NEXT® 150

EN

INSTALLATION MANUAL

Automation for indoor automatic swing doors

MADE IN ITALY

AZIENDA CERTIFICATA SISTEMA QUALITÀ UNI EN 9001:2008

English

TRANSLATION OF THE ORIGINAL INSTRUCTIONS

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GENERAL SAFETY WARNINGS

Carefully read this instruction manual for the safe installation and operation of the automatic door.
Improper installation and incorrect use of the product could cause serious injury.
Keep the instruction manual for future reference.
The installer must provide all the information about operation and provide the system user with the user manual delivered with the product.

MEANING OF THE SYMBOLS USED IN THESE INSTRUCTIONS

DANGER:
Notification of dangerous situations that could cause material damage and personal injury.

WARNING:
Identifies the procedures that must be understood and followed mandatorily in order to avoid damage to the product or malfunctions.

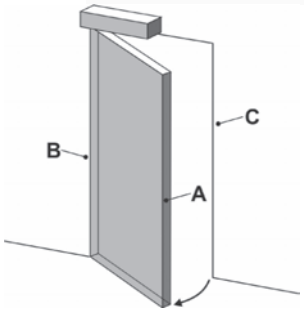
NOTE:
Highlights important information.

GENERAL SAFETY OBLIGATIONS

The mechanical and electric installation must be performed by specialised personnel in accordance with the applicable directives and regulations.
The installer must make sure that the structure to be automated is stable and robust and, if necessary, make structural modifications to make it so.
Keep product and packaging materials out of children's reach, as they might be a source of danger.
Do not let children stay or play within the operating range of the door.
This product is designed and built exclusively for the purpose described in this documentation. Any other use that is not specifically indicated could adversely impact the condition of the product and the safety of people.
Label accepts no responsibility for incorrect product installation and usage, as well as for any damage caused by changes made without its prior consent.
Label is not responsible for the construction of the frames to be motorised.
The IP32 protection class requires that the automation is installed only on the inner side of buildings.
This product cannot be installed in explosive environments or atmospheres, or in the presence of flammable gases or fumes.
Make sure that the characteristics of the electric distribution network are compatible with the technical data indicated in this manual and that upstream of the system there is an omnipolar switch with an opening distance of the contacts of at least 3mm and a residual current device.
Connect all dead metal parts to the earth conductor.
Any wiring not supplied for this operator shall be Type CL2x or Appliance Wiring Material (AWM) with FT-1 or VW-1 flammability rating.
The automatic door must be checked, started up, and tested by personnel skilled and trained about the product.
A technical dossier must be compiled for every automation, as established in the Machinery Directive.
Disconnect the power supply before working on the automation and before opening the cover.
Maintenance is of fundamental importance for the proper operation and safety of the automation. Check the efficiency of all parts every six months.
Use only original spare parts for maintenance and when replacing product components.
Cleaning operations must be performed with the power supply disconnected, using a damp cloth. Do not deposit or let water or other liquids penetrate into the automation or the accessories that are part of the system.

It is recommended to subscribe a maintenance contract.

The automatic swing doors must be designed and installed so as to protect users against the risk and danger of crushing, impact, and shearing between the leaf and adjacent parts near the door outline.
The person responsible for starting-up the automation must perform a risk assessment based on the place of installation and the type of users that could use the automatic door.
The automation NEXT 150, as provided for by the standard EN16005, must be equipped with the safety devices (sensors) compliant with the standard EN12978.



A = Main closing edge

B = Secondary closing edge

C = Opposite closing edge

The crushing and shearing dangers on the secondary closing edge must be protected structurally or by means of additional safety provisions (e.g., rubber covers).
Any residual risks must be properly highlighted.

1) DESCRIPTION OF THE MODELS

The automation NEXT 150 consists of an electro-mechanical motor to open pedestrian swing doors.

The electronic control equipment is located inside the automation.

A list of the swing door automation models NEXT 150 produced by Label is provided below:

NEXT 150 = automation for single leaf

NEXT 150B = automation with battery for single leaf

NEXT 150D = automation for double leaf

NEXT 150DB = automation with battery for double leaf

The automation NEXT 150 can be used with slide pull arm, or with articulated push arm.

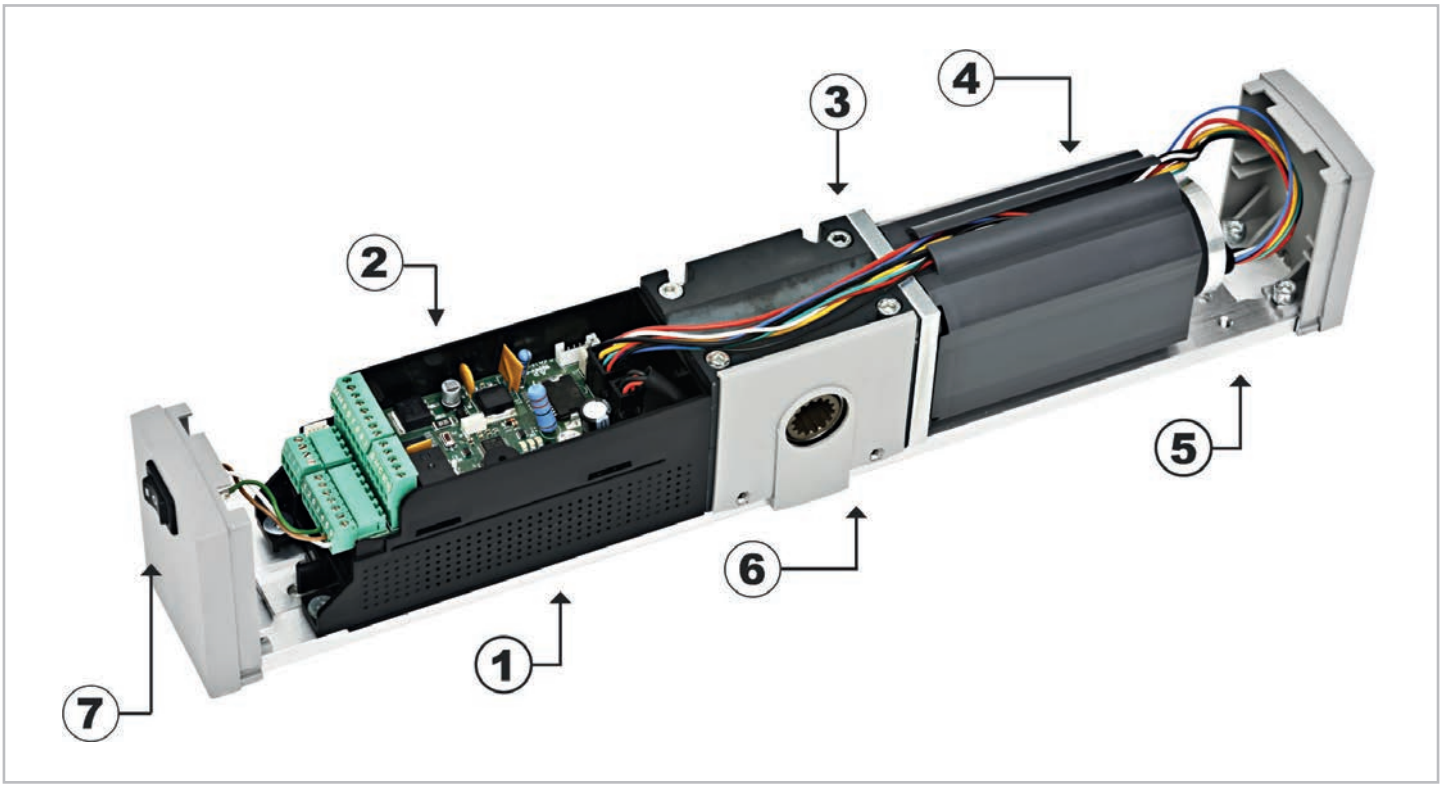
The automation must be installed in indoor environments.

All automation models are reversible, so in case of power failure it is possible to open the door manually.
Before starting installation, refer to the technical drawings in paragraph 4; for each type of arm they include the application design with installation dimensions and the chart that, depending on the automation model, provides the weight limits based on the length of the door leaf.
The technical data provided in the drawings refers to a typical installation, but may be influenced by variables inherent to each closing, such as friction, environmental conditions, alignment of the leaf hinges, etc....

2) TECHNICAL SPECIFICATIONS

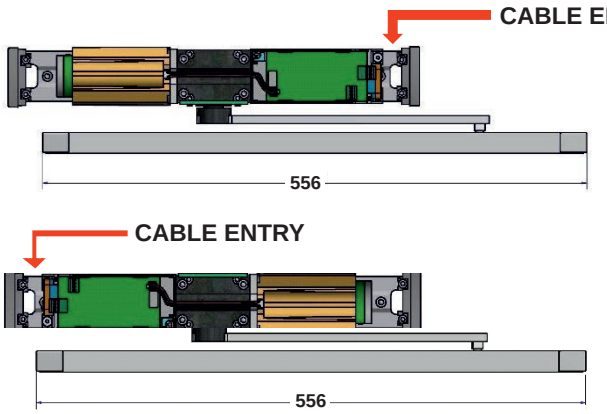
POWER SUPPLY	115/230V~, 50-60Hz
POWER	50W
TORQUE	25 Nm
LEAF MAX. WEIGHT	150 Kg
POWER SUPPLY OF EXTERNAL ACCESSORIES	24Vdc, 0.8A
EQUIPMENT CLASS	class II ⧈
ELECTRIC MOTOR	Brushless 24Vdc
AUTOMATION SIZE (LxHxD)	420 x 60 x 74 mm
STAND-BY CONSUMPTION	5W
AMBIENT TEMPERATURE	-15°C +50°C
FREQUENCY OF USE	continuous
LIMIT SWITCH AND ANTICRUSH SAFETY	controlled by encoder
REACTION TO OBSTACLES	reversal of direction
OPENING TIME FOR 90°	2 - 12 seconds adjustable
CLOSING TIME FOR 90°	4 - 12 seconds adjustable
PAUSE TIME	0 - 60 seconds adjustable
SOUND PRESSURE EMISSION	LpA ≤ 70dB (A)

3) NEXT 150 AUTOMATION COMPONENTS



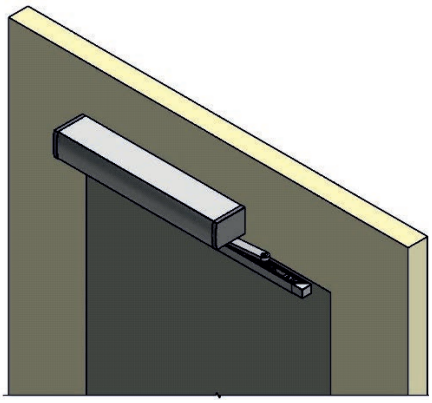
1. SWITCHING POWER SUPPLY NEXT-PW75
2. LOGIC BOARD NEXT-L150
3. GEARMOTOR WITH ENCODER
4. BATTERY NEXT-BAT 75
5. FIXING PLATE
6. PLASTIC PLATE
7. MANUAL PROGRAM SELECTOR

4) TECHNICAL DRAWINGS



OK

OK



The automation NEXT 150 can be installed without taking into account the direction of installation, because the door opening direction is automatically detected by the electronic control unit during the setup cycle.

PRELIMINARY CHECKS

Before installing the automation, verify the following requirements:

- The support structure of the automation should be firm, with no significant deformation.
- The structure of the leaf must be rigid and strong.
- The leaf hinges must be adequate and in good condition.
- The length and weight of the leaf must be within the operating limits of the automation.
- The movement of the leaf must be smooth and free of friction throughout the run.
- The door requires mechanical stops, consisting of a mechanical stop in open position and a final stop in closed position.

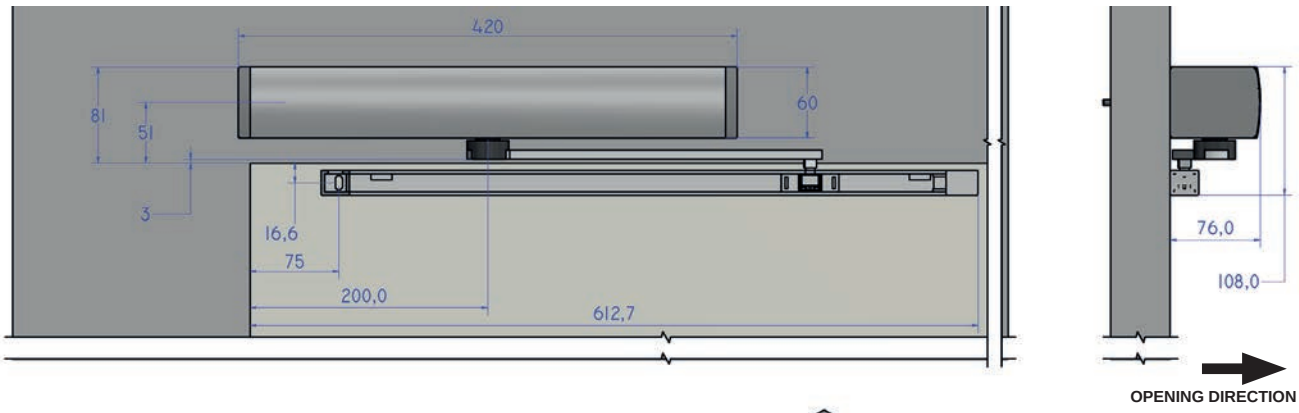
The mechanical opening stop is not supplied with the automation.

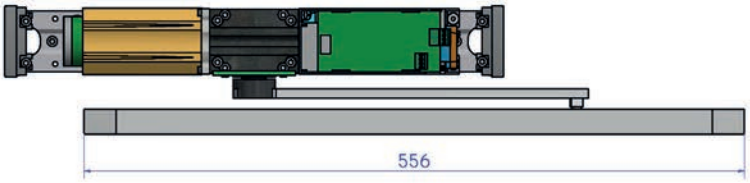
TOOLS REQUIRED:

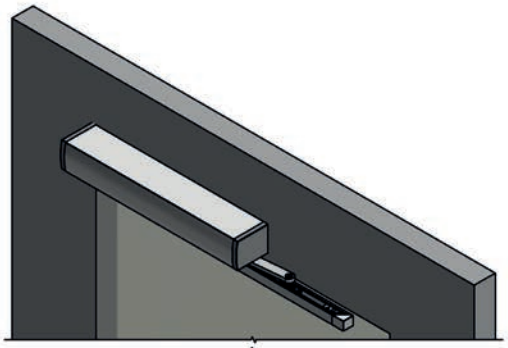
Tape measure, drill, level, flat-head screwdriver, cross-head screwdriver, Allen wrenches with handle (sizes 3 - 4 - 5).

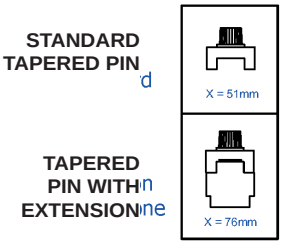
Before installing the automation plate, remove the plastic side caps, the enclosure of the electronic control unit and the motor unit.
Mount and secure the automation plate using screws and fixings suitable for the type of support (not supplied by Label).
After the plate has been installed, reinstall the motor unit, the electronic control unit, and the plastic side caps onto the automation.

