LM CONTROL
accélérateur de business

TECHNICAL MANUAL

TOUCH SCREEN PAYMENT STATION

TOUCH'N PAY®

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1. Checks upon receipt of the product

1.1 Receiving the packaged product

When you receive the product, make sure it hasn't been damaged during transport. If you notice damages of any kind, please notify immediately to the forwarder.

Also check that the content match that of your order.

After all these checking's, leave the product in its original package in order to facilitate its transport to the installation site.

1.2 Contenu of the package

- 1 touch screen payment station or
- 1 flash drive
- 1 technical manual

2. Introduction

This technical handbook provides you with a complete description of the product and with technical information's about how to operate this touch-screen payment station.

The information presented in this manual may be subject to change in the future without prior notice.

2.1 Warning

Before putting the device into service, please read thoroughly the user's manual and the installation instructions, and all information's relating to the touch-screen as well. Respect all instructions and always have those documents at hand.

- This device is designed for a professional use in compliance with the safety instructions provided in this technical handbook.
- Always use original spare parts, accessories, or peripherals.
- The device must be protected from rain.
- It shall be handled only by:
  - Adults with full physical, sensory and intellectual capacities.
  - Children under the age of 8 and persons who have diminished physical, sensory or intellectual capacities only if under the supervision of a responsible person.
- The manufacturer disclaims any liability in case of damages due to an improper or incorrect use of the device.

If kept in good use conditions and appropriately installed, this equipment does not expose the user to any king of hazards.

Warning, risk of death:

- Electrical hazards: shock hazards in case of contact with live parts.
- Never open the device with wet hands.
- In case of malfunction, resort to a professional.
- Never put liquids on or inside the device.
- Never remove the protective elements.
- The device must be connected only to the mains supply. Grid voltage must match that of the information label (230 VAC).
- Cabling and connecting must be carried out by qualified personnel.
- Before powering the device check each time that the main cable and the socket are not damaged. If a cable is damaged its replacement must be carried out immediately by qualified personnel.
- Crushing hazards when moving the device or if it is not properly mounted.
- It is strictly forbidden to install the device in areas with explosion hazards.

Warning, risk of injury:

- The payment station is heavy. Be cautious when you lift or transport it, wear protective gloves, protective footwear and follow all safety procedures regarding body positions and movements.
- When transporting the device, make sure the door is closed, that you took off the key and that no elements is on the loose inside. It might damage the device.
- If open do not lean over the door. The fastening points might break down, the cabinet might fall down and entail some injuries.
- Do not insert your fingers or any object in the cooling vent. It may damage the device and expose your hands to some injuries.
- The personnel in charge of installing, operating and servicing the device must pay particular attention to all the mobile parts (door, stacker) and handle them properly.

3. Presentation of the product

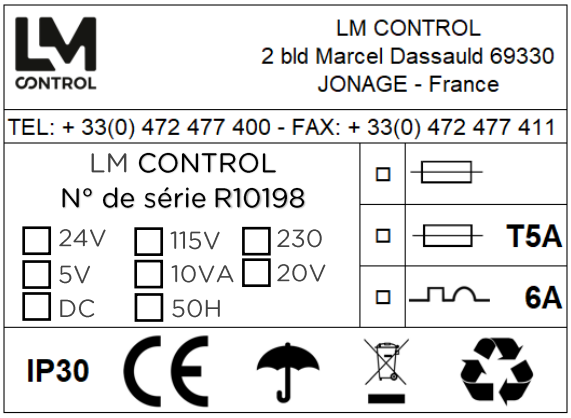
A new model enriches the wide array of payment stations manufactured by LM Control: the Touch'N Pay payment station. Designed for self-service applications, this kiosk sews together efficiency and interactivity.

The touch-screen and the vocal assistant (optional) facilitate the purchase process whilst being substantially time saving.

This product is available whether in wall-mounted or -embedded version

3.1 Product identification

The product is identified thanks to an identification label which is located inside the cabinet. In case of assistance, the information on this label will be required.



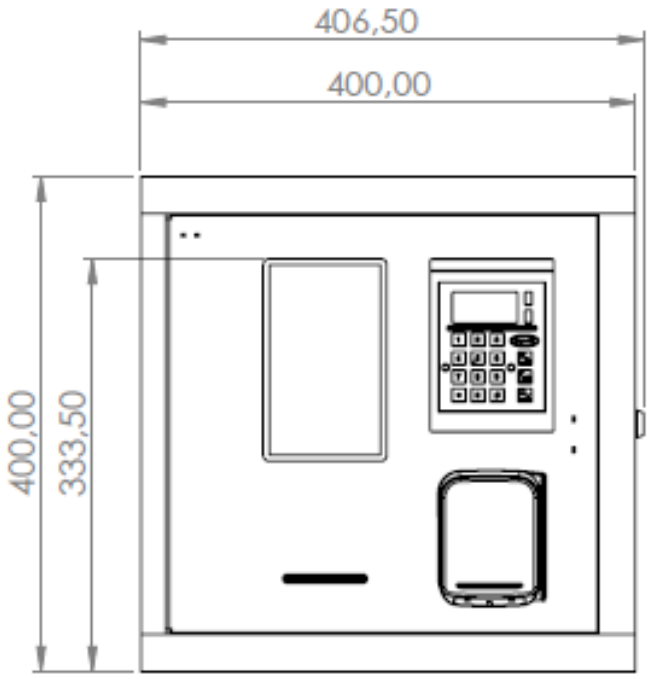
3.2 Technical specifications

General features			
	SL Range	M Range	L Range
Weight (kg)	20	50: mounted version 55: insert version	74: mounted version 81: insert version
Dimensions W x H x D (mm)	400x400x330	400x750x330	550x750x330
Operating temperature	0 to 40°C		
Relative humidity	80RH% à 55°C (no-condensing)		
Maximum inclination	± 2° from the vertical position, front and side		
Supply voltage	100 - 240 VAC 50/60Hz		
Consumption	Maximum 3A		
Number of machines to connect	8	8	64*
Display			
	SL Range	M Range	L Range
Size	7 inches		10.1 inches
Resolution	800 x 1 280 – 60Hz		
Impact resistance rating	IK07		
Protection	Protective film		Polycarbonate
Storage conditions			
Storage temperature	-10°C à +50°C		
Relative humidity	80RH% à 55°C (no-condensing)		

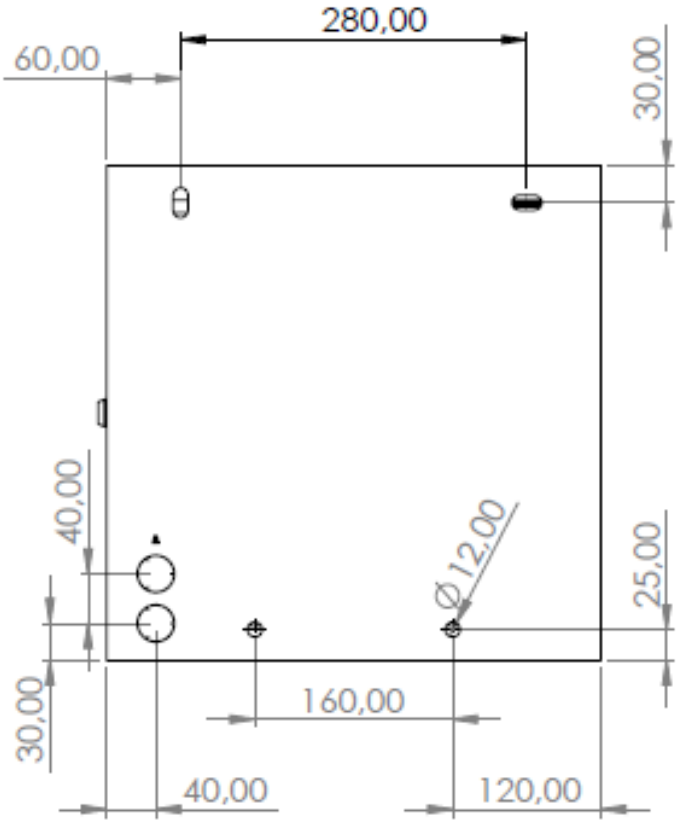
3.3 Dimensions

The diagrams below indicate the dimensions of the various cabinets of the range.

TNP-SL Wall-mounted cabinet



ECHELLE 1 : 6



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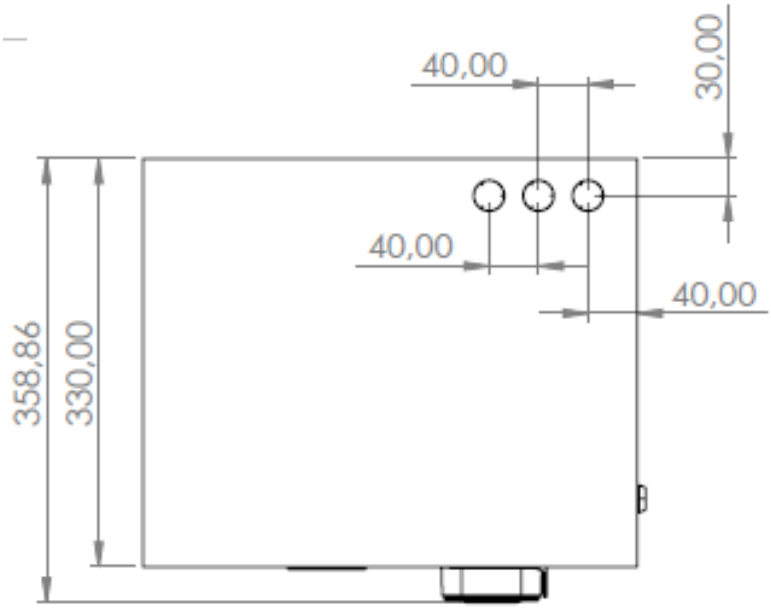

