WORLDLINE

davinci III Vending

Digital Payments
for a Trusted World

Contents

1 List of abbreviations

EMV	Europay Mastercard Visa (card payment transactions) Electromagnetic compatibility (electric)
ECR	Electronic Cash Register
ep2	eft/pos 2000: CH standard based on the EMV standard in electronic payment transactions
PW	Password
SW	Software
TID	Terminal ID
Trm	Terminal
Trx	Transaction

2 Installation

When installing the components in the device front, the cut-out dimensions detailed in this document must be applied. Particular consideration should be given to the torque used for the screws/nuts, otherwise proper operation cannot be guaranteed.

> **Please note**
> (Applies to all assemblies)
> - The device front into which the contact card reader is installed may have a maximum thickness of 6.6 mm.
> - The nuts/screws used to affix all components must be tightened with a torque of 0.8 Nm (± 10%).
>   The same also applies to the 4 screws that hold the mouthpiece module together.
> - The external 4 screws (affixing the reader to the device front) may have a maximum torque of 0.3 Nm for the final tightening step.

2.1   DIMENSIONS FOR THE DEVICE'S FRONT PANEL CUTOUT

Welding studs M5 (4x)

DEVICE FRONT CUTOUT

Cutout for hybrid slot reader
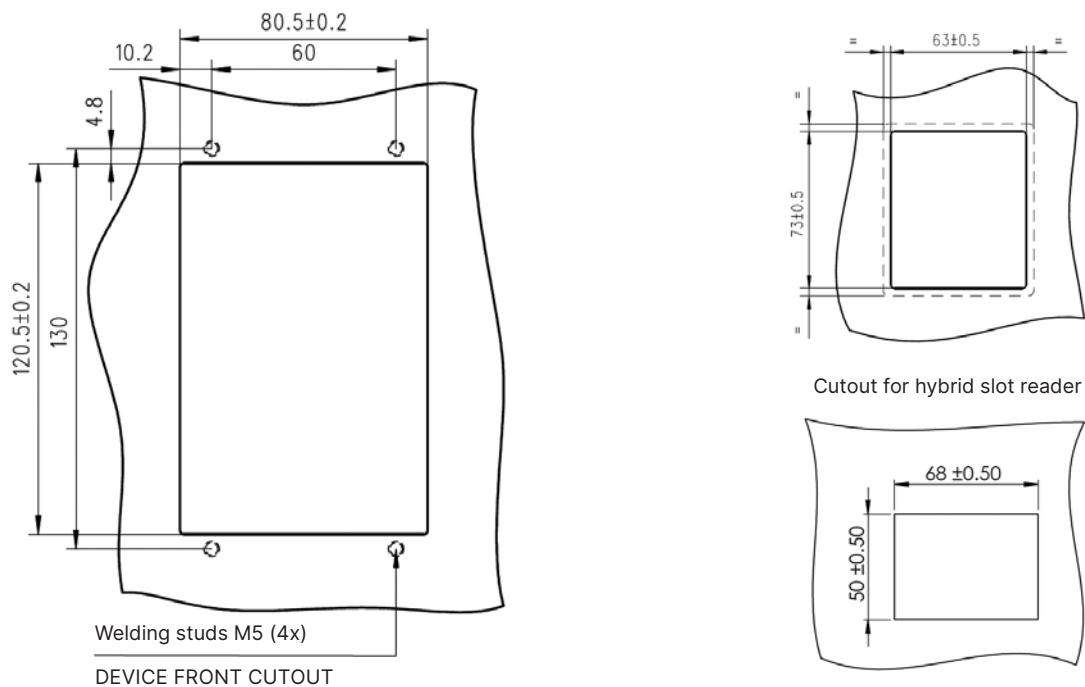
Figure: Cutout for the device front for the davinci reader and RFID reader

2.2 INSTALLING THE VENDING MODULE

The Vending module is mounted to the device front with the help of self-locking screws. The applicable dimensions for the device front cutout, as well as the position for the fixing bolts, can be found in Chapter 2.1.

Please note
- During the fixing process, ensure that the Vending module is firmly affixed to the device front as, otherwise, the dismantling protection may be triggered.
- The contact area for the dismantling protection switch must be flat.