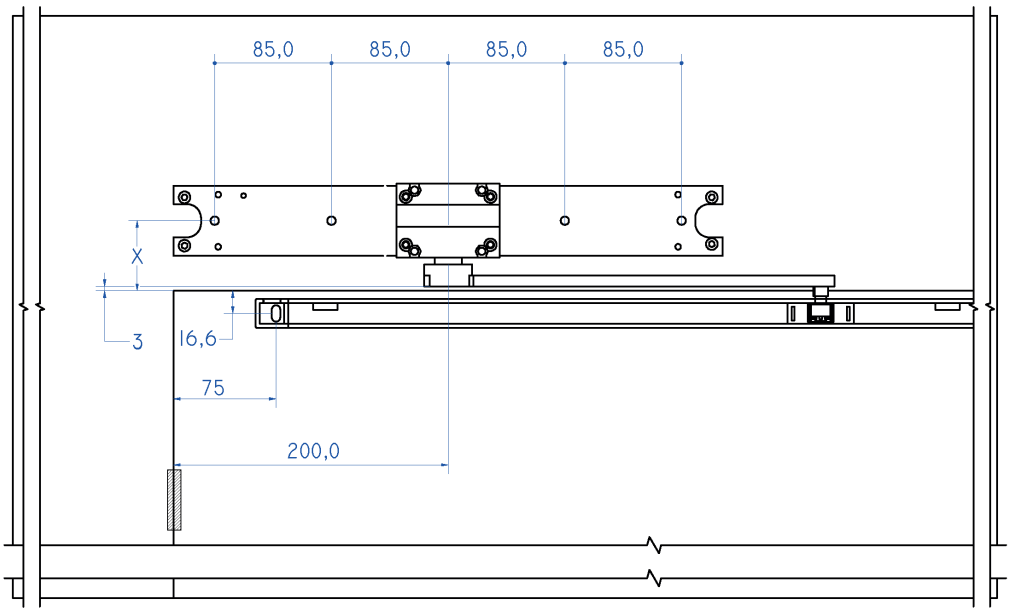
4.1) SLIDING PULL ARM NEXT-BDT

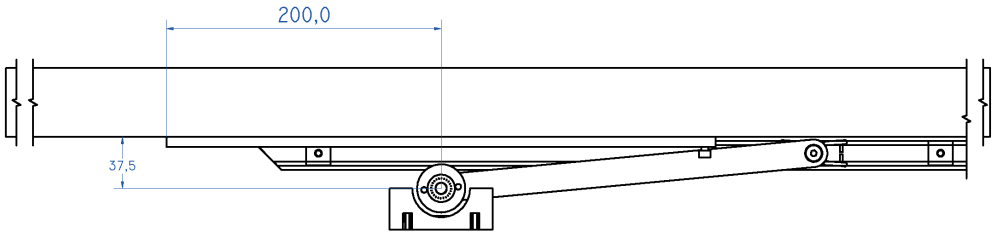


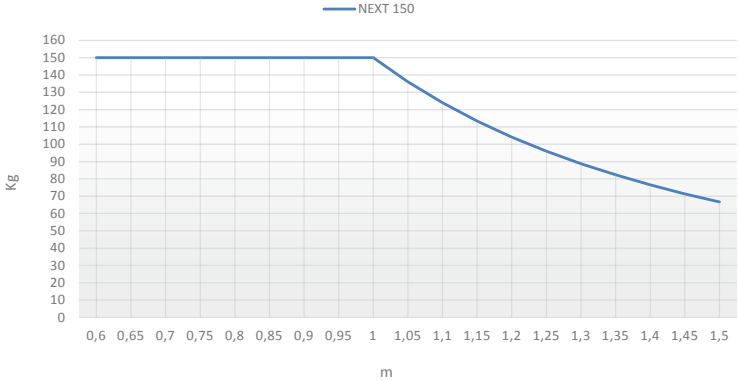




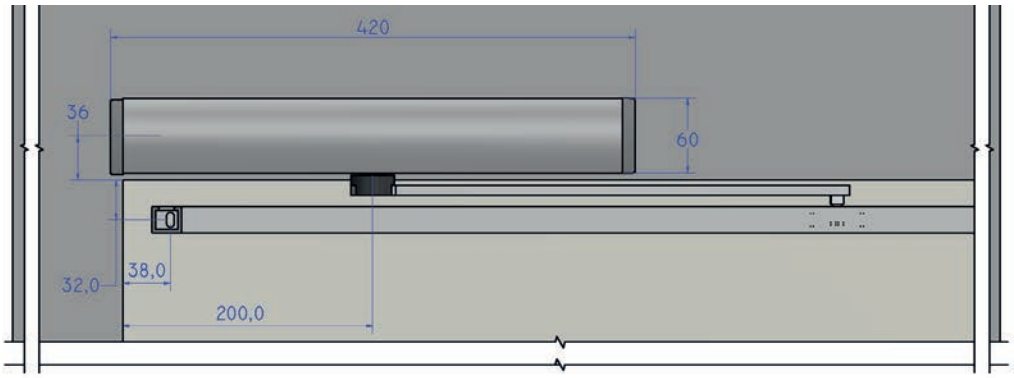


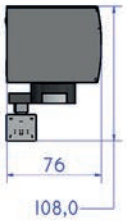




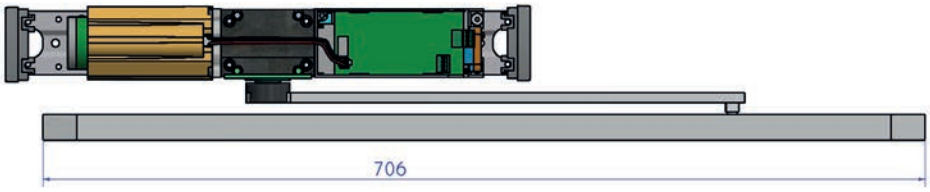


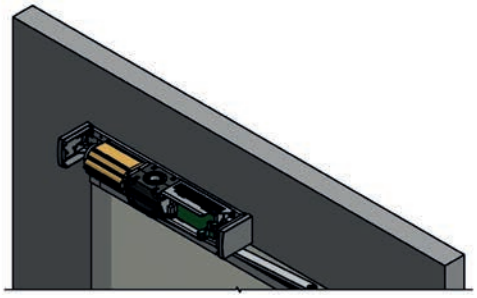
4.2) SLIDING PUSH ARM NEXT-BDS



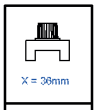


OPENING DIRECTION

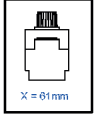


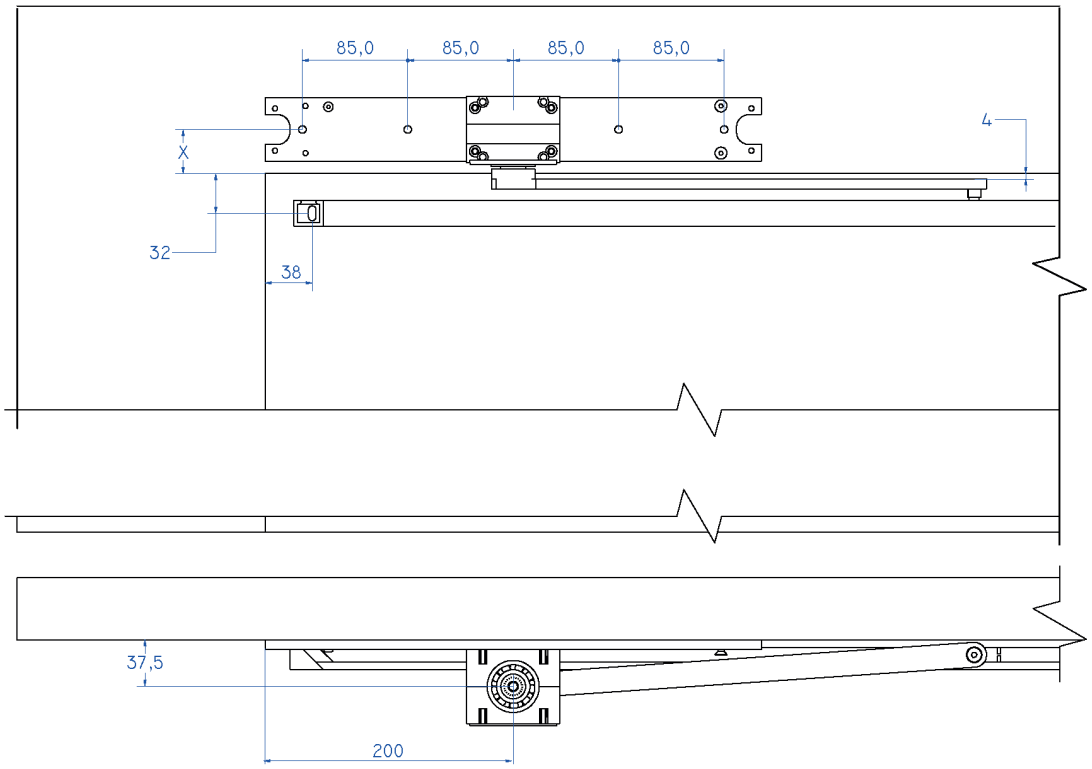


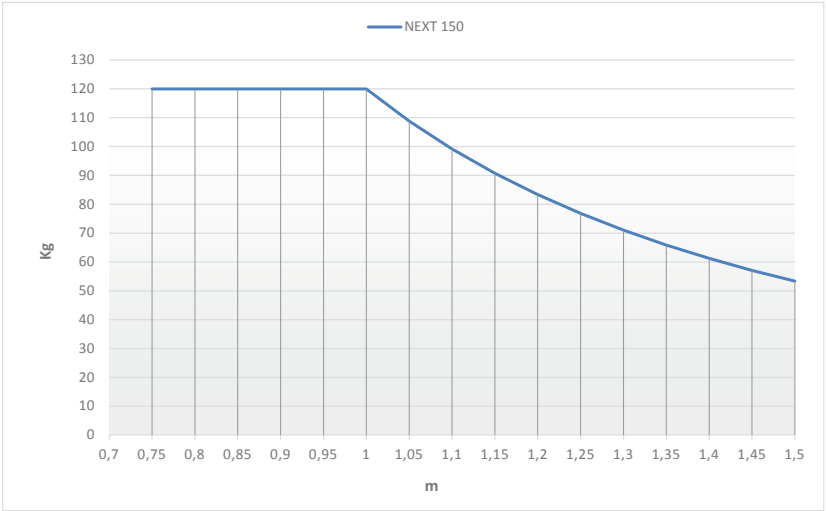
STANDARD TAPERED PIN



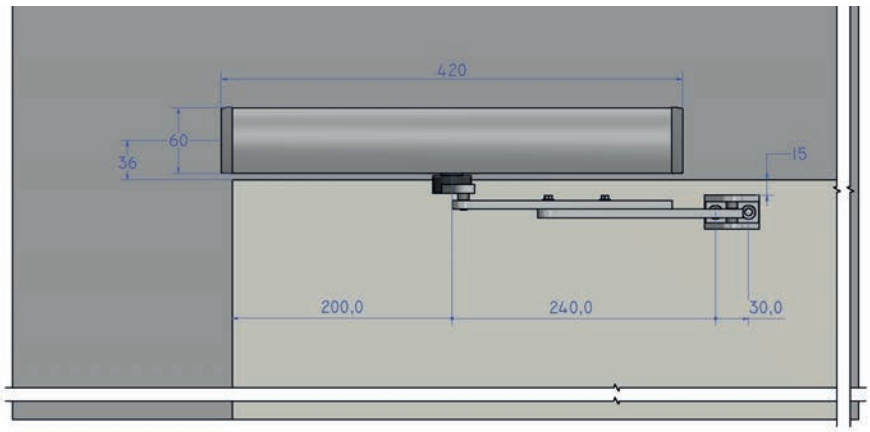
TAPERED PIN WITH EXTENSION

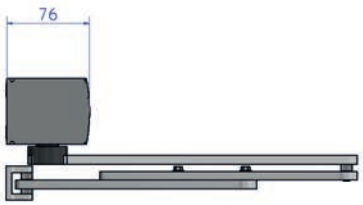




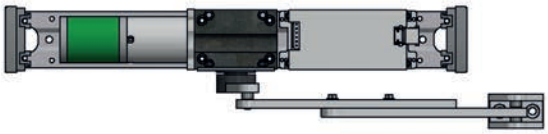


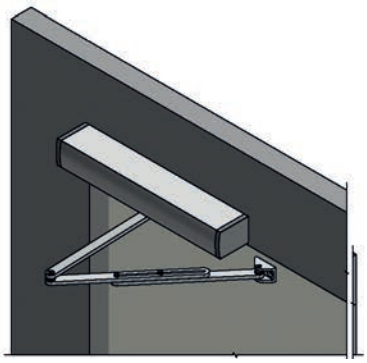
4.3) ARTICULATED PUSH ARM NEXT- BAS



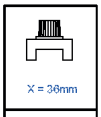


OPENING DIRECTION

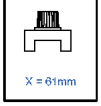


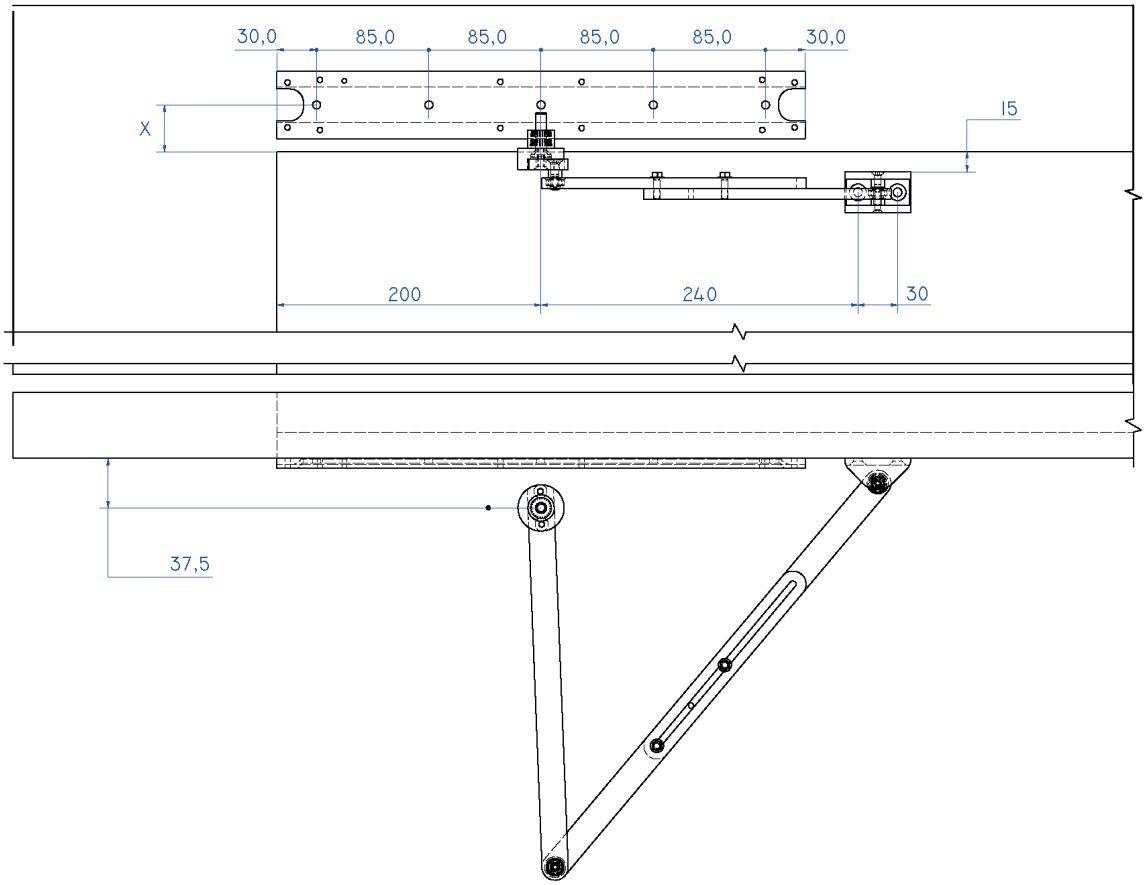


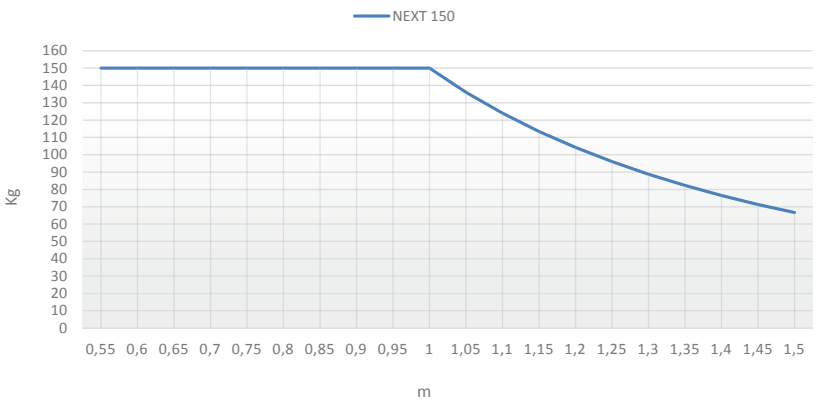
STANDARD TAPERED PIN



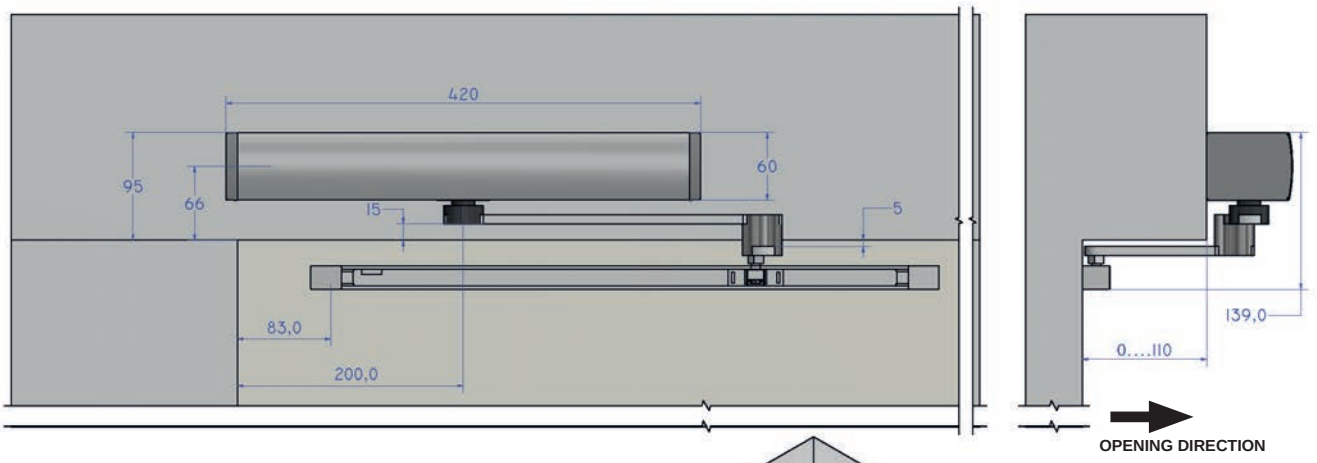
TAPERED PIN WITH EXTENSION

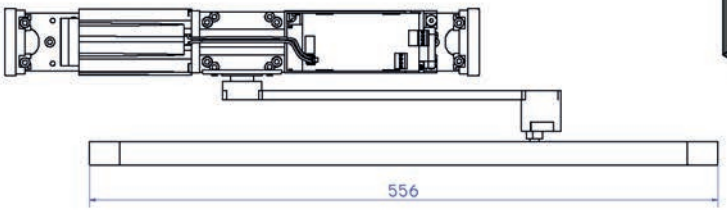


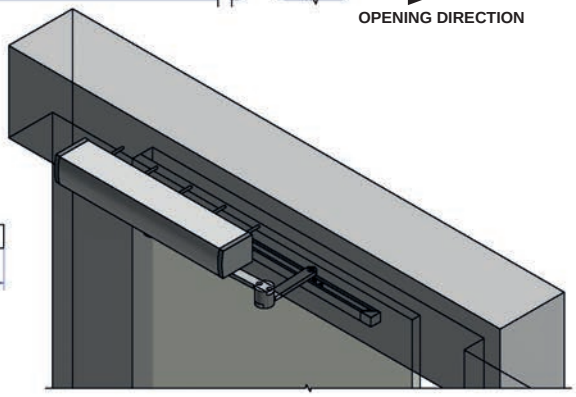




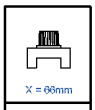
4.4) ELBOW SLIDING PULL ARM NEXT-B150



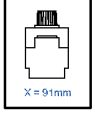


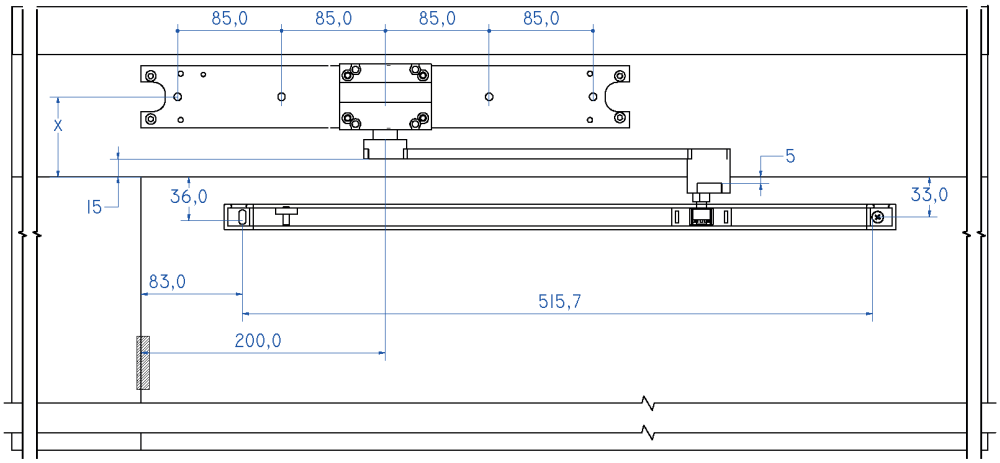


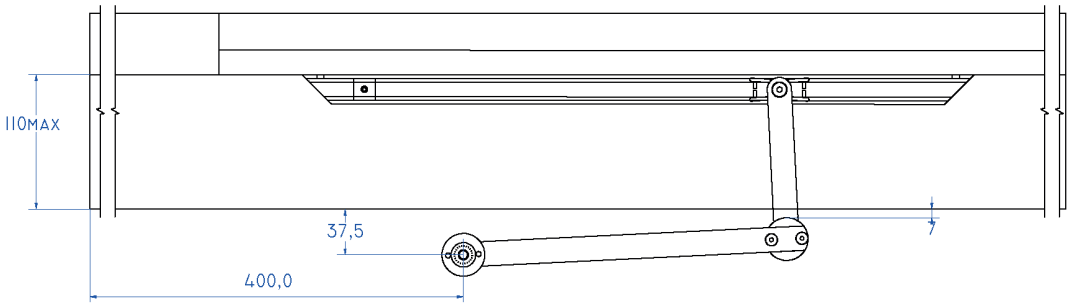
STANDARD TAPERED PIN

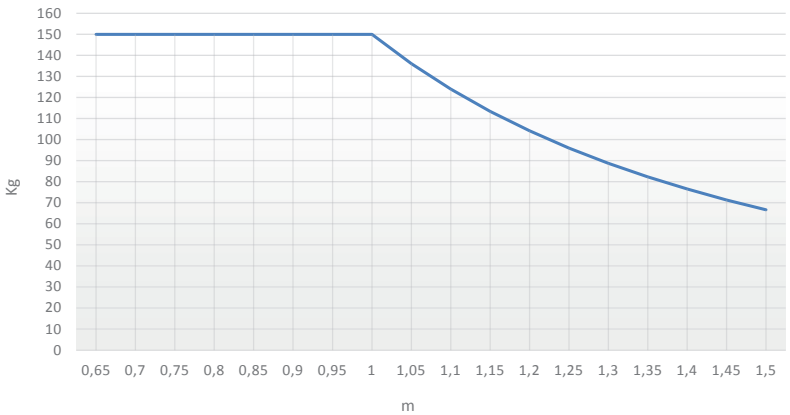


TAPERED PIN WITH EXTENSION

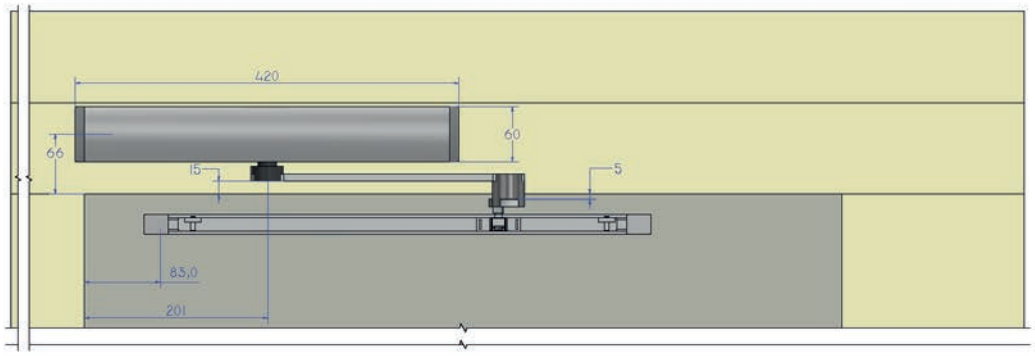


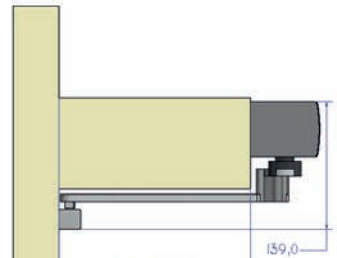




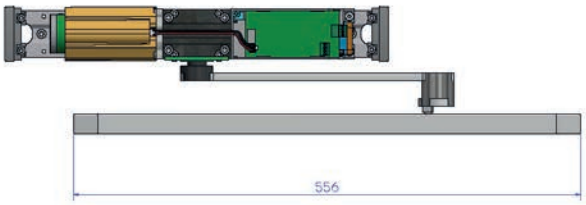


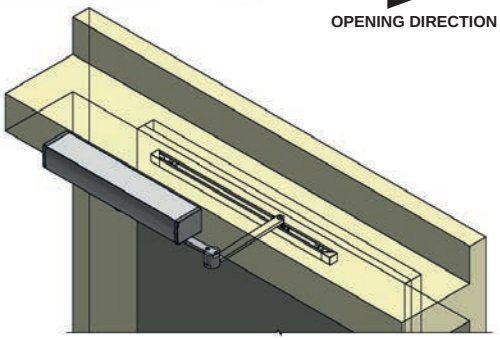
4.5) ELBOW SLIDING PULL ARM NEXT-B250



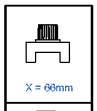


OPENING DIRECTION

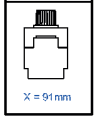


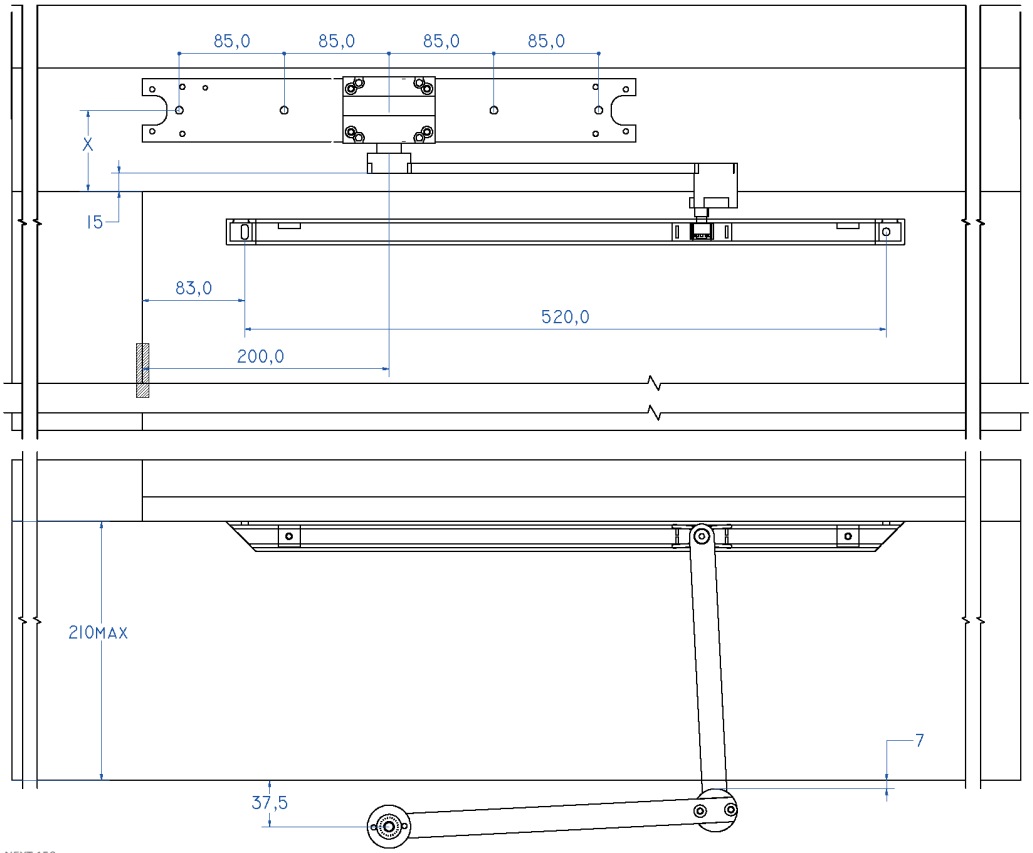


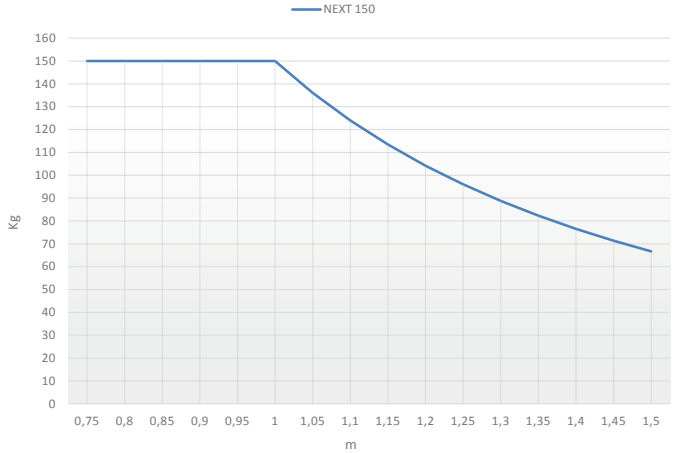
STANDARD TAPERED PIN



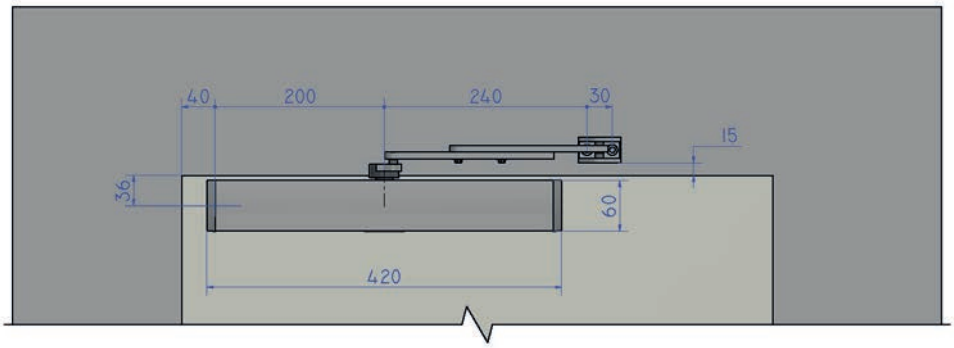
TAPERED PIN WITH EXTENSION

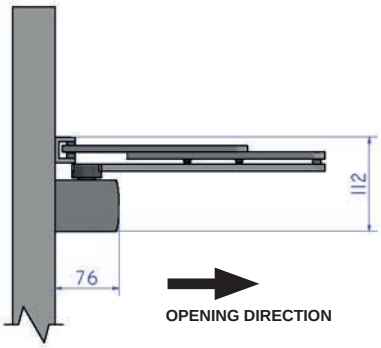


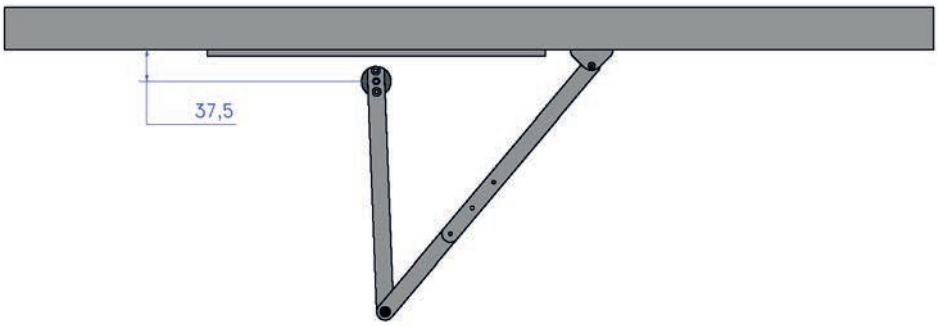


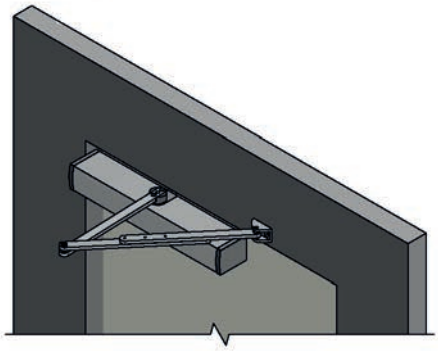


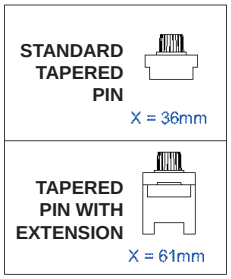
4.6) NEXT-BAS LEAF MOUNTING

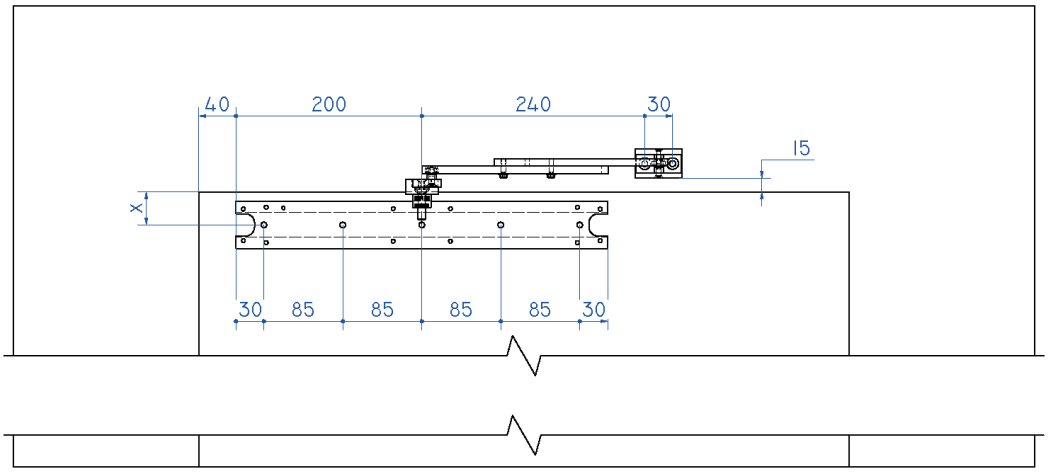




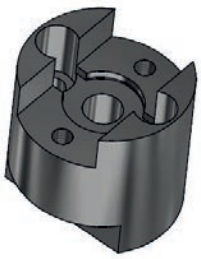








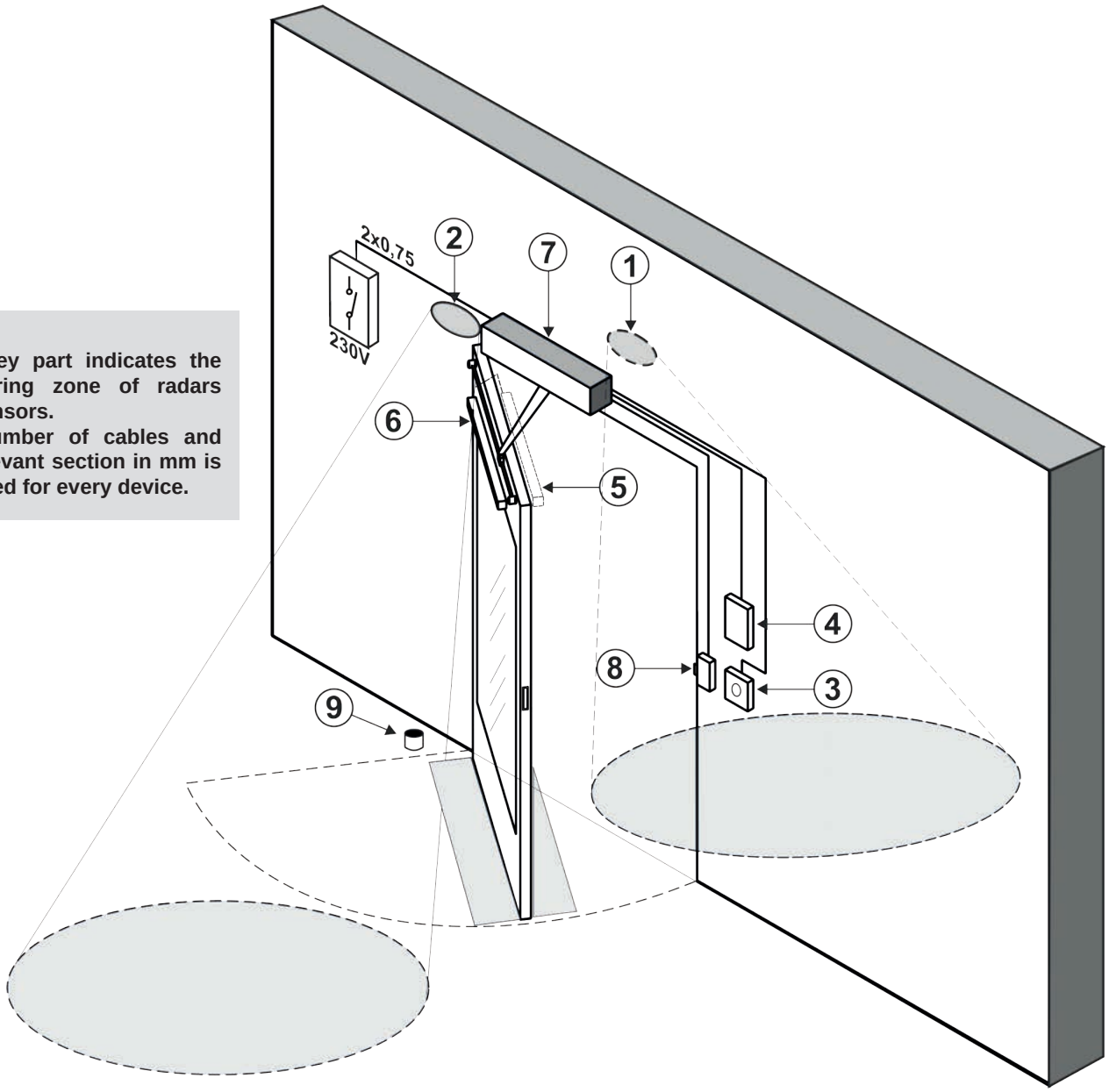
4.7) NEXT-EXT SHAFT EXTENSION PIN



NEXT-EXT
Shaft extension pin 25mm.
Applicable on all types of arms to increase the distance between automation and arm.

ELECTRIC SETUP

NOTE:
The grey part indicates the monitoring zone of radars and sensors.
The number of cables and the relevant section in mm is indicated for every device.

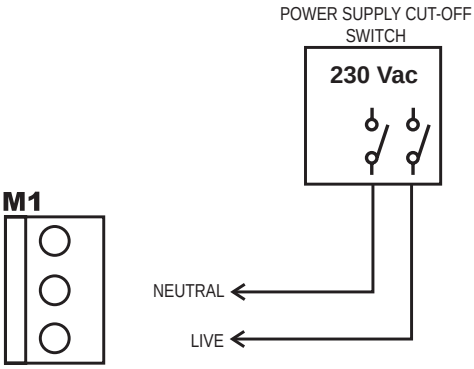


① **EXTERNAL RADAR (4x0.25mm)**
② **INTERNAL RADAR (4x0.25mm)**
③ **OPENING DEVICE (2X0.25MM)**
④ **PROGRAM SELECTOR (4X0.25MM)**
⑤ **CLOSURE SAFETY SENSOR (6x0.25mm)**
⑥ **OPENING SAFETY SENSOR (6x0.25mm)**
⑦ **AUTOMATION NEXT 150 (mains power 2x0.75mm)**
⑧ **ELECTRIC LOCK (2x0.5mm)**
⑨ **FLOOR STOP**

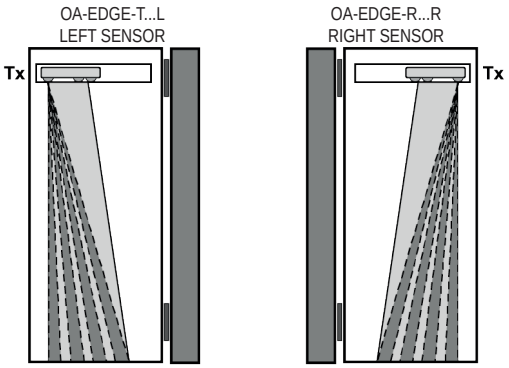
- The power supply line must be protected against short circuit and leakage to ground.
- On the power supply mains, provide an omnipolar switch/cut off device with contact opening distance of at least 3 mm
- Use self-extinguishing cables for electrical connections.

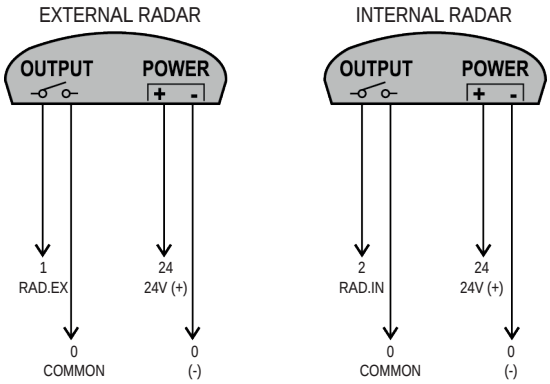
- Separate the mains power supply line from the extra-low voltage line control unit relative to control and safety accessories.
- On the plastic side caps of the automation NEXT 150 there are holes that must be broken open, through which the electric cables must be inserted. The installer must take care to secure the power supply cable inside the automation and, in particular, to limit the stripping of the primary sheath of the cable, so that the surface and air distances do not reduce if a wire comes off the terminal.
- If the automation is installed on a leaf, make the electrical connections using a junction box with suitable commercially available flexible tubes and joints.

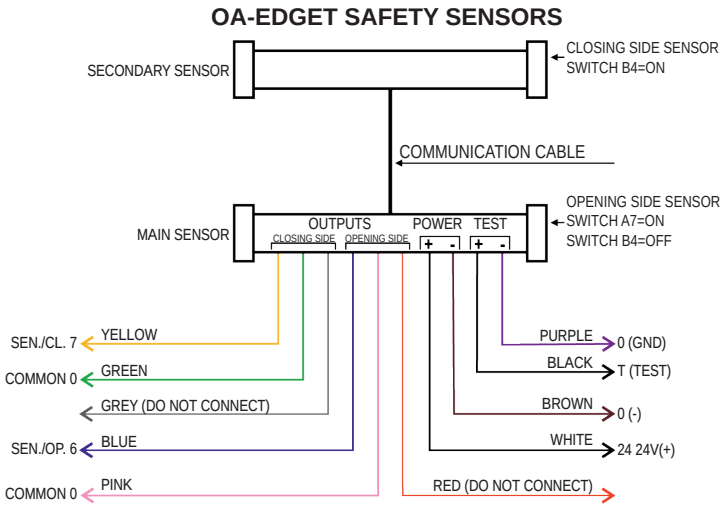
5) ELECTRIC CONNECTIONS

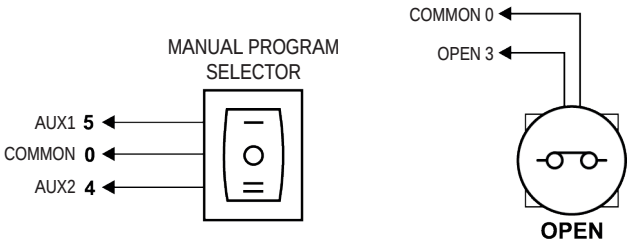


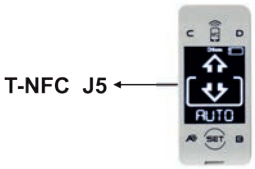
The lens with the TX marking must be positioned corresponding to the end of the door.

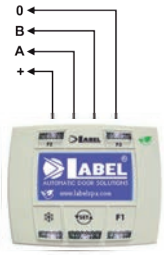




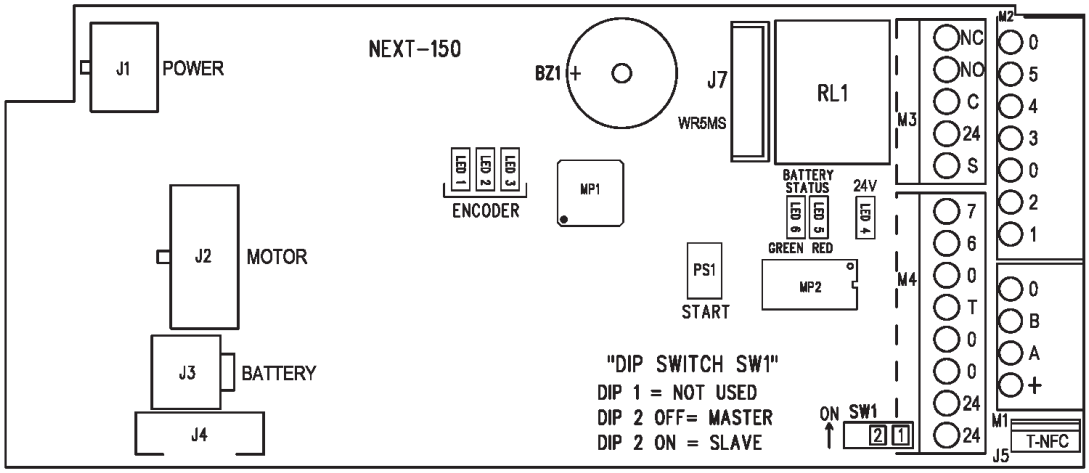






