



Tucker

AUTO-MATION

— **DRIVEN** —



TUCKER AUTO-MATION
kp evo - TAP CONTROLLER



IMPORTANT

READ THIS SECTION BEFORE PROCEEDING WITH INSTALLATION

Tucker Auto-Mation, LLC (hereafter referred to as “Tucker”) recommends that all of its automated pedestrian door products be installed by a trained automatic door technician and that the resulting performance of the product be in full compliance with the most current version of the American National Standards Institute document A156.10 or A156.19 (whichever is applicable) as well as any applicable building codes and/or fire codes. Tucker further recommends that a full inspection of the operating system be performed in accordance with the guidelines of the American Association of Automatic Door manufacturers (AAADM). This inspection must be performed by a certified AAADM trained inspector. Tucker recommends this documented inspection be performed upon completion of the installation as well as, following the completion of every service call thereafter. If service is not performed within one year of the previous service action, a routine AAADM inspection should be performed and documented. Under no circumstance should the product operate for more than one year without an AAADM inspection. Tucker does NOT recommend installation or service, on any of their automated pedestrian door products, by any individual who is not certified as an AAADM inspector. Following the installation or service of any Tucker automated pedestrian door product, if it is deemed unsafe, or is operating in an unsatisfactory manner according to national performance standards or recommended performance guidelines as defined by Tucker, repairs should be made immediately. If an immediate repair cannot be made, the product should be disabled, and appropriate measures should be taken to secure the door in a safe position or to enable the door to safely be used manually. During this situation, every effort should be made to notify the owner (or person responsible) of the condition and to advise on corrective actions that must be taken to return the product to safe operation.



TUCKER AUTO-MATION
KP evo - TAP CONTROLLER



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1. KP eVO

1.1 INSTALLATION AND CONNECTIONS



CARRY OUT THE FOLLOWING OPERATIONS WITH THE ELECTRICITY SUPPLY DISCONNECTED

1. Disassemble the parts (🔧 01).
2. Break the cable passage insert.



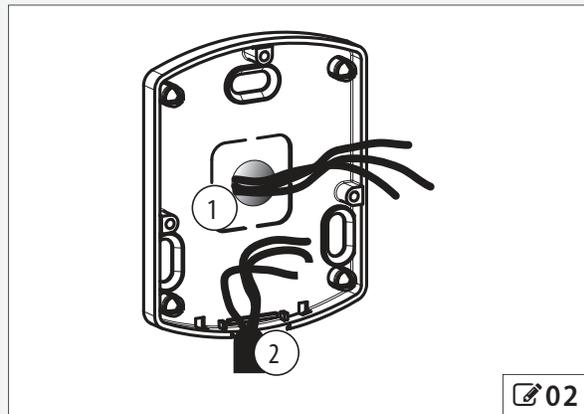
With reference to 🔧 02, the KP EVO is designed for the cables to enter from the back (1) or from underneath (2).

3. Decide where to position the support and fix it using suitable screws (🔧 01-1).
4. Connect the KP EVO to the 950N2 using a 4 pair twisted U/UTP AWG24 cable with a maximum length of 50m (🔧 03).

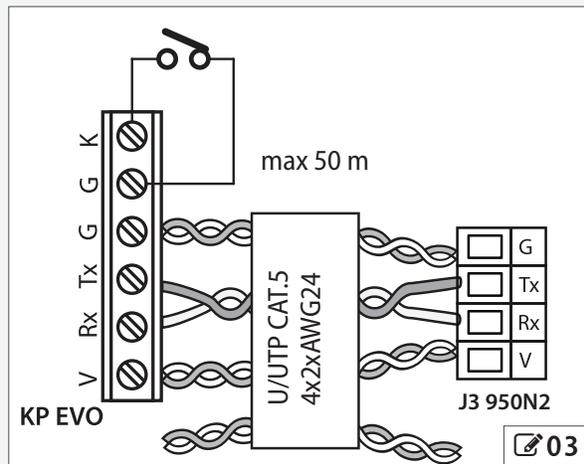


An optional key device can be connected between terminals G and K in order to enable/disable the KP EVO.

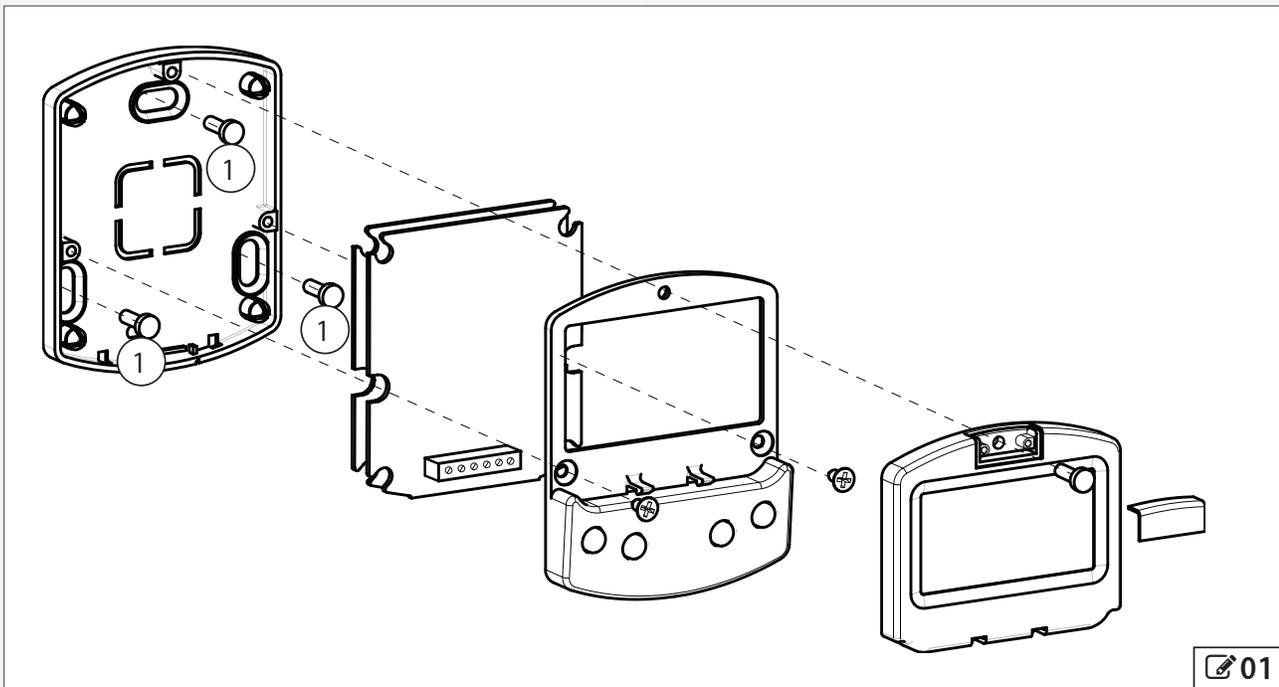
5. Reassemble the parts indicated in (🔧 01).



