

BOARD SF01

VENDING MACHINE

G-Drink
SVE GF9 - SVE GF6
SVE DR9 - SVE DR6 - SVE DY9 - SVE DY6



SandenVendo Europe S.p.A
Regione Cavallino, 2
15030 Coniolo (AL) - ITALIA
Tel.: +39 0142 335111 – Fax: +39 0142 562348
e-mail: marketing@sandenvendo.it
website: www.sandenvendo.com

Revision: 1.19
Date: 24/03/2015
Code: 407751

Sanden International (Europe) Limited

SandenVendo Italian Branch (SVI)

Regione Cavallino, 2
15030 Coniolo (AL) Italy
Tel.: + 39 0142 335111
Fax.: + 39 0142 562348
e-mail: marketing@sandenvendo.it
www.sandenvendo.com

SandenVendo German Branch (SVG)

Spangerstrasse 22
40599 Dusseldorf
Germany
Tel.: + 49 211 740390
Fax: + 49 211 7488541
e-mail: info@sandenvendo.de

SandenVendo Spain Sucursal en Espana (SVS)

Poligono Industrial la Almeda
C/. Sant Ferrán, no. 92
E-08940 Cornellà (Barcelona) - Spain
Tel. : +34 (0)93 4741555
Fax : +34 (0)93 4741842
e-mail: info@sandenvendo.es

SandenVendo Benelux (SVB)

Avenue A. Van Oss 1 - Boîte 21
1120 Bruxelles - Belgium
Tel.: +32 (0)2 2682595
Fax :+32 (0)2 2682862
e-mail: info@sandenvendo.be

For France:

Jean-François Suteau: Tel: +33 6 67 38 43 26
jsuteau@sandenvendo.be
Michel Mirczewski: Tel: +33 6 11 01 67 65
mmirczewski@sandenvendo.be
Philippe Mirczewski: Tel: +33 6 89 15 19 52
phmirczewski@sandenvendo.be
Tel. +33 1 73 06 98 54

SAV: 08 92 00 12 49 (1) numéro payant 0,34 cts la minute

1 GENERAL WARNINGS	3
1.1 Purpose of this manual	3
1.2 To whom this manual is addressed	3
1.3 Responsibility.....	5
1.4 Manufacturer.....	5
1.5 Service centers	6
1.6 Warranty	6
1.7 General safety warnings	7
2 SPECIFICATION FOR ELECTRONIC BOARD SF01	10
2.1 Electronic Features.....	10
2.2 Software Feature	10
2.3 Description of Functions and Features.....	11
2.3.1 Initialization	11
2.3.2 Loading Facility.....	11
2.3.3 FLAP Feature	11
2.3.4 FLAP Photocell Adjustment	11
2.3.5 How to adjust the sensitivity of the photocell:.....	12
2.3.6 Sold-Out Feature	12
2.3.7 Graphic Display	12
2.3.8 Space To Sale Facility	12
2.3.9 Door Switches	13
2.3.10 Vend Conditions Mode.....	13
2.3.11 Vend Detection Process	13
3 SELECTION BUTTON FUNCTIONS IN PROGRAMMING MODE	15
4 PROGRAMMING.....	16
4.1 Error Routine	17
4.1.1 Lift Error Routine.....	17
4.1.2 FLAP Error List	18
4.1.3 Door Switch Error Routine	18
4.1.4 Selection Switch Error Routine	18
4.1.5 Changer Error Routine.....	18
4.1.6 Bill Validator Error Routine.....	19
4.2 Coin Payout Routine (only In MDB)	19
4.3 Tube Fill Routine (only In MDB)	19
4.4 Test Vend Routine	20
4.4.1 "SELE" Selection swich test.....	20
4.4.2 "DRUM" FLAP test function	20
4.4.3 "POWER" Counter of power interruptions	20
4.4.4 "VEND" Vend test with door closed.....	20
4.4.5 "FAIL" Historical counter of lift failures	20
5 PROTECTED MENUS.....	21
5.1 Pass Routine	21
5.2 Cash Counter & Money Counter Routine (protected menu)	21
5.2.1 Money Counter (protected menu)	21
5.2.2 Cash Counter (protected menu).....	22
5.3 Sales Counter (protected menu)	22
5.4 Price Setting Routine	23
5.4.1 For Cash Payments (protected menu)	23
5.4.2 For Cashless Systems (protected menu, only in MDB)	23
5.5 Tray & Group Configuration (protected menu)	24
5.5.1 TRAY.....	24
5.5.2 GROUP	24
5.5.3 V-POS	24
5.6 Machine Configuration Setting Routine (protected menu)	24
5.6.1 ~ "C1" Reserved For Future Use	25
5.6.2 ~ "C2"&"C3" Not Used on this Version of the Software	25