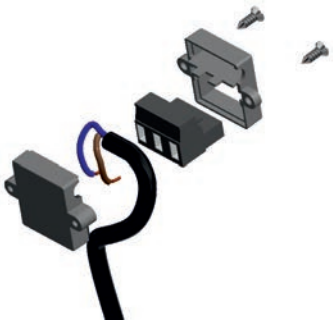


DIGITAL SELECTOR ET-DSEL



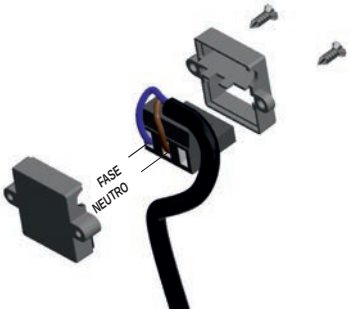
POWER SUPPLY TERMINAL 230V

STEP 1



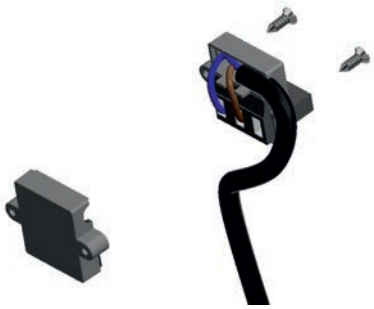
Separate view of the parts

STEP 2



Connection to the power supply terminal

STEP 3

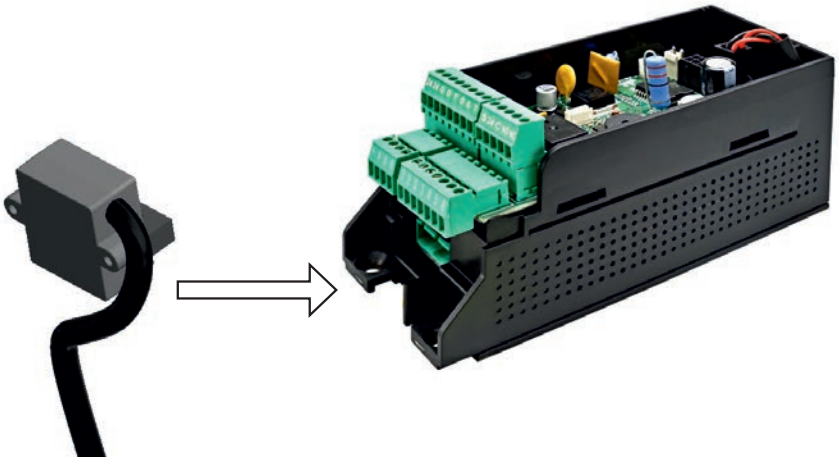


Insertion of wired terminal into the protective enclosure

STEP 4

Closing of the protective enclosure

STEP 5



Plug-in connection to the 230V input connector of the control unit of NEXT 150

ELECTRICAL CONNECTIONS OF NEXT-L150 CONTROL UNIT TERMINALS

Terminals 0-5	**AUX 1 (manual switch)**
Terminals 0-4	**AUX 2 (manual switch)**
Terminals 0-3	**OPEN input (N.O. contact if F21 = ON; N.C. contact if F21 = OFF)**
Terminals 0-2	**internal radar input (N.O. contact)**
Terminals 0-1	**external radar input (N.O. contact)**
Terminals 0-6	**input of opening safety sensor (N.C. contact)**
Terminals 0-7	**input of closing safety sensor (N.C. contact)**
Terminals 0-24	**24Vdc output (0 negative, 24V positive)**
Terminals 0-T	**Test for safety sensors (0 negative, T positive)**
Terminals S-24V	**Open Collector output.** **The mode of operation depends on the multi-function F41m.**
Terminals C - NO - NC	**(Common, normally open, normally closed)** **Potential free contact of relay RL1 to connect the electric lock.**

6) SAFETY SENSORS

This section describes how to connect and setup correctly some of the safety sensors compliant with the standard EN12987 available on the market, to ensure a safety level which corresponds to PL = c, Category 2 as provided for by the standard EN16005.

6.1) SAFETY SENSOR OA-EDGE T

This section describes how to connect and setup the safety sensors in accordance with the standard EN16005.

WIRING CONNECTION OF SENSOR OA-EDGE T				CONNECTION OF AUTOMATION NEXT 150 WIRING		
Wiring between the sensor and the terminal of the control unit NEXT-L150						
1. WHITE	(+)	Power supply		TERMINAL	24	(+)
2. BROWN	(-)	Power supply		TERMINAL	0	(-)
3. GREEN	COM	(Closing side)		TERMINAL	0	COM
4. YELLOW	N.C.	(Closing side)		TERMINAL	7	Closing safety sensor
5. GREY	N.O.	(Closing side)	do not connect			
6. PINK	COM	(Opening side)		TERMINAL	0	COM
7. BLUE	N.C.	(Opening side)		TERMINAL	6	Opening safety sensor
8. RED	N.O.	(Opening side)	do not connect			
9. BLACK	(+)	Test input		TERMINAL	T	TEST(+)
10. VIOLET	(-)	Test input		TERMINAL	0	GND (-)

DIP SWITCH SETTING ON OA-EDGE T		PARAMETERS ON DIGITAL SELECTOR ET-DSEL	
A7 = ON	Low level test input.	**F11 (S05) = ON**	Closing safety sensor
A8 = OFF	Input test delay 10msec.	**F12 (S06) = ON**	Opening safety sensor
B4 = OFF	Sensor installed on opening side.	**F13 (S07) = ON**	TEST of opening safety sensor
B4 = ON	Sensor installed on closing side.	**F14 (S08) = ON**	TEST of opening safety sensor
		F15 (S09) = OFF	Test level LOW

6.2) FLAT SCAN SAFETY SENSOR

CONNECTION OF FLAT SCAN SENSOR WIRING			CONNECTION OF AUTOMATION NEXT 150 WIRING		
Wiring between the sensor and the terminal of the control unit NEXT-L150					
1. GREEN	(+)	Power supply	TERMINAL	24	(+)
2. BROWN	(-)	Power supply	TERMINAL	0	(-)
3. YELLOW	COM	(Opening side)	TERMINAL	0	COM
4. WHITE	N.C.	(Opening side)	TERMINAL	6	Opening safety sensor
5. PINK	COM	(Closing side)	TERMINAL	0	COM
6. GREY	N.C.	(Closing side)	TERMINAL	7	Closing safety sensor
7. RED	(+)	Test input	TERMINAL	T	TEST(+)
8. BLUE	(-)	Test input	TERMINAL	0	GND (-)

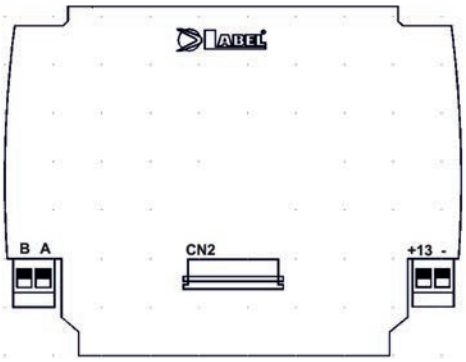
DIP SWITCH SETTING ON FLAT SCAN		PARAMETERS ON DIGITAL SELECTOR ET-DSEL	
DIP 1 ON	Sensor installed on opening side.	**F11 (S05) = ON**	Closing safety sensor
DIP 1 OFF	Sensor installed on closing side.	**F12 (S06) = ON**	Opening safety sensor
		F13 (S07) = ON	TEST of opening safety sensor
		F14 (S08) = ON	TEST of opening safety sensor
		F15 (S09) = OFF	Test level LOW

7) DIGITAL SELECTOR ET-DSEL – PURPOSE AND CONNECTIONS

The digital selector ET-DSEL is the essential tool for the installer, to configure the automatic door operation and perform the setup and function/parameter setting operations, to carry out the system diagnostics and to access the event memory containing information about the automation and its operation.
Access to the programming menu is protected by a safety technical password, to ensure that only specialised, authorized personnel can perform any operation on the automation.