Max. installation dimension

Welding studs M5 (4x)

DEVICE FRONT CUTOUT
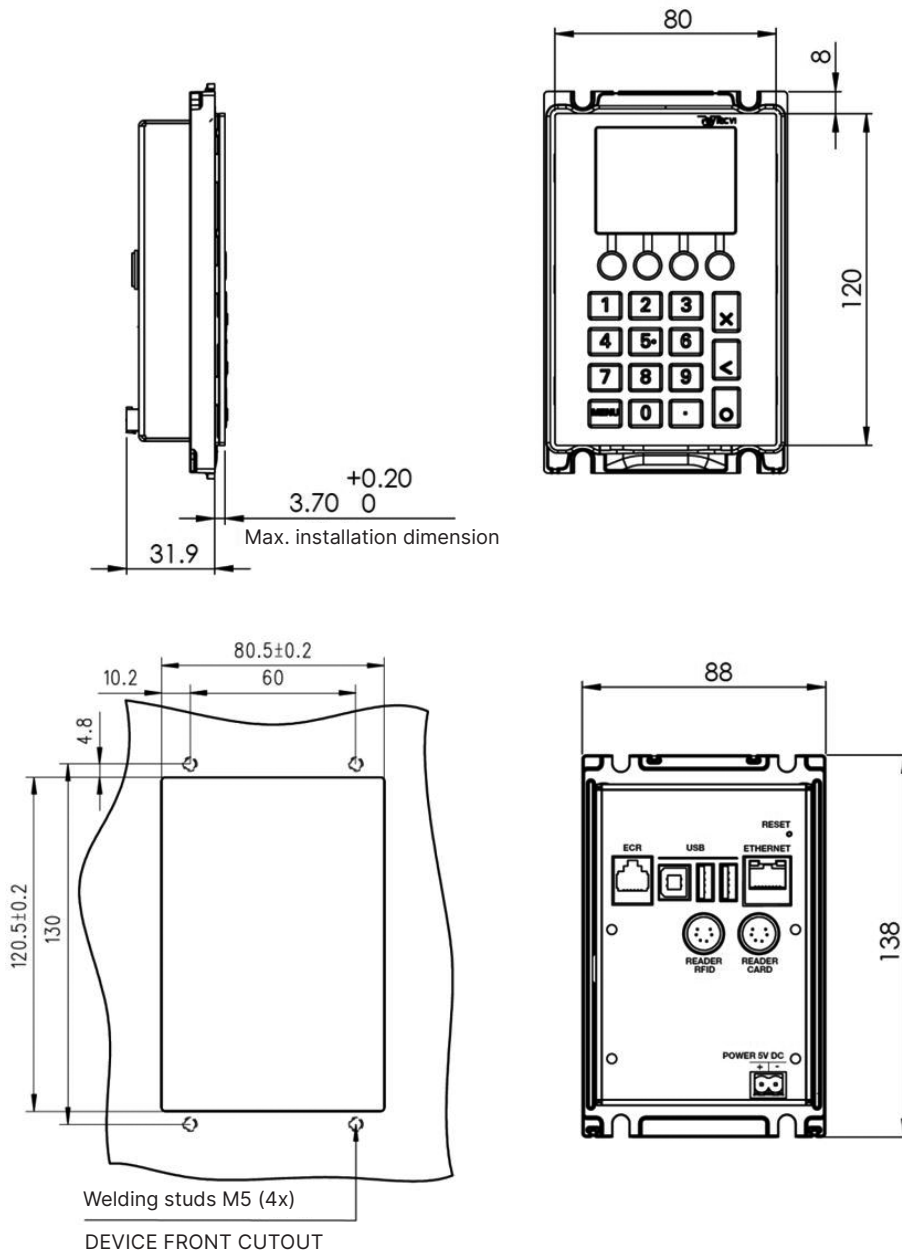
2.3 INSTALLING THE CONTACT CARD SLOT READER

To begin with, the mouthpiece and the retainer plate are mounted to the device front (step 1). The retainer plate features channels to carry away water. The bolts for fixing the card slot reader are screwed to the mouthpiece in step 2. The card slot reader is fixed with self-locking nuts (step 3).