5.6.3 ~ "C4" Open Door Display Mode.....	25
5.6.4 ~ "C5" Reset Counter Mode.....	25
5.6.5 ~ "C6" Not Used on this Version of the Software	25
5.6.6 ~ "C7" Save Credit Mode	25
5.6.7 ~ "C8" Forced Vend.....	25
5.6.8 ~ "C9" Multi Vend.....	26
5.6.9 ~ "C10" Bill Escrow Mode	26
5.6.10 ~ "C11" Event Reporting Mode	26
5.6.11 ~ "C12" Dynamic PA Reporting Mode.....	26
5.7 Correct Change Only Control (protected menu)	27
5.7.1 "CONx"	27
5.7.2 "CCU"	27
5.7.3 "ACC"	27
5.7.4 "MCARD"	28
5.7.5 "CONFY" Configuration.....	28
5.7.6 Asset Number ID 106	31
5.7.7 Token	31
5.8 Language Configuration (protected menu)	32
5.9 Time Configuration (protected menu).....	33
5.10 Light Control (protected menu).....	33
5.11 Payment System (protected menu) [Extended Menu]	34
5.12 Daily Vend Inhibited Period (protected menu) [Extended Menu]	34
5.13 Age Control (protected menu)	35
5.14 Discount Setting (protected menu).....	36
5.15 Return To Open Door Mode.....	36
6 TEMPERATURE ADJUSTMENT	37
6.1 Electronic Cooling Unit Control CAREL.....	37
6.1.1 Description and function of control unit CAREL.....	37
6.1.2 Display.....	37
6.1.3 Key board	38
6.1.4 Set the temperature	38
6.1.5 Quick defrost	38
6.1.6 Description of the main signals and alarms.....	39
6.1.7 Function.....	39
6.2 Cooling Unit Control SERETEC DSM 5030	40
6.2.1 Description and function of the SERETEC	40
6.3 Control Unit CAREL ir33	42
6.3.1 Display.....	42
6.3.2 Keyboard	44
6.3.3 Displaying and setting the set point.....	45
7 MENU DIAGRAM	46
8 EVENT TABLE - EVADTS 6.1	51

1 GENERAL WARNINGS

1.1 Purpose of this manual

The manual contains the correct procedures for programming of the Vending Machine. This manual is an integral part of the machine and must therefore be kept intact and available to hand for the machine's entire productive life.

KEEP INSIDE THE MACHINE

1.2 To whom this manual is addressed

This manual is addressed to those persons in charge of installing, setting, and extraordinary maintenance of the vendor (Installer/Maintenance technician). It is compulsory that all personnel in charge of these operations are familiar with the instructions and abide by the procedures contained in this manual.

Technicians allowed to operate this vending machine:

- **Installer/ Maintenance / Specialized technician**
 - The intervention of the maintenance technician is required for all those operations where the lower protection carter must be opened: when carter is removed all operations must be done only by SandenVendo personnel or by authorized technicians (trained and informed) and not by general operators because of electrical and mechanical risks.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

1.3 Responsibility

The **manufacturer's** responsibility is confined to the correct use of the machine, in the limits indicated in this manual.

“SandenVendo Europe Spa” declines all responsibility for any damages caused to persons and/or property as the result of:

- Incorrect installation
- Use of unauthorized spare parts
- Execution of changes unforeseen/unauthorized by the manufacturer
- Improper use of the machine
- Connection to inadequate supply systems and non in conformity with the regulations in force

1.4 Manufacturer

“SandenVendo Europe Spa.” has over 50 years experience in constructing beverage vending machines, and it is precisely the technological know-how it has developed over many years of research working closely with the production and international marketing, which is the best guarantee that **SandenVendo Europe Spa.”** can offer.

1.5 Service centers

“**SandenVendo Europe Spa.**” is represented by a valid and prepared sales network in both Italy and Europe (see inner cover page).

1.6 Warranty

The warranty on the Vending Machine components, starting from the date shown on the delivery note, is for 24 months for the cooling system.

The warranty includes exclusively the parts replaced, with labor excluded.

