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SC5E MDB Coin Changer Manual Guide

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1. GENERAL

The 5 - tube - coin changer SC5E MDBA has been designed for use in all conventional vending machines. The design of the changer meets all current technical and safety requirements.

Please pay attention to the following points when using the SC5E MDBA coin changer.

- ◇ Before installing, removing or cleaning the coin changer, switch off the electricity supply.
- ◇ Do not remove the connection cable while power is switched on, or pull on the cable to remove.
- ◇ To avoid damage by moisture or dust, retain the original packaging, and use for storage or transportation.
- ◇ Coin changer should only be connected by a qualified electrician or trained person.
- ◇ Disposal of the coin changer must be according to local law.
- ◇ After cleaning the coin changer, do not re-install until completely dry.
- ◇ If during the cleaning excessive water get into the changer, pay attention not to install the coin changer again before completely dried.

2. TECHNICAL FEATURES

2.1 Manipulation device

- High acceptor protection by using an anti manipulation device.

2.2 Liquid rejection

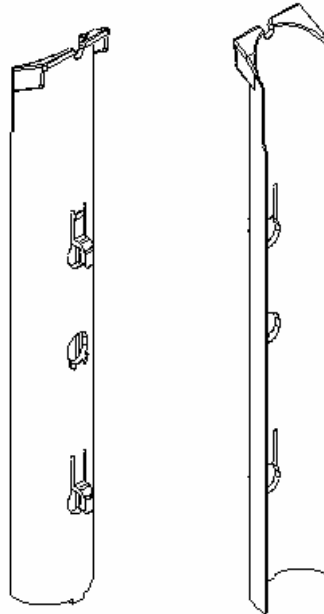
- Efficient protection of the coin acceptor by using a liquid rejection system.

2.3 Modular design

- Exchange of the components without tools.
- Visible cover for immediate diagnostics.

2.4 OPTION / CONVERSION E-TUBE FROM 5 CENT TO 10 CENT

- From Software V5119
- Spare Part Number Spacer 10 Cent = SA 75666-50100
- DIL Switch 3 Activate E - Tube ON : 5 Cent
OFF: 10 Cent



2.5 OPTION / PALM - DIAGNOSTIC - SYSTEM FROM SC5E MDBC

- Palm - solution permit, software update, reading audit data, diagnostics and changing configuration.
- Following Palm versions are suitable: Palm III / IIIe / IIIx / IIIxe / IIIc, VIIx, VNx, m100 / m105 / m125 / m130 / m500 / m505 / m515, Palm T3,
- Palm Software OS Version 3.1 or higher.
- Look at Palm - connector (Point 13.1 DIL - switch block).

3. MAINTANANCE AND CLEANING

This section explains maintenance and cleaning instructions which have to be done regularly on the 5 tube changer SC5E MDB.


To guarantee function and durability, take notice of following information.

CLEANING

- Coin acceptor, Coin routing
- Separator
- Tube cassette
- Payout slide (small and large)

Necessary cleaning intervals dependent on surrounding area as following.

Maintenance

- | | | |
|-----------------------------------|--|----------------|
| ◇ Clean area (i.e.. Office) |  | every 3 months |
| ◇ Industrial area (i.e.. Factory) |  | every month |

The SC5E MDB coin changer consists of plastic which has to be handled / cleaned with care for example without water or soapsuds.

Use only a moist duster or a soft brush.

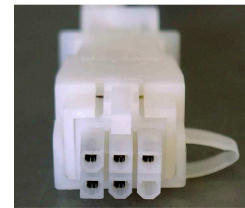
SAFETY



Before removing or cleaning switch off or isolate the electricity supply to the host machine

CAUTION

- Do not use any solvent or similar abrasive substances.
- Do not use any wire brush or cleaning powder.
- Do not use any spray - or lubrication oil.
- Do not put the changer underwater.



Molex 6 pol.

4. TECHNICAL DATA

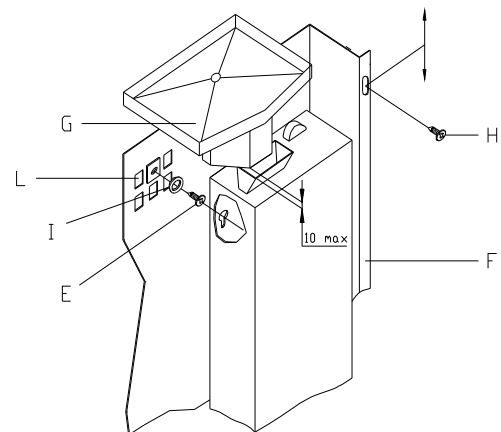
Protocol :	MDB VCCS		
Acceptance :	5c, 10c, 20c, 50c, 1€, 2€ 2 Freevend token		
Repayment :	4 coin types from 5 tubes		
Diameter :	Acceptance	min. 17,90 mm	max. 32,80 mm
	Return	min. 17,90 mm	max. 34,50 mm
Thickness :	Acceptance	min. 1,34 mm	max. 2,65 mm
	Return	min. 1,35 mm	max. 7,00 mm
Capacity :	Tube A	=	50c 23 to 61
	Tube B	=	10c 76
	Tube C	=	20c 70
	Tube D	=	5c 86
	Tube E	=	5c 86
Dimension :	Height	=	380 mm
	Width	=	140 mm
	Depth	=	84 mm
Installation :	Vertical (max. 5°)		
Weight :	1800g		
Temperature Range :	-15°C to + 60°C		
Humidity :	Max. 90%		
Power consumption :	Standby 2,6 VA, max. 7,7 VA		
Voltage :	Minimum	20,00 Volt / DC	
	Normal	34,00 Volt / DC	
	Maximum	42,50 Volt / DC	