🔧 02



🔧 03



🔧 01



1.2 SWITCHING ON AND THE HOME SCREEN

1. Turn power on to the 950N2
2. The display will show the following in sequence:



in which the Bootloader version appears, then



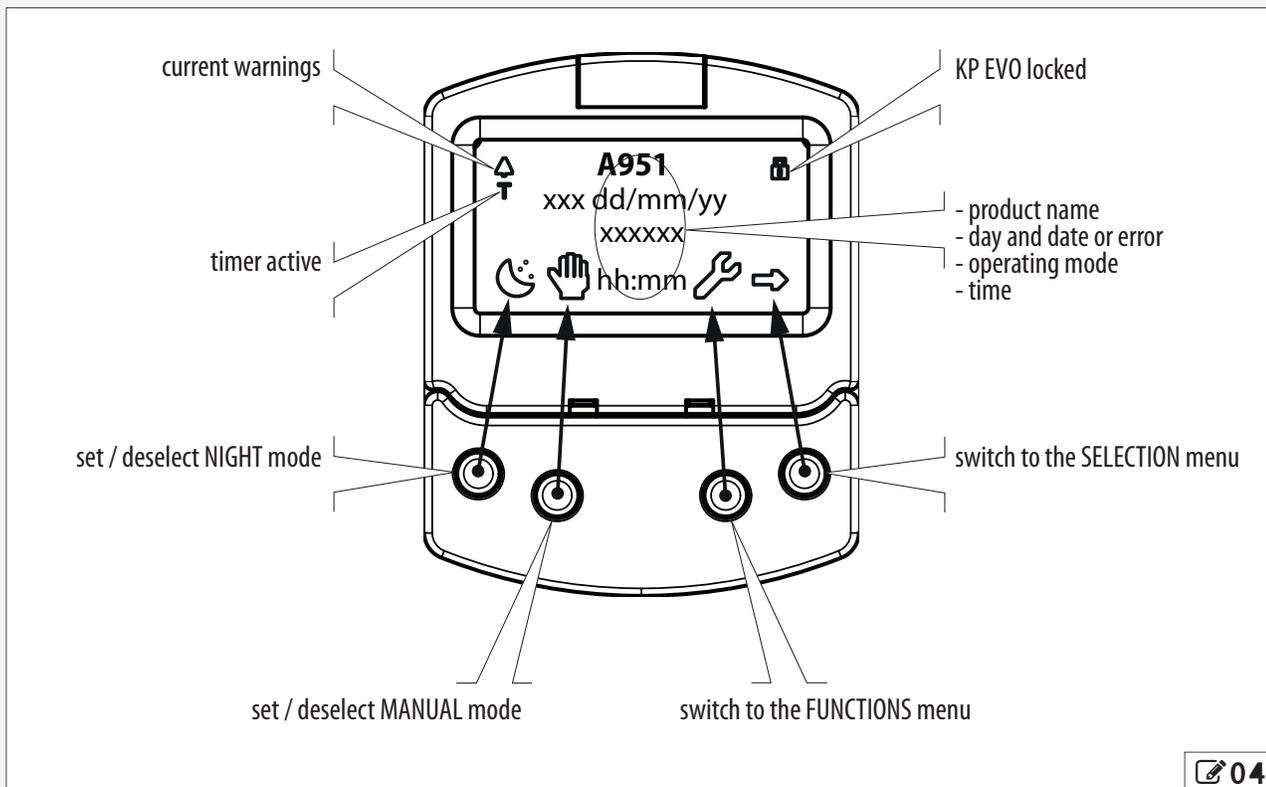
in which the firmware version appears, and lastly



The content of this home screen, including the fixed icons and those that may appear under certain circumstances, is explained in [04](#).

3. The 4 buttons are used to select controls that, depending on the screen, appear on the display above them.
4. By pressing the relative button on the home screen ([04](#)) you can:
 - 🌙 = set the NIGHT mode
 - 🖐 = set the MANUAL mode
 - 🛠 = switch to the FUNCTIONS menu that includes all the 950N2 configuration parameters.
 - ➡ = switch to the SELECTION menu that includes additional operating modes.

i By pressing the button to set the NIGHT or MANUAL mode, the relative icon is highlighted and the description of the operating mode is updated on the display. Once MANUAL mode has been set by pressing the relative button, press it again to return to the previous mode.





1.3 SELECTION MENU

To access the SELECTION menu from the home screen, press the → button (🔧 05).

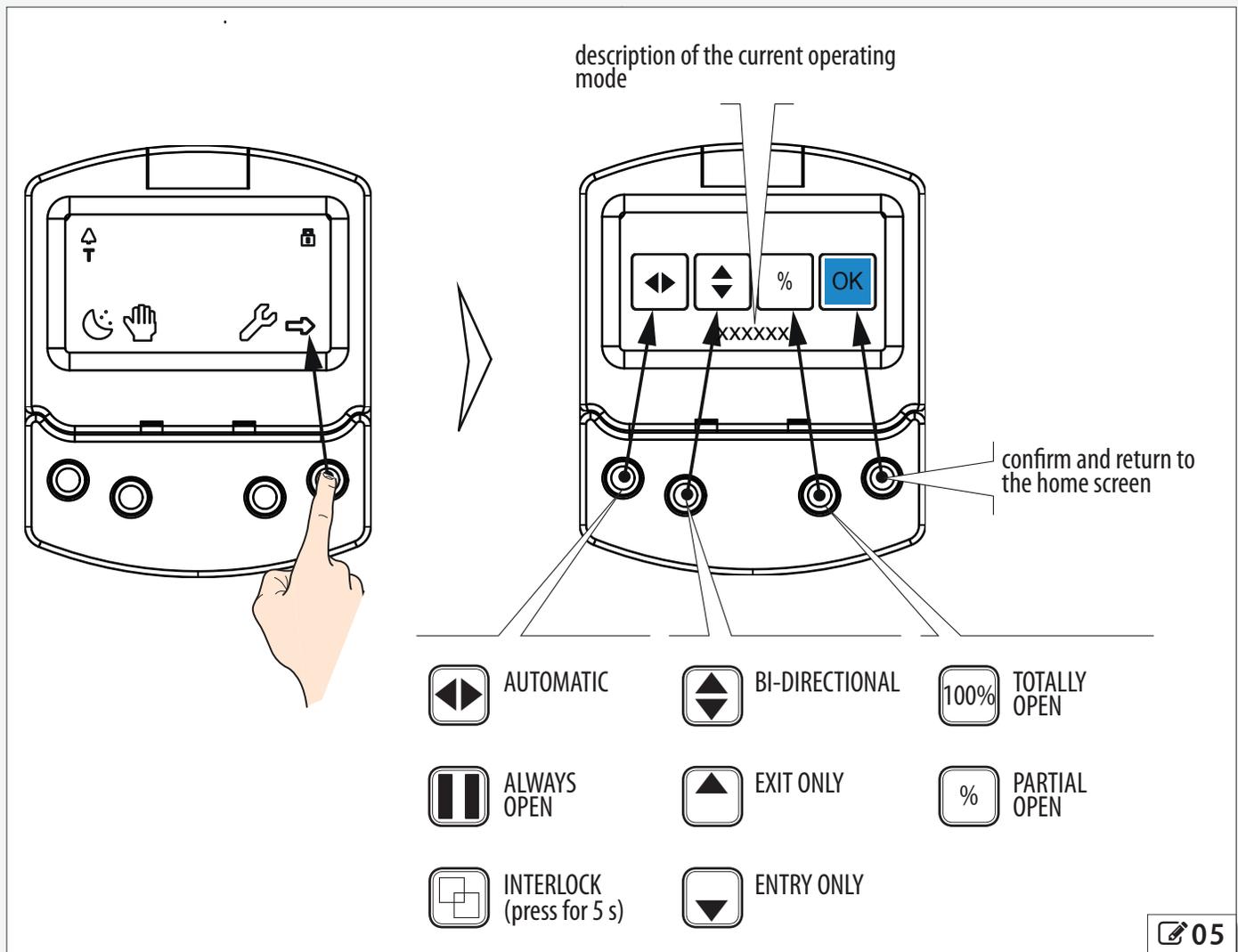
4 New icons appear on the display that define the operating modes that can be set.

The possible combinations can be obtained by pressing the corresponding buttons (🔧 05).

After having set the operating mode, press the OK button to confirm and return to the home screen.



The description of the operating mode on the display is updated with the description of the one that has been set.





1.4 FUNCTIONS MENU

To access the FUNCTIONS menu from the home screen, press the button (06). The display prompts for a 4-digit password to be entered.

