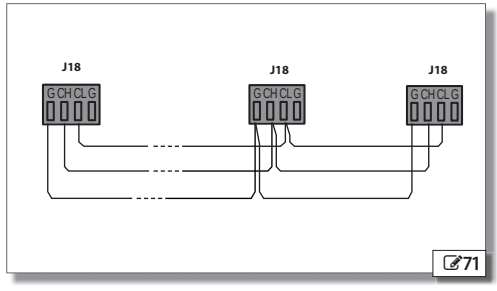
■ **Addressing**

A unique Node ID (Programming/Intercom/MasterSlave_no menu) must be assigned to each E1SL in the network as indicated below.

Do not assign the same Node ID to more than one unit in the network.

■ **Registration**

After having wired up and assigned an address to each unit, registration must be carried out (Programming/Intercom/Intercom/Node registration) only on the Master E1SL that has been assigned Node ID=1.



17.1 INTERMODE

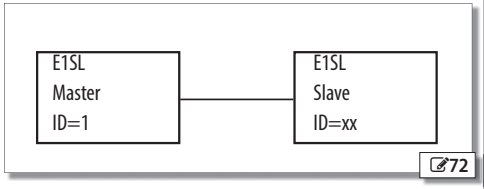
72 shows the IDs to assign to the E1SL units in the network.

The system consists of a Master unit and 1 Slave unit.

The E1SL Master unit is the only one on which the operating mode should be set, which is then also applied immediately to all the Slave units.

With INTERMODE, it is not possible to change the operating mode of an individual unit locally.

The Master E1SL must be programmed with ID1.



Connect the devices, program the individual E1SL boards and register the Master.

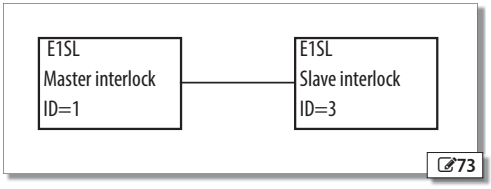
17.2 INTERLOCK

73 shows the IDs to assign to the E1SL units in the network.

The internal unit must be defined as the Master ID1; the Slave is ID3.

In INTERLOCK mode, one door can open only if the other is closed.

Connect the devices and carry out the programming and registration on the individual E1SL boards before configuring the INTERLOCK using SDK EVO.

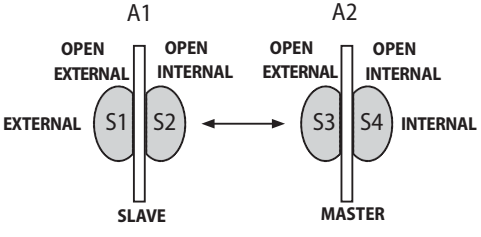


INTERLOCK WITH NO MEMORY

With 4 sensors: the second opening is not automatic.

In order to open the door, the internal/external sensor must be triggered when the other door is closed. If the sensor is activated while the door is not yet closed, it has no effect.

Use one-direction radar detectors



	S1	S2	S3	S4	ReqA1=1	ReqA2=1
A1 closed A2 closed	Open A1	Open A1	Open A2	Open A2	Open A1 Req A1=0	Open A2 Req A2=0
A1 mov. A2 closed	Open A1	Open A1	ReqA2=1	ReqA2=1		
A1 closed A2 mov.	ReqA1=1	ReqA1=1	Open A2	Open A2	----	----
A1 mov. A2 mov.	----	----	----	----	----	----

ReqA1=1 means that a request has been made to open A1

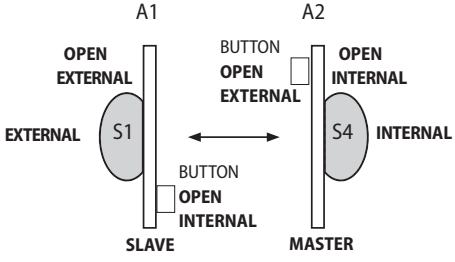
ReqA2=1 means that a request has been made to open A2

INTERLOCK WITH MEMORY

With 2 sensors, the other door opens automatically.

Two buttons can be used between the 2 doors to avoid trapping (optional).

Use one-direction radar detectors



	S1	S4	Req A1=1	Req A2=1
A1 closed A2 closed	Open A1 Req A2=1	Open A2 Req A1=1	Req A1=0 Open A1	Req A2=0 Open A2
A1 mov. A2 closed	Open A1	Req A2=1 Req (A1=1)	----	----
A1 closed A2 mov.	Req A1=1 Req (A2=1)	Open A2 Req A1=1	----	----
A1 mov. A2 mov	----	----	----	----

ReqA1=1 means that a request has been made to open A1

ReqA2=1 means that a request has been made to open A2

18. LK EVO fw version 1.2 or later

18.1 ASSEMBLY AND TESTING

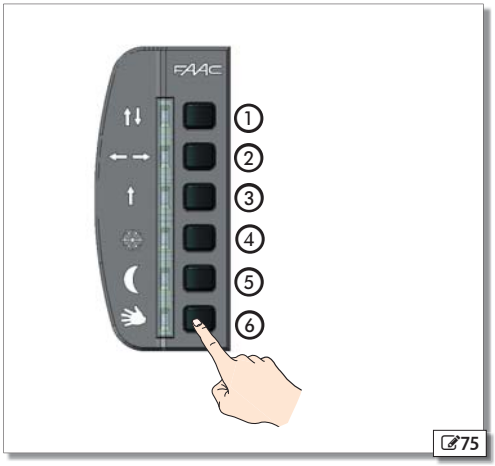
1. To separate the LK EVO , use a flat screwdriver to prise apart the points ✎74-①.
2. Break off the cable knockout.
3. Mark the points on the wall ✎74-③ and fasten the support using suitable screws.

BEFORE CONNECTING THE DEVICE, disconnect the power supply and the emergency battery of the automation.

4. Connect the E1SL board ✎74-④
5. The connection must be made using a 4-pair twisted cable U/UTP CAT.5 4x2xAWG24 with a 0.5 mm section ✎74-⑧. The maximum distance is 50 m.
6. Assemble the LK EVO by pressing lightly at the points ✎74-①.

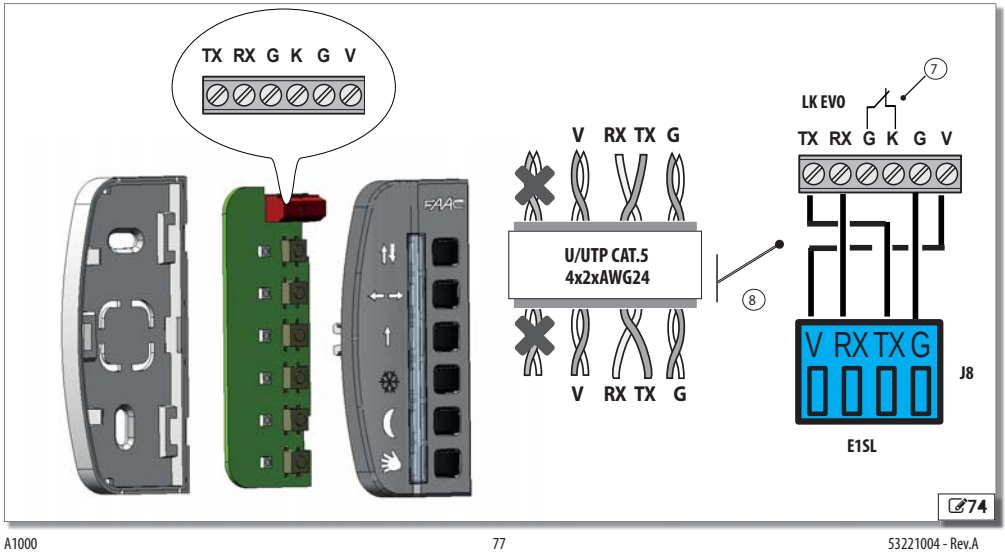
* An optional connection can be made to terminals G and K on the LK EVO with a key command to lock the function keys. With an NC contact, the keypad is locked ✎74-⑦.

①	↑↓	TOTAL TWO-DIRECTION AUTOMATIC
②	← →	DOOR OPEN
③	↑	AUTOMATIC TOTAL ONE-DIRECTIONAL
④	❄	AUTOMATIC PARTIAL TWO-DIRECTIONAL
⑤	☾	NIGHT
⑥	✋	MANUAL



18.2 SELECTION MENU

1. To access the operating mode selection menu, press the corresponding function button.
2. The following functions may be set with the selection buttons:
   - TOTAL TWO-DIRECTION AUTOMATIC
   - DOOR OPEN
   - AUTOMATIC TOTAL ONE-DIRECTION
   - AUTOMATIC PARTIAL TWO-DIRECTION AUTOMATIC
   - NIGHT
   - MANUAL
3. The LED switches on to identify the active function.
4. To switch to another function press the key corresponding to the new function.
5. If the LK EVO is connected to an A1000 board in which an unintended function has been programmed, it is overridden with a different function as indicated:



ENGLISH

Translation of the original instructions

- from AUTOMATIC ONLY PARTIAL ENTRY
- from AUTOMATIC ONLY PARTIAL EXIT
  switches to PARTIAL TWO-DIRECTION AUTOMATIC

- from AUTOMATIC ONLY TOTAL ENTRY
  switches to TOTAL TWO-DIRECTION AUTOMATIC

- from PARTIAL NIGHT-TIME
  switches to TOTAL NIGHT-TIME

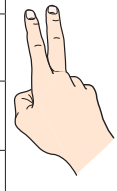
- PARTIAL MANUAL
  switches to TOTAL MANUAL

ALARMS
The ALARMS are displayed with a code of flashing LEDs alternating with the current operating mode.
For the type of ALARM see ▦ **23 .**

6. Other 2-key combinations may be used for the other special functions.

18.3 SPECIAL FUNCTIONS

RESET:

LOCK / UNLOCK		② + ⑤ 5 sec.
RESET		③ + ④
WARNINGS		① + ② continuous
FIRMWARE VERSION		⑤ + ⑥ continuous

Reset clears errors in the memory.
It is activated by pressing keys ③ and ④ simultaneously for 5 sec.
The LEDs corresponding to the keys switch on then off.

LOCK/ UNLOCK:
The lock locks and unlocks the keys of the LK EVO
It is activated by pressing keys ② and ⑤ simultaneously for 5 sec.
The LOCK/ UNLOCK mode change is displayed by switching on for 300msec then switching off the LEDs corresponding to keys.

WARNINGS:
The warnings are displayed by pressing and holding the keys ① and ② .
The LEDs corresponding to WARNINGS blink for as long as the keys are held.
To view the type of WARNING ▦ **24**

FIRMWARE VERSION:
the firmware version of E1400 board can be displayed by pressing and holding keys ⑤ and ⑥.
To display the FIRMWARE version ▦ **25**

19. KS EVO

19.1 ASSEMBLY AND TESTING

1. To separate the parts of the KS EVO see ✎**74** .
2. Break off the cable knockout.
3. Mark the points on the wall ✎**74**-③ and fasten the support using suitable screws.

BEFORE CONNECTING THE DEVICE, disconnect the power supply and the emergency battery of the automation.

4. Connect up the E1SL board ✎**74**-④
5. The connection must be made using a 4-pair twisted cable U/UTP CAT.5 4x2xAWG24 with a 0.5 mm section ✎**74**-⑧. The maximum distance is 50 m.
6. Assemble the KS EVO ✎**74**

✎76

19.2 SELECTION MENU

1. Turn the key corresponding to the function to access the operating mode selection menu.
2. The following functions can be set using the key:

- TOTAL TWO-DIRECTION AUTOMATIC
- DOOR OPEN
- AUTOMATIC TOTAL ONE-DIRECTION
- AUTOMATIC PARTIAL TWO-DIRECTION AUTOMATIC
- NIGHT
- MANUAL

3. The LED switches on to identify the active function.

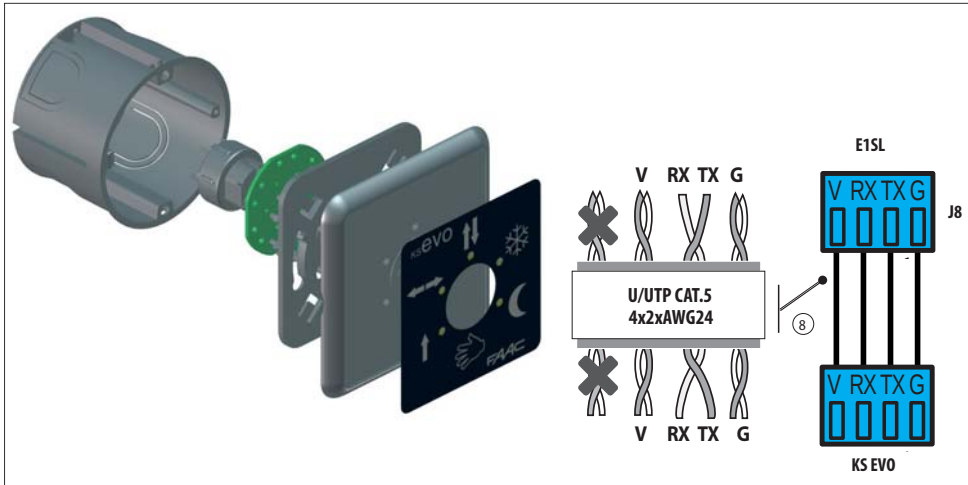
Turn the key to move from one function to another.

If there is an error on the board to which it is connected, the LEDs displayed on the device alternate between:
3 sec. current operating mode LED on steadily / 3 sec. flashing error code LED.

Refer to the error tables and the corresponding number on the board and the respective combination of LEDs associated with the error.

The switching time of the function with respect to the chosen selection is 1 sec.

If all the LEDs are on, it indicates that there is no communication with the board or the board to which it is connected is not recognised.