Step 1:
Mounting the mouthpiece
and retainer plate
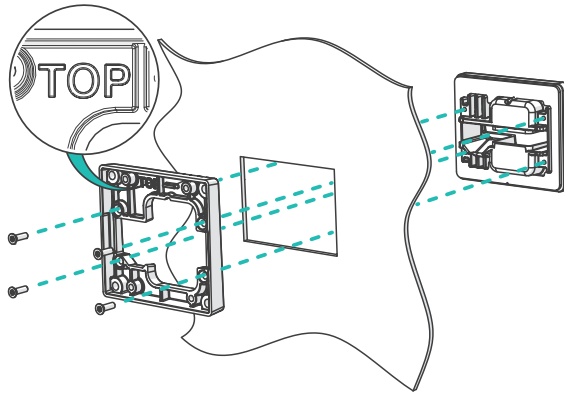
Step 2:
Mounting the bolts for fixing
the card slot reader
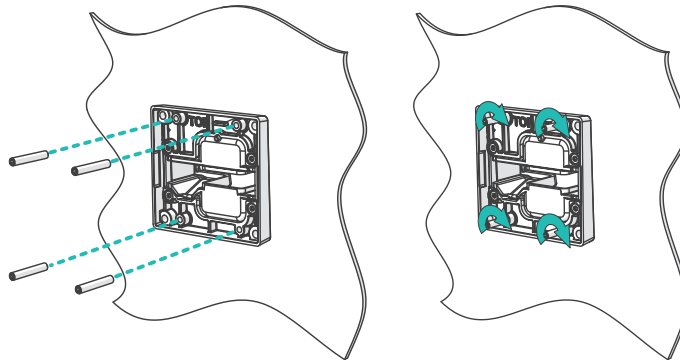
Step 3:
Mounting the card
slot reader
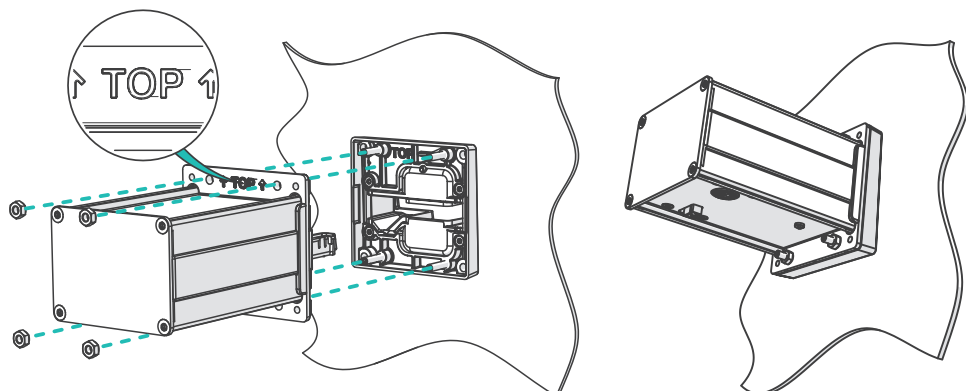
2.4 INSTALLING THE RFID READER

The RFID reader is affixed to the device front as follows:
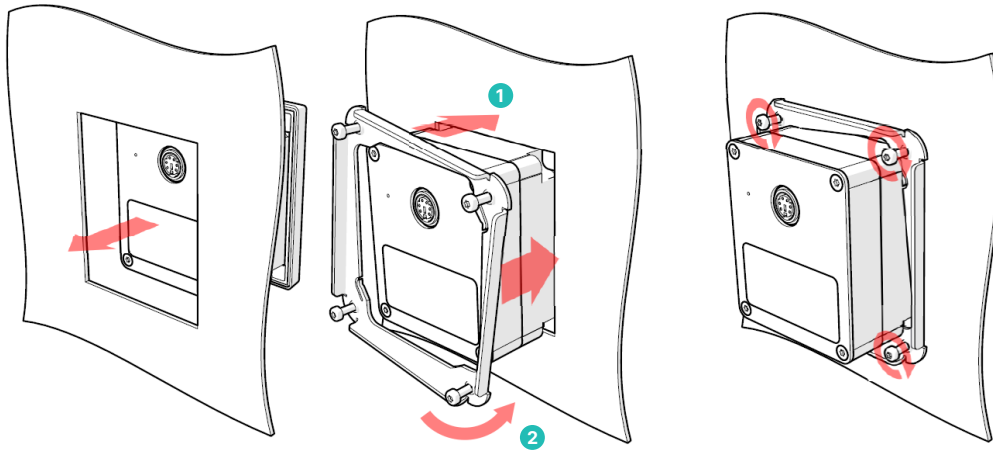
Figure: Mounting the RFID reader

