A1400 AIR
A1400 AIR DM

EN16005:2012

safe zone

green tech

energy saving

FAAC

FAAC S.p.A. Soc. Unipersonale
Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY
Tel. +39 051 61724 - Fax +39 051 758518
www.faac.it - www.faacgroup.com

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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: A1400 AIR 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, 08-10-2016 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: A1400 AIR KIT ; A1400 AIR PA ; A1400 AIR CS

comply with the following applicable EU legislations:

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

Furthermore, the following harmonised standards have been applied:

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

Bologna, Italy, 08-10-2016 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: A1400 AIR 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, 08-10-2016 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: A1400 AIR 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, 08-10-2016 CEO

CONTENTS

TABLES

ENGLISH

Translation of the original instructions

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 system
- 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 system 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 system if non-original FAACcomponents are used .

FAACsupplies a system register form for the A1400 AIR 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 system 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 system 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 system 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)


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


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


CIRCLIP PLIERS


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


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


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


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


LEVEL


45°...
COUNTERSINK with specified angle (45°...)


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

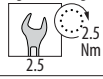

ROUND SAW


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.

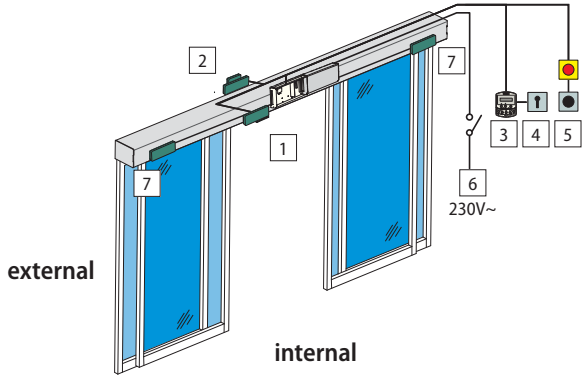
Use pallet trucks.

Use forklift trucks.

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

Kg _____ WEIGHT of the load.

2. AUTOMATION SYSTEM A1400 AIR H100-H140



1	Internal monitored opening detector and safe closing (XV1/XDT1)	optional accessory
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

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2.1 INTENDED USE

The FAAC series A1400 AIR systems are designed to automatically operate, manage and control linear horizontal motion one- or two-leaf sliding doors.

The A1400 AIR series automation system are designed for automated entry doors that are 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 use other than that for which the automation system is 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

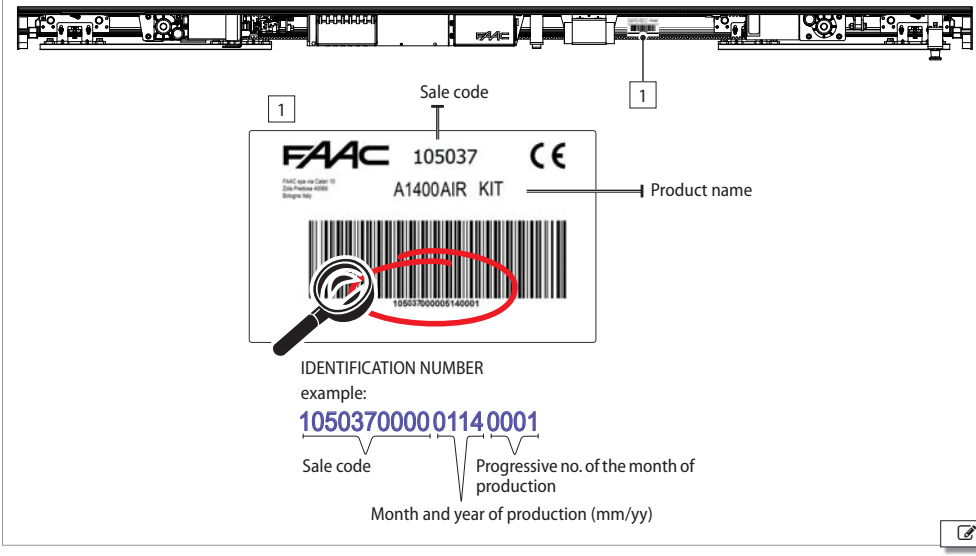
It is forbidden to:

- 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 system 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 A1400 AIR KIT is supplied, it is the responsibility of the installer to attach the identification plate in a visible position 2- ①.



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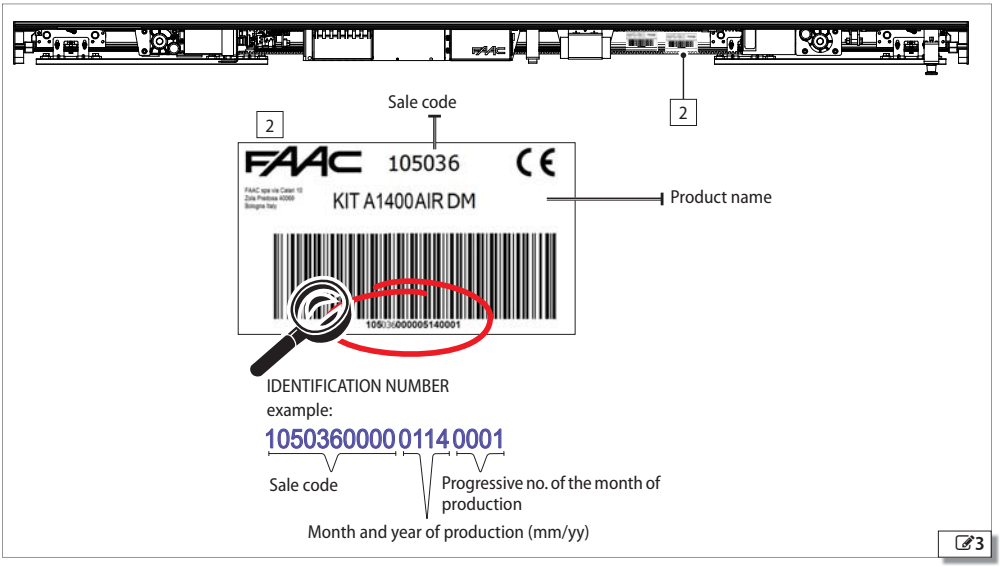
2.4 IDENTIFICATION PLATE A1400 AIR DM KIT

In the configuration using the A1400 AIR KIT, a second label is added in order to identify the second motor.

If the A1400 AIR KIT DM is supplied, it is the responsibility of the installer to attach the identification plate in a visible position 3- ②.



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2.5 TECHNICAL SPECIFICATIONS A1400 AIR

7 Technical specifications

MODEL	A1400 AIR single leaf	A1400 AIR double leaf
Length * [mm]	from 1500 to 6100	from 1700 to 6100
Depth * [mm]	128.7	128.7
Total depth with self-supporting beam * [mm]	183.7	183.7
Height * [mm]	100-140	100-140
Weight** [kg]	MIN. 21 - MAX 47	MIN. 24- MAX. 49
No. of leaves	1	2
MAX. leaf weight [kg]	200	120 +120
Transit space (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]	65	65
Power supply voltage	230 V~ (+6% -10%) 50 Hz	230 V~(+6% -10%) 50Hz
MAX Absorbed power [W]	140	140
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 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 degree	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 automation length, see **30**.

2.6 TECHNICAL SPECIFICATIONS A1400 AIR DM

8 Technical specifications

MODEL	A1400 AIR DM single leaf	A1400 AIR DM double leaf
Length * [mm]	from 1700 to 6100	from 1900 to 6100
Depth * [mm]	128.7	128.7
Total depth with self-supporting beam * [mm]	183.7	183.7
Height * [mm]	100-140	100-140
Weight** [kg]	MIN. 24 - MAX 49	MIN. 27 - MAX. 51
No. of leaves	1	2
MAX. leaf weight [kg]	250	180 +180
Transit space (Vp) [mm]	from 800 to 3000	from 900 to 3000
Beam length [mm]	Vp x 2 +100	Vp x 2 +100
Maximum framed leaf thickness [mm]	65	65
Power supply voltage	230 V~ (+6% -10%) 50 Hz	230 V~(+6% -10%) 50Hz
MAX Absorbed power [W]	140	140
Use frequency	100 %	100 %
Main motor (with encoder)	powered at 36V	powered at 36V
DM motor (without 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 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 degree	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 automation length, see **32**

2.7 TYPE OF SYSTEM SUPPLIED

The FAAC A1400 AIR series automation systems may be supplied as follows:

- Automation in kit: A1400 AIR KIT
- Assembled automation: A1400 AIR PA
- Complete entry door: A1400 AIR 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.

A1400 AIR KIT

A. Package with automation system components to be assembled on the FAAC support profile.
B. Package 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)
- Electronic installation (§ 12)
- Startup (§ 13)

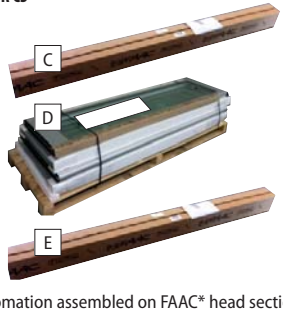
A1400 AIR PA

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)
- Electronic installation (§ 12)
- Startup (§ 13)

A1400 AIR 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)
- Electronic installation (§ 12)
- Startup (§ 13)

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

AUTOMATION SYSTEM COMPONENTS A1400 AIR

Support profile

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

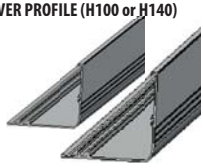
Self-supporting profile KIT - OPTIONAL

To fasten the head section to the side walls. In cases where there is no load bearing wall to fasten the support profile, or if the wall is not smooth.

The kit includes:

- Self-Supporting Profile to be assembled to the support profile to obtain a self-supporting head section.
- 2 Sides to fasten the head section to the side walls.
- Transom Profiles to lock any transom panel installed above the self-supporting profile.

Front COVER PROFILE (H100 or H140)



Aluminium profile for front head section closure.

Available in versions H100 (height 100 mm) or H140 (height 140 mm).

Electronic module rod

Accessory for installation of the electronics module.

Plates with screws

Accessories for installation of components.

Motor with encoder

Return pulley

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

⚠ In the configuration using the second motor kit, the wheels of the carriages should be replaced with the wheels specific for heavy leaves.

Transmission Belt

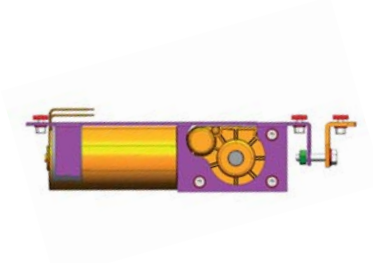
⚠ It is compulsory to use the FAAC belt for the A1400 AIR

Control electronics module

E1400 electronic board and power supply unit.

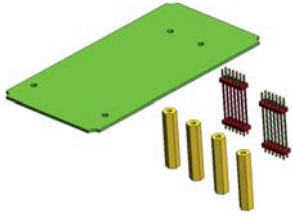
A1400 AIR DM KIT COMPONENTS

2nd Motor with adjustment bracket



Belt-tightening half-moon profiles

2nd Motor board and connection and fixing accessories



2nd Motor extension cable

Carriage wheels A1400 AIR DM (8 pieces)

ACCESSORIES

Motor block XB LOCK and Internal release - OPTIONAL

It acts directly on Motor_1 mechanically locking it to maintain leaf position.

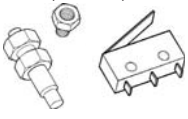
Supplied with internal release device which allows emergency opening to be performed in case of need.

Ready for installing external release.

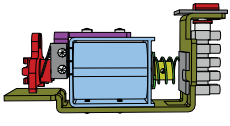
Monitoring - OPTIONAL

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.

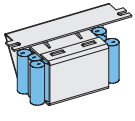


Motor block XM LOCK - OPTIONAL



It acts directly on Motor_1 mechanically locking it to maintain leaf position.

Emergency battery - OPTIONAL



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

SDK EVO - OPTIONAL

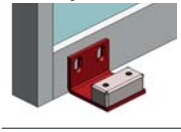
Programming and function selector device with display.

LK EVO - OPTIONAL

Programming and function selector device without display.

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

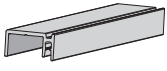
For fastening to fixed leaf (supplied in a PAIR).

Spacer for leaf carriage unit H140 - (2 for each leaf) - OPTIONAL

To use with casing H140 per obtain the correct leaf installation position.

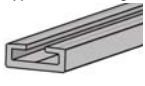
Lower guide profile - OPTIONAL

Used to adapt the lower leaf profile 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.

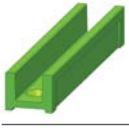


Sweeper for lower guide profile (H19 or H25) - OPTIONAL

Completes the floor guide system.

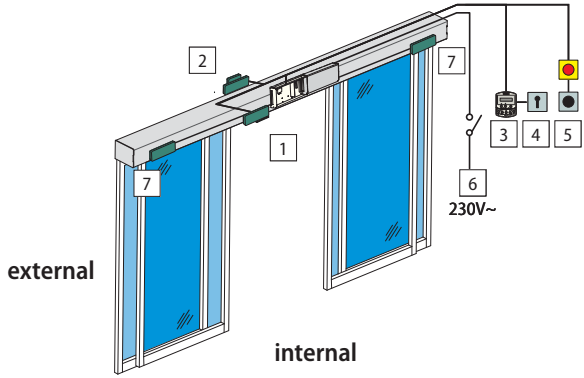
Glass leaf lower shoes - OPTIONAL

For glass leaf sliding.



Glass leaf gripper - OPTIONAL

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

4

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 system 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 **4**.

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. Ensure all components requested are present and undamaged (§ - 15).

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 A1400 AIR 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: 19.

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.

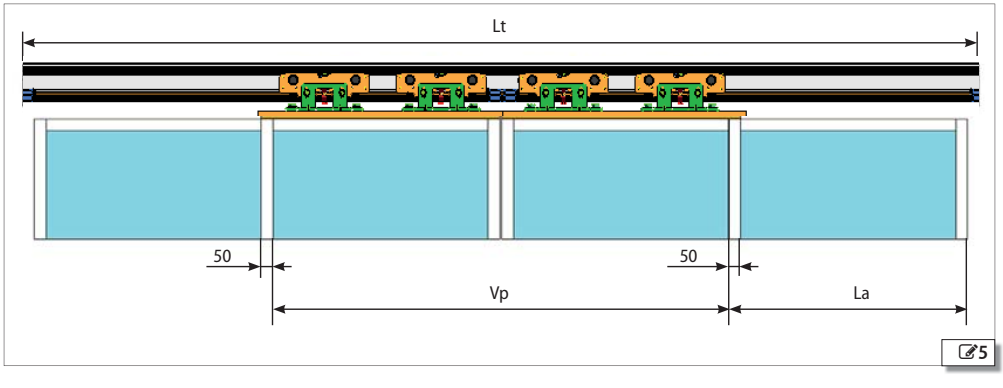
Always comply with the instructions provided by the equipment's manufacturer.

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

Cut according to the measurements indicated in 9.

9 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 transit space (Vp), measured at the installation, must already be known when placing the order since the profiles can be supplied in 4300 mm or 6100 mm lengths.
	If installed with side profiles, the support profile must be cut by:
	Lt - 2mm
- Leaf connection profile (OPTIONAL)	**La**
- Lower guide profile (OPTIONAL)	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

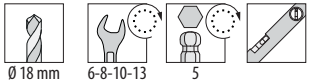
If the A1400 AIR KIT has been supplied, the components must be installed on the support profile. This operation is performed in the shop. The assembled head section is then moved to the installation site.

For handling instructions see 19.

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS



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.

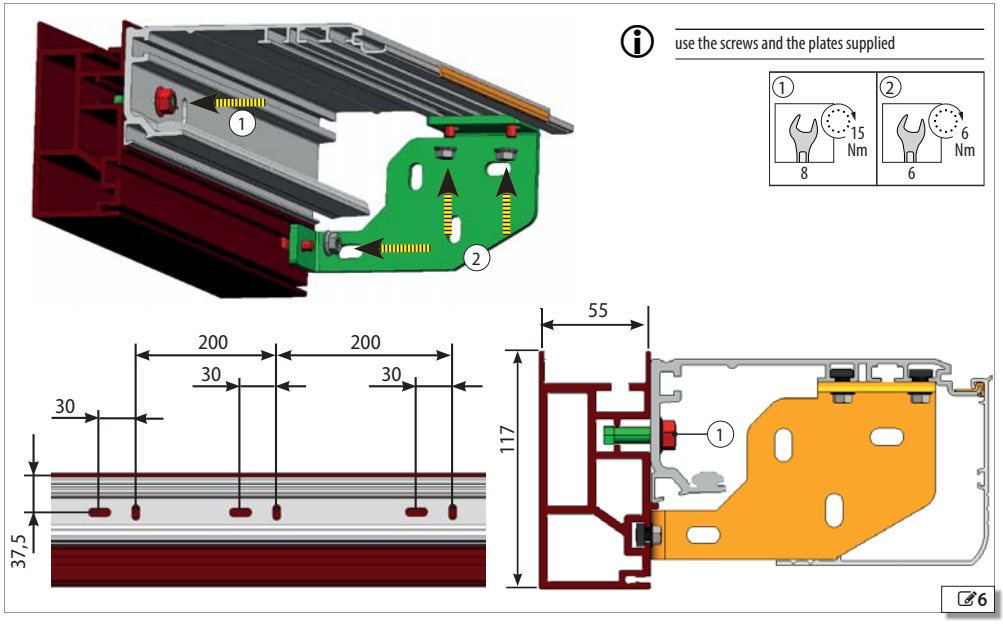
6.1 PREPARING THE SELF-SUPPORTING HEAD SECTION (if used)

ONLY in cases where the head section is to be fastened to the side walls, the self-supporting head section must be prepared:

the support profile, self-supporting profile and the side brackets are assembled before assembling the automation components.

1. Fasten the support profile to the self-supporting profile 6-①:
   - start fastening at a vertical slot at one end and a horizontal slot at the other end.

   Check the horizontal with a spirit level.
   - proceed with the other fastenings at a 200 mm distance; alternate vertical and horizontal slots.
2. Fasten the side brackets at the ends:
   - position the plates into their housings and fasten the 2 side brackets to the ends of the support profile and self-supporting profile 6-②.



6.2 ASSEMBLING THE COMPONENTS

Adhere to the correct positioning set out in the relevant diagram: 109/110/111.

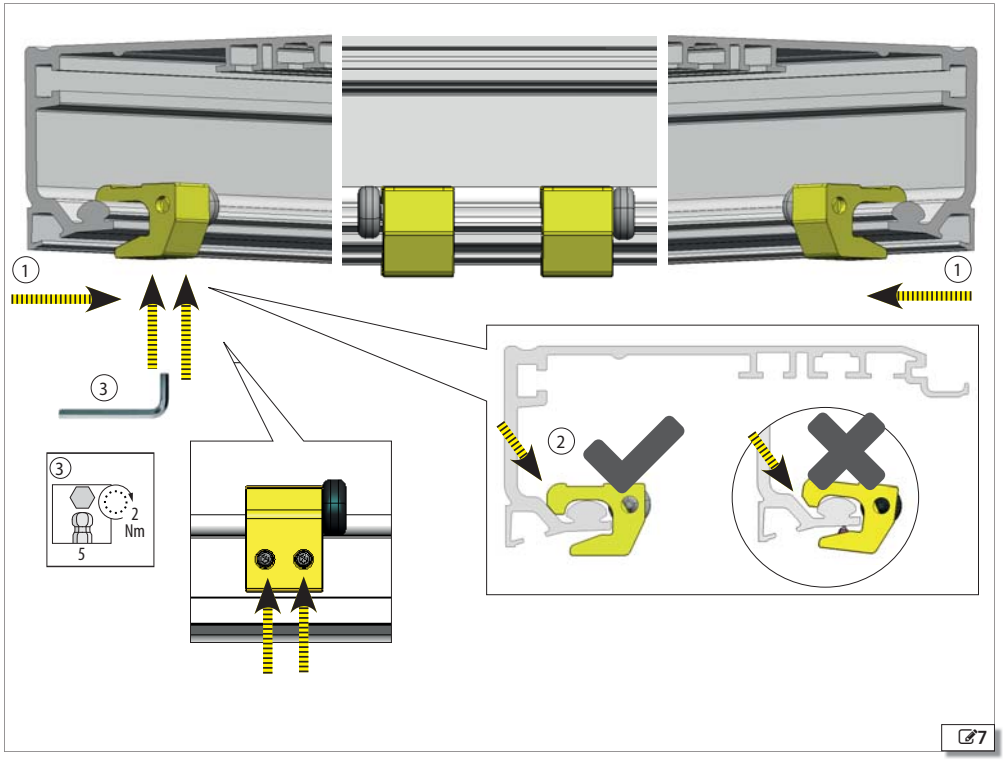
MECHANICAL STOPS

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 7-①.
2. Check that they are resting in the correct position on the profile - 7-② and temporarily fasten each mechanical stop 7-③.

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

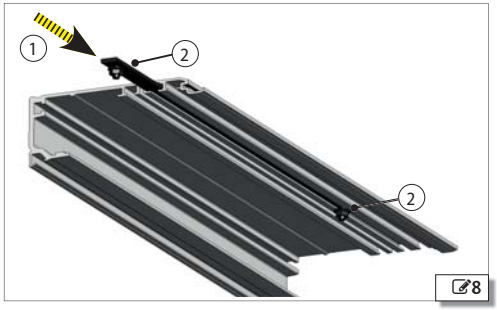


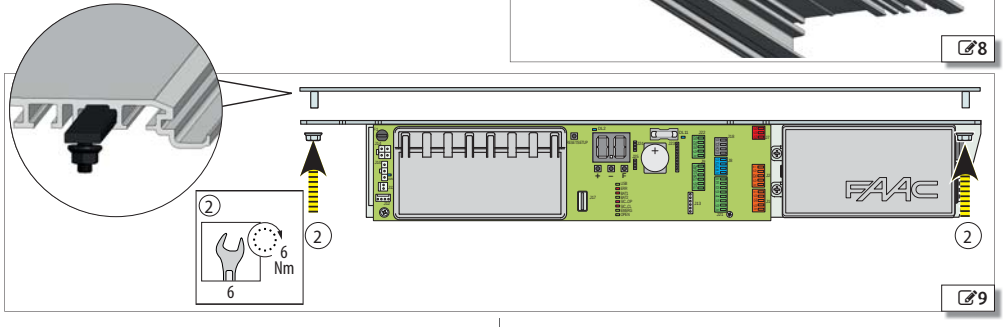
7

ELECTRONICS MODULE

1. Insert the electronics module mounting rod from the side of the profile 8-①.
2. Fasten the electronics module using the 2 screws on the mounting rod 8-9-②.

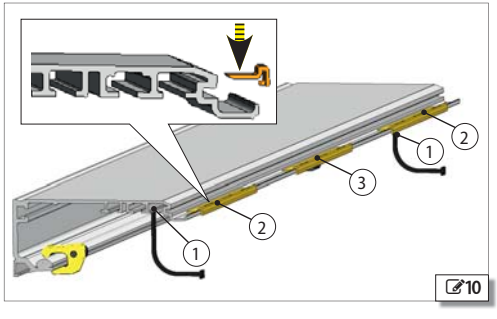
The electronics module may be fastened even if the bar is not present. In such an event 2 plates with screws may be used.





SAFETY CABLES AND SPACERS

1. Insert the largest end of each cable into the support profile 10-①.
2. Insert 2 vibration damper spacers 10-② onto the edge of the profile. In the case of profiles longer than 3 m, add a spacer in the middle 10-③.

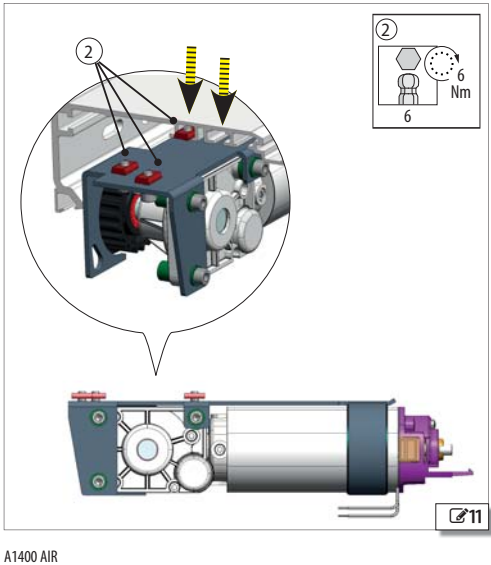


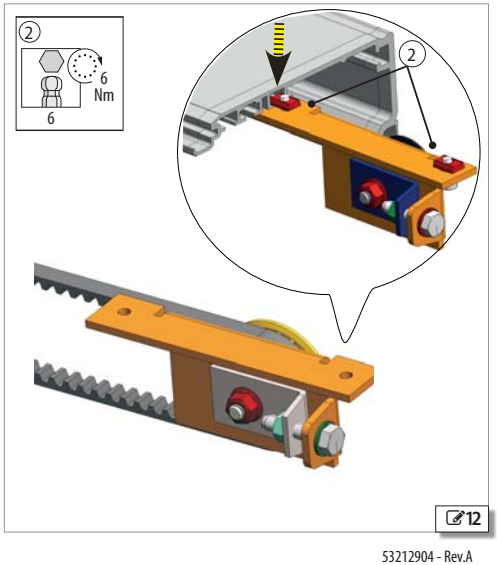
MOTOR

1. Insert the motor in the side of the support profile.
2. Fasten using the 3 plates with screws 11-②.

RETURN PULLEY

1. Insert the return pulley from the side 12-①.
2. Fasten using the 2 plates with screws 12-②.





6.3 INSTALLING THE 2° MOTOR KIT A1400 AIR DM

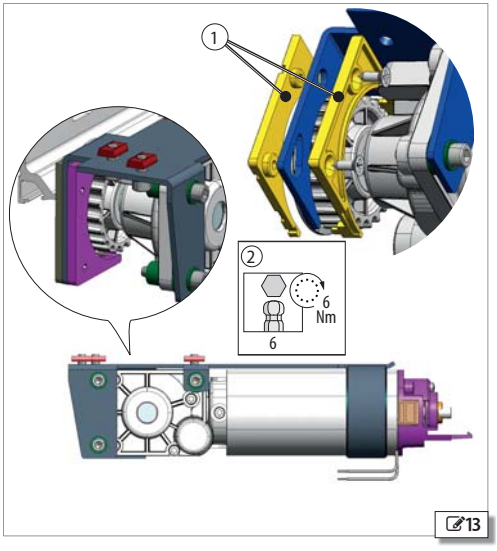
MOTOR

1. Mount the half-moon profiles on the motor 13-①.

2ND MOTOR

1. Mount the half-moon profiles on the 2nd motor 14-①.
2. Insert the motor from the side.
3. Fasten using the 5 plates with screws 14-②.

⚠ When passing from the A1400 AIR to the configuration using the A1400 AIR DM kit there may be a decrease in the transit space VP. Refer to tables 120 121 122



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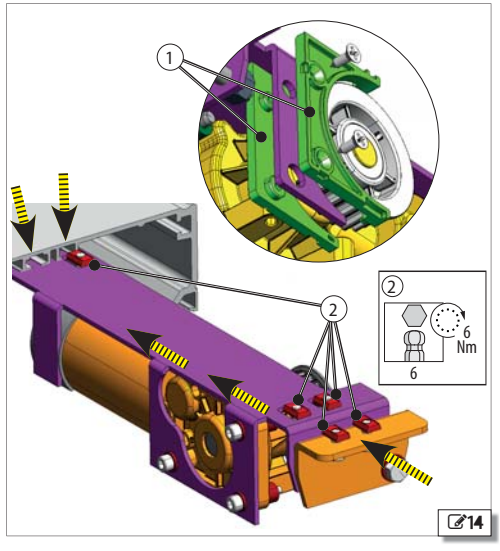


14

MOTOR RELEASE MONITOR

(OPTIONAL ACCESSORY)

Install the micro switch on the motor block **15**.

INTERNAL RELEASE

Double leaf applications

For transit spaces (Vp) of between 800 and 1000 mm, it is recommended to install the block at the opposite end to Motor_1.

For transit spaces (Vp) of between 1000 and 3000 mm, it is recommended to install the block close to Motor_1.

Release knobs are available for H100 or H140 version casings. The method of assembly and adjustment is identical for both versions.

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

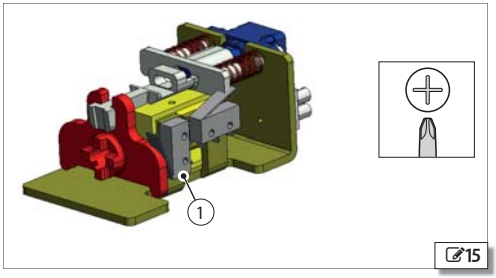
1. Turn the adjustment nut, with the relative locknut **16**-①.
2. Extract about 20 cm steel cable from the sheath. Insert the cable into the adjustment nut and pass it into the release device **16**-②.
3. Tighten the screw **16**-③ to lock the steel cable.
4. Move the black cable sheath against the adjustment screw and screw the adjustment screw fully into the bracket.
5. Insert two plates into the profile **17**-① and install the release knob into the side bracket.
6. Lock the knob: pull and turn it by 90° **16**. 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 fig. **18**and remove any excess sheath.
9. Feed the cable into the guide **18**-② so 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.

MOTOR BLOCK OPERATION TEST XB LOCK

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 **16**-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 **18**-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.



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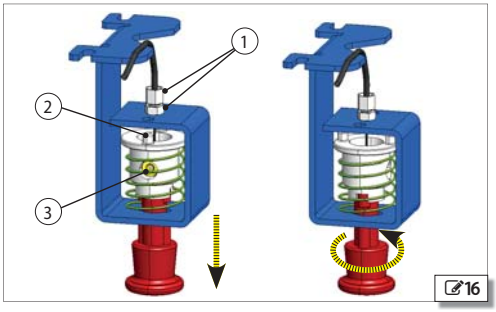

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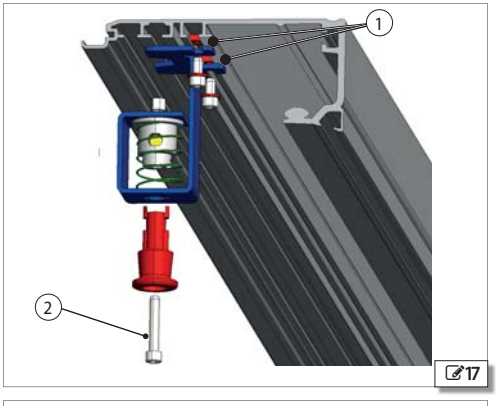

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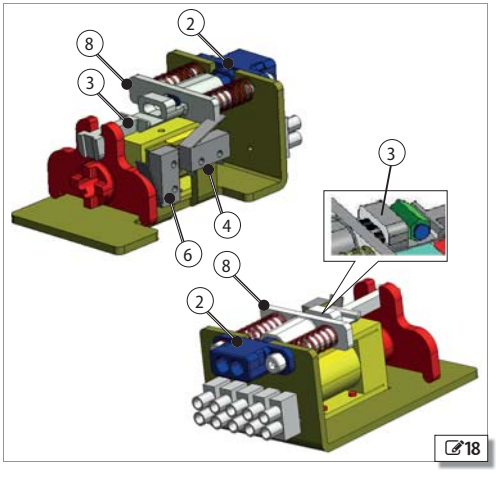


18

COVER DRILLING

Make a 18 mm diameterhole on the lengthways marking of the cover ✎**19**-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.

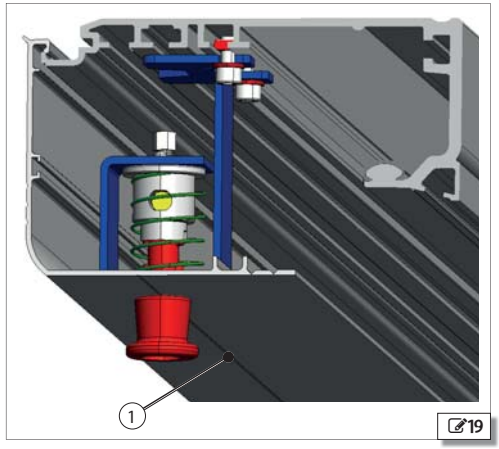
1. Screw the magnet ✎**20**-① onto the carriage (use the threaded hole normally used to attach the belt).
2. Install the sensor onto the bracket using the plastic nuts ✎**20**-②.
3. Insert a threaded plate with screw into seat on the support profile and fasten the bracket ✎**20**-③.

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

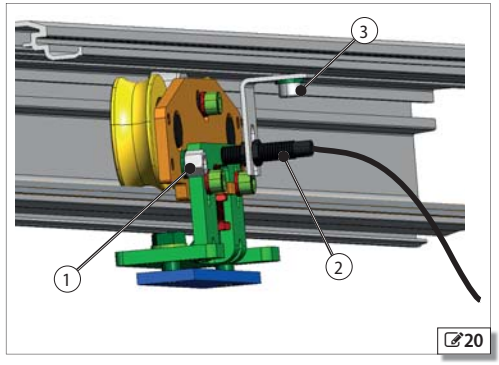
EMERGENCY BATTERY KIT

1. Insert two plates into the support profile as shown in ✎**21**.
2. Fasten the battery support onto the support profile using the 2 screws and washers (provided).