✎77

23 Errors

Errors		①	②	③	④	⑤
1	**Board** failure					
4	**Accessories power supply fault**					
5	**Microcontroller** error					
7	**Motor** failure					
9	VMAIN fault					
10	**Battery** discharged					
11-12-13-14-20	Test on **Inputs** configured as safeties failed					
15	**Set-up inhibited**					
16	**Encoder** failure					
17	**Double contact inputs fault**					
18	**Firmware** (FW) not compatible					
19	High **mechanical friction**					
21	Movement time not compliant with standard EN16005					
22	Corrupted data					
24-31	**Number of consecutive obstacles reached**					
26	Motor block failure					
27	Motor rotation error					
29	**AUX board** fault					
30	**Serious error**					
32	**Motor time out**					
38	Configuration error					
39	Set-up data missing or corrupted					
99	Total deletion of board data					

24 Warnings

Warnings		①	②	③	④	⑤	⑥
44	**Emergency** active						
51	**Obstacle during closure** detected						
52	**Obstacle during opening** detected						
54	**Motor block** absorption fault						
56	**Battery** operation						
59	Motor block **fault (only with Monitoring Kit)**						
60	Maintenance requested						
68	Safeties test failed						

25 Firmware Version

Firmware Version	①	②	③	④	⑤
FW 1.0					
FW 1.1					
FW 1.2					
FW 1.3					
FW 2.0					
FW 2.1					
FW 2.2					
FW 2.3					

How to calculate the firmware version number starting from the firmware number. E.g. firmware version 1.3:

FW	:	Result	Remainder
13	2	6	**1**
6	2	3	**0**
3	2	1.5	**1**
1	2	0,5	**1**
0	2	0	**0**

The final sequence starting from the bottom is: **01101 .**
This should be interpreted as follows:

1	2	3	4	5	6
1	**0**	**1**	**1**	**0**	-

How to calculate the firmware version using the binary sequence

Read the sequence generated by LK EVO . Example: **01101**
The sequence **01101** should be written under the numbers **128, 64, 32, 16, 8, 4, 2 ,1** so that every binary number is under its power of two :

128	64	32	16	8	4	2	1
-	-	-	**0**	**1**	**1**	**0**	**1**
-	-	-	**0+8+4+0+1 = 13**				

20. SDK EVO fw version 3.0 or later

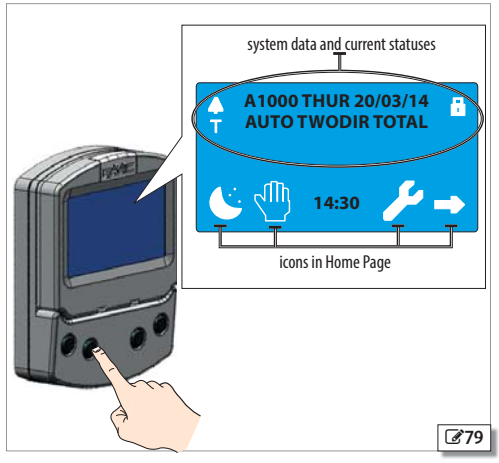
20.1 ASSEMBLY AND TESTING

1. Separate the parts ✎**78** (the 2 screws have to be loosened ✎**78**-①).
2. Break the cable knockout ✎**78**-②.
3. Mark the points on the wall ✎**78**-③ and fasten the support using suitable screws.

BEFORE CONNECTING THE DEVICE, disconnect the power supply and the emergency battery of the automation.

*An optional connection can be made on SDK EVO to terminals G and K with a key command. ✎**78**-⑦. The functions that may be selected from SDK EVO are: Block or Without User Password. Refer to paragraph "SDK EVO key" **91**.

4. Connect up the E1SL board ✎**78**-④
5. The connection must be made using a 4-pair twisted cable U/UTP CAT.5 4x2xAWG24 with a 0.5 mm section ✎**78**-⑧. The maximum distance is 50 m.
6. Assemble the parts (the 2 screws must be tightened ✎**78**-①).
7. Fasten using the screw ✎**78**-⑤ and insert the screw cover ✎**78**-⑥).



✎79

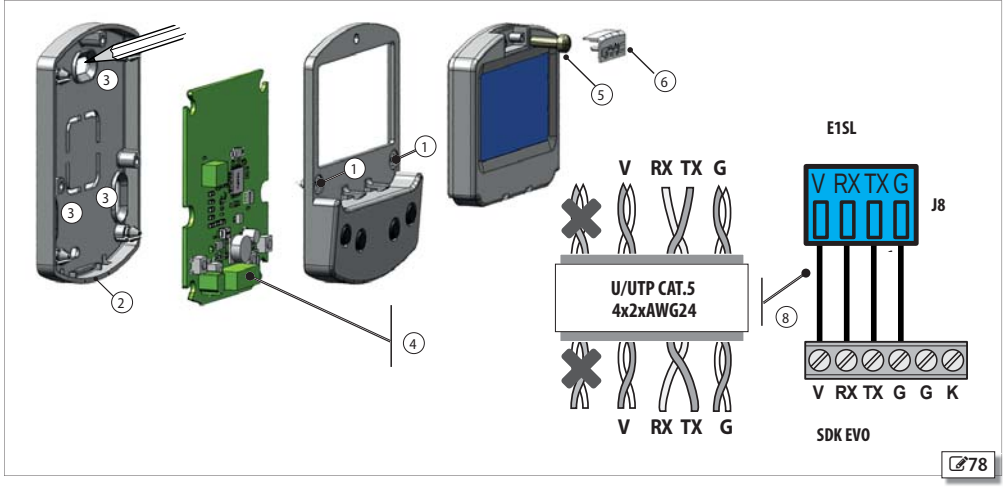
20.2 SWITCHING ON AND USE

1. Turn power on to the E1SL electronic board.
2. The device launches the program and displays:

then:

bootloader version

3. The device is ready for use when the HOME PAGE is displayed.
4. The modes of operation of the automation can be selected and set using the buttons under the activation icons (Home Page ✎**80**).



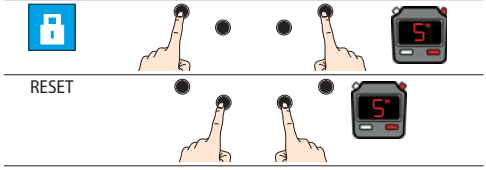
✎78

20.3 HOME PAGE

The 4 buttons under the display activate the control represented by the icon located above them ☞80.

20.4 RESET - LOCK/RELEASE SDKEVO

On the HOME PAGE, Lock/Release SDK EVO or Reset the board by pressing the 2 buttons indicated simultaneously for 5 s:

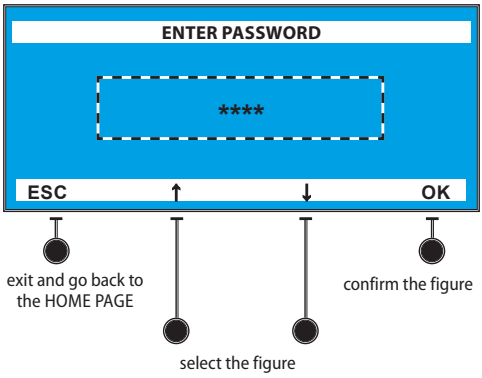


20.5 PASSWORD

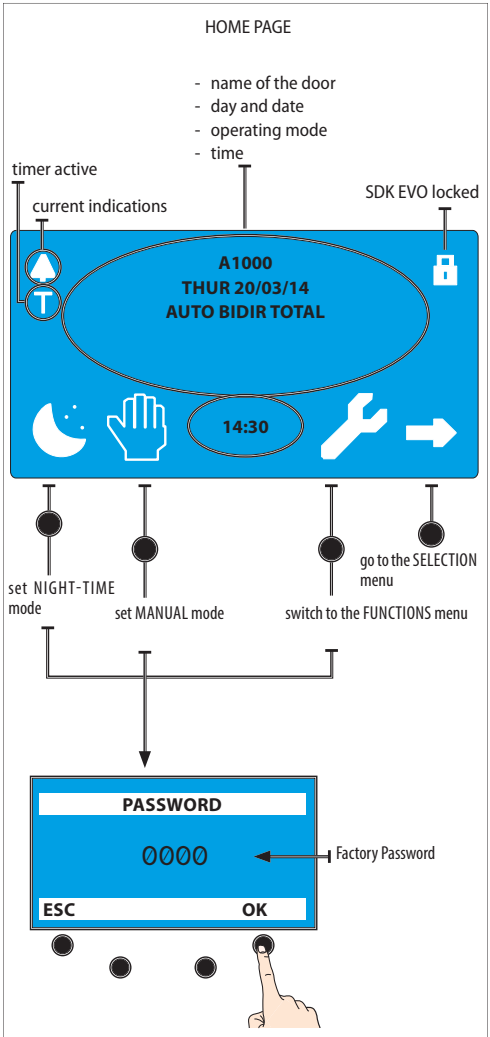
The 4 digit **PASSWORD** has to be entered in order to use some of the functions.

- select the first digit using the ↑↓ buttons
- confirm via the OK button and it moves on to the next digit
- once the 4 digits have been entered, the password is recognised by the device as **USER** or **INSTALLER**.

The factory-set password is: 0000



- If the PASSWORD IS NOT RECOGNISED:
- the command is not executed
- the display indicates "INCORRECT PASSWORD"
- press OK to go back to the HOME PAGE.



Functions accessible with PASSWORD

USER	✓	✓*
INSTALLER	✓	✓

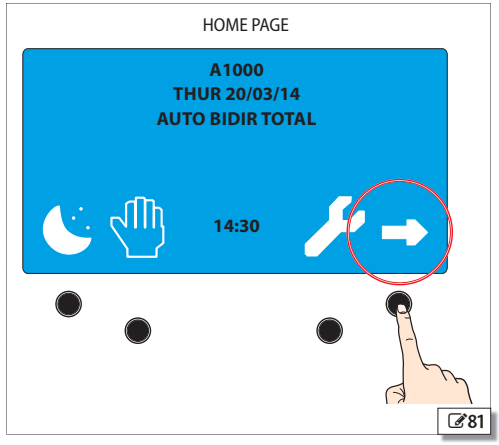
* Some functions are reserved to the installer

☞80

20.6 SELECTION MENU

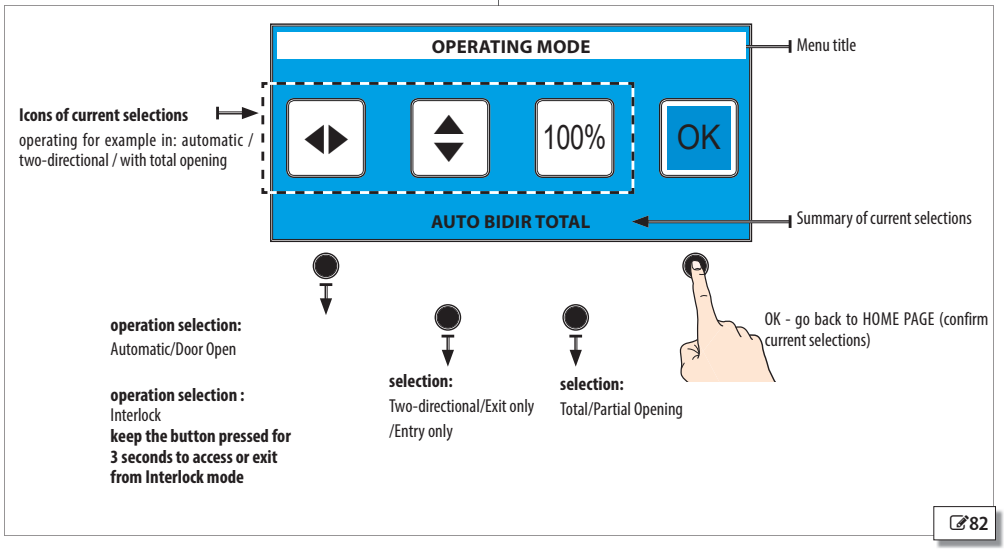
1. To access the operating mode selection menu, press the corresponding button on the HOME PAGE ✎81.
2. Using the selection buttons ✎82 you can set:
   - the Automatic or Door open operation
   - Two-directional or Exit only mode
   - Total or Partial Opening option
3. To go back to the HOME PAGE use the OK button (the selections displayed are confirmed).

Automatic or Door open operation Automatic = opening via detector Open door = closure is inhibited	Automatic	Door open
Direction of travel Two-directional = the detectors are enabled for entry and exit Exit only = the detector is only enabled for exit Entry only = the detector is only enabled for entry	Two-directional	Exit only Entry only
Opening percentage 100% = Total opening % = Partial opening (percentage that can be modified by the program)	Total opening 100%	Partial opening %
INTERLOCK operating mode To access the function press and hold the Automatic or Door open button for 3 seconds. To enable the mode of operation the board must be the Master and the Intercom function must have been set in Interlock on SDK EVO.		



example - automatic operation, only for exit, with partial Opening:

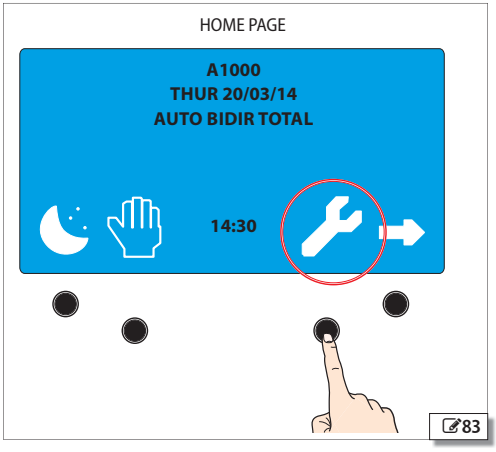
example - door open with total opening:

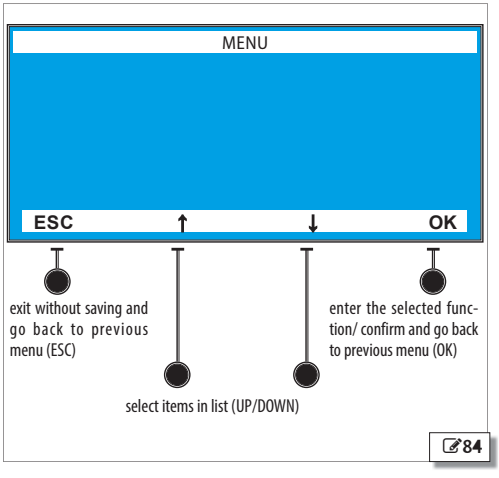


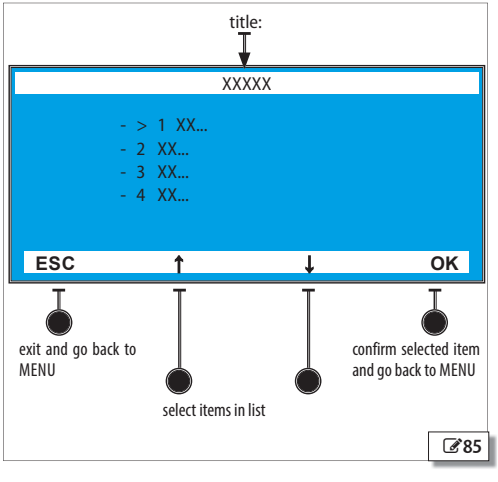
20.7 FUNCTION MENU

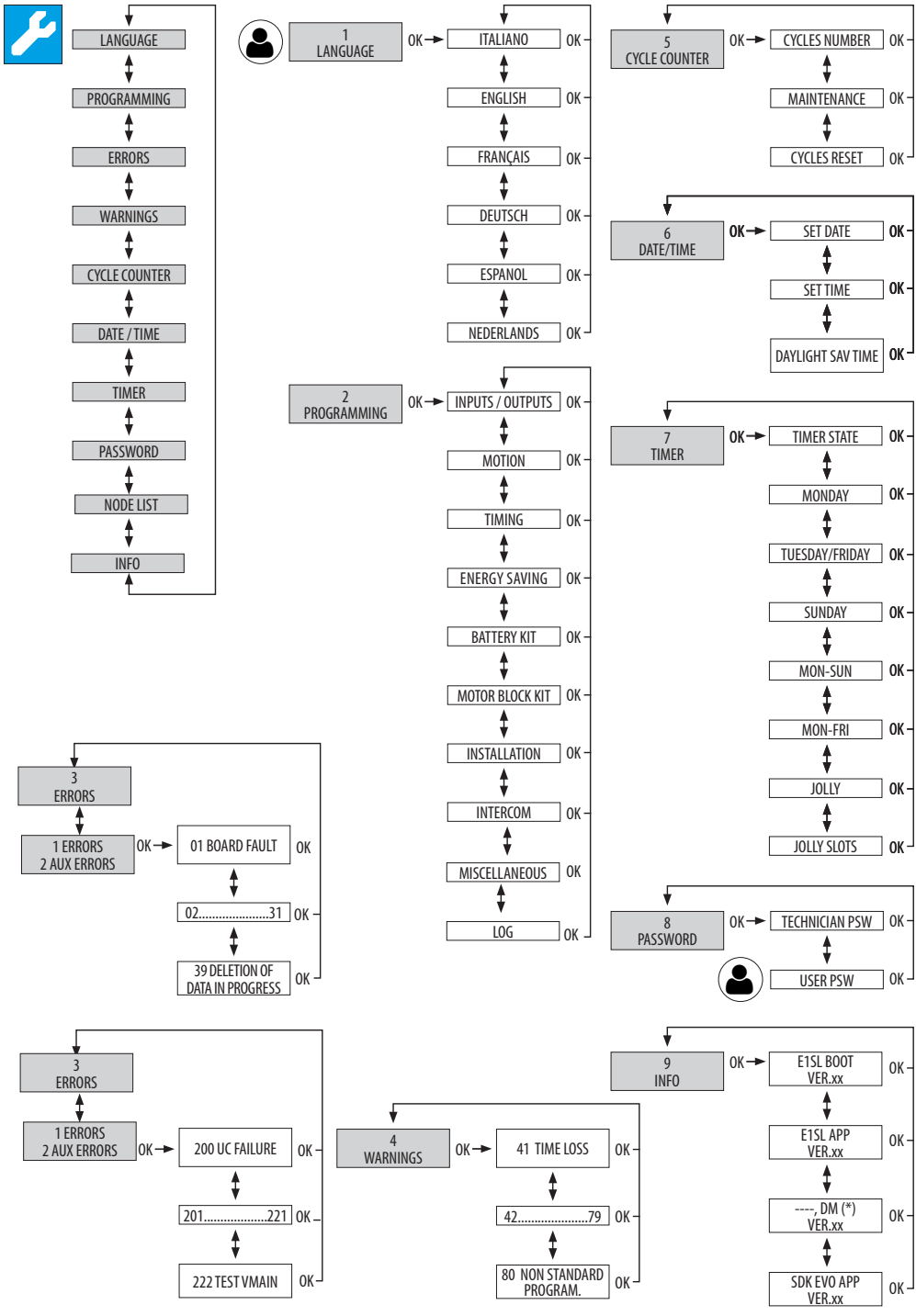
1. To access the functions menu, press the corresponding button on the HOME PAGE ✎**83**.
2. You are prompted to enter the **USER** or **INSTALLER** PASSWORD.
3. The display shows the functions (4 at a time) ✎**84**.
4. Scroll through the available functions using the buttons underneath the ↑ and ↓ selection arrows. The list is:
   - 1 LANGUAGE
   - 2 PROGRAMMING
   - 3 ERRORS
   - 4 ALERTS
   - 5 CYCLE COUNTER
   - 6 DATE / TIME
   - 7 TIMER
   - 8 PASSWORD
   - 9 INFO
5. Press OK to enter the selected function (highlighted with the symbol >) and proceed in the same way to set it.
6. Press ESC to go back to the HOME PAGE.
   - All function screens appear as in the example shown in ✎**85**.

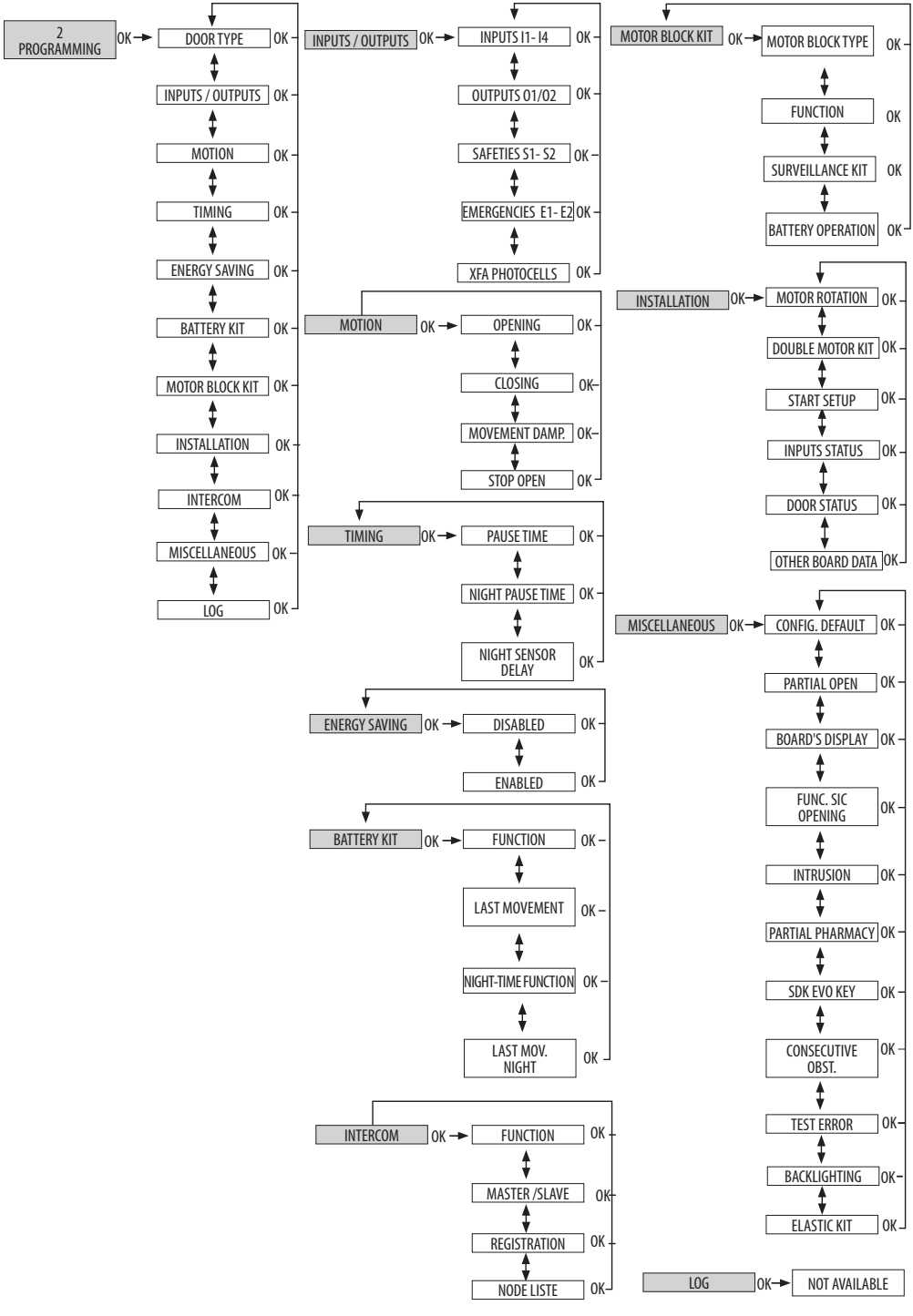
26 lists the menus showing the pages dedicated to individual functions.





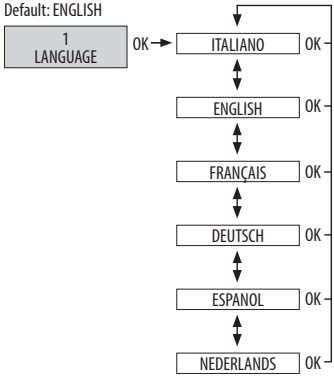



LANGUAGE
PROGRAMMING
ERRORS
WARNINGS
CYCLE COUNTER
DATE / TIME
TIMER
PASSWORD
NODE LIST
INFO
1 LANGUAGE
OK
ITALIANO
ENGLISH
FRANÇAIS
DEUTSCH
ESPANOL
NEDERLANDS
2 PROGRAMMING
INPUTS / OUTPUTS
MOTION
TIMING
ENERGY SAVING
BATTERY KIT
MOTOR BLOCK KIT
INSTALLATION
INTERCOM
MISCELLANEOUS
LOG
3 ERRORS
1 ERRORS 2 AUX ERRORS
01 BOARD FAULT
02.....31
39 DELETION OF DATA IN PROGRESS
200 UC FAILURE
201.....221
222 TEST VMAIN
4 WARNINGS
41 TIME LOSS
42.....79
80 NON STANDARD PROGRAM.
5 CYCLE COUNTER
CYCLES NUMBER
MAINTENANCE
CYCLES RESET
6 DATE/TIME
SET DATE
SET TIME
DAYLIGHT SAV TIME
7 TIMER
TIMER STATE
MONDAY
TUESDAY/FRIDAY
SUNDAY
MON-SUN
MON-FRI
JOLLY
JOLLY SLOTS
8 PASSWORD
TECHNICIAN PSW
USER PSW
9 INFO
E1SL BOOT VER.xx
E1SL APP VER.xx
----, DM (*) VER.xx
SDK EVO APP VER.xx


2 PROGRAMMING
OK
DOOR TYPE
INPUTS / OUTPUTS
MOTION
TIMING
ENERGY SAVING
BATTERY KIT
MOTOR BLOCK KIT
INSTALLATION
INTERCOM
MISCELLANEOUS
LOG
INPUTS / OUTPUTS
INPUTS I1- I4
OUTPUTS O1/O2
SAFETIES S1- S2
EMERGENCIES E1- E2
XFA PHOTOCELLS
MOTION
OPENING
CLOSING
MOVEMENT DAMP.
STOP OPEN
TIMING
PAUSE TIME
NIGHT PAUSE TIME
NIGHT SENSOR DELAY
ENERGY SAVING
DISABLED
ENABLED
BATTERY KIT
FUNCTION
LAST MOVEMENT
NIGHT-TIME FUNCTION
LAST MOV. NIGHT
INTERCOM
FUNCTION
MASTER /SLAVE
REGISTRATION
NODE LISTE
MOTOR BLOCK KIT
MOTOR BLOCK TYPE
FUNCTION
SURVEILLANCE KIT
BATTERY OPERATION
INSTALLATION
MOTOR ROTATION
DOUBLE MOTOR KIT
START SETUP
INPUTS STATUS
DOOR STATUS
OTHER BOARD DATA
MISCELLANEOUS
CONFIG. DEFAULT
PARTIAL OPEN
BOARD'S DISPLAY
FUNC. SIC OPENING
INTRUSION
PARTIAL PHARMACY
SDK EVO KEY
CONSECUTIVE OBST.
TEST ERROR
BACKLIGHTING
ELASTIC KIT
LOG
NOT AVAILABLE

MENU 1 LANGUAGE

Default: ENGLISH

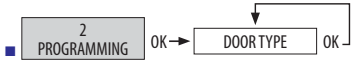


MENU 2 PROGRAMMING

The menu is only accessible if the INSTALLER password has been entered.
If a different password has been inserted, it is indicated: MENU RESERVED FOR INSTALLERS.