The Warranty does not include, damages to the vending machine caused by:

- Transport and/or handling
- Operator errors
- Lack of maintenance as explained in this manual
- Failures and/or breakages not due to malfunction of the vending machine

1.7 General safety warnings

- Carefully read the manual before starting or loading the vending machine
- Protect the vending machine against weather conditions
- Only maintenance technicians should remove the protective covers
- Always read the programming manual before operating the electronic board settings
- Never position the vending machine in direct sunlight
- Never sell the products with the door open
- Refer to the routine maintenance chapter to clean the vending machine
- Disconnect the power supply cable before investigating or unblocking a blocked product
- Use a special protection system/Residual current device or similar.
- Install the appliance so that the electrical plug can be easily accessed afterwards
- If the power cable is damaged, it must be replaced by the manufacturer or by one of its technical support personnel or by a qualified electrician.
- This machine is not suitable for installation in areas where water jets are used

- This machine is not suitable for outside installation
- To prevent hazards due to machine instability, secure the machine according to the instructions
- In case of a failure and/or poor operation, only seek help of the qualified personnel of our service centers.
- Use only spare parts authorized by the manufacturer
- Should this manual be lost or damaged, you may request a copy from the manufacturer: **please enclose the serial number of your vending machine with your request.**



CAUTION: FAILURE TO FOLLOW THE INSTRUCTIONS CONTAINED IN THIS MANUAL MAY INVOLVE DAMAGES TO THE MACHINE AND/OR PERSONNEL

The pictures and illustrations in this document are only indicative. **SandenVendo Europe S.p.A.** recalls that the technical and performance of products can change without notice.

“SandenVendo Europe S.p.A.” reserves the right of making changes on their vending machines without any advice; moreover they declare that the vendors listed in this manual are in conformity with the following directives: 2006/42/EC (EC markings).

“SandenVendo Europe S.p.A.” assumes no liability for the correctness of the contents or damages caused by using this manual.

“SandenVendo Europe S.p.A.” reserves the right to make changes to this manual without prior notice.

2 SPECIFICATION FOR ELECTRONIC BOARD SF01

2.1 Electronic Features

Power supply:	24 Volt DC
Outputs motors :	14 a 24 Volt DC, 1A
Motor micro-switches:	14
Sold-out micro switches:	14
Sold-out leds:	14
Selections switches:	26
Door switch:	1
Temperature probe:	3
Real time clock:	1
Exit audit Dex/UCS:	1
Serial TTL output:	1

The board uses an XA 16 bit microcontroller with up to 4096 Kbit of program EPROM and 256 Kbit of EPROM memory used to store settings and audit.

External slave board (placed on the box transformer) used to control refrigerant system, fluorescent tube.

External slave board (placed near main board) used to drive 64 vending motor with current control and limitation.

External slave Optical detector board used to check the product fall down.

External slave fluorescent display 2 lines 20 characters

Master and Slave optically isolated serial link for MDB e EXECUTIVE

2.2 Software Feature

Service programming routine (standard languages ENG, ITA, FR, GERM, SPA)

Possible to have customized programming & vend messages using WinDEX

Credit accumulation

Payment system interface

Consumer manipulation and vend process

Multi pricing

Escrow

Correct change indicator

Manual tube payout

Manual tube filling

Saved Error listing - Audit

Cooling unit control by separate electronic control unit

MDB 5 different tubes values

Possible to link selections in up to 10 groups

Slave MDB board controlling the lift and bucket part

2.3 Description of Functions and Features

2.3.1 Initialization

Each time the door is open and closed, the lift and catcher system will perform an initialisation in order to detect the shelves position. In order to avoid not needed initialisations, if the door is open for less than 60 seconds, the initialisation is not performed assuming nothing has changed regarding the shelf configuration during this short time. During initialisation the machine will automatically detect the position and the number of shelves. Only setting the number of trays (2 or 3 trays) is required.

Selection counting starts at the left side of the upper shelf with number 11 to 16 (or 19), next shelf starts with 21 to 26 (or 29) and then going to the bottom shelf.

Maximum number of shelves is 7.

2 Trays means 6 columns/selections per shelf

3 Trays means 9 columns/selections per shelf

From version software V1.29, at power ON the lift will proceed first to the delivery bucket in order to download remaining product in the hand bucket.

2.3.2 Loading Facility

In order to allow easier loading of the bottom shelf, pushing the delivery flap will move the bucket to the right side, pushing the flap again will move the bucket to the left side.