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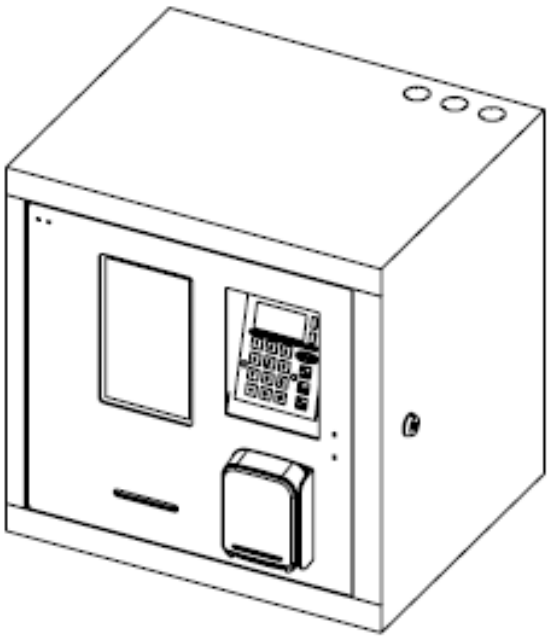
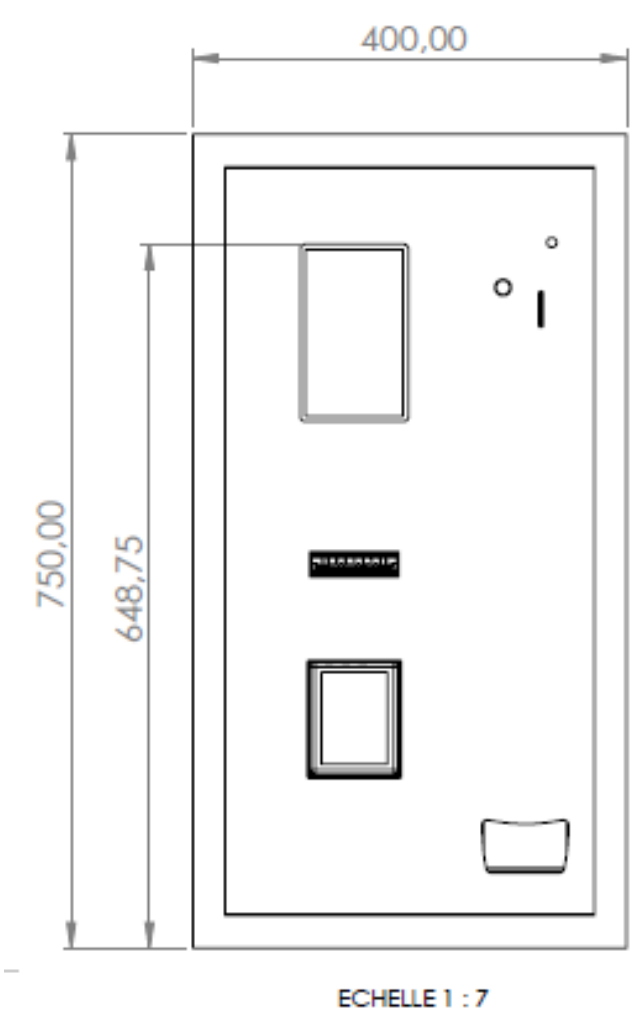
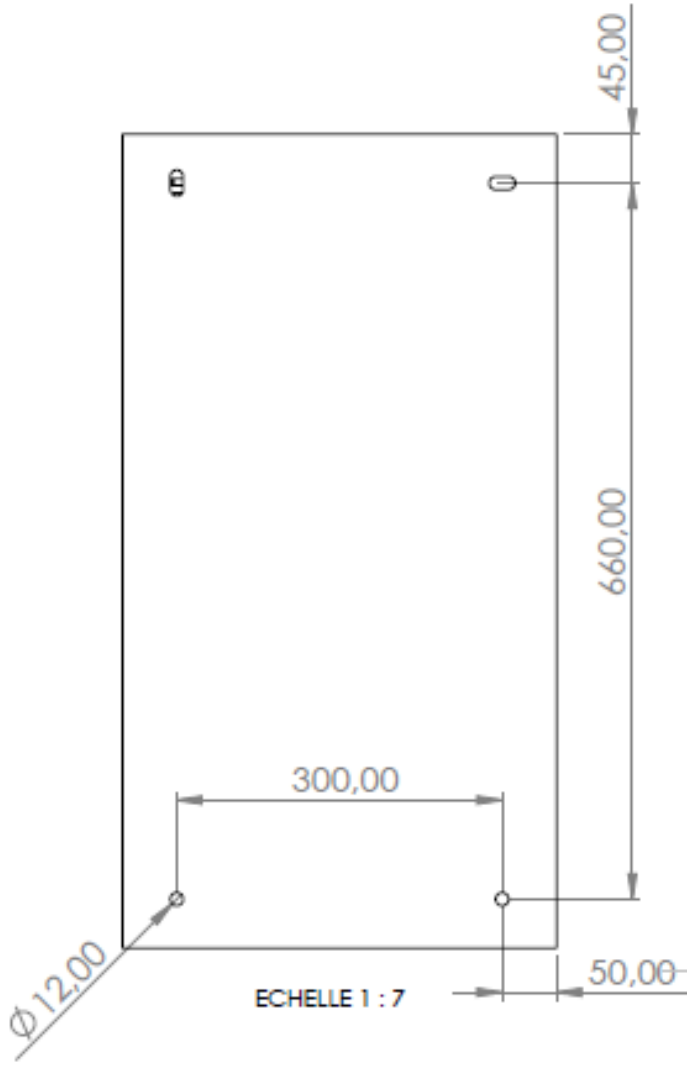
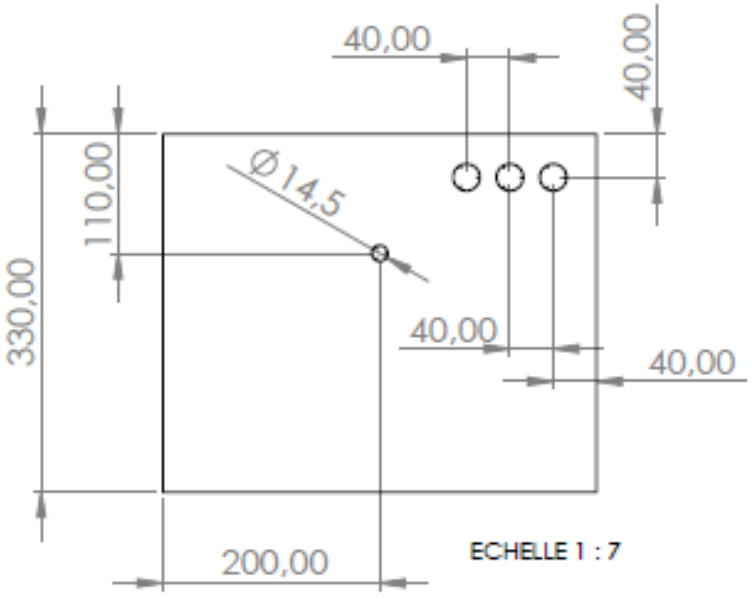
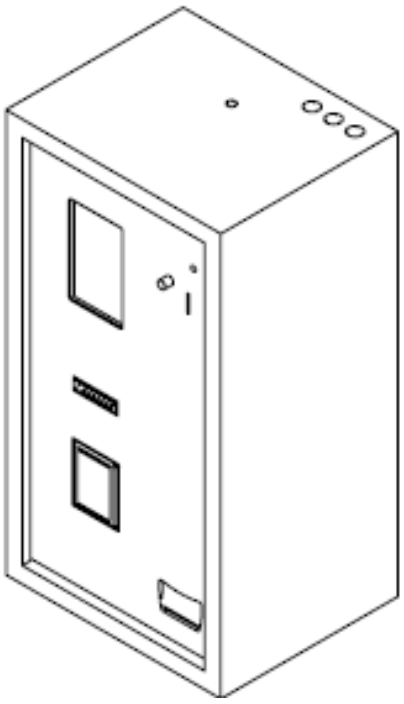


TNP-MO Wall-mounted cabinet

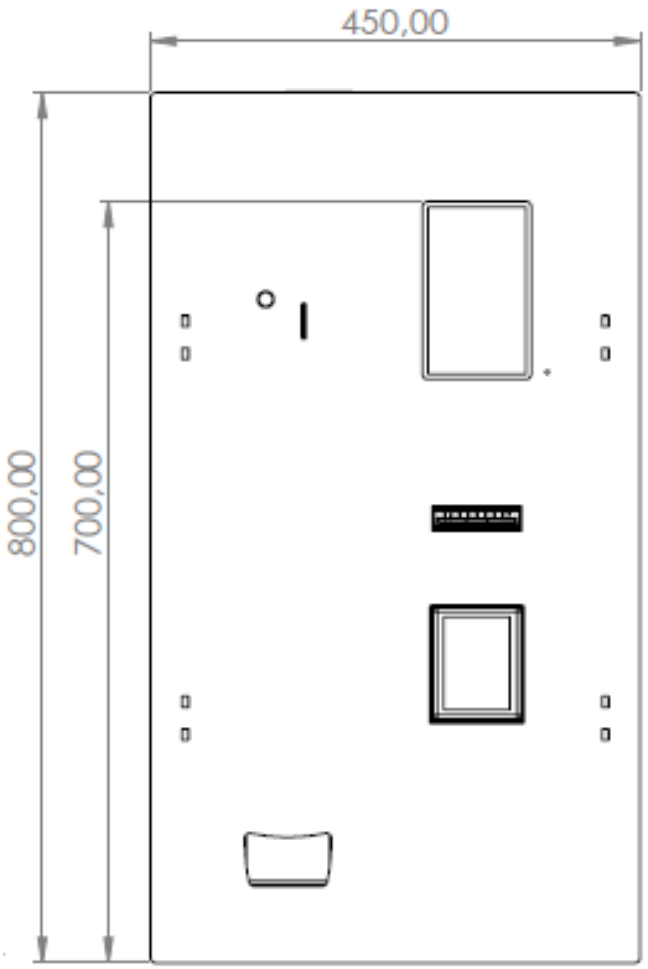








TNP-M1 Wall-embedded cabinet



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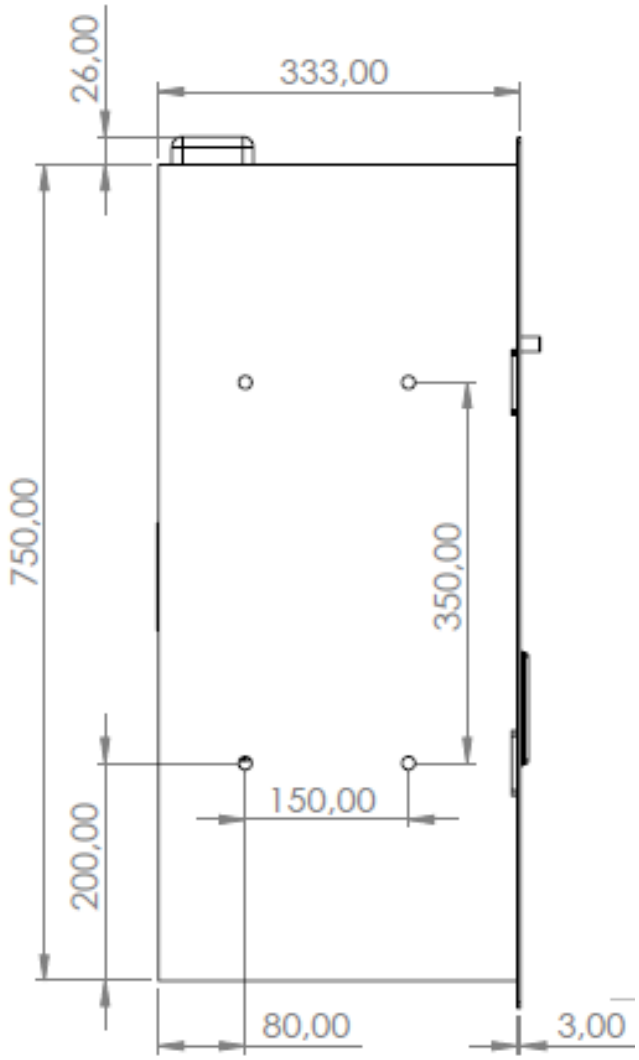

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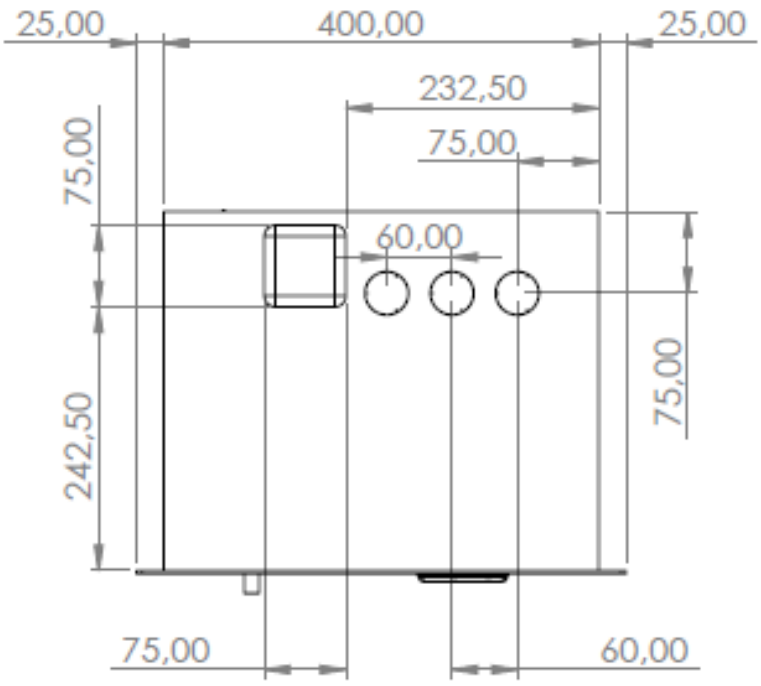
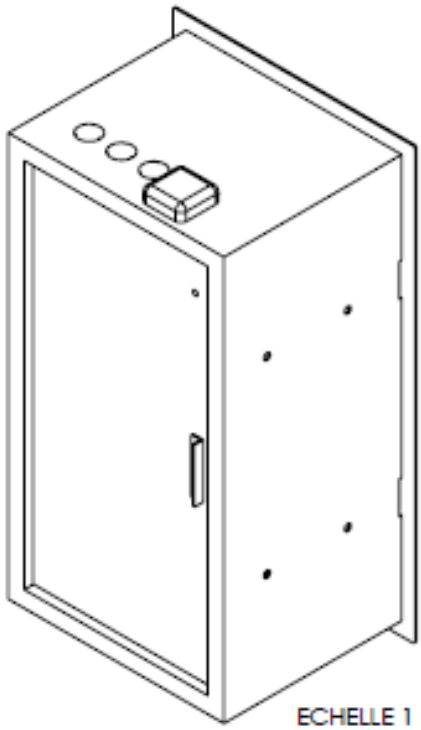
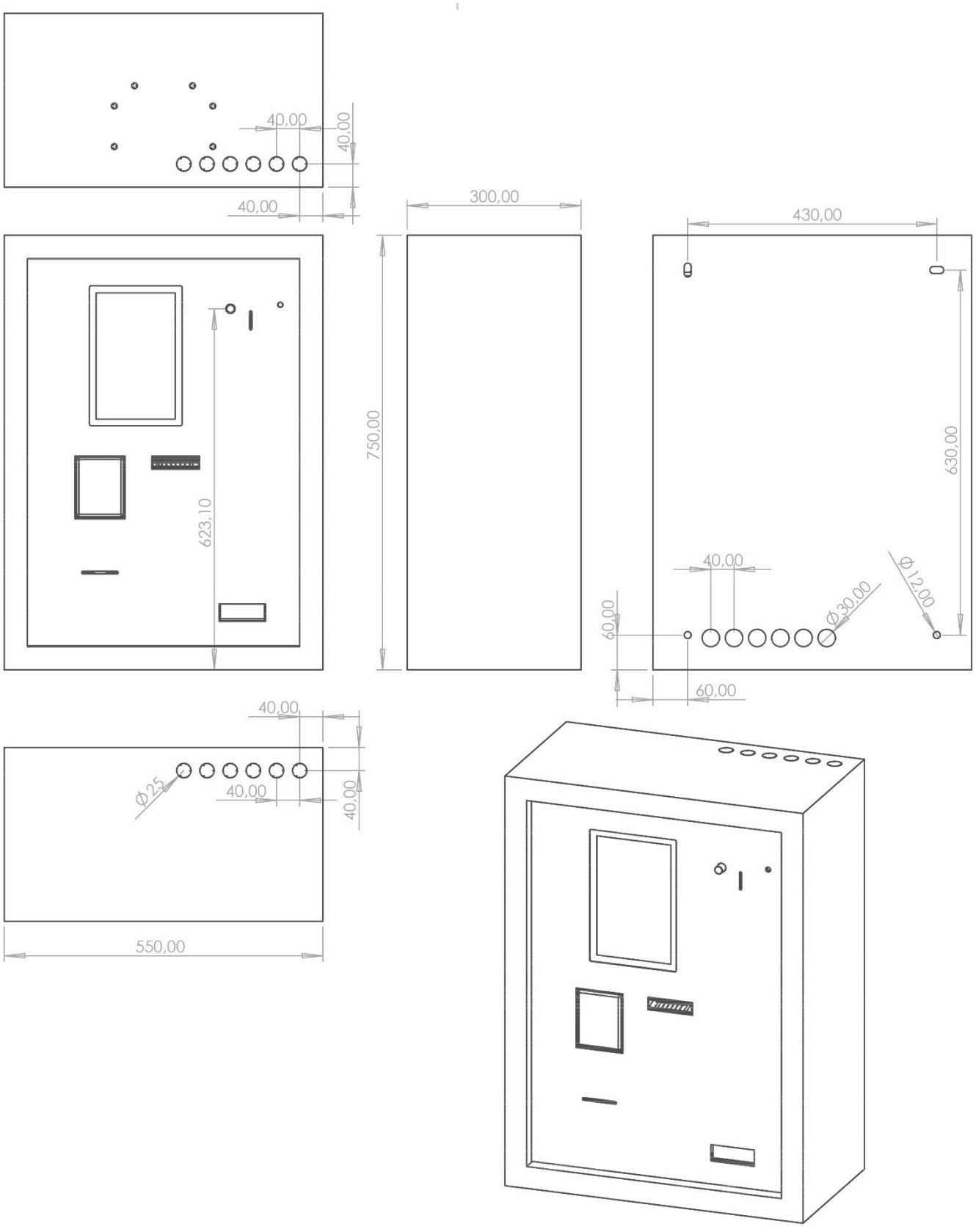