The digital selector ET-DSEL can also be used by the final user, but only to select the operating mode of the automatic door; the user can also select the preferred language and set up a user password to prevent the use of the digital selector by unauthorized persons.

Connect the digital selector ET-DSEL to the control unit of the automation NEXT-L150, using a 0.33mm 4-wire twisted pair cable for RS485 applications.



Terminal	+13V	=	connect to the terminal + of the control unit NEXT-L150 (+ positive);
Terminal	-	=	connect to the terminal 0 of the control unit NEXT-L150 (0 GND);
Terminal	A	=	connect to the terminal A of the control unit NEXT-L150 (A);
Terminal	B	=	connect to the terminal B of the control unit NEXT-L150 (B);

For each subject-matter described in the following paragraphs, the use of the digital selector (hereinafter ET-DSEL) is explained in the specific case.

8) COMMISSIONING OF THE AUTOMATION (INITIAL SETUP)

Once the mechanical installation and the electrical connections are completed, manually slide the door leaf up to run end, to ensure that there is no friction during the motion.
The SET-UP operation is compulsory to allow the automation electronic control unit to learn the run positions.
When the setup begins, the door must be closed and during the run learning cycle, no obstacle must be in the leaf motion area.
The automation NEXT 150 is equipped with a function allowing it to learn the position of the side wall during the initial set-up.
This function is useful as it allows to store the wall position at the end of the opening run, and as a consequence to precisely set the point where the tripping of the opening safety sensor causes leaf slowdown in the last few degrees of the opening stage.
It is important that you adjust the safety sensor detection range before starting the automation setup cycle.
If the automation NEXT 150 controls a single leaf automatic door, switches 1 and 2 on the dip-switch SW1 of the logic board L-NEXT must be set to OFF.
If two automations NEXT 150 must control a dual leaf automatic door, refer to the paragraph "Dual leaf door".

Follow chapter 8.1 only if the digital selector ET-DSEL is new and is powered on for the first time.
Follow chapter 8.2 if the digital selector has already been used before.

8.1) FIRST START OF THE DIGITAL SELECTOR ET-DSEL

Power the automation NEXT 150 with mains voltage, the control unit buzzer emits a few quick, short beeps.
Language selection is shown on the display of the digital selector ET-DSEL;

use the buttons **F2** and ❄ to move the arrow in correspondence with the language desired.

Press the EXIT (SET) button to exit the “Language” section and enter the “Serial communication settings” section, as described under para. 8.2.

8.2) SERIAL COMMUNICATION SETTINGS

Provide mains voltage to the automation NEXT 150;
The control unit buzzer emits a few quick, short beeps.

The selector ET-DSEL automatically detects the presence of the automation electronic control unit (fig. A) and stores the L-NEXT board serial code (fig. B).

When the acquisition of the serial code is completed, the display must show the closed padlock symbol on letter **M** and the open padlock symbol on **?** if it is a single automation NEXT 150 (fig. C).
For a dual leaf swing door, refer to paragraph "DUAL LEAF DOOR COMMISSIONING".

Press the EXIT (SET) button to exit the “Serial communication setup” section and enter the general programming menu.

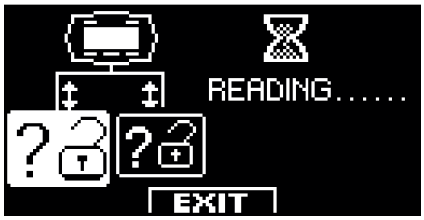


Fig. A

Fig. B

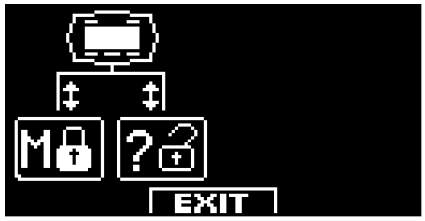
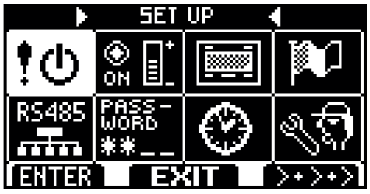


Fig. C

8.3) INITIAL SETUP

From the general programming menu, the F1 button allows moving forward among menu symbols. Select the INITIAL SETUP symbol.
Briefly press the ENTER button ❄ to access the section “INITIAL SETUP”.



Enter the 10-character technical password to access setup.
The default technical password set by Label for the digital selector ET-DSEL is “A-A-A-A-A-A-A-A-A-A”
Press the button in correspondence with letter A; an asterisk appears on the position of the first letter; repeat this operation for all the other characters required.
If the password you entered is correct, you enter the configuration section of the setup; if the password you entered is incorrect, you are returned to the general programming menu.

It is advisable to change the technical default password. See para. "Password Management".

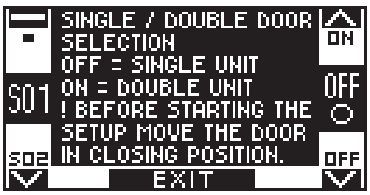
BEFORE STARTING THE SETUP, MOVE THE DOOR TO CLOSED POSITION. THE AUTOMATION AUTOMATICALLY DETECTS THE CORRECT DIRECTION OF TRAVEL DURING THE SETUP CYCLE.

FULL SETUP: mandatory for the first installation of the automation.
PARTIAL SETUP: to repeat leaf run learning if the mechanical limit stops are moved, without modifying the functions previously set.
WARNING! Partial setup does not work on a new automation on first installation. In this case, if it the Partial option is selected, the buzzer of the electronic control unit will report the fault emitting a continuous sound for 4 seconds. Press the button F1 to select the “FULL” setup.

In this section, the buttons F1 / F3 allow selecting the function OFF/ON status, while the button ❄ allows moving to the following function.
Press the button F2 to return to the previous function.

Select the door type: single leaf OFF.

(In the event of a dual leaf, refer to paragraph "Dual leaf door").

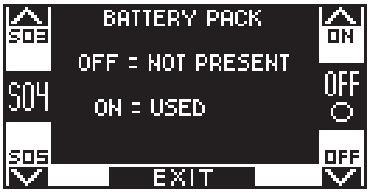


Select ON if there is an electric lock.

If the door is not equipped with an electric lock, keep OFF.

Only if the function S02 was set to ON
If there is an electric lock, select its type:
Pulse OFF (electric lock or electric strike) or permanent ON (electromagnet).

BATTERY PACK
OFF = NOT PRESENT
ON = USED



Select ON only if a closing safety sensor has been installed on the E.C. input (terminal 7)

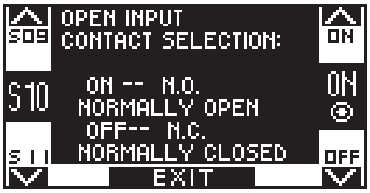
Select ON only if an opening safety sensor has been installed on E.O. input (terminal 6).

Only if function S05 was set to ON.
Select ON if a closing safety sensor was installed and monitored (as provided for by the standard EN 16005) in order to activate the sensor test at the beginning of each cycle.
Select OFF only if the safety closing sensor has not been setup to be monitored.
For details, refer to the "Safety sensors" paragraph.

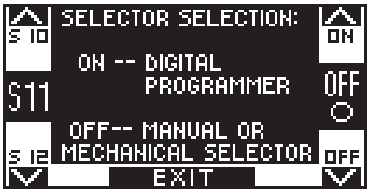
Only if the function S06 was set to ON
Select ON if an opening safety sensor was installed and monitored (as provided for by the standard EN 16005) in order to activate the sensor test at the beginning of each cycle.
Select OFF only if the opening safety sensor has not been setup to be monitored.
For details, refer to the "Safety sensors" paragraph.

Only if the functions S07 and/or S08 are set to ON.
Selects the logic state of the test, used by the automation control unit to monitor the safety sensors.
The setup depends on the characteristics of the sensor installed.
Select OFF when using sensors of the type "OA-EDGE T" or "FLAT SCAN";

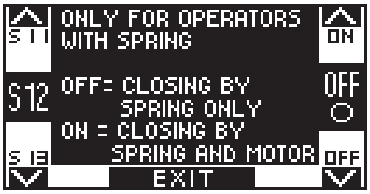
Contact configuration on OPEN input between terminals 0-3 of the control unit NEXT-L150.
Select ON with a normally open contact or when the OPEN input is not used.
Select OFF when you use a device with a normally closed contact.



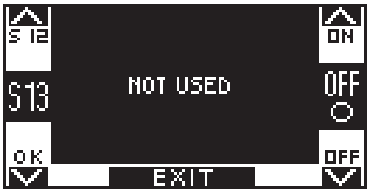
Choice of the work program selector.
OFF: Manual selector or mechanical selector EV-MSEL.
ON: Digital selector ET-DSEL or T-NFC.



Function NOT used.



Function NOT used.



The automation is ready for the set-up cycle.
Exit the detection range of the opening safety sensor during the setup, to allow the sensor to detect only the presence of any side wall at the end of the opening.

Press the button ❄ (OK).
The control unit buzzer emits 4 beeps and the set-up cycle starts at low speed.

Once the opening run is completed, a long beep indicates that the setup is successful.

8.4) FUNCTIONAL TESTING

Select the automatic operation of the door using the program selector.
Bring the manual program selector to position I, if you use it.

Refer to the “Program selectors” paragraph describing the types of selector provided for to select the automatic door operating mode.
To start an opening movement, press briefly the button PS1 (Start) on the control unit NEXT-L150 or engage the door opening devices.

Ensure that the door opening and closing cycle is properly performed and that thrust organs and safety sensors operate; to adjust the sensor detection range, refer to the instructions provided with the sensor.
The opening safety sensor detects the presence of any side wall at the end of the opening run thanks to the automatic learning function during the initial set-up.
Should you need to change the optical adjustment of the safety sensor after performing the initial setup of the automation, you can change the opening safety sensor inhibition distance by editing the parameter P03 (see paragraph "Potentiometers adjustment").

During door movement, intermittent signals emitted by the buzzer may be heard. They indicate that the limit power delivered by the automation has been reached, especially if leaf dimensions and weight are close to the limits allowed.

A short noise signal by the buzzer during start in opening is to be considered as normal, as the pick-up phase requires maximum force.

Adjust the thrust power using the parameter P04 of the N-DSEL selector (see paragraph “Potentiometers adjustment”).
To disable the buzzer noise signal when the power limit is reached, set the F34 function to ON (see “Functions setup”).

The buzzer noise for almost the entire run means that the leaf exceeds the limits allowed, or that the installation dimensions indicated in the assembly technical drawings were not respected, or that frictions exist on the door; in this case, the movements of the automatic door are not smooth and the opening/closing cycle may not be completed.

Safety on impact: make sure that the door stops and that the direction of movement is reversed if the motion of the door is prevented.

To set up the available functions, refer to the paragraph “Functions setup”.
To adjust the variable parameters, refer to section “Potentiometers adjustment”.

REPEATING THE INITIAL SETUP
Setup operation must be repeated if one of the following conditions changes:
leaf weight, leaf run.
In this case, select the PARTIAL option from “SETUP MODE” to perform only the leaf run learning without changing the current settings.

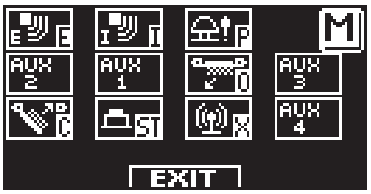
8.5) INPUT DIAGNOSTICS

The selector ET-DSEL allows checking the inputs status to ensure proper operation of all devices connected with the automation NEXT 150.
To enter “Input Diagnostics” while the automatic door operating program is shown on the display, hold the button F2 pressed for about 3 seconds.

The letter **M** is displayed on the top right.

The display shows the symbols of all automation inputs.
If an input is activated, the corresponding symbol lights up with an arrow nearby.

E	**External radar**
I	**Internal radar**
ST	**PS1 (start button) or RX1 radio control**
P	**OPEN**
C	**Closing safety sensor**
O	**Opening safety sensor**
AUX 1	**AUX 1 (activates if the manual program selector is in position I)**
AUX 2	**AUX 2 (activates if the manual program selector is in position II)**



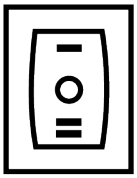
AUX 3, AUX 4, = **NOT USED**

9) PROGRAM SELECTORS

The program selector allows the user to select the operating mode of the door.
You can use the following devices, depending on the choice made: manual selector integrated into the automation side of NEXT 150, mechanical key selector EV-MSEL and digital selector ET-DSEL or digital selector T-NFC.
Each program selector is fully described below.

9.1) MANUAL PROGRAM SELECTORS

The 3-position manual program selector is the basic solution provided for the onboard automation. The operation of this selector is enabled when the function F01 is OFF (default).



Position **I** = Automatic bidirectional program
The door automatically opens after an opening command.

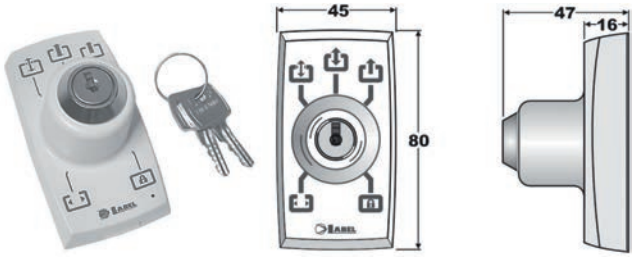
Position **0** = Manual free door
if function F06 is set to **OFF** (default)
Automatic operation is disabled and the door can be opened manually.

Position **II** = Night lock program
if function F06 is set to **ON**
The door can only be opened by the OPEN input or by radio control if the radio receiver is installed.

Open door program
The door stops in fully open position.

9.2) MECHANICAL KEY SELECTOR EV-MSEL

The 5-position mechanical key selector can be used as an alternative to the manual selector, and its operation is enabled when the function F01 is OFF (default).



Disconnect the wires of the manual selector from the terminal box of the control unit NEXT-L150 if you have installed the mechanical selector EV-MSEL.

ELECTRIC CONNECTIONS
Terminal 1 of EV-MSEL= to terminal 2 (Internal radar) of the control unit NEXT-L150.
Terminal 2 of EV-MSEL= to terminal 0 (Common) of the control unit NEXT-L150.
Terminal 3 of EV-MSEL= to terminal 5 (AUX 1) of the control unit NEXT-L150.
Terminal 4 of EV-MSEL= to terminal 4 (AUX 2) of the control unit NEXT-L150.

For any check on proper connection and operation of the key mechanical selector, enter inputs diagnostics (see par. 8.5) to ensure that different key positions correspond to the activation of the following symbols:

=	I I	**and** AUX 1
=	**no active symbol**	
=	AUX 1	
=	AUX 1	**and** AUX 2
=	AUX 2	

OPERATING MODE
Insert and turn the key of the selector EV-MSEL to select the desired program.

	Open door program **The door stops in fully open position.**
	Manual free door **Automatic operation is disabled and the door can be opened manually.**
	Automatic bidirectional program **The door automatically opens after an opening command.**
	Only unidirectional automatic program output **To disable entry detection on external Radar input.**
	Night lock program **The door can only be opened by the OPEN input or by radio control if the radio receiver is installed.**

The key can be removed from the selector in any position in order to prevent unintentional changes.

9.3) DIGITAL SELECTOR ET-DSEL – USED AS PROGRAM SELECTOR

The digital selector ET-DSEL can be installed in the system and used by the user like a program selector, as an alternative to the manual and mechanical selector if you need a more comprehensive tool in terms of functions and graphics.

To enable ET-DSEL operation as program selector, set the F01 function to OFF (see paragraph “Functions setup”).

Pressing briefly the button SET, select the automatic door operating mode.
Whenever the button is pressed, you switch from a work program to the next.

The work programs which can be selected using the button are described below SET

Automatic bidirectional program
The door automatically opens after an opening command.

Automatic unidirectional exit only program
To disable entry detection on external Radar input.

Automatic unidirectional entry only program
To disable exit detection on internal Radar input.

Open door program
The door remains motionless in the position of complete opening.

Night lock program
The door can only be opened by the OPEN input or by radio control if the radio receiver is installed.

Manual free door
Automatic operation is disabled and the door can be opened manually.

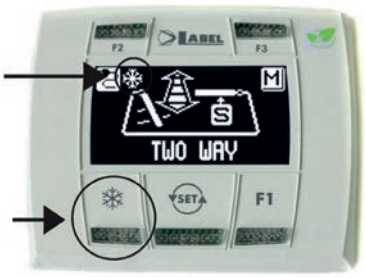
Power lamp display

The symbol indicates the presence of mains power voltage and the battery, if any, is operating.

- The symbol indicates the absence of mains power voltage. Automation operation is ensured by the emergency battery, if any, which is in working order.
- The symbol with mains power voltage indicates that the battery is damaged.

  In this case, the control unit buzzer emits a beep before each door opening for 10 cycles (if function F10 OFF), or the door opens and remains open (if function F10 ON).
- The symbol without mains power voltage indicates that the emergency battery is about to run out.

Operation of other buttons located on the panel of the program selector ET-DSEL



❄

Partial opening, is used only in a double leaf door automation
To activate the partial opening press briefly the button ❄;
The symbol ❄ on the display indicates that the function is on.

In a dual leaf door, only the first leaf (Master) opens if the opening command is given from the internal or external radar inputs.
Partial opening only operates in bi-directional, unidirectional, and open door automatic programs.
To disable partial opening, press again briefly the button ❄.
For details, refer to paragraph "Dual leaf swing door".

F2

Disabling the virtual spring function (if F40 = OFF)
Briefly press the button F2 to disable the virtual spring function activated by the potentiometer P22 (see the paragraph "Potentiometer settings")
Press again button F2 in order to activate the virtual spring function. The symbol F2 on the display disappears.

Disabling the step-by-step operation (if F40 = ON)
Briefly press the button F2 to disable the step-by-step operation previously enabled by setting F18 ON (see the paragraph "Functions settings") and enable the automatic closing of the door.
Press again button F2 in order to enable the step-by-step operation.
The symbol F2 on the display disappears.

F1

Door opening command
Press the button F1 to open the door, but only in bi-directional and unidirectional programs (if function F32 OFF).
Press F1 to open the door in all operating programs, both automatic and night lock (if function F32 ON).

F3

It is used only in a MASTER / SLAVE double leaf door automation

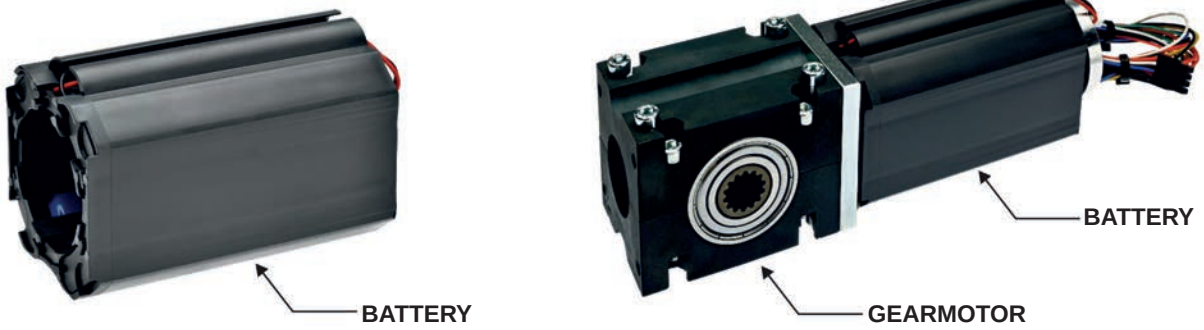
In the main screen of the work program, the button F3 has no operating function. Its function is just to toggle from MASTER to SLAVE and ensure the proper communication between the automations and the selector ET-DSEL.

M is displayed on the top right of the display when you select the Master automation, while S is displayed when you select the Slave automation.

When the operation is correct, the work program of the door both in **M** and in **S** is displayed, otherwise in the event of communication fault, it is displayed "NO SIGNAL" related to the automation that is not working properly.

"SCHEDULED MAINTENANCE" message
If the display shows the message "SCHEDULED MAINTENANCE", contact the authorized service centre to request the service visit on the system.

10) BATTERY PACK NEXT-BAT75



Battery supplied assembled in the plastic casing located around the motor body for the best use of the inner spaces of the automation.
Plug-in connection to connect the battery to the control unit of NEXT 150.
The battery charging and monitoring circuit is incorporated in the electronic control unit of NEXT 150.
Battery life approx. 1 hour in continuous operation and 3 hours in standby.

Connect the battery to the connector J3 of the control unit NEXT-L150.
To enable battery operation, set the F07 function to ON
or S04 = ON from the initial setup.

The battery charger integrated in the control unit automatically checks the battery charge level and displays a green and a red LED (see table "LED SIGNALLING")

Operation
The battery activates in case of mains power failure, allowing the automation NEXT 150 to keep operating.
Battery life depends on several factors, such as the number of operations carried out, the weight of the leaves, the external devices connected, etc.
The charged battery can supply energy for approximately 1 hour, with continuous door opening/closing cycles.

IMPORTANT!

BATTERY TYPE: NiMH, 19.2V - 600mAh

LED SIGNALLING

SIGNALLED EVENTS	GREEN LED DL6	RED LED DL5
BATTERY DISCONNECTED	ON	ON
BATTERY CHARGING	BLINKING	OFF
BATTERY CHARGED WITH MAINS VOLTAGE	ON	OFF
BATTERY LOW	OFF	BLINKING
BATTERY CHARGED WITHOUT MAINS VOLTAGE	OFF	ON

WARNING!

- Periodically check battery efficiency
- To allow recharging, the batteries must always be connected to the electronic control unit
- The equipment must be disconnected from the mains when removing the batteries
- In case of replacement, always use genuine batteries
- Replacement must be performed by qualified personnel
- Remove batteries from the equipment before its disposal
- Batteries contain polluting substances; therefore they must be disposed of in accordance with the provisions of local regulations

11) GENERAL PROGRAMMING MENU

To enter the general programming menu while the automatic door operating program is shown on the display, hold the button SET pressed for about 5 seconds.