5. INSTALLATION PAYMENT - SYSTEM

1. Power off electrical supply
2. Unclamp the acceptor at the left side and pull it.
3. Disconnect the flat cable and take out the complete acceptor



4. Hook the coin mechanism on the 3 screws suitably placed (E) on the door.
5. Check that the coin mechanism has the coin entrance in line with the exit of the curved channel(G). The distance between the two parts is around 10 mm maximum.
6. Take care that both return levers do not have any contact.
7. Check the acceptor opening by pushing the coin return lever from the host machine.
8. Install the coin acceptor again.



6. PROGRAMMING

6.1 TUBE FILLING VIA THE COIN CHANGER

This function permits an easy way to fill the tube.

The number of inserted coins will be recorded and transmitted to the VMC of the vending machine

- Open the door
- Push "+" key, both LED's flash simultaneously.
- Insert coins in any order.
- After finishing, push the "+" key or wait for 45 seconds.
- To fill E- tube, push the "+" key both LED's flash simultaneous.
- Push E key, both LED's flash faster.
- Insert the 5 cent coins.
- After finishing, push the "+" key or wait for 45 seconds.

NOTICE:

If you activate the E- tube with DIL- switch 3 on the back of the acceptor, in normal operation the E- tube will be filled automatically.

6.2. CHECKUP THE PAYOUT MODULE

- By pushing the key's A / B / C / or D you can dispense coins from each tube. Before using the E- tube you have to activate the E-tube with DIL- switch 3 on the back of the acceptor.

6.3 DISPENSING OF COINS UP TO MINIMUM TUBE LEVEL

- Select tube which has to be set to the safety level.
For example tube A
- Push key "A" for about 2 seconds. The dispensing automatically starts until the safety level is reached.
Tube A = 3 coins, Tube B = 9 coins
Tube C = 7 coins, Tube D = 8 coins, Tube E = 9 coins
This function is only useful if you have a safety level of 2 coins each.
To meet the requirements
follow point 8.3 (Reset safety level minimum 2 coins).

7. CONFIGURATION

7.1

Programming mode for two different freevend token

- While holding the "coin return lever" down, press the "+" button.
- Both green LED's flash.
- Insert 10 token in turns.
- While holding the "coin return lever" down, press the "+" button.
- Both green LED's momentarily flashing.

To Enable or disable this function is achieved by setting the DIL switch 4 on the back of the acceptor.

NOTICE:

Programming a third token while doing following operation:

- While holding the "coin return lever" down, press the "E" button.
- Both green LED's flash.
- While holding the "coin return lever" down, press the "E" button.
- Both green LED's on.

8. TUBE LEVEL ADJUSTMENT (TUBE IN MODE)

With this function you are able to set individually safety levels of each tube. The factory setting is 2 coins of each tube.

8.1

- Open the door
- Dispense all coins
- Push "+" key, both LED's flash simultaneously
- Push "B" key, both LED's on
- Push "+" key, both LED's flash simultaneously
- Insert coins in any order
- To finish push the "D" key, both LED's are on again

8.2 Cash inventory up to the preseted safety level of each tube.

- Open the door
- Push "+" key, both LED's flash simultaneous
- Push "C" key for about 2 seconds, start of automatic dispensing until the preset safety level is reached.

By doing a factory reset, you are able to set a new safety level (Point 8.3 factory reset).

8.3 TUBE SAFETY LEVEL ADJUSTMENT (FACTORY RESET)

Setting a new safety level by doing a factory reset

- Open the door
- Dispense all coins
- Push "+" key, both LED's flash simultaneously
- Push "B" key, both LED's on
- Push "+" key, both LED's flash simultaneously
- To finish push the "D" key, both LED's on again
- The safety level is now 2 coins each tube

NOTICE:

Setting an individual safety level, follow point 8 (Tube in mode).

9. MAXIMUM LEVEL OF EACH TUBE (TUBE OUT MODE)

With this function you are able to set individual maximum safety levels. All inserted coins over the programmed level go to the cash box.