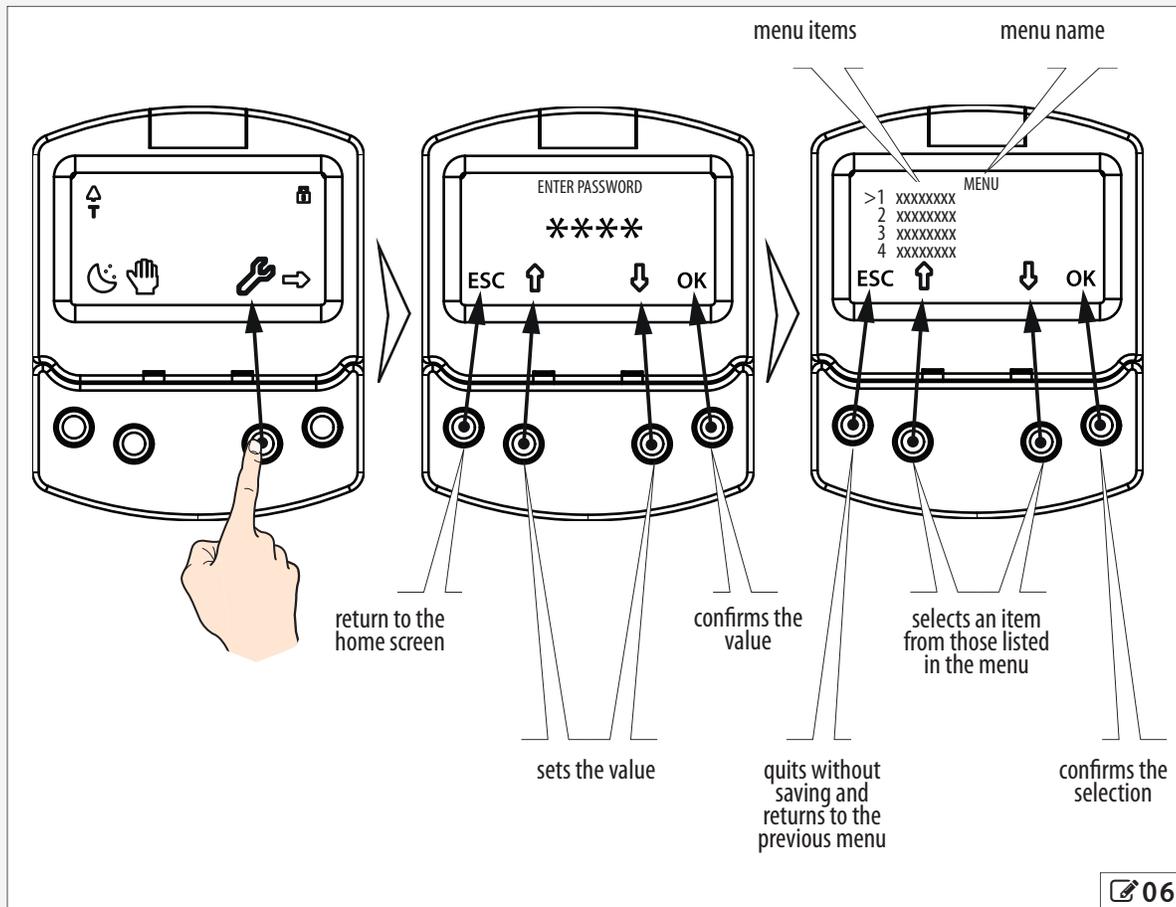
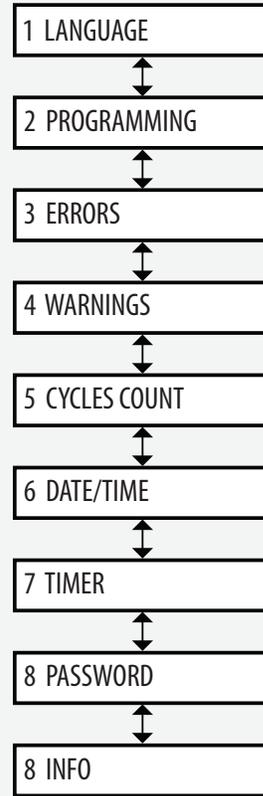


The factory-set password is: 0000

- Set the first digit using the and buttons.
- Confirm using the OK button to move to the next digit.
- When all 4 digits have been entered, if the password is correct, access the FUNCTIONS menu as a USER or a TECHNICIAN.
- Select the item from the menu using the and buttons.
- Confirm using the OK button to enter.



Press ESC at any time to return to the home screen.





A KP EVO menu

1 LANGUAGE

- 1 ITALIANO
- 2 ENGLISH
- 3 FRANCAIS
- 4 DEUTSCH
- 5 ESPANOL
- 6 NEDERLANDS

2 PROGRAMMING

1 INPUTS / OUTPUTS

1 INPUTS I1-I8

I1...I8

- 0 DISABLED
- 1 EXTERNAL OPEN NORMALLY OPENED / NORMALLY CLOSED
- 4 INTERNAL OPEN NORMALLY OPENED / NORMALLY CLOSED
- 7 AUTOMATIC OPEN NORMALLY OPENED / NORMALLY CLOSED
- 8 SEMIAUTOM. OPEN NORMALLY OPENED / NORMALLY CLOSED
- 10 KEY NORMALLY OPENED / NORMALLY CLOSED
- 11 PARTIAL OPEN NORMALLY OPENED / NORMALLY CLOSED
- 20 CLOSING SAFETY NORMALLY OPENED / NORMALLY CLOSED TEST ENABLED / DISABLED
- 21 OPENING SAFETY NORMALLY OPENED / NORMALLY CLOSED TEST ENABLED / DISABLED
- 22 OVERHEAD PRES. SENS NORMALLY OPENED / NORMALLY CLOSED
- 30 EMERGENCY OPEN NORMALLY OPENED / NORMALLY CLOSED
- 31 EMERGENCY OPEN WITH MEM NORMALLY OPENED / NORMALLY CLOSED
- 34 EMERGENCY CLOSE NORMALLY OPENED / NORMALLY CLOSED
- 35 EMERGENCY CLOSE WITH MEM NORMALLY OPENED / NORMALLY CLOSED
- 36 FIRE ALARM NORMALLY OPENED / NORMALLY CLOSED
- 40 ALWAYS OPEN NORMALLY OPENED / NORMALLY CLOSED
- 41 EXIT ONLY NORMALLY OPENED / NORMALLY CLOSED
- 42 ONLY IN NORMALLY OPENED / NORMALLY CLOSED
- 43 NIGHT NORMALLY OPENED / NORMALLY CLOSED
- 44 MANUAL NORMALLY OPENED / NORMALLY CLOSED
- 45 PARTIAL NORMALLY OPENED / NORMALLY CLOSED
- 46 INTERBLOCK ON NORMALLY OPENED / NORMALLY CLOSED

2 OUTPUTS 01/02

01...02

- 0 DISABLED
- 1 GONG NORMALLY OPENED / NORMALLY CLOSED
- 2 ERROR NORMALLY OPENED / NORMALLY CLOSED
- 4 EMERGENCY ACTIVATE NORMALLY OPENED / NORMALLY CLOSED
- 5 TEST NORMALLY OPENED / NORMALLY CLOSED
- 6 DOOR NOT CLOSED NORMALLY OPENED / NORMALLY CLOSED
- 7 DOOR OPENED NORMALLY OPENED / NORMALLY CLOSED
- 8 DOOR OPENING NORMALLY OPENED / NORMALLY CLOSED
- 9 LIGHT TIME 1...90 S NORMALLY OPENED / NORMALLY CLOSED
- 10 INTRUSION ACTIVE NORMALLY OPENED / NORMALLY CLOSED CLOSED
- 11 CLOSING SAFETY NORMALLY OPENED / NORMALLY CLOSED
- 12 SAFETIES NORMALLY OPENED / NORMALLY CLOSED

3 OP/CLRELAY

NORMALLY OPENED / NORMALLY CLOSED

4 EXTERNAL SELECTOR

POSITION 1...POSITION 2

- 0 DISABLED
- 1 NIGHT
- 2 OPENED
- 3 EXIT ONLY
- 4 MANUAL



2 MOTION

1 OPENING...2 CLOSING

- 1 SPEED 1...10
- 2 SLOWDOWN SLOWDOWN SPACE 0°...90° SLOWDOWN SPEED 1...3
- 3 STRENGTH 0...10
- 4 STRENGTH DURATION 0.1...3.0 s
- 5 ACCELERATION 1...10
- 6 DECELERATION 1...10

3 TIMING

- 1 PAUSE TIME 0...30 s
- 2 PAUSE TIME 0...30 s
- 3 NIGHT PAUSE TIME] 0...90 s
- 4 NIGHT SENSOR NIGHT 0...90 s

4 MOTOR LOCK KIT

1 FUNCTION

- DISABLED
- NIGHT
- EXIT ONLY
- NIGHT + MONODIR
- ALWAYS

- 2 LOCK DELAY 0...60 tenths of a second

3 RELEASE TYPE

- WHEN OPENING
- CLOSED

5 INSTALLATION

1 ARM TYPE

- SKID
- ARTICULATE

2 SENSOR TYPE

- DOOR MOUNTED SYSTEM
- OPS AND BEAM

- 3 START SETUP ARE YOU SURE ?