Check the date on the label of the emergency battery through the window on battery support plate. ✎**21**-③ **100**



✎**19**



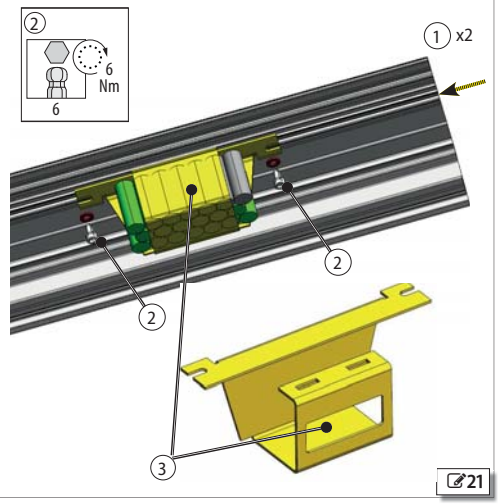
✎**20**

IDENTIFICATION NUMBER
example:

75501500 2015

Sale code

year of manufacture (yyyy)



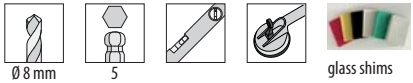
✎**21**

7. ASSEMBLING THE A1400 AIR 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 A1400 AIR 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.

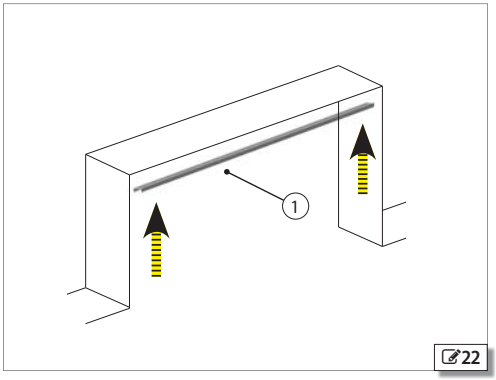
Ensure there are no hydraulic coils or electrical conduits under the floor at the planned drill points.

ASSEMBLING THE FRAME

The supply includes:

- upper head section with reinforcement counter-plate for A1400 AIR
- 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) 23- 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 23- 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.



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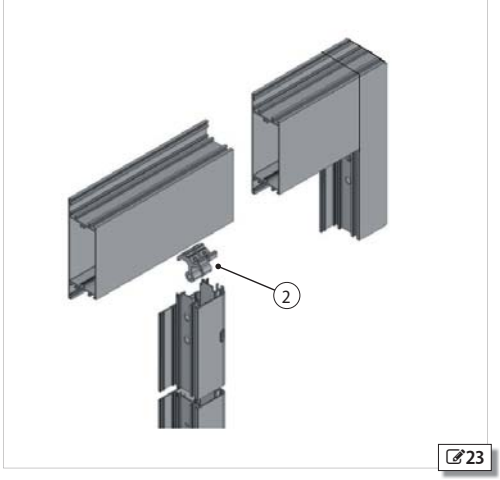


23

7. Fasten the side balancing profiles using suitable next to the grub screws **24**-③.
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 **24**-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 **24**-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 **25**-③ and fasten it using suitable screws and wall plugs.
- 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 **33**.

GLAZING INSTALLATION

1. Place the 3 shims in the lower part of the profile **25**-②.
2. Place the glazing on the shims. **26**- ③④

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

3. Secure the glass using the beading supplied **26**-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 **26**-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 TK20PROFILES

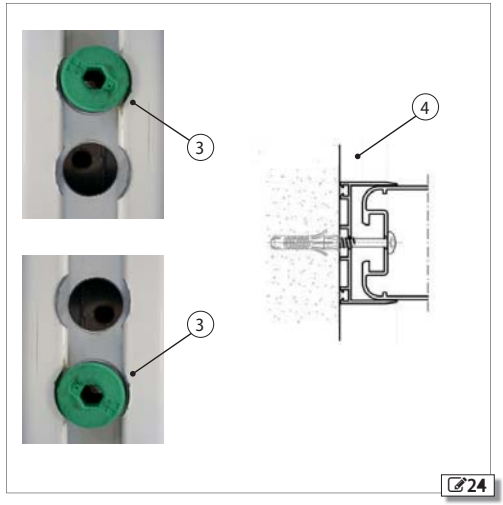
PRELIMINARY OPERATIONS

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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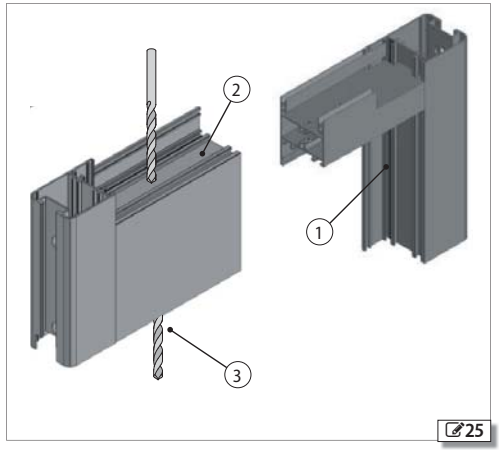

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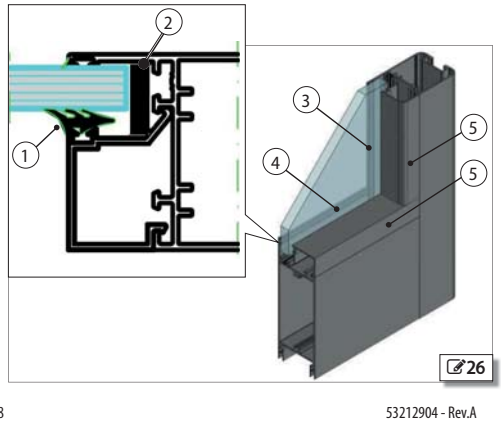


26

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 **27**-①.
2. Install the side balancing profiles **27**-②.
3. Mount the floor profile **27**-③.
4. Insert the fixed leaf by tilting it and inserting it into the top profile **28** ① ② ③.
5. Place horizontally then fasten the leaf.
6. Mount the upper labyrinth profile **28**-⑤.

MOUNTING MOBILE LEAVES

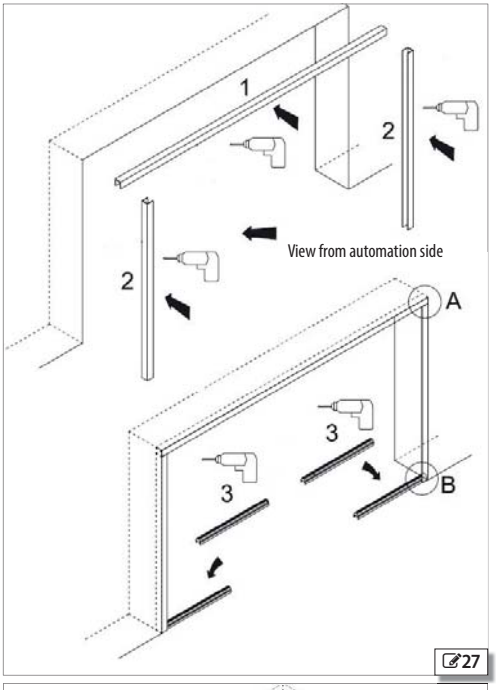
Mount the leaves as described in § 9 **33**.

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 **30**.



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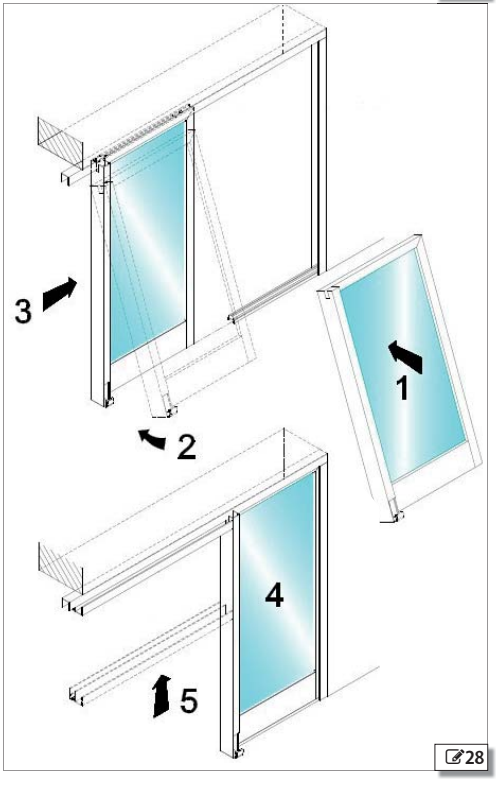

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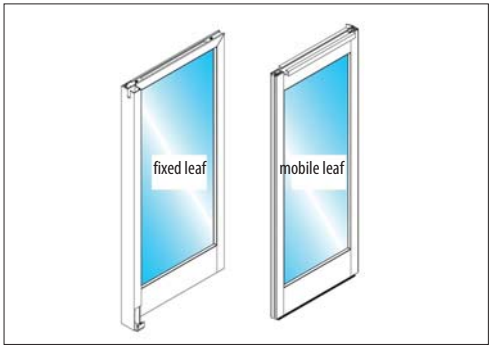
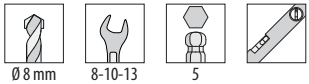


8. INSTALLING THE HEAD SECTION

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:
   - for leaves with a 2.5 m standard height frame consider overall dimensions of ✎**114** - **106**

$$HA = LH - 27$$

   - for leaves with a frame height of less than 2.5 m consider overall dimensions of ✎**115** - **107**

$$HA = LH - 19.5$$

   - for doors with glass leaves without a frame, consider overall dimensions of ✎**116** - **108**

$$HV = LH - 31$$

The minimum distance between the top of the support profile and the ceiling must be 80 mm ✎**29**.
Check the horizontal with a spirit level.

3. Continue according to the intended type of installation:
   - WALL FASTENING **30**
   - SELF-SUPPORTING FASTENING with optional accessory PROFILE **31** - if provided for specific requirements.

8.2 WALL FASTENING

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.

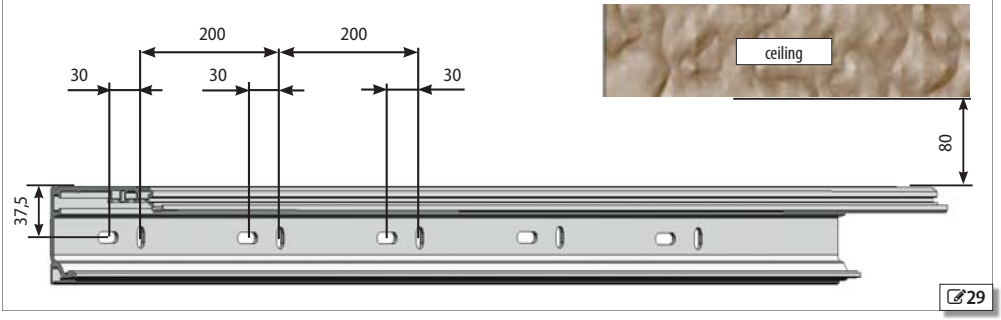
3. Drill the holes on the wall.
   - Use suitable drill bits for the wall material.
4. Lift the support profile. Start fastening at a vertical slot at one end and a horizontal slot at the other end.

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 ✎**29**.

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.



✎**29**

8.3 MOUNTING THE SELF-SUPPORTING AUTOMATION

(IF PROVIDED)

The side supporting walls 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.

In the self-supporting version of the automation system (if supplied), the support profile is mounted on the self-supporting profile and the side brackets **21**.

1. Lift the automation to the established fastening height and mark on the wall the drilling points at the 4 slots of each side bracket.

Check the horizontal with a spirit level.

2. Drill the holes on the side walls.
   - Use drill bits that are suitable for the material **30**.
3. Lift the automation and fasten it to the side walls:
   - Use 4 suitable wall plugs in correspondence with the 4 slots on each of the two side brackets **31**.

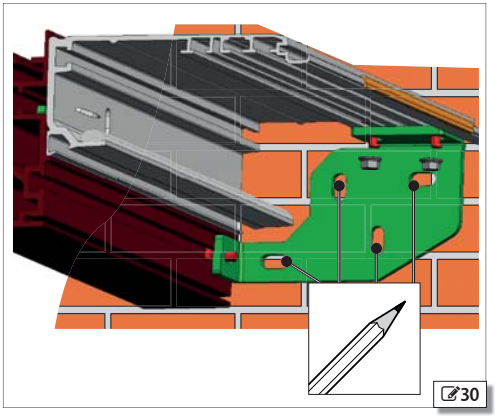
Check the horizontal with a spirit level.

4. If the length of the profile exceeds 3000 mm, tie rods must be fitted to the wall or ceiling, depending on the situation, in intermediate position to prevent bending of the head section's middle.

Use steel tie rods suitable for supporting a 600 kg load (the contact surface of the cable with the self-supporting profile must be at least 70 mm²)* **32**.

5. The number of tie rods required depends on the length of the profile:
   - from 3000 to 4000 mm, a central fastening is required.
   - from 4000 to 6100 mm, two intermediate fastening points are required.

It is nevertheless recommended to fit a tie rod in a central position also for lengths less than 3000 mm.



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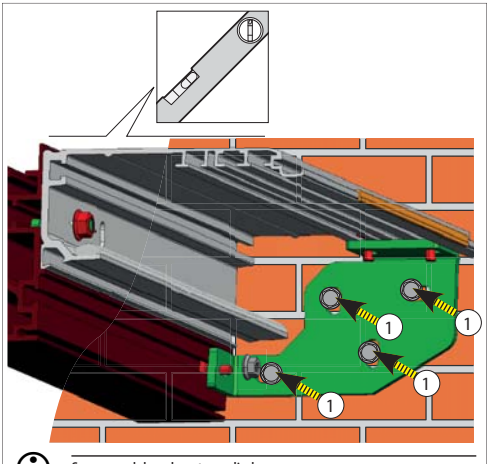
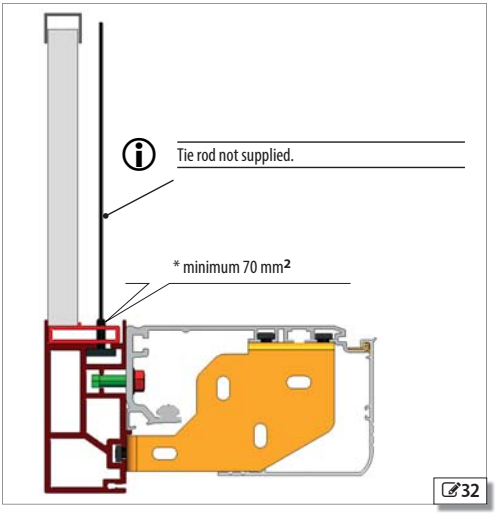


Screws and dowels not supplied.

31



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8.4 MOUNT THE TRANSOM

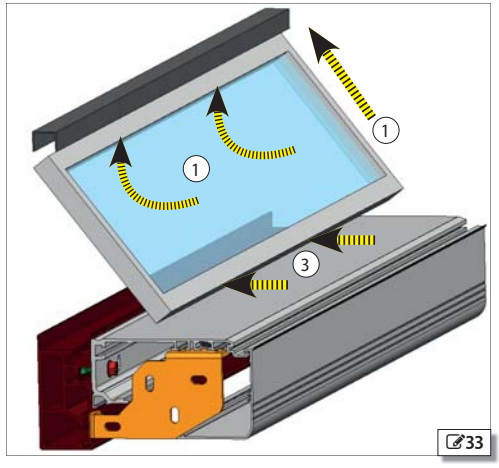
(OPTIONAL)

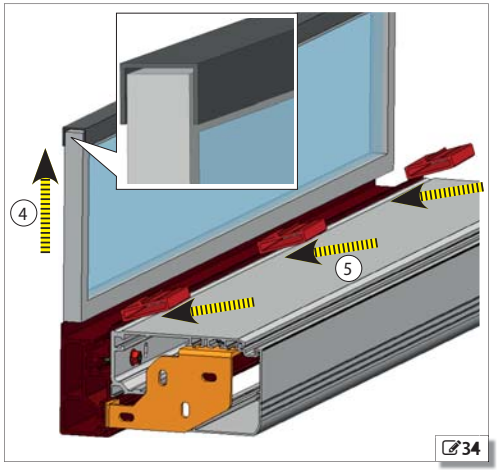
The optional transom is provided in the event of self-supporting head section.

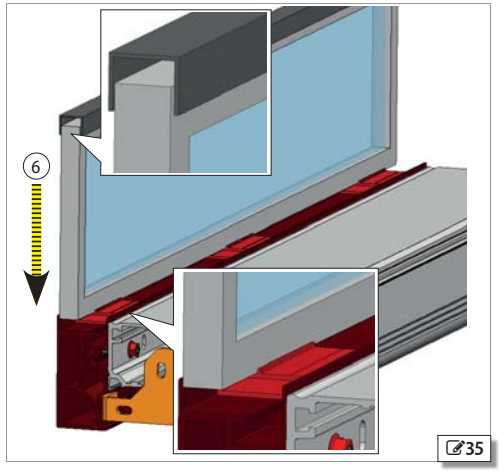
1. Insert the transom panel into the slot on the self-supporting profile ✎**33**.
2. Keep the panel raised in order to insert the profiles at a regular distance ✎**34**.
3. Lower the panel onto the profiles ✎**35**.
4. Install a tie rod (not provided) in the centre ✎**36**.

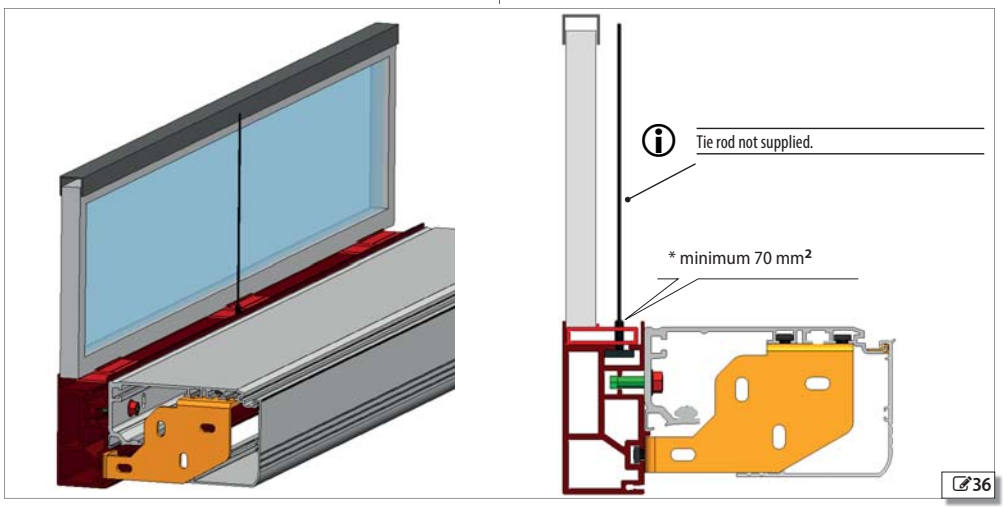
Use steel tie rods suitable for supporting a 600 kg load (the contact surface of the cable with the self-supporting profile must be at least 70 mm²)* ✎**32**.

The number of tie rods required depends on the length of the profile: install one tie rod every 2500 mm.







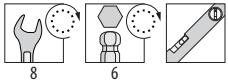


9. INSTALLING THE LEAVES

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 BRACKET TK50

For fastening to wall or fixed leaf **37**.

- use suitable screws (not provided).

SWIVEL SHOE TK50

For fastening to the floor **38**.

- use suitable screws (not provided).

SHOE WITH BRACKET TK20

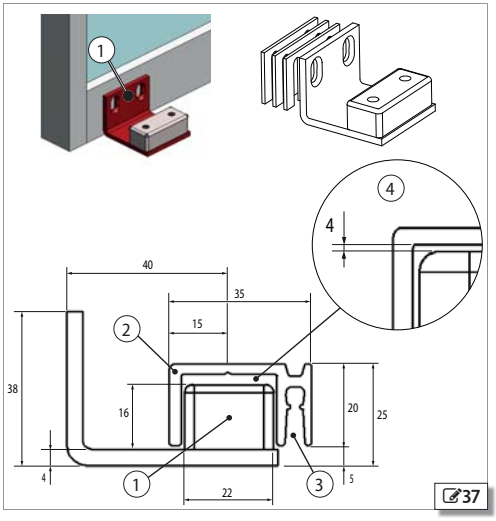
For fastening to the fixed leaf **39**.

- 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 shoe and lower profile must be 4mm (ref. 4 **37**-**38**-**39**).



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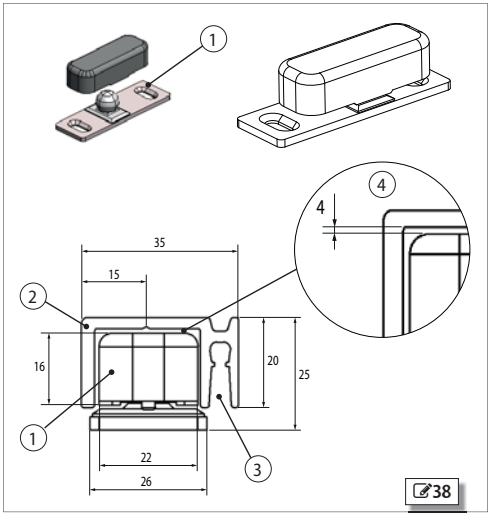

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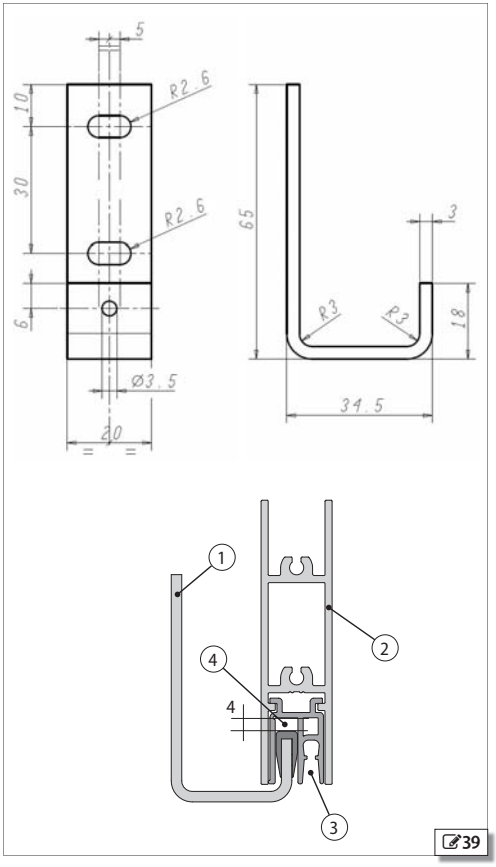

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ENGLISH

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 **40**.

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 **41**.

9.3 MOUNT THE LOWER SWEEPER

(OPTIONAL ACCESSORY)

1. Cut the sweeper to the same length as the leaf.
2. Insert the sweeper into the appropriate housing in the lower guide profile **41**-①.

GLASS LEAVES

For installation of glass leaves see the dedicated section: § 10 **37**.

9.4 INSTALLING THE LEAVES

Install each leaf as described below.

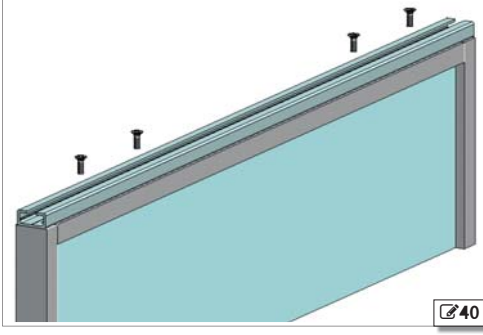
1. Disassemble the 2 carriages:
   - Remove the 2 fixing screws **42**-①.
   - Separate the top plate of the carriage from the bottom plate **42**-②.
2. Place the wheels of the upper plate unit on the sliding guide (two plates for each leaf) **43**-①.
3. Adjust the counter wheel to prevent the carriage from falling **43**-②.
4. Insert the lower plates of the carriage into the profile from the side **43**-③.
5. Adjust the position of the two plates on the leaf.
   - Keep to the measurements indicated in diagrams **114** or **115** and:
   - **117** - **109** for RIGHT single leaf automations
   - **118**- **110** for LEFT single leaf automations
   - **119** - **111** for DOUBLE leaf automations
6. Fasten the plates of the carriages using the 2 screws **43**-④.
7. Lift the leaf until the upper and lower plates of the carriage come into contact **44**-①. Align the holes.

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

8. Fasten the 2 plates of the carriage together **44**-②.

Adjust the counter wheel **48** **36**.

Screws not supplied.



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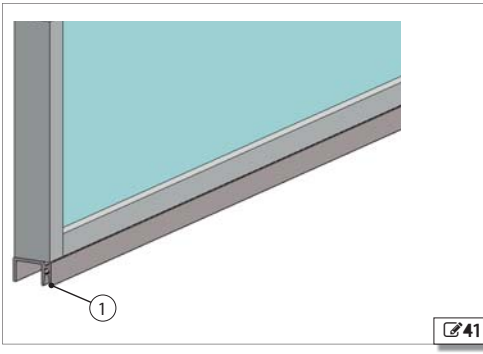

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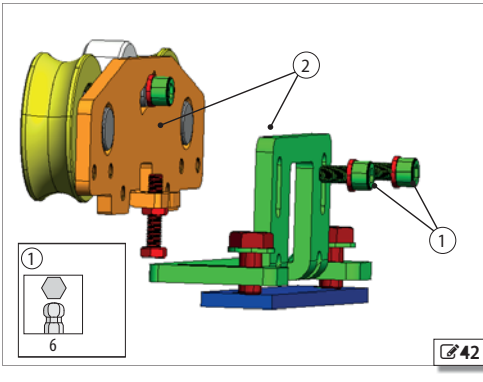

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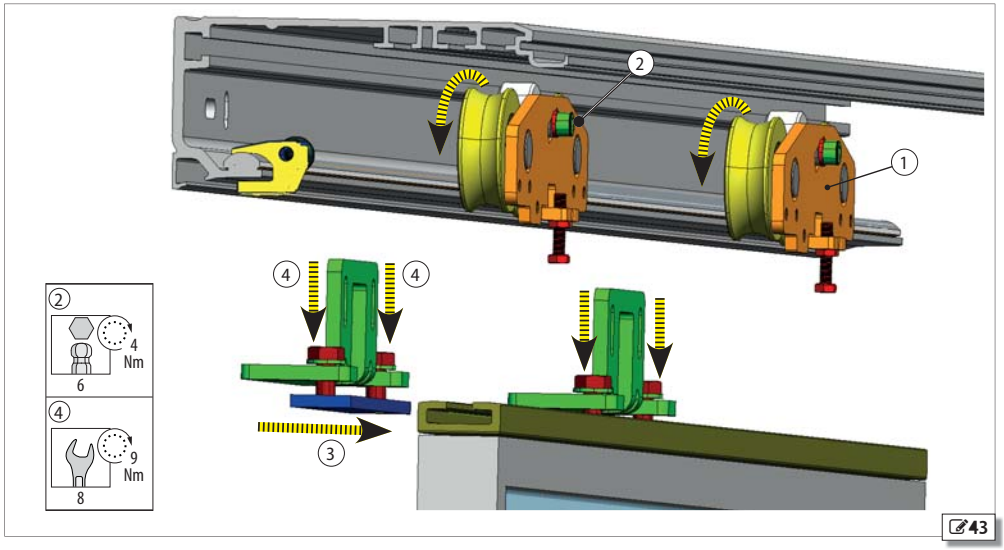

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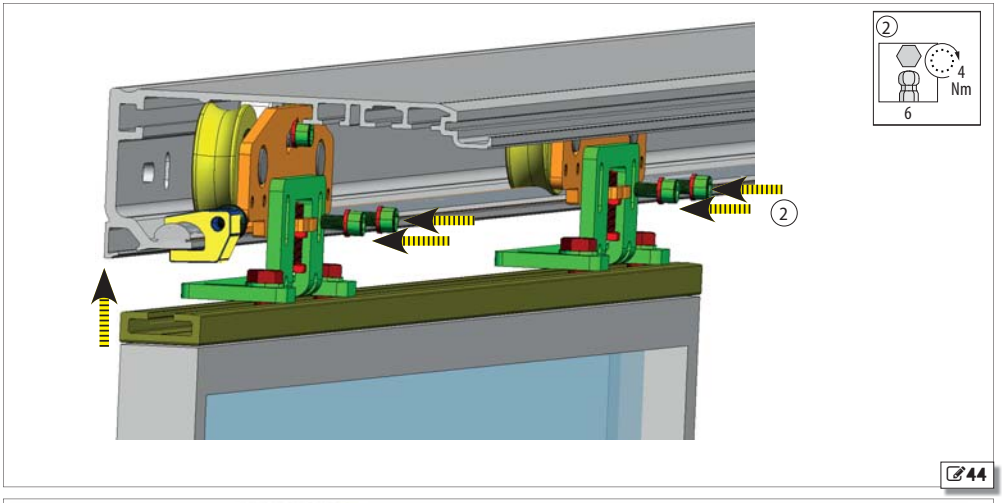

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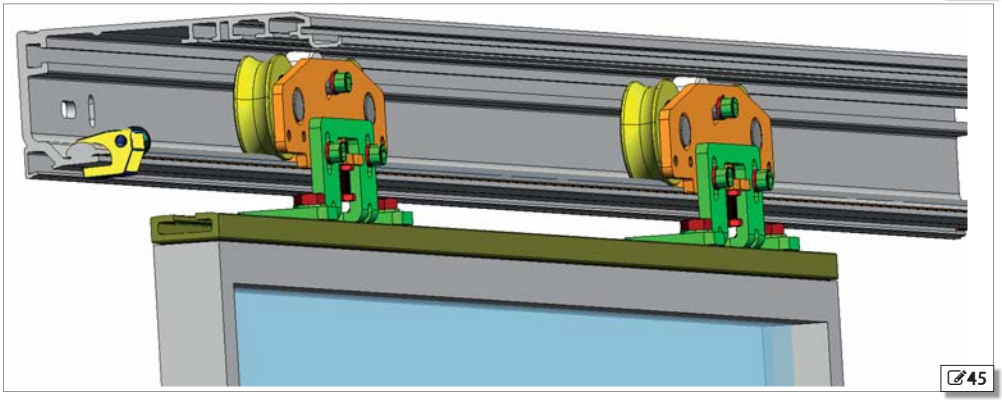

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9.5 ADJUSTING THE LEAVES AND CARRIAGES

In the configuration using the second motor kit, the wheels of the carriages should be replaced with the wheels specific for heavy leaves.

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 ✎**46**-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 ✎**46**-①.

DEPTH OF THE LEAVES

1. Loosen the 2 screws ✎**47**-①.
2. Move the leaf on the two slots at the base of the carriages as desired.
3. Tighten the 2 screws ✎**47**-①.

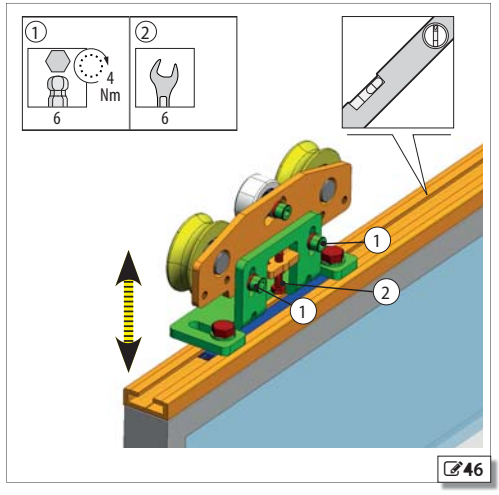
After the adjustments check the vertical and horizontal positions of the leaf with a spirit level.

COUNTER WHEEL

1. Loosen the screw ✎**48**-①.
2. Adjust the height by sliding the wheel support in the diagonal slot ✎**48**-②.
   - The wheel must be brought close to the top profile ✎**48**-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 ✎**48**-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.



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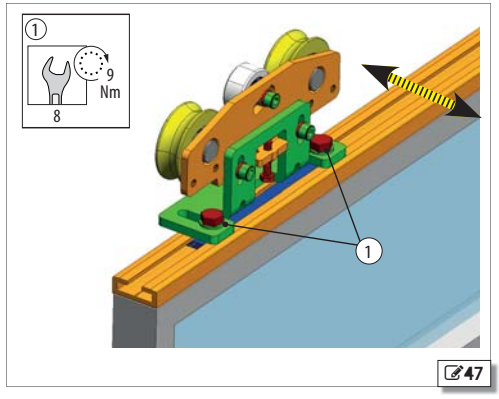
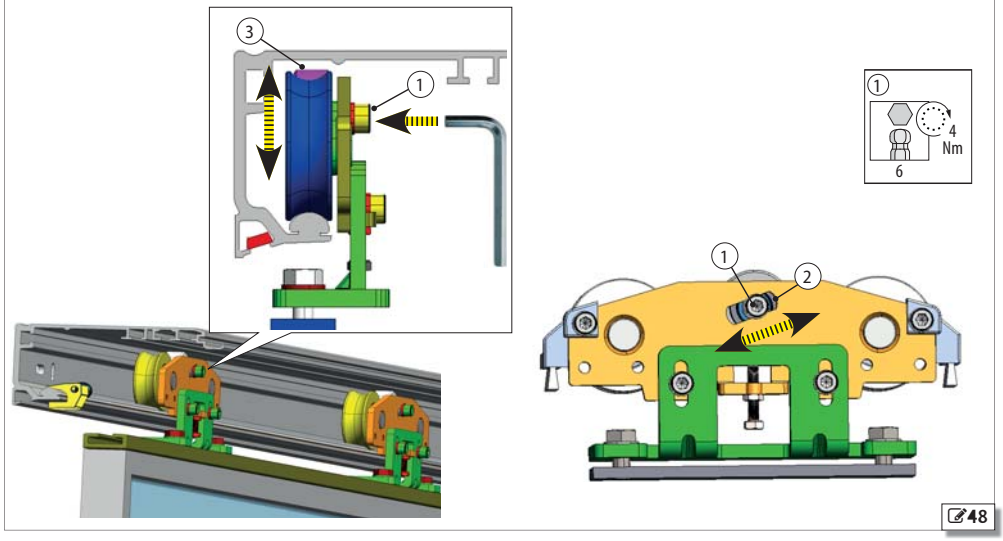


✎47



✎48

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 49-①.
2. Insert a bush in each hole in the glass 49-②.
3. Make 2 holes on the profiles of the gripper 49-③-④.
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 49-⑤
6. Insert the 2 seals into the profiles 49-⑥.
7. Clean the glass, insert the gripper.