Open and remove the mounting frame:
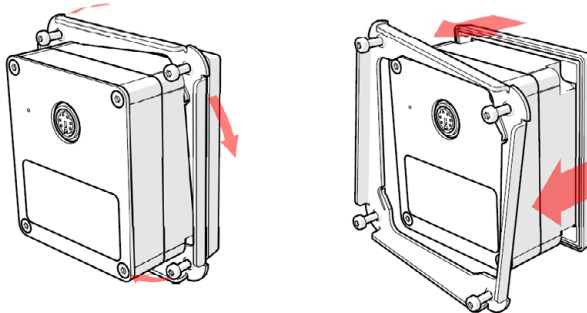
Figure: Dismantling the RFID reader

2.5   SUPPLY CONCEPT

The davinci III Vending module is powered using the hybrid slot reader, a mains adapter or a vending machine. In such instances, additional components can also be powered simul-taneously with the davinci III Vending module. The following figure displays the supply connector:

Supply connector
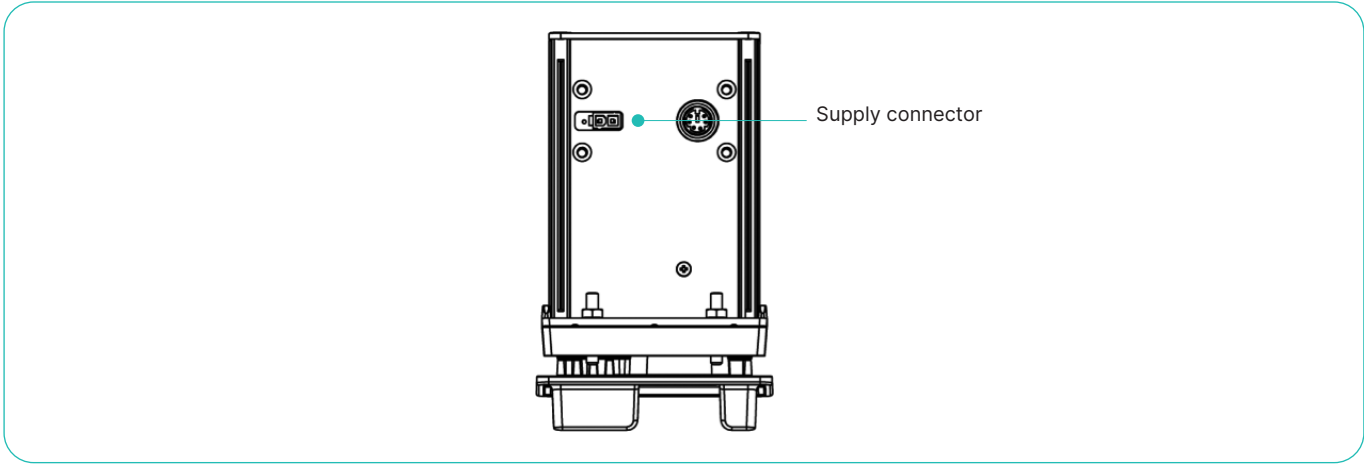
2.5.1   Connecting the components

The process of connecting the components is described in this section. The maximum length of the connection between the reader and the davinci III Vending module is 2 metres. Only those cables specified by Worldline may be used.

In the version displayed, the davinci III Vending module (Base Unit) is connected with an RFID reader and a hybrid slot reader. The entire system is powered by means of a supply connector to the hybrid slot reader.