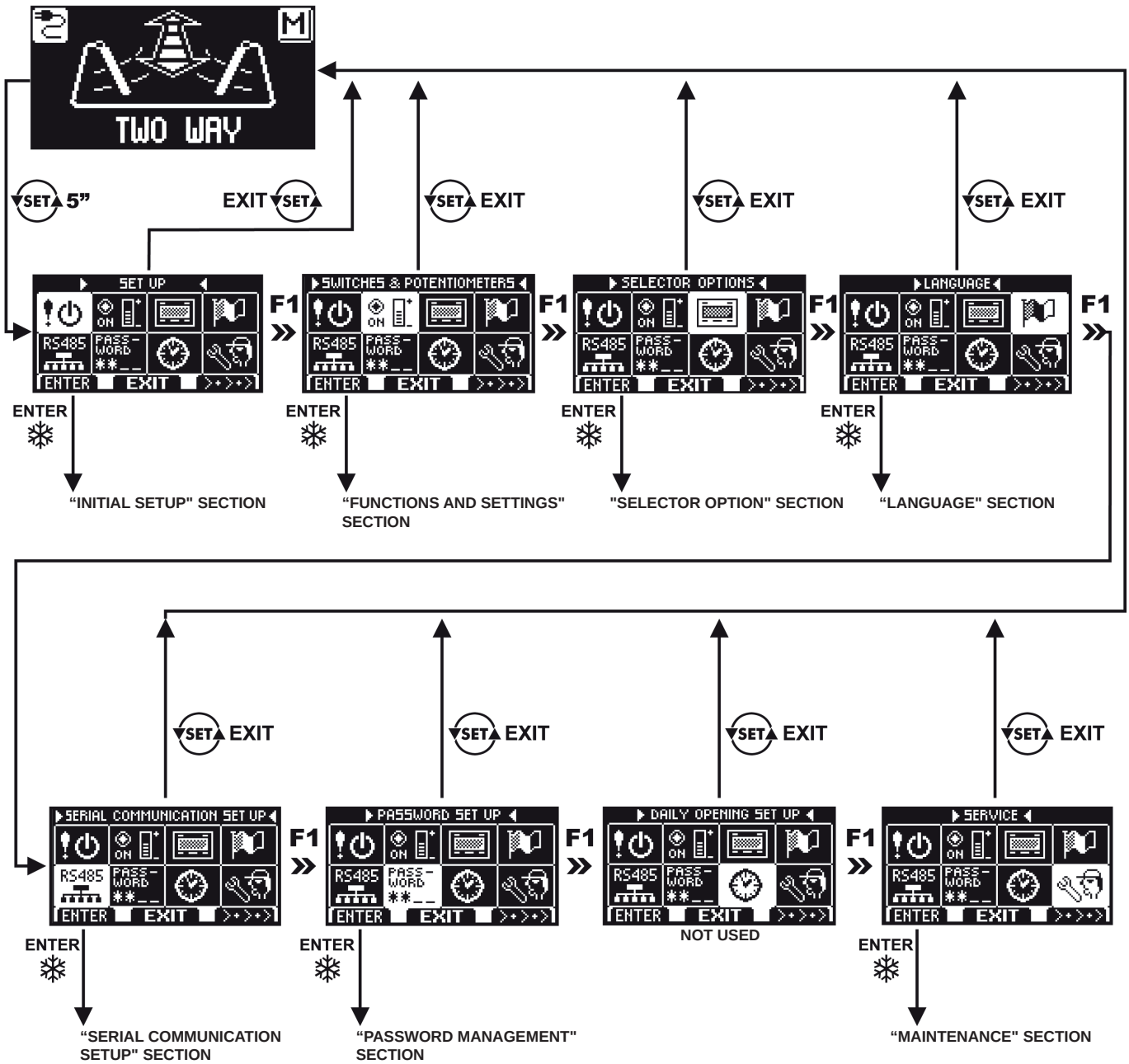
The programming menu includes several submenus organized by topic (Diagram 1).

Choose the section you wish to access by pressing the button F1 >> .
The selected menu icon is highlighted and the section title appears at the top of the display.

To enter the selected sub-menu, press briefly the ENTER button ❄.

To exit the general programming menu and return to the work program view, press the EXIT button SET.

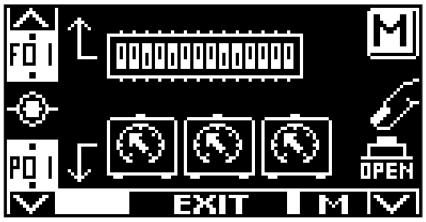
DIAGRAM 1



- **If you enter the initial setup section, see paragraph 8.3.**
- **If you enter the serial communication settings section, see paragraph 8.2 for single leaf door, or paragraph 19.2 for dual leaf swing door.**
- **For the other submenus, refer to the paragraph related to the section you entered**

12) FUNCTIONS AND SETTINGS

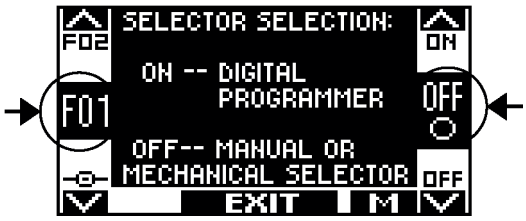
To enter, type the 10-character technical password (for more information, refer to the “Password management” paragraph)



The buttons in this sub-menu are used as follows:

F2 button = to access the functions F setting (see “Function setting” paragraph);
button ❄ = to access the P parameters setting (see the “Potentiometers adjustment” paragraph);
F1 button = control door opening;
F3 button = it is used only in case of dual leaf door to select whether you want to act on the functions and parameters of the Master or Slave automation; the letter M or S to the bottom right of the display indicates which automation has been selected.
In case of single leaf automation, on the top right of the display it is displayed the letter M.
SET button = to return to the general programming menu.

12.1) FUNCTIONS SETTING



In this section the display describes the purpose of the selected function;
the button F1 sets the function status to OFF;
the button F3 sets the function status to ON;
the button F2 allows to go to the next function;
the button ❄ allows returning to the previous function;

For information about the operation of each function, please refer to the "FUNCTION TABLE".

12.2) POTENTIOMETER ADJUSTMENT

In this section the display describes the selected parameter type;
the button F1 decreases the set percentage value;
the button F3 increases the set percentage value;
the button ❄ allows to go to the next parameter;
the button F2 allows to return to the previous parameter.

For information about the operation of each potentiometer, please refer to the “POTENTIOMETER TABLE".

Below is the explanation of the operation of each potentiometer.

FUNCTION TABLE	
	[1] Function to be set in the menu "Initial Set-up" of the digital selector before door start.
	* Default setting of the function.
	" For dual leaf swing door. In the Slave column are marked with the letter S the functions that must be set separately on the Slave automation in case of dual leaf door. The other functions not marked with S are set only on the Master automation.

FUNCTION	STATE	EXPLANATION	"SLAVE
F01[1]	**OFF***	Selection of the work program switch: embedded manual selector or key mechanical selector EV-MSEL	
	ON	Selection of the work program selector: digital selector ET-DSEL or T-NFC.	
F02[1]	**OFF**	Electric lock output disabled.	**S**
	ON	Electric lock output enabled. The electric lock is enabled in all the work programs of the door.	
F03[1] Function enabled if F02 = ON	**OFF**	Pulse operation for electric lock or electric striker. Refer to the paragraph "Applications with electric lock"	**S**
	ON	Permanent operation for electromagnet. Refer to the paragraph "Applications with electric lock"	
F04	**OFF***	The electric lock output is enabled in all work programs.	**S**
	ON	The electric lock output is enabled only in the work program "night lock"	
F05 Function enabled if F03 = ON	**OFF***	Electric lock release disabled in the work program "manual free door"	**S**
	ON	Electric lock release enabled on each closing in the work program " manual free door"	
F06 Function enabled if F01 = OFF	**OFF***	Operating mode of manual program selector in position II = selection of the work program "night lock"	
	ON	Operating mode of manual program selector in position II = selection of the work program "open door"	
F07[1]	**OFF***	Battery module not installed	**S**
	ON	Battery module NEXT-BAT 75 installed	
F08	**OFF***	Operation with battery: in the absence of mains power supply, the door continues to operate normally	
	ON	Operation with battery: in the absence of mains power supply, the door opens and remains open in the automatic work programs	
F09	**OFF***	Operation without mains power supply with battery low: the door operates normally	
	ON	Operation without mains power supply with battery low: the door opens and stays open	
F10	**OFF***	Battery monitoring: if the battery is low or damaged, the control unit buzzer beeps before opening for 10 cycles	
	ON	Battery monitoring: if the battery is low or damaged, the door opens and stays open in automatic programs	
F11[1]	**OFF**	Closing safety sensor input disabled; when the safety sensor is not installed on the E.C. input	**S**
	ON	Closing safety sensor input enabled; closing safety sensor on E.C. input installed.	
F12[1]	**OFF**	Opening safety sensor input disabled; when the safety sensor is not installed on the E.O. input	**S**
	ON	Opening safety sensor input enabled; opening safety sensor on E.O. input installed	
F13[1] Function enabled if F11 = OFF	**OFF**	Tests on closing safety sensor E.C. disabled; for sensors which are not pre-arranged for monitoring	**S**
	ON	Test on closing safety sensors E.C. enabled; for sensors pre-arranged for monitoring by the automation (cat.2/pl.c). For details, refer to the paragraph "Safety sensors".	

F14[1] Function enabled if F12 = ON	**OFF**	Tests on opening safety sensor E.O. disabled; for sensors which are not pre-arranged for monitoring	**S**
	ON	Test on opening safety sensors E.O. enabled; for sensors pre-arranged for monitoring by the automation (cat.2/pl.c). For details, refer to the paragraph “Safety sensors”.	
F15[1] Function enabled if F13 or F14 = ON	**OFF**	Safety sensors test with LOW logic level. For information, please refer to the paragraph "Safety sensors".	**S**
	ON	Safety sensors test with HIGH logic level. For information, please refer to the paragraph "Safety sensors".	
F16	**OFF***	Selecting the work program “Night Lock”, the door remains closed and can be opened only actuating the input OPEN or the Spyco radio control with the radio receiver N-RX.	
	ON	Selecting the work program “Night Lock”, the door opens and remains open 10” before reclosing to allow leaving the building.	
F17	**OFF***	Disabled function OFF	
	ON	Disabled function ON Refer to the paragraph “Courtesy operation for disabled” for details on the operating mode.	
F18	**OFF***	Operation with automatic closing	
	ON	Step-by-step function: an OPEN command opens the door; a second command is required to close back the door.	
F19 Function enabled if F18 = ON	**OFF***	In the step-by-step function, the door, when open, can be closed only with a closing command given by the OPEN input or by the Spyco radio control with the radio receiver NEXT-RX.	
	ON	In the step-by-step function, the door, when open, automatically closes if the closing command is not given within 30 seconds.	
F20	**OFF***	Standard operation on the internal and external radar inputs.	
	ON	Operation with separate opening and closing commands. The external radar input controls the opening, the internal radar input controls the closing, without automatic closing. The OPEN input operates in standard mode.	
F21[1]	**OFF**	OPEN input configuration: normally closed contact. When a device with N.C. contact is installed	
	ON	OPEN input configuration: normally open contact. When not in use or if a device with N.O. contact is installed	
F22	**OFF***	The OPEN input is disabled in the work program “Manual free door”.	
	ON	The OPEN input is enabled also in the work program “Manual free door”, to allow the automatic opening of the door.	
F23	**OFF***	Pause time with open door before constant automatic closing.	
	ON	Automatic increase of the pause time with door open if the door cannot close due to the high flow of people.	
F24	**OFF***	The pause time set by the potentiometer P4 is never reset.	
	ON	The pause time set by the potentiometer P4 is reset to the initial value if, with the door open, an opening command is given.	
F25	**OFF***	In case of power failure, when mains supply is restored, the door remains in the current position.	
	ON	In case of power failure, when mains supply is restored, the door slowly goes to closed position.	
F26	**OFF***	Interlock function disabled.	
	ON	Function of interlock between two doors enabled. A door may be opened only if the other one is closed. Please refer to the paragraph "Interlock system".	
F27 Function enabled if F26 = ON	**OFF***	In interlock function, door opening is delayed by 0.5” after the opening command. Please refer to the paragraph "Interlock system".	
	ON	In interlock function, door opening is immediate after the opening command. Please refer to the paragraph "Interlock system".	

F28 Function enabled if F26 = ON	**OFF***	In interlock function, the opening control on the closed door is not saved. Please refer to the paragraph "Interlock system".	
	ON	In interlock function, the opening command on the closed door is saved and the subsequent opening will take place as soon as the other door will be closed. Please refer to the paragraph "Interlock system".	
F29 Function enabled if F26 = ON	**OFF***	Standard operation of the electric lock in the interlock system.	
	ON	Electric lock disabled if the 2 doors are closed in the automatic programs. Refer to the paragraph “Interlock system → Interlock application with electric locks disabled with closed doors”.	
F30		Not used	
F31	**OFF***	The internal and external radars are not active during the closing movement in the work program “Night Lock”	
	ON	The internal and external radars are active during the closing movement in the “Night Lock” work program, therefore the door is re-opened.	
F32	**OFF***	The F1 button of the selector ET-DSEL or the button B of the selector T-NFC controls door opening in automatic programs only.	
	ON	The F1 button of the selector ET-DSEL or the button B of the selector T-NFC controls door opening both in automatic and in NIGHT LOCK programs.	
F33[1]	**OFF**	Single leaf door (display only, for editing it is necessary to repeat the setup).	
	ON	Double leaf door (display only, for editing it is necessary to repeat the setup).	
F34[1]	**OFF**	Master automation in double-leaf door (display only, for editing it is necessary to repeat the setup).	
	ON	Slave automation in double-leaf door (display only, for editing it is necessary to repeat the setup).	
F35	**OFF***	For double-leaf door: after a power failure, during the first opening movement the leaves start at the same time.	
	ON	For double-leaf door: after a power failure, during the first opening movement the leaves start respecting the offset.	
F36m Multiple selection function	**Multiple selection function, allowing to set the position of the manual or mechanic program selector where the pedestrian opening function of only the master leaf in a dual-leaf door is enabled.**		
	A*	Pedestrian opening DISABLED.	
	B	Pedestrian opening in position “Manual free door”.	
	C	Pedestrian opening DISABLED.	
	D	Pedestrian opening in “Night Lock” position.	
F38		Not used	
F39		Not used	
F40	**OFF***	The button F2 of the digital selector ET-DSEL or T-NFC disables the virtual spring function set by the potentiometer P22.	
	ON	The button F2 of the digital selector ET-DSEL or T-NFC disables the step by step function set by the potentiometer F18 = ON.	
F41m Multiple selection function	**Multiple selection function that allows to set the mode of operation of the open collector output between the terminals S-24.** **WARNING! If you have selected the interlock function → F26=ON the open collector output S-24 operates as interlock signal and all the functions provided for by F41m are automatically disabled.**		**S**
	A*	Door state signal. The output turns on when the door is moving, whereas it turns off when the door is closed.	
	B	Battery state. The activation of the output reports the status of damaged battery.	
	C	Maintenance signal The output activates when the door reaches the number of cycles provided for by the maintenance plan set by the potentiometer P48.	
	D	The output is enabled in the automatic programs and is disabled in night lock.	
	E	Not used	
	F	Not used	
	G	Not used	
	H	Not used	

F44		Not used	
F45m		Not used	
F48		Not used	
F49	**OFF***	It enables the buzzer warning beep when the motor thrust power limit is reached (refer to the paragraph "Functional testing").	**S**
	ON	It disables the buzzer warning beep when the motor thrust power limit is reached.	
F50		Not used	
F51		Not used	
F52		Not used	
F53		Not used	
F54		Not used	
F55		Not used	
F56		Not used	
F57		Not used	
F58		Not used	
F59		Not used	
F60		Not used	
F61		Not used	
F62		Not used	
F63		Not used	
F64		Not used	
F65		Not used	
F66		Not used	
F67		Not used	
F68		Not used	
F69		Not used	
F70		Not used	
F71		Not used	
F72		Not used	
F73	**OFF***	Opening leaf braking stage start in advance with relation to the end of the manoeuvre..	**S**
	ON	Opening leaf braking stage start corresponding to the last degrees of the manoeuvre.	
F74		Not used	
F75		Not used	
F76		Not used	
F77	**OFF***	Privacy Function not active	
	ON	Privacy Function active (Please check paragraph “PRIVACY FUNCTION”)	
F78 Function active if F77 = ON	**OFF***	for maglock without status sensor open/closed (factory setting) The operator NEXT 150 is automatically detecting the close door status.	
	ON	*Read this function just in case you install a maglock with status sensor open/closed* (not supplied by Label) for maglock with status sensor open/close. Connect the N.O output contact of the status sensor to the input AUX1 on NEXT-L150 control unit in order to detect the close door status.	
F79 Function active if F77 = ON	**OFF**	The traffic light (D) show steady green light during the door movement and until the locking impulse is given by the user.	
	ON*	The traffic light (D) slowly flashes red/green light during the door movement and then rapidly at door closed until the locking impulse is given by the user. As soon as the door is closed, the traffic light will show red light.	
F80	**OFF***	Cyclic function OFF	
	ON	Cyclic function ON. It activates the continuous door opening and closing cycle; it is only used for operation or durability tests.	

POTENTIOMETERS TABLE		
POTENTIOMETER	**EXPLANATION**	**"SLAVE**
P01	**Opening speed** Increasing the value increases the speed during the opening movement.	S
P02	**Closing speed** Increasing the value increases the speed during the closing movement.	**S**
P03	**Opening safety sensor disabling distance** When the wall is near the open door, by increasing the value, the degrees in the final stage of the opening run in which the activation of the safety sensor leads to the immediate switch of the opening speed to the approach speed are increased to prevent leaf stop due to wall detection.	**S**
P04	**Open door pause time in automatic work programs** Setting values range between 0 (closing immediately after opening) and 60 seconds. Door open time before automatic closing.	
P05 Potentiometer enabled if F17 = ON	**Pause time with open door in the disabled function** Setting values range between 0 (closing immediately after opening) and 60 seconds. Door open time before automatic closing when the opening command is given by the disabled, operating the button connected to the OPEN input or by the Label remote control.	
P06	**Holding tension with door closed** Increasing the value increases the thrust exerted by the leaf on the closing ledge.	**S**
P07	**Wind stop when the door is closed** At the default value 0%, the function is disabled. Increasing the value increases the intensity of the force contrasting the wind thrust to keep the leaf closed.	**S**
P08	**Push & go** At the default value 0%, the function is disabled. As soon as the door is pushed manually, an automatic opening cycle starts. Increasing the value increases the degrees of leaf motion required before starting the opening. Adjustment between 2° and 15°.	**S**
P09 Potentiometer enabled if F02 = ON and F03 = OFF	**Final push for electric lock engagement** Increasing the value increases the leaf speed in the last degrees of the closing movement to ease the engagement of the electric lock.	**S**
P10 Potentiometer enabled if F02 = ON	**Closing thrust to release the electric lock** At the default value 0%, the function is disabled. Increasing the value increases the power of the closing thrust before door opening to ease electric lock release.	**S**
P11 Potentiometer enabled if F02 = ON	**Opening start delay after electric lock activation.** At the default value 0%, the function is disabled. Increasing the value introduces a delay in leaf opening start with respect to electric lock activation (4" at 100%).	**S**
P12 Potentiometer ON if F02 = ON, F03 = OFF, F05 = ON	**Electric lock excitation time when you select the program "manual free door"** At 100%, the electric lock is always powered.	**S**
P13	**Deceleration starting distance when opening** Increasing the value increases the degrees of the opening run starting from which the leaf proceeds at approach speed.	**S**
P14	**Deceleration starting distance when closing** Increasing the value increases the degrees of the closing run starting from which the leaf proceeds at approach speed.	**S**
P15	**Thrust power during closing** Increasing the value increases the thrust power of the motor during the closing movement.	**S**
P16	**Motor thrust time at the end of the closing** Increasing the value increases the time the motor keeps thrusting in the last degrees of the closing movement, to overcome possible frictions and ease the approach of the leaf to the closing ledge. At 100%, thrust time 1.5 seconds.	**S**

P17	**Thrust power at the end of the opening cycle** The value of this parameter must be increased in order to increase the motor thrust power if the door has difficulty opening in the last degrees.	S
P18	**Distance between the end of the leaf run and the final ledge during opening** Increasing the value reduces the opening degrees, decreasing the value increases the opening degrees with respect to the default value stored during the setup. The adjustment range is approximately 5°.	**S**
P19	**Push & close** If the stationary open door is pushed manually, an automatic closing cycle starts. Increasing the value increases the degrees of leaf motion required before starting the closing. Adjustment between 2° and 15°.	**S**
P20	**Wind stop when the door is open** Increasing the value increases the intensity of the force contrasting the wind thrust to keep the stationary leaf open.	S
P21	**Acceleration ramp when opening** Increasing the value increases door acceleration during the opening movement.	S
P22	**Door closing virtual spring** Door new closing after a manual opening. At value = 00 the function is disabled and the door does not close again after a manual opening. Setting the value 01, the door closes with the minimum force. Increasing the value, the thrust force during closing increases.	**S**
P23 Potentiometer enabled if the potentiometer P22 is at value 01% or higher	**Virtual spring aid for closure** Increasing the value, the starting force increases when the door must start its closing motion after manual push opening, for situations in which the start of the reclosing movement is difficult.	**S**
P24	**Distance from the final closing ledge where the door reopens if an obstacle is detected during the closing cycle** Increasing the value increases the degrees from the final closing ledge in which the closing movement stop is achieved without reversing the running direction in case of detection of an obstacle.	**S**
P25	**Intensity of door braking at the end of the opening after a manual push** Increasing the value increases the leaf braking.	**S**
P26	**Distance from the end of the run during opening, starting from which it is braked after a manual push** Increasing the value increases the distance from the final ledge in opening where the door is braked during the manual push.	**S**
P27	**Leaf braking intensity when the opening safety sensor trips** Increasing the value reduces the braking distance.	**S**
P28 Potentiometer enabled if the function F26 = ON	**Time after which the interlock between two automatic doors gets disabled if the open door doesn't close back** Please refer to the "Interlock system" paragraph. At the default value 0%, the function is disabled. Time after which the interlock is disabled automatically if the door that is open does not close due to the high flow of people. In this case, if the radar inside the second door is activated by the persons in the space between the two doors, the second door opens allowing the outflow of people. At 01% the interlock disabling time and the ensuing second door opening time will be 10 seconds. At 50% the interlock disabling time will be 60 seconds, at 100% the interlock disabling time will be 120 seconds.	
P29 Potentiometer enabled if the potentiometer P22 is at value 01% or higher	**Pause time before door reclosing in the virtual spring function after a manual opening** If the virtual spring function is enabled, this potentiometer adjusts the waiting time before door new closing after the door was opened with a manual push. Pause time adjustable from 1 to 6 seconds.	**S**

P30	**Leaf delay during opening** For dual leaf door. Increasing the value increases the starting delay during opening of the Slave automation with respect to the Master automation, necessary in case of overlapping leaves. At the minimum value 0%, both leaves start together during opening.	
P31	**Leaf delay during closing** For dual leaf door. Increasing the value increases the starting delay during closing of the Master automation with respect to the Slave automation, necessary in case of overlapping leaves. At the minimum value 0%, both leaves start together during closing.	
P32	**Thrust power** Increasing the value will increase the thrust power of the motor.	**S**
P33	Not used	
P34 Parameter active if F77 = ON	Adjustment of the time within which the user can activate door locking from inside once the door is closed. At value "0" the time is set to infinite; therefore, it is always possible to activate door locking through the internal touchless sensor. From value "1" to "100", the time is adjusted between 1 and 100 seconds (factory setting = 10 seconds). Once this time period has expired, the maglock is not engaged and the touchless sensor will activate door opening.	
P35 Parameter active if F77 = ON	Adjustment of the time after which the maglock is released automatically if the door has been locked from inside. At value "0" (factory setting) the time is set to infinite; therefore, the maglock keeps the door locked until the user activates the internal touchless sensor to open the door and exit. From value "1" to "100", time is set from 1 to 100 minutes. Once this time period is expired the traffic light flashes red/green, advising the user that door will be unlocked within 3 minutes.	
P36	Not used	
P37	Not used	
P38	Not used	
P39	Not used	
P40	Not used	
P41	Not used	
P42	Not used	
P43	**Slowdown ramp during opening** Increasing the value, leaf slowdown moves toward the last degrees of the opening cycle.	**S**
P44	**Intensity of the braking during opening** Increasing the value increases door braking intensity during the opening cycle.	**S**
P45	**Intensity of the braking during closing** Increasing the value increases door braking intensity during the closing cycle.	**S**
P46	Not used	
P47	Not used	
P48	**Scheduled maintenance** This parameter allows to select the number of opening/closing cycles after which the message "SCHEDULED MAINTENANCE" appears on the display of the program selector. The maintenance signal can also be displayed on the open collector output between the terminals S-24 of the electronic control unit if the operating mode C is selected in the function F41m. When set to OFF (default value), the scheduled maintenance message is never displayed. Select the number of cycles after which maintenance is to be reported according to door operation and to the usage conditions: 8K (8,000 cycles), 16K (16,000 cycles), 32K (32,000 cycles), 64K (64,000 cycles), 128K (128,000 cycles), 256K (256,000 cycles), 512K (512,000 cycles).	
P49	Not used	
P50	Not used	

13) LANGUAGE

- Use the buttons F2 and ❄ to move the arrow in correspondence with the language desired.
- Press the EXIT button SET to return to general programming menu.