2.3.3 FLAP Feature

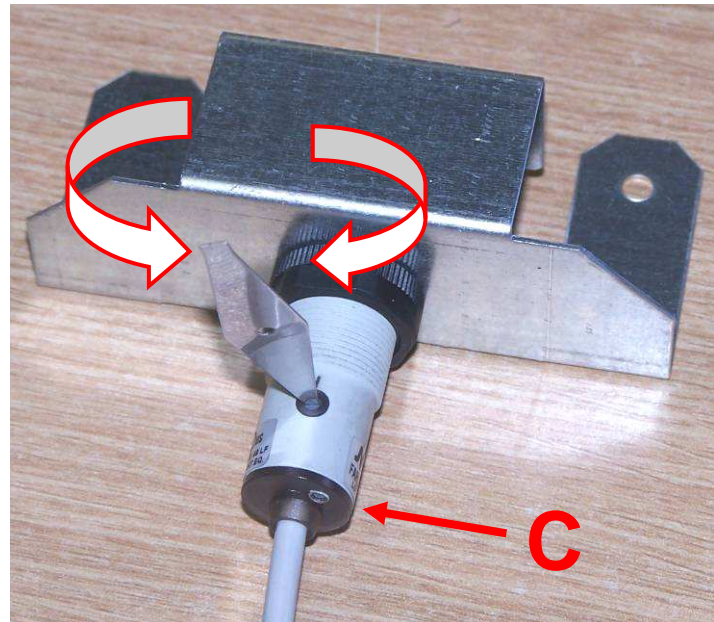
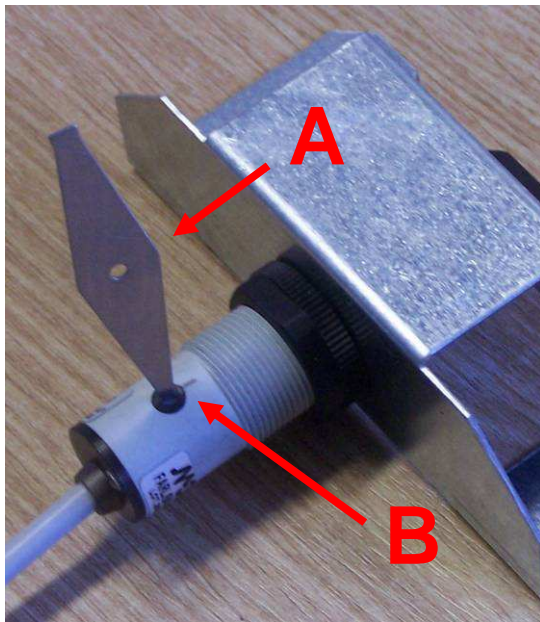
When a product is detected inside the flap, the LED light is switched on in the flap, and the flap is unlock and goes in position open. If the product is not removed after 2 minutes the light is switched off, while the message "REMOVE THE PRODUCT" alternatively with arrows pointing in downwards is displayed. When the product is removed, the lights will blink a short time before closing the flap

2.3.4 FLAP Photocell Adjustment

The identification of the product is performed as follows:

The hand transports the product to the inner delivery flap and releases the product into the delivery chamber - Product detection is performed by the flap switch.

If the product is detected when passing the inner flap but not from the delivery chamber sensor the delivery door is opened. It stays open for a preset period of time, whether the product is removed or not. After the preset time elapses, the door will be closed. If the product is detected and removed before, the door is closed immediately.



2.3.5 How to adjust the sensitivity of the photocell:

Insert the appropriate regulation key “A”, provided with photocells, into the cut of the front “B”
Turn the regulation key in one direction until the LED lights on “C” underneath the photocell.

Turn it to the opposite direction until the led turns off.

Turn it to the opposite direction and stop immediately after the led turns on.

Check the function by passing an object between the photocell and reflector, and check if the status of the led changes from on (product is not present) to off (product is present).

2.3.6 Sold-Out Feature

A magnetic sensor included in the delivery door flap allows the detection of the product falling down the drum, if a selection is done with no product inside the columns, the machine will put this selection in sold-out until the door is open-close assuming the selection has been reloaded.

2.3.7 Graphic Display

During standby, in normal condition the machine will scroll a message in graphic 16x8 bits higher character alternatively with correct change status message if any.

Also when the product have been detected the display will scroll the message “REMOVE THE PRODUCT“ alternatively with arrows pointing in downwards.

2.3.8 Space To Sale Facility

It is possible to group selections of the same product to one group.