- Open the door
- Push "+" key, both LED's flash simultaneously
- Push "A" key, both LED's on
- Push "+" key, both LED's flash simultaneously
- Insert coins
- Push "D" key, both LED's on again

NOTICE:

Reset tube out mode

- Open the door
- Push "+" key, both LED's flash simultaneous
- Push "B" key, both LED's on
- The tube level is now up to the limit

ATTENTION

You can only work either with Point 8.1, tube in mode or Point 9 tube out mode.

10. REJECTION OF FOREIGN CURRENCY

Quick action at location by self learning mode for foreign currency.
New programming erases previous data base.

- While holding the "coin return lever" down press "C" button.
- Both LED's flash.
- Insert ten times the same or ten different foreign coins.
- While holding the "coin return lever" down press "C" button for about 2 seconds.

10.1 ERASING FOREIGN CURRENCY

- While holding the "coin return lever" down, press "E" button for about 2 seconds.
- Both LED's flash
- While holding the "coin return lever" down, press "E" button for about 2 seconds.

NOTICE:

Activate this function by setting DIL switch 5 (Position "**ON**") on the back of the acceptor.

11.ACCEPTANCE BAND FOR 1,00 AND 2,00 EURO

DIL -SWITCH 6

Acceptance band 1,00 € ON = NARROW OFF = STANDARD

DIL - SWITCH 7

Acceptance band 2,00 € ON = NARROW OFF = STANDARD

12. INHIBIT OF 1,00 EURO AND 2,00 EURO

DIL - SWITCH 1

1,00 € Inhibit ON = DISABLE OFF = ENABLE

DIL - SWITCH 2

2,00 € Inhibit ON = DISABLE OFF = ENABLE

NOTICE:

To Enable or disable this function is achieved by setting the DIL switches on the back of the acceptor.

13. DIL - SWITCH BLOCK (BACKSIDE COIN VALIDATOR)

DIL - SWITCH 1

1 € inhibit

ON = DISABLE OFF = ENABLE

DIL - SWITCH 2

2 € inhibit

ON = DISABLE OFF = ENABLE

DIL - SWITCH 3

E - Tube setting

ON = 5 CENT OFF = 10 CENT

DIL - SWITCH 4

Programming mode for two different freevend token

ON = ENABLE OFF = DISABLE

- While holding the "coin return lever" down, press the "+" button.
- Both green LED's flash.
- Insert 10 token in turns.
- While holding the "coin return lever" down, press the "+" button.
- Both green LED's momentarily flashing.

DIL - SWITCH 5

Rejection of foreign currency / false money

ON = ENABLE OFF = DISABLE

- While holding the "coin return lever" down, press the "C" button.
- Both green LED's flash.
- Insert 10 foreign currency / false money.
- While holding the "coin return lever" down, press the "C" button.
- Both green LED's momentarily flashing.