4 PUSH AND GO

- 0 DISABLED
- 1 ENABLED
- 2 FAST FOOD

5 PARTIAL STOP SEC.

- DISABLED
- ENABLED

- 6 LEAF DELAY 0°...90°

7 SCP

- DISABLED
- ENABLED

8 REVERSE STROKE

- DISABLED
- ENABLED

- 10 INOUT STATE IN1...IN8 01...02

11 DOOR STATUS

- 12 OTHER BOARD DATA V_MAIN V_ACC POS I_MOT

6 INTERCOM

1 FUNCTION

- DISABLED
- INTERMODE
- INTERLOCK WITH MEMORY / WITHOUT MEMORY
- 2 LEAVES
- 2 LEAVES + INTERBLOCK WITH MEMORY / WITHOUT MEMORY

2 MASTER/SLAVE NR.

3 INTERCOM REG.

4 NODE LIST



7 MISCELLANEOUS

- 1 DEFAULT DEFAULT
ACTIVATE
NO DO YOU WANT TO LOAD DEFAULT CONFIG ?
- 2 BOARD'S DISPLAY
STOPPED
NOT BLOCKED
- 3 INTRUSION
DISABLED
ENABLED
- 4 KPEVO KEY
WITHOUT USER PSW
BLOCK
- 5 CONSECUTIVE OBST.
CLOSING 0...10
OPENING 0...10
- 6 TEST ERROR
DISABLED
ENABLED

3 ERRORS

The display shows any current errors

4 WARNINGS

the display shows any current warnings

5 CYCLES COUNT

- 1 CYCLES NUMBER
ABSOLUTE
RELATIVE
- 2 MAINTENANCE
MAINTENANCE DATE MAINTENANCE CYCLES
- 3 CYCLES RESET ARE YOU SURE ? resets the number of cycles

6 DATE/TIME

- 1 SET DATE
- 2 SET TIME
- 3 DAYLIGHT SAV TIME
DISABLED
ENABLED

7 TIMER

- 1 TIMER STATE
DISABLED
ENABLED
- 2 MONDAY
- 3 TUESDAY
- 4 WEDNESDAY
- 5 THURSDAY
- 6 FRIDAY
- 7 SATURDAY
- 8 SUNDAY
- 9 MON - SUN
- 10 MON - FRI
- 11 JOLLY
- 12 JOLLY SLOTS
SLOT 1
SLOT 2
SLOT 3
SLOT 4
SLOT 5
SLOT 6
APPLY (appears only if selected LUN - SUN or LUN - FRI)



FUNCTION: 0	NO FUNCTION		
FUNCTION: 1	AUTO BIDIR TOTAL		
FUNCTION: 2	AUTO OUT TOTAL		
FUNCTION: 3	AUTO BIDIR PARTIAL		
FUNCTION: 4	AUTO OUT PARTIAL		
FUNCTION: 5	TOTALLY OPEN		
FUNCTION: 6	PARTIAL OPEN		
FUNCTION: 7	AUTO IN TOTAL		
FUNCTION: 8	AUTO IN PARTIAL		
FUNCTION: 9	NIGHT		
FUNCTION: 10	PARTIAL NIGHT		
	BEGINNING	hh:mm	
	END	hh:mm	
8 PASSWORD			
1	TECHNICIAN PSW		
	CHANGE TEC PSW	REINSERT TEC PSW	NEW PSW INSERTED
2	USER PSW		
	CHANGE USER PSW	REINSERT USER PSW	NEW PSW INSERTED
9 INFO			
E950E	BOOT	VER *.*	
E950E	APP	VER *.*	
KP EVO	APP	VER *.*	

PROGRAMMING - INPUTS/OUTPUTS

INPUTS

The inputs on terminal board J5 of the I/O board can be configured with the following functions



Each input can be set to NC or NO according to the device connected to it.

Disabled

No associated function.

External open

When activated, the door opens and remains open as long as the input is active. When released, the door waits for the pause time to elapse and then closes.

This has no effect in the EXIT ONLY or NIGHT modes.

Internal open

When activated, the door opens and remains open as long as the input is active. When released, the door waits for the pause time to elapse and then closes.

This has no effect in the ONLY IN or NIGHT modes.

Automatic open

When activated, the door opens and remains open as long as the input is active. When released, the door waits for the pause time to elapse and then closes.

Active in the BI-DIRECTIONAL, EXIT ONLY and ONLY IN modes.

This has no effect in the NIGHT mode.

Semiautom. open

When activated:

- if the door is not already open, it opens and remains open
- if the door is already open, it closes

Active in the BI-DIRECTIONAL, EXIT ONLY and ONLY IN modes.

This has no effect in the NIGHT mode.

Key

When activated, the door opens and remains open as long as the input is active. When released, the door waits for the night pause time to elapse and then closes.

Active in the BI-DIRECTIONAL, EXIT ONLY, IN ONLY and NIGHT modes.

Partial open

Only opens the master door when activated in the "2 leaves" mode.

Closing safety

When activated:

- If the door is closing, it reopens
- If the door is already open, it prevents it from closing
- If the door is opening, it has no effect

Opening safety

When activated:

- If the door is opening, it stops until it is released
- If the door is already closed, it prevents it from opening
- If the door is closing, it has no effect

Emergency open

When activated, the door opens (always total) and remains open as long as the input is active. When released, the door waits for the night pause time to elapse and then closes.

Also active in NIGHT mode.

Emergency open with memory

When activated, the door opens (always total) and remains open as long as the input is active. When released, the door remains open until it is Reset

Emergency close

When activated, the door closes and remains closed as long as the input is active. When released, the door returns to normal operation.



Emergency close with memory

When activated, the door closes and remains closed as long as the input is active. When released, the door remains closed until it is Reset

Fire alarm

When activated, the door closes, regardless of the operating mode that has been set, with the lock kept in the released position. It has priority over any commands that may be active.

Always open

When activated, the ALWAYS OPEN mode is set.

Exit only

When activated, the EXIT ONLY mode is set.

Entry only

When activated, the ONLY IN operating mode is set.

Night

When activated, the NIGHT mode is set.

Manual

When activated, the MANUAL mode is set.

Partial

When activated, the PARTIAL mode is set.

Interblock ON

When activated, the INTERLOCK mode is set.

Timer

When activated, the TIMER mode is set.

OUTPUTS

The outputs on terminal board J5 of the I/O board can be configured with the following functions



Each input can be set to NC or NO according to the device connected to it.

Disabled

No associated function.

Gong

The output is activated and deactivated at 1-second intervals when the safety devices are engaged.

Error

The output is activated if there is an error.

Emrg. active

The output is activated when an Emergency is triggered.

Test

The output commands a FAILSAFE test on the inputs that are configured as safety devices on which the option of running a TEST before movement has been enabled.

Door not closed

The output remains active until the door is closed.

Door open

The output remains active as long as the door is open.

Door opening

The output remains active as long as the door is moving.

Light

The output is activated, for a programmable length of time, when the door is open in NIGHT mode.

Intrusion active

The output is activated when an intrusion is in progress (i.e. when an unexpected movement of the door from its closed position is detected).

Closing safety

The output is activated when a closing safety device is active.

Safeties

The output is activated when a closing or opening safety device is engaged.

OP/CL RELAY

Specifies the logic of the door status relay (NC/NO).

EXTERNAL SELECTOR

Specifies the operating mode associated with positions 1 and 2 of the selector on the side of the unit.

PROGRAMMING - MOTION

OPENING/CLOSING

Speed

Sets the speed of movement.

Deceleration

Specifies the space (in degrees of rotation of the 950N2 shaft) and the deceleration speed (on 3 levels) of the door before reaching the final open / closed positions.

Strength

Specifies the maximum crushing force.

Strength duration

Specifies the maximum thrust time before an obstacle is recognised.

Acceleration

Specifies how quickly the door reaches the set opening speed when starting from stop.

Deceleration

Specifies how quickly the door stops.

PROGRAMMING - TIMING

PAUSE TIME

Defines the pause time of the door when opened by a command, before closing automatically.

PAUSE TIME P&G

Sets the door pause time when opened by a Push & Go command, before closing automatically.

Night PAUSE TIME

Sets the door pause time when opened by a command in NIGHT mode, before closing automatically.

NIGHT SENSOR DELAY

When NIGHT mode is set, the internal detector remains active for the amount of time set in this parameter, to allow it to be opened only once. The internal detector is disabled immediately after opening and in any case upon expiry of the set delay.

PROGRAMMING - MOTOR BLOCK KIT

FUNCTION

Specifies the operating mode in which the lock is activated.

LOCK DELAY

Specifies the opening delay time of the door to allow the lock to be released, particularly motorised locks.

RELEASE TYPE

Specifies when power is disconnected from the lock after it has been mechanically released:

Opening = during the opening phase

Closed = when the door is closed again



■ PROGRAMMING - INSTALLATION

ARM TYPE

Specifies the type of transmission arm installed (shoe or articulated)

START SETUP

Carries out a Setup cycle after confirmation.