Up to 10 groups of 63 selections

Price per group to avoid mistakes

Copy function for quick set up

2.3.9 Door Switches

For security purposes two door switches are used, one for the lift control board and cooling unit and one for the main control board. If one of the door switches is not actuated by the door (contacts closed) the lift will not move and the cooling will not start.

2.3.10 Vend Conditions Mode

Conditions are:

Doors switches are closed

- Delivery flap is closed
- Drum is in closed position with not product inside and no errors reported
- Initialisation of the slave memory and shelves report has been properly done
- No error in the lift and bucket are reported (see lift error list). If an error is continuously reported by the slave controller, any movement or initialisation will be performed by the master until no error is reported. (see section ERROR ROUTINE)
- MDB communication is working correctly

2.3.11 Vend Detection Process

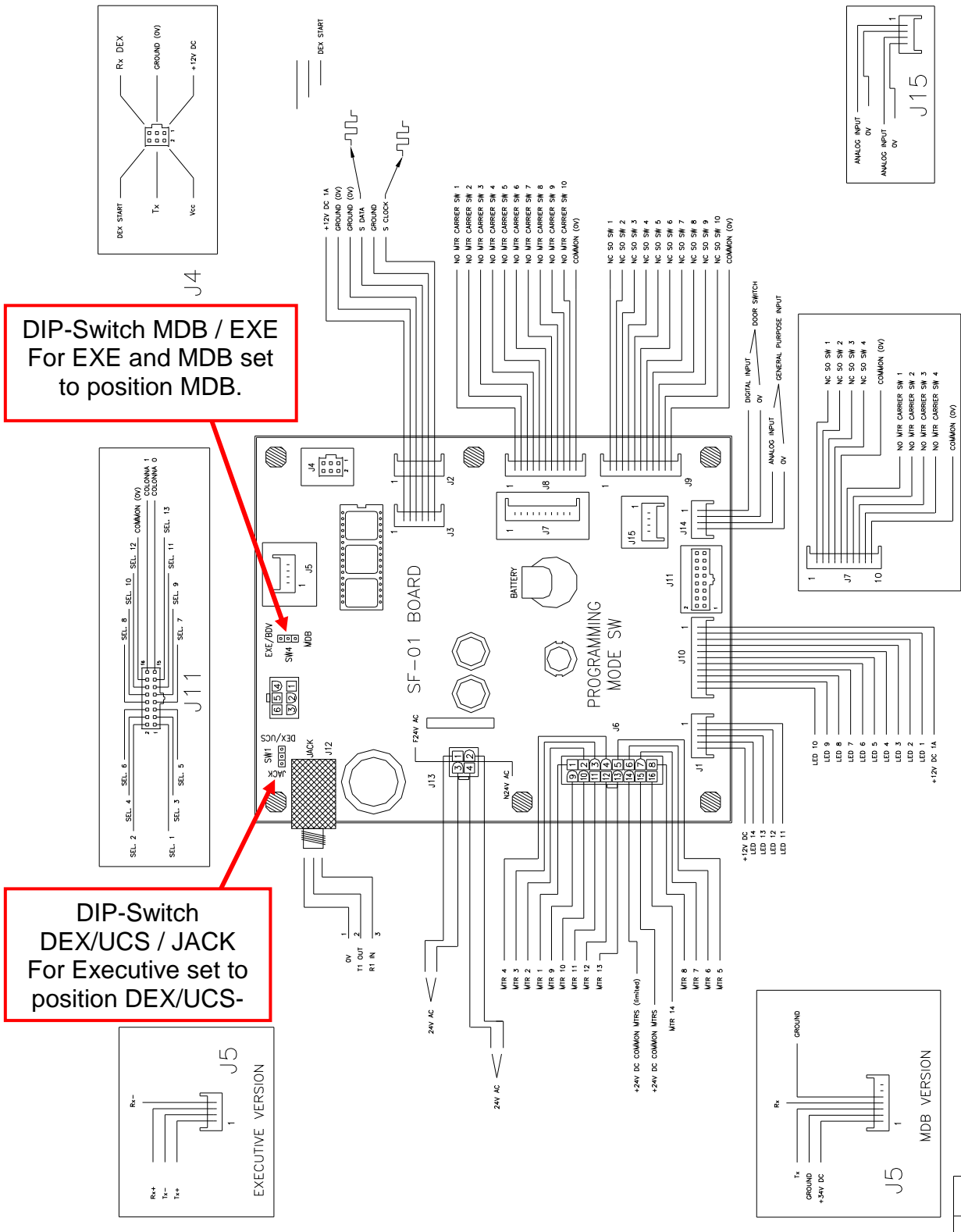
The product is detected when crossing the inner delivery flap by a magnetic sensor which have the contact open when the door is open for more than 15 mm.