The list is:
- 1 DOOR TYPE
- 2 INPUTS / OUTPUTS
- 3 MOTION
- 4 TIMING
- 5 ENERGY SAVING
- 6 BATTERY KIT
- 7 MOTOR BLOCK KIT
- 8 INSTALLATION
- 9 SUNDRIES
- 10 LOG

DOOR TYPE



1. Select the type of door:
- NO
- A1000
- A1400
- RKE1400
- SF1400

Default	CF1	CF2	CF2	CF4	CF5
DOOR TYPE	NO	NO	NO	NO	--

If SF1400 is selected, two other menus are displayed:

2. NUMBER OF LEAVES select :
- 1 LEAF
- 2 LEAVES

3. PASSAGE OPENING with 1 LEAF selected:
- >= 75CM
- <=65CM
- >65CM and <75cm

4. PASSAGE OPENING with 2 LEAVES selected:
- >= 150CM
- <=130CM
- >130CM and <150cm

INPUTS / OUTPUTS

2 Inputs I1- I4

1. Select an input from the list:
- I1
- I2
- I3
- I4

2. Select function:
- Disabled (0)
- Open external (1)
- Open internal (4)
- Open automatic (7)
- Open semi-automatic (8)
- Pharmacy open (9)
- Key (10)
- Partial Open (11)
- Closing safety (20)
- Opening safety (21)
- Emergency Open (30)
- Emergency Open with memory (31)
- Emergency Stop (32)
- Emergency Stop with memory (33)
- Emergency closing (34)
- Emergency closing with memory (35)
- Modefun Open (40)
- Modefun Exit only (41)
- Modefun Entry only (42)
- Modefun Night (43)
- Modefun Manual (44)
- Modefun Partial (45)
- Modefun Interlock (46)
- Timer (60)
- Reset (61)

Default	CF1	CF2	CF2	CF4	CF5
I1	1	1	1	1	--
I2	4	4	4	4	--
I3	10	10	10	10	--
I4	7	7	7	7	--

If the input has not been disabled, select the type of contact:
- Normally open (NO)
- Normally closed (NC)

Default	CF1	CF2	CF2	CF4	CF5
Contact	Normally closed (NC)			--	

3. If an input with CLOSURE SAFETY function has been selected, set the TEST:
- Enabled
- Disabled

Default	CF1	CF2	CF2	CF4	CF5
TEST		Disabled		--	

4. Repeat the procedure for the other inputs.

3 Outputs O1 / O2

1. Select an input from the list:
   - O1
   - O2
2. Select function:
   - Disabled (0)
   - Gong (1)
   - Error (2)
   - Battery (3)
   - Emergency active (4)
   - Test for I1, I2, I3 and I4 (5)
   - Door not closed (6)
   - Door open (7)
   - Door in motion (8)
   - Light*(9)
   - Intrusion active (10)
   - Closing Safety (11)
   - Closing or Opening Safety (12)

(*) If this function is selected, set the time:
   - from 1s to 255s (Default 60s)

Default	CF1	CF2	CF2	CF4	CF5
01	**6**	**6**	**6**	**6**	--
02	**2**	**2**	**2**	**2**	--

3. If the output has not been disabled, select the type of contact:
   - Normally open (NO)
   - Normally closed (NC)

Default	CF1	CF2	CF2	CF4	CF5
Contact	Normally closed (NC)				--

4. Repeat the procedure for the other output.

3 Safety devices S1-S2

Select a SAFETY input. :
- S1
- S2

5. Select function:

SEE INPUTS LIST I1-I4

Default	CF1	CF2	CF2	CF4	CF5
S1	CLOSING SAFETY				--
S2	CLOSING SAFETY				--

6. If the input has not been disabled, set the TEST:

Default	CF1	CF2	CF2	CF4	CF5
TEST	Enabled				--

   - Enabled
   - Disabled

7. If the input has not been disabled, select the logic:
   - Normally open (NO)
   - Normally closed (NC)

Default	CF1	CF2	CF2	CF4	CF5
Contact	Normally closed (NC)				--

8. Repeat the procedure for the other inputs.

4 Emergencies E1 / E2

1. Select input E1 from the list:
   - E1
   - E2
2. Select function:

SEE INPUTS LIST I1-I4

Default	CF1	CF2	CF2	CF4	CF5
E1		Disabled			--
E2		Disabled			--

3. If the input is enabled, select the type of contact:
   - Normally open (NO)
   - Normally closed (NC)

Default	CF1	CF2	CF2	CF4	CF5
Contact	Normally open (NO)				--

5 XFA photocells

XFA photocell inputs are disabled by default.

1. Select:
   - Disabled
   - 1 pair
   - 2 pairs

Default	CF1	CF2	CF2	CF4	CF5
XFA photocells		Disabled			

■ **2 MOVEMENT**

Opening

Select and modify the parameter from the list:
- 1 SPEED from 1 to 10
- 2 SLOWDOWN from 0 to 200 cm
  SLOWDOWN SPEED from 1 to 3
- 3 FORCE from 1 to 10
- 4 FORCE TIME from 0.1 to 3.0s
- 5 ACCELERATION from 1 to 10
- 6 DECELERATION from 1 to 10

Default	CF1	CF2	CF2	CF4	CF5
SPEED	**10**	**8**	**8**	**5**	---
SLOWDOWN	**1**	**1**	**1**	**1**	---
SLOWDOWN SPEED	**1**	**1**	**1**	**1**	---
FORCE	**8**	**8**	**8**	**8**	---
FORCE TIME	**1.0**	**1.0**	2.0	**1.0**	---
ACCELERATION	**8**	**8**	**5**	**8**	---
DECELERATION	**6**	**6**	**6**	**4**	---

Closing

Select and modify the parameter from the list:
- 1 SPEED from 1 to 10
- 2 SLOWDOWN from 0 to 200cm
  SLOWDOWN SPEED from 1 to 3
- 3 FORCE from 1 to 10
- 4 FORCE TIME from 0.1 to 3.0s
- 5 ACCELERATION from 1 to 10
- 6 DECELERATION from 1 to 10
- 7 REVERSE(*) 5 from 1 to 5

* the REVERSE parameter determines the reverse speed of the leaf during closing with a 5-level setting from 1 (slow) to 5 (fast).

Default	CF1	CF2	CF2	CF4	CF5
SPEED	5	5	5	5	---
SLOWDOWN	1	1	1	1	---
SLOWDOWN SPEED	1	1	1	1	---
FORCE	5	5	5	5	---
FORCE TIME	1.0	1.0	2.0	1.0	---
ACCELERATION	8	8	5	8	---
DECELERATION	6	6	6	4	---
REVERSE	5	5	5	5	---

MOVEMENT DAMPING

Select and modify the parameter from the list:

- MOVEMENT DAMPING (*) 1-5

* the MOVEMENT DAMPING parameter enables the deceleration ramp to be programmed in the event of a stop or a reverse movement.

Default	CF1	CF2	CF2	CF4	CF5
MOVEMENT DAMP.	5	5	5	5	----

STOP OPEN

Select and modify the parameter from the list:

- STOP OPEN (*) 0-10

* the STOP OPEN parameter allows you to program the motor to stop in advance in correspondence to the passage opening.

Default	CF1	CF2	CF2	CF4	CF5
STOP OPEN	5	5	5	5	----

■ **3 TIMING**

Select and modify the parameter from the list:

- 1 PAUSE TIME 0-30s
- 2 NIGHT PAUSE TIME 0-240s
- 3 NIGHT SENSOR DELAY 0-240S

Default	CF1	CF2	CF2	CF4	CF5
PAUSE TIME	2	2	2	2	--
NIGHT PAUSE TIME	10	10	10	10	--
NIGHT PAUSE TIME DELAY	10	10	10	10	--

■ **4 ENERGY SAVING**

The Energy Saving is disabled by default **CF1,CF2**. Available options are:

- ENABLED
- DISABLED

Default	CF1	CF2	CF2	CF4	CF5
Energy Saving	Disabled				

■ **5 BATTERY KIT**

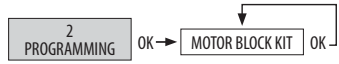
Defines the automation's behaviour with emergency battery, in case of mains power outage. Available options are:

1. FUNCTION
   - Disabled
   - Until the last movement
   - Now last motion
2. LAST MOVEMENT
   - Opening
   - Closing
3. NIGHT-TIME FUNCTION
   - Now last motion
   - Until the last movement
4. LAST MOVEMENT NIGHT
   - Closing
   - Opening

If the door is in NIGHT-TIME, battery operation is not active.

Default	CF1	CF2	CF2	CF4	CF5
FUNCTION	Disabled				---
LAST MOVEMENT	Opening				
NIGHT-TIME FUNCTION	Until the last movement				
LAST MOVEMENT NIGHT	Closing				

■ **6 MOTOR BLOCK KIT**



Defines the motor block behaviour
(OPTIONAL accessory)

Options:

- 1 LOCK TYPE
- 2 FUNCTION
- 3 MONITORING KIT
- 4 BATTERY OPERATION

1 LOCK TYPE

Defines the type of motor block:

- XB LOCK
- XM LOCK

2 FUNCTION

Defines operating methods in which motor block is activated;

- Disabled
- Night
- Night + Open
- Night-time and One-directional
- Always

3 MONITORING KIT

Enables/disables monitoring on motor block;

- ENABLED
- DISABLED

If the monitoring kit (OPTIONAL accessory) is not installed, disable.

4 BATTERY OPERATION

Defines battery operation of the motor block:

- STANDARD: the mode of operation selected is kept even with battery operation.
- NIGHT: motor block active only in NIGHT-TIME mode.
- ALWAYS OPEN: motor block active in OPEN mode

Default	CF1	CF2	CF2	CF4	CF5
LOCK TYPE	XB LOCK				
FUNCTION	DISABLED				
MONITORING KIT	DISABLED				
BATTERY OPERATION	STANDARD				

7 INSTALLATION

1 Motor Rotation

The default motor rotation is standard Available options are:

- STANDARD
- NON-STANDARD

2 Double Motor Kit

Specifies if the double motor kit is enabled or not.

- ENABLED
- DISABLED

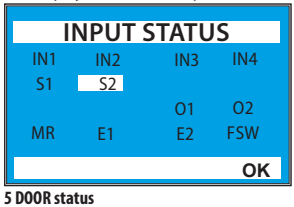
3 Start SETUP

This command requires confirmation to perform SETUP.

Follow the procedure indicated in 53.

4 INPUT status

The display shows active inputs. In the example safety sensor S2 is on:



5 DOOR status

The display shows what status the door is in:

- CLOSED (00)
- OPENING (01)
- OPEN (02)
- PAUSED (03)
- NIGHT PAUSE (04)
- CLOSING (05)
- EMERGENCY (06)
- MANUAL (07)
- NIGHT (08)
- AUX OPENING (09)
- BOARD TEST (10)
- STOPPED (11)
- SAFETIES TEST (12)
- ERROR (13)
- SERIOUS ERROR (15)
- SETUP IN PROGRESS (L0, L1.....)

6 Other board data

The display shows:

- V_MAIN (input voltage to the board in Volts)
- V_BATT (battery voltage in Volts)
- V_ACC (accessories voltage in Volts)
- I_MOT (current absorbed by the motor in Amperes)
- POS (leaf position in cm)

Default	CF1	CF2	CF2	CF4	CF5
MOTOR ROTATION	STANDARD				
DOUBLE MOTOR KIT	DISABLED				
START SETUP	DIS.	ENA.	DIS.	DIS.	DIS.
INPUTS STATUS	see DISPLAY				
DOOR STATUS	see DISPLAY				
OTHER BOARD DATA	see DISPLAY				

8 INTERCOM

Intercom menu list:

1. FUNCTION
2. MASTER / SLAVE
3. REGISTRATION
4. NODE LIST

1 FUNCTION

Defines the type of intercom function:

- Disabled
- INTERMODE
- INTERLOCK

with the opportunity of selecting the following functions:

1. With no memory
2. With memory

2 MASTER / SLAVE

Defines the board function:

- Master (1)
- Slave (from 2 to 15)

3 REGISTRATION

On the board configured as the Master it activates the procedure to recognise any connected boards configured as Slave.

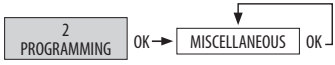
4 NODE LIST

On the board configured as the Master, from this menu all boards connected and configured as Slave and the relative information can be displayed.

1. ID
2. Errors
3. Warnings
4. Cycles

Default	CF1	CF2	CF2	CF4	CF5
FUNCTION	Disabled				
MASTER / SLAVE	1 MASTER				
REGISTRATION	see DISPLAY				
NODE LIST	see DISPLAY				

9 MISCELLANEOUS



1 Default Configuration

- ACTIVE (default configuration active)
- NO (the configuration has been modified)

To reset all parameters to default settings press the OK button and confirm.

2 Partial opening

Defines the opening percentage in PARTIAL OPENING mode. The default and interval of settings is:

- PARTIAL OPENING 20-100

3 Board Display

Enables/disables programming from the board. The options with relevant default are as follows:

- Not blocked
- Blocked

4 Safety Opening Function

Defines the safety in opening function

- STOP
- LOW ENERGY (Slow speed movement)

5 Intrusion

Defines door behaviour in case of attempt to open manually. The options with relative defaults are as follows:

- DISABLED does not actuate the motor
- KEEP CLOSED actuates the closing motor
- PULL & GO actuates the opening motor (NOT active with battery operation)

6 Partial Chemist's Shop

It defines the opening percentage with the pharmacy control (only active in NIGHT-TIME Mode). The default and interval of settings is:

- PARTIAL PHARMACY 20 % (1-95)

7 SDK EVO key

Defines the operation of the key switch connected to the SDK EVO (OPTIONAL accessory):

- BLOCK:

The SDK EVO operates normally with the NO (Normally Open) key switch. A password is required.

With the key switch NC (Normally Closed) the SDK EVO is locked.

- WITHOUT USER PSW:

With the key switch NO (Normally Open), the SDK EVO works without having to enter a password.

With the key switch NC (Normally Closed), the SDK EVO works normally. A password is required.

8 Consecutive obstacles

Defines the number of consecutive obstacles after which the door is blocked in error. Choose and modify the parameter:

- CLOSING from no to 10
- OPENING from no to 10

No stands for infinity

9 Test Error

Enables/disables movement at slower speed in the event of TEST ERROR on safety devices.

- ENABLED
- DISABLED

10 Display backlighting

Enables the backlighting of the display.

- ALWAYS (backlighting is always enabled)
- DISABLED (backlighting is disabled after 30sec of SDKEVO key inactivity).

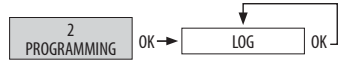
With battery operation it is always disabled.