DIL - SWITCH 6

Acceptance band for 1 €

ON = NARROW OFF = STANDARD

DIL - SWITCH 7

Acceptance band for 2 €

ON = NARROW OFF = STANDARD

DIL - SWITCH 8

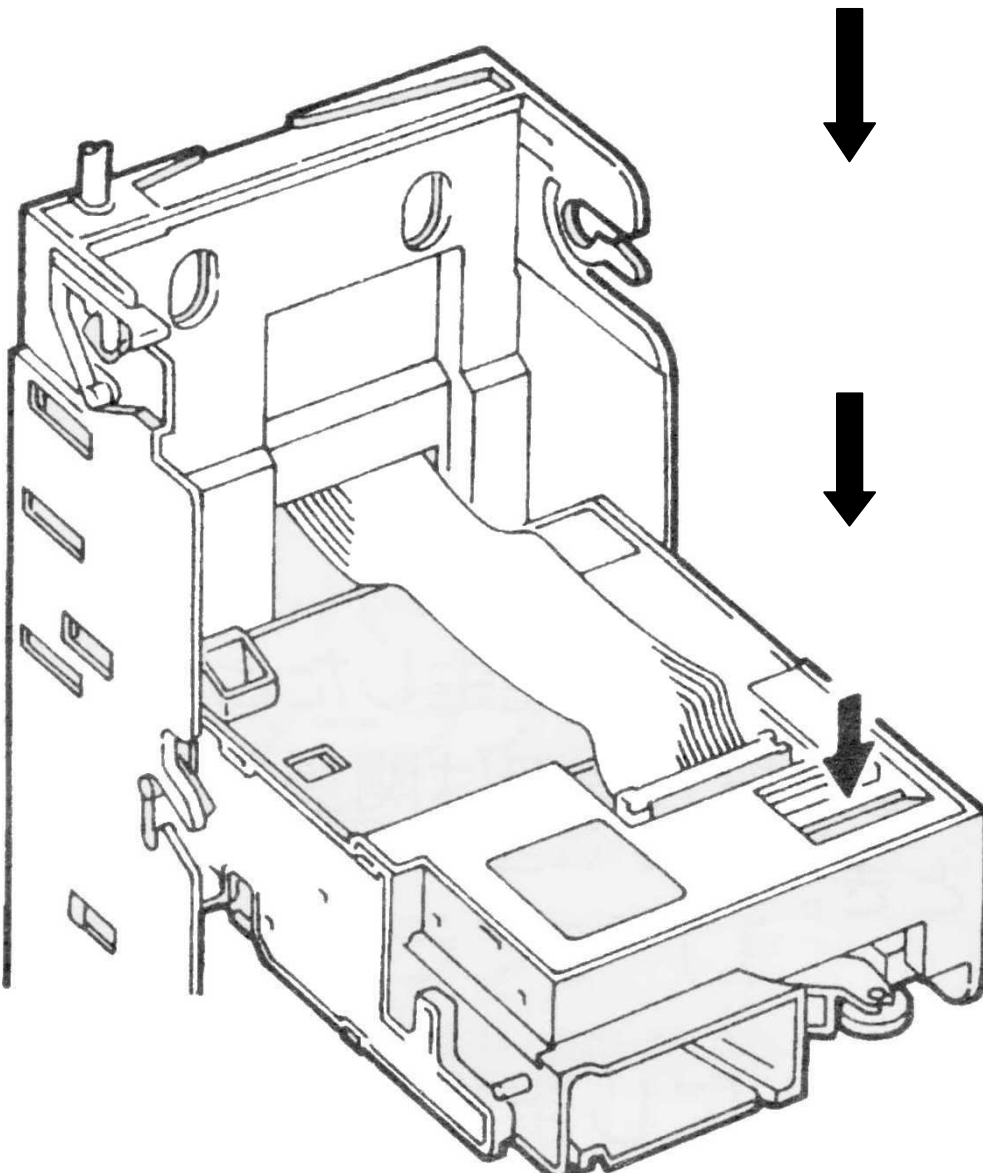
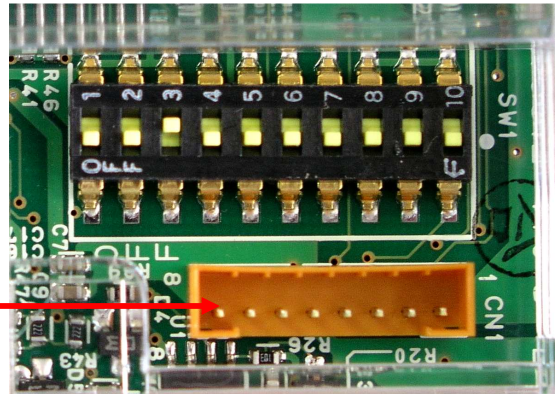
Safety function, if twice within 5 minutes 1 € or 2 € are inserted and the coin return button pushed, the acceptance of the 1 € and 2 € will be disabled for the next 5 minutes.

ON = ENABLE OFF = DISABLE

13.1

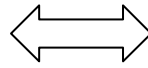
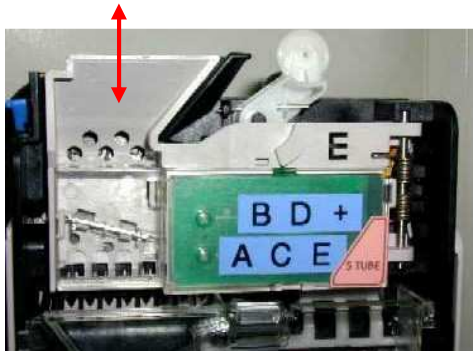
DIL - SWITCH BLOCK

Palm Connector



14. HOW TO RELEASE A COIN JAM

Open the acceptor door and release the coin



14.1

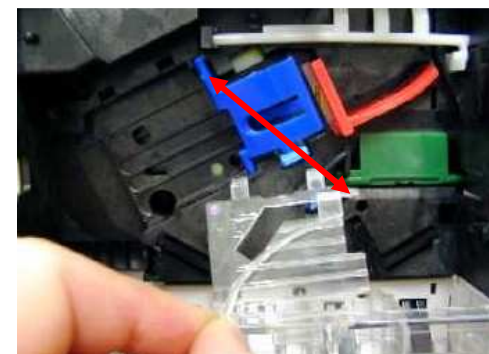
Remove the cover by pushing the right side lever



Lift up to remove the partion guide



Take care when installing the section guide and note that the pin pushes the blue section