RFID reader

davinci III Base Unit

hybrid slot reader
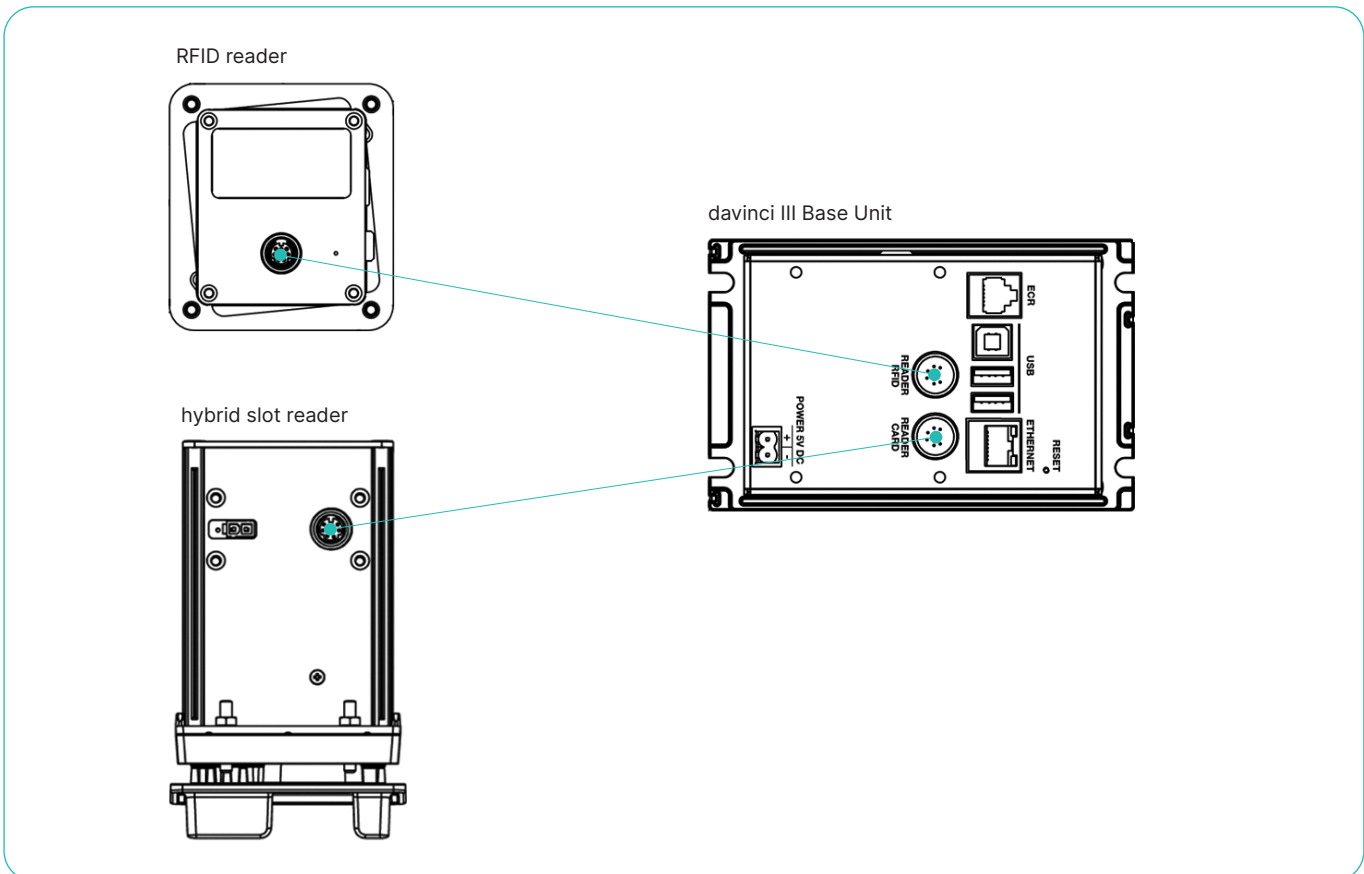
2.6 PIN ASSIGNMENT FOR THE CONNECTORS

2.6.1 PIN assignment for the davinci III Vending module

Article name	Connector type	Application	1	2	3	4	5	6	7	8
Power	Screw/plug connection	5 VDC Supply (Aux)	VCC	GND						
Comm	RJ45	Ethernet	Tx+	Tx-	Rx+			Rx-		
ECR	RJI2	Cash register interface	U in Ext +12V	U in Ext +12V	RxD	TxD	GND	GND		
USB type 1.1	Standard type A Standard type B	Host and device	+ 5V	D-	D+	GND				
Connect to module	Mini-DIN 6-pin	Connection to the components	+12V	+12V	RxD	TxD	GND	GND		