14) PASSWORD MANAGEMENT

This section shows three types of password.

a) TECHNICAL PASSWORD (for technical personnel in charge of installation and maintenance)

It is the 10-character password of the installer who commissions the system.
Using the technical password is compulsory to prevent unauthorized persons from having access to general programming menu sections concerning parameters and functions setting, initial setup and maintenance area.
The default technical password is “A-A-A-A-A-A-A-A-A-A”.

WARNING!
It is recommended to change the default technical password and to be very careful not to forget it.

b) PRIMARY PASSWORD (for the system owner-user)

It is a 5-character password used by the user to prevent unauthorized persons from having access to the selector ET-DSEL and change the work program.
Using a primary password is optional and must be enabled by the system owner.
The default technical password is “A-A-A-A-A”.

WARNING!
When enabling the password, be very careful not to forget the access combination.

c) SERVICE PASSWORD (for user)

It is a 5-character password that the system's owner may provide to persons authorized to use the selector ET-DSEL.

With the service password, it is only possible to change the work program of the automatic door.
The default service password is “A-A-A-A-A”.
To change the service password, it is necessary to log in using the primary password.

Use the button ❄ to move the selection arrow downwards, use the F2 button to move the arrow upwards.

14.1) HOW TO CHANGE THE TECHNICAL PASSWORD

- Select “TECHNICAL PASSWORD”
- Press OK (F1).

- Enter the default technical password “A-A-A-A-A-A-A-A-A-A” by pressing 10 times the button A.

- Enter the new technical password, selecting a combination of 10 characters from the letters A-B-C-D.

From this moment on, when having access to general programming to enter initial setup, functions and adjustments, settings of serial communication and maintenance section, it is necessary to enter the newly saved password.
The password is not required afterwards, when you navigate sections without exiting the general programming menu.
If the password entered is wrong, the display shows "PASSWORD ERROR" and returns you to the general programming menu.

14.2) HOW TO CHANGE THE PRIMARY PASSWORD

- Select “PRIMARY PASSWORD”
- Press OK (F1).

- Type the default primary password “A-A-A-A-A” by pressing 5 times the button A.
  (If the primary password is not the default password, since it had already been changed before, enter the currently-used primary password).

- Enter the new primary password, selecting a combination of 5 characters from the letters A-B-C-D.

- You are prompted to repeat the new password, so enter again the previous combination.

- If the password entered is correct, the message “PASSWORD OK” is displayed for one second, then the system returns to the PASSWORD MANAGEMENT section. Press the EXIT (SET) button to return to the general programming menu
- If the password you entered does not match the previous one, the display shows PASSWORD ERROR, the system returns to the section PASSWORD MANAGEMENT and it is necessary to perform again the procedure.

14.3) HOW TO CHANGE THE SERVICE PASSWORD

- Select “SERVICE PASSWORD”
- Press OK (F1).

- Enter the primary password

- Enter the new service password, selecting a combination of 5 characters from the letters A-B-C-D.

- You are prompted to repeat the new password, so enter again the previous combination.

- If the password entered is correct, “PASSWORD OK” is displayed for one second and the system returns to the PASSWORD MANAGEMENT section.

Press the EXIT (SET) button to return to the general programming menu.
If the password you entered does not match the previous one, the display shows PASSWORD ERROR, the system returns to the section PASSWORD MANAGEMENT, and it is necessary to perform again the procedure.

14.4) ENABLING USER PASSWORD USAGE (PRIMARY AND SERVICE)

- Select “PASSWORD ON / OFF”
- Press OK (F1).

- Press the ON ❄ button to enable the usage of user passwords and return to the menu PASSWORD MANAGEMENT.
  To return to the work program view, press the EXIT button SET twice.
- From this moment on, whenever the user wants to access the digital selector ET-DSEL to change the automatic door work program, the primary or service password must be entered.

When the user decides to enable password usage, it is recommended to change the combination of both primary and service password.

14.5) DISABLING USER PASSWORD USAGE

- From the PASSWORD MANAGEMENT section, select “PASSWORD ON / OFF”
- Press the button OK (F1)

- Enter the primary password

- Press the OFF button (F1) to disable user password usage. To return to the general programming menu press the EXIT button twice SET
  Access to the digital selector ET-DSEL as program selector now is free.

15) SELECTOR OPTIONS

In the section "Selector Options" you can choose which work programs are displayed on the display of the digital selector, so that the end user can scroll through and select only those he wants to use.

“Bidirectional program”

The buttons in this submenu are used as follows:
The button * allows going to the next function.
The button F2 allows returning to the previous function.
The button F1 sets the function status to OFF.
The button F3 sets the function status to ON.

“Exit Only Program”

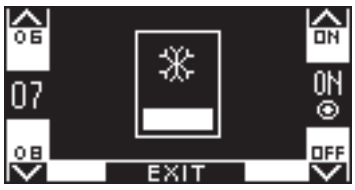
“Entry Only Program”

“Open Door Program”

“Night Lock Program”

“Manual Free Door Program”

“Pedestrian Opening For Dual Leaf Door”



“Button F2”

16) INFORMATION AND EVENT MEMORY

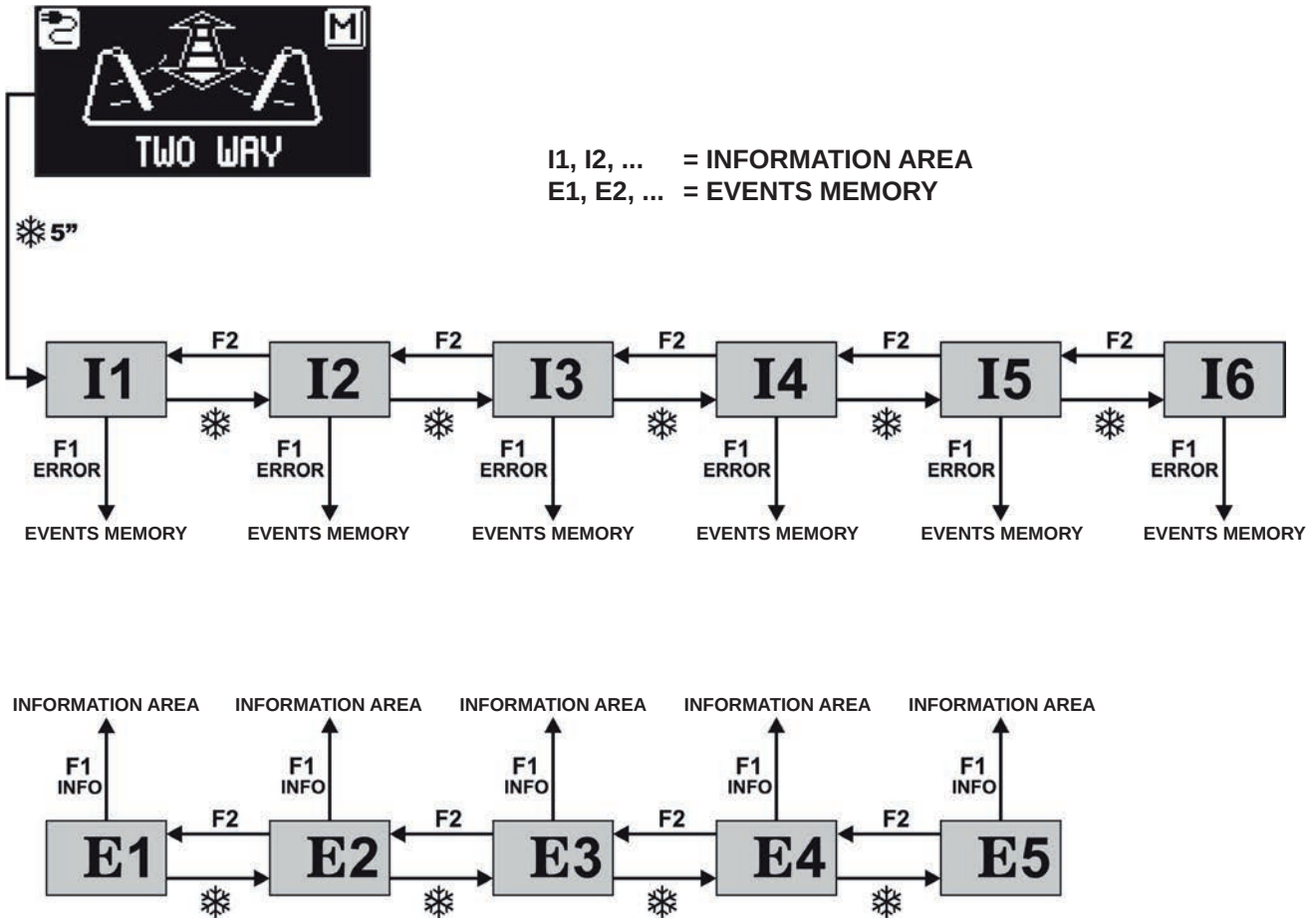
The digital selector ET-DSEL allows displaying information on automation and accessing events memory, where faults are saved.

After displaying the automatic door work program, press the button ❄ for 5” to enter the information area (Diagram 2).

The buttons inside the information area are used as follows

- The button v ❄ allows to go to the following information or event in events memory.
- The button ^ **F2** allows to go to the previous information or event in events memory.
- The button **F3** is used only in the case of dual leaf swing door and the symbol on the top right indicates **M** if you are viewing the information of the Master automation, or **S** if you are viewing the information of the Slave automation.
  Each pulse on the button F3 allows switching from **M** to **S** and vice versa.
  In case of single leaf automation, on the top right of the display it is displayed the letter **M**
- The button **F1** allows to go to the event memory, to display fault messages; press it again to return to the information area.
- The button EXIT (SET) allows returning to the main display of the work program of the door.

DIAGRAM 2



The purpose of the diagram is illustrating the path to be followed to view the information and the events memory; the texts included in the figures refer to the memory cells appearing on the left side of the display when viewing the information or the faults.

See the tables below for the list of information and fault messages.

INFORMATION AREA

NUMBER	INFORMATION	MEANING
I1	**Serial number**	Identifies the serial code of the logic board NEXT-L150
I2	**Partial counter**	Displays the opening/closing cycles of the door performed since the last maintenance. This counter must be reset by the maintainer for each servicing task (see paragraph "Maintenance").
I3	**Total cycles**	It displays the door opening/closing cycles which have been carried out since the first start-up of the automation.
I4	**Version of microcontroller A**	Displays the software release of the microcontroller A of the logic board NEXT-L150 of the automation.
I5	**Version of microcontroller B**	Displays the software release of the microcontroller B of the logic board NEXT-L150 of the automation.
I6	**Identification number**	Identification number including data for manufacturer use

The events memory stores the last 5 fault messages in chronological order.
When all the 5 memory cells include messages, the subsequent event will be saved in cell E1, the other events in the memory are shifted by one position and the event in cell E5 shall be deleted.
The events memory stores the messages, which are classified into warnings and faults.
Stored faults are signalled by displaying the symbol (!) directly from the main screen of the work program; access the events memory to show the relevant message.
Saved warnings are not reported in the main screen of the work program. They are just stored the event memory.

EVENTS MEMORY

Messages that may be displayed in cells E1 through E5

FAULT CODE	SYMBOL	MESSAGE ON THE DISPLAY	MEANING	PROBLEM RESOLUTION
01		OPENING OBSTACLE	The door has come into contact with an obstacle during opening; this caused the reversal of the motion direction.	If the problem persists, remove the obstacle or check for leaf correct sliding.
02		CLOSING OBSTACLE	The door has come into contact with an obstacle while closing; this caused the reversal of the motion direction.	If the problem persists, remove the obstacle or check for leaf correct sliding.
03		RESET 4 OBSTACLES IN CLOSING	If, during closing, the leaf strikes an obstacle in the same location for 4 times in a row, a reset occurs with subsequent opening at slow speed.	Remove the obstacle that prevents the full closing of the door.
33		CURRENT FAULT	Failed cyclic internal test of the current detection circuit.	The system resets automatically after a few seconds and carries out another testing attempt. If the problem persists, replace the control unit NEXT-L150.
35		INITIAL SETUP FAULT	The automation has not managed to complete the initial setup.	Check for leaf correct sliding and verify that there are no obstacles along the path it follows; also check that motor and encoder are connected, then repeat the setup attempt.
36		ENCODER OR MOTOR FAULT	Signals from the encoder are not detected.	It is necessary to turn off the 230V power supply, then turn it on again after a few seconds. Check that the motor is running, that the motor connector is properly plugged in and that the motor cables are not damaged.
37		SAFETY SENSOR FAULT DURING OPENING	Failed opening safety sensor test.	Check that the test settings and parameters are correct, that the test has been enabled also on the safety sensor and that the electrical connections between sensor and control unit are correct
39		SAFETY SENSOR FAULT DURING CLOSING	Failed closing safety sensor test.	Check that the test settings and parameters are correct, that the test has been enabled also on the safety sensor and that the electrical connections between sensor and control unit are correct.
42		BATTERY FAULT	The system signals a damage to the battery.	During the operation the battery is constantly monitored. Should the system signal any damage to it, check that the battery and the battery charger board are working properly.
43		SLAVE GENERAL FAULT	Signalling of a defect on the Slave automation	Access the event memory of the Slave automation and check the type of fault displayed.
44		EEPROM REGISTERS FAULT	Failed internal memory register test.	It is necessary to turn off the 230V power supply, then turn it on again after a few seconds. If the problem persists, it is a control unit fault.
45		MASTER-SLAVE COMMUNICATION FAULT	There is a fault in the communication between Master and Slave.	Check that the cable WR5MS is connected between the two automations and that the setting of the double swing door is correct.

17) MAINTENANCE

To enter, type the 10-character technical password (for more information, refer to the “Password management” paragraph).

This section is accessed only to reset any fault existing in the events memory and the partial counter of the door opening/closing cycles performed by the door and to reset the initial setup carried out during commissioning.
The event memory and partial counter reset must be performed by specialized personnel only during routine maintenance, after performing all system operation checks.

Never reset the setup.
Only in the case of a change in the leaf run, it is necessary to reset the setup and proceed to a new setup following the operations described in para. 8.3 (for single leaf door) or para. 19.2 (for dual leaf door).

The buttons in this section are used as follows:

- The button v❄ allows moving forward in the reset type selection.
- The button ^ **F2** allows returning to the previous reset.
- The button **F1** (OK) allows confirming data reset for the selected reset type.
- The button **F3** is used only in case of dual leaf swing door and symbol on the top right on the display indicates **M** if the reset operations are related to the Master automation, or **S** if they are related to the Slave automation.
  Each pulse on the button **F3** allows switching from **M** to **S** and vice versa.
  In case of single leaf automation, on the top right of the display it is displayed the letter **M**.

The GENERAL RESET returns the electronic control unit to the factory settings.

17.1) PLUG AND PLAY

The Plug and Play option allows to set the functions and the parameters of the automatic door directly at the factory, before shipping the automation to the installation site.
To adjust the functions and parameters, refer to the paragraph "Functions and Adjustments".

After you have selected the desired functions, access the "SERVICE" section of the digital selector ET-DSEL described in this paragraph, select with the arrow the option "PLUG and PLAY" and press the button F1 (OK).
The buzzer of the electronic control unit emits 5 beeps.

Turn off the power supply of the automation.

Once the automatic door is installed, in order to perform the initial setup, follow the procedure below:

a) **MOVE THE DOOR TO CLOSED POSITION.**
   THE AUTOMATION AUTOMATICALLY DETECTS THE CORRECT DIRECTION OF TRAVEL DURING THE SETUP CYCLE.
b) Power the automation NEXT 150 with mains voltage, the control unit buzzer emits 5 beeps.
c) Press the button PS1 (START) on the electronic control unit to start the initial setup cycle, or alternatively, access the section "SETUP" of the general programming menu and select the option "PARTIAL" as setup mode.
d) During the setup cycle, the door moves slowly from closed position to fully open position, in order to learn the leaf run.
   At the end of the cycle a prolonged beep signals that the setup is over.
e) Now the door will operate according to the setup.

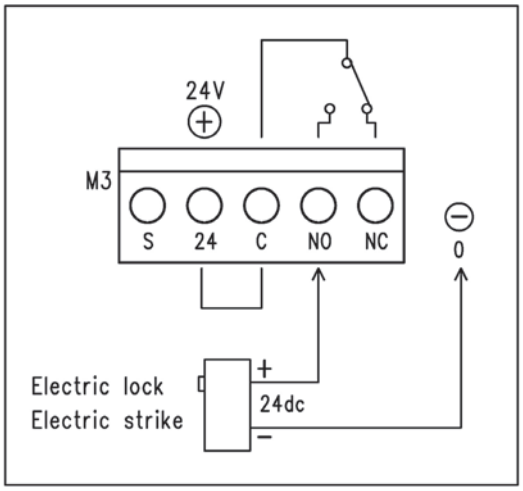
18) APPLICATIONS WITH ELECTRIC LOCK

To lock the door in closed position, the automation NEXT 150 is ready to control an electric strike, an electric lock or an electromagnet.

18.1) ELECTRIC LOCK / ELECTRIC STRIKE

Setup of the functions to enable the electric lock:

- **F02 = ON** to enable the electric lock.
- **F03 = OFF** to enable the pulse operation.
- **F05 = ON**
  If you want the automatic release of the electric lock when the door is closed, when you select the work program "Manual free door", to set the door to be opened manually.



Setting of electric door management parameters

- **P09**
  Adjusts the leaf speed in the last degrees of the closing movement to ease the engagement of the electric lock.
- **P10**
  Power of the closing thrust before door opening to ease electric lock release. At value 0%, the function is disabled, from 01 to 100% the power of the thrust increases proportionally.
- **P11**
  introduces a delay in leaf opening start with respect to electric lock activation.
  At value 0%, the function is disabled, from 01 to 100% the delay increases proportionally up to 4 seconds.

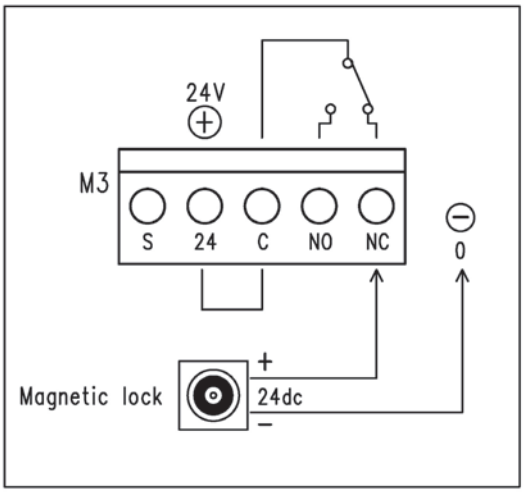
18.2) ELECTROMAGNET

Setup of the functions to enable the electromagnet:

- **F02 = ON** to enable the electric lock output.
- **F03 = ON** to enable permanent operation, which supplies the electromagnet with door closed.
- **F04 = OFF** the electromagnet is enabled when the door is closed in all work programs
- **F04 = ON** the electromagnet is enabled when the door is closed only in the "Night Lock" work program.

In the work program "Manual free door" the electromagnet is not powered with the door closed to be able to move the leaf manually.

Enabling the "Push & Go" function (parameter P08), the electromagnet is not powered with the door closed in the automatic work programs to be able to operate push opening. It is enabled only in the "Night lock" program.



19) DUAL LEAF DOOR

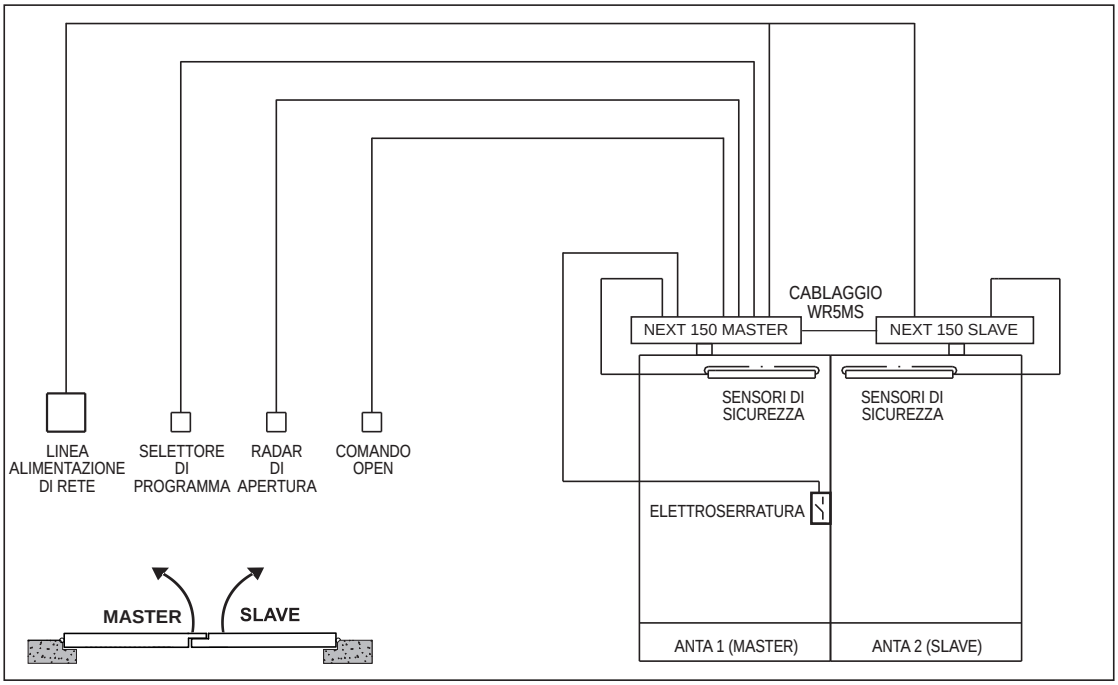
Two automations are required to control the operation of a dual leaf swing door, one which must be setup as Master and the other that must be setup as Slave.
In the case of overlapping leaves, setup as Master the automation applied to the first leaf which opens.

In case of swing door with two leaves overlapping when closed and installed on emergency exits, the person in charge of commissioning shall measure the force necessary to open both leaves of the door pushing manually the Slave leaf in the direction of the escape (most unfavourable condition).
The force necessary to open manually the door must not exceed 150N and must be measured at the main edge, at a right angle with respect to the leaf, at an height of 1000 ± 10mm.
If the force measured is higher than the limit of 150N, apply the symbol for emergency breakout only on the main leaf (Master) of the door.