14.2

To remove the front cover,
push and pull both lever



Lift up the front cover



Remove the front cover



14.3

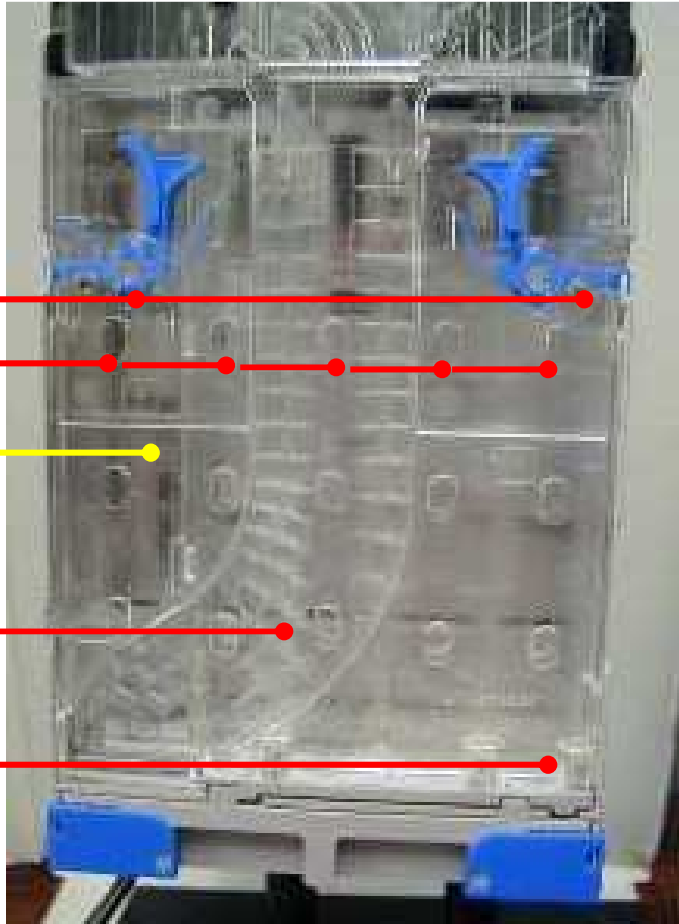
Cassette lock

Tube A, B, C, D, E

Manual coin level setting of 50 cent

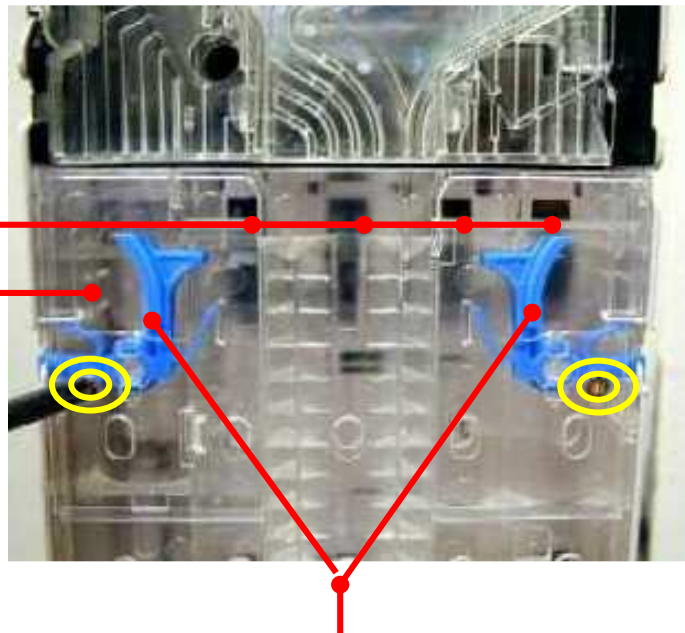
Coin return chute

Cash box chute



Tube level sensor

Slide switch for setting the 50 cent coin level



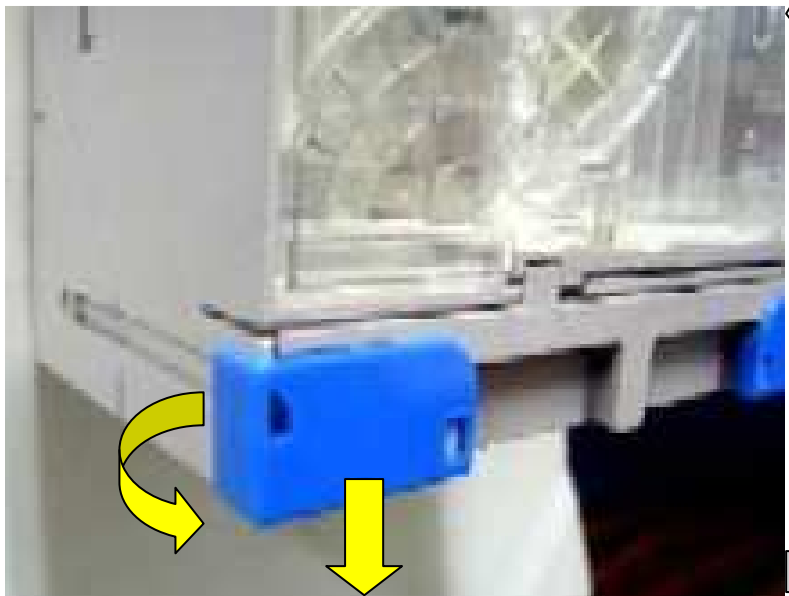
Removing the cassette by unscrew left and right screw. .