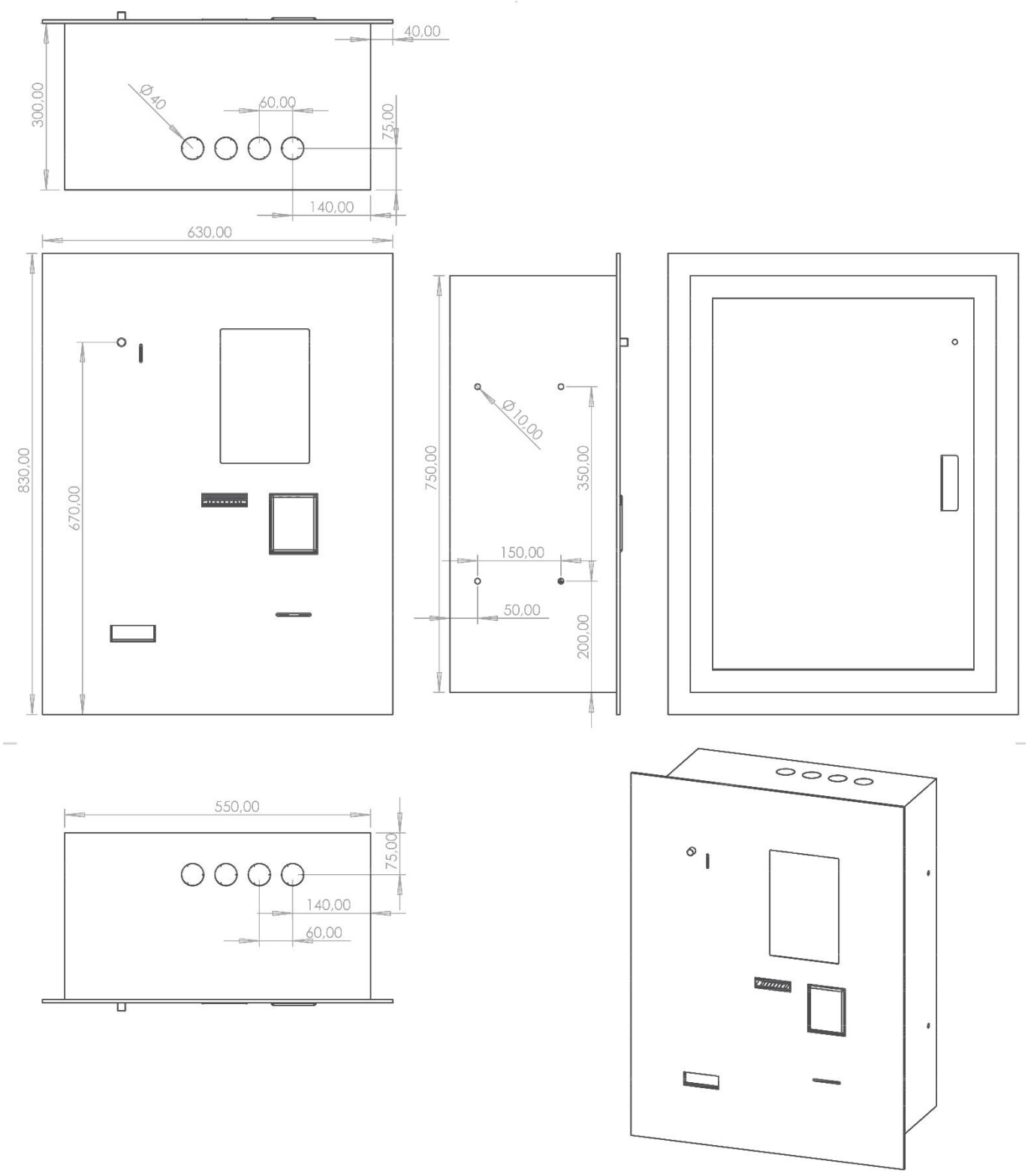


ECHELLE 1 : 10

TNP-L0 Wall-mounted cabinet



TNP-L1 Wall-embedded cabinet



3.4 Mechanical installation

The installation of the cabinet must be carried out by taking into account its weight and the position of the cables (for further details see the installation figures).

The holes for the cables are pre-drilled. To unblock theses holes the easiest way is by hitting closer to the attachment points with a hammer and a punch.

4. Connecting

Before getting started with cabling, check that the main switch is in the OFF position.

The connection to the mains is set with phase, neutral and ground conductors on screw terminals.

Like all electrical appliances, the payment station must be protected properly on an electrical panel up to standards.

➔ *When the payment station is powered via a time relay especially in case of a power failure at night, please take into account that the payment station does contextual backups every day at 11 pm. As a result it is recommended to let it powered at that moment.*

4.1 Connecting the loudspeakers

Voice assisted option

The jack 3.5 extension cable is pre-wired with the embedded computer.

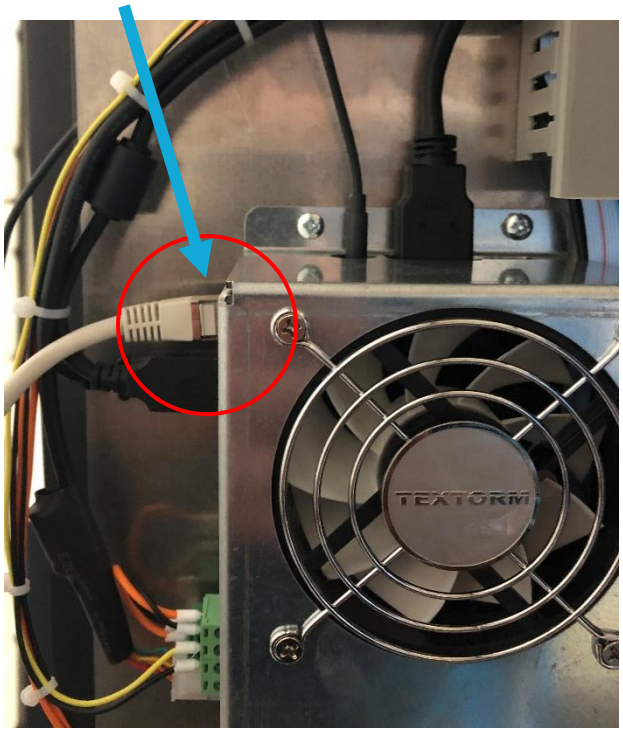
Please connect the loud-speakers on the jack imput of the embedded computer thanks to the extension provided.

On the left of the HDMI cable above the metal protective box.

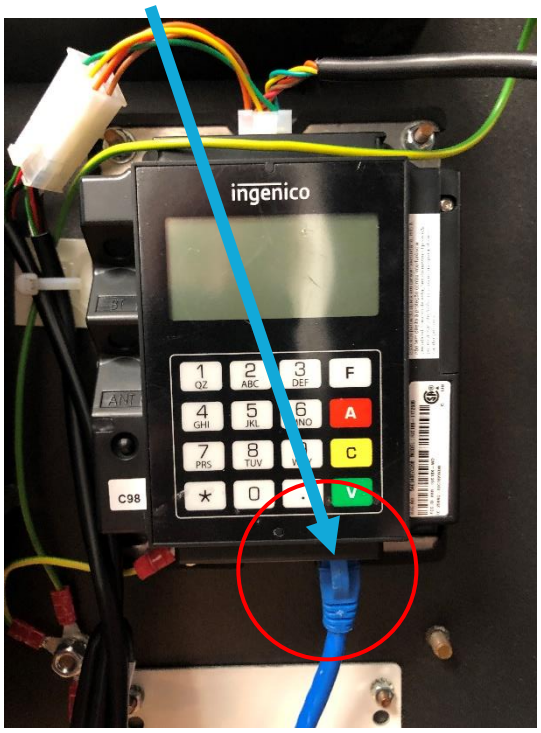
4.2 Connecting network cables

The extensions cables are pre-wired with the embedded computer and banking terminal.

On the left of on-board computer



Under the iUC180B



4.3 Connecting the machines

The machines are to be connected on the withdrawable screw terminals.

You need to connect 4 x 0.75mm² conductors per machine.

- **Machine start-up:** dry contact (relay) 12A 250 V max or 24VAC optional.
- **Machine return:** optocoupler imput (24/110/230 VAC/DC according to configuration) or dry contact as optional.

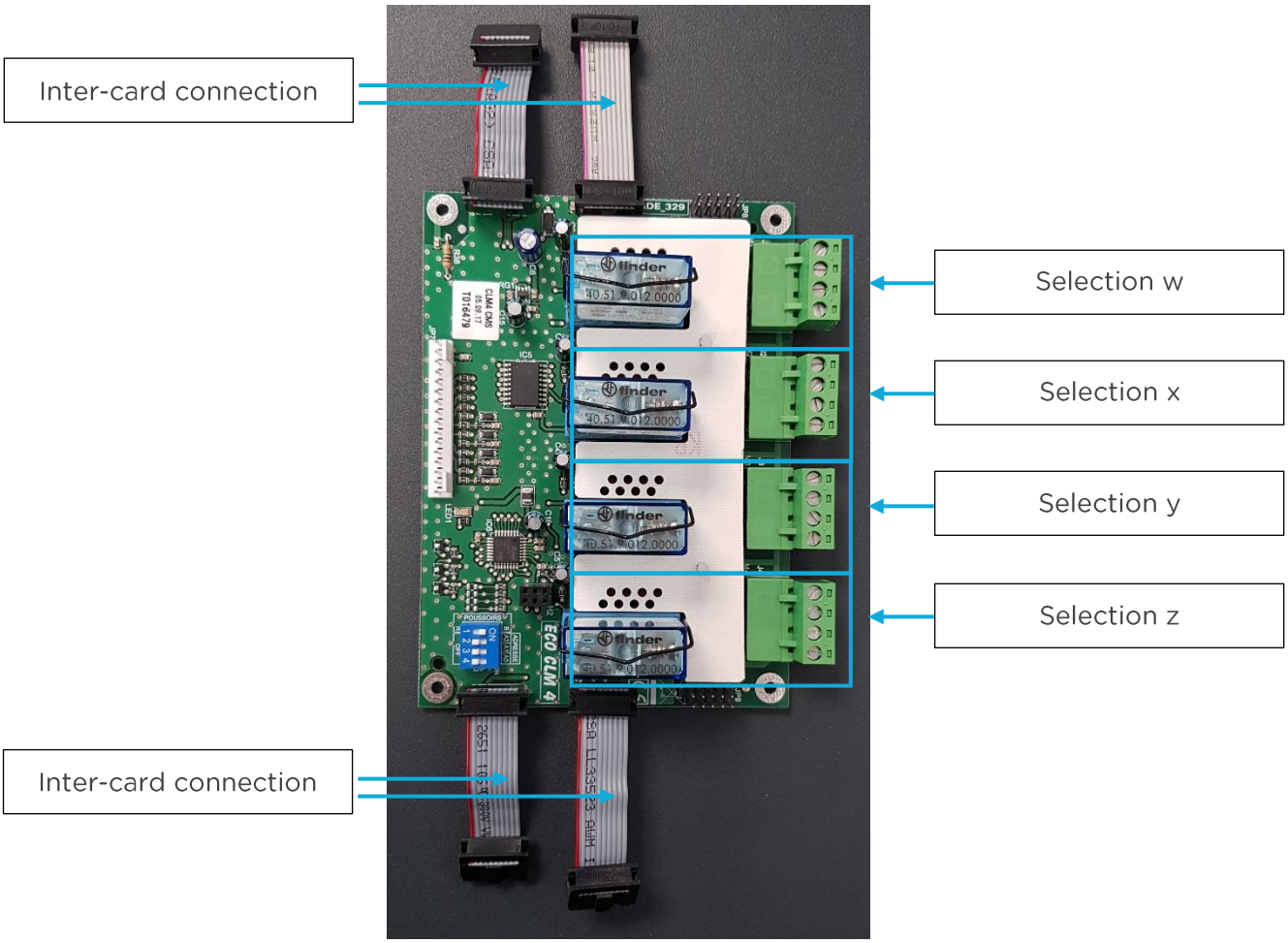
NOTE

In order to facilitate cabling, use preferably flexible cables with a roughly 1,50 m extra length.