19.1) DUAL LEAF ELECTRIC SETUP

Make the electrical connections to the automations (see paragraph "Electrical connections"), considering that the door opening control actuators, the program selector, and the electric lock must be connected to the Master automation.
The safety sensors installed on the master leaf must be connected to the Master automation, the safety sensors installed on the slave leaf must be connected to the Slave automation.
If the door is equipped with dual electric lock to lock individually each leaf, connect to the Slave automation the electric lock which locks the Slave leaf.

The Master and Slave automations must be connected via the wiring "WR5MS", whose terminals must be inserted into the connector J7 of the logic boards NEXT-L150 of the automations.
Connect to the Master automation the digital selector EV-DSEL or T-NFC.



19.2) DUAL LEAF DOOR COMMISSIONING

After having completed the mechanical installation and performed the electric connections, check manually that the motion of both leaves is without friction for the entire run.

Before powering the system set the SW1 dip-switch of the NEXT-L150 logic board as specified in the table

	SW1 DIP 1	SW1 DIP 2
NEXT-L150 MASTER AUTOMATION	**OFF**	**OFF**
NEXT-L150 SLAVE AUTOMATION	**OFF**	**ON**

Follow the steps described below to complete the commissioning of the automation.

1. Power on the automations with mains voltage
2. If the digital selector ET-DSEL is new and is powered for the first time, it is necessary to select a language as shown in paragraph 8.1, then you will automatically enter the section "Serial communication settings".
3. **SERIAL COMMUNICATION SETTINGS**
   The selector ET-DSEL detects the presence of the two automations in the system (fig.A) and automatically stores the serial code of the logic boards NEXT-L150 (fig.B).
   At the end of the acquisition of both serial codes of the logic boards NEXT-L150, the display shows the symbol with a closed padlock on the icons of the letters M and S (fig.C) and the selector ET-DSEL will be able to manage both Master and Slave automations.

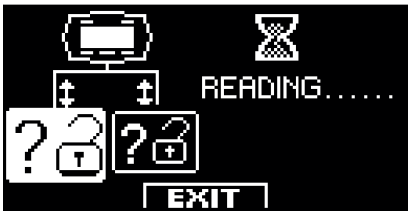


fig. A

fig. B

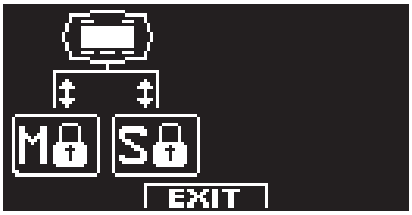


fig. C

Press the button EXIT (SET) to exit the section “Serial communication settings” and return to the general programming menu.

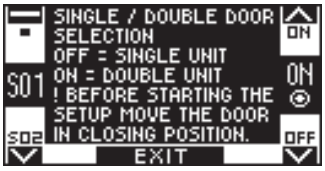
4. **INITIAL SETUP**
   From the main programming menu, enter the section "INITIAL SETUP" (as indicated in paragraph 11).
   Enter the 10 character technical password to access setup; (for information about the use of the technical password, refer to the paragraph "Password management" 14 and 14.1).

BEFORE STARTING THE SETUP, MOVE THE DOOR TO CLOSED POSITION.
THE AUTOMATION AUTOMATICALLY DETECTS THE CORRECT DIRECTION OF TRAVEL DURING THE SETUP CYCLE.

FULL SETUP	mandatory for the first installation of the automation.
PARTIAL SETUP	to repeat leaf run learning if the mechanical limit stops are moved, without modifying the functions previously set.
WARNING!	Partial setup does not work on a new automation on first installation. In this case, if it the Partial option is selected, the buzzer of the electronic control unit will report the fault emitting a continuous sound for 4 seconds. Press the button F1 to select the “FULL” setup.

In this section, the buttons F1 / F3 allow selecting the function OFF/ON status, while the button ❄ allows moving to the following function.
Press the button F2 to return to the previous function.

- Select the function S01 ON = dual leaf door.



Select ON if there is an electric lock.
If the door is not equipped with an electric lock, keep OFF.

Only if the function S02 was set to ON
If there is an electric lock, select its type:
Pulse OFF (electric lock or electric strike) or permanent ON (electromagnet).

BATTERY PACK
OFF = NOT PRESENT
ON = USED

Select ON only if a closing safety sensor has been installed on the E.C. input (terminal 7).
The selection of this function is valid for both master and slave automations.

Select ON only if an opening safety sensor has been installed on E.O. input (terminal 6).
The selection of this function is valid for both master and slave automations.

Only if function S05 was set to ON.
Select ON if a closing safety sensor was installed and monitored (as provided for by the standard EN 16005) in order to activate the sensor test at the beginning of each cycle.
Select OFF only if the safety closing sensor has not been setup to be monitored.
For details, refer to the paragraph "Safety sensors".

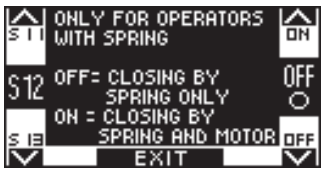
Only if the function S06 was set to ON
Select ON if an opening safety sensor was installed and monitored (as provided for by the standard EN 16005) in order to activate the sensor test at the beginning of each cycle.
Select OFF only if the opening safety sensor has not been setup to be monitored.
For details, refer to the paragraph "Safety sensors".

Only if the functions S07 and/or S08 are set to ON.
Selects the logic state of the test, used by the automation control unit to monitor the safety sensors.
The setup depends on the characteristics of the sensor installed.
Select OFF when using sensors of the type "OA-EDGE T" or "FLAT SCAN";

Contact configuration on OPEN input between terminals 0-3 of the control unit NEXT-L150.
Select ON with a normally open contact or when the OPEN input is not used.
Select OFF when you use a device with a normally closed contact.

Choice of the work program selector.
OFF: Manual selector or mechanical selector EV-MSEL.
ON: Digital selector ET-DSEL or T-NFC.

Function NOT used.



Function NOT used.

- The automations are ready for the setup cycle.
  Press the button ❄ (OK) to start the setup cycle.

5. SETUP CYCLE

- The Master automation, after the 4 initial beeps, starts the opening cycle at low speed. At the end of the opening a 3" long beep signals that the run of the Master automation has been saved. The Master leaf remains open.
- The Slave automation, after the quick beeps before the start, starts the opening cycle at low speed. At the end of the opening a 3" long beep signals that the run of the Slave automation has been saved.
- The setup is over and the closing cycle occurs automatically, including at first the closing of the Slave leaf and after the closing leaf delay, the new closing of the Master leaf.

19.3) FUNCTIONAL TESTING

Select the automatic operation of the door using the program selector.

If you use the program manual selector, set it to I.

Refer to the “Program selectors” paragraph describing the types of selector provided for to select the automatic door operating mode.

To start an opening movement, press briefly the button PS1 (Start) on the control unit NEXT-L150 of the Master automation, or operate the door opening devices.

Check the correct execution of the door opening and closing cycle

During the opening cycle, the Slave leaf starts with a preset delay with respect to the Master leaf, while in the closing cycle the Master leaf starts with a preset delay with respect to the Slave leaf.

The delay between the leaves at start is fundamental to avoid a possible crossing during the run, risking to overlap; if you want to change the preset leaf delay, enter the section “Functions and adjustments” and use the parameter P30 to adjust the delay of the leaf during opening and the parameter P31 to adjust the leaf delay during closing (see paragraph 12.2 “Potentiometers adjustment”).

Ensure that thrust organs and safety sensors operate; to adjust sensor detection field, refer to the instructions provided with the sensor.

The detection of the safety sensor during opening stops the motion only of the leaf on which it is installed.

The detection of the safety sensor during closing reverses the opening motion on both leaves.

Safety on impact: check that when there is an obstacle to the motion of a leaf, both leaves stop and reverse their motion.

After having powered the system, the first opening cycle occurs at slow speed and you can choose with the function F35 if both leaves must start together, or one after the other, respecting the leaf delay.

F35 OFF = In the first opening cycle the leaves start together.

F35 ON = In the first opening cycle the leaves start one after the other, respecting the leaf delay.

To set up the available functions, refer to “Functions setup” paragraph.

To adjust the variable parameters, refer to the paragraph “Potentiometers adjustment”.

Setup operation must be repeated if one of the following conditions changes:

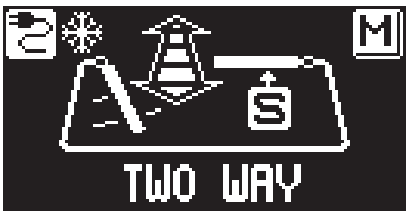
weight of the door, leaf opening angle, replacement of the logic board NEXT-L150.

In this case, select the PARTIAL option from “setup mode” to perform only the leaf run learning without changing the current settings.

19.4) PARTIAL OPENING

From the automatic door work program, it is possible to select the partial opening option, used to open only the Master leaf.

- If the automation is equipped with the digital selector ET-DSEL or T-NFC (F01 = ON), press the button ❄ to enable partial opening.



- If the automation is equipped with the manual selector or the mechanical key selector EV-MSEL (F01 = OFF), to enable partial opening it is necessary to set the function **F36m**.
  Then you should select in which position of the selector the partial opening must be enabled:

  F36 = B: partial opening in position 0 in the manual program selector;
  partial opening in position ⍐ in the mechanical selector EV-MSEL.

  F36 = D: partial opening in position II in the manual program selector;
  partial opening in position 🔒 in the mechanical selector EV-MSEL.

PARTIAL OPENING OPERATION

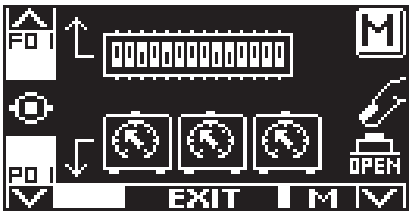
The opening commands, given via the internal and external radar inputs and with push & go, actuate the partial opening of the door, therefore only the Master leaf.

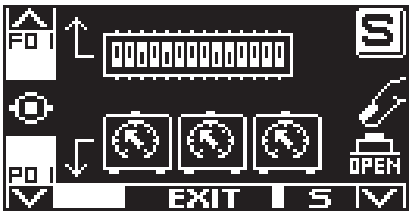
The opening commands given via the OPEN input lead to the full opening of both leaves.

19.5) CONSIDERATIONS ABOUT THE USE OF THE SELECTOR ET-DSEL OF THE TWO-LEAF DOOR

With the digital selector ET-DSEL you can operate separately the Master and Slave automations regarding the following sections of the general programming menu and of the information area.

a) FUNCTIONS AND ADJUSTMENTS





button F3 toggles from Master to Slave

Master automation **Slave automation**

b) MAINTENANCE

button F3 toggles from Master to Slave

Master automation **Slave automation**

If the display shows the letter M, the operations carried out on the selector ET-DSEL apply to the Master automation, if it shows the letter S they apply to the Slave automation.

c) INFORMATION AREA AND EVENTS MEMORY

Also the information and the events memory of the Master and Slave automations are displayed separately.

Once you have entered the information area as described in paragraph 16, pressing the button F3 you select the automation whose information and events you want to display.

On the top right of the display appears the letter M if the information is related to the Master operation, the letter S if it is related to the Slave automation.

button F3 toggles from Master to Slave

Master automation **Slave automation**

In a swing door with two leaves, reset the events memory on the SLAVE (S) automation and then on the MASTER (M) automation. To reset the events memory, select "RESET FAULTS" and confirm with "OK".

19.6) MASTER / SLAVE INPUTS DIAGNOSTICS

The selector ET-DSEL allows checking the inputs status to ensure proper operation of all devices connected with the automation NEXT 150.

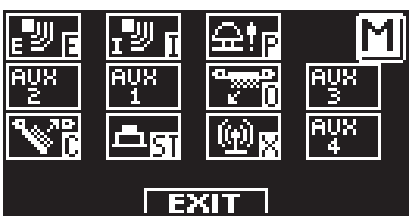
To enter "Input Diagnostics" while the automatic door operating program is shown on the display, keep the F2 button pressed for about 3 seconds. The letter M displayed on the top right means that you are viewing the inputs of the master.

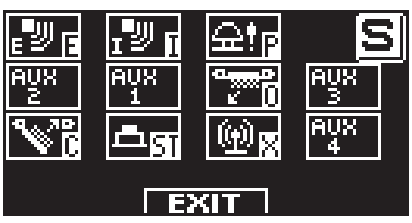
The display shows the symbols of all automation inputs.

If an input is used, the corresponding symbol lights up with an arrow nearby.

The button F3 is used to switch from the display of the master (M) inputs to the display of the slave (S) inputs,

Each pulse on the button F3 allows switching from M to S and vice versa.





20) NEXT-RX RADIO RECEIVER

1 - GENERAL INFORMATION

The single-channel receiver NEXT-RX is a 433.92 MHz radio receiver designed to open the automatic door NEXT using the transmitters manufactured by Label. In Table 1 there is a list of radio transmitters produced by LABELSpa.

2 - DESIGNED USE

The receiver NEXT-RX must be coupled to the connector J4 of the logic card NEXT-L150 and it is intended to control the opening of the automatic door in all the work programs of the automation.

WARNING:

The opening command of the automatic door is issued by the radio control, but movement protection and safety are delegated to organs other than the receiver.

It shall never be used in any case where the door activation or deactivation may cause injuries and damage. Receiver in class 3 according to the standards ETSI EN 300-220-2 V.3.1.1 (2016-11).

3 - INSTALLATION OF THE RECEIVER

Plug the cable of the receiver NEXT-RX (fig. 1) in the connector J4 of the logic card NEXT-L150 of the automation (fig. 2). Proceed with saving the radio-controls (fig.3) as follows:

a) Enter the programming mode of the transmitters pressing and holding the button SW1 until the led L1 is steadily lit (approx. 3 seconds).

b) Press the button of the transmitter to be saved. Successful saving will be indicated by 5 fast flashings of the led L1 .

c) Then LED L1 will turn on steadily again and it will be possible to save another transmitter by repeating the operation described in point b), and so forth for all the transmitters to be used.

- A maximum of 250 transmitters can be saved on the receiver.

d) Once the transmitter saving procedure is finished, exit the programming mode by pressing and holding the button SW1 until the led L1 (○) turns off.

4 - USE OF THE RADIO CONTROL

By pressing the button of a saved transmitter, the automatic door opens and the led L1 of the receiver remains on until the button of the transmitter is released.

The radio control opens the door in all the operating programs of the automation.

5 - RECEIVER MEMORY ERASURE

Should it be necessary to erase all the transmitter codes saved in the memory of the receiver NEXT-RX, proceed as follows:

a) Disconnect the cable from the receiver NEXT-RX from the connector J4 of the logic card NEXT.

b) Press and hold the button SW1 of the receiver and at the same time connect the cable of the receiver NEXT/RX in the connector J4 connector of the logic card NEXT-L150.

c) Release the button SW1 of the receiver NEXT-RX only after the LED L1 of the receiver starts flashing.

Now the LED L1 of NEXT/RX blinks fast to indicate that the receiver is ready to save the codes of all the transmitters of the LABEL range, both rolling code models and dip switch models.

If you only wish to save the rolling code transmitters (SPYCO model), excluding all dip switch models, briefly push the SW1 button; the led L1 blinks slowly to indicate that the receiver is ready to save only the SPYCO transmitter codes.

To switch from one mode to the other, press the button SW1.

d) After selecting the desired mode, press and hold the button SW1 for about 3 seconds until the led L1 begins blinking very fast for about 8 seconds, signalling that the receiver memory is being erased.

e) When the memory of the receiver NEXT-RX has been erased, the LED L1 will turn off.

f) Now it is possible to save again the code of the transmitters to be used, following the procedure described in paragraph 3.

6 - TECHNICAL SPECIFICATIONS

Power supply	12Vdc
Power draw	10mA at rest - 50mA in operation
Outputs	OPEN COLLECTOR
Frequency	433.92 Mhz
Memory Capacity	250 users
Range without obstacles	30 meters
Operating temperature	-20° / +55°
Receiver class (ETSI EN 300-220-1 Chapter 4.1.1)	Class 3

7 - DECLARATIONS

Marketing, sale and use are valid without restrictions in all EU countries.

With this document Label SpA declares that the receiver NEXT-RX complies with all the essential requirements and with all other relevant provisions established by the directive RED 2014/53/EC.

The declaration of conformity is annexed to the instructions of the receiver NEXT-RX.

TABLE 1
Label transmitters

ROLLING CODE	DIP-SWITCH	
SPYCO/1E SPYCO/3E	MDW/1E MDW/2E	TYKO/1E TYKO/2E

LED MEANING

	LED OFF
	LED ON
	LED BLINKING SLOWLY memory full or transmitter already saved
	LED BLINKING FAST transmitter saving
	LED BLINKING VERY FAST memory erasure

FIG.1

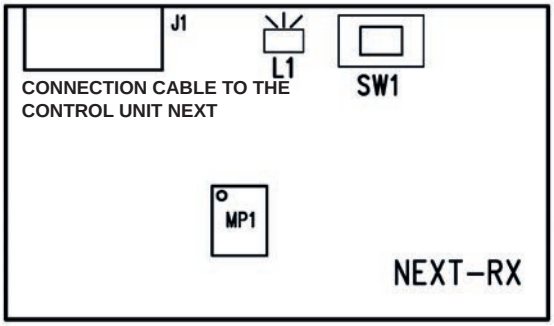


FIG.2

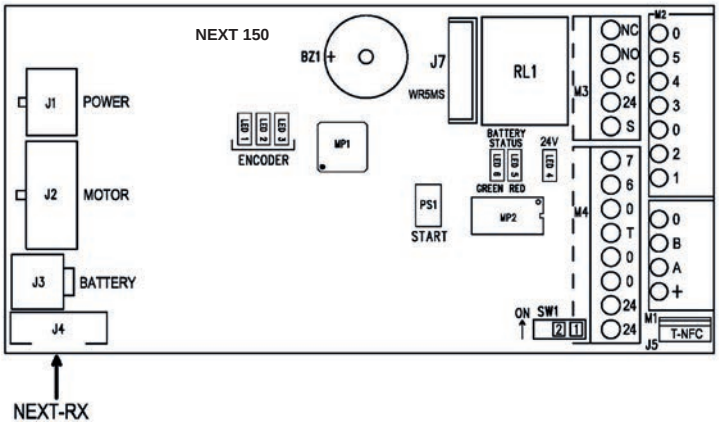
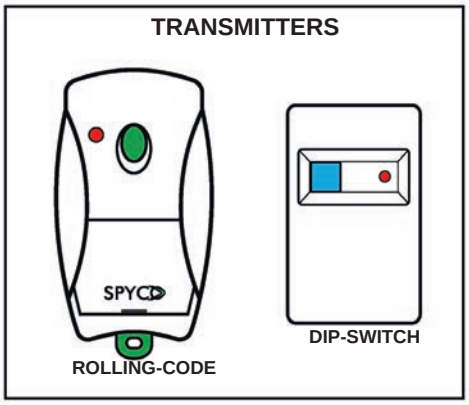
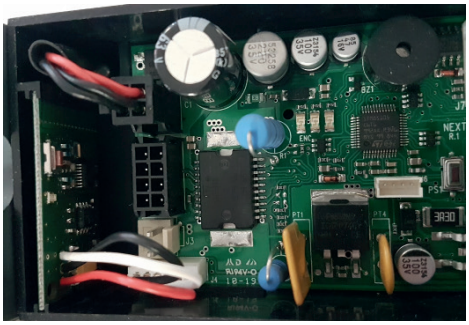


FIG.3



Housing of the receiver NEXT-RX inside the automation NEXT



21) COURTESY MODE FOR DISABLED

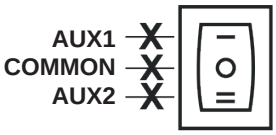
To enable courtesy mode for disabled, set the function **F17 = ON** on the digital selector.

- The appropriate opening button for disabled persons must be connected to the OPEN input of the automation.The disabled can also use the SPYCO radio control paired with the radio receiver NEXT-RX.
- Set the pause time (parameter P05) so as to keep the door open for a sufficient time to allow the disabled to cross the door before automatic closing.
- If, at the end of the opening manoeuvre or during the pause time, the closing safety sensor detects the presence of the disabled person as he/she crosses the door, the pause time is reduced to 3 seconds (even if it is calibrated for a longer time) after which the door closes.
- The door closes immediately without considering the pause time if the opening has been requested by the external radar or internal radar inputs, or by a manual push if the push & go function is enabled.

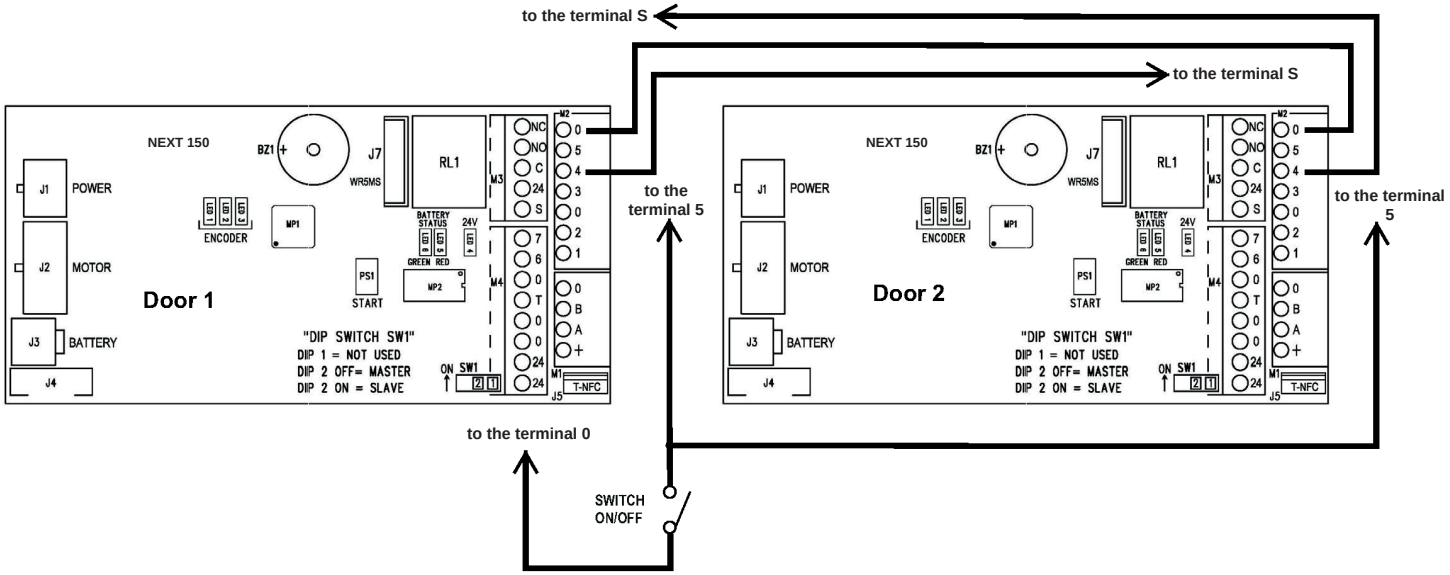
22) INTERLOCK SYSTEM

The interlock system is used to connect two automatic doors when a door can open only if the other one is closed.