14.4

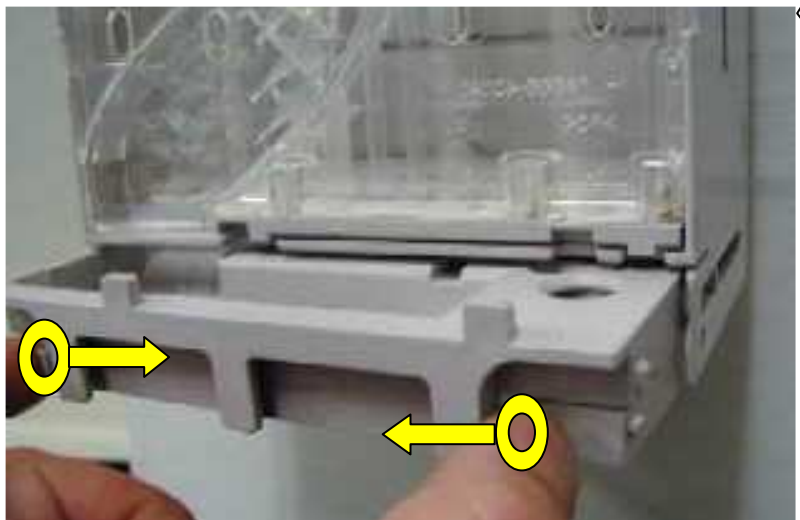
Payout unit



Remove left and right protectors

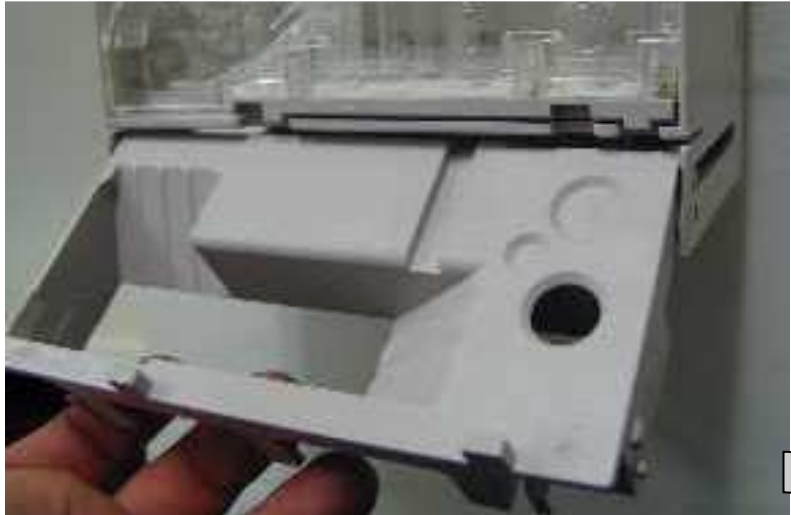


Push both levers to take out the payout unit (see next page)



14.5

Pull until it stops



Turn through 90°



Take out by pushing it to the right

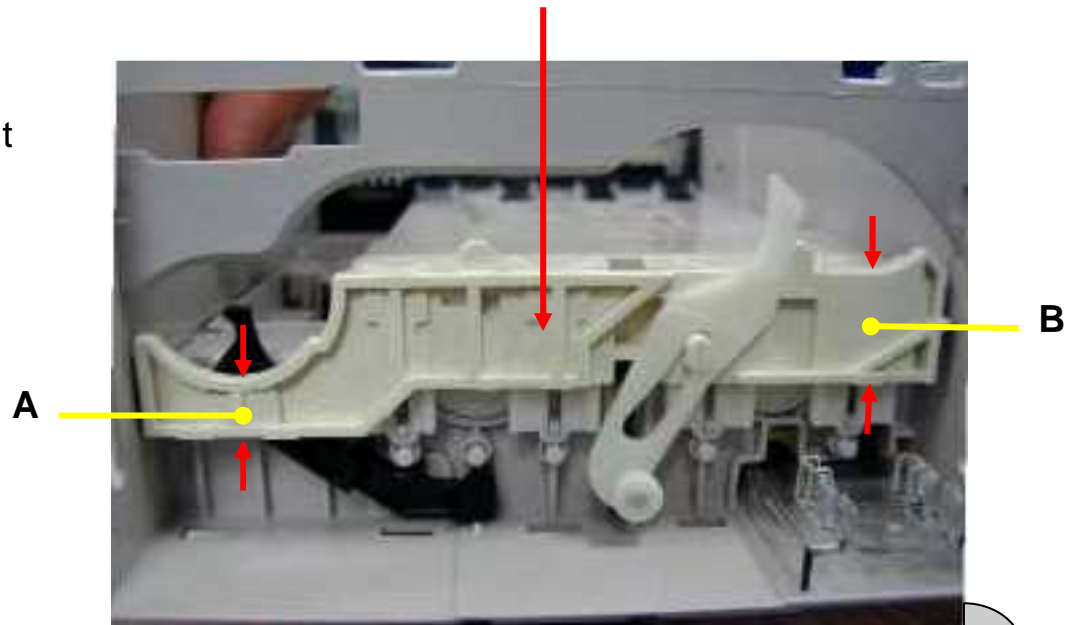
Pay attention to attach the right pin first