PUSH AND GO

Sets the function that commands the automatic opening of the door after an initial manual push:

Disabled = Push & Go not enabled

Enabled = Push & Go enabled

Fast food = Push & Go enabled in "FAST FOOD" mode (manual opening, motorised closing)

PARTIAL STOP SEC.

Specifies the detection area of the safety in opening:

Disabled = obstacle detection active over the entire opening stroke

Enabled = obstacle detection NOT active in proximity to the opening stop

LEAF DELAY

Specifies the opening delay between the doors of 2 leaf models.

SCP

Specifies the function that pushes the door with a greater force in the final section of the closure. It is useful to activate this function if there is high friction, if the seals are particularly rigid or if locks have a stiff latch.



Because activating the SCP function also reduces the sensitivity of the electronic anti-crushing system in the final section of closing, DO NOT activate the SCP function in "low energy" mode.

REVERSE STROKE

Sets the function that makes the door carry out a short reverse stroke before opening to make it easier to release the lock.

2 EASY REG.

Registration of BUS 2easy devices.

INOUT STATE

The display indicates the status (on / off) of inputs I1-I8 and outputs O1-O2 in real-time.

DOOR STATUS

The display indicates the status of the automation in real-time.

OTHER BOARD DATA

The display indicates useful diagnostics information in real-time.

■ PROGRAMMING - INTERCOM

FUNCTION

Sets the operating mode.

MASTER/SLAVE NR.

Sets the network ID of the unit.

INTERCOM REG.

Registers the units of the network (to be performed only on the 950N2 with ID1).

NODE LIST

Shows the ID of the units registered (on the master).

■ PROGRAMMING - MISCELLANEOUS

CONFIG. DEFAULT

Shows whether the parameters have been modified, and if so, resets the factory defaults after confirmation.

BOARD'S DISPLAY

Not active.

INTRUSION

Sets the function in which the door resists attempts to open it manually.

KPEVO KEY

You can choose between:

Block = the user must enter the user password in order to access the menus that he is authorised to use.

Without user psw = the user doesn't need to enter the user password in order to access the menus that he is authorised to use.

CONSECUTIVE OBST.

Specifies the maximum number of consecutive obstacle detections in the same direction of movement, before stopping in an error condition.

TEST ERROR

Specifies the effect that the TEST will have when it detects a safety device fault:

Disabled = the door will remain stationary in an error condition

Enabled = the door will continue to operate at minimum speed

■ ERRORS

In this menu, the display indicates any current errors that there may be in real time.

■ WARNINGS

In this menu, the display indicates any current alerts that there may be in real time.

■ CYCLE COUNTER

The 950N2 has two counters:

- total, non-resettable

- partial, resettable

This menu allows you to view the cycles performed by the automation and reset the partial counter.

It is also possible to set a deadline for scheduled maintenance according to:

- date (optional)

- number of cycles (from 1000 to 1000000)

Alert 60 will be displayed as soon as one of the two settings (date or number of cycles) is reached.



Logging in with the user password only allows data to be viewed.

■ DATE/TIME

This menu allows you to set or modify the date, time and turn European summer time on / off.



i To keep the settings even if there is no mains power, which is necessary for the TIMER to work correctly, a battery must be installed on the Logic board.

■ TIMER

This menu includes all the parameters for configuring the TIMER function.

When the TIMER is enabled, the operating mode of the door during the programmed time bands is set automatically.

A maximum of 6 daily time bands can be defined, and an operating mode, selected from those available, assigned to each one. Each time band has a start time and an end time.

The time bands must not overlap.

i When the TIMER is enabled, the T icon appears on the home screen.

To manually change the operating mode set by the TIMER, it first has to be disabled.

In order for the TIMER to work correctly, a battery must be installed on the Logic board.

In order to quickly program groups of days of the week with the same time bands, it is possible to simultaneously select all the days of the week (MON - SUN) and all weekdays (MON - FRI). Once the time bands that have been defined here have been confirmed using the APPLY option, they will overwrite any time bands that have already been programmed for individual days.

If it is necessary to program specific days or periods (e.g. recurring holidays), you may use the JOLLY function.

A maximum of 6 JOLLY time bands can be specified and an operating mode, selected from those available, assigned to each one. Each time band has a start time and an end time.

The time bands must not overlap.

The JOLLY time bands are then assigned to a maximum of 6 INTERVALS. An interval can be a single day or a series of days.

i If a single day is defined, the start and end date of the interval must be the same.

The interval must refer to same calendar year (example: for the period from 25/12 to 06/01, 2 intervals must be created, from 25/12 to 31/12 and from 01/01 to 06/01).

■ PASSWORD

This menu allows passwords to be set or modified.

To access the FUNCTIONS menu you are prompted to enter a 4-digit password.

The 950N2 has two passwords available, with different access rights (**B**)

B Access permissions and passwords

	TECHNICIAN PSW	USER PSW
LANGUAGE	✓	✓
PROGRAMMING	✓	⊖
ERRORS	✓	✓
WARNINGS	✓	✓
CYCLES COUNT	✓	✓(*)
DATE/TIME	✓	✓
TIMER	✓	✓
PASSWORD	✓	✓(*)
INFO	✓	✓

* with restrictions



The user is only allowed to modify the user password.



2. DIAGNOSTICS

2.1 LEDS CHECK

I/O BOARD LEDS

Each input on the I/O board, has a LED that indicates the physical state of the contact:

☐ C I/O board LEDS

LED	○	●
DL 1	accessories power on	accessories power off
DL 2 - DL9	open contact	closed contact

LOGIC BOARD LEDS

There are 4 LEDs on the Logic board:

☐ D Logic board LEDS

LED	○	●	*	*
DL 1 green	no USB	USB connect- ed		§
DL 2 red	normal con- dition	error	Setup re- quested	Setup in pro- gress
DL 3 blue	no power or board failure	/	normal con- dition	/
DL 4 yellow	board pa- rameters the same as trim- mer and DIP switch values	board pa- rameters different to trimmer and DIP switch values	Button pressed	/

- off
- on
- * flashing
- * fast flashing

2.2 INPUTS AND OUTPUTS STATUS CHECK

The status of each input and output can be checked via the KP EVO.

Go to menu 2.5.9. The display indicates the status of the logic as shown in  07. Example:

IN1 = input active

IN1 = input not active

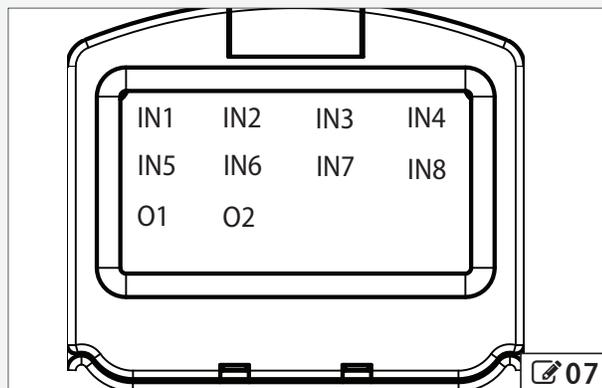
2.3 AUTOMATION STATUS CHECK

The current status of the automation system can be checked via the KP EVO.

Go to menu 2.5.10. The display shows information regarding the status of the automation.

☐ E Status

CLOSED
OPENING
OPEN
PAUSE
NIGHT PAUSE
CLOSING
EMERGENCY ACTIVATE
MANUAL
NIGHT
STOP
SECURITIES TEST
ERROR
SETUP in progress





2.4 WARNINGS

Alerts provide information regarding the status or current phase of the automation and errors that do not prevent it from operating. It is possible to check any current alerts via the KP EVO.

Go to menu 4 to view the list of current alerts.

If there is at least one alert, an icon appears on the home screen.