22.1) ELECTRICAL CONNECTION FOR INTERLOCK



X= Disconnect the manual selector from the terminals AUX1 (5), COMMON (0), AUX2 (4).



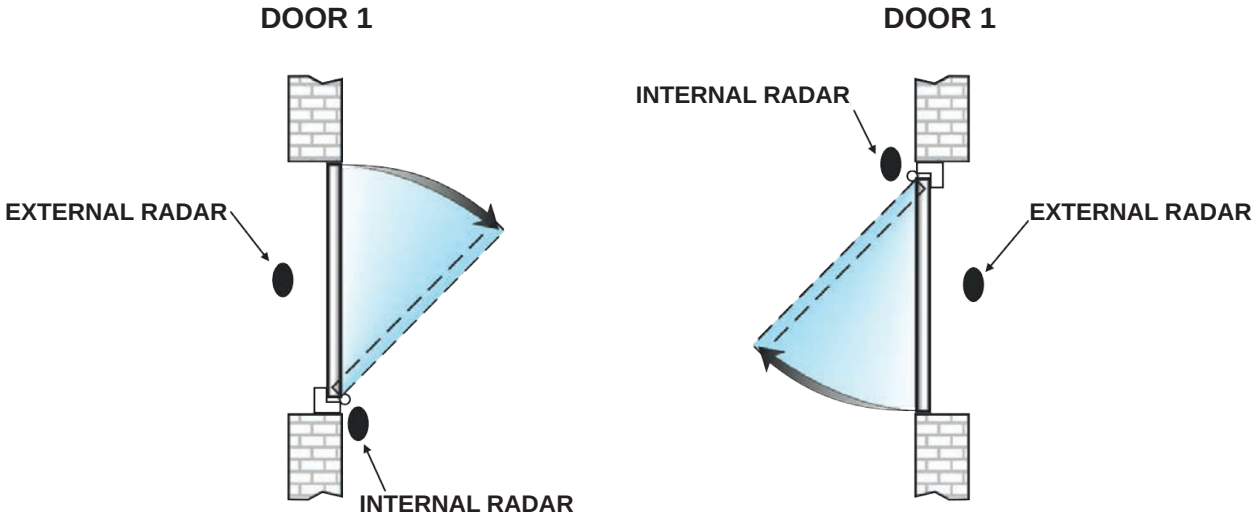
The figure shows the diagram of the electrical connections between the automations of the two doors ensuring that they are interlocked during operation.

- The terminal S of the control unit of the door 1 must be connected to terminal 4 (AUX2) of the door 2.
- The terminal S of the control unit of the door 2 must be connected to terminal 4 (AUX2) of the door 1.
- The terminal 0 (Common) of each control unit must be connected together.
- If you wish to by-pass the interlock operation and allow the two doors to operate independently, you need to connect an ON / OFF switch in parallel between terminals 5 (AUX1) and 0 (Common) of both control units of the automations. This way when the switch contact is open the interlock is enabled, while when the switch contact is closed the interlock is disabled and the two automatic doors can operate independently.

To enable interlocked operation you need to install the digital selector ET-DSEL or T-NFC as program selector on each door.
You cannot use the manual selector, nor the mechanical key selector EV-MSEL.

In case of double leaf door, carry out the electrical connection on the Master automation.

22.2) OPERATION OF THE INTERLOCK SYSTEM



The internal radars of each door are used independently when the distance between the two doors is such that there are no interferences in the detection field of the two internal radars.

- Set the function F26 = ON on both automations of the two doors.
- Select which of the two doors must open first in case of simultaneous command on both:
  F27 = OFF: door opening 0.5 seconds after the command is issued.
  F27 = ON : door opening immediately after the command is issued.
  Decide which of the two doors must have opening priority and set on it F27 = ON; on the other door set F27 = OFF.

- Select whether you want to save the opening command on the internal radar of the second door while the first one is still moving.
  F28 = OFF: opening command saving disabled.
  To open the second door the radar must be activated when the first door has closed back.
  F28 = ON: opening command saving enabled.
  To open the second door, the radar can be activated even when the first door is still moving; the opening of the second one occurs automatically as soon as the first one has finished its closure.
- If you want that the second door opens automatically after a preset time if your radar is detecting a presence, even if the first door has not yet closed, set the parameter P27.
  P28 = 0% : the function is disabled and the second door opens only after the first one has closed back.
  P28 = 01% : the second door opens 10 seconds after the opening of the first one if its radar is engaged.
  P28 = 100%: the second door opens 2 minutes after the opening of the first one if its radar is engaged.

The interlock operation includes the following steps:

a.) the person approaching from the outside activates the external radar of door 1, and door 1 opens;
b.) the person enters the internal area between the two doors;
c.) door 1 closes back after the pause time;
d.) the person must activate the internal radar of the second door to get door 2 to open;
e.) door 2 opens when door 1 has closed back;
f.) the person enters through door 2 and that door closes back at the end of the pause time.

Operation when the person approaches from the opposite direction is the same.

To open the door even when the other is open, it is necessary to actuate the command on the OPEN input.

22.3) INTERLOCK APPLICATION WITH ELECTRIC LOCKS DISABLED WITH CLOSED DOORS

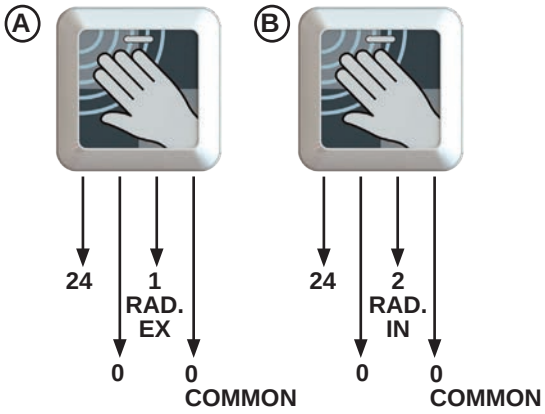
To enable this type of operation, set the function F29 = ON.
This application is used only when you install electric locks on the two interlocked doors and you want to keep them disabled when both doors are closed (breakout condition).
In the automatic bidirectional and monodirectional work programs, when door 1 receives an opening command, the electric lock that locks the leaf activates on door 2; the electric lock on door 2 is automatically disabled at the end of the closure of door 1.
Operation when the person approaches from the opposite direction is the same.
In the work program “Night lock” the electric lock is active when the door is closed, and in order to open the door it is necessary to issue a command on the OPEN input.
To open the door even when the other is open, it is necessary to actuate the command on the OPEN input.

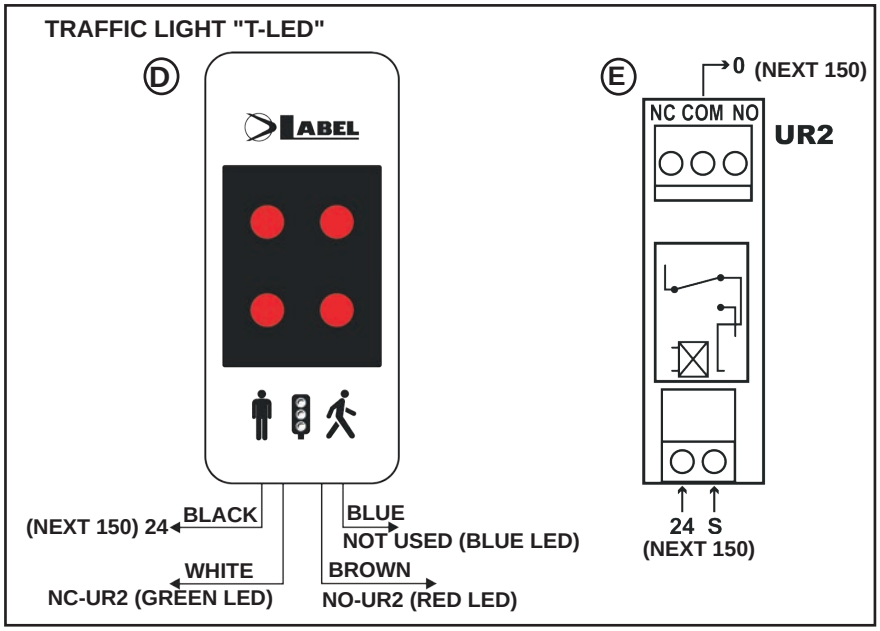
23) PRIVACY FUNCTION

Privacy function is used in those environments where you need to close the door from inside, as for example in toilettes, private rooms or meeting rooms.
In case of power failure the maglock is deactivated and the door can be open manually. For this reason we strongly recommend the use of the operator NEXT 150B (with emergency battery).
In order to avoid any contact between the door and the user, the following accessories are required and have to be connected to our NEXT 150 drive unit:

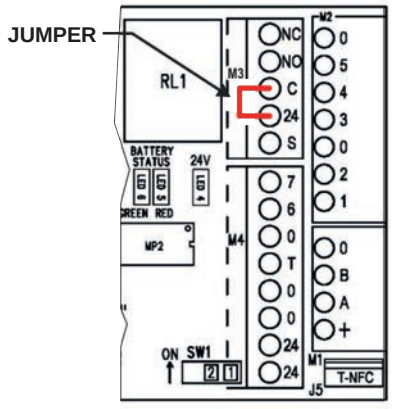
Ⓐ n. 1 Touchless Sensor for door opening from outside
Ⓑ n. 1 Touchless Sensor for locking the door from inside
Ⓒ n. 1 Maglock
Ⓓ n. 2 Traffic lights (red/green). These will show the door status (free or busy) inside or outside. Please connect the traffic lights in parallel. It is possible to choose between two different traffic lights: "item T-LED" or item "V00175".
Ⓔ n. 1 UR2 Relay Module to control the traffic lights
Ⓕ n. 1 N.C. emergency push button to release the maglock from inside
Ⓖ n. 1 ON/OFF Key selector to release the maglock from outside in case of emergency

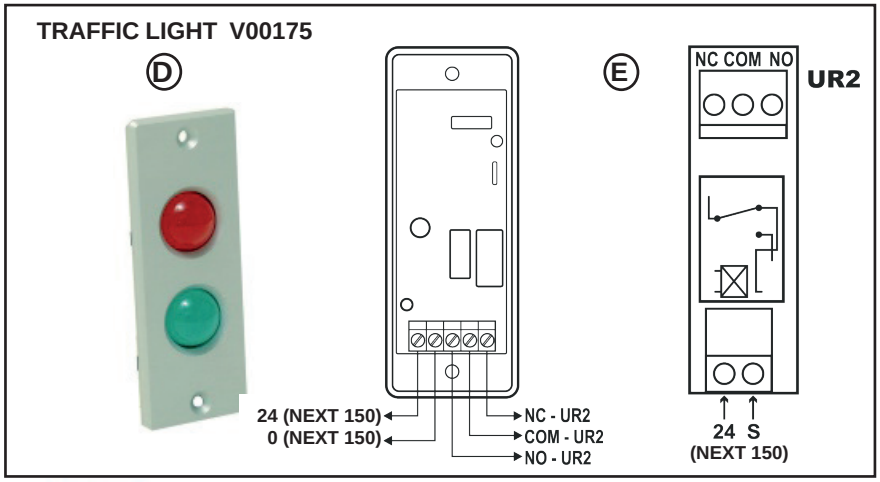
23.1) ELECTRICAL CONNECTIONS

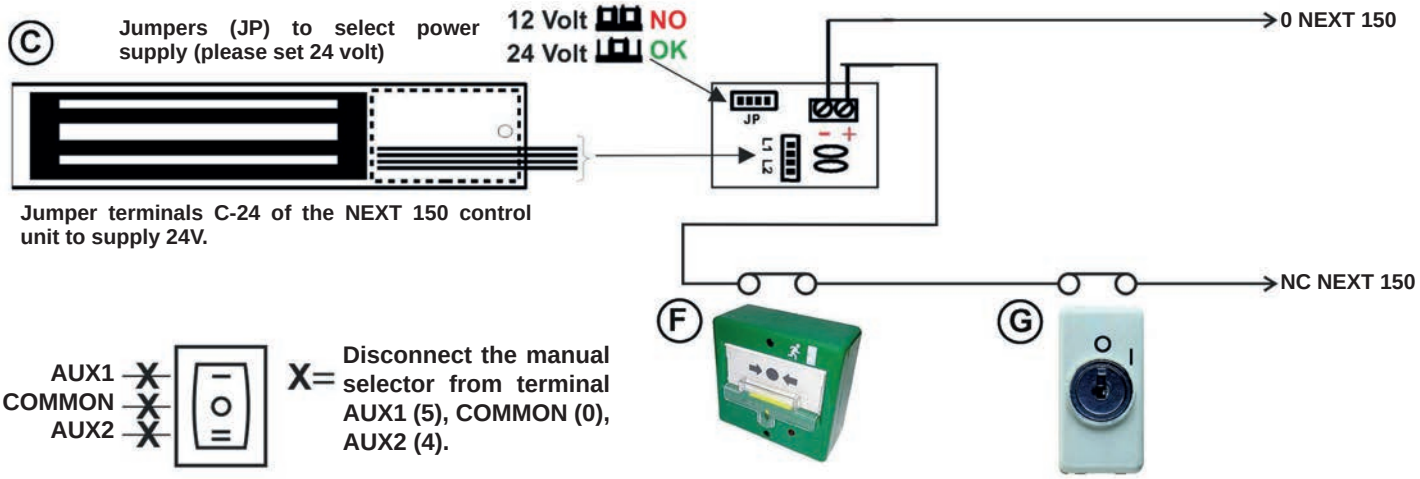




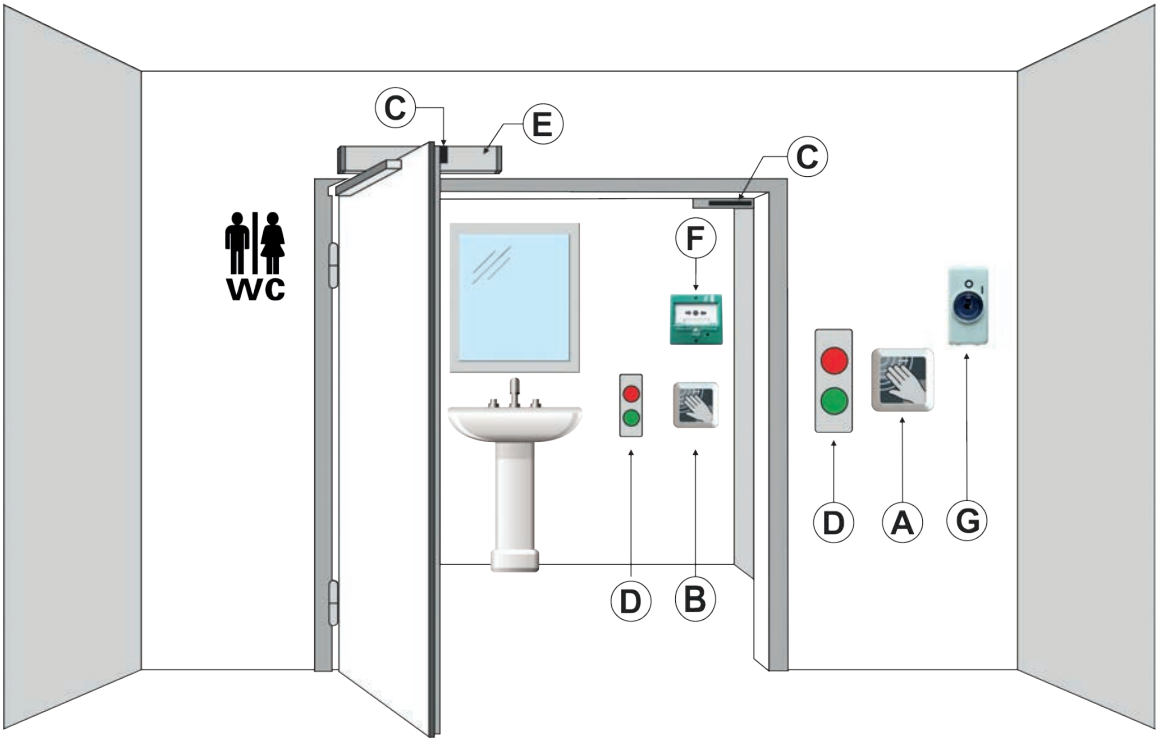
CONTROL UNIT NEXT 150







X= Disconnect the manual selector from terminal AUX1 (5), COMMON (0), AUX2 (4).



23.2) PRIVACY SYSTEM SETTINGS

- In order to activate the Privacy Function please set F77=ON through the digital display selector.
- The automatic door is usually unlocked when the room is empty and if the traffic light (D) is showing green light.
- Activating the external touchless sensor (A), the door will open automatically allowing the user to enter the room.
- Once the pause time is over, the door will close automatically and will wait for the user to lock it.
- Within the time set by parameter P34, the user has to activate once the internal touchless sensor (B) in order to engage the maglock (C). At this stage the traffic light will show red light and it will not be possible to open the door from outside.
- In order to open the door and leave the room, the user has to activate the internal touchless sensor (B), so that the maglock (C) will release and open the door. The traffic light (D) will show green light one the maglock is released.

In case of emergency it is possible to release the maglock (C) activating the internal emergency push button (F) or the external key selector (G).
The door will be released and a manual opening will be possible.

23.3) SETTINGS

- **FUNCTION F77**
  OFF: Privacy Function not active
  ON: Privacy Function active

- **FUNCTION F78:** Read this function just in case you install a maglock with status sensor open/closed (not supplied by Label)
  OFF: for maglock without status sensor open/closed (factory setting) The operator NEXT 150 is automatically detecting the close door status.
  ON: for maglock with status sensor open/close. Connect the N.O output contact of the status sensor to the input AUX1 on NEXT-L150 ontrol unit in order to detect the close door status.

- **FUNCTION F79**
  OFF: The traffic light (D) show steady green light during the door movement and until the locking impulse is given by the user.
  ON: The traffic light (D) slowly flashes red/green light during the door movement and then rapidly at door closed until the locking impulse is given by the user.
  As soon as the door is closed, the traffic light will show red light.

- **POTENTIOMETER P34**
  Adjustment of the time within which the user can activate door locking from inside once the door is closed. At value "0" the time is set to infinite; therefore, it is always possible to activate door locking through the internal touchless sensor. From value "1" to "100", the time is adjusted between 1 and 100 seconds (factory setting = 10 seconds). Once this time period has expired, the maglock is not engaged and the touchless sensor will activate door opening.

- **POTENTIOMETER P35**
  Adjustment of the time after which the maglock is released automatically if the door has been locked from inside. At value "0" (factory setting) the time is set to infinite; therefore, the maglock keeps the door locked until the user activates the internal touchless sensor to open the door and exit. From value "1" to "100", time is set from 1 to 100 minutes. Once this time period is expired the traffic light flashes red/green, advising the user that door will be unlocked within 3 minutes.

24) MEANING OF BUZZER AUDIBLE SIGNALS

The electronic control unit of the automation is equipped with a buzzer emitting audible signals, whose meaning varies according to the number of beeps and the sound duration.

AUDIBLE SIGNAL (BEEP)	MEANING
5 short fast BEEPS	Automation not set-up when powered.
4 short BEEPS	Warning related to the start of the slow opening manoeuvre during the initial phase of the set-up cycle.
Extended sound (3 seconds)	Signals the end of the initial set-up.
Extended and intermittent sound (during motion)	The power limit that the automation can supply to the motor is exceeded while the leaf is moving. This signal is active if function F49 = OFF. To disable this warning set F49 to ON.
1 BEEP	After powering the automation (already started up before).
1 extended BEEP (2 seconds)	Motor / encoder disconnected or not working.
1 BEEP (before the opening)	Safety sensor test during opening failed and subsequent opening at slow speed.
1 BEEP (before the opening)	Battery failure or low battery charge warning.
2 BEEPS (before the closing)	Safety sensor test during closing failed and subsequent closing at slow speed.
1 extended BEEP (2 seconds)	Internal system failure.

25) MAINTENANCE PROGRAM

To ensure that the automatic door keeps running safely over time, it is recommended to carry out the maintenance operations once every 6 months.
The installer can set the number of opening/closing cycles after which the message "PROGRAMMED MAINTENANCE" will appear on the display of the selector ET-DSEL or T-NFC (parameter P48).

Warning!
Before starting the operations on the automation, cut off the main supply line.

- Check that all the setscrews are correctly tightened.
- Clean and lubricate all the sliding and mobile components.
- Check all the connections of the wirings.
- Check that the setscrew of the arm is correctly tightened.
- Check that the leaf is steady and that the movement is smooth and without friction from ”door open” position up to “door closed” position.
- Check the conditions of the hinges and lubricate them.
- Check that speed, times, and safety functions are correctly selected.
- Check for the correct operation of the activation sensors and the safety sensors.

Once maintenance is completed, reset the partial cycle counter and the event memory (see paragraph 17 "MAINTENANCE").

Warning!
Any potentially damaged or worn component must be replaced.

Make use of original spare parts only; for this purpose check LABEL Parts list.

LABEL S.p.A.
Via Ilariuzzi, 17/A - S. Pancrazio P.se - 43126 - PARMA - Italy
Tel. (+39) 0521/6752 - Fax (+39) 0521/675222
www.labelspa.com

DECLARATION OF INCORPORATION OF PARTLY ASSEMBLED MACHINERY

Manufacturer: Label S.p.A.

Address: Via Ilariuzzi 17/A - 43126 San Pancrazio Parmense, PARMA - ITALY

Declares that: the automation, mod. **NEXT 150** (type NEXT 150, NEXT 150B, NEXT 150D, NEXT 150DB)

Serial Number:

realized to control pedestrian automatic swing doors
is in conformity with the essential safety requirements of the following Directives:

- Low voltage directive LVD 2014/35/EU
- Electromagnetic compatibility directive EMC 2014/30/EU
- RoHS2 Directive 2011/65/EU and subsequent amendments of the Directive 2015/863/EU (RoHS3)

Label declares that the automation **NEXT 150** has been realized to be incorporated in a machinery or to be assembled with other devices to constitute a machinery covered by Machine Directive 2006/42/EC.

Harmonized European regulations applied:
EN 13849-1
EN 13849-2 (automation in category 2, PL = d)
EN 61000-6-2
EN 61000-6-3
EN 60335-2-103
EN16005

Standard UL325, 7th Ed. (Certificate number UL-US-2015511-0, UL-CA-2012338-0)

Also declares that it is not allowed the commissioning of the product indicated until the final machinery in which the product is incorporated is declared in conformity according to the Machinery Directive 2006/42/EC.
Label undertakes to submit, upon suitably justified request of the national authorities, information related to the partly completed machinery.

PERSON AUTHORIZED TO ESTABLISH THE TECHNICAL DOCUMENTATION:
Bruno Baron Toaldo
Via Ilariuzzi, 17/A
43126 - San Pancrazio P.se - Parma

Parma, 30/09/2020

The Chairman
Bruno Baron Toaldo

NEXT

Made in Italy
by

Via Ilariuzzi, 17/A - S. Pancrazio P.se - 43126 PARMA - ITALIA
Tel. (+39) 05 21/ 67 52 - Fax (+39) 05 21/ 67 52 22
infocom@labelspa.it - **www.labelspa.com**

AZIENDA CERTIFICATA
SISTEMA QUALITÀ
UNI EN 9001:2008