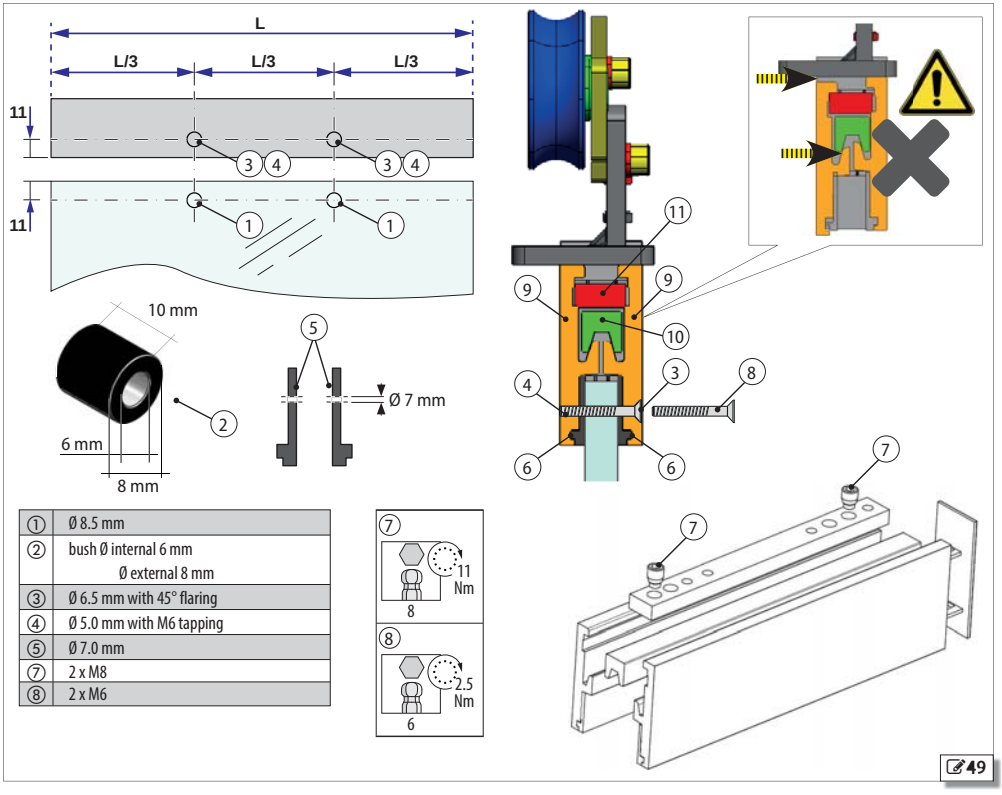
Ensure the beading is in its housing.

8. Assemble the gripper as follows: Insert elements ⑩ and ⑪ into the 2 plates ⑨.
9. Tighten the 2 grub screws 49-⑦
10. Part ⑪ must be aligned with the fixing holes on the carriage 51-③
11. Insert 2 galvanised countersunk head screws into the holes 49-⑧.

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.

1. Disassemble the 2 carriages:
   - Remove the 2 screws 50-①.
   - Separate the top plate of the carriage from the bottom plate 50-② and remove the plate ③.
2. Place the wheels of the upper plate unit on the sliding guide
3. 51-① (2 plates for each leaf).
4. Adjust the counter wheel to prevent the carriage from falling 51-②.
5. Place the lower plate onto the glass leaf.
   - Keep to the measurements indicated in diagrams 116 or 108 and:
   - 117 - 109 for RIGHT single leaf automations



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

- 118- 110 for LEFT single leaf automations
- 119 - 111 for DOUBLE leaf automations

6. Fasten the lower plate onto the gripper using the 2 screws 51-③
7. Lift the leaf until the upper and lower plates of the carriage come into contact 51-⑥. The holes must be aligned.

In order to lift the leaf of the door manually, there must be an appropriate number of people for the weight of the leaf: 1 person for every 20 kg to be lifted.

Use suitable glazing suction cups.

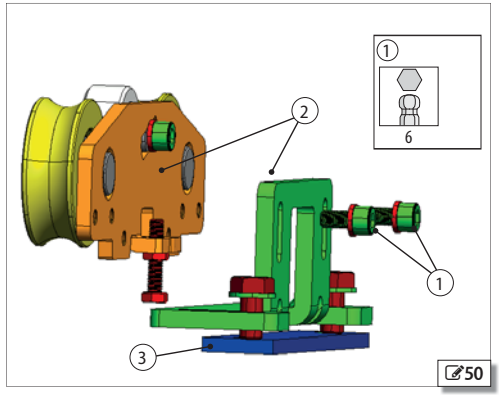
8. Fasten the 2 plates of the carriage together 51-⑦.
9. Adjust the counter wheel 51-② (see 36).
10. Insert the end cover 51-⑧.

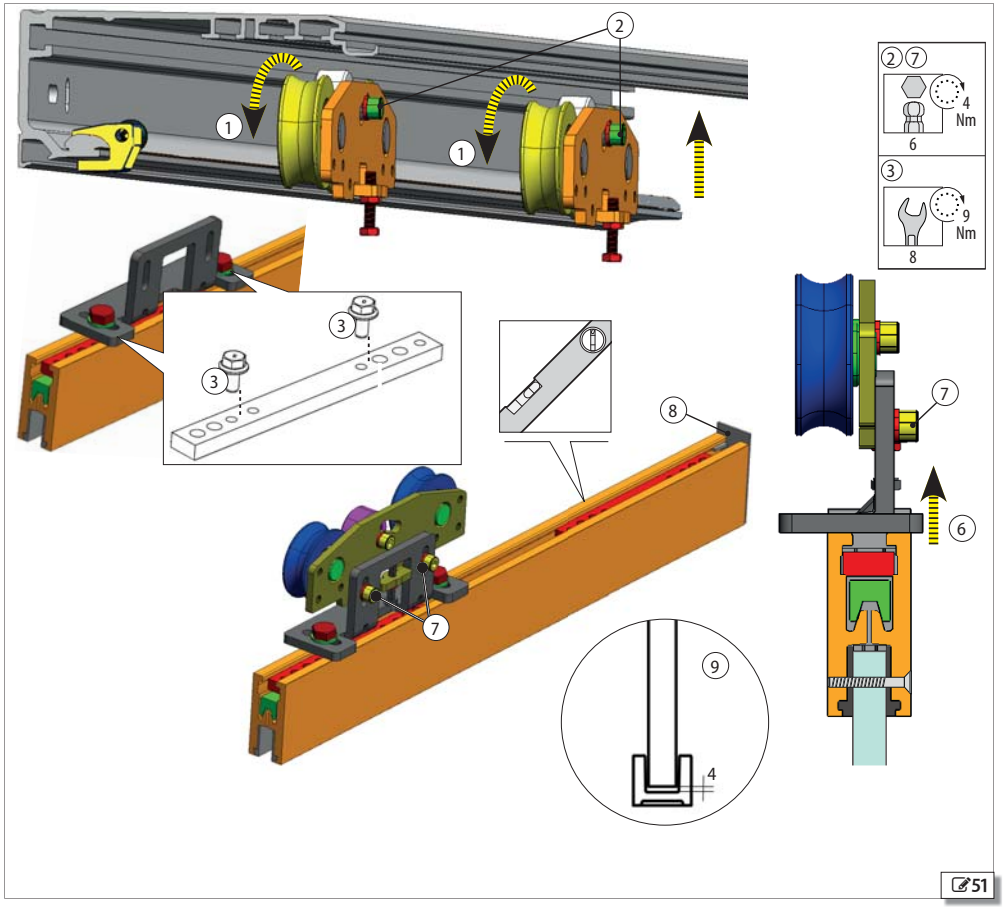
Check leaf verticality.

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 51-⑨.

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





10.1 INSTALLING THE WHEELS ON THE A1400 AIR DM

RISKS

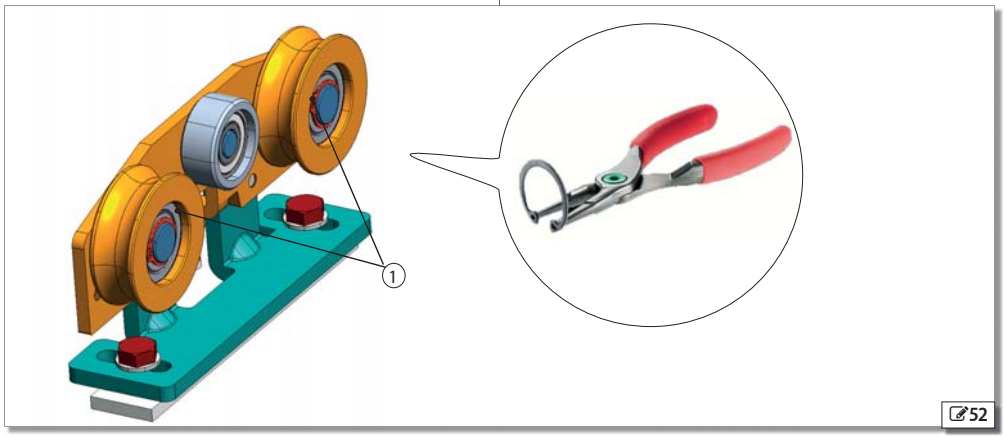
PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS

8 Wheels are provided in the A1400 AIR DM kit, for use with heavy leaves, to be installed on the carriages in place of the standard wheels.

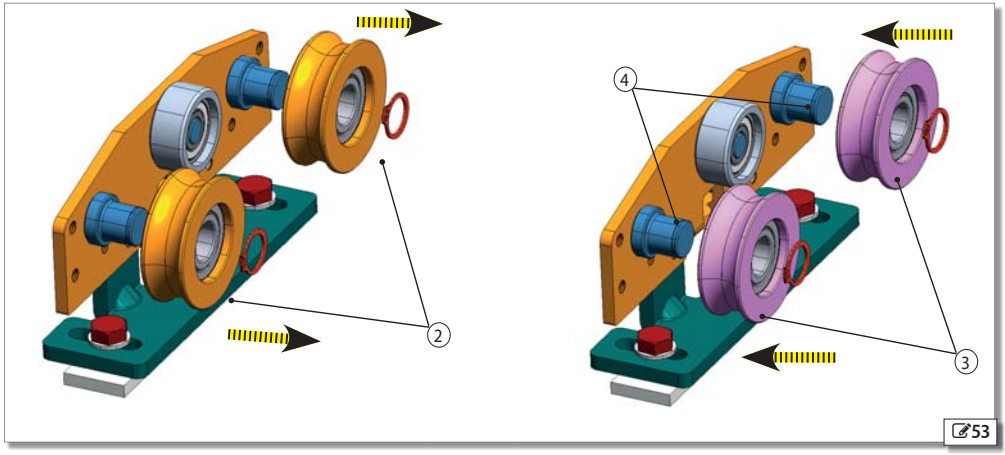
To remove the wheels proceed as follows:

1. Release and remove the circlips from the wheels, using circlip pliers **52**-①.



52

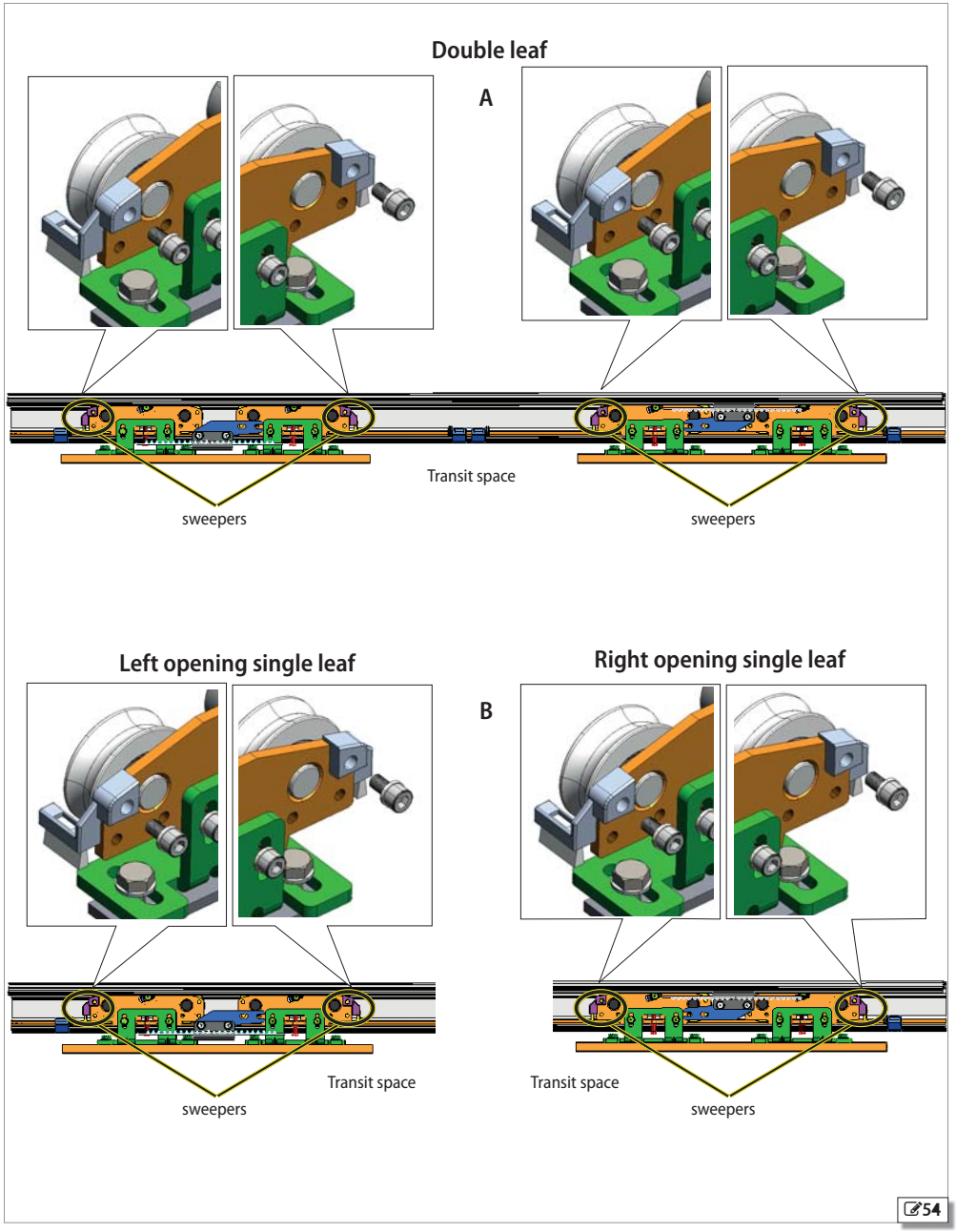
2. Remove the wheels from the carriages **53**-②.
3. Install the wheels for the A1400 AIR DM provided in the kit **53**-③.
4. Using the circlip pliers, replace the circlips in the grooves of the wheel pins in order to secure the wheels **53**-④.



53

10.2 MOUNTING THE SWEEPERS

For double leaf automations: ✎**54**.
For single leaf automations: ✎**54**.



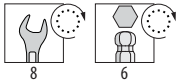
✎**54**

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 A1400 AIR

1. Place one end of the belt over the pulley of Motor_1. Fasten the two ends using the fittings ✎**55**(1) and screws ✎**55**(2).

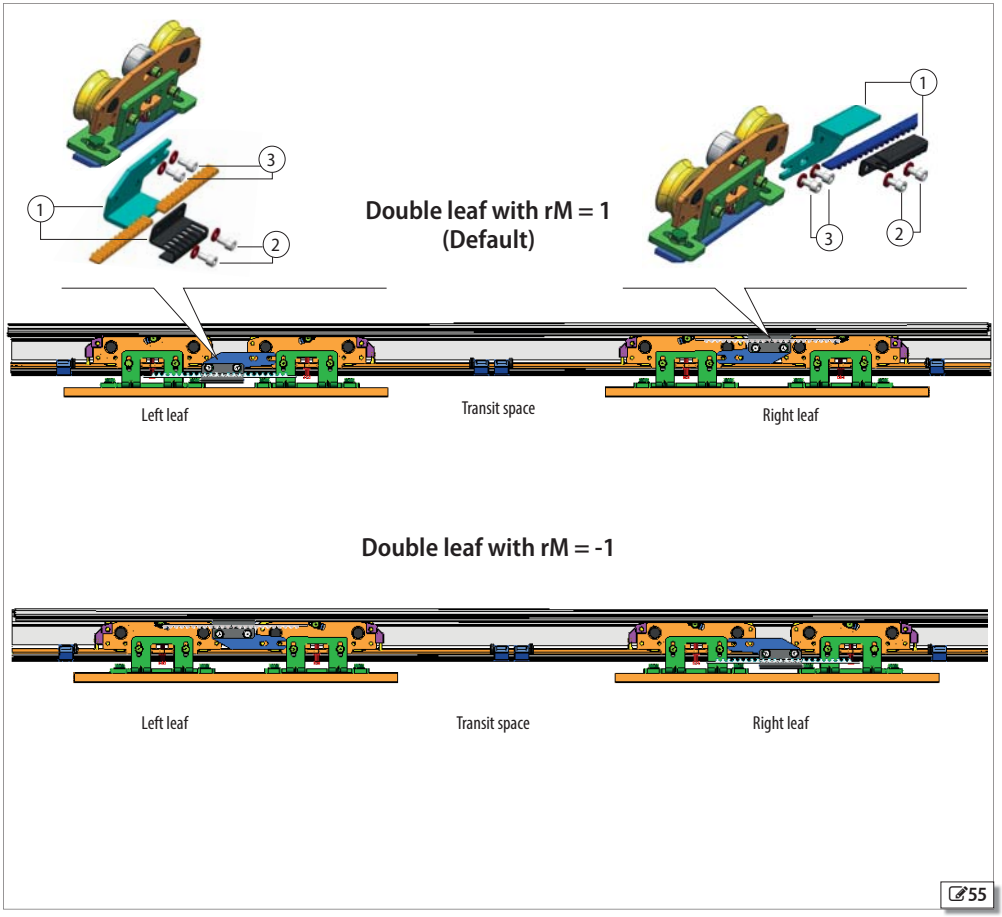
The middle slot of the belt fitting must be left empty ✎**55**-④.

2. Position the assembled fitting with the belt on the carriage. Keep to with the positions indicated in ✎**55** and fasten using the screws ✎**55**-③.

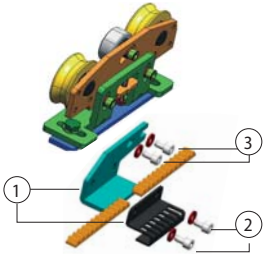
In case of double leaf, the belt joint must be fastened on the lower fitting (on the left leaf).

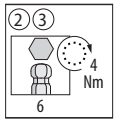
The position of the belt fitting determines the opening direction.

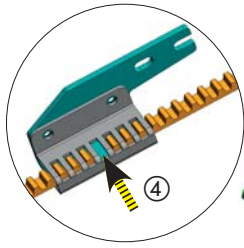
3. Position the belt also on the pulley of the second motor.

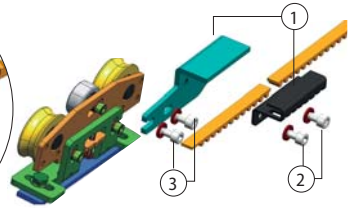


✎55

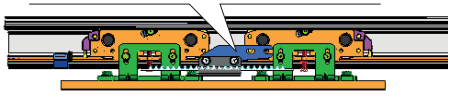






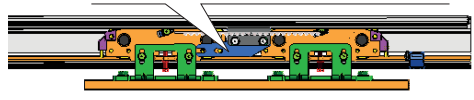


Single leaf - LH opening with rM = 1 (Default)
Single leaf - RH opening with rM = -1



Transit space

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



Transit space

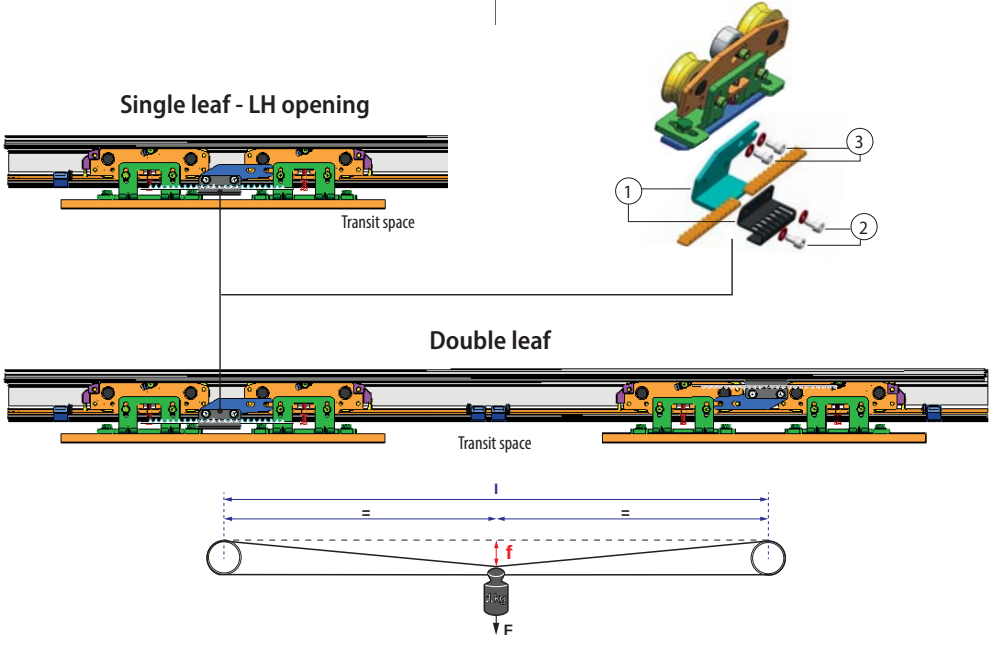
ADJUSTING THE BELT

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.

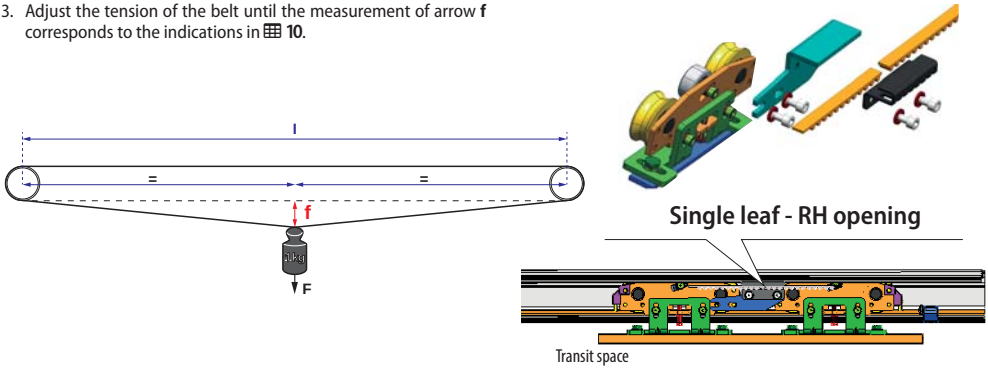
SINGLE LEAF WITH LH OPENING / DOUBLE LEAF

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 ▦ **10**.
4. In the case of a double leaf: after adjustment, mount the second upper belt fitting and connect it to the carriage.



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 ▦ **10**.



11.2 BELT TENSIONING

1. To tension the belt correctly, proceed as follows.
2. Loosen the nut 56-①.
3. Adjust the screw and nut 56-② to tension or loosen 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 56-② using a hex spanner until obtaining the measurement specified in the table.
6. After adjustment, tighten the screw 56-①.
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 the belt remains flush with the pulleys on the main motor and the return pulley.

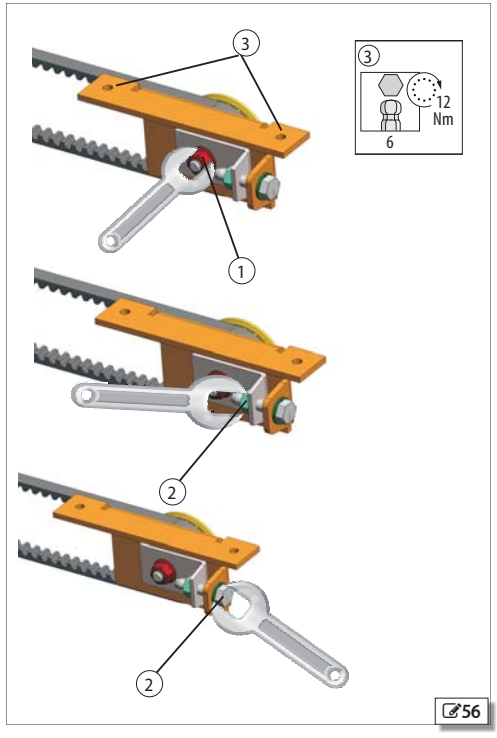
8. If the belt is not flush with the pulleys, loosen the fastening screws of the return pulley bracket 56-③
9. Rotate the return pulley bracket clockwise.
10. Tighten the return pulley bracket fastening screws.
11. Perform a few cycles again and check that the belt remains flush with the pulley.

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.



10 Belt tensioning (measurements in mm)

RH single leaf Pulley centre distance (I)	Belt length	f
1150	2470	18
1200	2570	19
1250	2670	20
1300	2770	20
1350	2870	21
1400	2970	22
1450	3070	23
1500	3170	23
1550	3270	24
1600	3370	25
1650	3470	26
1700	3570	27
1750	3670	27
1800	3770	28
1850	3870	29
1900	3970	30
1950	4070	30
2000	4170	31
2050	4270	32
2100	4370	33
2150	4470	34
2200	4570	34
2250	4670	35
2300	4770	36

LH single leaf Centre distance pulleys (I)	Length belt	f
1170	2510	18
1265	2700	20
1360	2890	21
1455	3080	23
1550	3270	24
1645	3460	26
1740	3650	27
1835	3840	29
1930	4030	30
2025	4220	32
2120	4410	33
2215	4600	35
2310	4790	36
2405	4980	38
2500	5170	39
2595	5360	40
2690	5550	42
2785	5740	43
2880	5930	45
2975	6120	46
3070	6310	48
3165	6500	49
3260	6690	51
3355	6880	52

Double leaf Centre distance pulleys (I)	Length belt	f
1200	2570	19
1310	2790	20
1420	3010	22
1530	3230	24
1640	3450	26
1750	3670	27
1860	3890	29
1970	4110	31
2080	4330	32
2190	4550	34
2300	4750	36
2410	4970	38
2520	5190	39
2630	5410	41
2740	5630	43
2850	5850	44
2960	6070	46
3070	6290	48
3180	6510	50
3290	6730	51
3400	6950	53
3510	7170	55
3620	7390	56

11.3 BELT TENSIONING WITH KIT DM

12. Manually move the second motor to tension the belt.
13. Fasten the bracket using the 2 screws **57** -①
14. Loosen the 3 screws **57**-②.
15. Loosen the nut **57**-③.
16. Attach a **1 kg** weight in the centre of the lower section of the belt.
17. Measure the arrow **f** and adjust the screw **57** -④ using a hex spanner until obtaining the measurement specified in the table.
18. After adjustment, tighten the 3 screws **57**-②.
19. Loosen the nut **57**-③.
20. Perform some cycles and ensure the belt remains in its housing flush with the pulley on the main motor and on the second motor.

Caution - ensure the belt remains flush with the pulleys on the main motor and second motor.

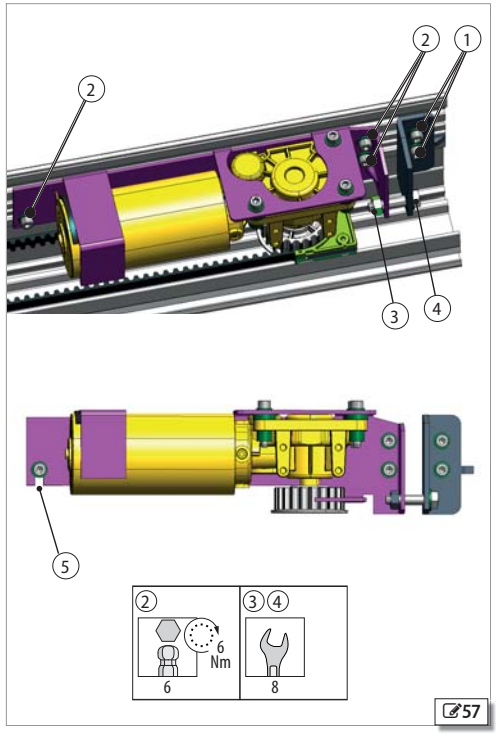
21. If the belt is not flush with the pulleys, loosen the 3 screws **57**-② and rotate the plate clockwise using the slot **57**- ⑤
22. After adjustment, tighten the 3 screws **57**-②.
23. Perform some cycles again and ensure the belt remains flush with the pulley of both motors.

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.



11 Belt tensioning (measurements in mm)

RH single leaf Pulley centre distance (I)	Belt length	f
1292	2744	20
1344	2848	21
1400	2960	22
1456	3072	23
1340	2840	21
1440	3040	22
1540	3240	24
1640	3440	26
1740	3640	27
1840	3840	29
1940	4040	30
2040	4240	32
2140	4440	33
2240	4640	35
2340	4840	37
2440	5040	38
2540	5240	40
2640	5440	41
2740	5640	43
2840	5840	44
2940	6040	46
3040	6240	47

LH single leaf Centre distance pulleys (I)	Length belt	f
1320	2800	21
1340	2840	21
1360	2880	21
1380	2920	22
1340	2840	21
1440	3040	22
1540	3240	24
1640	3440	26
1740	3640	27
1840	3840	29
1940	4040	30
2040	4240	32
2140	4440	33
2240	4640	35
2340	4840	37
2440	5040	38
2540	5240	40
2640	5440	41
2740	5640	43
2840	5840	44
2940	6040	46
3040	6240	47
3140	6440	49

Double leaf Centre distance pulleys (I)	Length belt	f
1440	3040	22
1550	3260	24
1660	3480	26
1770	3700	28
1880	3920	29
1990	4140	31
2100	4360	33
2210	4580	34
2320	4800	36
2430	5020	38
2540	5240	40
2650	5460	41
2760	5680	43
2870	5900	45
2980	6120	46
3090	6340	48
3200	6560	50
3310	6780	52
3420	7000	53
3530	7220	55
3640	7440	57
3750	7660	59

11.4 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 2 grub screws 58-① to release the mechanical stop.
2. Completely open the leaf 59-①.
3. Bring the pad of the mechanical stop and the carriage into contact 59-②.
4. Tighten the 2 grub screws to lock the mechanical stop 58-①.

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.

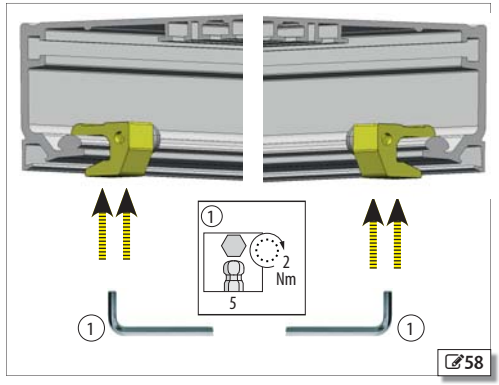
Should adjustment be required:

3. Bring the pad of the mechanical stop and the carriage into contact 59-②.
4. Tighten the 2 grub screws to lock the mechanical stop 58-①.

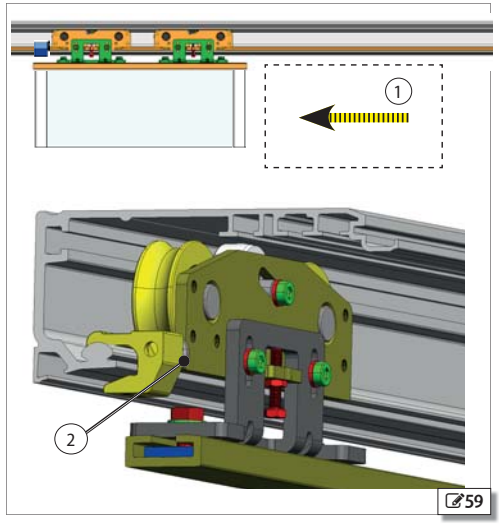
SINGLE LEAF CLOSING STOPS

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

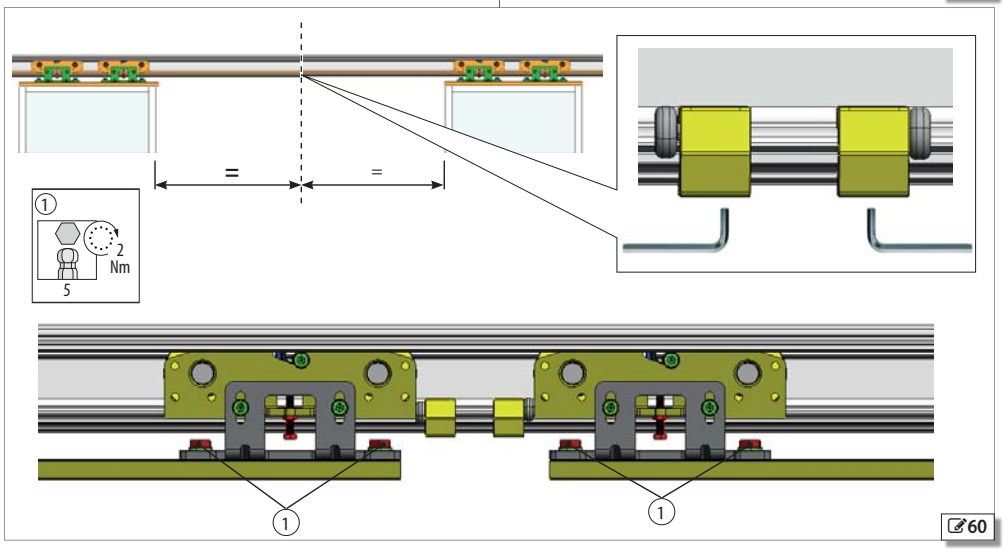
1. Loosen the 2 grub screws to release the mechanical stop 58-①.
2. Close the leaf.
3. Bring the pad of the mechanical stop and the carriage into contact 59-②.
4. Tighten the 2 grub screws to lock the mechanical stop 59-①.