F Warnings

41	Date and time missing - Reset date/time via the KP EVO
42	Clock battery discharged or missing
44	Emergency active (including command memory)
45	Timer active
46	Timer function in progress
48	Night mode operation
49	Manual mode operation
50	Partial mode operation
51	Obstacle detected during closure
52	Obstacle detected during opening
53	Number of maintenance cycles on E ² prom corrupted - Carry out a Reset. - If the alarm persists, replace the Logic board
58	Searching for strike on closing
60	Maintenance requested
61	KP EVO fault - Check that the correct device is connected and check the connections. - If the alarm persists, update the firmware - If the alarm persists, replace the Logic board
63	Intrusion in progress
65	Set-up in progress
68	TEST alarm (only if the "test error" parameter is enabled) - Check the operation of the connected devices - If the alarm persists, replace the device - If the alarm persists, replace the Logic board In this condition, the door moves at a slower speed.
69	Door opened by a semi-automatic command
71	Slave Intercom mode
72	Intercom alarm - Check the connections - Check the ID - If the alarm persists, replace the Logic board
73	Slave Error / Alarm
74	Interlock alarm - Check the connections - Check the ID - If the alarm persists, replace the Logic board
80	Non-standard programming



2.5 ERRORS

Errors are malfunctions that prevent the automation system from working. They are indicated by a steady red LED on the Logic board.

After every 5 minutes in which a fault condition persists and for a maximum of 20 consecutive times, the 950N2 will perform a Reset to attempt to restore normal operation so as not to require any action if the condition that caused the error was temporary. If the fault persists, remove the cause in order to restore

normal operation.

The type of error can be identified via the KP EVO. The error code appears on the home page. Go to menu 5; the display provides information regarding the current error.

G Errors

When an error occurs:

1. Check all the electrical connections
2. Carry out a reset.
3. If the problem persists, carry out the operations described in the table one at a time until the problem is resolved.

Error	Action required
01 Board failure	- Replace the Logic board
02 E ² prom failure	- Replace the Logic board
03 Motor driver failure	- Replace the Logic board - Replace the motor
04 Accessories power supply fault	- Check that the accessories power supply is not short circuited - Check that maximum load of the accessories has not been exceeded - Replace the Logic board - Replace the I/O board
05 Microcontroller error	- Reload/update the Logic board firmware - Replace the Logic board
07 Motor failure	- Replace the motor - Replace the Logic board
09 Board voltage anomaly	- Replace the Logic board - Replace the I/O board
11 Closing safety TEST failed	- Check the connections of the safety device - Check that the safety device is working - Replace the Logic board
12 Opening safety TEST failed	- Check the connections of the safety device - Check that the safety device is working - Replace the Logic board
15 Setup inhibited	- Make sure that Night or Manual mode has not been set. - Make sure that an Emergency command has not been activated
16 Encoder fault	- Replace the Logic board
18 Firmware not compatible	- Update with the correct firmware
19 High mechanical friction	- Make sure that the leaf has been mounted correctly and that it moves smoothly, remove any friction - Replace the Logic board - Replace the gearmotor
22 Programming data corrupted	- Reprogram the board or upload the program files that were saved to the USB storage device. - Replace the Logic board



24	Consecutive obstacles in closing	<ul style="list-style-type: none">- Remove the obstacle in closing.- Make sure that the leaf has been mounted correctly and that it moves smoothly, remove any friction
26	Lock failure	<ul style="list-style-type: none">- Check the wiring of the lock- Check that the maximum load of the lock has not been exceeded- Replace the lock- Replace the Logic board
27	Motor rotation fault	<ul style="list-style-type: none">- Check the polarity of the motor cable
31	Consecutive obstacles in opening	<ul style="list-style-type: none">- Remove the obstacle in opening- Make sure that the leaf has been mounted correctly and that it moves smoothly, remove any friction
39	Setup data missing or corrupted	<ul style="list-style-type: none">- Perform Setup- Replace the Logic board

2.6 OTHER BOARD DATA

Go to menu 2.5.11 of the KP EVO. The display provides information on the following parameters:

- V MAIN : input voltage to the Logic board (Volts)
- V ACC : output voltage for accessories (Volts)
- POS : position of the rotating shaft (degrees)
- I MOT : current drawn by motor (Amperes)

2.7 FIRMWARE VERSIONS

Go to menu 9 of the KP EVO to view the firmware versions of the bootloader, the Logic board and the KP EVO.

2.8 LOG DATA

The 950N2 records the last 512 system events. A battery must be installed on the Logic board in order to save the list of events in memory even if the system is switched off.

To download the data as a text file, see § .

3. UPLOAD / DOWNLOAD

There is a USB port on the Logic board via which the following operations can be carried out:

- Load data from a USB pen drive (UPLOAD).
- Save data to a USB pen drive (DOWNLOAD).

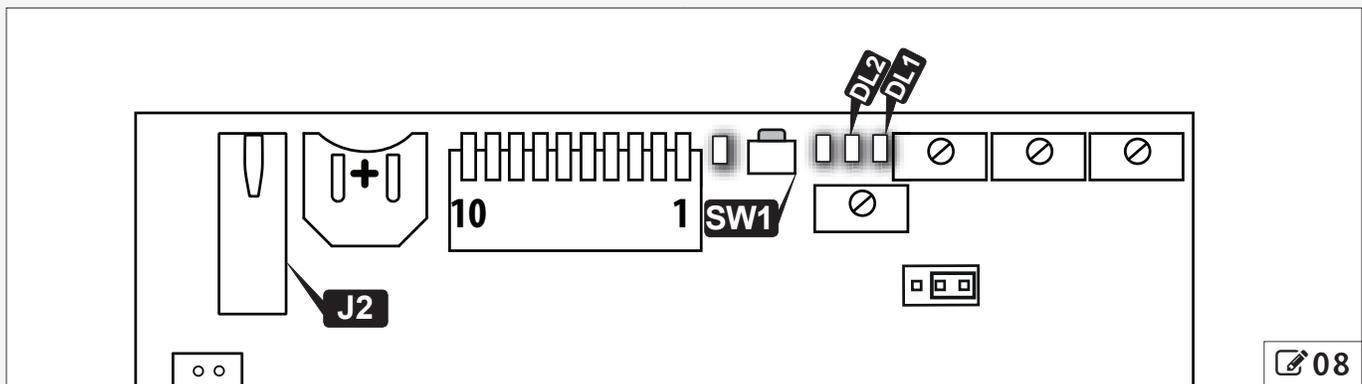


For both operations, the USB pen drive must be formatted with the FAT or FAT 32 file system. The NTFS format is not recognised.



In order to upload, the files required, the names of which are indicated in **H** must be present in the root directory of the USB pen drive.

1. Turn power off to the 950N2.
2. Insert the USB pen drive in the USB port (J2) on the Logic board.
3. Turn power on to the 950N2.
4. If the device is detected correctly, the green LED DL1 of the Logic (**08**) board lights up steadily.
5. The available functions are selected by briefly pressing button SW1 on the Logic board (**08**). The operation to be carried out is indicated by the number of flashes of the green LED. Each time the button is pressed, the operations selected are indicated in **H**.
6. Press and hold the SW1 button for at least 3 seconds to use the function. The green LED flashes more quickly while the procedure is being carried out. When finished, the result is signalled by the status of the following LEDs:
 - green LED (DL1) on steadily = completed successfully
 - red LED (DL2) on steadily = error
7. Turn power off to the 950N2 and remove the USB pen drive.



H Selecting the upload/download function

Green LED DL1	Function
1 flash	950N2 firmware update file required: 950N2.hex
2 flashes	KP EVO firmware update, including menu translations files required: KP EVO.hex e KP EVO_L.bin
3 flashes	950N2 and timer configuration upload files required:
4 flashes	950N2, timer and LOG data configuration download files written: 950N2.prg , 950N2.tmr , 950N2.log



4 . PUTTING INTO SERVICE

4.1 FINAL CHECKS

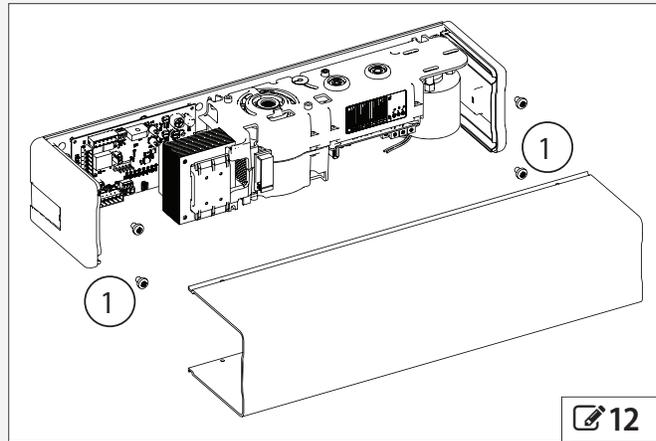
1. For doors in “low energy” mode, make sure that the forces generated by the leaf are within the limits permitted by the regulations. Use an impact force tester in accordance with standards EN 12453: 2002 and EN 12445: 2002. For non-EU countries, if there are no specific local regulations, the force must be less than 67 N.
2. For doors that are not in “low energy” mode, make sure that the test object is detected in all areas covered by the leaf movement.