11 ELASTIC KIT

- ENABLED
- DISABLED

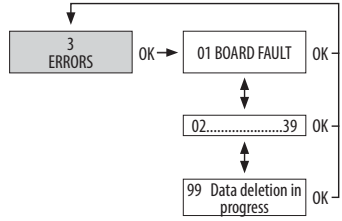
Default	CF1	CF2	CF2	CF4	CF5
Default Configuration			**NO**		-----
Partial opening			**50%**	----	----
Board Display			**Not locked**		----
Opening Safety Function			**LOW ENERGY**		----
Intrusion	**Dis.**	**Dis.**	**Dis.**	**Dis.**	----
Partial Pharmacy			**20%**		----
SDK EVO key			**Lock**		----
Consecutive obstacles			**0**		----
Test Error			**Disabled**		-----
Display backlighting			**ALWAYS**		------
ELASTIC KIT			**Disabled**		------

■ **10 LOG**



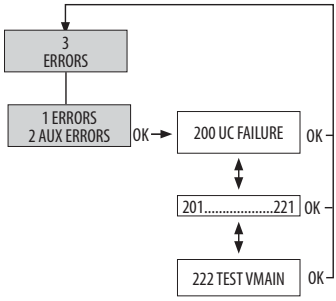
MENU NOT AVAILABLE

MENU 3 ERRORS



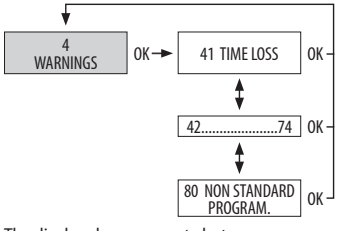
The display shows current errors:

- 1 Board failure
- 4 VACC fault
- 5 Microcontroller error
- 6 VMOT fault
- 7 Motor MOT1 failure
- 9 VMAIN low
- 10 Battery discharged
- 11 S1 test failed
- 12 S2 test failed
- 15 Data in setup memory missing or corrupted
- 16 Encoder failure
- 18 FW not compatible
- 19 High mechanical friction
- 20 Test of inputs I1-I4 configured as safeties failed
- 22 Corrupted data
- 23 VMAIN high
- 24 Consecutive obstacles when closing
- 26 Motor block failure
- 27 Motor rotation error
- 29 AUX board fault
- 31 Consecutive obstacles during opening
- 32 Motor time out
- 33 Battery failure
- 38 Configuration error
- 39 Data in Setup memory missing or corrupted
- 99 Data deletion in progress



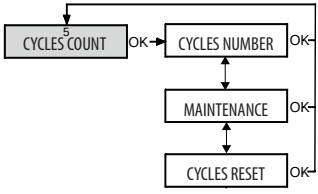
The display shows current errors:
- 200 UC fault (Corrupted FW or corrupted RAM)
- 201 Aux Mot failure
- 202 High friction
- 203 Aux Mot Driver
- 204 FW Not Compatible
- 205 Motor rotation
- 206 Encoder failure
- 216 Communication
  (Communication problem between the 2 boards)
- 217 Incorrect opening position
- 218 Obstacle
- 219 Incorrect ID
- 220 Vmain
- 221 Timeout
- 222 Vmain Test

MENU 4 INDICATIONS



The display shows current alerts:
- 41 Date and time missing
- 42 Clock battery discharged or missing
- 44 Emergency active
- 45 TIMER active (indicated with T on HOME PAGE)
- 46 Timer function in progress
- 47 Last movement carried out with battery
- 48 Night-time mode operation
- 49 Manual mode operation
- 50 Partial mode operation
- 51 Obstacle during closing
- 52 Obstacle during opening
- 53 Number of maintenance cycles corrupted
- 54 Motor block failure
- 55 Pharmacy mode operation
- 56 Battery operation
- 57 Searching for opening stop
- 58 Searching for closing stop
- 59 Motor block fault (only with monitoring KIT)
- 60 Maintenance request
- 61 SDK EVO / LK EVO / KSEVO fault
- 62 Battery charger failure
- 63 Intrusion in progress
- 65 SETUP in progress
- 67 Battery saving
- 68 Safety devices test failed
- 69 Semi-automatic input keeps door open
- 70 Battery charge level
- 71 Slave Intercom
- 72 CANBUS Failure
- 73 Intercom Node Alarm
- 74 INTERLOCK operating mode active
- 80 Programming other than standard

MENU 5 CYCLE COUNTER



1 Number of cycles

The display shows the number of cycles performed:
- ABSOLUTE counter not resettable
- RELATIVE counter resettable (with CYCLE RESET)

2 Maintenance

To set the deadlines for maintenance request:
- DATA (default: disabled) 00/00/00
- number of cycles minimum: 1000; maximum 1000000

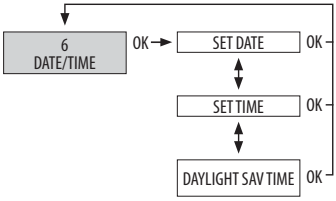
Entering a date is optional.

3 RESET CYCLES

It resets RELATIVE cycle counter to zero. This command requires confirmation

The ABSOLUTE cycle counter cannot be reset to zero.

MENU 6 DATE / TIME



SET DATE

Set date in dd/mm/yy.

SET TIME

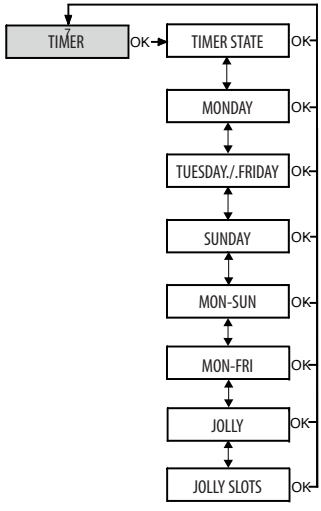
Set time in HH:mm.

EUROPEAN DAYLIGHT SAVING TIME

European daylight saving time is enabled by default.
Available options are:

- Enabled
- Disabled

MENU 7 TIMER



When TIMER is on:

- alert T appears on the HOME PAGE 80
- the door operating mode is set automatically based on programmed time bands
- the timer must be disabled to manually change the operating mode activated by it

Programming requires:

- setting time bands for each day of the week or by groups of days. There are up to 6 time bands for each day
- assign an operation mode to each time band
- set any JOLLY

1 Timer status

Enables/disables timer function:

- ENABLED
- DISABLED

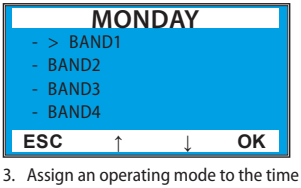
Default	CF1	CF2	CF2	CF4	CF5
Timer status	Disabled				

When the TIMER is disabled programming is stored.

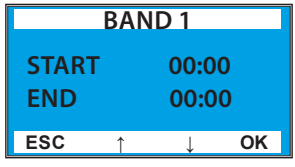
2Monday 8 Sunday

To program the days of the week:

1. Select the day.
2. Select the time band.



3. Assign an operating mode to the time band:
   - 0 No function
   - 1 Auto Twodir Total
   - 2 Auto Out Total
   - 3 Auto Twodir Partial
   - 4 Auto Out Partial
   - 5 Open Total
   - 6 Open Partial
   - 7 Auto In Total
   - 8 Auto In Partial
   - 9 Night-time
   - 10 Partial night-time
   - 11 Interlock
   - 12 Interlock EXIT Only
   - 13 Interlock Entry Only
4. Set time band start and end time.



5. Proceed in the same way for the other desired time bands.
6. In Auto Twodir Total mode, an example:
   - BAND 1 08:00-08:59 Open Total
   - BAND 2 09:00-09:59 Open Partial
   - BAND 3 11:00-11:59 Auto Out Total
   - BAND 4 12:00-12:01 Auto Out Partial
   - BAND 5 17:59-16:30 Auto Twodir Partial
   - BAND 6 22:00-23:59 Auto Twodir Total

9 Mon-Sun; 10 Mon-Fri

To quickly program groups of days of the week with the same time bands:

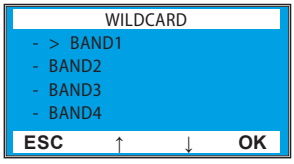
1. Select the group of days (from Mon-Sun or from Mon-Fri).
2. Select the time band.
3. Set time band start and end time.
4. Assign the operating mode to the time band. Repeat stages from 2 to 4 for any other time bands.
5. Apply programming to the group of days by selecting APPLY.

Confirm APPLY to apply the time bands to the set group days, any pre-existing programming on individual days is overwritten.

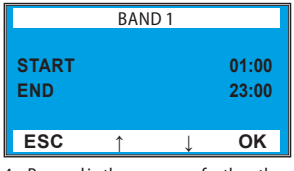
11 Wild Card

To PROGRAM TIMER operation in Wild Card intervals (one or more days that require different programming):

1. Select the Wild Card time band.



2. Assign an operating mode to the time band:
   - 0 No function
   - 1 Auto Twodir Total
   - 2 Auto Out Total
   - 3 Auto Twodir Partial
   - 4 Auto Out Partial
   - 5 Open Total
   - 6 Open Partial
   - 7 Auto In Total
   - 8 Auto In Partial
   - 9 Night-time
   - 10 Partial night-time
   - 11 Interlock
   - 12 Interlock EXIT Only
   - 13 Interlock Entry Only
3. Set time band start and end time



4. Proceed in the same way for the other desired Wild Card time bands.

■ 12 WILD CARD intervals

To apply Wild Card programming to individual days or intervals of days:

1. Enable an interval (max 6 Wild Card intervals).
2. Define the interval's beginning and end date.
3. In Auto Twodir Total mode, a WILD CARD example:
   - BAND 1 07:00-09:59 Auto Out Partial
   - BAND 2 10:00-10:01 Auto Out Total
   - BAND 3 10:30-11:00 Open Total
   - BAND 4 15:00-23:59 Open Partial
   - BAND 5 03:00-07:00 Auto Twodir Total
   - BAND 6 09:00-12:00 Auto Out Total
   - Interval 1 25/12/2014 - 25/12/2014
   - Interval 2 30/12/2014 - 31/12/2014
   - Interval 3 01/01/2015 - 06/01/2015
   - Interval 4 28/02/2015 - 01/03/2015
   - Interval 5 30/04/2015 - 03/05/2015
   - Interval 6 07/05/2015 - 09/06/2015

Should you wish to set an individual day, the interval beginning and end date coincide.

The interval must refer to same calendar year (e.g. for the period from 25th December to 6th January, create 2 intervals: from 25/12 to 31/12 and from 01/01 to 06/01).

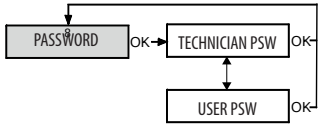
Using the TIMER, functions can be overridden by means of time bands from 0 to 6. The functions set from the TIMER CANNOT be overwritten by SDK EVO or LK EVO configured inputs.

TIMER active and with no time band corresponds to function 0. Exiting a time band overrides function 1 that can be modified by devices having a lower priority.

The priority order is as follows:

MANUAL
EMERGENCY
TIMER
Configured INPUTS
LK EVO and SDK EVO External programmers

MENU 8 PASSWORD



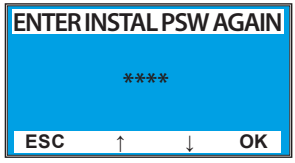
The user is ONLY allowed to modify the user password.
The installer may edit both passwords.

The personnel allowed to use the password to select the automation's operating modes must maintain password knowledge confidential.

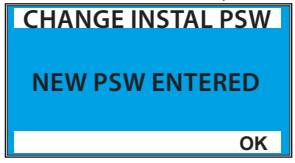
■ INSTALLER PASSWORD

1. Enter the new PASSWORD and press OK.
2. The new PSW must be repeated and confirmed with OK:

If the PSW has not been repeated correctly, the display continues requesting the new password and the confirmation.



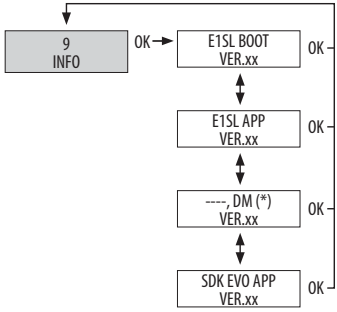
3. When the PSW has been repeated correctly, the display shows:



■ USER PASSWORD

Proceed as with the INSTALLER PASSWORD menu.

MENU 9 INFO



ENGLISH

Translation of the original instructions

The display shows the firmware versions of the control board and installed devices.

(*) DM is only displayed if the DM KIT is used. If it is not present, the field is empty.

21. MAINTENANCE

In order to keep the system operating safety and efficiently and to reduce the number of malfunctions and breakdowns, routine maintenance and the periodic replacement of parts must be carried out as indicated in **27**.

ROUTINE MAINTENANCE must be performed every 6 months.

Frequency of replacements is indicated based on number of operation cycles for components subject to wear; in years for components subject to deterioration.

All maintenance operations must exclusively be performed by technical-professional personnel.

Only the installer/maintenance technician is authorised to open the casing to access the automation housing.

21.1 CALCULATION ESTIMATE OF CYCLES PERFORMED

If there is a E1SL board fault and the cycle counter data is lost with error code 53, the number of cycles performed since the last service should be estimated.

R1 = number of days elapsed since the last motor replacement (see SYSTEM REGISTER)

R2 = number of hours of operation per day

R3 = door cycle time (opening time + pause + closing time)

The installer must take on responsibility for indicating parameters R1, R2 and R3

Calculate:

R4 = R1 * R2 *3600

Calculate the ESTIMATED NUMBER OF CYCLES:

R4 / R3

Afterwards, from the SDK EVO; in the Cycle counter menu (5) in the Maintenance section **93**, enter the calculated number of cycles.

27 Maintenance programme and periodic replacements

ROUTINE MAINTENANCE

OPERATION		
Check automation fastening to the wall	check the support profile is solidly secured to the wall	-
	in case of installation with self-supporting Head Section:	
	Check the fixing screws of the support profile	**28**
Check the fastening of the Motor and return Pulley	check screws securing the motors on the support profile	**22**
Check on carriages	check screws securing to the leaf	**30**
	check and adjust the counter wheels of carriages and leaf depth and height screws	**31**
Check mechanical stops	check position of mechanical stops and fixing screws	**20**
Belt tensioning check	check belt tensioning	**37**
Cleaning	clean: Sliding Guide; Lower Guide Shoe; Carriages	**100**
Functional system check	perform required checks and procedures to ensure integrity of the load bearing structure and leaf frames	**16**
	perform functional checks	**100**

PERIODIC REPLACEMENTS

20

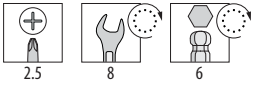
PART/COMPONENT	FREQUENCY		Replacements
	Operation cycles	Time (years)	Recommended / Mandatory
Motor	1 000 000	--	Recommended
Return pulley	1 000 000	--	Recommended
Lower guide shoe	2 000 000	--	**Mandatory**
Carriages	2 000 000	--	**Mandatory**
Belt	1 000 000	5	**Mandatory**
Pad mechanical stop	2 000 000	5	**Mandatory**
Safety fall arrest cables	--	5	**Mandatory**
Emergency battery	--	1	Recommended

21.2 MAINTENANCE TECHNICIAN SAFETY

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS



Before any maintenance operation, disconnect the mains power supply and disconnect the emergency battery.

The installer/maintenance technician is bound to comply with the safety instructions and recommendations provided in this manual.

Signal maintenance work in progress and prevent access to the area.

Do not leave the work site unattended.

The work area must be kept tidy and clear upon completing maintenance.

Do not proceed with modifications or repairs of any motorisation component.

The repairs must exclusively be performed by an Authorised Repair Centre.

The warranty shall be forfeited in the event of tampering with components.