14.6

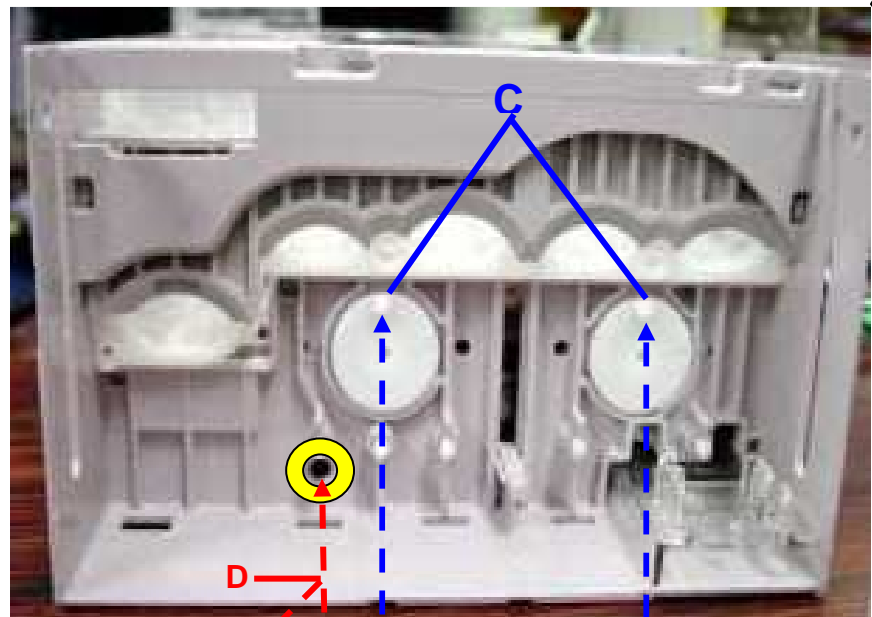
Slide bar unit

Push together point A and B and pull out the slide bar unit



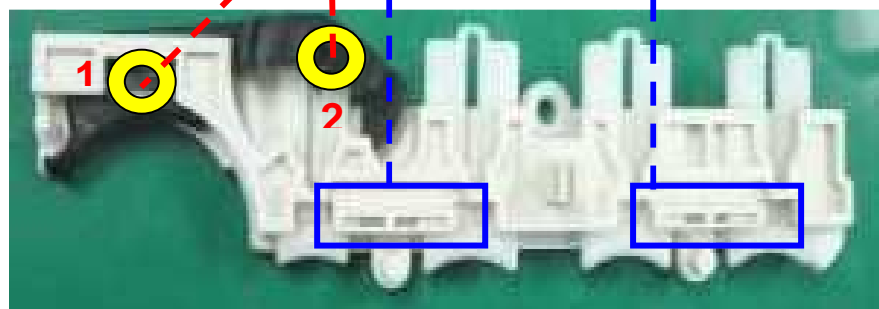
Position C

If you reassemble take care that the pins come into the correct position

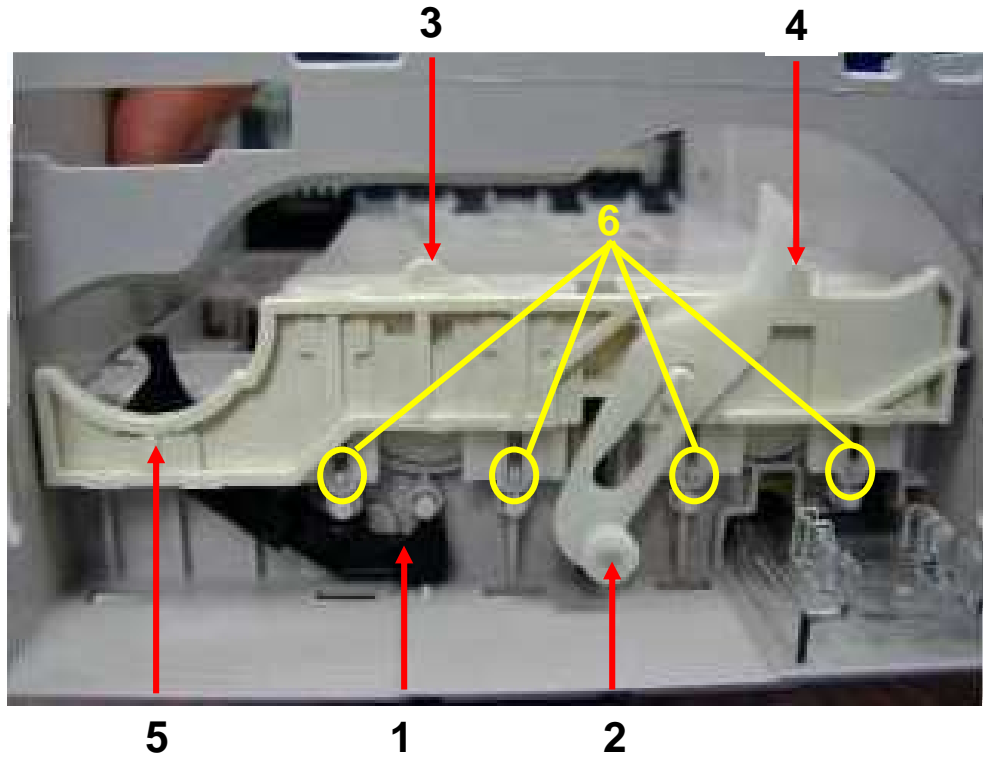


Position D

Reassemble at first Position 1 and afterwards Position 2



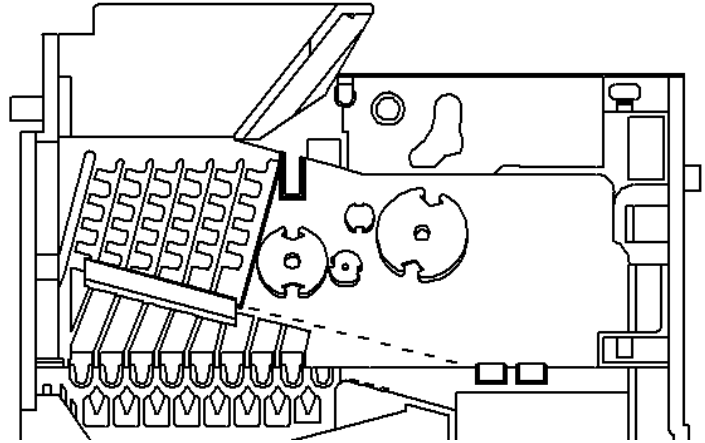
14.7



If you reassemble make sure that position 1 to 6 are placed in the correct way.
Firstly push position 1 followed by position 3 and 4 simultaneously.

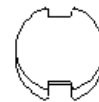
15 SENSOR

COIN ACCEPTOR



Sensor 0

Outside measurement of a coin
Measuring the 2 Euro



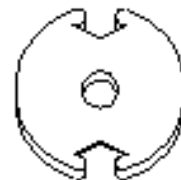
Sensor 1

Measuring the thickness



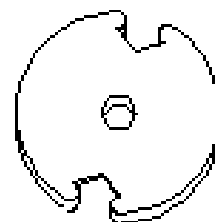
Sensor 2

Measuring the material (low frequency)



Sensor 3

Outside measurement of a coin



16. TROUBLE SHOOTING GUIDE VIA DIAGNOSTIC LED'S

The following table reports all the most common troubles that could happen on the coin changer. If both LED'S are "on" the changer is in operation. Otherwise the LED'S indicate the following faults.

TROUBLE	POSSIBLE CAUSES	SUGGESTED SOLUTIONS
Upper LED flashing	No or poor coin acceptance (Acceptor is dirty)	Clean both inner sides of the acceptor. Clear error while holding the "coin return lever" down, press "C" button, Both LED's flash. While holding the "coin return lever" down, press "C" button, Both LED's are on again.