2.6.2 PIN assignment for the card readers

(Connectors dependent on the respective card reader):

Article name	Connector type	Application	1	2	3	4	5	6	7	8
Power	Molex	12 V–36 VDC	GND	VCC						
Power	RJ45	12 V–20 VAC	AC1	AC1	AC1			AC2	AC2	AC2
Connect to module	Mini-DIN 6-pin	Connection to the components	+12V	+12V	RxD	TxD	GND	GND		

2.6.3 PIN assignment for the RFID reader

Article name	Connector type	Application	1	2	3	4	5	6	7	8
Connect to module	Mini-DIN 6-pin	Connection to the components	+12V	+12V	RxD	TxD	GND	GND		

2.7 EARTH

It must be ensured that the correct earth is in place between the davinci III Vending module and the slot reader.
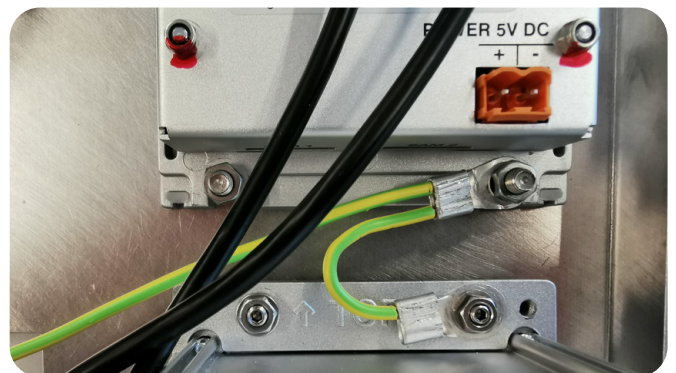

Figure: Earthing example davinci III Vending

3 Terminal installation

Following the proper installation of the terminal, this must then be activated and put into operation with the corresponding parameters.

> **Please note**
> If the communication of the davinci III Vending is executed via a vending machine, the terminal's operation may differ from these instructions.

In the following steps, the possible selection of entries is also made using the arrow button and then confirmed with the OK button.

ECR Integration?	
Standalone	**Cash register-autonomous installation**
ECR Integrated	Cash register-integrated installation

ECR Connection	
RS.232	**Connection to cash register via RS.232**
LAN	Connection to cash register via LAN
USB	Connection to cash register via USB

ECR PORT Speed	
Detect	**Interface speed**
115200	
57600	

Network Interface	
LAN	**Terminal communication directly via LAN**

IP Configuration	
DHCP	**Obtains the IP address from the DHCP server and displays it > continue with OK**
Static IP	Must also be stated and prepared upon activation accordingly

Server IP-Address	**default DNS address for Internet communication**
serv.ep2.telekurs.com	Other communication types (Private Net, Point-to-Point) must be entered manually and confirmed using OK.

Server TCP Port Number	
8953	**This entry can be confirmed with OK**

Terminal Identification	**Enter the specific Terminal ID here and confirm with OK**

After entering the Terminal ID, the terminal will begin with the software download, configuration and initialisation.
As soon as the word "Welcome" and the card brands appear on the display, the terminal is ready for operation.

4 Menu – function overview

The terminal must be approved in advance by the vending machine in order for these functions to be selected.

(MPD Command: 4 – 1 Activate the Service Menu on the terminal)

Following the approval, the terminal password must be entered. Every terminal has one password which is defined as per the customer's request upon activation.

The following menu structures can be selected with the arrow button and then confirmed with the OK button. It is possible to go back one level by pressing the STOP button.

Closings	**Daily closing statement**	Daily closing statement is executed manually
Queries	**Data transmission**	Transaction data is transferred
Settings		
Setup	**Trx storage**	Displays the transaction log in the terminal
	Language	Terminal language can be changed D / E / I / F at present
	Service PW	Without function
	Configuration	Triggers configuration manually
	Initialisation	Triggers initialisation manually
	SWUpdate	Triggers a software update manually
	Trm Reset	The terminal is cleared and reactivated. Password required 1235789
	Info	shows TID. SW. ep2version on

4.1   HW TEST MENU

Users can find this HW test menu as follows: Following a PowerUp the "MENU" button must be pressed as the white screen is being set up. Thereafter, the user is requested to enter the "Z" password.