58



59



60

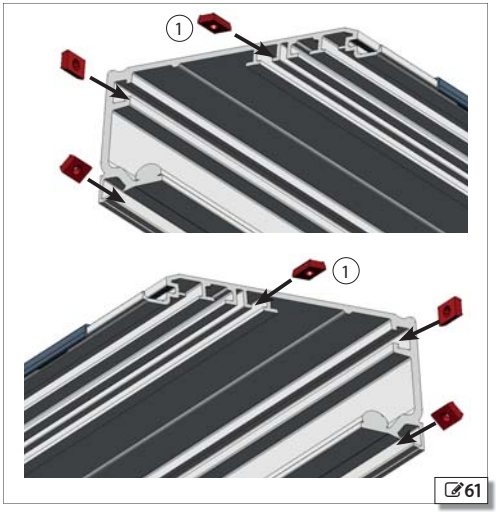
11.5 MOUNT THE SIDE PROFILES

The side profiles allow the casing to be closed.

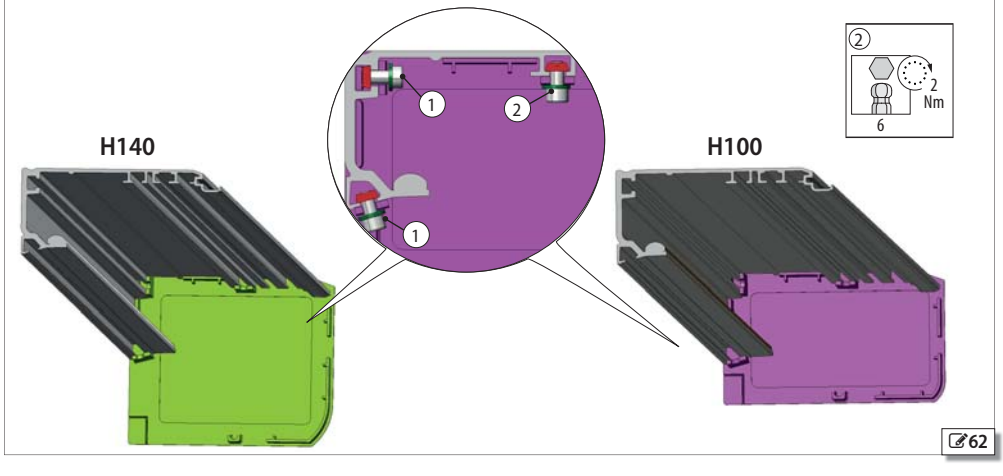
If the side profiles are not used, cover fastening brackets should be used.

1. Place 6 plates on the support profile (In the case of profiles longer than 3 m) ✎**61**-①.
2. Mount the side profiles for H100 or H140 casings on the ends of the support profile.
3. Fasten each side profile using the 3 screws provided ✎**62**-②.

Use at least one central bracket ✎**63**-② for profiles longer than 3 m.



✎**61**



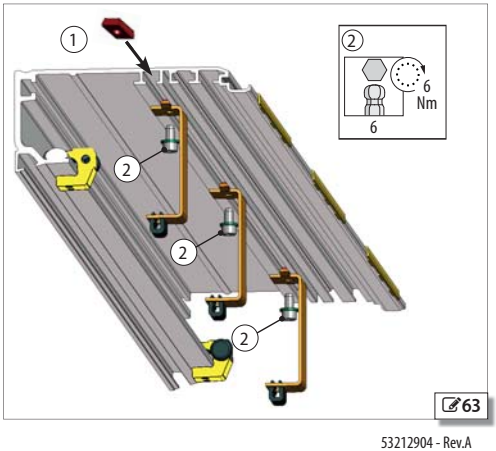
✎**62**

11.6 INSTALL THE CASING BRACKETS

If the side profiles are not used, the brackets enable the casing to be closed.

Cover brackets are available for H100 or H140 casings.
It is recommended to a central bracket for profiles longer than 3 m.

1. Place 2 plates ✎**63**-① on the support profile (in the case of profiles longer than 3 m, a third plate should be added).
2. Mount the brackets and fasten using with the screws provided ✎**63**-②.



✎**63**

11.7 FITTING THE COVER

On the profile there must be:
- the safety cables ✎**64**-⑤
- the spacers ✎**66**-①
- the side profiles ✎**65**-⑦ or the cover fastening brackets ✎**64**-⑧

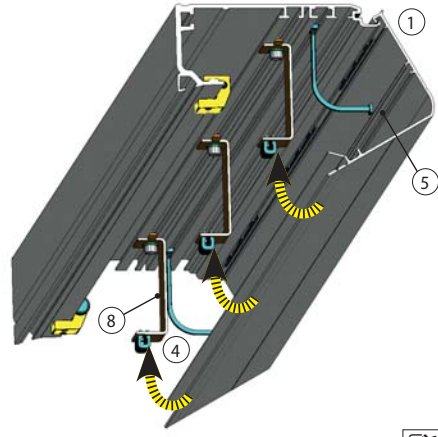
1. Place the cover onto the profile ✎**64** or ✎**65**.
2. Hold the cover in the open position ✎**66**-②③ (lift it, then push it into the profile).
3. Fasten safety cables to the cover ✎**67**-⑤ and close it.

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

Slightly push on the casing to insert the blocks into the brackets ✎**64**-④ or ✎**65**-④.

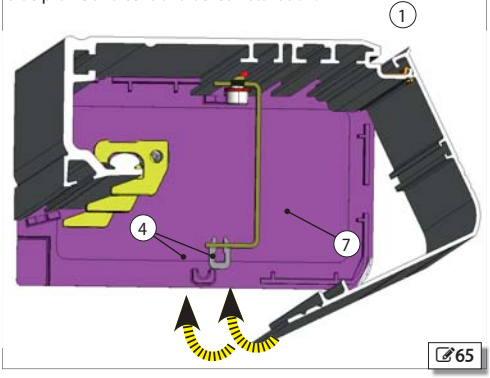
The markings on the casing allow it to be adapted to varying leaf thickness. The breaking points ✎**67**-⑥ make it possible to remove the profile section in excess.

Cover fastening bracket installation.

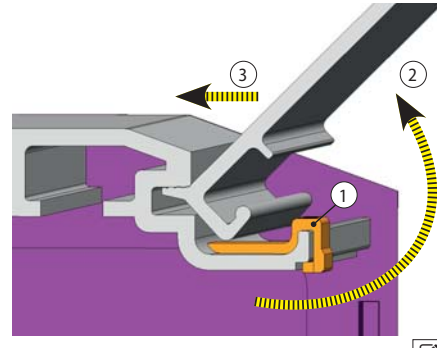


✎64

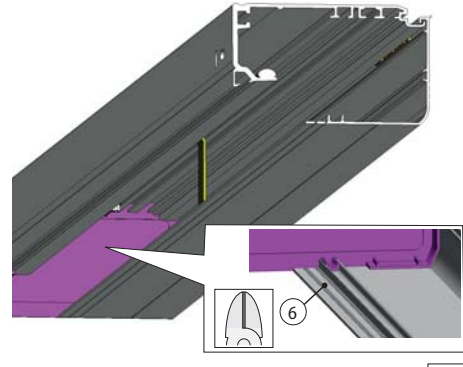
Side profile and central bracket installation.



✎65



✎66



✎67

11.8 INSTALLING THE MOTOR BLOCK XB LOCK

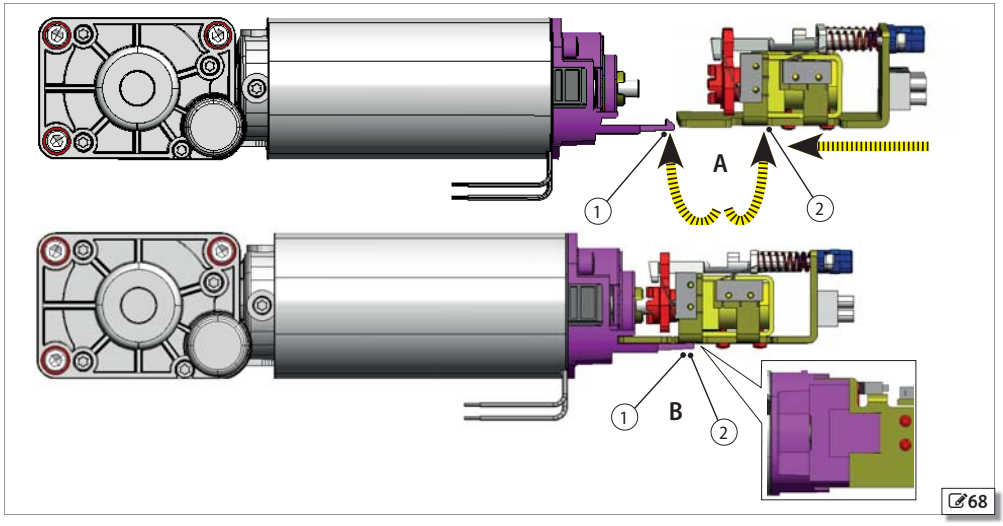
1. Install the motor block by engaging the retaining hook ① in the slot ② of the motor block ✎**68 A-B**.
2. Close the leaves.
3. Manually push the lever ✎**69**-① towards the motor shaft. Check correct coupling.
4. Move the motor block lever to check the clearance between the motor shaft and motor block coupling ✎**69**-②. If it is incorrect, adjust as described below. ✎**70**-③.

⚠ To remove the XB LOCK motor block:

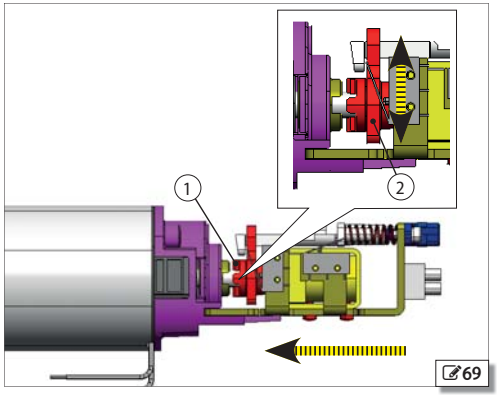
Release the motor retainer hook carefully so as not to break it; use a flat-head screwdriver to prise the retainer hook away from the motor block ✎**68**-①.

11.9 ADJUSTING THE XB LOCK MOTOR BLOCK

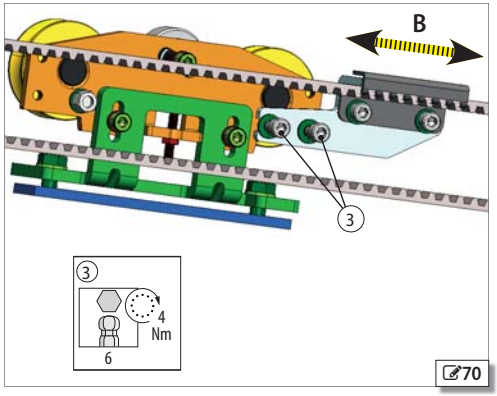
1. Loosen the two screws ✎**69**-③ that connect the belt fitting to the carriage (on both carriages in the case of a double leaf).
2. Slightly move the belt fitting horizontally until there is clearance between the coupling of the motor shaft and the motor block by moving the motor block lever ✎**68**-②; re-tighten the previously loosened screws.



✎68



✎69

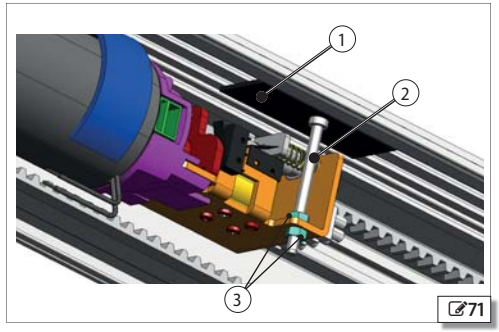


✎70

11.10 ALIGNING THE MOTOR BLOCK XB LOCK

The motor block must be aligned with the motor.

1. Apply an adhesive strip at the top of the profile **71**-①.
2. Insert the adjustment screw onto the motor block bracket with the head facing upwards in contact with strip **71**-②.
3. Adjust it using the nut and lock nut **71**-③.



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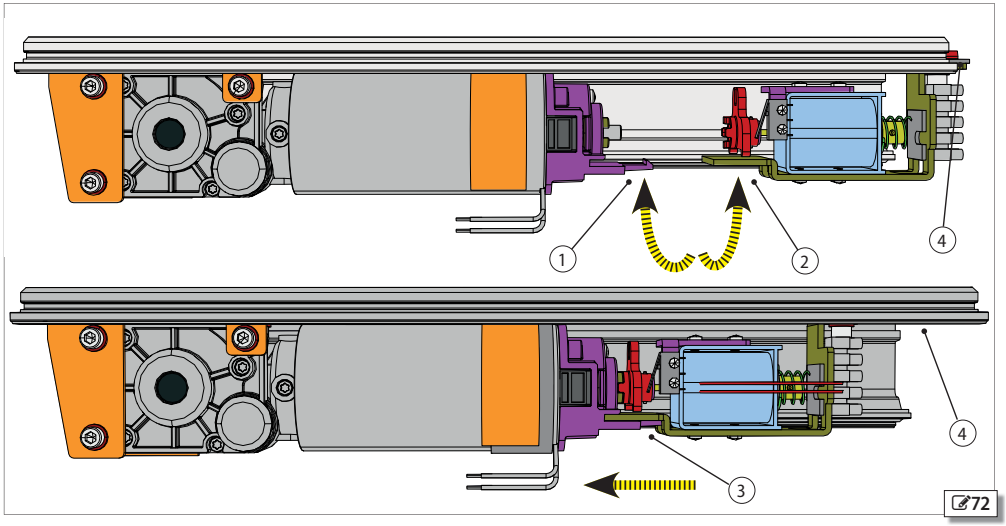
11.11 MOUNTING THE MOTOR BLOCK XM LOCK

1. Install the motor block by engaging the retaining hook ① in the slot ② of the motor block **72**.
2. Check that the motor block is properly engaged **72**-③.
3. After making sure that it is, tighten screw **72**-④.

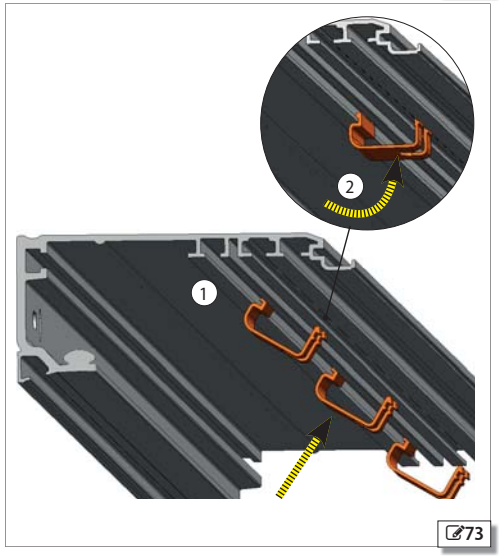


72

11.12 MOUNT THE CABLE GLAND GUIDES

The guides prevent interference between cables and moving parts.

Install the electric cable guides inside the support profile **73**-① and ②).



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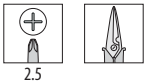
12. ELECTRONIC INSTALLATION

RISKS

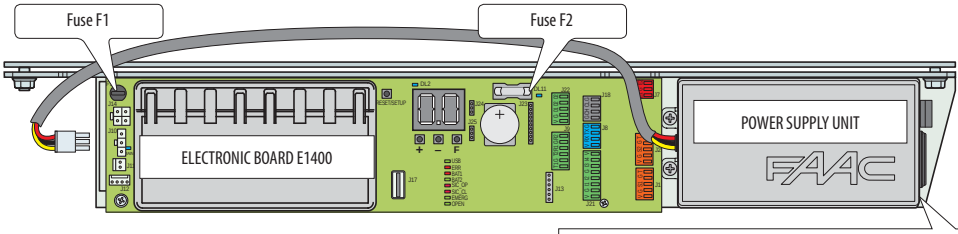
PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS

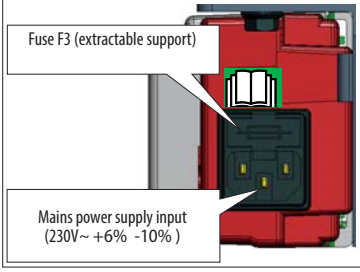


ALWAYS DISCONNECT THE POWER SUPPLY before working on the board. Turn the power on only after having completed all the connections and preliminary start-up checks (63).

12.1 ELECTRONICS MODULE



Switching power supply unit 230 V~ +6% -10%
self-protected from overloads



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)

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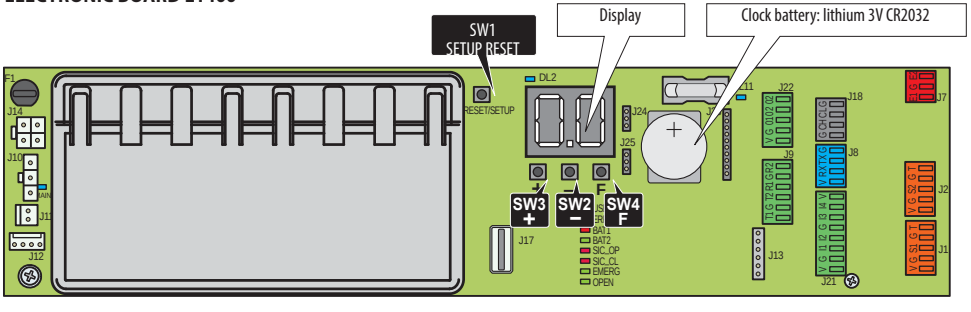
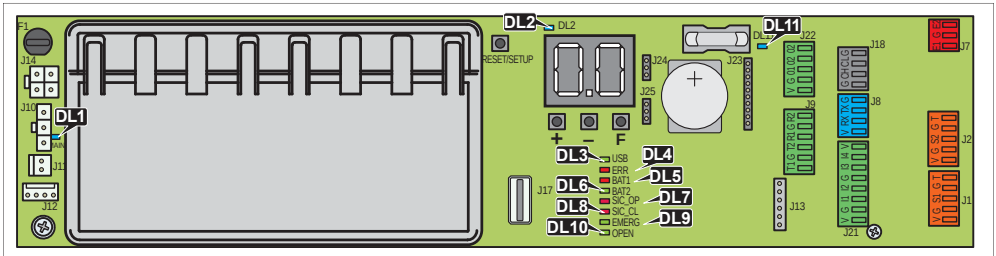
ELECTRONIC BOARD E1400



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

75



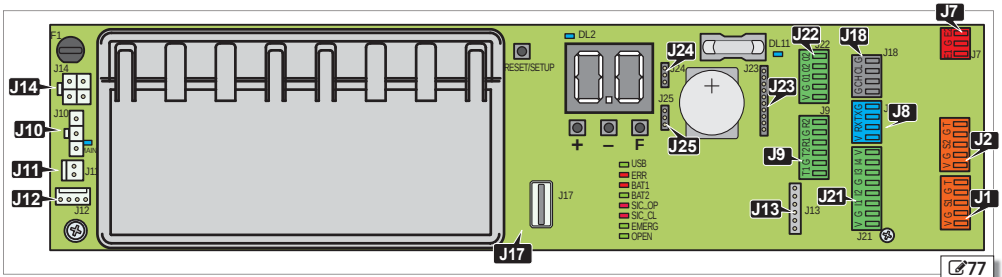
12 LEDs on the board

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 dwith 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	

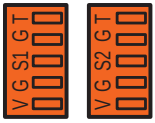
12.2 TERMINAL BOARDS AND CONNECTORS



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

J1 J2 - SAFETY DETECTORS

J1 J2



T	TEST Power supply negative for test
G	GND Power supply negative and Common contacts
S1 **S2**	Configurable safety input (programming) IMPORTANT: Use monitored safety devices compliant with standards EN 16005:2012
G	GND Power supply negative and Common contacts
V	**+24V** ⎓ (power supply)

J7 - EMERGENCY

J7

E2	Emergency command 2
G	GND Accessories power supply negative and Common contacts
E1	Emergency command 1

J8 - SDK EVO

J8

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

J9 - BUTTON PHOTOCELLS XFA

J9

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

J10 	+36V ⎓ Switching power supply unit connection

ENGLISH

Translation of the original instructions

J11 - MOTOR

J11 	M1 Motor connection

J12 - MOTOR ENCODER

J12 	M1 Motor encoder connection

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

J13 	Connection of motor block XB LOCK /XM LOCK with monitoring (OPTIONALS)

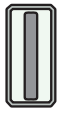
J14 - EMERGENCY BATTERY

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

To check the charge status see LEDs DL5 and DL6 (52).

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

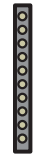
J21 - CONFIGURABLE INPUTS

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

J22 - CONFIGURABLE OUTPUTS

J22 	**02**	**Output2** NC/NO configurable relay output (programming)
	02	**Output2** NC/NO configurable relay output (programming)
	01	**Output1** configurable (programming)
	G	**GND** Accessories power supply negative and Common contacts
	V	+24V ⎓ accessories power supply

J23 J24 J25 - OPTIONAL MODULES

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

12.3 MOTOR AND ENCODER

1. Connect motor M1 to connector J11.
2. Connect the encoder cable of motor M1 to connector J12. ✎78

12.4 MOTOR BLOCK XB LOCK AND MONITORING (OPTIONALS)

ALWAYS DISCONNECT the power supply and disconnect the emergency battery before inserting or disabling the motor block, in order not to damage the device.

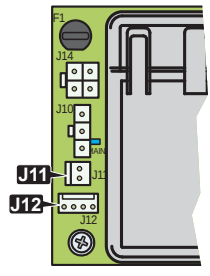
1. Connect the motor release monitor (IF INSTALLED) to the release terminal block ✎79-C.
2. Connect the motor block to the control board using the wired connector ✎79-②.
3. Program the motor block operation (EL) and enable monitoring (SU) (IF INSTALLED).

(A)
- EL = no
- 1 = motor block XB LOCK closed in NIGHT-TIME mode
- 2 = motor block XB LOCK closed in NIGHT-TIME and ONE-DIRECTIONAL MODE
- 3 = motor block XB LOCK closed in NIGHT-TIME mode and OPEN
- 4 = motor block XB LOCK closed in ALWAYS mode.

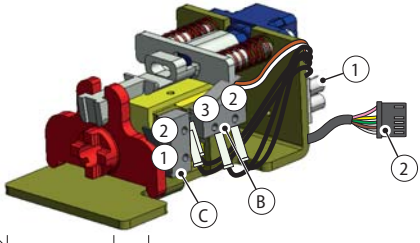
(C) SU = Y (monitoring enabled - IF INSTALLED)

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

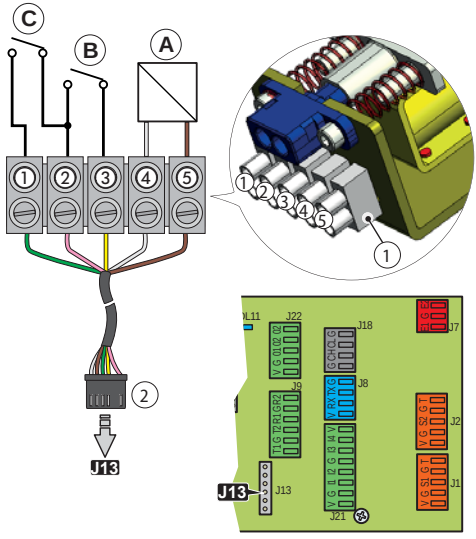
In the event of mains power failure, if the battery runs out the block remains on.



✎78



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



✎79

ENGLISH

Translation of the original instructions

12.5 MOTOR BLOCK XM LOCK AND MONITORING (OPTIONAL)

ALWAYS DISCONNECT the power supply and disconnect the emergency battery before inserting or disabling the motor block, in order not to damage the device.

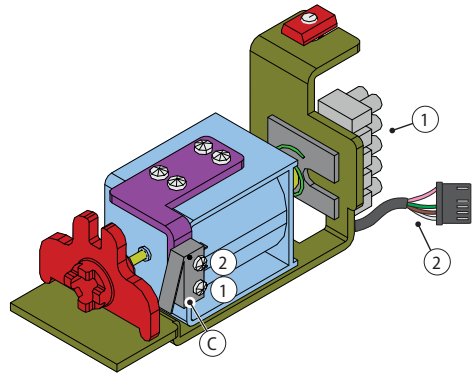
1. Connect the motor release monitor (IF INSTALLED) to the release terminal block ✎**80**-C.
2. Connect the motor block to the control board using the wired connector ✎**80**-②.
3. Program the motor block operation (EL) and enable monitoring SU.

(A)
- EL = no
- 5 = motor block XM LOCK closed in NIGHT-TIME mode
- 6 = motor block XM LOCK closed in NIGHT-TIME and ONE-DIRECTIONAL MODE
- 7 = motor block XM LOCK closed in NIGHT-TIME mode and OPEN
- 8 = motor block XM LOCK closed in ALWAYS mode.

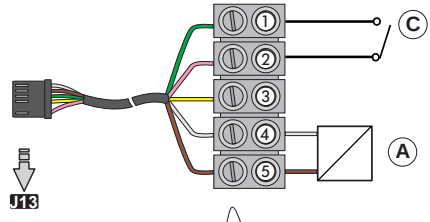
(C) SU = Y (monitoring enabled)

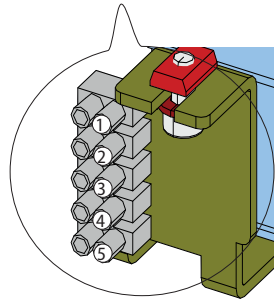
If the motor block malfunctions, the system signals ERROR 26 on the display and on SDK EVO.

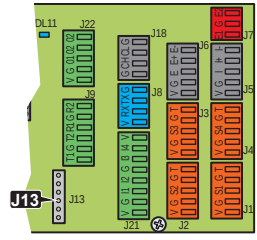
In the event of a mains power failure, if the battery runs out, the XM LOCK motor block is disconnected.



①	green	C	Motor block monitoring
②	pink		
④	white	A	Motor block
⑤	brown		







✎80

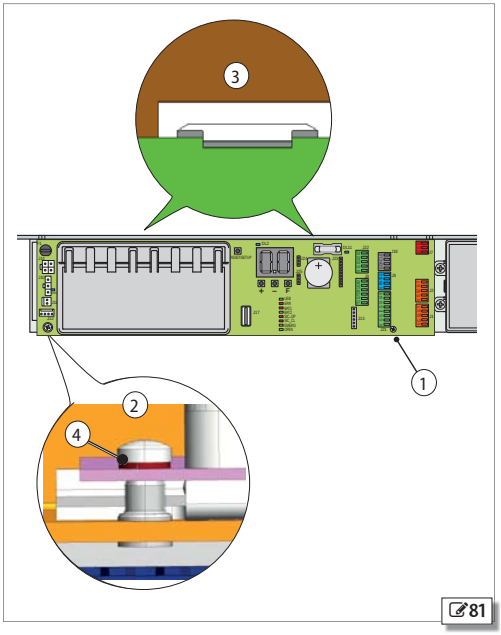
12.6 INSTALLING THE A1400 AIR DM ELECTRONIC BOARD

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

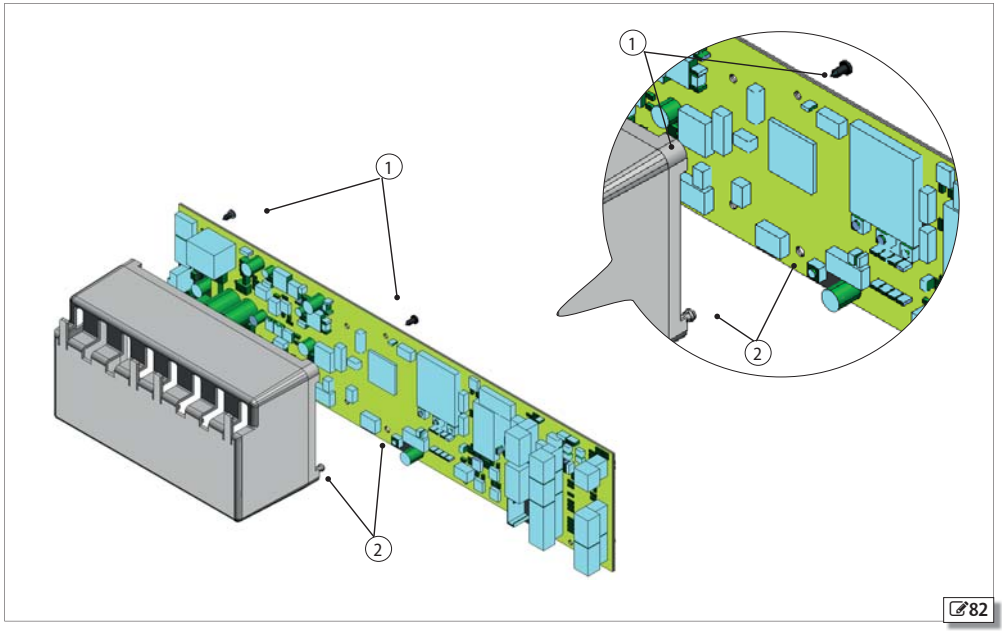
1. Remove all connections.
2. Remove the screw ✎**81**-① and the screw with washer ✎**81**-②.
3. Remove the board from the support.
4. Unscrew the 2 screws ✎**82**-① and remove the plastic cover by withdrawing the 2 plastic pins from the board ✎**82**-②
5. Install the 4 plastic posts ✎**83**-① in the 4 holes on board E1400 and fasten them using the screws provided .
6. Insert the two metal plugs as far as they will go into the connector ✎**83**-② on board E1400 .
7. Insert the 2nd motor board onto the other end of the plugs until it rests against the connector ✎**84**-②.
8. Fasten the 2nd motor board using the 4 posts and the other 4 screws provided ✎**84**-①.
9. Replace the plastic cover, inserting the 2 plastic pins into board E1400 and fasten it in place using the 2 screws ✎**82**-① ②.
10. Insert the E1400 into the seats ✎**81**-③.
11. Fasten using the screw ① and screw ② with washer ④.

⚠ The washer ✎**81**-④ ensures that the board is earthed.

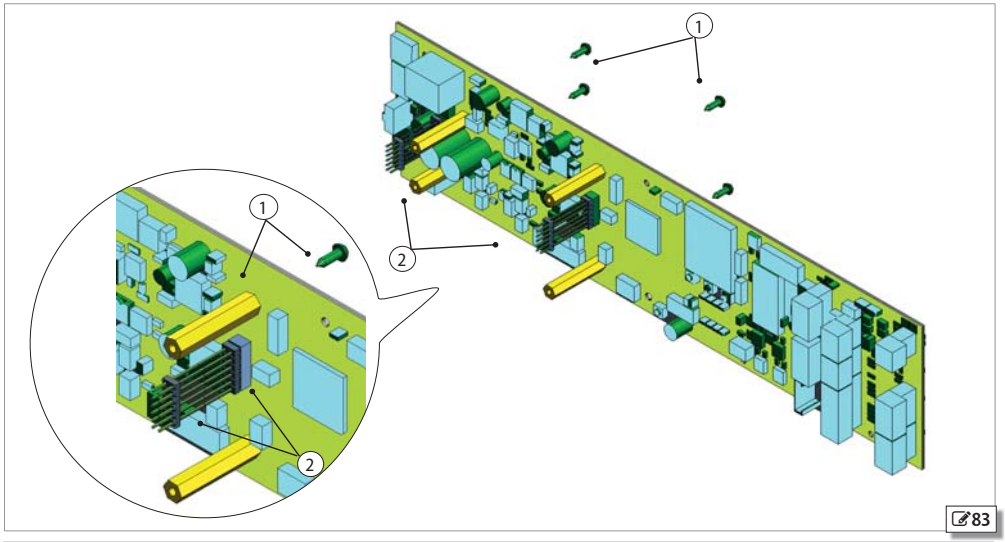
12. Restore all connections.