Only use original FAAC spare parts.

The batteries and electronic components must not be disposed of with household waste but delivered to authorised disposal and recycling centres.

21.3 REPLACEMENTS

Per 2 million cycles

1. Remove the belt after loosening it from the leaf fittings.
2. Remove the motor from its support after removing the screws ✎**86**-①.
3. Loosen the screws ✎**87**-① of each carriage and lower the leaves to the floor using screw ②.
4. Disconnect the leaves from the carriages by removing the screws ✎**87**-①.
5. Temporarily store the leaves away, using all precautions to prevent risks of fall.
6. Loosen the screw ✎**87**-③ and lower the counter wheel in order to remove each carriage**.**
7. Remove the mechanical stops.
8. Remove the lower guide shoe.
9. Install the new shoe **29**.
10. Install the new motor on its support.
11. Tighten the screws ✎**86**-①-②-③.
12. Install the new mechanical stops **20**.
13. Install the new carriages onto the leaves **30**.
14. Install and adjust the leaves **30** **31**.
15. Install and adjust the new belt **35** **37**.
16. Adjust the new mechanical stops **20**.

For 1 million cycles

Perform steps 1, 2, 11, 12, 13 and 18 of the sequence for 2 million cycles.

Belt replacement

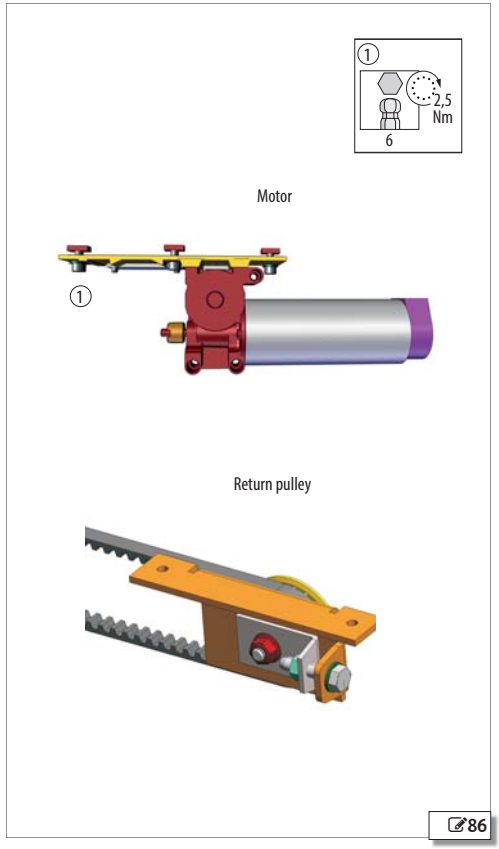
Only perform steps 1 and 9 of the sequence for 2 million cycles.

Replacement of mechanical stops

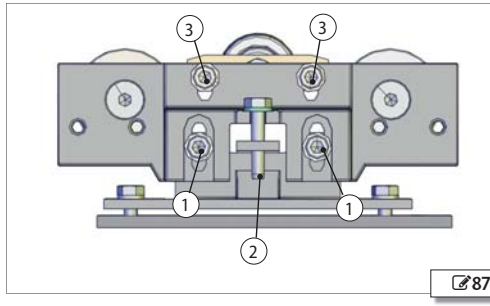
Only perform steps 7 and 19 of the sequence for 2 million cycles.

Replacement of safety cables

1. Remove the safety cables from the casing.
2. Install the new cables **22** e **41**.



✎**86**



✎**87**

Emergency battery replacement

Before proceeding, disconnect mains power supply.

1. Disconnect the battery from the E1SL board.
2. Unscrew the 2 screws with washer **88**-① and remove the battery.
3. Install the new battery **88**-①.
4. Connect the battery to the E1SL board.

Electronic board replacement

Before proceeding, disconnect the mains power supply and disconnect the emergency battery.

It is recommended to download the data to a USB storage device in order to upload it (update) to the new board **72**.

1. Remove all connections.
2. Remove the screw **89**-① and the screw with washer **89**-②.
3. Remove the board from the support.
4. Insert the new board in the seats **89**-③.
5. Fasten using the screw ① and screw ② with washer ④.

The washer **89**-④ ensures that the board is earthed.

6. Restore all connections.
7. Program the new board.

If programming files that were previously saved to a USB storage device are available, upload (update) these to the board **72**.

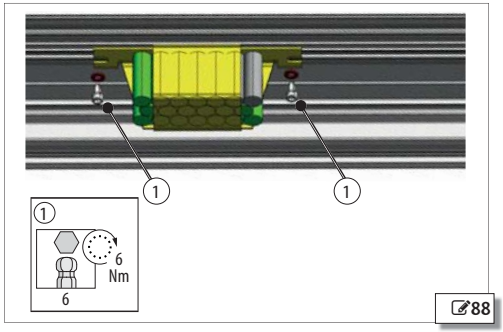
8. Carry out the SETUP procedure **53**.

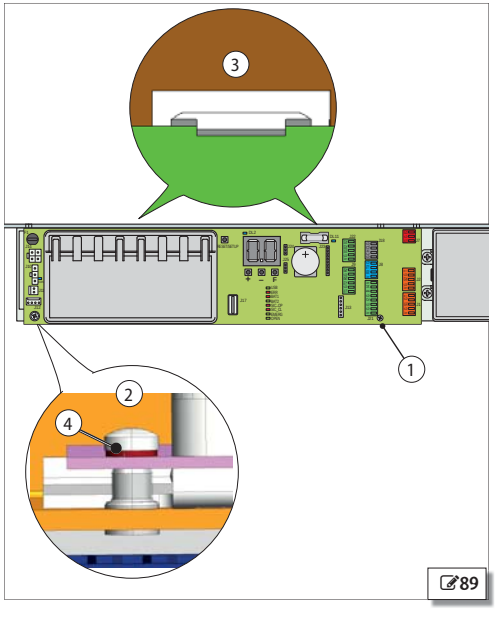
Replacing the fuses

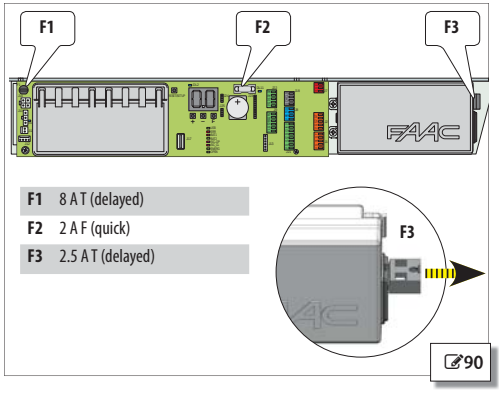
Before proceeding, disconnect the mains power supply and disconnect the emergency battery.

1. Remove the fuse F1 by pressing and turning anti-clockwise. Remove fuses F2 and F3 by gently using a screwdriver as a lever.
2. Assemble the new fuse.

Only use the fuses indicated **90**.







21.4 CLEANING

Before any maintenance operation, disconnect the mains power supply and disconnect the emergency battery.

Before starting to clean, wait for the components subject to overheating to cool down.

DO NOT use detergents on optical devices and electronic displays (e.g. photocell lenses).

Do not moisten parts. In particular, do not moisten electrical connections and components in any way.

NEVER use direct water and compressed air jets neither for cleaning nor drying.

Ensure all components are dry after cleaning.

Use clean soft cloths to remove dust. Moisten the cloth to remove dirt. Dry parts with clean, dry and soft cloths.

For parts that are hard to reach, use brushes with soft bristles.

Cleaning products for plastic material parts

With the exception of optical devices and electronic displays, water and neutral detergent solutions are allowed (in the concentration indicated by the manufacturer). Use detergents at ambient temperature (max. 30°C).

DO NOT use alkaline, acid or base solutions, benzene, acetic acid or solvents of any kind: these products may damage the surfaces of the materials.

Cleaning products of steel or aluminium parts

Water and neutral detergent solutions are allowed (in the concentration indicated on the detergent packaging). 95% methylated spirit diluted at 50%. In case of oily dirt, use 70% solutions of isopropyl alcohol.

DO NOT use solutions of acetic acid, acid or basic solutions or ethyl alcohol.

21.5 FUNCTIONAL CHECKS

Connect power supply and emergency battery only after tidying up the area.

In case of failures or malfunctions, please refer to **66** and **70**.

Command some movements to check correct operation:

- movements correctly executed, according to logics and settings
- regular and smooth leaf movement
- end of run slowing down correctly executed
- approaching the opening and closing stops without impact
- regular operation of motor block on Motor_1 (if present)
- working efficiency of emergency battery: disconnect the mains power supply and ensure that the door opens and remains open (safety condition)
- efficiency of safety detectors (the radar field must be free and adequately sized with respect to passage flow)
- operation of EMERGENCY button (if present) and any other accessories installed.

22. WASTE DISPOSAL

After taking down the automation, dispose of it in compliance with the material disposal regulations in force.

WARNING

The batteries and electronic components must not be disposed of with household waste but delivered to authorised disposal and recycling centres.

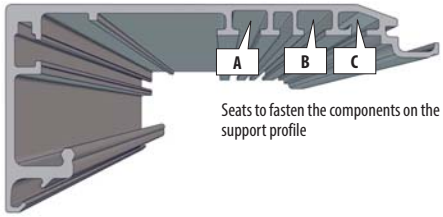
23. ANNEXES TO A1000

28 A1000 automation weights

Single leaf			
Vp	Lt	Support profile weight	TOTAL weight
[mm]	[mm]	[kg - approximate values]	[kg]
700	1500	9	21
800	1700	10	22
900	1900	12	23
1000	2100	13	24
1100	2300	14	25
1200	2500	15	26
1300	2700	16	27
1400	2900	17	29
1500	3100	19	30
1600	3300	20	31
1700	3500	21	32
1800	3700	22	33
1900	3900	23	34
2000	4100	24	35
2100	4300	26	37
2200	4500	27	38
2300	4700	28	39
2400	4900	29	40
2500	5100	30	41
2600	5300	31	42
2700	5500	32	43
2800	5700	34	45
2900	5900	35	46
3000	6100	36	47

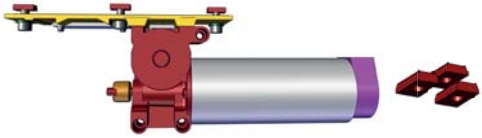
Double leaf			
Vp	Lt	Support profile weight	TOTAL weight
[mm]	[mm]	[kg - approximate values]	[kg]
800	1700	11	24
900	1900	12	25
1000	2100	13	27
1100	2300	14	28
1200	2500	15	29
1300	2700	16	30
1400	2900	18	31
1500	3100	19	32
1600	3300	20	33
1700	3500	21	34
1800	3700	22	36
1900	3900	23	37
2000	4100	24	38
2100	4300	26	39
2200	4500	27	40
2300	4700	28	41
2400	4900	29	42
2500	5100	30	44
2600	5300	31	45
2700	5500	32	46
2800	5700	34	47
2900	5900	35	48
3000	6100	36	49

29 Positions of components on the head section

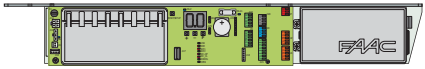


Seats to fasten the components on the support profile

Motor A-B

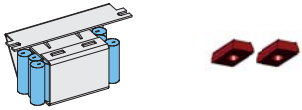


Board module B



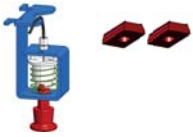
Return pulley A

Emergency battery A



Cover mounting brackets B and safety cables C

Internal release (optional component) A

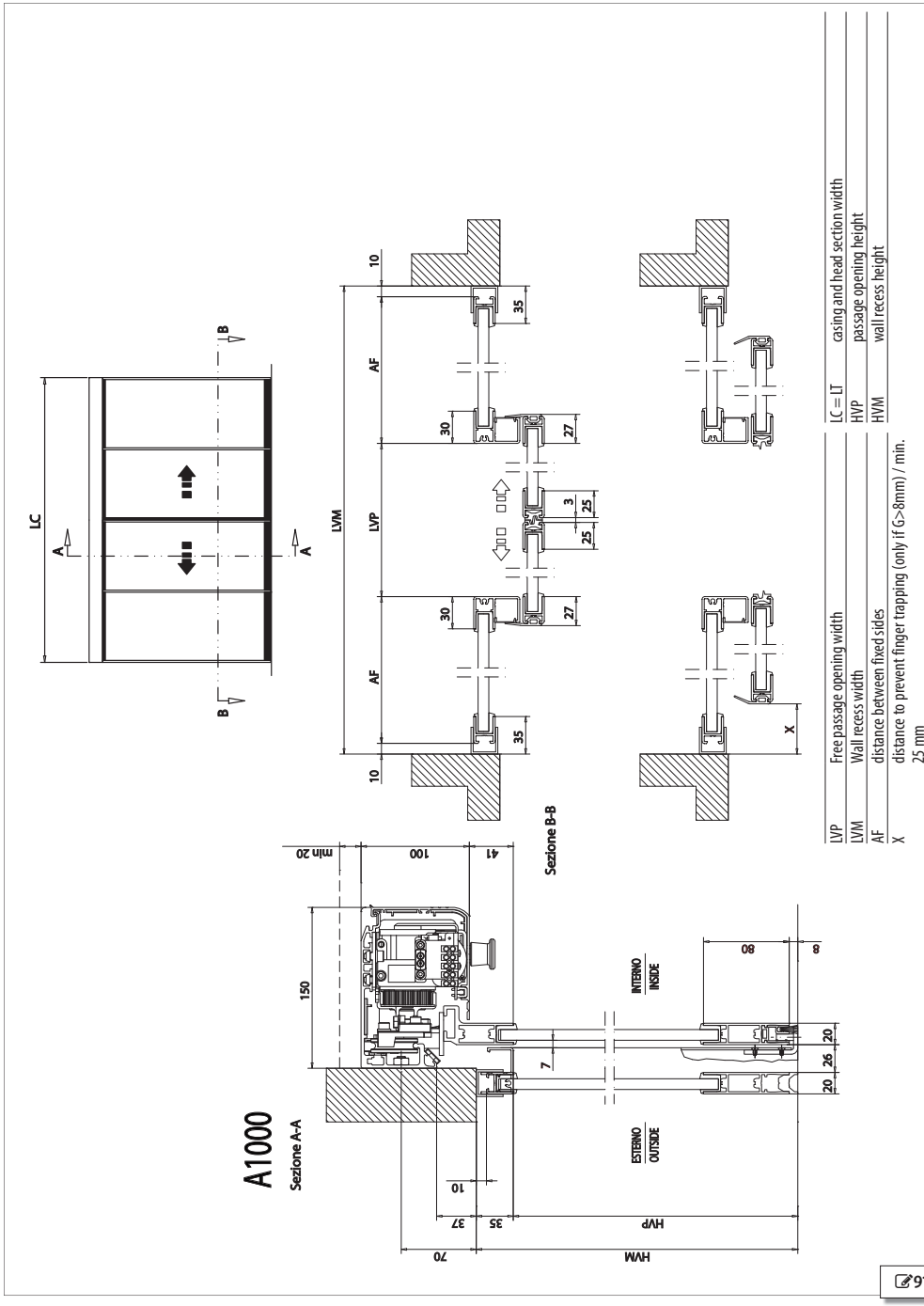


ENGLISH

Translation of the original instructions

23.1 INSTALLATION DIAGRAMS

A1000 WITH 2 TK20 SLIDING LEAVES AND 2 FIXED SIDE LEAVES



LVP	Free passage opening width	LC = LT	casing and head section width
LVM	Wall recess width	HVP	passage opening height
AF	distance between fixed sides	HVM	wall recess height
X	distance to prevent finger trapping (only if G>8mm) / min. 25 mm		