Menu items

1	Test PIN pad	Every button must be pressed 1x.
2	Test external reader	The card is read 10x
3	List of installed firmware	List of installed SW modules
4	Exit	Abort

5 Dismantling protection

In accordance with international PCI regulations, the individual components of the davinci Vending terminal have been equipped with dismantling protection. This is intended to prevent it from being dismantled and modified with malicious intent during operation, before then being put back into operation. For this reason, the dismantled parts must always be returned to Worldline in order for these to be reactivated.

5.1 DISPLAY INFORMATION

The dismantling protection consists of electronic contacts, which are located on the device front and can only be activated when the components are mounted correctly.

Whether or not the dismantling protection of a component is active can be determined based on the status information shown on the display:

Display	Description	Help
Tampered (0) Tampered (2)	• The security apparatus of the Vending module was triggered or tampered with	• Return the Vending module to Worldline
Reader Tampered (0) Reader Tampered (2)	• The security apparatus of the reader was triggered or damaged	• Return the reader to Worldline
Not mounted (4)	• The Vending module is not mounted correctly	• Check the contacts on the dismantling protection • Activation possible following correct mounting
Reader not mounted (4)	• The reader is not mounted correctly • The mouthpiece is not mounted correctly	• Activation possible following correct mounting • You may need to check the contacts on the dismantling protection and/or the mouthpiece mount
Not activated (5)	• The dismantling protection for the Vending module has not been activated	• Carry out activation
Reader not activated (5)	• The dismantling protection for the reader has not yet been activated	• Carry out activation
Not mounted (7)	• The Vending module is not mounted correctly • The Vending module was removed	• Device must be returned to Worldline for reactivation
Reader not mounted (7)	• The reader is not mounted correctly • The reader was removed • The mouthpiece is not mounted correctly	• Device must be returned to Worldline for reactivation
Not activated (8)	• The dismantling protection for the Vending module has been re-closed • A password is required for its reactivation • Whilst it is in this state, no transactions are possible	• Device must be returned to Worldline for reactivation
Reader not activated (8)	• The dismantling protection for the reader has been re-closed • A password is required for its reactivation • Whilst it is in this state, no transactions are possible	• Device must be returned to Worldline for reactivation

5.2   REPLACING THE VENDING MODULE

When replacing the Vending module it is important to note that the card reader must also be replaced. Otherwise, it is no longer technically possible to execute "Plaintext" PIN verifications against chip cards, which have an SDA chip (static data authentication). These would then, under certain circumstances, no longer function correctly. The Swiss Maestro card is not affected by this.
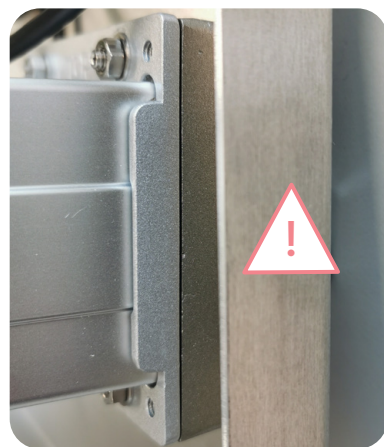
5.3   TEST – INSTALLATION WITHOUT ACTIVATION

During a menu query regarding activation, the process can be cancelled by pressing the STOP button and then entering the Z password. In doing so, the status of the dismantling protection will not be queried or amended. In this mode, the terminal can be put into operation and, e.g. initialised.