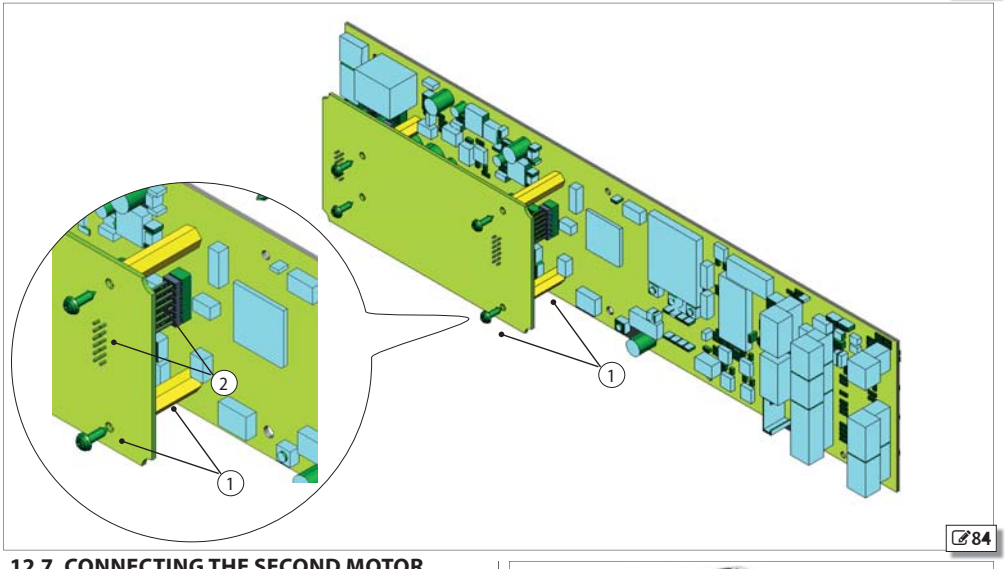
✎81



✎82



83



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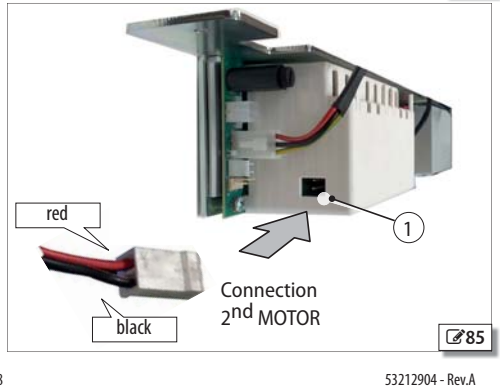
12.7 CONNECTING THE SECOND MOTOR

To connect, proceed as follows:

1. Use the extension cable supplied in the A1400 AIR DM KIT.
2. Connect the motor cable connector to the terminal block.
3. Insert the keyed connector onto the plug on the 2nd motor board via the hole in the plastic cover as shown in 85-①.
4. Activate parameter dn on the E1400 board **14.**



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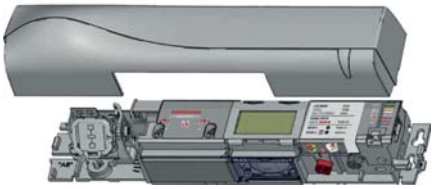
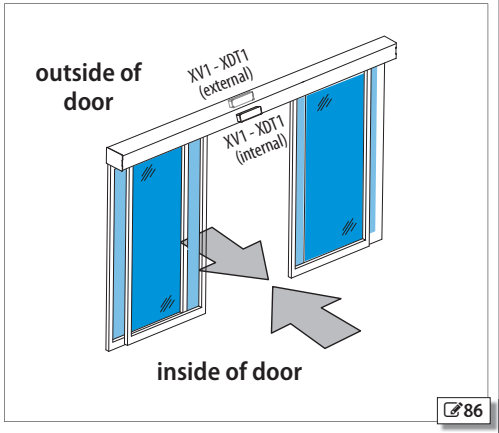
12.8 EXIT AND ENTRY DETECTORS XV1-XDT1
(DEFAULT CONFIGURATION)

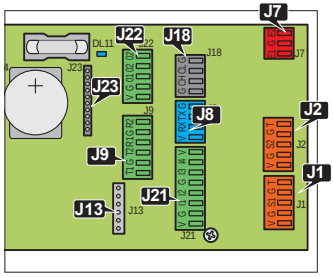


Use the XV1 or XDT1 exit and entry detector for opening and safety on closure, in compliance with EN 16005:2012 and DIN18650.

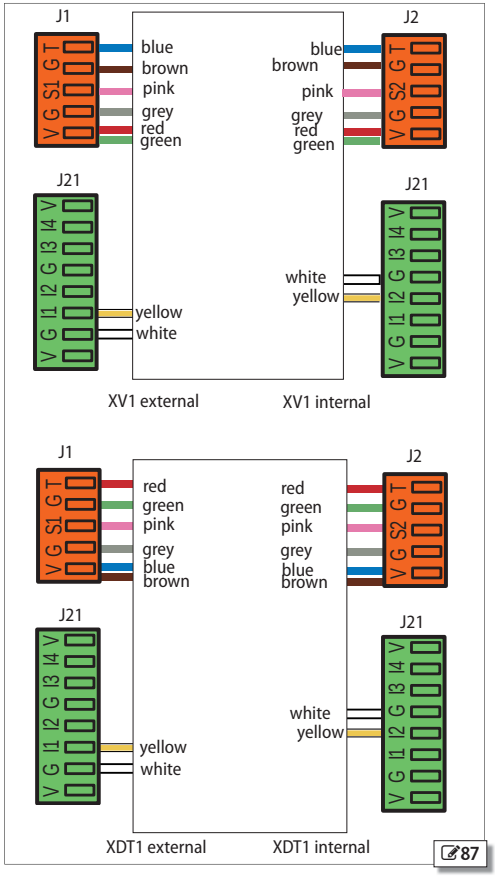
It is recommended not to activate the "narrow pavement" function which combines radar and infrared detection for opening.



86



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 BOARD E1400

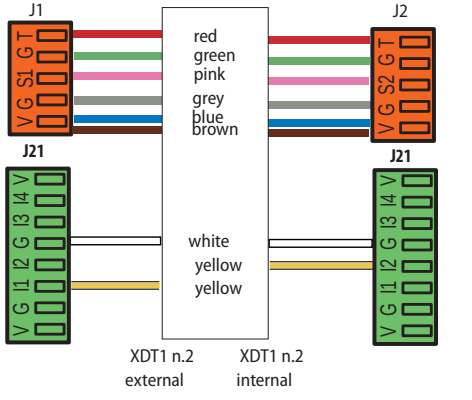
From Board	from SDK EVO
P1=20 1F=4	**S1-S2 safeties** **S1 Function** = Closing Safety **S1 Test** = Enabled **S1 NO/NC** = NC
P2=20 2F=4	**S2 Function** = Closing Safety **S2 Test** = Enabled **S2NO/NC** = NC
C1=1	**INPUTS I1-I2** **I1** = External sensor contact
C2=4	**I2**= Internal sensor contact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

ENGLISH

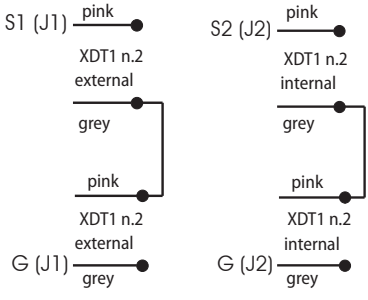
Translation of the original instructions

12.9 2 XDT1 EXIT DETECTORS AND 2 XDT1 ENTRY DETECTORS

Use 2 XDT1 exit detectors for opening and safety on closure and 2 XDT1 entry detectors for opening and safety on closure, 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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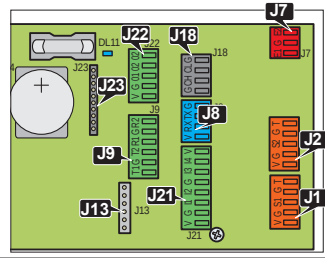
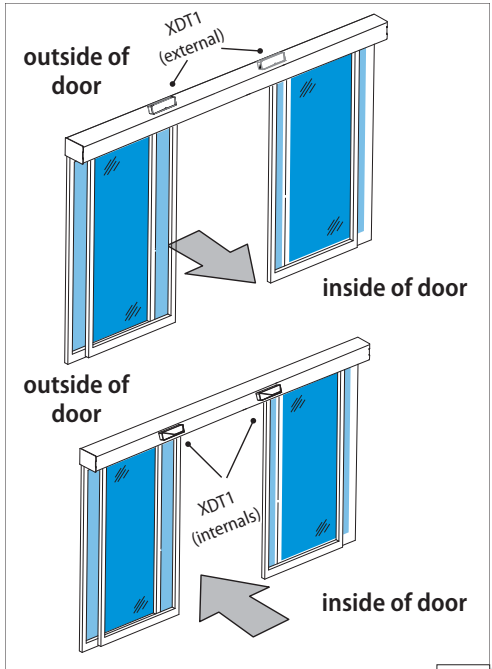
WARNING: IT IS OBLIGATORY TO INSTALL PROTECTIVE BARRIERS IN THE MOVEMENT AREAS IN THE EVENT CONTACT WITH PERSONS IS NOT ALLOWED.





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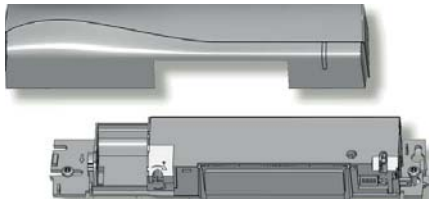
PROGRAMMING THE E1400 BOARD

Programming from board or SDK EVO: XDT1

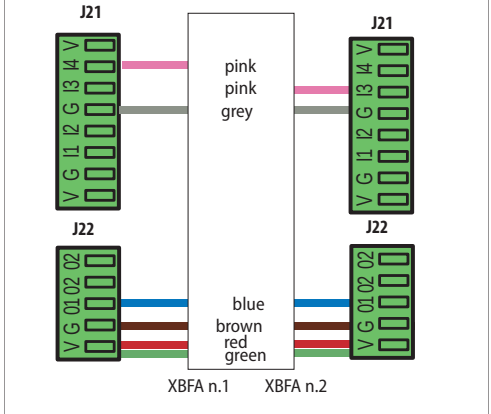
From Board	SDK EVO
	S1-S2 safeties
P1=20	**S1 Function** = Closing Safety
1F=Y	**S1 Test** = Enabled
	S1 NO/NC = NC
P2=20	**S2 Function** = Closing Safety
2F=Y	**S2 Test** = Enabled
	S2 NO/NC = NC

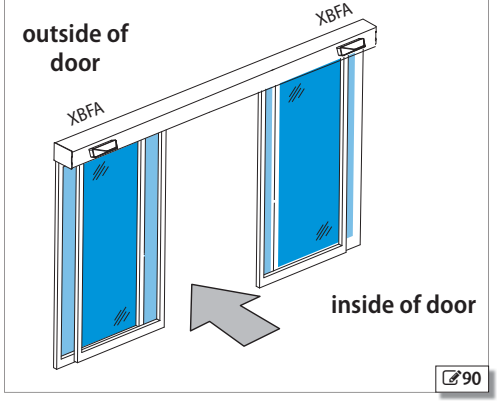
From Board	SDK EVO
	INPUTS I1-I2
C1=1	**I1** = External sensor contact
C2=4	**I2**= Internal sensor contact
	I1 NO/NC = NO
	I2 NO/NC = NO

12.10 DETECTORS XBFA FOR SAFETY ON OPENING

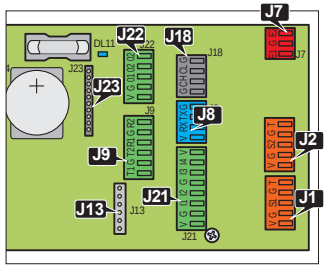


Use the XBFA detectors for safety on opening in compliance with EN 16005:2012 and DIN18650.





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



PROGRAMMING THE E1400 BOARD

Programming can 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=y	**I3** = Safety on opening
	I3 NO/NC = NC
	I3 TEST =Enabled
C4=2I 4F=y	**I4** = Safety on opening
	I4 NO/NC = NC
	I4 TEST =Enabled

12.11 J9 - BUTTON PHOTOCELLS XFA

The 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) 91 or 92.

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

The number of photocells can be set via SDK EVO.

12.12 J7 - EMERGENCY

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

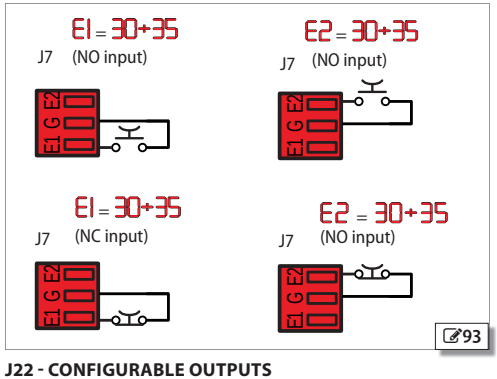
The emergency control causes the door to OPEN / STOP/ CLOSE, depending on how it has been programmed.

It remains active as long as the control is pressed.

1. Connect a NO or NC type contact push-button.
2. Enable the input according to the type of contact E1 and/or E2).
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 SDK EVO



J22 - CONFIGURABLE OUTPUTS

02	**Output2** configurable output (programming)
02	**Output2** configurable output (programming)
01	**Output1** configurable (programming)
G	**GND** Accessories power supply negative and Common contacts
V	+24V ⎓ accessories power supply

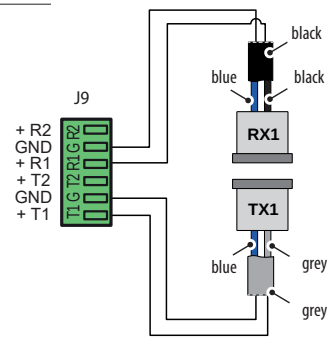
Using SDK EVO, 01 and 02 operation on J22 may be programmed with several options.

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.

1 pair of button photocells

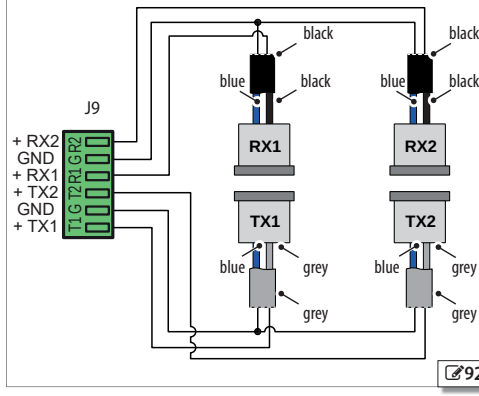
bP = 1

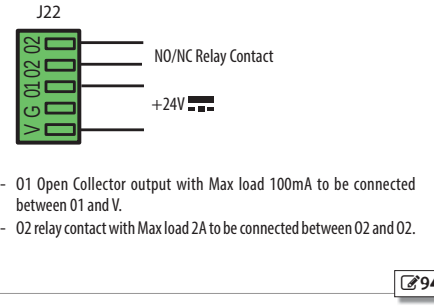


	CABLE colour
TX - transmitter	grey and blue (grey sheath)
RX - receiver	black and blue (black sheath)

2 pairs of button photocells

bP = 2





13. STARTUP

RISKS

PERSONAL PROTECTIVE EQUIPMENT

REQUIRED TOOLS

--

PRELIMINARY CHECKS PRIOR TO COMMISSIONING

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

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

13.1 SWITCHING ON AND SYSTEM SETUP

1. Position the leaves so that they are closed or 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 reads in sequence:

- bo (Bootloader)
- FW version (2 digits separated by a point)
- L0 flashing = system requires setup

The setup procedure can be carried out.

If the door CLOSES instead of opening, turn the power off, check the position of the belt fitting and then turn the power back on.

If the door does NOT move, check that the Emergency inputs E1-E2 are NOT active.

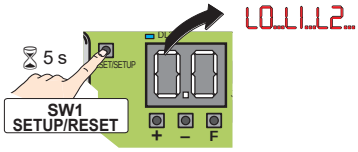
4. Enter programming mode and make any necessary modifications (13 and 14).

IT IS IMPORTANT TO SET:

- the number of leaves Ln

The setup CANNOT be performed in NIGHT-TIME and MANUAL function.

5. Start the SETUP



The door performs SETUP and the ongoing phases are displayed: L0... L1... L2.

When the SETUP has been completed, the display shows the automated system status (see 16).

During SETUP the safety detectors are ignored apart from emergency devices E1-E2. 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 (inputs S1-S2)
- devices connected to inputs (I1-I4)
- emergency (E1-E2)
- configurable outputs (O1-O2)
- any connected control devices.

SAVING THE CONFIGURATION

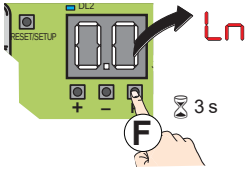
At the end of functional tests, download the full configuration of the system.

Use the DOWNLOAD procedure indicated on (78).

13.2 BASIC / ADVANCED PROGRAMMING

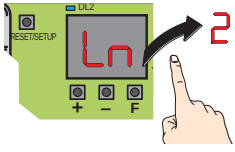
BASIC programming (see ▦ 13)

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

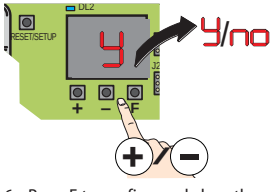


The function code remains displayed as long as it is pressed

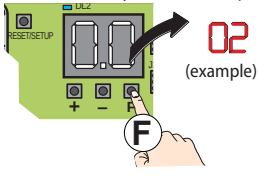
2. Release F. The default value is displayed (or another programmed one)



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 = saves the new settings
   - no = does NOT save new settings

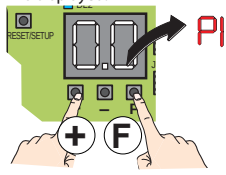


6. Press F to confirm and close the program. It takes you back to automation system status display (⊠ 16).



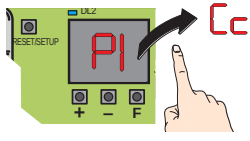
Advanced Programming (see ▦ 14)

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

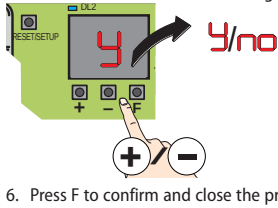


The function code remains displayed as long as it is pressed

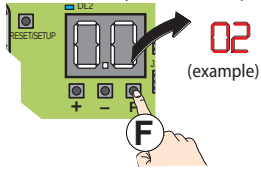
2. Release F and +. The default value appears (or another programmed one)



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 = saves the new settings
   - no = does NOT save new settings



6. Press F to confirm and close the program. It takes you back to automation system status display (⊠ 16).



Programming time expiration

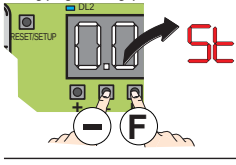
Programming is interrupted after 10 minutes if buttons +, − and F have not been pressed. The display returns to the automation system status view and any UNSAVED changes have to be re-entered.

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.



13 BASIC programming fw version 1.6 or higher

BASIC	Function	dF1	dF2
dF	**DEFAULT configuration** The standard configuration is selected: no = no Standard configuration in use 1 = standard configuration 1 2 = standard configuration 2 (Hermetic Door)	1	1
Ln	**LEAF NUMBER** 1 = 1 leaf 2 = 2 leaves ⓘ If the parameter is modified, SETUP must be performed.	2	1
rn	The direction of rotation of the motor is selected: 1 = STANDARD rotation -1 = NON STANDARD rotation ⓘ The choice becomes effective immediately. If the parameter is modified after SETUP has been performed, error 34 is generated.	1	1
PO	**PARTIAL OPEN** Set the opening percentage in Partial operating mode no= 100% opening Adjustable from 20% to 95% (MAX) of complete opening Step = 5%	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

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

ES	**Energy Saving** no = not enabled y = enabled	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
CS	**CLOSING SPEED** Adjustable from 1 (minimum) to 10 (MAX).	3	3
OS	**OPENING SPEED** Adjustable from 1 (minimum) to 10 (MAX).	8	8
CF	**CLOSING FORCE** Adjustable from 1 (minimum) to 10 (MAX).	5	5
OF	**OPENING FORCE** Adjustable from 1 (minimum) to 10 (MAX).	10	10

BASIC	Function	dF1	dF2
tF	**PUSH TIME on OBSTACLE for CF and OF** Adjustable from 0.1 to 3.0 sec. in 0.1 second steps.	1.0	2.0
dr	**ACCELERATION RAMP in OP and CL** Adjustable from 1 (minimum) to 10 (MAX).	6	6
Ar	**ACCELERATION RAMP in OP and CL** Adjustable from 1 (minimum) to 10 (MAX).	8	5
C1	**INPUT I1 CONFIGURATION** NO input (Programmable via SDK EVO other selections and as NC contact) no = input not enabled 1 = External sensor contact 2 = Internal sensor contact 7 = OPEN Automatic Contact 8 = OPEN Semi-Automatic Contact 9 = Pharmacy OPEN Contact 10 = KEY Contact 20 = Closing Safety Contact (NC) 21 = Opening Safety Contact (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 = 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 46 = Interlock 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
IF	**SAFETY INPUT TEST I1** parameter displayed only if C1 = 20 or 21 y = test enabled no = test not enabled	no	no
C2	**INPUT I2 CONFIGURATION** Allows parameter C2 to be set. See options as in C1	4	4
2F	**SAFETY INPUT TEST I2** parameter displayed only if C2 = 20 or 21 y = test enabled no = test not enabled	no	no

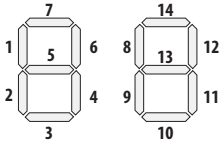
BASIC Function		dF1	dF2
C3	**INPUT I3 CONFIGURATION** Allows parameter C3 to be set. See options as in C1	10	10
3F	**SAFETY INPUT TEST I3** parameter displayed only if C3 = 20 or 21 Y = test enabled no = test not enabled	no	no
C4	**INPUT I4 CONFIGURATION** Allows parameter C4 to be set. See options as in C1	7	7
4F	**SAFETY INPUT TEST I4** parameter displayed only if C4 = 20 or 21 Y = test enabled no = test not enabled	no	no
PF	**PHARMACY OPENING** Parameter displayed only if one of the inputs C1 ,C2,C3 ,C4 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
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 in PAUSE 04 in NIGHT 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 active ERROR) L0-L2 PHASES L0, L1, L2 SETUP IN PROGRESS . in SLEEP mode (point flashing)	Y	Y

14 ADVANCED programming fw version 2.0 or higher

ADVANCED Function		dF1	dF2
P1	**SAFETY INPUT CONFIGURATION S1** Allows parameter P1 to be set. See options as in C1	20	20
1F	**SAFETY INPUT TEST S1** parameter displayed only if P1 = 20 or 21 Y = test enabled no = test not enabled	Y	Y
P2	**SAFETY INPUT CONFIGURATION S2** Allows parameter P2 to be set. See options as in C1	20	20
2F	**SAFETY INPUT TEST S2** parameter displayed only if P2 = 20 or 21 Y = test enabled no = test not enabled	Y	Y
Ot	**OPERATION OF SAFETIES ON OPENING** Parameter displayed only if one of the inputs C1 ,C2,C3 ,C4 , P1,P2 ,E1 or E2 is configured as OPENING SAFETY. 1 = STOP (stops movement during opening) 2 = LOW ENERGY (motion slowed down)	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
E1	**EMERGENCY CONFIGURATION 1** Allows parameter E1 to be set. See options as in C1	30	30
1F	parameter displayed only if E1 = 20 or 21 Y = test enabled no = test not enabled	Y	Y
E2	**EMERGENCY CONFIGURATION 2** Allows parameter E2 to be set. See options as in C1	32	32
2F	parameter displayed only if E2 = 20 or 21 Y = test enabled no = test not enabled	Y	Y

ADVANCED Function		dF1	dF2
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
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
EL	**MOTOR BLOCK_1 (OPTIONAL)** ✎ **79ref .C** no = not enabled 1 = motor block XB LOCK closed in NIGHT-TIME mode 2 = motor block XB LOCK closed in NIGHT-TIME and ONE-DIRECTIONAL mode. 3 = motor blockXB LOCK closed in NIGHT-TIME MODE and OPEN 4 = motor block XB LOCK closed in ALWAYS mode. 5 = motor block XM LOCK closed in NIGHT-TIME mode 6 = motor block XM LOCK closed in NIGHT-TIME and ONE-DIRECTIONAL mode. 7 = motor block XM LOCK closed in NIGHT-TIME MODE and OPEN 8 = motor block XM LOCK closed in ALWAYS mode.	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	no	no
dn	**DOUBLE MOTOR KIT ACTIVATION** no = second motor kit not enabled y = second motor kit enabled	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 90s. Step = 1 s	10	10

ADVANCED Function		dF1	dF2
o1	**CONFIGURABLE OUTPUT OUT2 (J22)** NO output(**) (**) Programmable as NC via SDK EVO no = not enabled 1 = GONG 2 = BOARD ERROR/FAULT 3 = BATTERY operation 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 Closing Safety Active 12 = At least one Closing Safety Active or one Safety in Opening On	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 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 Closing Safety Active 12 = At least one Closing Safety Active or one Safety in Opening On	2	2

ADVANCED Function		dF1	dF2
d	**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	.	.
SE	**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

(*) EP value EP:
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	Emergency
MANUAL	--------	no effect	no effect	no effect	no effect
TOTALLY OPEN (100%)	OPEN	no effect	no effect	no effect	no effect
AUTOMATIC TWO-DIRECTIONAL TOTAL (100%)	OPEN	pause counting restarts	pause counting restarts	pause counting restarts	no effect
	CLOSED	total opening and closure again after pause time	total opening and closure again after pause time	total opening and closure again after pause time	total opening
AUTOMATIC TWO-DIRECTIONAL PARTIAL (%)	OPENING PARTIAL	pause counting restarts	pause counting restarts	pause counting restarts	total opening
	CLOSED	partial opening and closure again after pause time	partial opening and closure again after pause time	partial opening and closure again after pause time	total opening
AUTOMATIC ONE-DIRECTIONAL TOTAL (EXIT ONLY) (100%)	OPEN	pause counting restarts	no effect	pause counting restarts	total opening
	CLOSED	total opening and closure again after pause time	no effect	total opening and closure again after pause time	total opening
AUTOMATIC ONE-DIRECTIONAL PARTIAL (EXIT ONLY) (%)	OPENING PARTIAL	pause counting restarts	no effect	pause counting restarts	total opening
	CLOSED	partial opening and closure again after pause time	no effect	partial opening and closure again after pause time	total opening
TOTAL ONE-DIRECTIONAL AUTOMATIC (ENTRY ONLY) (100%)	OPEN	no effect	pause counting restarts	pause counting restarts	total opening
	CLOSED	no effect	total opening and closure again after pause time	total opening and closure again after pause time	total opening
AUTOMATIC ONE-DIRECTIONAL PARTIAL (ENTRY ONLY) (%)	OPENING PARTIAL	no effect	pause counting restarts	pause counting restarts	total opening
	CLOSED	no effect	partial opening and closure again after pause time	partial opening and closure again after pause time	total opening
PARTIAL NIGHT-TIME (%)	CLOSED	no effect	no effect	partial opening and closure again after night pause time	total opening
PARTIAL OPENING (%)	OPEN PARTIAL	no effect	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 actuation devices, safety devices and other devices ✎95 .

DISABLED input

the input is NOT considered in this mode.

FUNCTION ALWAYS OPEN / AUTOMATIC input

- this type of input may only be activated on I1, I2, I3 and I4 inputs as NO or NC contact.
- With contact active this input overrides an OPEN operating mode.
- With contact not active this input overrides an AUTOMATIC operating mode.
- except for ALWAYS OPEN / AUTOMATIC, functions can be modified for an input configured in this mode with the SDK EVO and LK EVO .

EXTERNAL OPEN input

- this type of input can only be activated on I1, I2, I3 and I4 inputs as NO or NC contact.
- With active contact of an input configured in this way the leaves must open and remain in the open status for as long as the input is active.
- With inactive contact the pause time elapses and the leaves close again.
- the ENERGY SAVING mode can be activated on this input.
- the TOTAL or PARTIAL function can be selected 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.

EXIT ONLY / TWO-DIRECTIONAL FUNCTION input

- this type of input can only be activated on I1, I2, I3 and I4 inputs as NO or NC contact.
- With contact active this input overrides an EXIT ONLY operating mode.
- With contact not active this input overrides a TWO-DIRECTIONAL operating mode.

ENTRY ONLY / TWO-DIRECTIONAL FUNCTION input

- this type of input can only be activated on I1, I2, I3 and I4 inputs as NO or NC contact.
- With the contact active, this input overrides an ENTRY ONLY operating mode.
- With contact not active this input overrides a TWO-DIRECTIONAL operating mode.

AUTOMATIC OPEN input

- this type of input can only be activated on I1, I2, I3 and I4 terminals as NO or NC contact.
- With active contact of an input configured in this way the leaves must open and remain in the open status for as long as the input is active.
- With inactive contact the pause time elapses and the leaves close again.
- 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.

SEMI-AUTOMATIC OPEN input

- this type of input can only be activated on I1, I2, I3 and I4 terminals as NO or NC contact.
- With active contact of an input configured in this way the leaves must open and remain in the open status.
- 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

- this type of input may only be activated on I1, I2, I3 and I4 inputs as NO or NC contact.
- With active contact of an input configured in this way 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

- this type of input can only be activated on I1, I2, I3 and I4 terminals as NO or NC contact.
- in NIGHT-TIME mode the input is active and has the same function as AUTOMATIC OPEN.
- With active contact of an input configured in this way during NIGHT-TIME function the leaves must open and remain in open status for as long as the input is active.
- With active contact of an input configured in this way during normal operation the leaves must open and remain in open status for as long as the input is active.
- With the contact not active, the night pause time elapses and the leaves close.
- the ENERGY SAVING mode CANNOT be activated on this input.
- activation of this input lights up the OPEN green LED on the board.

CLOSURE SAFETY input

- this type of input can only be activated on inputs I1, I2, I3, I4 and S1, S2 as NO or NC contacts.
- with activation of an input configured in this mode we have the following functions:

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.
   - With non active contact of the 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

- this type of input can only be activated on terminals I1, I2, I3, I4, S1 and S2 as NO or NC contacts.

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, on the input thus configured, a TEST procedure is run before an opening motion.
   - 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

- this type of input can only be activated on inputs I1, I2, I3 and I4 as NO or NC contacts.
- With active contact of an input configured in this way the leaves must open and remain in the open status for as long as the input is active.
- With inactive contact the pause time elapses and the leaves close again.
- the ENERGY SAVING mode can be activated on this input.
- the TOTAL or PARTIAL function can be selected 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.

EMERGENCY OPENING / STOPPING / CLOSING input
WITHOUT MEMORY AND WITH MEMORY

- this type of input can only be activated on inputs I1, I2, I3 and I4 and E1, E2 as NO or NC contacts.
- When this input is activated, the leaves carry out the programmed function as long as the input is active.

The Emergency priority order is as follows: Open , Stop , Close.

- The input configured as EMERGENCY OPENING 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.
- 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.

- The input configured as EMERGENCY CLOSING 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 / TOTAL FUNCTION input

- this type of input can only be activated on I1, I2, I3 and I4 terminals as NO or NC contact.
- With contact active this input overrides a PARTIAL operating mode.
- With contact inactive this input overrides a TOTAL operating mode.

NIGHT-TIME FUNCTION input

- this type of input can only be activated on I1, I2, I3 and I4 terminals as NO or NC contact.
- An active contact of an input configured in this way overrides the NIGHT-TIME operating mode.
- With inactive contact of an input configured in this way the NIGHT-TIME mode is exited.

MANUAL FUNCTION input

- this type of input can only be activated on I1, I2, I3 and I4 terminals as NO or NC contact.
- An active contact of an input configured in this way overrides the MANUAL operating mode.
- With inactive contact of an input configured in this way the MANUAL mode is exited.

Interlock input

- this type of input can only be activated on terminals I1, I2, I3 and I4
- The input becomes active only if the Interlock function is programmed from the Intercom menu via SDK EVO.

TIMER input

- when activated, the TIMER function is activated.
- when deactivated, the TIMER function is deactivated.

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

95

14.3 CONFIGURATION OF J22 OUTPUTS

O1 and O2 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 configured as DISABLED
- keeps the output always off.

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

Output configured as ERROR
- the output is on when there is any active error.

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

Output configured as ACTIVE EMERGENCY
- the output is on when an emergency is on.

Output configured as TEST
- activates the output to perform a test (FAIL SAFE) on inputs I1- I4 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
- the output is on when the door is in NOT CLOSED status.

Output configured as DOOR OPEN
- the output is on when the door is in open status.

Output configured as DOOR IN MOTION
- the output is on when the door is moving (opening or closing).

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

Output configured as INTRUSION
- 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.
- activates the output when at least one Safety in Closing is On.

Output configured as Safety in Closing or Safety in Opening
- 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 **dF1,dF2)**

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 **dF1,dF2)**

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 BOOST FUNCTION

The BOOST function is used for hermetically sealed doors during starting to obtain maximum thrust .

14.7 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.

14.8 ENERGY SAVING FUNCTION

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

This involves an opening movement by external or internal radars. When the radars are no longer engaged and the sensors do not detect a presence, it reverses immediately.

Obligatory requirements

The Energy Saving function requires:

use of the one-direction radar detectors inside and outside

The operating mode must be AUTOMATIC.

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

HOW TO ACTIVATE THEENERGY SAVING FUNCTION

In basic programming:
- Set ES = 4.

The parameter may be selected from the board or from the SDK EVO.

14.9 LOW ENERGYFUNCTION DURING CLOSING AND OPENING

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

HOW TO SET THE LOW ENERGY FUNCTION DURING CLOSING CS CF

In basic programming:

- set CS by keeping to the MAX closing speed values indicated in **15** according to the weight of the leaf.
- set CF by keeping to the maximum closing force value I.
- set the closing acceleration = 1 ("Closing - Acceleration **94** via SDK EVO
- set the number of obstacles during closing = 0 ("Consecutive obstacles" **95**) via SDK EVO

For details refer to standard EN 16005:2012.
SDK EVO can be used

HOW TO SET THE LOW ENERGY FUNCTION DURING OPENING OS OF

In basic programming:

- set OS by keeping to the MAX opening speed values indicated in **15** according to the weight of the leaf.
- set OFkeeping to the maximum opening force valueI.
- set the opening acceleration = 1 ("Opening - Acceleration **94**) via SDK EVO
- set the number of obstacles during opening = 0 ("Consecutive obstacles" **95**) via SDK EVO

For details refer to standard EN 16005:2012.
SDK EVO can be used

15 Max. speed settings in Low Energy

Leaf weight /e [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.