CONFIGURATION

Unless requested by the customer, the device is delivered unconfigured. Hence before using it, it is necessary to configure it.

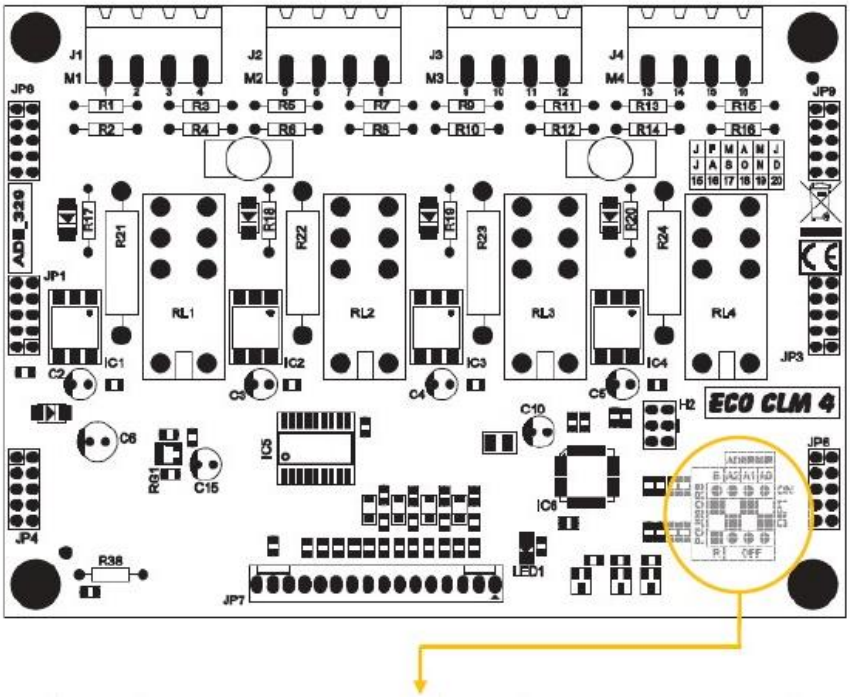
4.4 Daughterboard



According to the daughterboard's number, the selections are as follows :

	Selection w	Selection x	Selection y	Selection z
Daughter card « 00 »	1	2	3	4
Daughter card « 01 »	5	6	7	8
Daughter card « 02 »	9	10	11	12
Daughter card « 03 »	13	14	15	16
Daughter card « 04 »	17	18	19	20
Daughter card « 05 »	21	22	23	24
Daughter card « 06 »	25	26	27	28
Daughter card « 07 »	29	30	31	32
Daughter card « 08 »	33	34	35	36
Daughter card « 09 »	37	38	39	40
Daughter card « 10 »	41	42	43	44
Daughter card « 11 »	45	46	47	48
Daughter card « 12 »	49	50	51	52
Daughter card « 13 »	53	54	55	56
Daughter card « 14 »	57	58	59	60
Daughter card « 15 »	61	62	63	64

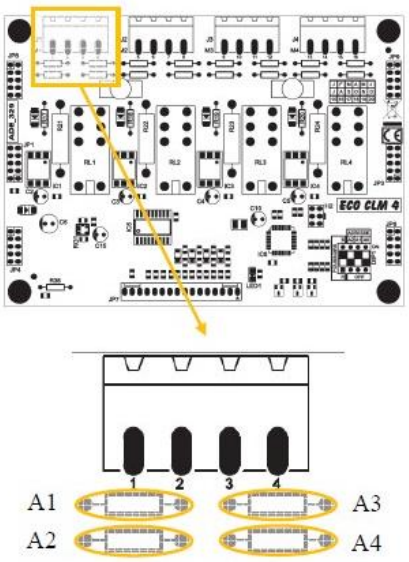
4.5 Configuring daughter card addresses

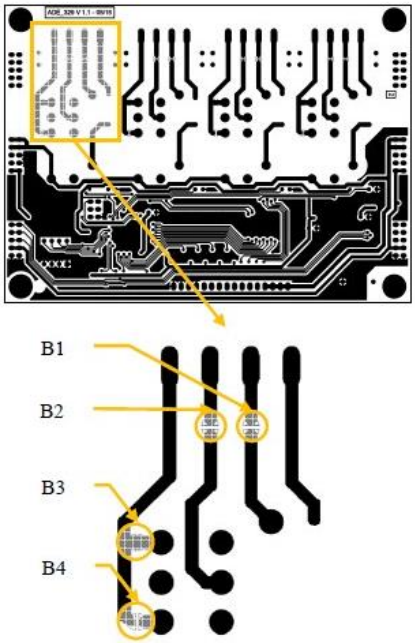


Card	Switch			
	A3	A2	A1	A0
00				
	■	■	■	■
01				■
	■	■	■	
02			■	
	■	■		■
03			■	■
	■	■		
04		■		
	■		■	■
05		■		■
	■		■	
06		■	■	
	■			■
07		■	■	■
	■			

Card	Switch			
	A3	A2	A1	A0
08	■			
		■	■	■
09	■			■
		■	■	
10	■		■	
		■		■
11	■		■	■
		■		
12	■	■		
			■	■
13	■	■		■
			■	
14	■	■	■	
				■
15	■	■	■	■

4.6 Setting up the interface





Active or passive control relay				NO or NF control relay		
	B2	A3	A4		B3	B4
Passive	Closed	No mounted	No mounted	NO	Closed	Open
Active	Open	Mounted	Mounted	NF	Open	Closed

Passive or active return			
	B1	A1	A2
Passive	Closed	No mounted	No mounted
Active	Open	Mounted	Mounted

A1, A2, A3 and A4 are straps or resistance 0 ohm.

Initial power-up

At first power-up, if unconfigured the payment station reboots with factory default settings.

Check that all means of payment, the screen, and the daughterboards are powered and operational.

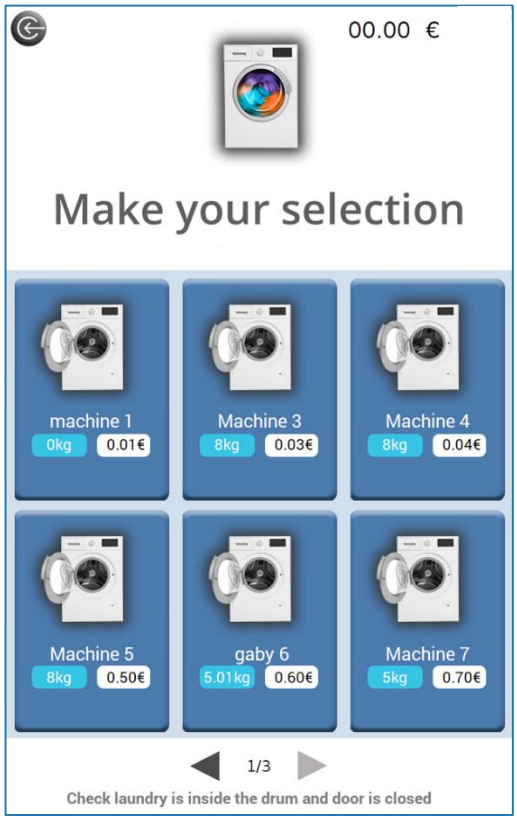
5. Presentation of the MMI (Man Machine Interface)

The man-machine interface is set as follows:

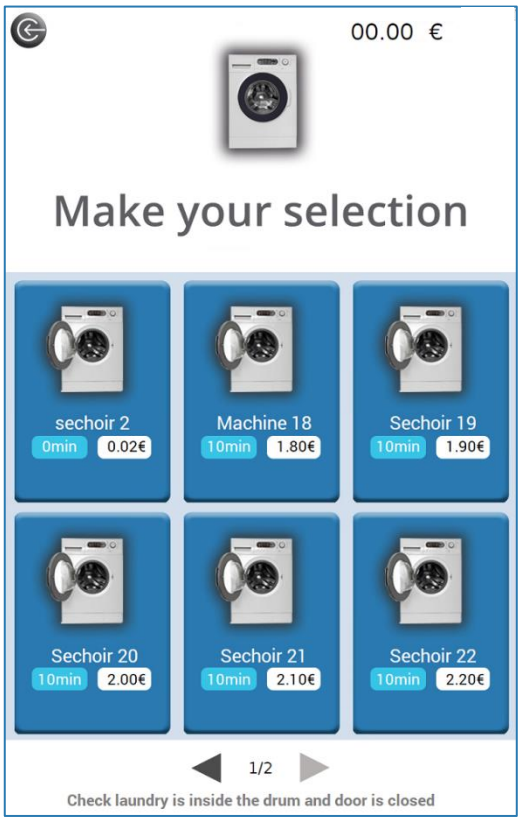
1) Home Menu

1. A language selection icon on the top left corner.
2. An information icon on the top right (where the owner can display the launderette's opening hours, the emergency number, and so on...).
3. A customizable logotype
4. A customizable title
5. A Washer icon to access the various washers
6. A Dryer icon to access the various dryers.
7. A detergent icon to acces the detergent selections.
8. A loyalty card icon allowing to buy and/or top-up a loyalty card.
9. A status indicator (on the bottom right) about the remote control.

2) Washer Menu

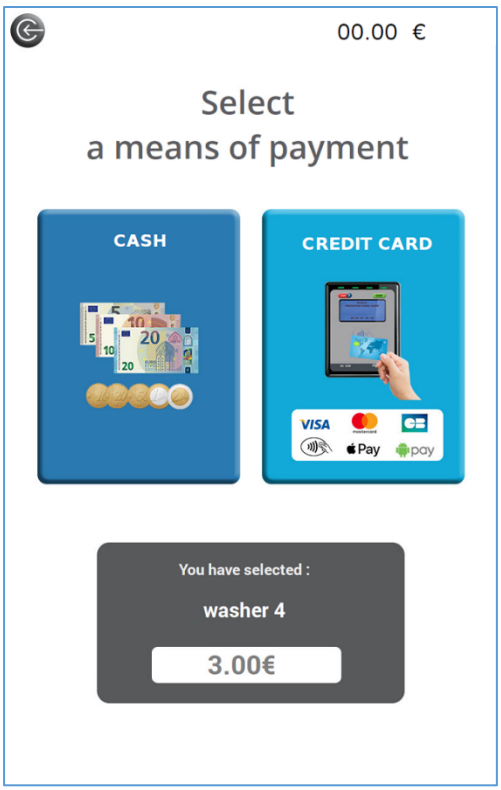


3) Dryer Menu



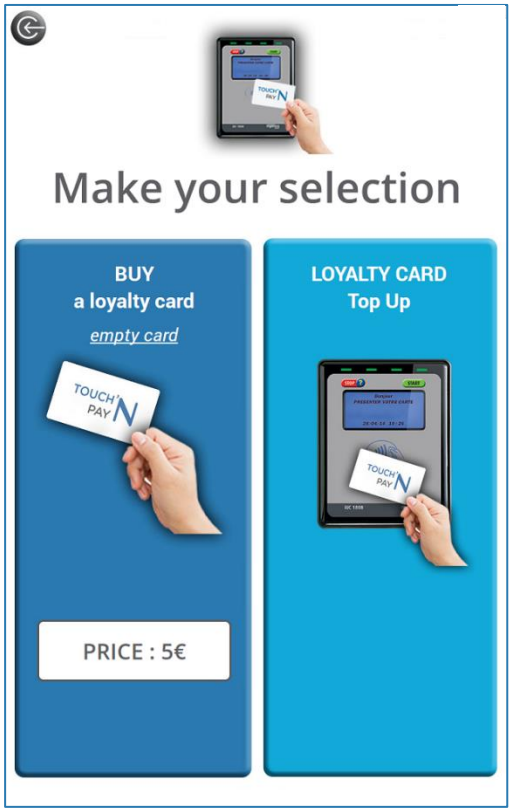
4) Detergent Menu

5) Payment



➔ Once you made a selection, the payment page is displayed then you select your means of payment, cash, banknotes, credit card or loyalty card.