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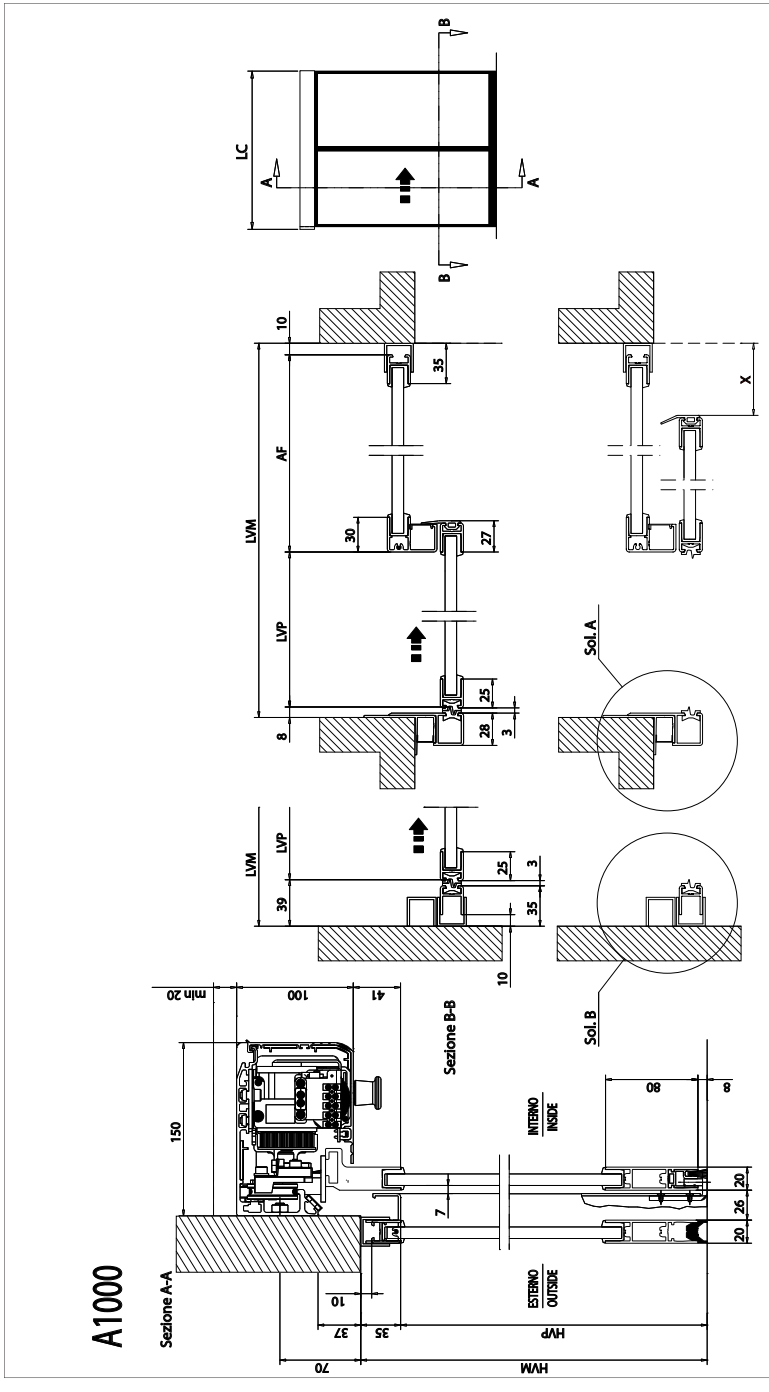
A1000 WITH ONE TK20 SLIDING LEAF AND ONE FIXED SIDE LEAF



LVP	Free passage opening width	LC = LT	casing and head section width
LVM	Wall recess width	HVP	passage opening height
AF	distance between fixed sides	HVM	wall recess height
X	distance to prevent finger trapping (only if G>8mm) / min. 25 mm		

ENGLISH

Translation of the original instructions

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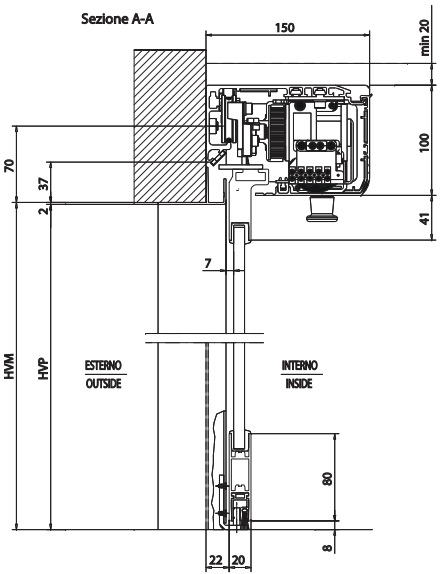
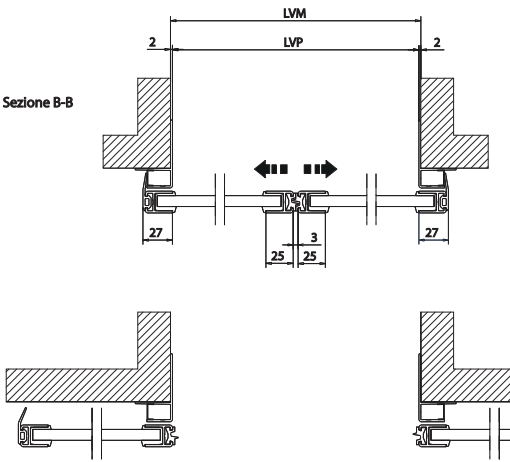
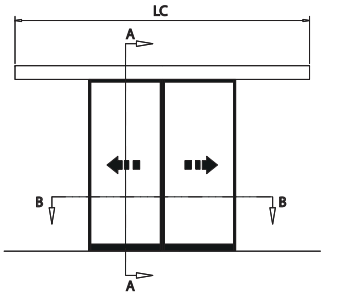
A1000





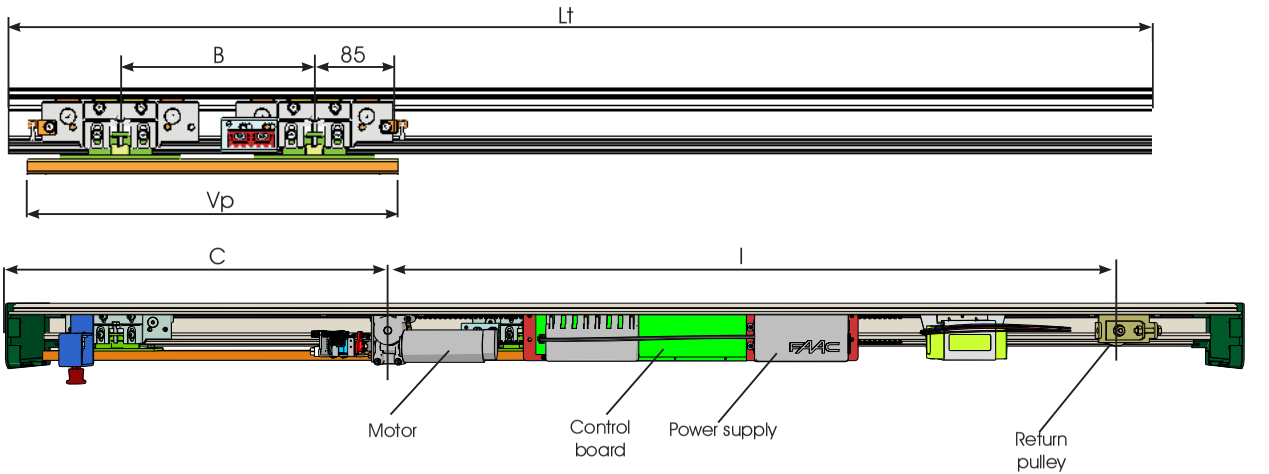


LVP	Free passage opening width
LVM	Wall recess width
AF	distance between fixed sides
X	distance to prevent finger trapping (only if G>8mm) / min. 25 mm

LC = LT	casing and head section width
HVP	passage opening height
HVM	wall recess height

23.2 POSITION OF COMPONENTS ON THE A1000 SUPPORT PROFILE

A1000 WITH RIGHT OPENING SINGLE LEAF

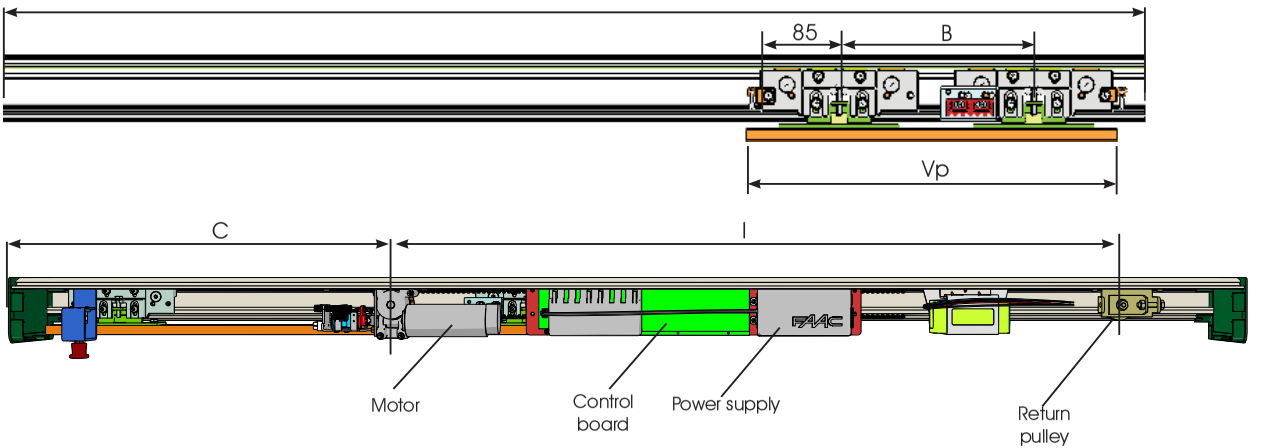


Lt = Vp X 2 + 100

B = Carriage fixing distance on the sliding leaf
C = Motor position
D = Transmission belt length
I = Motor / transmission unit centre distance
Lt = Head section length
Vp = Free passage opening
100 = leaf overlap (mm)

Vp	Lt	B	I	C	D
700	1500	460	1000	380	2140
800	1700	560	1080	480	2300
900	1900	660	1160	580	2460
1000	2100	760	1240	680	2620
1100	2300	860	1320	780	2780
1200	2500	960	1400	880	2940
1300	2700	1060	1480	980	3100
1400	2900	1160	1560	1080	3260
1500	3100	1260	1640	1180	3420
1600	3300	1360	1720	1280	3580
1700	3500	1460	1800	1380	3740
1800	3700	1560	1880	1480	3900

Vp	Lt	B	I	C	D
1900	3900	1660	1960	1580	4060
2000	4100	1760	2040	1680	4220
2100	4300	1860	2120	1780	4380
2200	4500	1960	2200	1880	4540
2300	4700	2060	2280	1980	4700
2400	4900	2160	2360	2080	4860
2500	5100	2260	2440	2180	5020
2600	5300	2360	2520	2280	5180
2700	5500	2460	2600	2380	5340
2800	5700	2560	2680	2480	5500
2900	5900	2660	2760	2580	5660
3000	6100	2760	2840	2680	5820

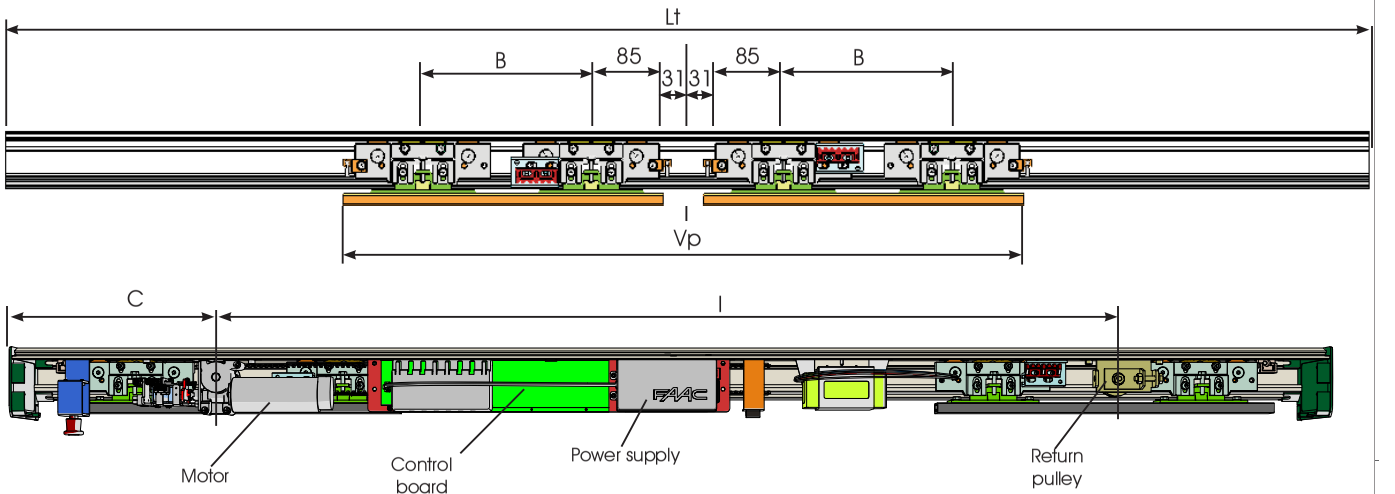


Lt = Vp X 2 + 100

B = Carriage fixing distance on the sliding leaf
C = Motor position
D = Transmission belt length
I = Motor / transmission unit centre distance
Lt = Head section length
Vp = Free passage opening
100 = leaf overlap (mm)