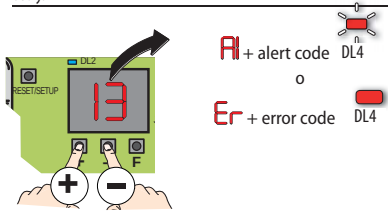
15. DIAGNOSTICS

15.1 SYSTEM DIAGNOSTICS: ALERTS, ERRORS

The display reads

- the STATUS of the automation **16**
- the ERRORS that stop the automation system 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 **17**.
- The ALERTS of current conditions/phases, identified by the flashing **RED LED DL4** are described in **18**.

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



16 Automation system status

Status of the automation	
00	CLOSED
01	OPENING
02	OPEN
03	in PAUSE
04	in NIGHT-TIME PAUSE
05	CLOSING
06	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)

ENGLISH

Translation of the original instructions

17 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)**	Perform RESET. If the problem persists replace the control board.
5	**Microcontroller** error (*)	Update FW. The file on USB storage device is required (78)
7	**Motor** failure **(*)**	Replace the Motor.
9	VMain low	With the battery pack connected, check that the battery kit is enabled via the board or SDK EVO. Check the switching power supply unit
10	**Battery** discharged	Battery charge too low to enable movement (battery mode only)
11	**S1** test failed (*)	Check that: - connection of the safety device. - operation of the safety device. - the programming of input P1- P2.
12	**S2** test failed (*)	
15	**Setup inhibited**	Perform SETUP
16	**Encoder** fault (*)	Replace the Motor.
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 (78).
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 on **Inputs** configured as safeties failed **(*)**	Check input connection and programming.
22	Corrupted data	Reprogram the board, or upload the program files that were saved to the USB storage device (78).
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.
25	**DM_Motor** failure	Replace the DM_Motor (double motor) (only if DM has been activated)
26	Motor block failure **(*)**	Replace motor block
27	Motor rotation error	Check belt connection to the leaves.
29	**Anomaly AUX board** (*)	Check the table Error AUX by SDKEVO
31	**Consecutive obstacles in opening**	Check for and remove the obstacle in **opening**.
32	**Motor time out**	Motor without limit switch reference positions; check the mechanical stops (*)
38	Configuration error	DM selection or motor rotation modified.
39	Data in setup memory missing or corrupted	Repeat the SETUP procedure
99	Data deletion in progress (not displayed)	----------

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

18 Alerts

Indication		Intervention required
41	**Date and time loss**	Reset time and date via SDK EVO.
42	**Clock battery** discharged or missing	In case of mains power supply failure, replace the battery to avoid losing the time.
44	**Emergency** active	signal that an emergency is active
45	**Timer** active	the TIMER is in activated state
46	**Timer** function in progress	A TIMER function is running with operating mode other than Total Two-directional Automatic)

Indication		Intervention required
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 control board and perform 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** or LK EVO **fault**	Check it is the correct device and check the SDK EVO or LK EVO connections. Update the FW (see procedure **78**). If the problem persists, replace the SDK EVO or LK EVO .
62	**Battery charger** failure	Perform RESET. If the problem persists replace the control 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 detector operation. 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	Slave Intercom	board configured as Slave
72	CANBUS failure	Replace board
73	Intercom Node Alarm	Master : At least one node does not respond / Slave : The Master does not respond
74	INTERLOCK operating mode active	Interlock mode has been activated
80	Programming other than standard	Alert not displayed by the board.

19 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	Incompatible firmware downloaded
205	Motor Rotation	Check AUX Motor wiring

AUX Errors		Intervention required
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 situation not included in the system diagnostics (alerts/errors).

20 Troubleshooting guide

CONDITION	SUGGESTION
SDK EVO off	- there is no mains voltage and the board is operating on battery with NIGHT-TIME operative function and energy saving condition - connection to the board has been interrupted: check the cables and wiring between 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 24V LED ⎓ 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 system is first put into operation **63** or after replacing the board
- when the display indicates error 15
- following any travel variation
- when leaf number (LN) is modified
- after a reset to factory settings

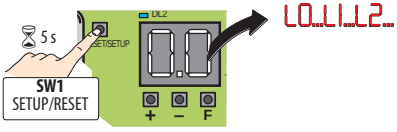
SETUP CANNOT be performed in conditions of:

- 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 **95**.

16.2 RESET

Reset is an initialising procedure of board operation.

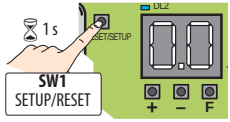
WHEN IS RESET NECESSARY

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.

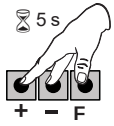
The procedure is irreversible and involves:
- loss of data acquired from SETUP (need to perform SETUP again)
- loss of programming (resetting default values)
- relevant cycle counters are reset to zero
- loss of passwords ("0000" is reset)

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 ▦ **23** 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 (▦ **21**)
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 completed successfully
   no = in the event of errors (**RED LED DL4** on the board lit).

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

6. Remove the USB memory device.

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

UP	E1400 board firmware update required file: 1400.hex
UE	SDK EVO and LK EVO firmware update including translations of messages displayed by the device. to update the SDK EVO, two files on the USB device are required: SDKEVO.hex SDKEVO_L.bin to update the LK EVO , one file on the USB device is required: LK EVO .hex
Ud	DM (double motor) board firmware update. required file:1400DM.hex
UC	E1400 board CONFIGURATION UPLOAD. required file: 1400.prg
Ut	E1400 board TIMER CONFIGURATION UPLOAD. required file: 1400.tmr

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

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 (▦ **22**)
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 lit).

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

9. Remove the USB memory device.

▦ **22** Download to USB functions

dC	Board E1400 CONFIGURATION download to USB storage device. the file is copied: 1400.prg (*)
dt	TIMER CONFIGURATION Download This function allows you to save the TIMER configuration of the E1400 board to the USB storage device. the file is copied: 1400.tmr (*)
dL	LOG DATA Download This function allows you to save the LOG data of the E1400 board to the USB storage device. the file is copied: 1400.log (*)

(*) If there is already a file with the same name in the root directory of the USB storage device and **Ad** was selected, an incremental number will be added to the new file name. E. g.: if the file **1400**01.prg already exists, the file **1400**02.prg will be saved and so on.

▦ **23** Firmware and programming file names

1400.hex	E1400 board firmware
1400DM.hex	DM (double motor) board firmware
1400.prg	board programming
1400.tmr	Timer programming
SDKEVO.hex	SDK EVO firmware
SDKEVO_L.bin	language update for SDK EVO
LK EVO .hex	LK EVO firmware

24 BOOTLOADER Errors

Error		Intervention required
81	**Update files missing**	**Check for files on the USB memory Key**
82	**File writing error**	**File read error Repeat update procedure**
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**
97	**USB Error**	**USB memory key not recognised.** **USB key not f**ormatted with the FAT or FAT 32 file system or faulty .

17. INTERCOM

■ **Description**

The A1400 AIR is capable of communicating with other A1400 AIR 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 A1400 AIR 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 ✎**96** boards.

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

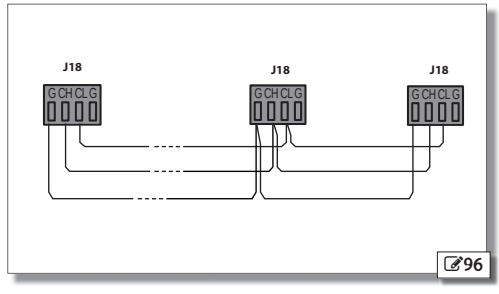
■ **Addressing**

A unique ID (Programming/Intercom/MasterSlave_no menu) must be assigned to each E1400 in the network as indicated below.

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

■ **Registration**

After having wired and assigned an address to each unit, registration must only be carried out (Programming/Intercom/Intercom_reg menu) on the A1400 AIR that has been assigned ID1.



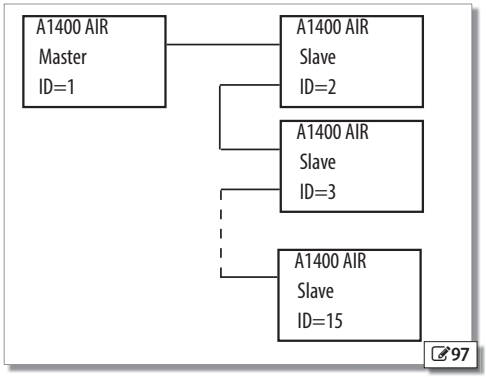
17.1 INTERMODE

97 shows the IDs to assign to the A1400 AIR units in the network.

The system consists of a Master unit and a maximum of 14 Slave units. The A1400 AIR 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.

The Master A1400 AIR must be assigned ID1 and the Slave units with IDs from 2 to 14.



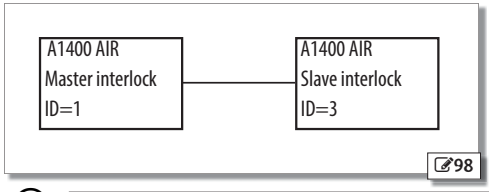
17.2 INTERLOCK

98 shows the IDs to assign to the A1400 AIR units in the network.

Either of the two units can be designated as the Master and the other as the Slave. In INTERLOCK mode, a door can open only if the other is closed. The available variations are shown below.

If the PARTIAL mode is associated with INTERLOCK, only the Master leaf opens.

Connect the devices and carry out the programming and Setup of the individual A1400 AIR units before configuring the INTERLOCK using SDK EVO. To activate the INTERLOCK, select on the Master.



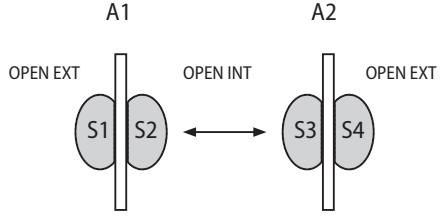
Interlock with memory means that an opening command is stored on A1 for A2 or vice versa.

Interlock with request means that an opening request is made on A1 for A1 or on A2 for A2.

INTERLOCK WITH NO MEMORY (WITH REQUEST)

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.

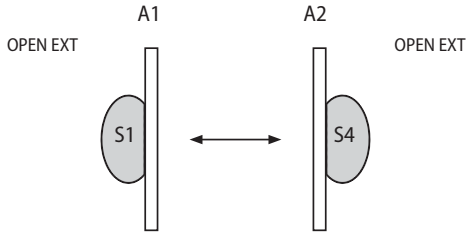


	S1	S2	S3	S4	ReqA1=1	ReqA2=1
A1 closed A2 closed	Open A1	Open A1	Open A2	Open A2	Open A1 Req A1=0	Open A2 Req A2=0
A1 mov. A2 closed	Open A1	Open A1	ReqA2=1	ReqA2=1		
A1 closed A2 mov.	ReqA1=1	ReqA1=1	Open A2	Open A2	----	----
A1 mov. A2 mov.	----	----	----	----	----	----

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 REQUEST)

With 2 sensors or buttons: the second opening is automatic.



	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 not closed A2 not closed (*)	----	----	----	----

ReqA1=1 means that a request has been made to open A1
ReqA2=1 means that a request has been made to open A2

(*) Opening of 2 accesses by Emergency Open

18. LK EVO

18.1 ASSEMBLY AND TESTING

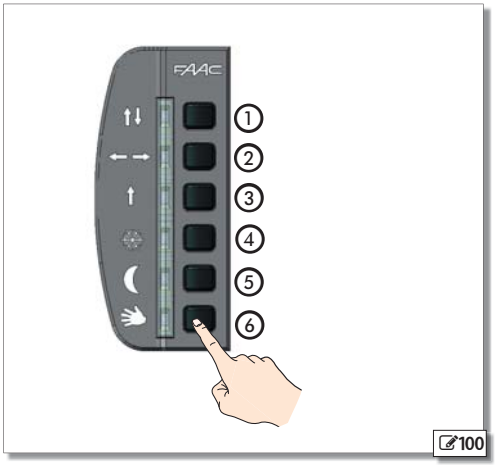
1. To disassemble the LK EVO , use a flat screwdriver to prise apart points 99-①.
2. Break off the cable knockout.
3. Mark the points on the wall 99-③ and fasten the support using suitable screws.

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

4. Connect up the E1400 board 99-④
5. The connection must be made using a 4- twisted pair cable U/UTP CAT.5 4x2xAWG24 with a 0.5 mm section 99-⑧. Maximum distance is 50 m.
6. Assemble the parts of the LK EVO by pressing slightly on points 99-①.

* An optional connection can be made to terminals G and K on the LK EVO with a key command to block the function keys. With a NC contact, the keypad is locked 99-⑦.

①		TOTAL TWO-DIRECTION AUTOMATIC
②		DOOR OPENED
③		AUTOMATIC TOTAL ONE-DIRECTIONAL
④		AUTOMATIC PARTIAL TWO-DIRECTIONAL
⑤		NIGHT
⑥		MANUAL

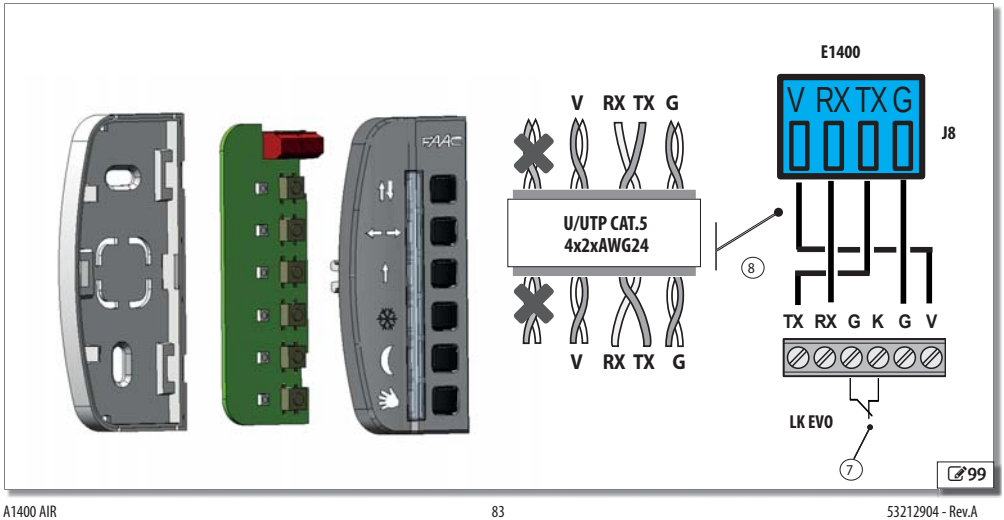


18.2 SELECTION MENU

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 OPENED
- 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.



ENGLISH

Translation of the original instructions

5. If the LK EVO is connected to a A1400 AIR board in which an unintended function has been programmed, it is overridden with a different function as indicated:

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

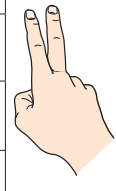
   - from AUTOMATIC ONLY TOTAL ENTRY
     switches to TOTAL TWO-DIRECTION AUTOMATIC

   - 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 ▦ **25 .**

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

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

18.3 SPECIAL FUNCTIONS

RESET:
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 blocks and releases 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 see the type of ALERT see ▦ **26**

FIRMWARE VERSION:
the firmware version of board E1400 is displayed by pressing and holding keys ⑤ and ⑥.
To display the FIRMWARE version see ▦ **27**

25 Errors

Errors		①	②	③	④	⑤	⑥
1	**Board** failure						
4	**Accessories power supply fault**						
5	**Microcontroller** error						
7	**Motor** failure						
10	**Battery** discharged						
11	**S1** test failed						
12	**S2** test failed						
15	**Set-up inhibited**						
16	**Encoder** failure						
18	**Firmware** (FW) not compatible						
19	High**mechanical friction**						
20	Test on **Inputs** configured as safeties failed						
22	Corrupted data						
24	**Consecutive obstacles in closing**						
25	**DM_Motor** failure						
26	Motor block fault						
27	Motor rotation error						
29	**Anomaly AUX board**						
31	**Consecutive obstacles in opening**						
32	**Motor time out**						
38	Configuration error						

26 Alerts

Alerts		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				●	●	●
65	SETUP in progress	●			●	●	●
68	Safeties test failed		●		●	●	●

27 Firmware Version

Firmware Version	①	②	③	④	⑤	⑥
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**				

ENGLISH

Translation of the original instructions

19. SDK EVO

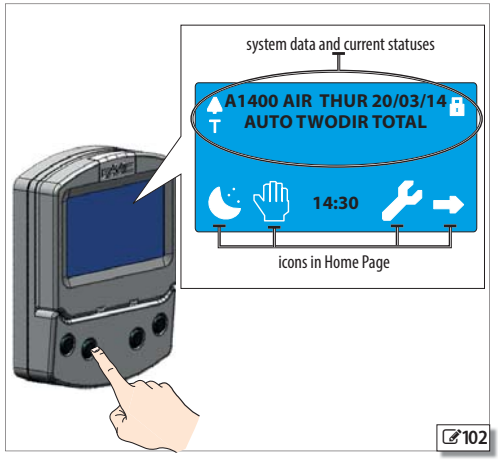
19.1 ASSEMBLY AND TESTING

1. Separate the parts ✎**101** (loosen the 2 screws ✎**101**-①).
2. Break the cable knockout ✎**101**-②.
3. Mark the points on the wall ✎**101**-③ and fasten the support using suitable screws.

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

*An optional connection can be made on SDK EVO to terminals G and K with a key command. ✎**101**-⑦. The functions that may be selected from SDK EVO are: Block or Without User Password. Refer to paragraph "SDK EVO key" **95**.

4. Connect to board E1400 ✎**101**-④.
5. The connection must be made using a 4- twisted pair cable U/UTP CAT.5 4x2xAWG24 with a 0.5 mm section ✎**101**-⑧. Maximum distance is 50 m.
6. Assemble the parts (the 2 screws must be tightened ✎**101**-①).
7. Fasten using the screw ✎**101**-⑤ and insert the screw cover ✎**101**-⑥).



✎102

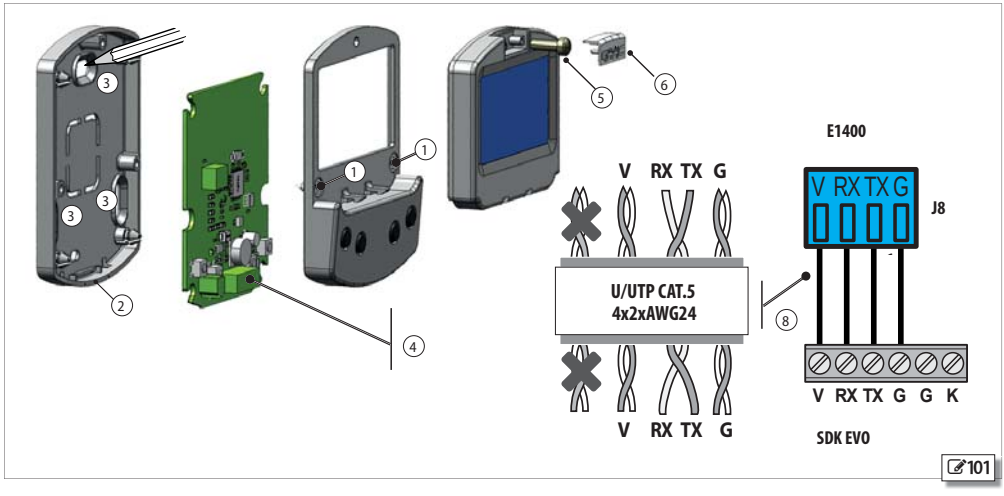
19.2 SWITCHING ON AND USE

1. Turn power on to the E1400 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 automation system modes of operation can be selected and set using the buttons under the activation icons (Home Page ✎**103**).



✎101

ENGLISH

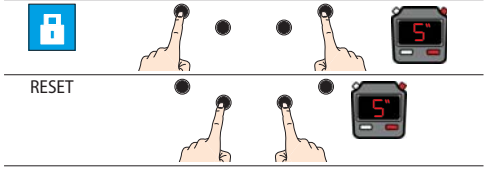
Translation of the original instructions

19.3 HOME PAGE

The 4 buttons under the display activate the function represented by the icon above them ☞103.

19.4 RESET - BLOCK/RELEASE SDKEVO

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

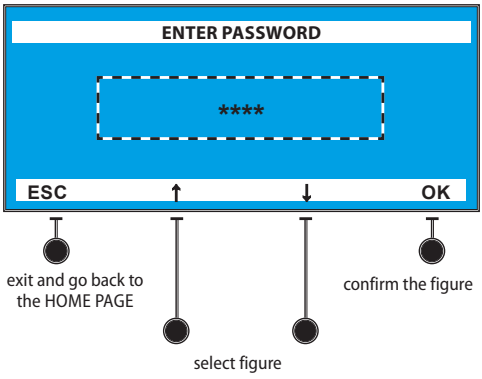


19.5 PASSWORD

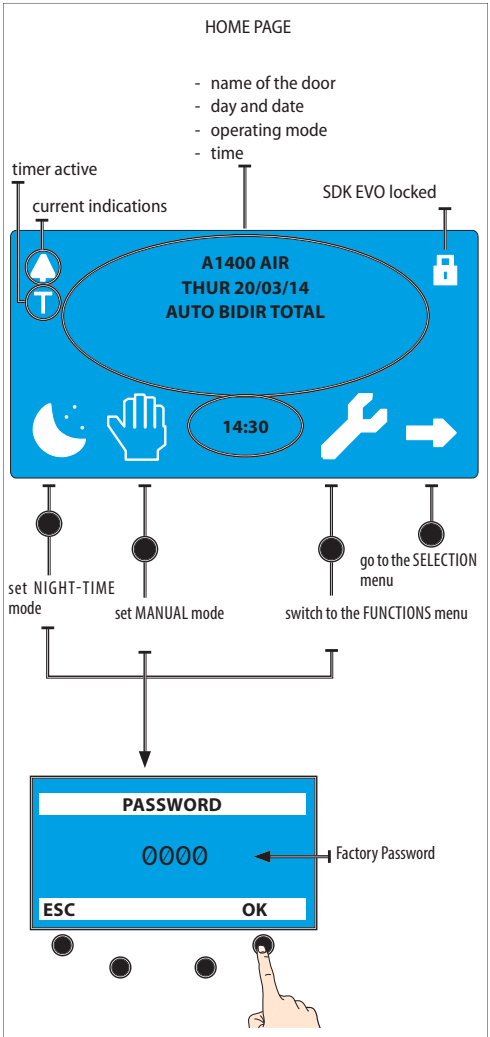
The 4 digit **PASSWORD** has to be entered in order to use some of the functions.

- 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

☞103

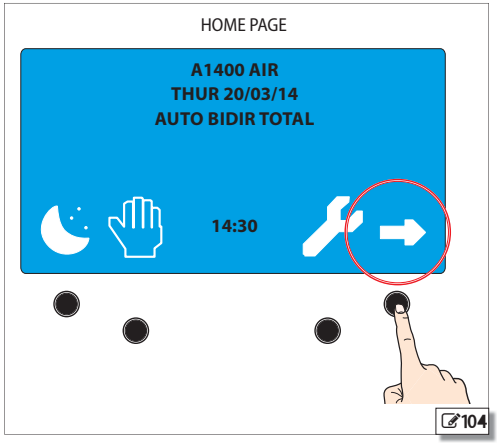
19.6 SELECTION MENU

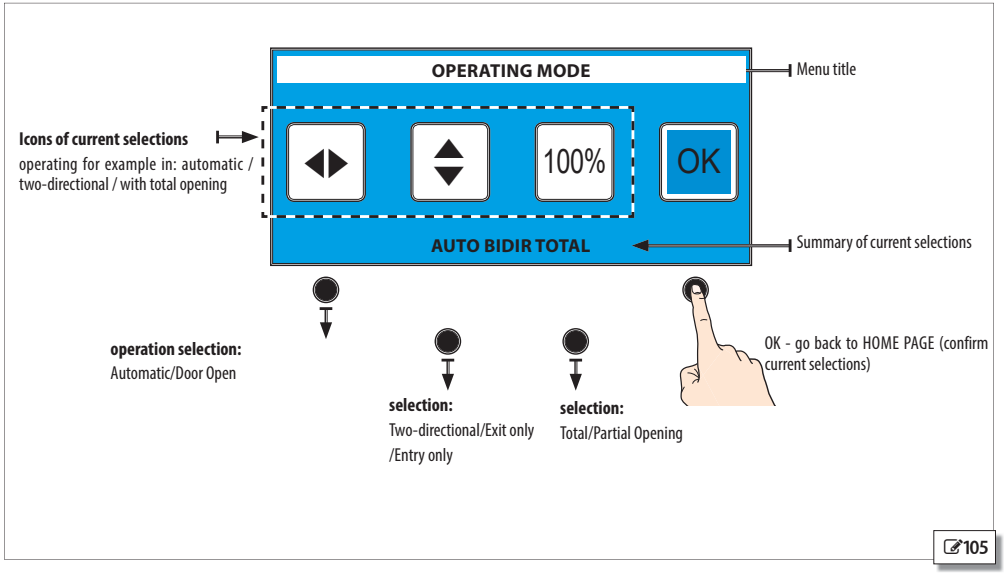
1. To access the operating mode selection menu, press the corresponding button on the HOME PAGE ✎104.
2. Using the selection buttons ✎105 you can set:
   - the Automatic or Door open operation
   - Two-directional or Exit only mode
   - Total or Partial Opening option
3. To go back to the HOME PAGE use 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 	Partial opening 

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

example - door open with total opening:

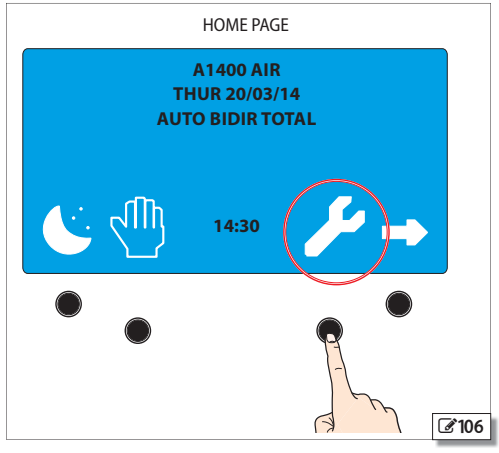


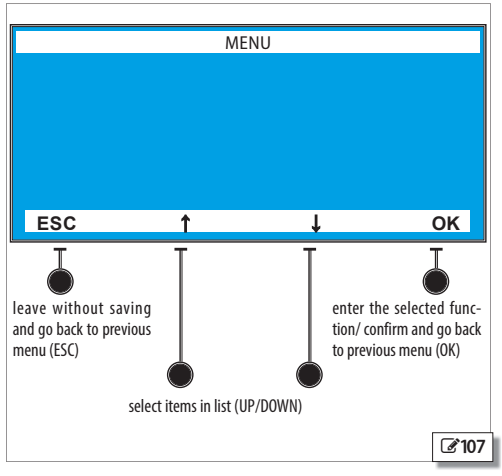


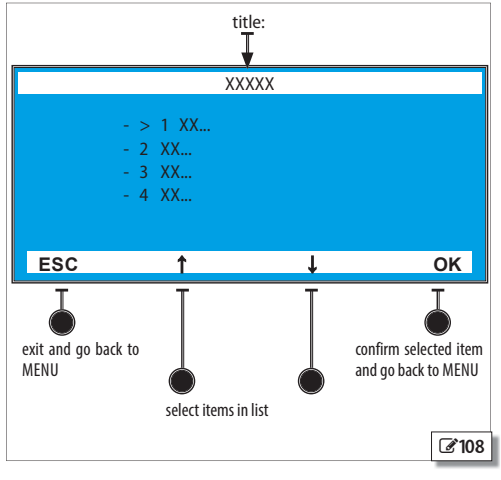
19.7 FUNCTION MENU

1. To access the functions menu, press the corresponding button on the HOME PAGE ✎**106**.
2. You are prompted to enter the **USER** or **INSTALLER** PASSWORD.
3. The display shows the functions (4 at a time) ✎**107**.
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 ✎**108**.

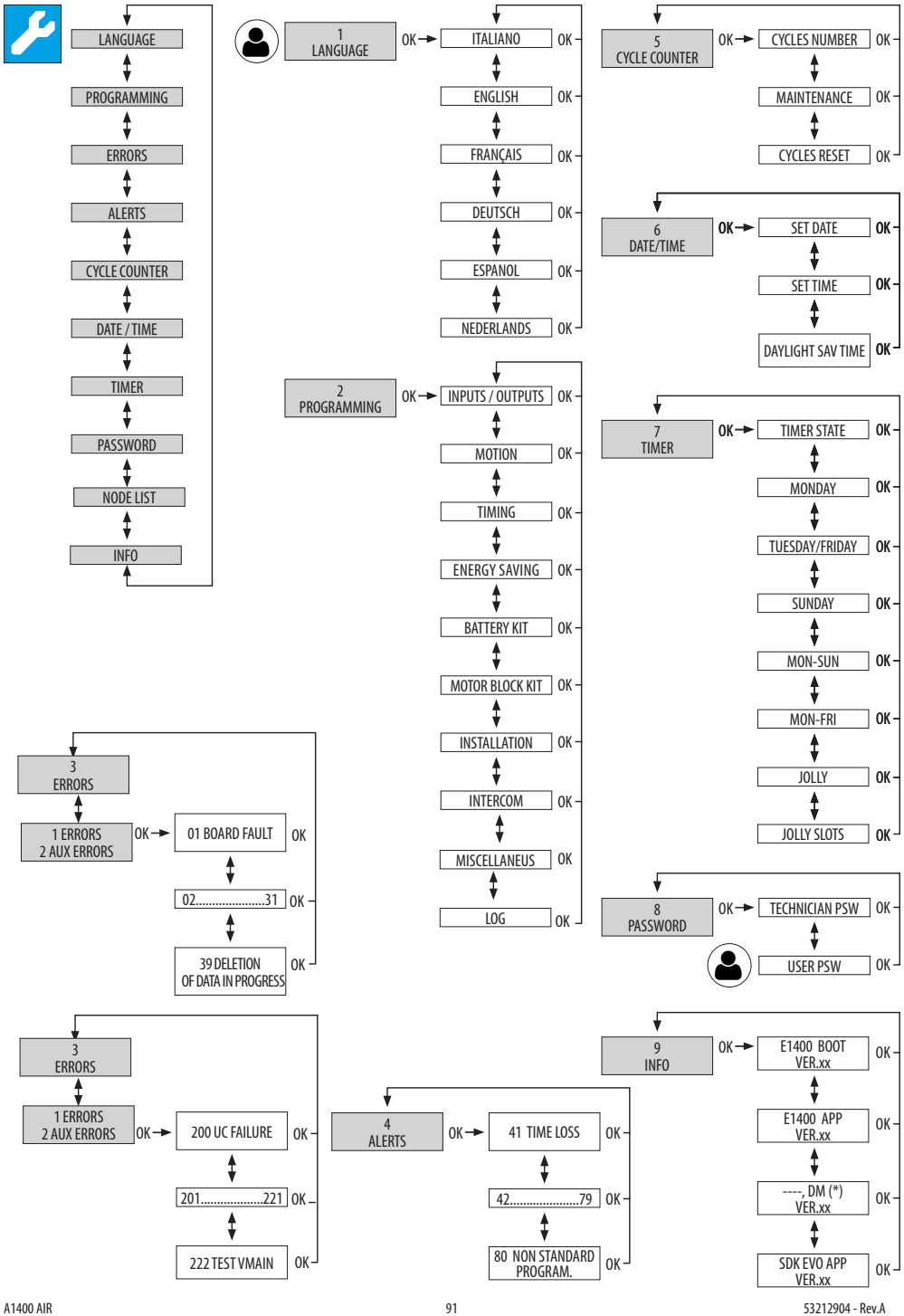
28 Lists the menus showing the pages dedicated to individual functions.