6) Loyalty Card Menu



7) Loyalty cards top-up Menu

2 possibilities of this menu:

- Buy a loyalty card (with card dispenser).
- Top up a loyalty card (cash or credit card (3 top-up bonuses according to preset levels).

6. Setup

Step 1

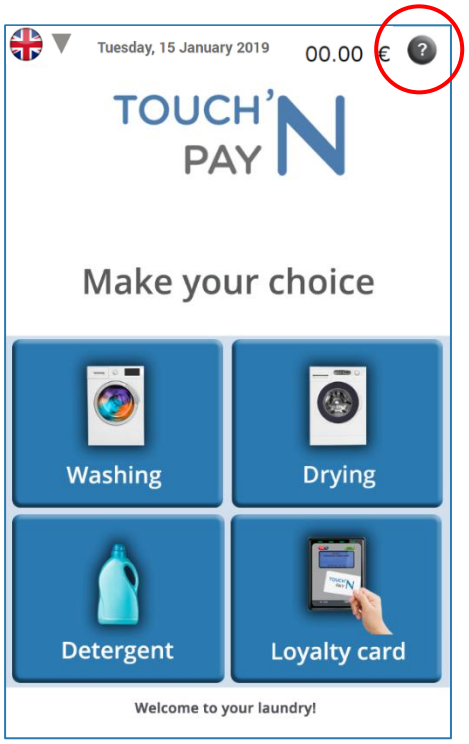
Make sure that cabling is correct and that the daughterboards are properly configured.

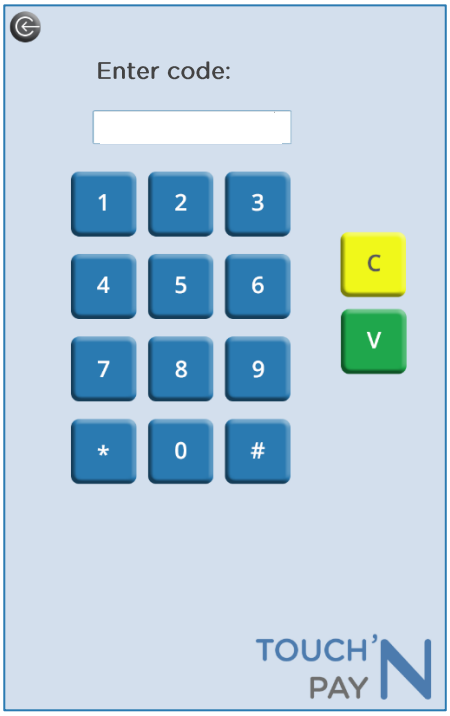
Step 2

Access to setup: from touch-screen or Bluetooth keyboard.
If you use a keyboard, plug it into an available USB port of the embedded computer.

Step 3

Access to setup menu:
On the home screen, press and hold the question mark at least for 10 seconds then release it.





➔ The following page is displayed.

Insert the password that you've set up then click on V.

Default password:

#69330#

It is imperative to change your password.

→ It must contain 10 characters with numbers, * and #.

Where to change the password?
See table p.23, INFOS tab

Step 4

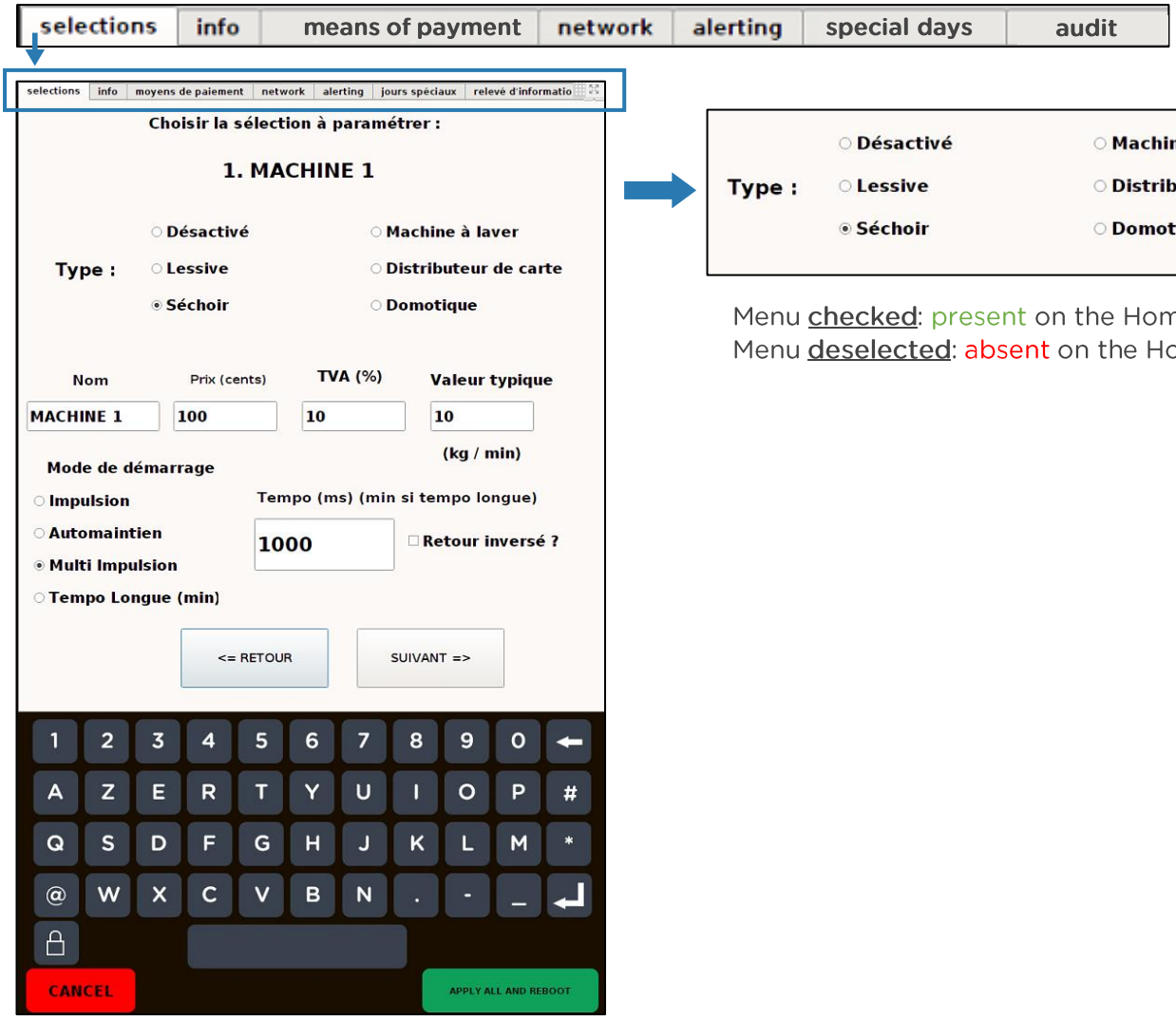
You have now access to the main setup page which includes diverse elements such as:

- The serial numbers of the installed devices and their configuration
- The single-use free codes: in order to generate new ones, just press the button Generate Free codes, then Return. Go back to the setup page. You have now access to the new codes

➔ In order to get to next page with the various settings menus press the SETTINGS button.

Step 5

You have access now to the various setup menus.



Menu checked: present on the Home Menu.
Menu deselected: absent on the Home Menu.

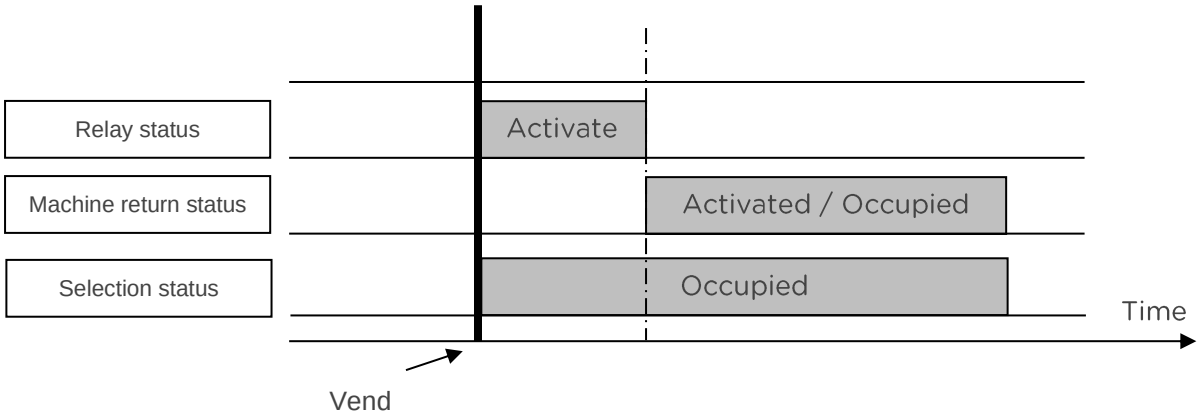
TABS	FUNCTIONALITIES
SELECTIONS	To set up the various selections: • Washers • Dryers • Detergent • Loyalty card dispenser • Disable a selection • Domotic when associating the selection's name, its price, its VAT, its typical value (capacity in kg for washers, duration in min for the dryers, N/A for the other selections), its startup mode, and the timeout linked to the startup mode.
INFOS	To insert the lauderette's owner informations ➔ E-mail, name of the launderette to be displayed, change of password, receipt info, detergent info, language by default, help page info, time of the cycle per machine, opening hours.
MEANS OF PAYMENT	To set up the means of payment, maximum credit, coins/banknotes accepted, token value if any, bonus values/ level if any
NETWORK	Network info, DHCP or fixed IP address, remote control server
ALERTING	To set up alerts on turnover
SPECIAL DAYS	To set up the selections' prices for the happy hours
AUDIT	To set up the shipping preferences of the audit report (automatic or not, periodic or not)
MENU	It is used to activate or disactivate the menus: Washers, Dryers, Detergent, Loyalty Card Dispenser

7. The various modes to start up the selections

7.1 Auto-hold mode

When you chose a selection, and enough credit is inserted, the relay is activated.

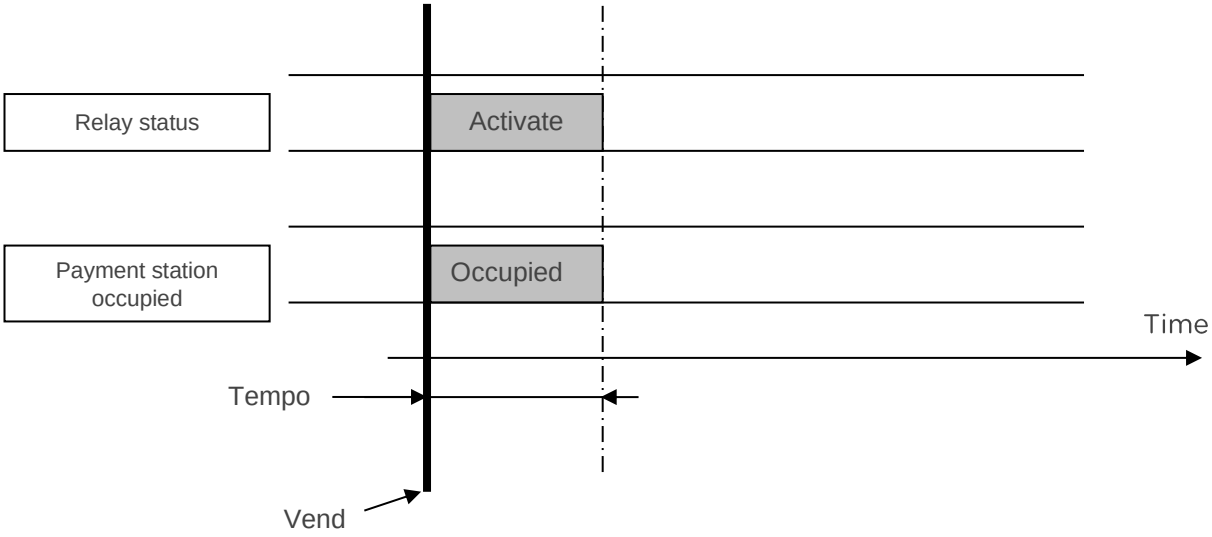
When the machine return or "busy signal" s is sent, the relay is deactivated.



7.2 Pulse Mode

When you chose a selection (the LED flashes) and enough credit is inserted, the relay is activated for the TEMPO duration corresponding to the selection.