4.2 FINAL OPERATIONS

1. Connect the cable of the functions selector at the side of the unit to the I/O board (connector J2).
2. Install the front cover.
3. Highlight all areas with adequate warning signs in which there are still residual risks, even if all possible safety measures having been adopted. In particular, for doors less than 2 meters high, apply the hazard warning pictograms in correspondence with the arm movement area.
4. Place a “DANGER, AUTOMATICALLY CONTROLLED” sign in a prominent position on the door.
5. Attach the CE marking on the door.
6. Fill out the EC declaration of conformity and the system register.
7. Give the EC Declaration, the system register with the maintenance plan and the instructions for use of the automation to the system owner/operator.

INSTALLING AN ALUMINIUM COVER

1. Install the side profiles using the screws 12 -1 on both sides.
2. Press the aluminium cover on, aligning the slot with the side on which the transmission arm has been installed.



5. MAINTENANCE

RISKS



PERSONAL PROTECTIVE EQUIPMENT



Always shut off the power supply before performing any maintenance operations. If the disconnect switch is not in view, apply a warning sign stating "WARNING - Maintenance in Progress". Restore the power supply only after finishing any maintenance work and restoring the area to normal.

Maintenance must be performed by the installer or a maintenance technician. Follow all safety recommendations and instructions given in this manual. Mark off the work site and prohibit access/transit. Do not leave the work site unattended. The work area must be kept tidy and cleared after maintenance has been completed. Before starting work, wait for any hot components to cool down. Do not make any modifications to the original components. FAAC S.p.A. shall bear no liability for damage or injury due to components that have been modified or otherwise tampered with.

The warranty shall be forfeited in the event of tampering with components. Only use original FAAC spare parts.

5.1 INSERTING / REPLACING THE BATTERY



CARRY OUT THE FOLLOWING OPERATIONS WITH THE ELECTRICITY SUPPLY DISCONNECTED

1. Remove the cover.
2. Install or replace the CR1216 battery on the Logic board, as shown in 13 .
3. Reinstall the cover.

5.2 REPLACING THE FUSE

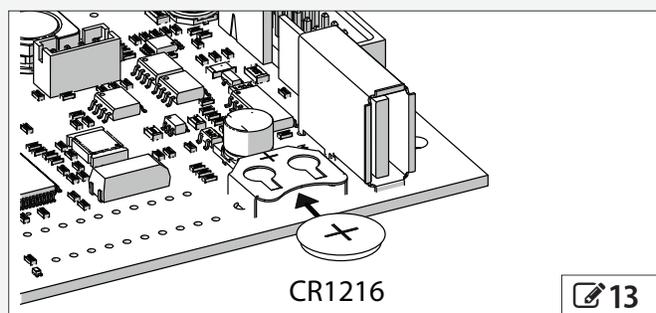


CARRY OUT THE FOLLOWING OPERATIONS WITH THE ELECTRICITY SUPPLY DISCONNECTED

There is a power supply protection fuse on the I/O board.

To replace it:

1. Remove the cover:
2. Replace the following fuses
 - F 4A for the 230 V version
 - T 3.15A for the 115 V version
3. Reinstall the cover.





5.3 ROUTINE MAINTENANCE

Table I lists the operations which must be performed on a regular basis in order to keep the automation working reliably and safely; these are given purely as a guideline and should not be considered exhaustive. The installer/machine manufacturer is responsible for drawing up the maintenance plan for the automation, supplementing this list or modifying the maintenance operations on the basis of the machine characteristics.

I Scheduled maintenance

Operations	Frequency/months
Structures	
Check the structures and the parts of the building to which the door and the automation is fixed: make sure there is no damage, cracking, breaks or subsidence.	12
Frame	
Check the frame: make sure that it is fixed correctly, that it is integral and that there is no deformation or damage. Tighten screws and bolts where necessary.	12
Check the leaf: that it is integral and that there is no deformation or damage.	12
Check the hinges: make sure that they are fixed correctly, that they are integral, correctly positioned in their seats and that there is no deformation or damage.	12
Lubricate hinges or locks, if necessary.	12
Generally clean of the area of movement of the door.	12
Check the presence and condition of pictograms that highlight the glass part of the door. If they are missing or damaged, replace them.	12
Operator	
Check that the cover/casing and all the movable guards are integral and that they are fastened correctly. Tighten screws and bolts where necessary.	12
Check the condition of the power cables, the sensor and accessory connection cables and the relative cable glands.	12
General cleaning.	12
Function set-up selector and keyboard	
Check that they are intact and operating correctly.	12
Sensors, protective devices and control devices	
Check that they are intact and operating correctly.	12
If applicable, check that the pictograms that identify the control devices for disabled persons are present and intact.	12
The door	
Check that the door operates properly in both directions with all the devices installed.	12
Check that the door moves smoothly and uniformly without making any unusual noises.	12
Check that the opening and closing speed is correct. For doors in "low energy" mode, make sure that the opening and closing times are within the limits permitted by the regulations.	6
For doors in "low energy" mode, make sure that it is possible to stop the movement of the door without excessive force (Max. 67N) at any point along its travel.	6
Check that the door operates correctly in every operating mode.	12
Check that the lock is working properly, if present.	6
Check that the safety system is working correctly (door reverses or stops when an obstacle is detected, that the door stops in the open position when there is an obstacle in the area of movement etc.)	6
Check the presence, integrity and legibility of the EC marking on the door and the DANGER AUTOMATIC MOVEMENT warning sign.	12



6. INTERCOM

■ DESCRIPTION

The 950N2 is capable of communicating with other 950N2 units via an Intercom network connection. This enables the following modes of operation to be used (KP EVO menu 2.6.1):

- INTERMODE: a master door from which to set the operating mode for all the other doors that are connected to the network.
- INTERLOCK: two single doors, where the opening of one is subject to the closing of the other and vice versa.
- 2 LEAVES: access consisting of a double leaf.
- 2 LEAVES + INTERLOCK: two interlocked accesses, each consisting of a double leaf.



Every network connected 950N2 should be programmed for the same Intercom mode.

■ CONNECTION

The units in the network are connected via 3 cascade connected-wires between the J8 connectors of the I/O boards (🔗 14).



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

The 2 DIP switches on the I/O board must be set as follows:

- On the first and last units of the cascade connection: both ON.
- On intermediate units (if any): both OFF.

■ ADDRESSING

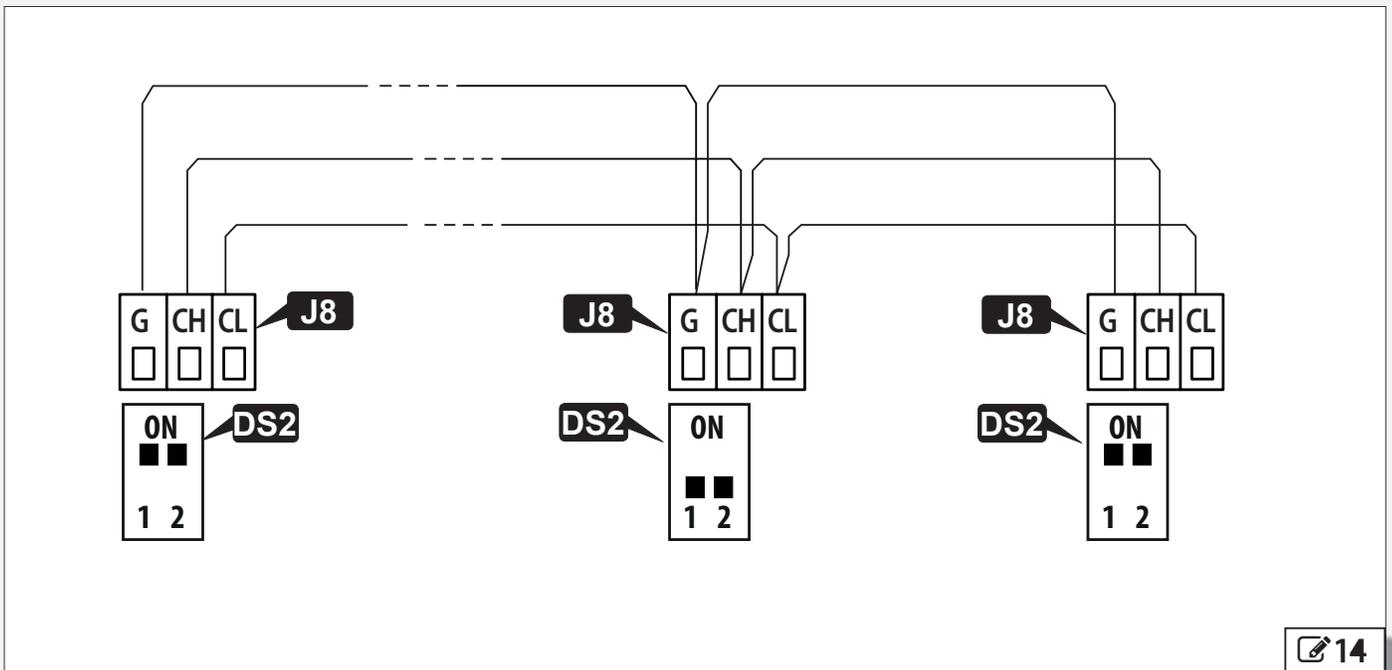
A unique ID (KP EVO menu 2.6.2) must be assigned to each 950N2 in the network as indicated below.