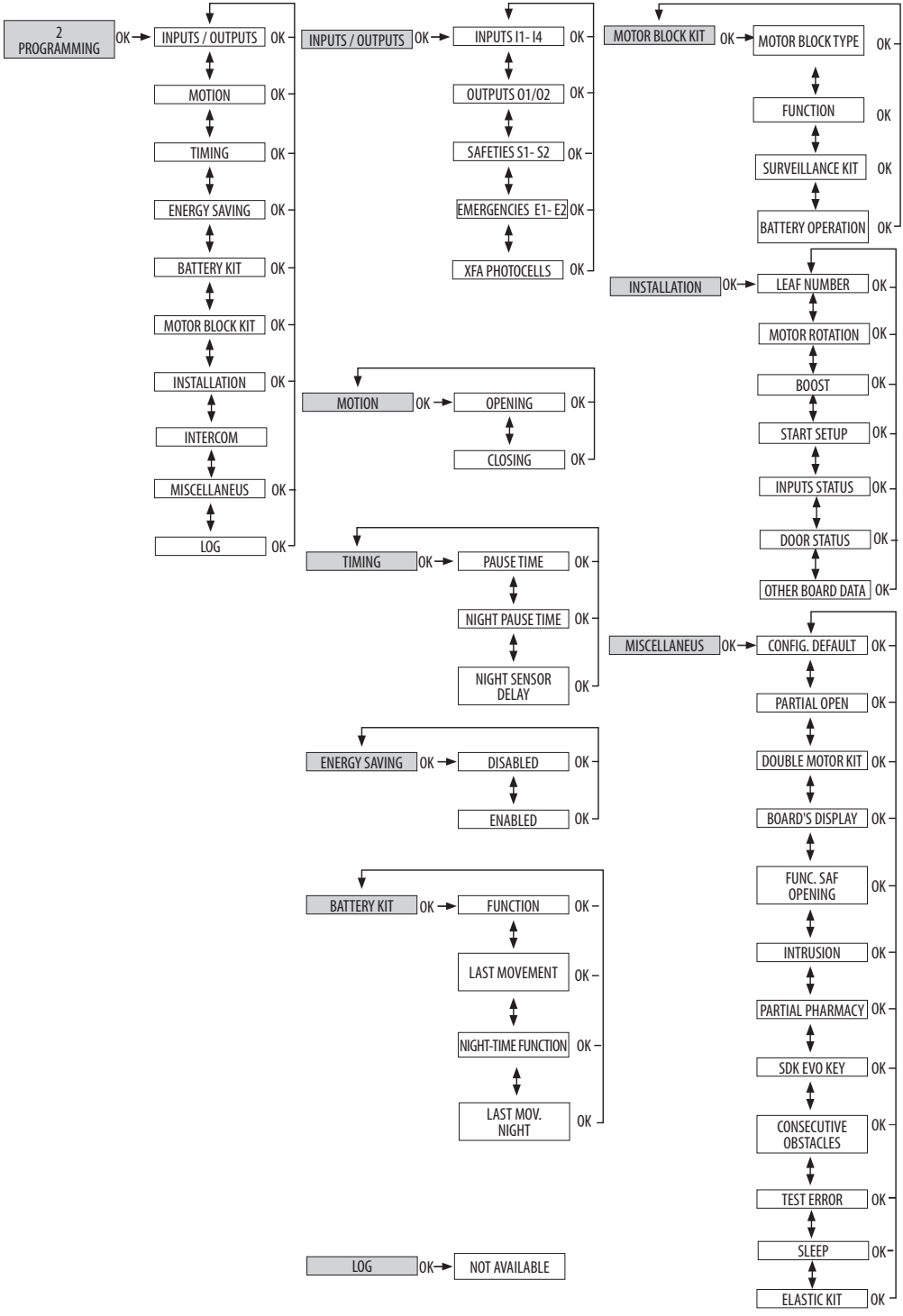


28 FUNCTIONS Menu

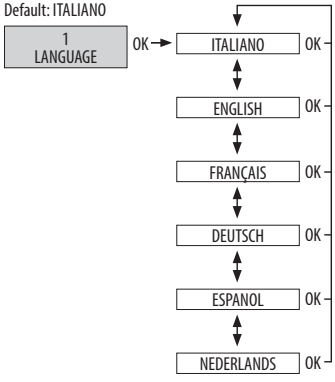


ENGLISH

Translation of the original instructions


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

MENU 1 LANGUAGE

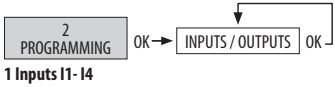


MENU 2 PROGRAMMING

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 INPUTS / OUTPUTS
- 2 MOTION
- 3 TIMING
- 4 ENERGY SAVING
- 5 BATTERY KIT
- 6 MOTOR BLOCK KIT
- 7 INSTALLATION
- 8 SUNDRIES
- 9 LOG

■ INPUTS / OUTPUTS



1 Inputs I1- I4

1. Select an input. The list with the relative default **dF1, dF2** is:
   - I1 OPEN EXTERNAL / NO
   - I2 OPEN INTERNAL / NO
   - I3 KEY / NO
   - I4 OPEN AUTOMATIC / NO
2. Select function:
   - Disabled (0)
   - Open external (1)
   - Open internal (4)
   - Open automatic (7)
   - Open semi-automatic (8)
   - Pharmacy open (9)
   - Key (10)
   - Closing safety (20)
   - Opening safety (21)
   - Emergency Open (30)
   - Emergency Open with memory (31)
   - Emergency Stop (32)
   - Emergency Stop with memory (33)
   - Emergency closing
   - 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)

   If the input has not been disabled, select the logic:
   - Normally open (NO)
   - Normally closed (NC)
3. If an input with CLOSURE SAFETY function has been selected, set the TEST:
   - Enabled
   - Disabled (**dF1,dF2**)
4. Repeat the procedure for the other inputs.

2 Outputs O1 / O2

1. Select an output. The list with the relative default **dF1, dF2** is:
   - O1 Door not closed
   - O2 Error
2. Select function:
   - 0 Disabled
   - 1 Gong
   - 2 Error
   - 3 Battery
   - 4 Emergency active
   - 5 Test (for I1,I2,I3 and I4)
   - 6 Door not closed
   - 7 Door open
   - 8 Door in motion
   - 9 Light*
   - 10 Intrusion active
   - 11 Closing safety
   - 12 Closing or Opening Safety

   (*) If this function is selected, set the time:
   - from 1s to 255s (Default 60s)
3. If the output has not been disabled, select the logic:
   - Normally open (NO)
   - Normally closed (NC)
4. Repeat the procedure for the other output.

3 Safety devices S1-S2

1. Select a SAFETY input. The list with the relative default **dF1, dF2** is:
   - S1 CLOSING SAFETY / TEST ENABLED / NC
   - S2 CLOSING SAFETY / TEST ENABLED / NC
2. Select function:
   - Disabled
   - Closing safety
   - Opening safety
3. If the input has not been disabled, set the TEST:
   - Enabled
   - Disabled
4. If the input has not been disabled, select the logic:
   - Normally open (NO)
   - Normally closed (NC)
5. Repeat the procedure for the other inputs.

4 Emergencies E1 / E2

1. Select input E1. The list with the relative default **dF1, dF2** is:
   - E1 Opening /NO
   - E2 Stop /NO

2. Select function:
   - Disabled
   - Opening
   - Opening with memory
   - Closing
   - Closing with memory
   - Stop
   - Stop with memory
3. If the input is enabled, select the logic:
   - Normally open (NO)
   - Normally closed (NC)

5 XFA Photocells

XFA Photocell inputs are disabled by default.

1. Select:
   - Disabled (**dF1,dF2**)
   - 1 pair
   - 2 pairs

■ **2 MOVEMENT**

Opening

Choose and modify the parameter. The complete list with relevant default and range of values is:

- 1 SPEED **dF1=10 , dF2=8** (from 1 to 10)
- 2 DECELERATION 1cm (from 0 to 200)
  SLOWDOWN SPEED 1 (1-3)
- 3 FORCE **dF1=10 , dF2=10** (from 1 to 10)
- 4 FORCE TIME 1.0s (from 0.1 to 3.0)
- 5 ACCELERATION 8 (from 1 to 10)
- 6 DECELERATION 6 (from 1 to 10)

Closing

Choose and modify the parameter. The complete list with relevant default and range of values is:

- 1 SPEED **dF1=3 , dF2=8** (from 1 to 10)
- 2 DECELERATION 1cm (from 0 to 200)
  SLOWDOWN SPEED 1 (1-3)
- 3 FORCE **dF1=5 , dF2=5** (from 1 to 10)
- 4 FORCE TIME 1.0s (from 0.1 to 3.0)
- 5 ACCELERATION 8 (from 1 to 10)
- 6 DECELERATION 6 (from 1 to 10)
- 7 INVERSION(*) 5 (from 1 to 5)

* the INVERSION parameter determines the inversion speed of the leaf in the closing stage with 5 level setting from 1 (slow) to 5 (fast).

Choose and modify the parameter. The complete list with relative default **dF1,dF2** and range of values is:

- 1 PAUSE TIME 2s (0-30)
- 2 NIGHT PAUSE TIME 10s (0-240)
- 3 NIGHT SENSOR DELAY 10s (0-240)

■ **4 Energy Saving**

The Energy Saving is disabled by default **dF1,dF2**. Available options are:

- ENABLED
- DISABLED

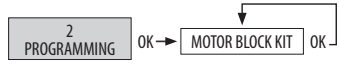
■ **5 BATTERY KIT**

Defines the automation's behaviour with emergency battery, in case of mains power outage. The options with the relative default (**dF1, dF2**) are as follows:

1. FUNCTION
   - Disabled
   - Now last motion
   - Until the last movement
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.

■ **6 MOTOR BLOCK KIT**



Defines motor block behaviour (OPTIONAL accessory).

The options with relevant default are as follows:

- 1 MOTOR BLOCK TYPE
- 2 FUNCTION (Disabled)
- 3 MONITORING KIT (Disabled)
- 4 BATTERY OPERATION

1 TYPE

Defines the type of motor block:

- XB LOCK (**dF1,dF2**)
- 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

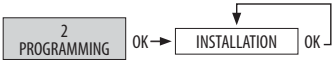
If the monitoring kit (OPTIONAL accessory) is not installed, disable.

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

7 INSTALLATION



1 Number of leaves

Set the number of leaves of the system:

- 1 LEAF (**dF2**)
- 2 LEAVES (**dF1**)

2 Motor Rotation

The default motor rotation is standard Available options are:

- STANDARD (**dF1,dF2**)
- NON STANDARD

3 Boost

Boost is disabled by default. Available options are:

- ENABLED (**dF2**)
- DISABLED (**dF1**)

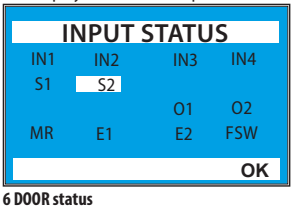
4 Start SETUP

This command requires confirmation to perform SETUP.

⚠ Follow the procedure indicated in 63.

5 INPUT status

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



6 DOOR status

The display shows what status the door is in:

- CLOSED 00
- OPENING (01)
- OPEN (02)
- PAUSED (03)
- in NIGHT PAUSE (04)
- CLOSING (05)
- EMERGENCY (06)
- MANUAL MODE (07)
- NIGHT-TIME MODE (08)
- STOPPED (11)
- SAFETIES TEST (12)
- ERROR (13)
- SETUP IN PROGRESS (L0,L1,..)
- DEEP SLEEP (.)

7 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)

8 INTERCOM

Intercom menu list:

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

1 FUNCTION

Defines the type of intercom function:

- Disabled (**dF1,dF2**)
- 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

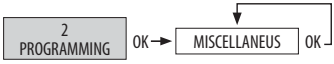
On the board configured as the Master it activates the procedure to recognise any connected boards configured as Slave.

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. Alerts
4. Cycles

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 **dF1,dF2** =50% (20-100)

3 Double Motor Kit

Specifies if the double motor kit is enabled or not.

- ENABLED
- DISABILITATO (**dF1,dF2**)

4 Board Display

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

- Not blocked (**dF1,dF2**)
- Blocked

5 Safety Opening Function

Defines the safety in opening function

- STOP (**dF1,dF2**)
- LOW ENERGY (Slow speed movement)

6 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 (**dF1**)
- KEEP CLOSED actuates the closing motor
- PULL & GO actuates the opening motor
  (NOT active with battery operation) (**dF2**)

7 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)

8 SDK EVO key

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

- BLOCCO (**dF1,dF2**):

With the NO (Normally Open) key switch, SDK EVO operates normally. Password is required.

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

- WITHOUT USER PSW:

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

With the NC (Normally Closed) key switch, SDK EVO operates normally. Password is required.

9 Consecutive obstacles

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

- CLOSING
  from 0 to 10 (number of obstacles =0 **dF1,dF2**)
- OPENING
  from 0 to 10 (number of obstacles =0 **dF1,dF2**)

10 Test Error

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

- ENABLED
- DISABILITATO(**dF1,dF2**)

11 Sleep

Enables the Sleep function.

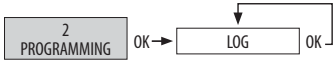
Turns of the accessories during the night-time and Manual modes if operating on the battery.

- ABILITATO(**dF1,dF2**)
- DISABLED

12 ELASTIC KIT

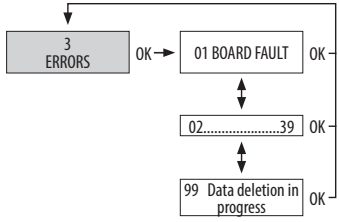
- ENABLED
- DISABILITATO (**dF1,dF2**)

■ **10 LOG**



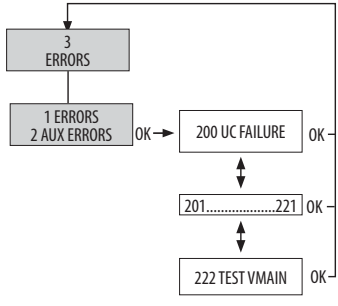
MENU NOT AVAILABLE

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 Anomaly AUX board
- 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

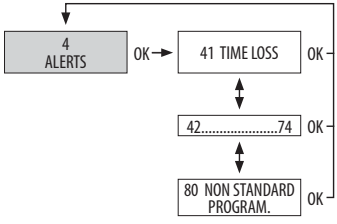


The display shows current errors:

- 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

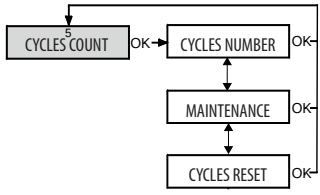
MENU 4 INDICATIONS



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 or LK EVO fault
- 62 Battery charger failure
- 63 Intrusion in progress
- 65 SETUP in progress
- 67 Battery saving
- 68 Safety devices test failed
- 67 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 (**dF1,dF2**)

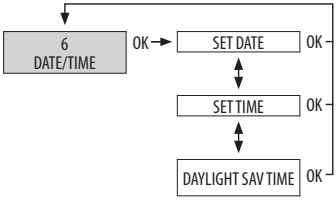
Entering a date is optional.

■ **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.

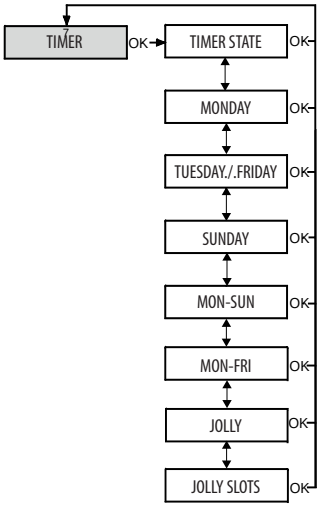
■ **EUROPEAN DAYLIGHT SAVING TIME**

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 103
- 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

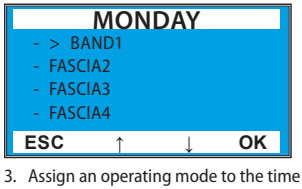
1 Timer status

Enables/disables timer function:
- ENABLED
- DISABILITATO ((**dF1,dF2**)

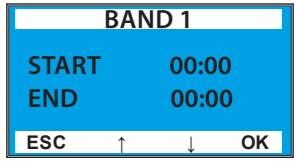
When the TIMER is disabled programming is stored.

2Monday... 8 Sunday

To program days of the week:
1. Select the day.
2. Select the time band.



3. Assign an operating mode to the time band:
   - 0 Auto Twodir Total
   - 1 Auto Out Total
   - 2 Auto Twodir Partial
   - 3 Auto Out Partial
   - 4 Open Total
   - 5 Open Partial
   - 6 Auto In Total
   - 7 Auto In Partial
   - 8 Night-time
   - 9 Partial night-time
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

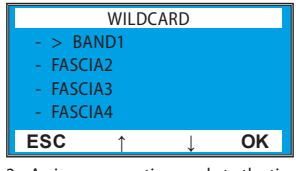
9 Mon-Sun; 10 Mon-Fri

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.

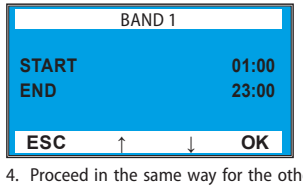
Confirm APPLY to apply the time bands to the set group days, any pre-existing programming on individual days is overwritten.

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 Auto Twodir Total
   - 1 Auto Out Total
   - 2 Auto Twodir Partial
   - 3 Auto Out Partial
   - 4 Open Total
   - 5 Open Partial
   - 6 Auto In Total
   - 7 Auto In Partial
   - 8 Night-time
   - 9 Partial night-time
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

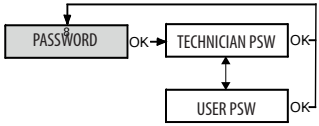
EMERGENCY

TIMER

Configured INPUTS

External programmers LK EVO and SDK EVO

MENU 8 PASSWORD



The user is ONLY allowed to modify the user password.

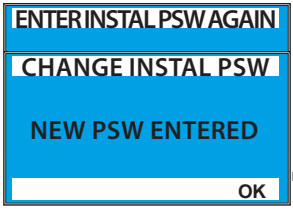
The installer may edit both passwords.

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.

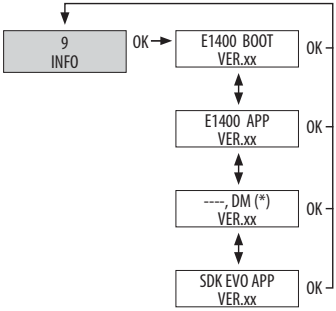


rrectly, the display shows:

USER PASSWORD

Proceed as with the INSTALLER PASSWORD menu.

MENU 9 INFO



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

(*) DM is only displayed if the A1400 AIR DM KIT is used, if it is not present the field is empty:

20. 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 29.

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.

29 Maintenance programme and periodic replacements

20.1 CALCULATION ESTIMATE OF CYCLES PERFORMED

If there is a E1400 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 SDK EVO, in the Cycle counter menu (5), Maintenance section 97, enter the calculated number of cycles.

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 screws securing the support profile to the self-supporting profile and the screws of side wall fixings	21 31
Check the fastening of the Motor and return Pulley	check screws securing the motors on the support profile	23
Check on carriages	check screws securing to the leaf	34
	check and adjust the counter wheels of carriages and leaf depth and height screws	36
Check mechanical stops	check position of mechanical stops and fixing screws	45
Belt tensioning check	check belt tensioning	43
Cleaning	clean: Sliding Guide; Lower Guide Shoe; Carriages	103
Functional system check	perform required checks and procedures to ensure integrity of the load bearing structure and leaf frames	18
	perform functional checks	103

PERIODIC REPLACEMENTS

22 23

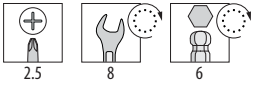
PART/COMPONENT	FREQUENCY		Replacements
	Operation cycles	Time (years)	Recommended / Mandatory
Motor	1 000 000	--	Recommended
DM Motor	1 000 000	--	Recommended
Motor Vibration Damper Rubbers	2 000 000	--	Recommended
Return pulley	1 000 000	--	Recommended
Lower guide shoe	2 000 000	--	**Mandatory**
Carriages	2 000 000	--	**Mandatory**
DM Carriage Wheels	2 000 000	--	**Mandatory**
Belt	1 000 000	5	Recommended
Mechanical stops	2 000 000	5	**Mandatory**
Safety fall arrest cables	--	5	**Mandatory**
Emergency battery	--	1	Recommended

20.2 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.

20.3 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 ✎**109**-①-②-③.
3. Loosen the screws ✎**110**-① of each carriage and lower the leaves to the ground using screw b. ②.
4. Disconnect the leaves from the carriages by removing the screws ✎**110**-①.
5. Temporarily store the leaves away, using all precautions to prevent risks of fall.
6. Loosen the screw ✎**110**-③ and lower the counter wheel in order to remove each carriage.
7. Install the new wheels for the DM carriages **39.**
8. Remove the mechanical stops.
9. Remove the lower guide shoe.
10. Install the new shoe **33**.
11. Install the vibration damper rubbers onto the support.
12. Mount the new motor onto its support.
13. Tighten the screws ✎**109**-①-②-③.
14. Install the new mechanical stops **22**.
15. Install the new carriages onto the leaves **34**.
16. Install and adjust the leaves **34** **36**.
17. Install and adjust the new belt **41** **43**.
18. Adjust the new mechanical stops **45**.

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.

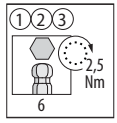
Replacement of mechanical stops

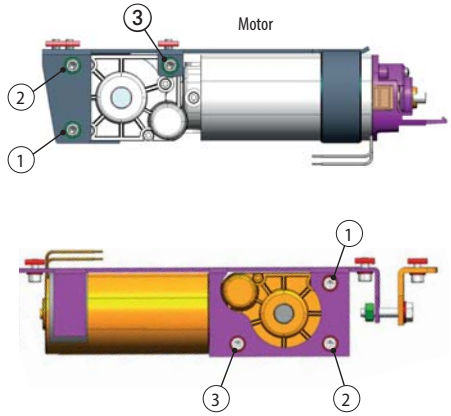
Only perform steps 7 and 19 of the sequence for 2 million cycles.

Replacement of safety cables

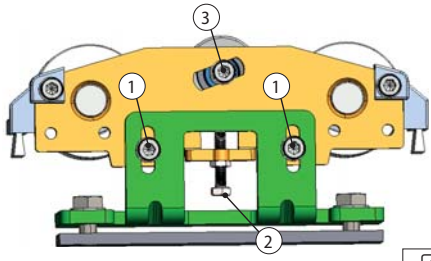
1. Remove the safety cables from the casing.
2. Install the new cables **23** e **48**.

Follow the tightening sequence ①-②-③.





✎**109**



✎**110**

ENGLISH

Translation of the original instructions

Emergency battery replacement

Before proceeding, disconnect mains power supply.

1. Disconnect the battery from the board E1400 .
2. Loosen the 2 screws with washer ✎**111**-① and remove the battery.
3. Install the new battery ✎**111**-①.
4. Connect the battery to the board E1400 .

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 **78**.

1. Remove all connections.
2. Remove the screw ✎**112**-① and the screw with washer ✎**112**-②.
3. Remove the board from the support.
4. Insert the new board in the seats ✎**112**-③.
5. Fasten using the screw ① and screw ② with washer ④.

The washer ✎**112**-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 **78**.

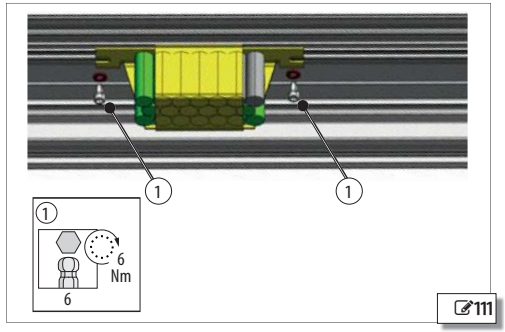
8. Carry out the SETUP procedure **63**.

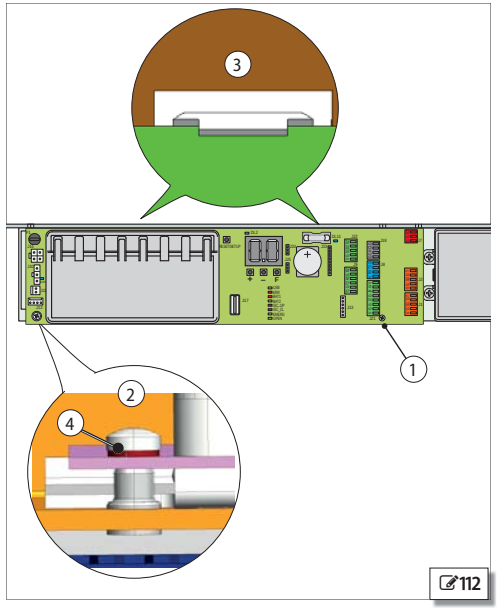
Replacing the fuses

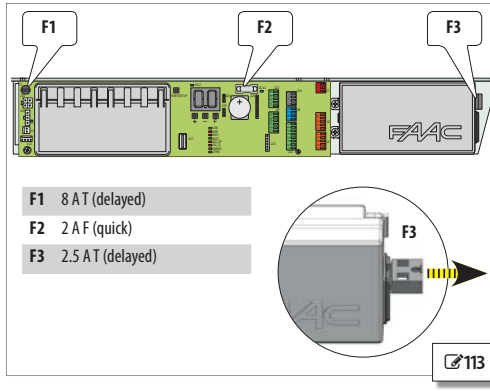
Before proceeding, disconnect the mains power supply and disconnect the emergency battery.

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 ✎**113**.







20.4 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 base solutions, ethyl alcohol.

20.5 FUNCTIONAL CHECKS

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

In case of failures or malfunction, please refer to **73** through to **76**.

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
- drawing to the stops on opening and closing without any shocks
- 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.

21. 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.

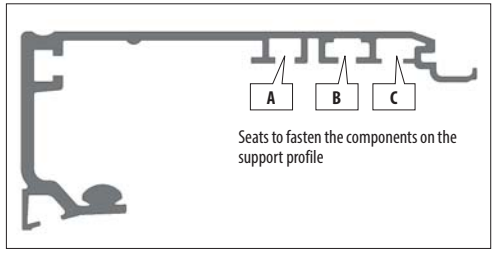
22. ATTACHMENTS A1400 AIR

30 A1400 AIR 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

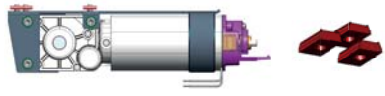
Double leaf			
Vp	Lt	Support profile weight	TOTAL weight
[mm]	[mm]	[kg - approximate values]	[kg]
800	1700	11	24
900	1900	12	25
1000	2100	13	27
1100	2300	14	28
1200	2500	15	29
1300	2700	16	30
1400	2900	18	31
1500	3100	19	32
1600	3300	20	33
1700	3500	21	34
1800	3700	22	36
1900	3900	23	37
2000	4100	24	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

31 Positions of components on the head section



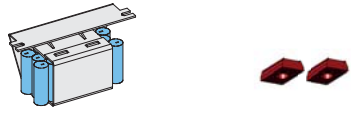
Electronic module rod B

Motor A-B



Return pulley A

Emergency battery A



Safety cables B

Cover fastening brackets B

Internal release (optional component) A

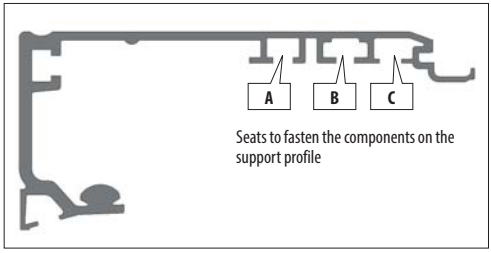
23. ATTACHMENTS A1400 AIR

32 A1400 AIR DM automation weights

Single leaf			
Vp [mm]	Lt [mm]	Support profile weight [kg - approximate values]	TOTAL weight [kg]
800	1700	9	24
900	1900	10	25
1000	2100	12	26
1100	2300	13	27
1200	2500	14	28
1300	2700	15	29
1400	2900	16	30
1500	3100	17	32
1600	3300	19	33
1700	3500	20	34
1800	3700	21	35
1900	3900	22	36
2000	4100	23	37
2100	4300	24	38
2200	4500	26	40
2300	4700	27	41
2400	4900	28	42
2500	5100	29	43
2600	5300	30	44
2700	5500	31	45
2800	5700	32	46
2900	5900	34	48
3000	6100	35	49

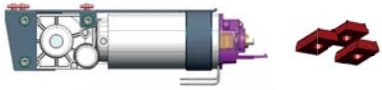
Double leaf			
Vp [mm]	Lt [mm]	Support profile weight [kg - approximate values]	TOTAL weight [kg]
900	1900	11	27
1000	2100	12	28
1100	2300	13	30
1200	2500	14	31
1300	2700	15	32
1400	2900	16	33
1500	3100	18	34
1600	3300	19	35
1700	3500	20	36
1800	3700	21	37
1900	3900	22	39
2000	4100	23	40
2100	4300	24	41
2200	4500	26	42
2300	4700	27	43
2400	4900	28	44
2500	5100	29	45
2600	5300	30	47
2700	5500	31	48
2800	5700	32	49
2900	5900	34	50
3000	6100	35	51

33 Positions of components on the head section

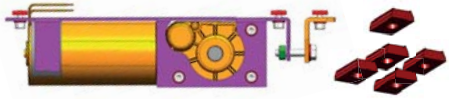


Electronic module rod B

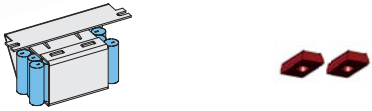
Motor A-B



2nd Motor A-B



Emergency battery A



Safety cables B

Cover fastening brackets B

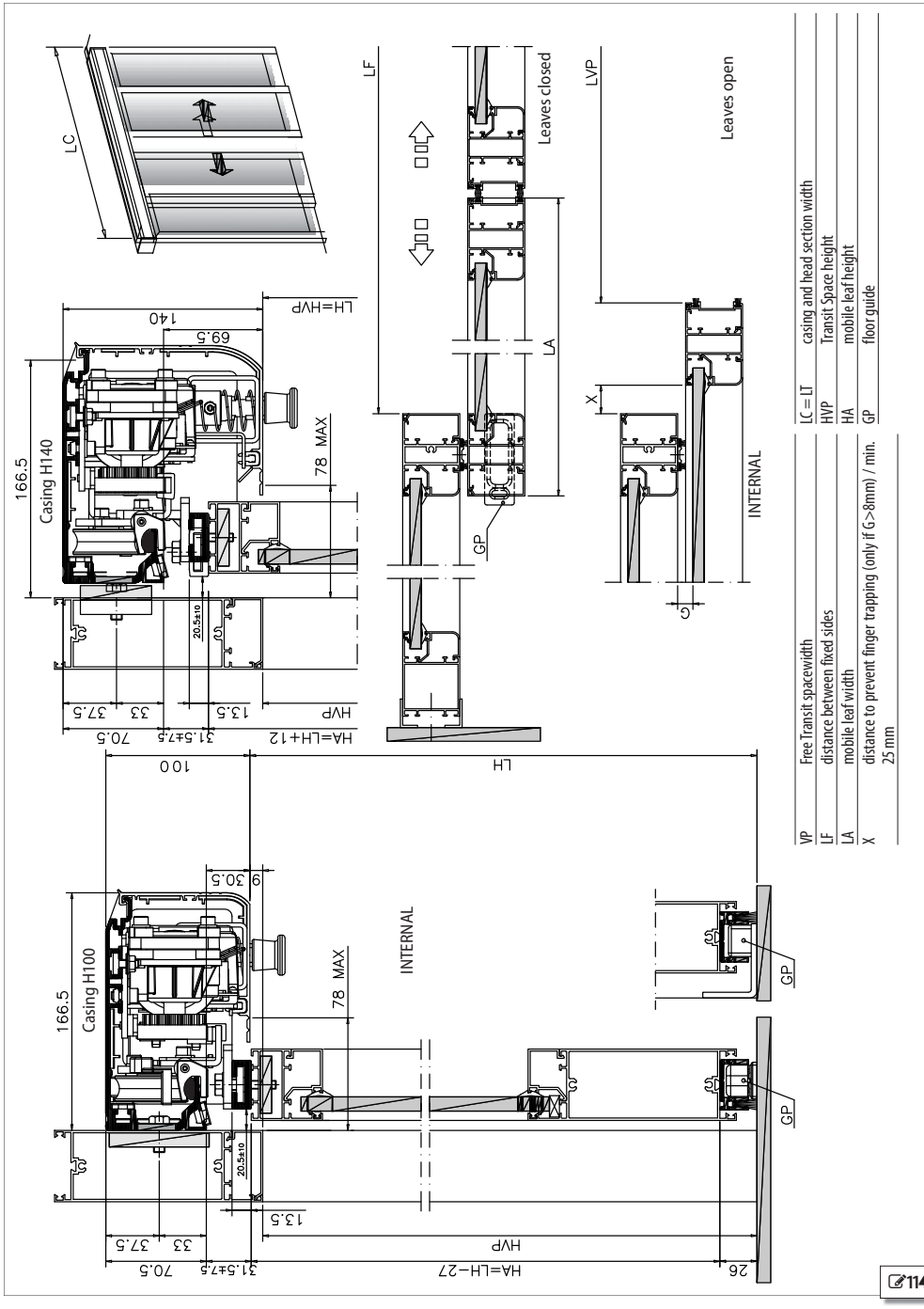
Internal release (optional component) A

ENGLISH

Translation of the original instructions

23.1 INSTALLATION DIAGRAMS

A1400 AIR H100 - H140



VP	Free Transit spacewidth	LC = LT	casing and head section width
LF	distance between fixed sides	HVP	Transit Space height
LA	mobile leaf width	HA	mobile leaf height
X	distance to prevent finger trapping (only if G>8mm) / min. 25 mm	GP	floor guide