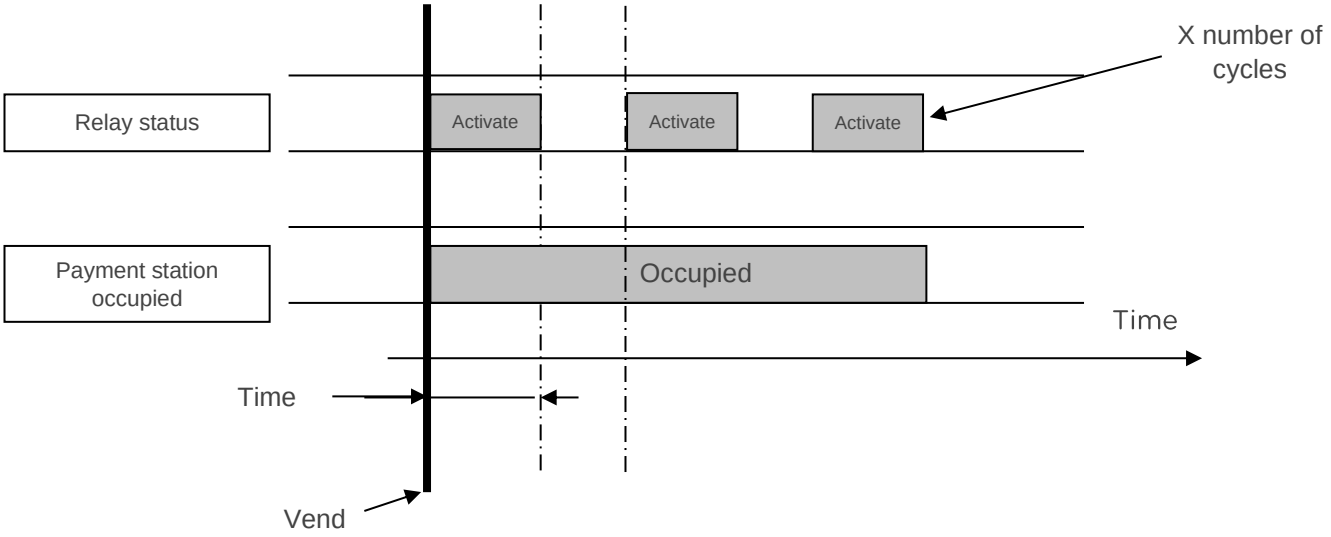
The control unit cannot be used for another sale as long as the relay is active.



7.3 Multi-pulse mode (for dryers only)

Every selection is associated with a millisecond meter.

When this mode is configured, for a specific dryer the user can select a number of cycles between 1 et 5. The relay will be activated between 1 and 5 times (according to the number of cycles selected) in order to increase the total amount of time. By default, there is a lapse of 1.2 seconds between 2 impulses.



8. Inverted return

By default, feedback (in use) information is activated by the presence of a voltage (24, 110 or 230 V AC).

It is possible to run it the other way round, in this case when no voltage is delivered then the machine return signal is activated (the selection is set in inverted return).

9. Cleaning and Maintenance

Before starting to do cleaning and maintenance operations, make sure the device is switched off.
Troubles are most of the time due to dust and dirt. As a result, cleaning is prominent when doing the maintenance on site.
Your device is fitted with different means of payment according to configurations.

Only use damp cloth, damp cotton buds or our recommended cleaning products.
NEVER USE SOLVENTS OR SCOURING AGENTS.

9.1 Cleaning the touch-screen protective glass

We recommend cleaning the touch-screen protective glass at least once a week.

Before starting the cleaning operations, make sure the device is switched off.

Use only damp cloth or recommended cleaning products.

NEVER USE SOLVENTS OR SCOURING AGENTS.

It might damage the polycarbonate sheet's transparency.

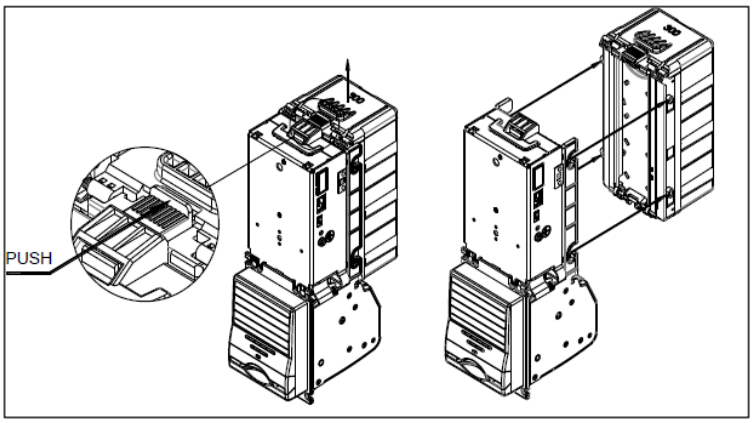
9.2 Replacing the screen protector – **7 inches**

Before replacing it, make sure the device is switched off.

For disassembly and assembly of what is below, you need the following tools:

- A screwdriver for M4 screws
- A 5.5 mm hexagon socket wrench
- A 10 mm hexagon socket wrench

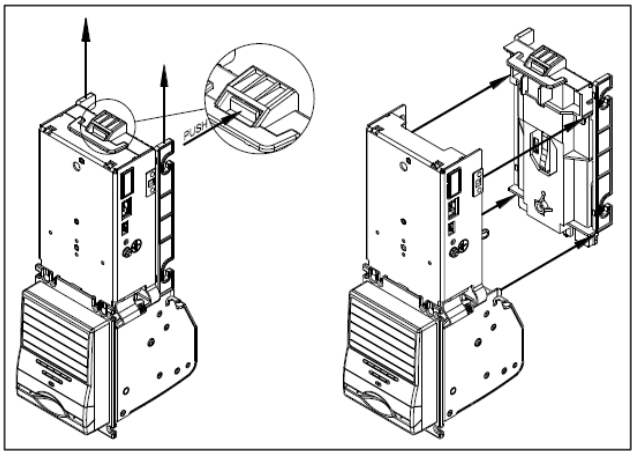
1. In a first step, in order to disassemble the screen you need to disassemble the validator

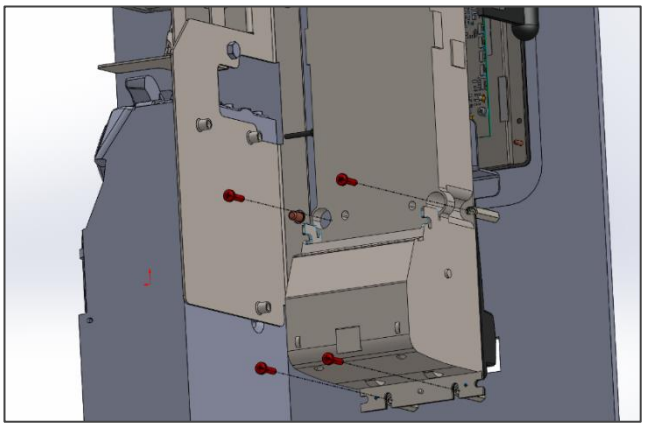


a) For remove the stacker, push the release lever as shown below and drag the cassette in the indicated direction.

For the UPWARD STACKER installation, drag the stacker upward and vice versa. Once the stacker is released, it is easily removable from the 4 slots located on the plastic bearing plate.

b) Push the release lever and drag the bearing plate in the indicated direction. For the UPWARD STACKER installation, drag the bearing plate upward and vice versa.

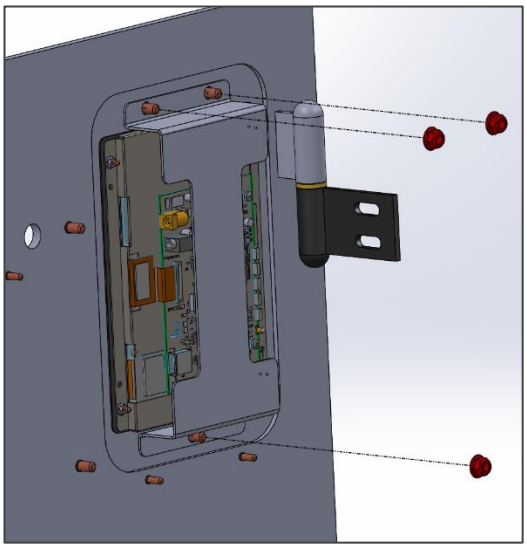


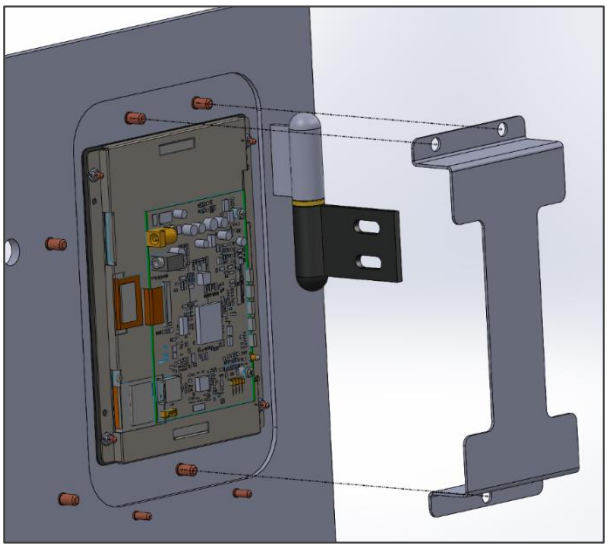


c) Now you need to spot the position of each cable connected to the banknote validator, then disconnect them. Unscrew the 4 M4 screw from the spacers (don't remove them) then remove the banknote validator (use the Pozidriv screwdriver for M4 screws).

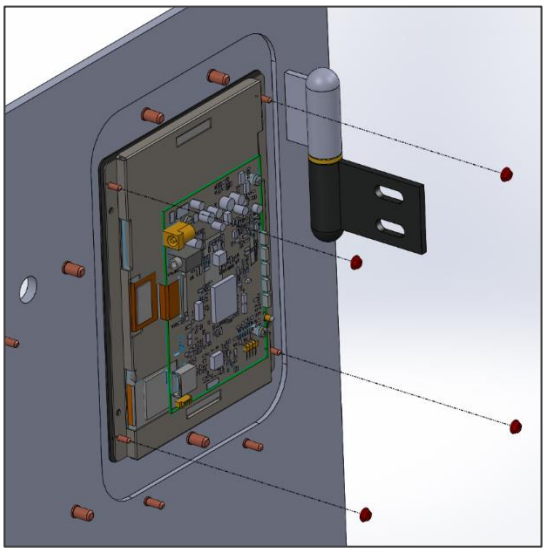
2. Once the banknote validator is removed, start by spotting the position of each cable connected to the screen and then disconnect them.

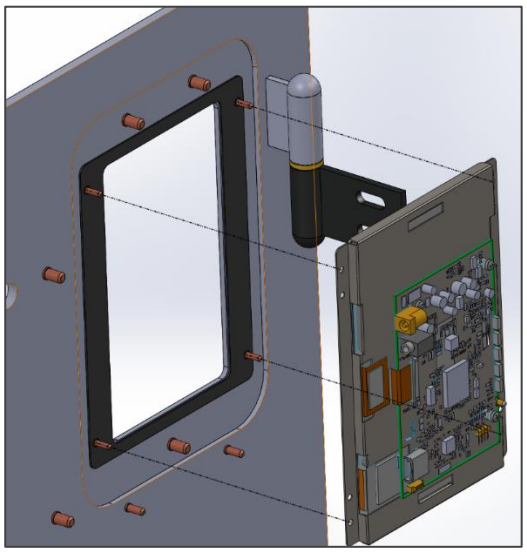
Unscrew the 3 M6 serrated fange nuts from the screen bearing plate then remove the screen bearing plate (use the 10 mm hexagon socket wrench).





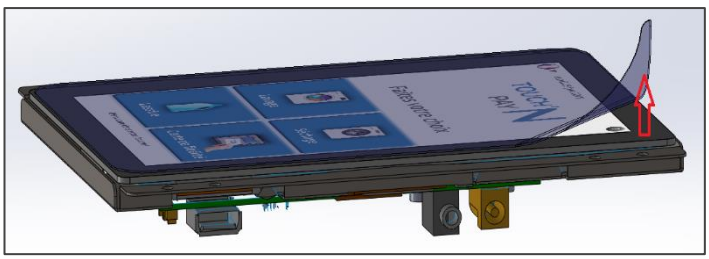
Unscrew the 4 M3 serrated flange nuts from the screen then remove the screen (use the 5.5 mm hexagon socket wrench).