Lower LED flashing	Poor payout frequency of coins (Acceptor is dirty)	Clean payout unit, Clear error while holding the "coin return lever" down, press "C" button, Both LED's flash. While holding the "coin return lever" down, press "C" button, Both LED's are on again
Upper LED off.	Trouble with coin acceptor	Information on page 22.
Lower LED off.	Trouble with coin changer	Information on page 22
Both LED's flash simultaneously	Changer is in a programming mode. For example filling mode	Power off and on the vending machine
Both LED's flash in turns	Low change in tubes	Empty all tubes and refill again

17. TROUBLE SHOOTING

The following table reports all the most common troubles recorded by the VMC of the vending machine.

TROUBLE	POSSIBLE CAUSES	SUGGESTED SOLUTIONS
CC	VMC and Changer communication error	Check MDB harness / power supply
TS	Wrong cassette position Coin jam Tube sensor error	Check position of the cassette Remove coin jam Exchange coin changer
TJXX	Payout unit coin jam	Remove coin jam Refer to Page 7 - 16
NJ	Acceptor coin jam	Page 13
DIS	Coin return lever is pushed for more than 30 seconds. Keys A, B, C, D, or E pushed for more than 15 seconds	Check coin return lever position. Check the keys Exchange coin changer

- Further error codes in connection with the payment system / vending machine are available in the manual of the vending machine.

NOTES