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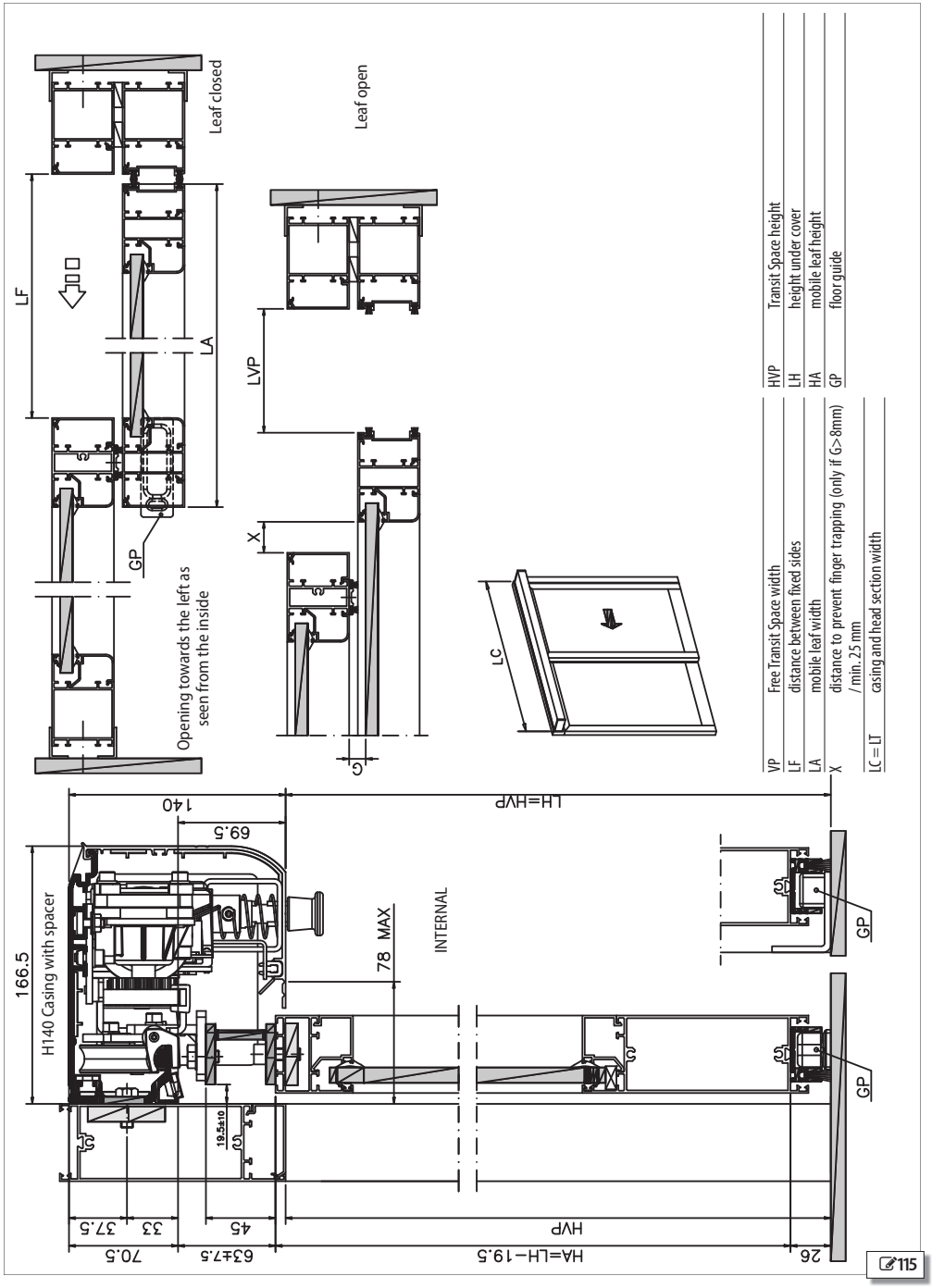
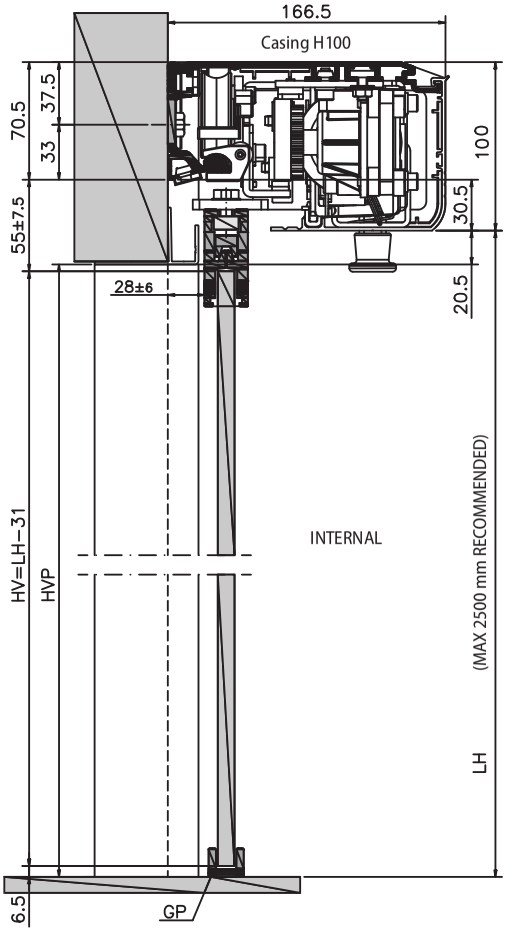
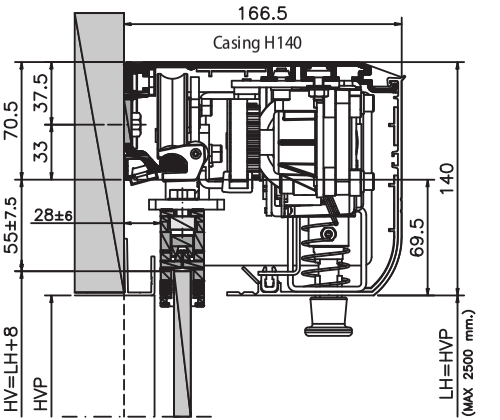
A1400 AIR WITH CARRIAGE LEAF SPACER

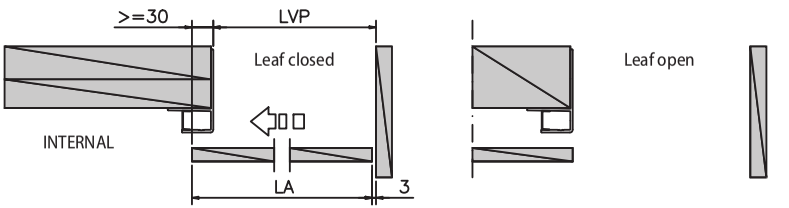


ENGLISH

Translation of the original instructions



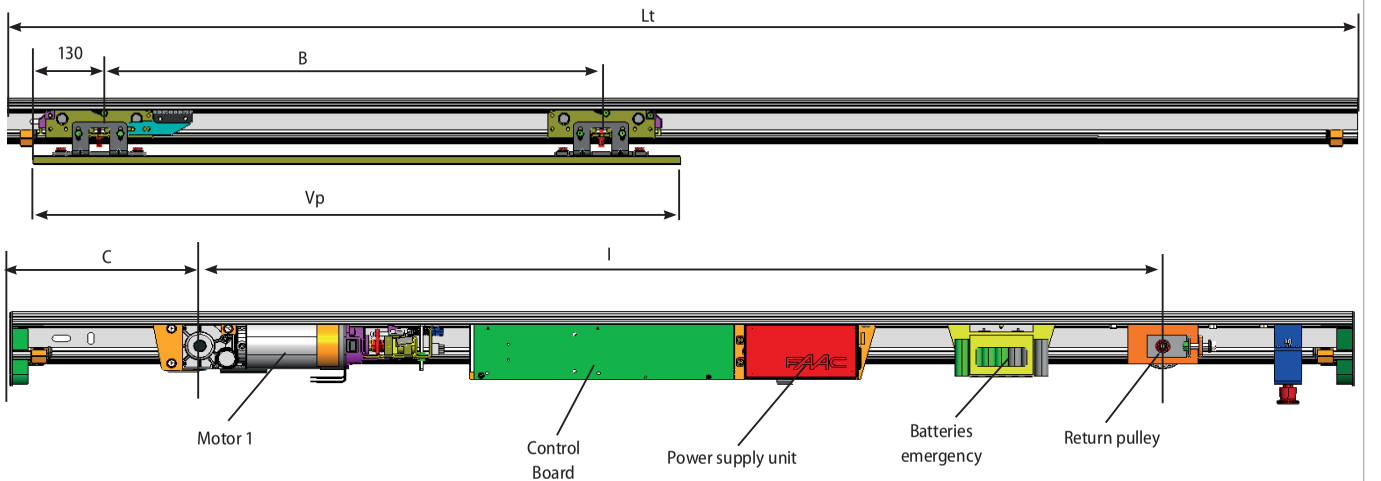




VP	Free Transit Space width	HVP	Transit Space height
LF	distance between fixed sides	LH	height under cover
LA	mobile leaf width	HV	glass height
X	distance to prevent finger trapping (only if G>8mm) / min. 25 mm	GP	floor guide
LC = LT	casing and head section width		

23.2 POSITION OF COMPONENTS ON A1400 AIR SUPPORT PROFILE

A1400 AIR RIGHT OPENING SINGLE LEAF

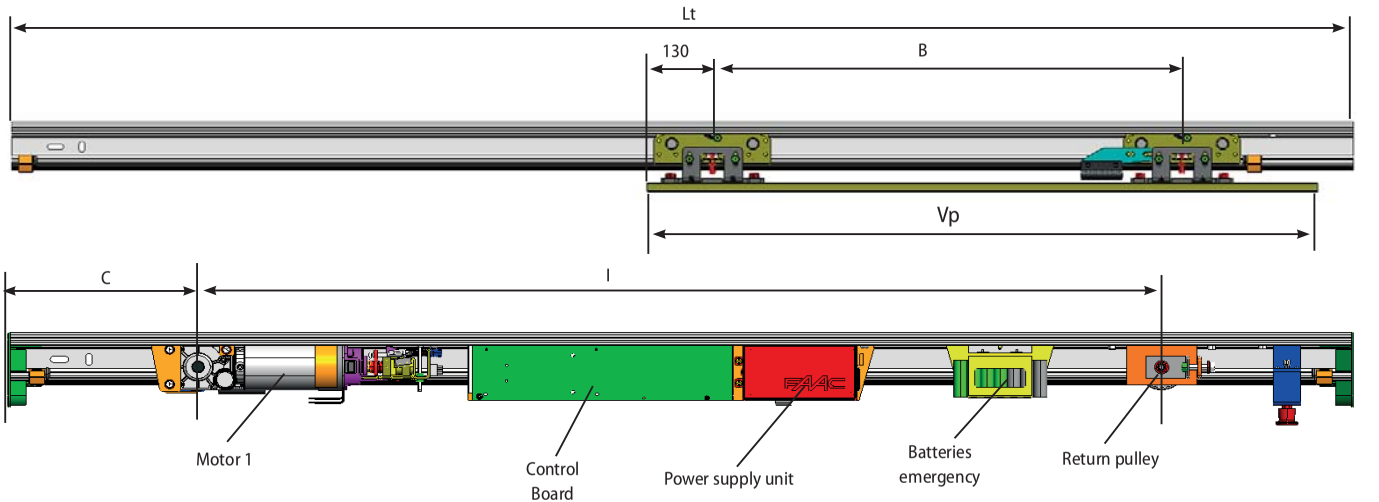


Lt = Vp X 2 + 100

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

Vp	Lt	B	I	C	D
700	1500	515	1150	150	2470
800	1700	615	1200	150	2570
900	1900	715	1250	150	2670
1000	2100	815	1300	150	2770
1100	2300	915	1350	150	2870
1200	2500	1015	1400	150	2970
1300	2700	1115	1450	150	3070
1400	2900	1215	1500	150	3170
1500	3100	1315	1550	150	3270
1600	3300	1415	1600	150	3370
1700	3500	1515	1650	150	3470
1800	3700	1615	1700	150	3570

Vp	Lt	B	I	C	D
1900	3900	1715	1750	150	3670
2000	4100	1815	1800	150	3770
2100	4300	1915	1850	150	3870
2200	4500	2015	1900	150	3970
2300	4700	2115	1950	150	4070
2400	4900	2215	2000	150	4170
2500	5100	2315	2050	150	4270
2600	5300	2415	2100	150	4370
2700	5500	2515	2150	150	4470
2800	5700	2615	2200	150	4570
2900	5900	2715	2250	150	4670
3000	6100	2815	2300	150	4770

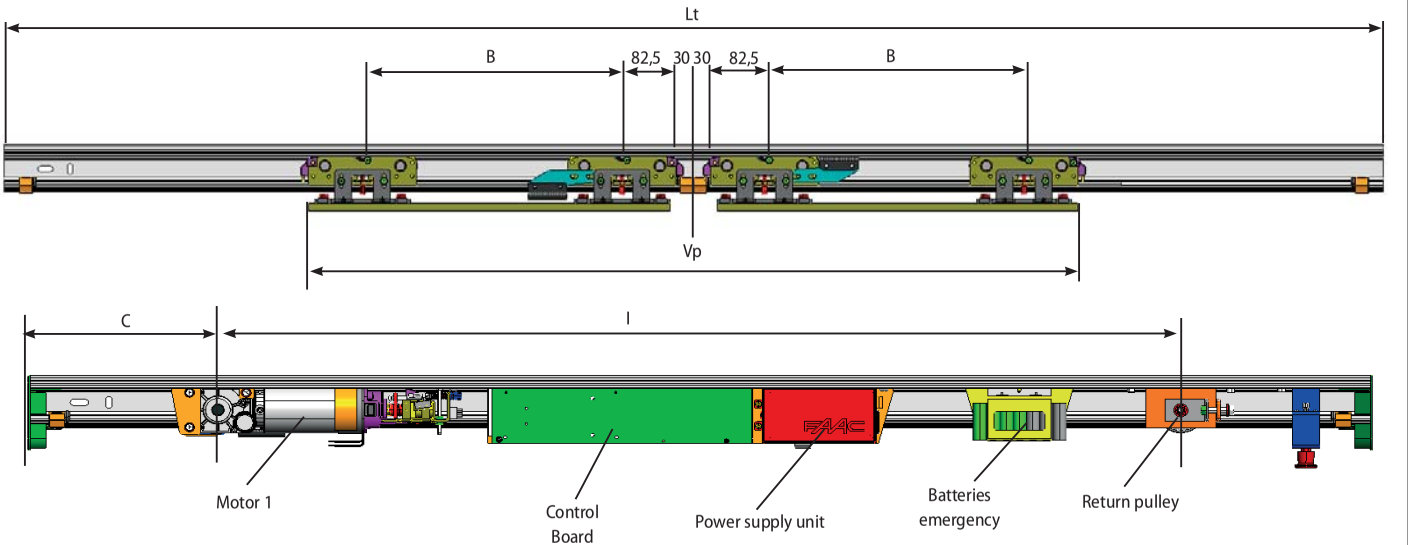


Lt = Vp X 2 + 100

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

Vp	Lt	B	I	C	D
700	1500	485	1170	135	2510
800	1700	585	1265	235	2700
900	1900	685	1360	335	2890
1000	2100	785	1455	435	3080
1100	2300	885	1550	535	3270
1200	2500	985	1645	635	3460
1300	2700	1085	1740	735	3650
1400	2900	1185	1835	835	3840
1500	3100	1285	1930	935	4030
1600	3300	1385	2025	1035	4220
1700	3500	1485	2120	1135	4410
1800	3700	1585	2215	1235	4600

Vp	Lt	B	I	C	D
1900	3900	1685	2310	1335	4790
2000	4100	1785	2405	1435	4980
2100	4300	1885	2500	1535	5170
2200	4500	1985	2595	1635	5360
2300	4700	2085	2690	1735	5550
2400	4900	2185	2785	1835	5740
2500	5100	2285	2880	1935	5930
2600	5300	2385	2975	2035	6120
2700	5500	2485	3070	2135	6310
2800	5700	2585	3165	2235	6500
2900	5900	2685	3260	2335	6690
3000	6100	2785	3355	2435	6880



Lt = Vp X 2 + 100

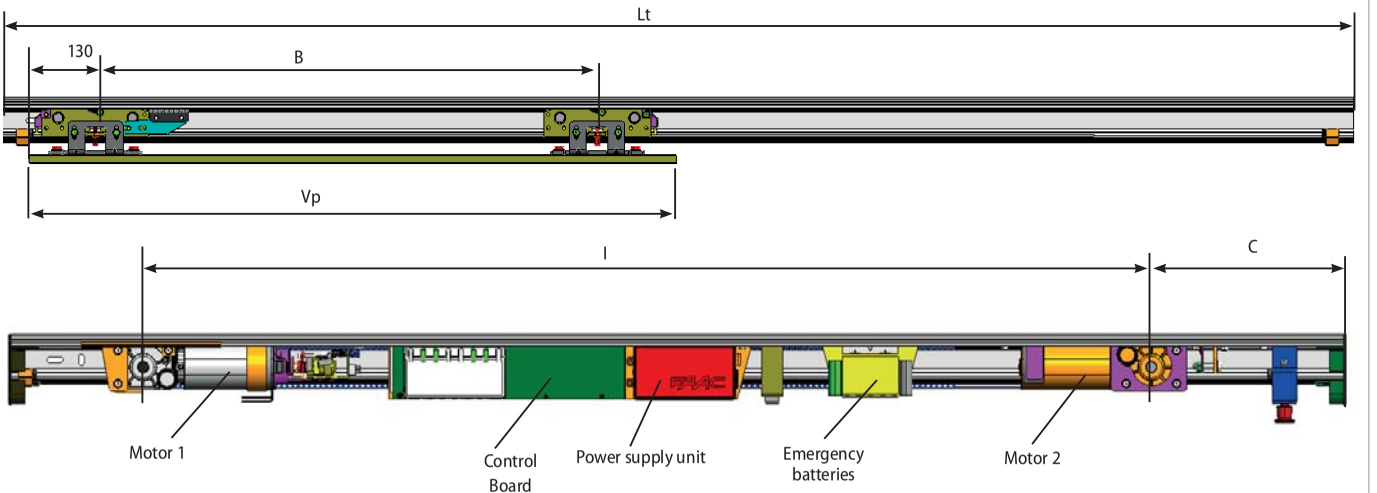
- **B** = Carriage fixing distance on sliding leaf
- **C** = Motor position
- **D** = Transmission belt length
- **I** = Motor 1 / motor 2 centre distance
- **Lt** = Head section length
- **Vp** = Free transit space
- **100** = leaf overlap (mm)

Vp	Lt	B	I	C	D
800	1700	275	1200	240	2570
900	1900	325	1310	290	2790
1000	2100	375	1420	340	3010
1100	2300	425	1530	390	3230
1200	2500	475	1640	440	3450
1300	2700	525	1750	490	3670
1400	2900	575	1860	540	3890
1500	3100	625	1970	590	4110
1600	3300	675	2080	640	4330
1700	3500	725	2190	690	4550
1800	3700	775	2300	740	4750
1900	3900	825	2410	790	4970

Vp	Lt	B	I	C	D
2000	4100	875	2520	840	5190
2100	4300	925	2630	890	5410
2200	4500	975	2740	940	5630
2300	4700	1025	2850	990	5850
2400	4900	1075	2960	1040	6070
2500	5100	1125	3070	1090	6290
2600	5300	1175	3180	1140	6510
2700	5500	1225	3290	1190	6730
2800	5700	1275	3400	1240	6950
2900	5900	1325	3510	1290	7170
3000	6100	1375	3620	1390	7390

23.3 POSITION OF COMPONENTS ON A1400 AIR DM SUPPORT PROFILE

A1400 AIR DM RIGHT OPENING SINGLE LEAF

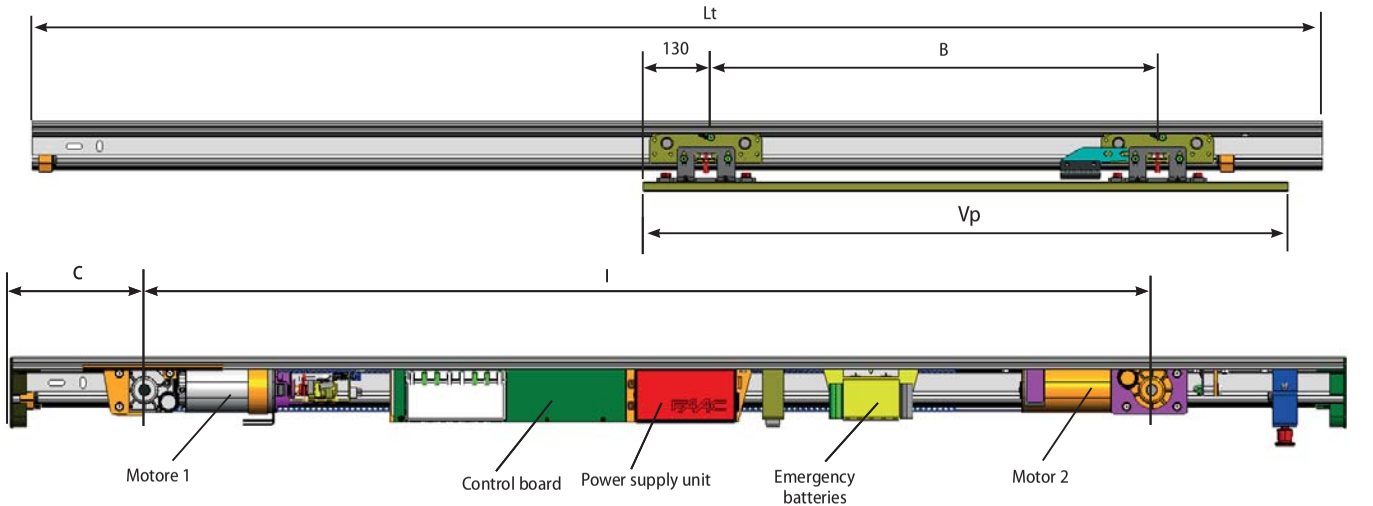


Lt = Vp X 2 + 100

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

Vp	Lt	B	I	C	D
800	1700	585	1292	250	2744
900	1900	685	1344	380	2848
1000	2100	785	1400	510	2960
1100	2300	885	1456	640	3072
1200	2500	1035	1340	935	2840
1300	2700	1085	1440	1035	3040
1400	2900	1185	1540	1135	3240
1500	3100	1285	1640	1235	3440
1600	3300	1385	1740	1335	3640
1700	3500	1485	1840	1435	3840
1800	3700	1585	1940	1535	4040
1900	3900	1685	2040	1635	4240

Vp	Lt	B	I	C	D
2000	4100	1785	2140	1735	4440
2100	4300	1885	2240	1835	4640
2200	4500	1985	2340	1935	4840
2300	4700	2085	2440	2035	5040
2400	4900	2185	2540	2135	5240
2500	5100	2285	2640	2235	5440
2600	5300	2385	2740	2335	5640
2700	5500	2485	2840	2435	5840
2800	5700	2585	2940	2535	6040
2900	5900	2685	3040	2635	6240
3000	6100	2785	3140	2735	6440

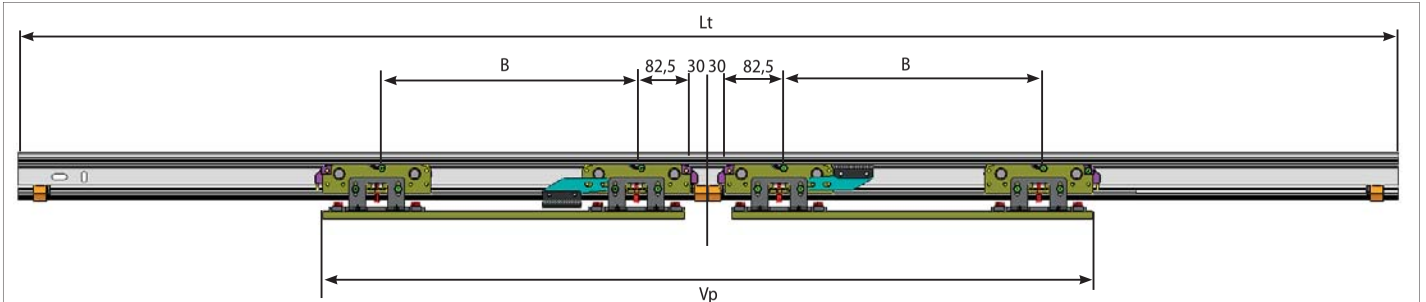


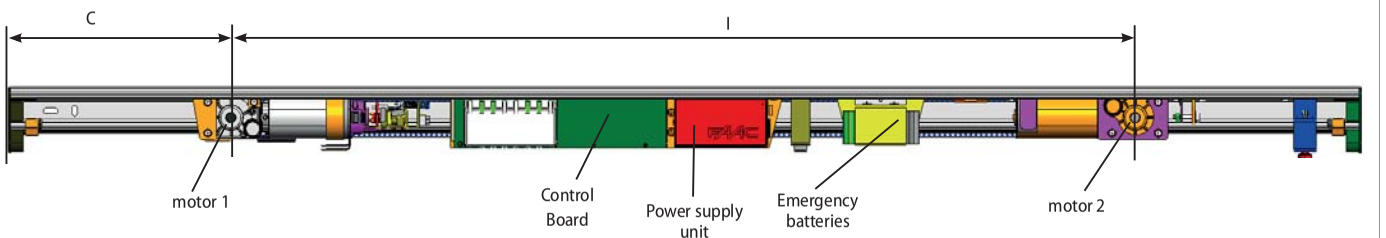
Lt = Vp X 2 + 100

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

Vp	Lt	B	I	C	D
800	1700	555	1320	130	2800
900	1900	635	1340	290	2840
1000	2100	715	1360	450	2880
1100	2300	795	1380	610	2920
1200	2500	1015	1340	935	2840
1300	2700	1115	1440	1035	3040
1400	2900	1215	1540	1135	3240
1500	3100	1315	1640	1235	3440
1600	3300	1415	1740	1335	3640
1700	3500	1515	1840	1435	3840
1800	3700	1615	1940	1535	4040
1900	3900	1715	2040	1635	4240

Vp	Lt	B	I	C	D
2000	4100	1815	2140	1735	4440
2100	4300	1915	2240	1835	4640
2200	4500	2015	2340	1935	4840
2300	4700	2115	2440	2035	5040
2400	4900	2215	2540	2135	5240
2500	5100	2315	2640	2235	5440
2600	5300	2415	2740	2335	5640
2700	5500	2515	2840	2435	5840
2800	5700	2615	2940	2535	6040
2900	5900	2715	3040	2635	6240
3000	6100	2815	3140	2735	6440





Lt = Vp X 2 + 100

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

Vp	Lt	B	I	C	D
900	1900	345	1440	225	3040
1000	2100	395	1550	280	3260
1100	2300	445	1660	335	3480
1200	2500	495	1770	390	3700
1300	2700	545	1880	445	3920
1400	2900	595	1990	500	4140
1500	3100	645	2100	555	4360
1600	3300	695	2210	610	4580
1700	3500	745	2320	665	4800
1800	3700	795	2430	720	5020
1900	3900	845	2540	775	5240
2000	4100	895	2650	830	5460

Vp	Lt	B	I	C	D
2100	4300	945	2760	885	5680
2200	4500	995	2870	940	5900
2300	4700	1045	2980	995	6120
2400	4900	1095	3090	1050	6340
2500	5100	1145	3200	1105	6560
2600	5300	1195	3310	1160	6780
2700	5500	1245	3420	1215	7000
2800	5700	1295	3530	1270	7220
2900	5900	1345	3640	1325	7440
3000	6100	1395	3750	1380	7660

USER'S GUIDE A1400 AIR

SAFETY RECOMMENDATIONS

The A1400 AIR automation system, 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. In the event of malfunctioning, the operator must abstain from any attempt to repair or intervene directly. 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 A1400 AIR 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 A1400 AIR systems are designed to automatically operate, manage and control linear horizontal motion one- or two-leaf sliding doors.

The A1400 AIR series automation system are designed for automated entry doors that are 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 system 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 A1400 AIR door changes from NIGHT-TIME or MANUAL mode to TWO-DIRECTION AUTOMATIC mode a system test is carried out immediately.

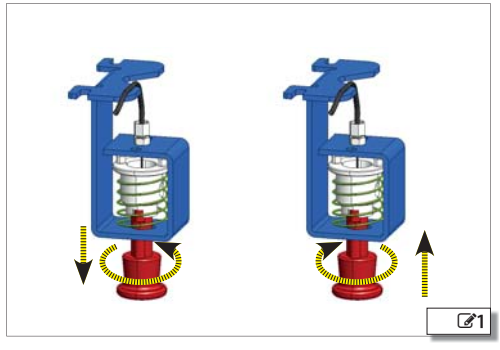
MANUAL OPERATION

Release manoeuvre

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

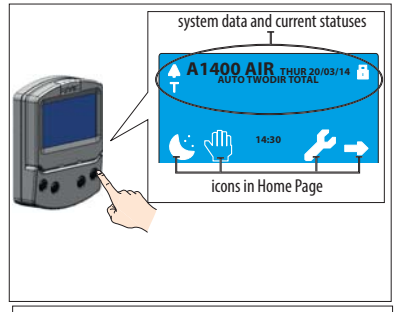
To open the door, pull the red knob downwards and turn it anti-clockwise until it locks on the bracket Fig. 1.

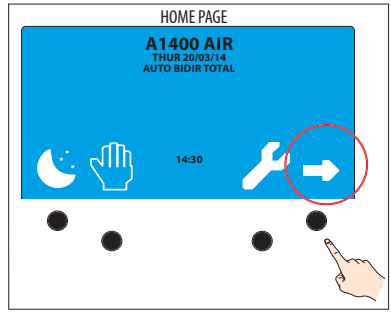
To close the door, pull the red knob downwards to release it and turn it clockwise until it comes into contact with the bracket Fig. 1.



23.4 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).

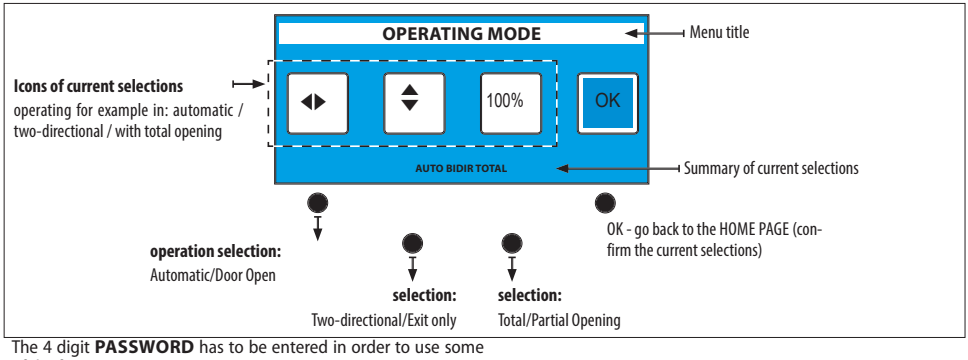




Automatic or Door open operation Automatic = opening via detector Open door = closure is inhibited	Automatic	Door open
Direction of travel Two-directional = the detectors are enabled for entry and exit Exit only = the detector is only enabled for exit Entry only = the detector is only enabled for exit	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, exit only, with partial Opening:

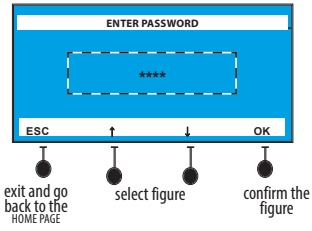
example - door open with total opening:



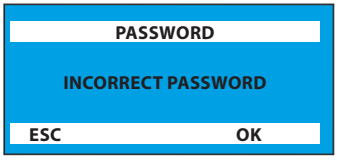
The 4 digit **PASSWORD** has to be entered in order to use some of the functions.

- 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

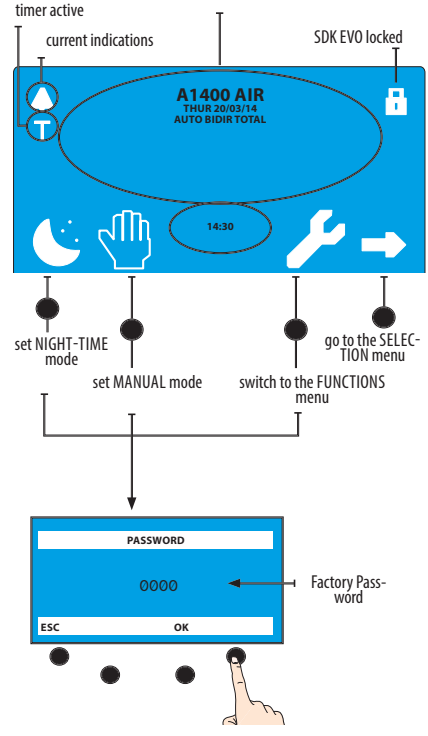


- In case of unrecognised password:
- the command is not executed
- the display shows "incorrect password"
- press OK to go back to the home page.



HOME PAGE

- name of the door
- day and date
- operating mode
- time



Functions accessible with PASSWORD

OPERATOR	✓	✓*
USER	✓	✓

* Some functions are reserved to the installer

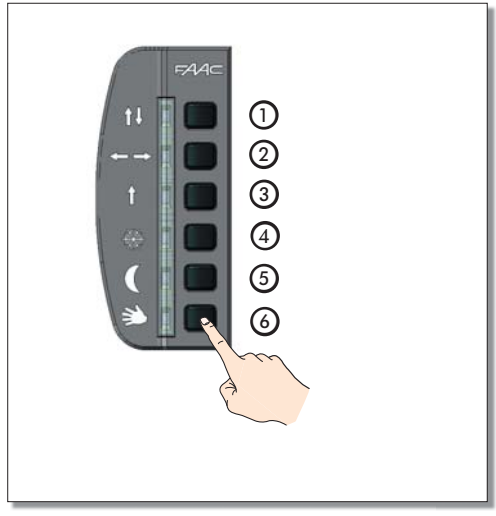
23.6 SELECTION MENU

1. To access the operating mode selection menu, press the corresponding function button .
2. The following functions may be set with the selection buttons:

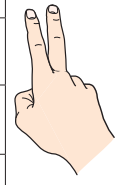
   - TOTAL TWO-DIRECTION AUTOMATIC
   - DOOR OPENED
   - AUTOMATIC TOTAL ONE-DIRECTION
   - AUTOMATIC PARTIAL TWO-DIRECTION AUTOMATIC
   - NIGHT
   - MANUAL

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

①		TOTAL TWO-DIRECTION AUTOMATIC
②		DOOR OPENED
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
ALERTS		① + ② continuous
FIRMWARE VERSION		⑤ + ⑥ continuous

7. The key combinations will allow special functions:
   - LOCK / UNLOCK
   - RESET
   - ALERTS
   - FIRMWARE VERSION
8. The LEDs corresponding to WARNINGS will blink for as long as the keys are held.

6. The ALARMS are displayed with a code of flashing LEDs alternating with the current operating mode. For the type of ALARM see ▦ **25** in the A1400 AIR manual.

Translation of the original instructions

ENGLISH

FAAC S.p.A. Soc. Unipersonale
Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY
Tel. +39 051 61724 - Fax +39 051 758518
www.faac.it - www.faacgroup.com

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