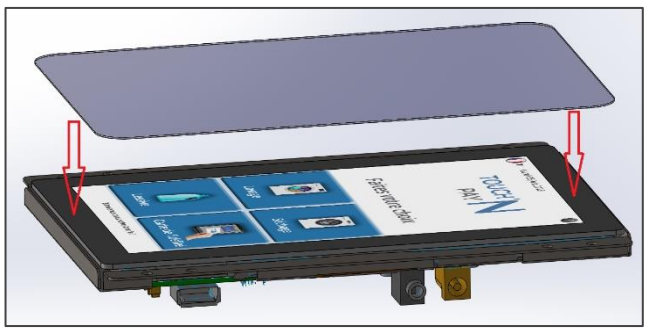




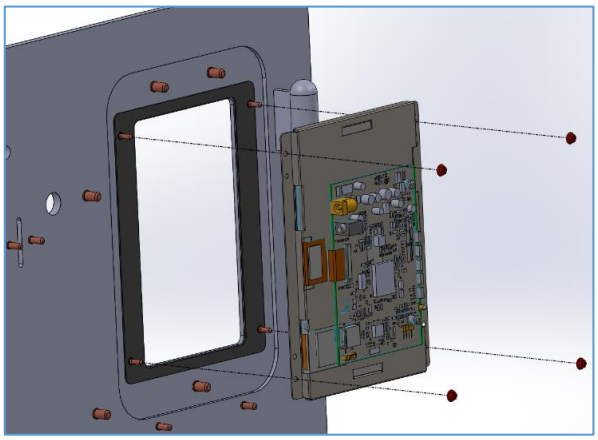
3. Peel off the used plastic protector from the screen and replace it with a new one.

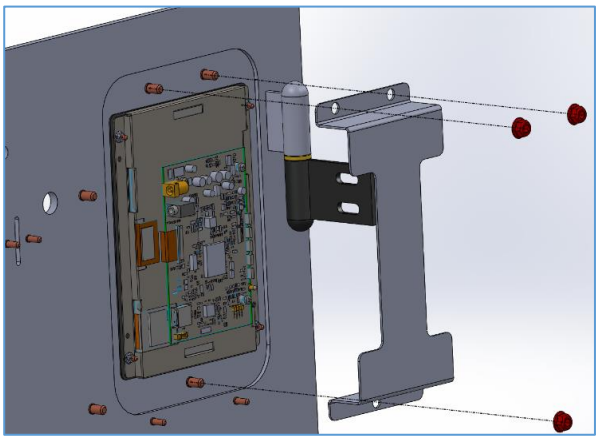
➔ When disassembling make sure you get all the air bubbles out of the plastic protector.

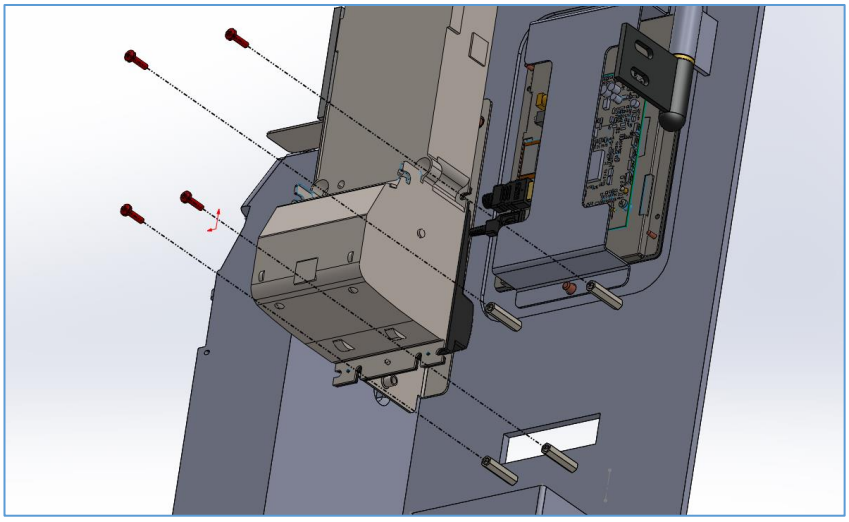




4. Now you can reassemble the screen on the back side of the door and screw the 4 corresponding nuts then put the screen protection back in place and screw the 3 corresponding nuts.

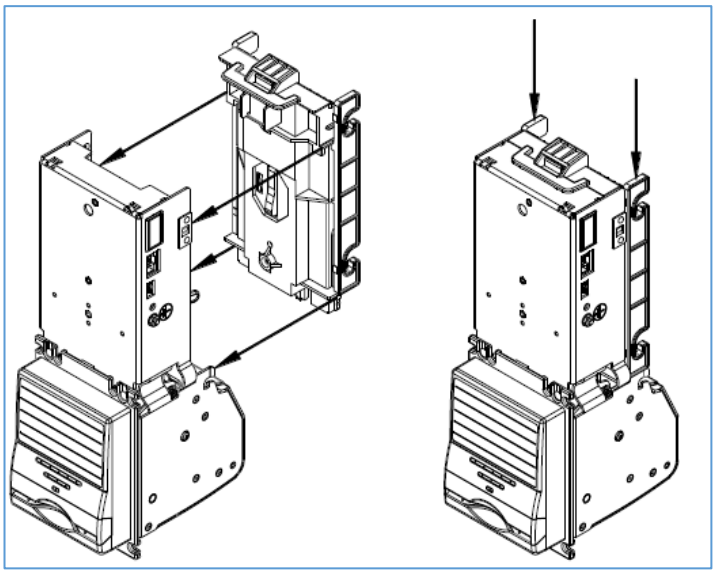






Once screen and support are back in place, you can reassemble the banknote validator (using the Pozidriv screwdriver for M4 screws), then connect the screen cables again.

<u>To reinstall the support</u>:
In order to fasten the support in place, align the two lugs located on the bearing plate with the two slots of the banknote validator assembly. Once back in place, push the support in the direction as shown until the latch is locked. For the UPWARD STACKER installation, drag the bearing plate down and vice versa.

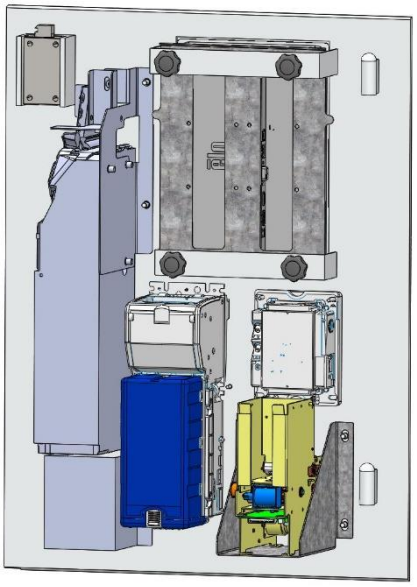


Put the stacker back into the banknote validator. Align the 4 stacker lugs with the 4 slots of the plastic bearing plate. Once the stacker is inserted in the slots, push the stacker to the indicated direction. For the UPWARD STACKER installation, drag the bearing plate down and vice versa.

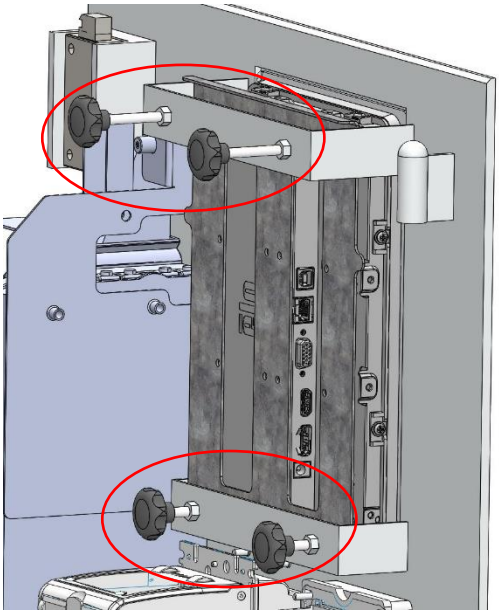
Now you can reconnect the cables of the banknote reader then power on the device once you have ensured everything is correctly screwed and connected.

9.3 Replacing the screen protector – **10 inches**

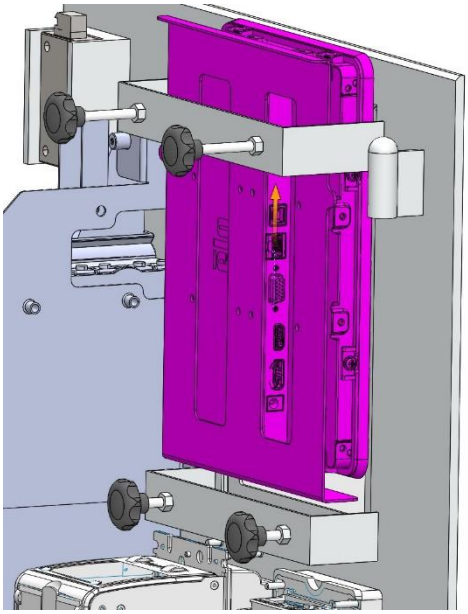
Before replacing it, make sure the device is switched off.



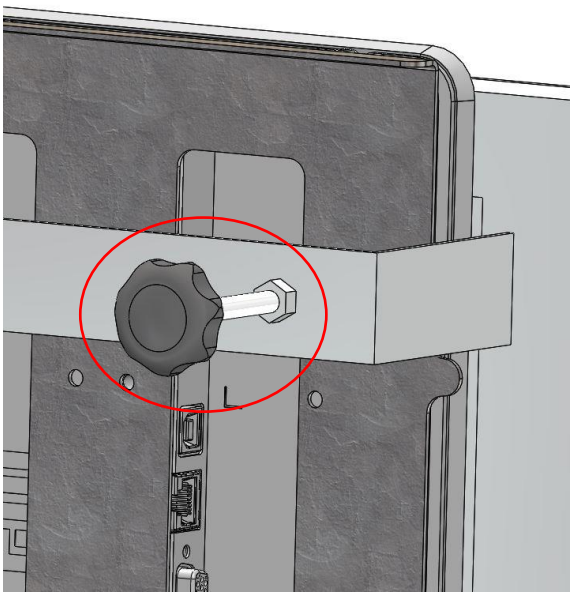
1. To remove the screen protector, spot first each cable's position plugged to the screen then unplug them.

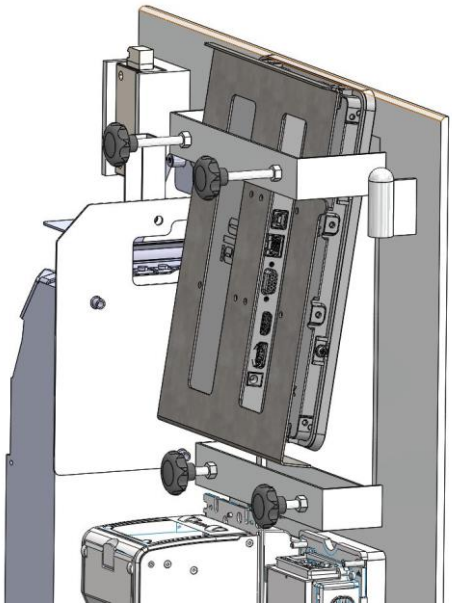


2. Unscrew completely the 4 captive thumbscrews, without removing them from the nuts.

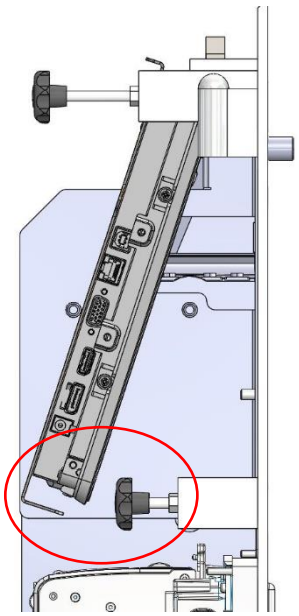


3. Swipe the screen up to the lugs located on each side of the mounting plate.

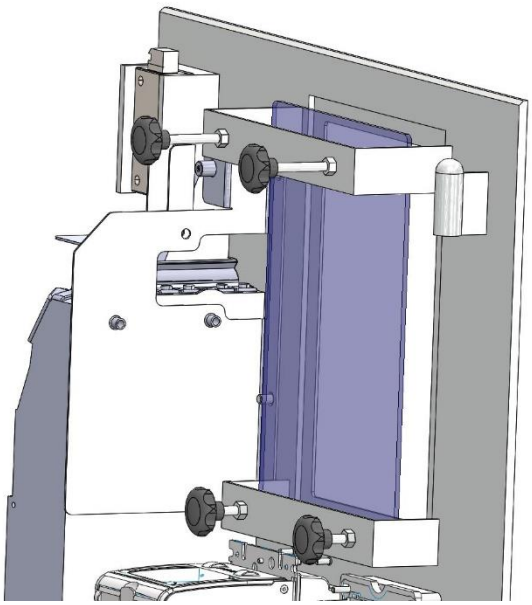




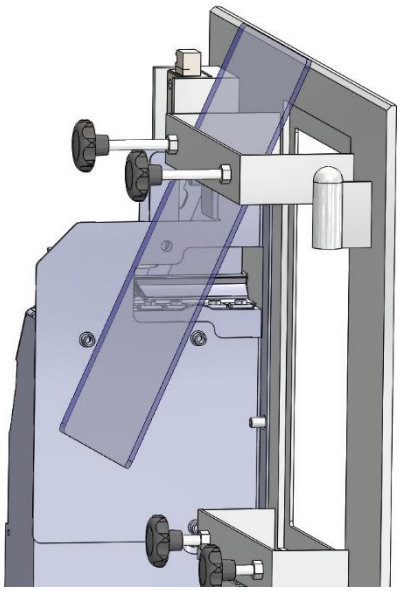
4. Tilt the screen towards you.