Vp	Lt	B	I	C	D
700	1500	460	1000	380	2140
800	1700	560	1080	480	2300
900	1900	660	1160	580	2460
1000	2100	760	1240	680	2620
1100	2300	860	1320	780	2780
1200	2500	960	1400	880	2940
1300	2700	1060	1480	980	3100
1400	2900	1160	1560	1080	3260
1500	3100	1260	1640	1180	3420
1600	3300	1360	1720	1280	3580
1700	3500	1460	1800	1380	3740
1800	3700	1560	1880	1480	3900

Vp	Lt	B	I	C	D
1900	3900	1660	1960	1580	4060
2000	4100	1760	2040	1680	4220
2100	4300	1860	2120	1780	4380
2200	4500	1960	2200	1880	4540
2300	4700	2060	2280	1980	4700
2400	4900	2160	2360	2080	4860
2500	5100	2260	2440	2180	5020
2600	5300	2360	2520	2280	5180
2700	5500	2460	2600	2380	5340
2800	5700	2560	2680	2480	5500
2900	5900	2660	2760	2580	5660
3000	6100	2760	2840	2680	5820



Lt = Vp X 2 + 100

- **B** = Carriage fixing distance on the sliding leaf
- **C** = Motor position
- **D** = Transmission belt length
- **I** = Motor 1 / motor 2 centre distance
- **Lt** = Head section length
- **Vp** = Free passage opening
- **100** = leaf overlap (mm)

Vp	Lt	B	I	C	D
800	1700	260	1250	225	2640
900	1900	310	1320	290	2780
1000	2100	360	1390	355	2920
1100	2300	410	1460	420	3060
1200	2500	460	1530	485	3200
1300	2700	510	1600	550	3340
1400	2900	560	1670	615	3480
1500	3100	610	1740	680	3620
1600	3300	660	1810	745	3760
1700	3500	710	1880	810	3900
1800	3700	760	1950	875	4040
1900	3900	810	2020	940	4180

Vp	Lt	B	I	C	D
2000	4100	860	2090	1005	4320
2100	4300	910	2160	1070	4460
2200	4500	960	2230	1135	4600
2300	4700	1010	2300	1200	4740
2400	4900	1060	2370	1265	4880
2500	5100	1110	2440	1330	5020
2600	5300	1160	2510	1395	5160
2700	5500	1210	2580	1460	5300
2800	5700	1260	2650	1525	5440
2900	5900	1310	2720	1590	5580
3000	6100	1360	2790	1655	5720

A1000 USER'S GUIDE

SAFETY RECOMMENDATIONS

The A1000 automation, if correctly installed, maintained and used, guarantees a high level of safety.

GENERAL SAFETY RECOMMENDATIONS

The operator in charge of using the automation is responsible for running the system and must:

- carefully read the instructions before using the product and store them for future use
- comply with all Operating instructions and Safety recommendations
- store the instructions of the products installed
- prevent the control devices from being used by persons not expressly authorised and instructed
- prevent access to the control devices to persons under age or with reduced psycho-physical abilities, unless under supervision by an adult responsible for their safety
- not use the system in case of malfunctioning. If the system malfunctions, the operator must not attempt any kind of repair or take any direct action. He/she must request intervention by the installer/maintenance technician.
- make sure the system's maintenance is carried out according to the instructions provided in this manual.
- must be in good psycho-physical conditions, aware of and responsible about the hazards that may be engendered when using a machine.
- the required level of ambient lighting must be equal to at least 200 lux
- store the system Register filled in at the end of every maintenance operation by the installer/maintenance technician

Routine and planned maintenance

- In order to keep the system operating safety and efficiently and to reduce the number of malfunctions and breakdowns, ROUTINE MAINTENANCE and the PERIODIC REPLACEMENT of parts must be carried out as indicated in the A1000 manual.
- All maintenance operations must exclusively be performed by technical-professional personnel.
- Only the installer/maintenance technician is authorised to open the casing to access the automation housing.
- ROUTINE MAINTENANCE must be performed every 6 months.
- Frequency of REPLACEMENTS is indicated based on number of operation cycles for components subject to wear; in years for components subject to deterioration.

USE

The FAAC series A1000 systems are designed to automatically operate, manage and control linear horizontal motion one- or two-leaf sliding doors.

The A1000 series automations are designed to automate entry doors that are used exclusively for pedestrian traffic.

They are compliant with standard EN 16005:2012.

They are suitable for indoor installation, for applications meeting the features detailed in the instruction manual.

- No other use outside the ones set out above is allowed by the manufacturer.

FAAC declines all liability deriving from misuse or use other than that for which the automation is intended.

Unauthorised use

- use the automation for uses other than THE INTENDED USE;
- use the automation with mobile and fixed guards tampered with or removed.

WARNINGS DURING NORMAL OPERATION

The following conditions can occur during normal operation of the door:

- When the A1000 door changes from NIGHT-TIME or MANUAL mode to TWO-DIRECTION AUTOMATIC mode a system test is carried out immediately.

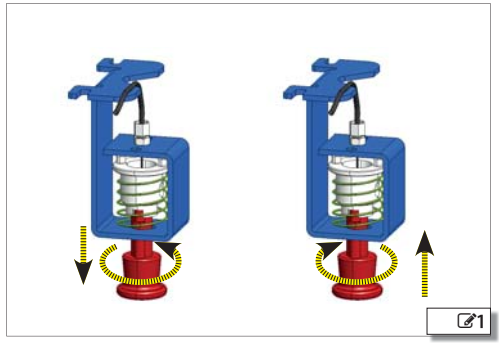
MANUAL OPERATION

Release manoeuvre

If it is necessary to manually actuate the internal release to manually open the door, proceed as follows:

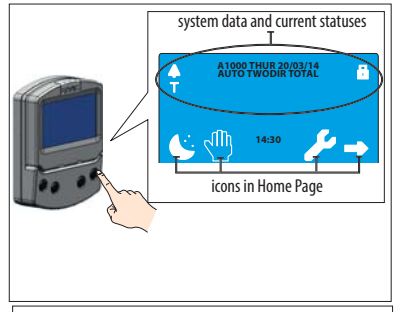
To open the door, pull the red knob downwards and turn it anti-clockwise until it locks on the bracket Fig. 1.

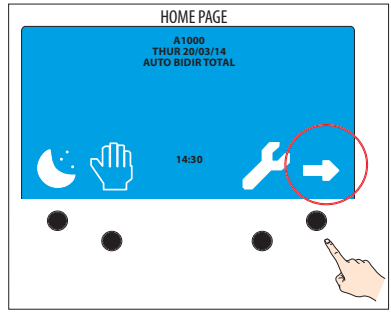
To close the door, pull the red knob downwards to release it and turn it clockwise until it comes into contact with the bracket Fig. 1.



23.3 SELECTION MENU

1. To access the operating mode selection menu, press the corresponding button on the HOME PAGE.
2. With the selection buttons you can set:
   - the Automatic or Door open operation
   - Two-directional or Exit only mode
   - Total or Partial Opening option
3. To go back to the HOME PAGE use the OK button (the selections displayed are confirmed).

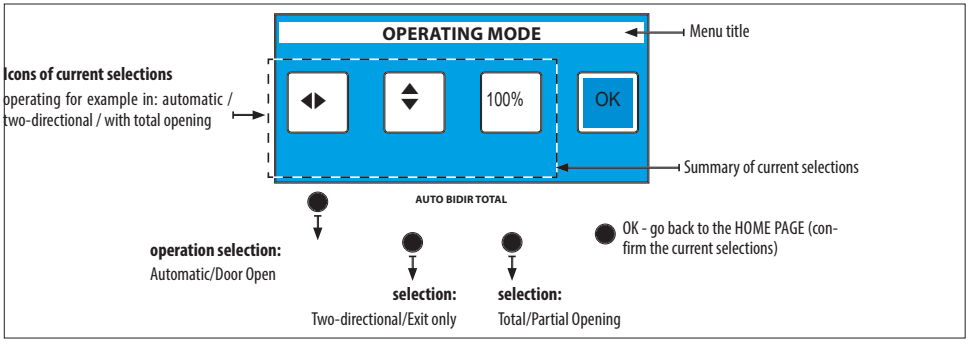




Automatic or Door open operation Automatic = opening via detector Open door = closure is inhibited	Automatic	Door open
Direction of travel Two-directional = the detectors are enabled for entry and exit Exit only = the detector is only enabled for exit Entry only = the detector is only enabled for exit	Two-directional	Exit only Entry only
Opening percentage 100% = Total opening % = Partial opening (percentage that can be modified by the program)	Total opening 100%	Partial opening %

example - automatic operation, only for exit, with partial Opening:

example - door open with total opening:

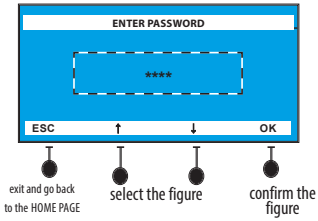


23.4 PASSWORD

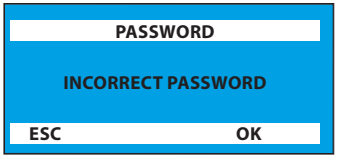
The 4 digit **PASSWORD** has to be entered in order to use some of the functions.

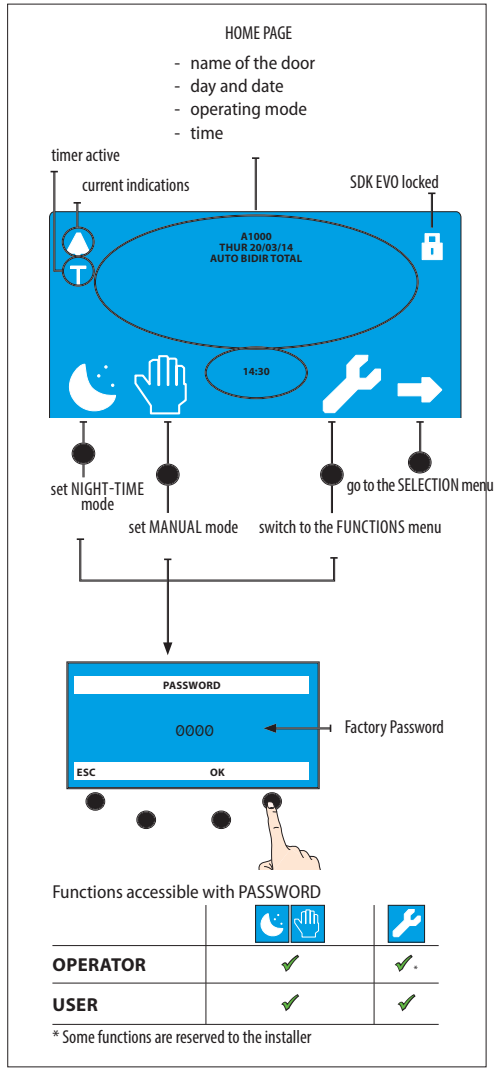
- select the first digit using the ↑↓ buttons
- confirm via the OK button and it moves on to the next digit
- once the 4 digits have been entered, the password is recognised by the device as **OPERATOR** or **INSTALLER**.

The factory-set password is: 0000



- In case of unrecognised password:
- the command is not executed
- the display shows "incorrect password"
- press OK to go back to the home page.





Functions accessible with PASSWORD

OPERATOR	✓	✓*
USER	✓	✓

* Some functions are reserved to the installer

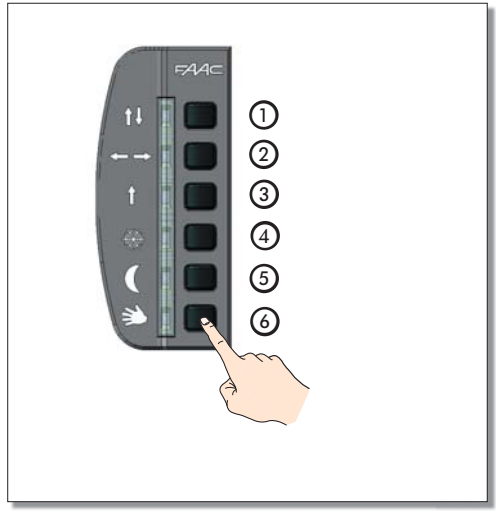
23.5 SELECTION MENU

1. To access the operating mode selection menu, press the corresponding function button.
2. The following functions may be set with the selection buttons:

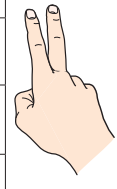
   - TOTAL TWO-DIRECTION AUTOMATIC
   - DOOR OPEN
   - AUTOMATIC TOTAL ONE-DIRECTION
   - AUTOMATIC PARTIAL TWO-DIRECTION AUTOMATIC
   - NIGHT
   - MANUAL

3. The LED switches on to identify the active function.

①		TOTAL TWO-DIRECTION AUTOMATIC
②		DOOR OPEN
③		AUTOMATIC TOTAL ONE-DIRECTIONAL
④		AUTOMATIC PARTIAL TWO-DIRECTIONAL
⑤		NIGHT
⑥		MANUAL



4. To switch to another function press the key corresponding to the new function.
5. If there is an alert, to display it 2 keys must be pressed simultaneously as indicated in the table:

LOCK / UNLOCK		② + ⑤ 5 sec.
RESET		③ + ④
WARNINGS		① + ② continuous
FIRMWARE VERSION		⑤ + ⑥ continuous

6. The ALARMS are displayed with a code of flashing LEDs alternating with the current operating mode. For the type of ALARM see ▦ **23** in the A1400 AIR manual.

7. The key combinations will allow special functions:
   - LOCK / UNLOCK
   - RESET
   - WARNINGS
   - FIRMWARE VERSION
8. The LEDs corresponding to WARNINGS will blink for as long as the keys are held.

Translation of the original instructions

ENGLISH

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