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

■ REGISTRATION

After having wired up and assigned an address to each unit, registration (KP EVO menu 2.6.3), must only be carried out on the 950N2 that has been assigned ID1.





6.1 INTERMODE

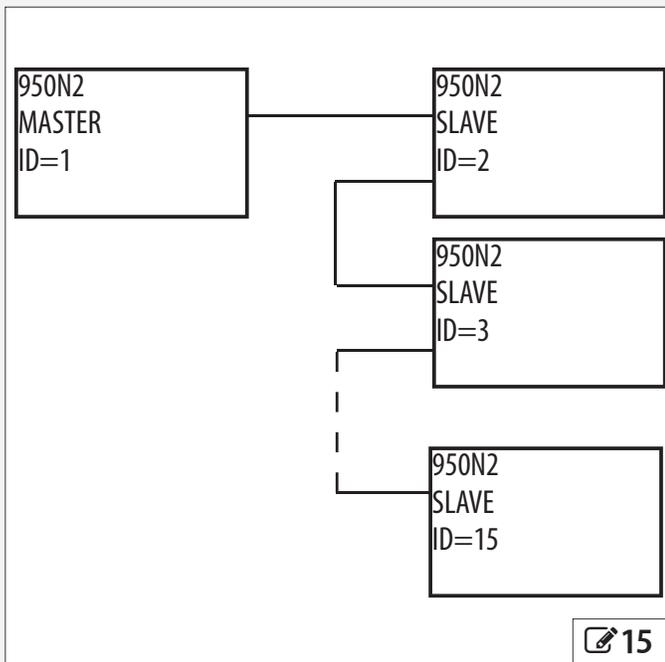
15 shows the ID to assign to the 950N2 units in the network.

The system consists of a Master unit and a maximum of 14 Slave units. The 950N2 Master unit is the only one on which the operating mode should be set, which is then also applied immediately to all the Slave units.



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

950N2 The Master must be assigned ID1 and the Slave units with ID from 2 to 14.



6.2 INTERLOCK

16 shows the ID to assign to the 950N2 units in the network.

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

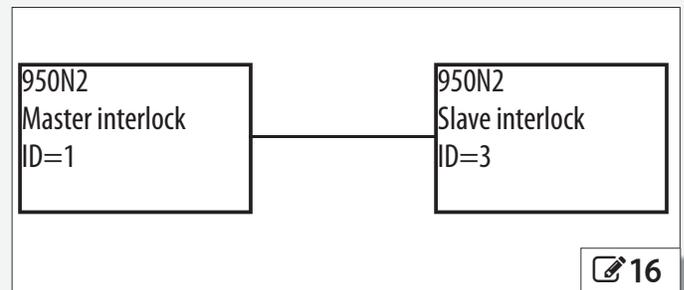
If the PARTIAL mode is associated with INTERLOCK, only the Master leaf opens.



Connect the devices and carry out the programming and Setup of the individual 950N2 units before configuring the INTERLOCK using KP EVO.



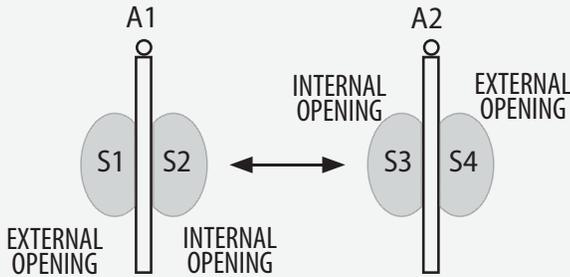
Select on the Master unit to activate the INTERLOCK.





INTERLOCK WITH NO MEMORY

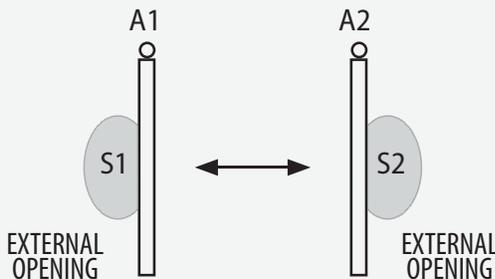
With 4 sensors: the second opening is not automatic. In order to open the door, the internal/external sensor must be triggered when the other door is closed. If the sensor is activated while the door is not yet closed, it has no effect.



	S1	S2	S3	S4
A1 closed A2 closed	A1 opens	A1 opens	A2 opens	A2 opens
A1 NOT closed A2 closed	A1 opens	A1 opens	request opening of A2	request opening of A2
A1 closed A2 NOT closed	request opening A1	request opening A1	A2 opens	A2 opens

INTERLOCK WITH MEMORY

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



	S1	S2
A1 closed A2 closed	A1 opens, then A2	A2 opens, then A1
A1 NOT closed, A2 closed	A1 opens and request opening of A2	request opening of A2
A1 closed, A2 NOT closed	request opening of A1	A2 opens and request opening of A1

6.3 2 LEAVES

🔧 17 shows the ID to assign to the 950N2 units in the network.

If the two doors overlap, the one that opens first is designated as the Master. If there is no overlap, either of the two units can be designated as the Master and the other as the Slave.

The movement of the leaves 2 is synchronised.

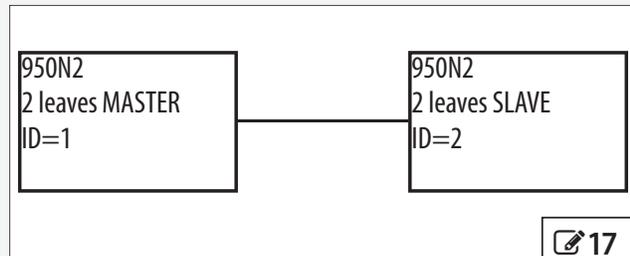
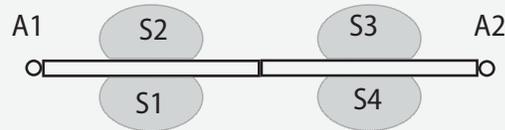


The internal / external door sensors and safety devices must be connected to their own unit; all other devices are connected only to the Master.

Connect the devices and carry out the programming and Setup of the individual 950N2 units before activating the 2 LEAF function.

Only use the Master 950N2 to change the operating mode.

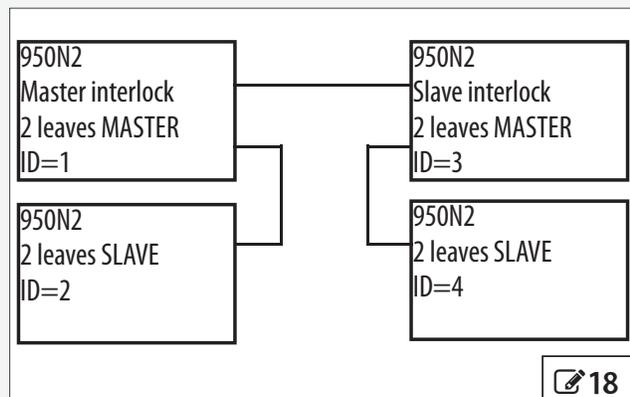
The leaf opening / closing delay can be set in menu 2.5.5 of the KP EVO.



6.4 2 LEAVES + INTERLOCK

🔧 18 shows the ID to assign to the 950N2 units in the network.

This configuration integrates the 2 LEAVES function (on two double-leaf accesses) with the interlock function. Refer to the operating modes described above.





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