5. Then put down the screen while maintaining the maximum tilt angle to make sure that the captive thumbscrews don't touch the screen.



6. Pull the screen protector towards you.



7. Then in order to remove it do it the same way as for the screen.

The cleanness of the new screen protection shall be verified then follow procedure the other way round to put it in place.

WARNING

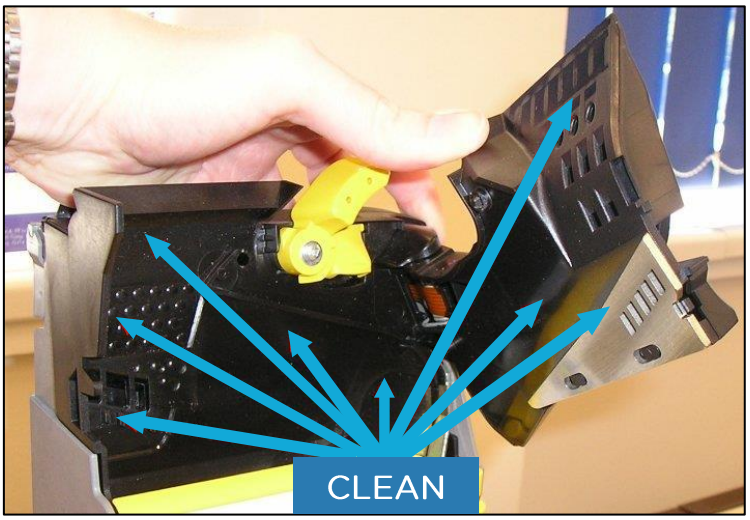
Don't screw the captive thumbscrew too tight in order not to damage the scree or to alter its resolution quality (halos).

9.4 Cleaning the change giver

The acceptor module is composed of the coin path, accept gate, routing gates, and reject path. All these areas can be wiped clean at the same time.

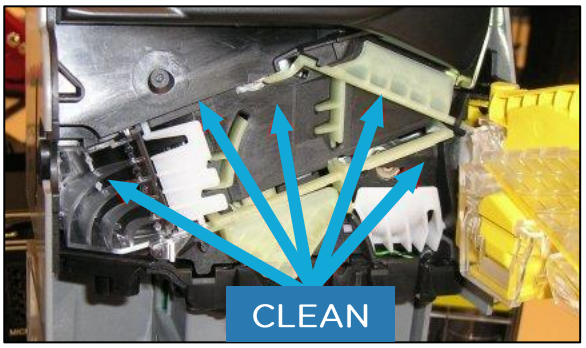
Acceptor lid

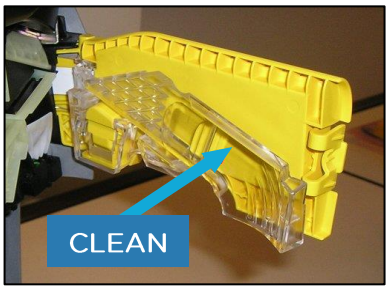
- Open the acceptor by pulling on the left-hand side and lifting upwards and to the right.
  Note: The acceptor assembly lid does not remain opened.
- Clean the areas shown here under until the surfaces are clean and dry.
- Do not scratch or damage the coin runway, otherwise coin acceptance may prove less efficient.
- After cleaning, ensure lid closes properly.

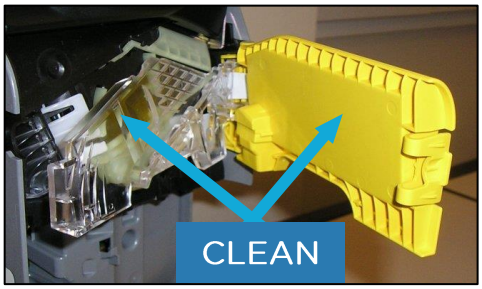


Separator lid

- Open the MMI LCD assembly lid by releasing the clip on the left-hand side and swing it out to the right.
- Clean the areas shown below while ensuring all surfaces are clean and dry.
- After cleaning check that all the gates are free to move.
- Clean both side of the reject slide and the back of the MMI as indicated so that all the surfaces are clean and dry.



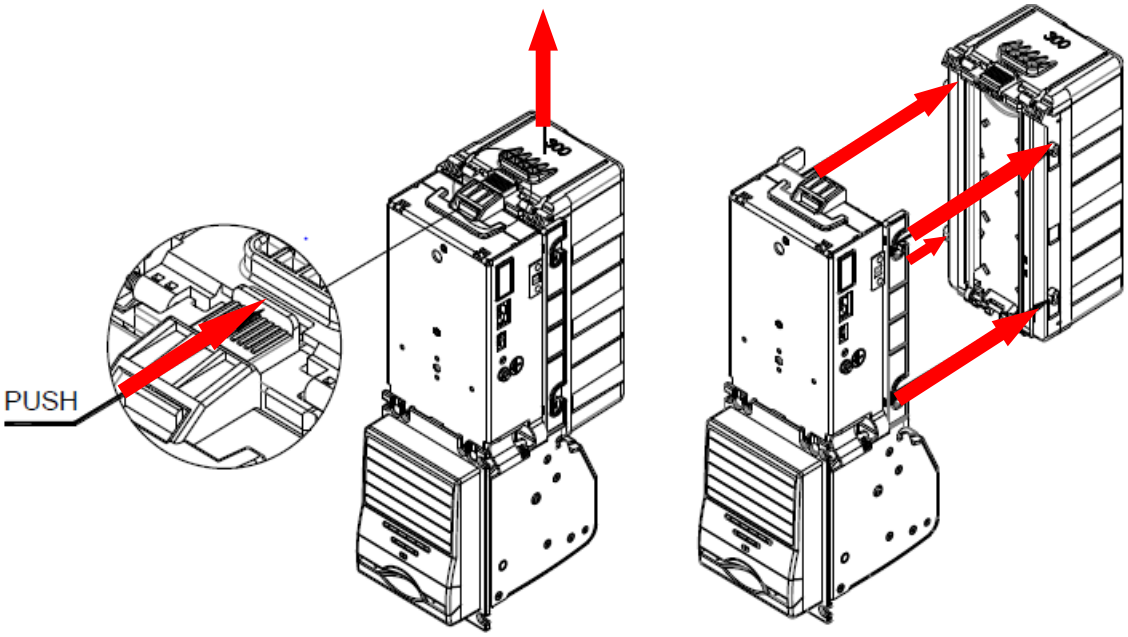




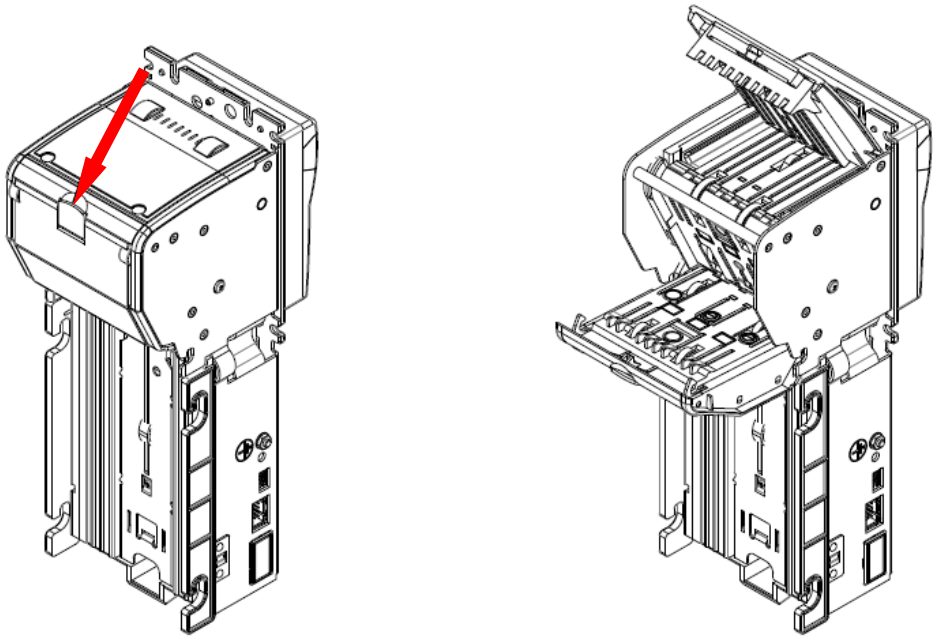
- Check that the clip popped up after closing the lid.

9.5 Cleaning the banknote reader

In order to remove the stacker, push the release catch as indicated and slide the stacker according to the direction indicated. Once unlocked, the stacker will be removed easily from the 4 slots located on the plastic support.



During normal operating conditions, dust and filth can accumulate on the optical sensor and on the wheels. It may result in a lower acceptance rate. We recommend cleaning the banknote path every 6 month as shown hereafter.
Remove the cassette. Open the compartment pushing on the button as shown below.



Points to check:

- Check that there are no scratches on the note paths and on the sensor, no filth and no cracks on the transport wheels and on the sensor lenses.
- Check also that there are no paper debris on every banknote runway.
- Clean all the parts with a soft moistened cloth. Clean also the wheels when really dirty.

  ➔ We recommend the pre-saturated cleaning bills: ***Réf.EBILNET.***

CAUTION: DO NOT USE ACETONE OR SOLVENT BASED CLEANING AGENTS, THIS WILL RESULT IN DAMAGING ALL PLASTIC PARTS.

Check there are no banknotes fragments and no residues in the stacker compartment. Use compressed air to eliminate them.

9.6 Maintenance of card dispenser

In normal circumstances, the routine maintenance should be performed every 2 months or every 10 000 distributed cards.

By means of a cotton swab with isopropyl alcohol, thoroughly clean the clutch roller. The clutch roller will rotate freely without the unit operating.

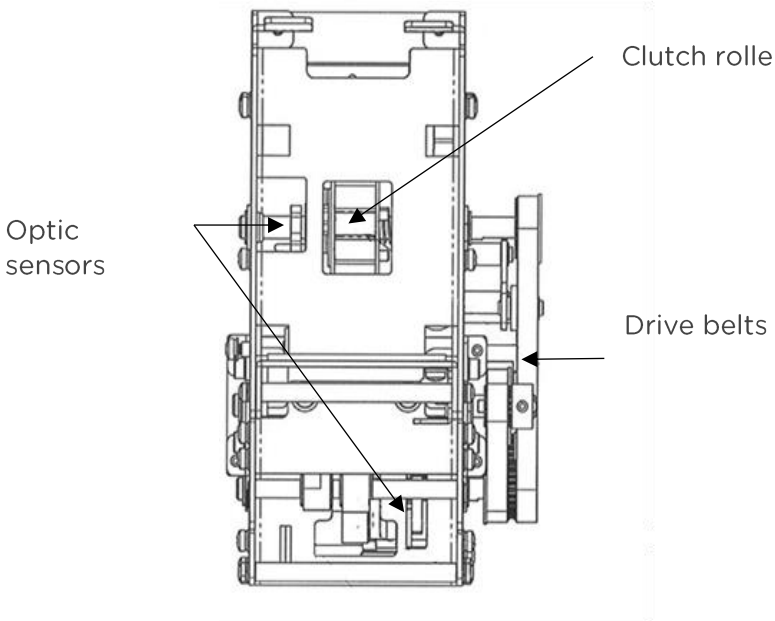
Using a small piece of cloth, dampened with isopropyl alcohol, wipe all metal surfaces on the interior of the unit.

Occasionally, the optic sensors may become dirty. Simply blow them with a dry air bomb or wipe them with a clean and dry cloth.

Check the state of wear of the drive belts (1-2mm deflection when light pressure is applied to the longest edge).

Before re-stocking the unit with cards, make sure that the alcohol has completely dried.

It is a good idea, during the maintenance session, that the unit be visually inspected for broken or damaged parts, frayed or worn belts, worn rollers, debris build up, etc...



10. Recycling end-of-life products

The LM CONTROL company is member of Récylum, which deals with collection, depollution and recycling of our professional electrical used devices in the respect of the highest environmental standards as defined by ESR.
ESR is an eco-organisation certified by the authorities for the professional DEEE * area.
www.recylum.com

**DEEE : Déchets d'Equipements Electriques et Electroniques professionnels*

Collection modes

Several solutions are available free of charge:

- **Voluntary supply (< 500 Kg or < 2,5 m3)**

Delivery of all professional DEEE in one of the 200 professional collection sites or in one of the 1 500 professional distributors of the Récylum network.

➔ **To locate your nearest depot:**

https://www.recylum.com/recycler/industrie/, click on "Trouvez un point de collecte

- **On-site collection (≥ 500 Kg ou ≥ 2,5 m3)**

Submit a request to Récylum, in order to manage consistent transportation and make an appointment for professional DEEE collection on site. If needed, specific containers can be put at your disposal.

➔ **To submit a collection request**:
https://www.recylum.com/recycler/industriee/, Click on "Vos solutions de collecte".

LM CONTROL
accélérateur de business

2 boulevard Marcel Dassault
69330 Jonage - FRANCE

Phone: +33 (0)4 72 47 74 00
Fax: +33 (0)4 72 47 74 11
Email: commercial@lmcontrol.fr
lmcontrol.com