Important: In this mode, no transactions are possible. By executing a repeat PowerUp, the user is then taken to the same "Activation menu" again.
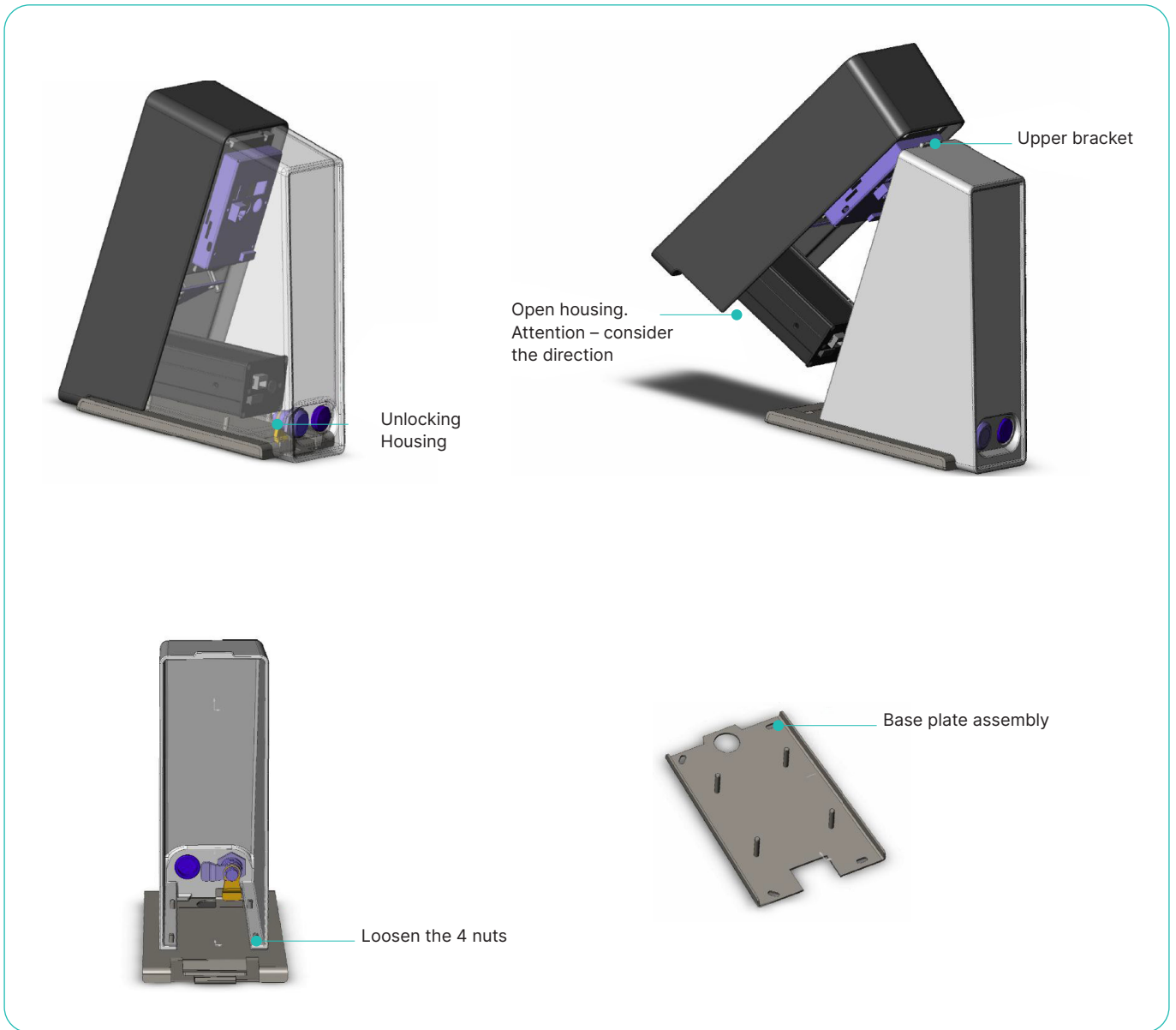
5.4   HELP WITH MOUNTING AND ASSEMBLY

- If the silicone seal is not mounted correctly, the device must be returned (see example: davinci 2 Vending).

- The silicone seal is mounted correctly, the device is watertight and can be mounted (example: davinci III Vending).

- The flex cable is very sensitive and must **not** be bent or contacted.

- There should be no gap between the card reader and the mouthpiece.

6 davinci Safe

Assembly instructions for the davinci Safe terminal.

Upper bracket

Open housing.
Attention – consider
the direction

Unlocking
Housing

Base plate assembly

Loosen the 4 nuts