This detection will cause the vend price deduction from the established credit, if not the selection will be in sold-out and the credit can be returned or another selection is possible.

As the product drop in the flap, another infrared sensor will detect the product and opens the flap. As soon as the product is removed the light will flash and the flap is closing.

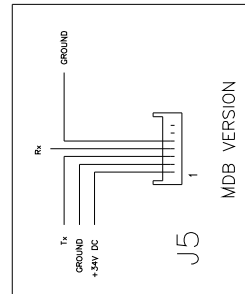
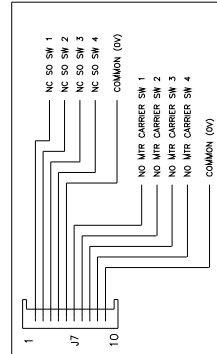
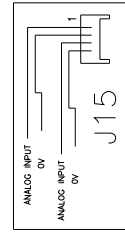
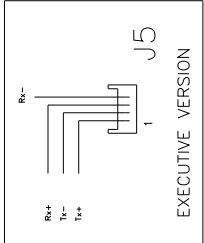
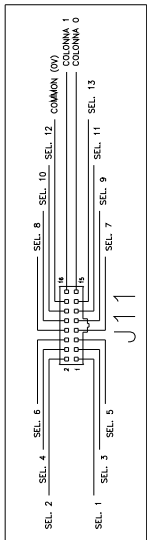
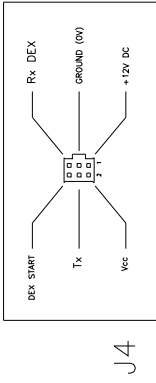
IF THE PRODUCT IS NOT DETECTED IN THE FLAP, BUT SEEN CROSSING THE INNER DELIVERY FLAP DOOR GATE, THE FLAP IS OPENING AND STAYS OPEN FOR A FIXED TIME (INDEPENDENT WHETHER THE PRODUCT IS REMOVED OR NOT). IF THE PRODUCT IS DETECTED WHILE THE FLAP IS TURNING OR DURING THE PRODUCT IS REMOVED THE PREVIOUS MODE FUNCTION IS CANCELLED AND TIMER IS RESET.

Instructions for programming SF01 Board functions

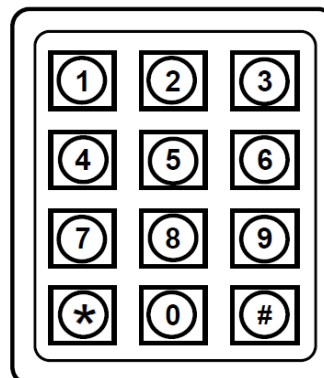






DIP-Switch MDB / EXE
For EXE and MDB set to position MDB.

DIP-Switch DEX/UCS / JACK
For Executive set to position DEX/UCS-



3 SELECTION BUTTON FUNCTIONS IN PROGRAMMING MODE



Selection Nr. 1	Back 	Abort or escape a programming point
Selection Nr. 2	Up 	Increase or next programming point by pushing selection button 2
Selection Nr. 3	Down 	Decrease or previous programming point by pushing selection button 3
Selection Nr. 4	Enter / Save 	Call or save a programming point by pushing selection button 4
Selection Nr. 0	Price set to zero	
Selection Nr. 5	Fast up	Fast increase of price or selection
Selection Nr. 6	Fast down	Fast decrease of price or selection
Selection Nr. #	Copy function	Copy price on next selection

Password: 4 - 2 - 3 - 1 - 4

Entry by selection buttons:

4 = key 4

2 = key 2

3 = key 3

1 = key 1

4 = key 4

4 PROGRAMMING

In the service mode, information such as sales by selection, total sales, total cash flow through the machine, and diagnostic error codes can be accessed by using the selection buttons and the electronic display. In addition, storage column assignments and vend pricing can be set in this mode using the same techniques. The service mode can only be entered when the vendor door is open and when the service mode switch is activated (placed in the center of the electronic control board).

To step through the various programming functions each of the selection switches is given a specific function (see previous page).

After entry into the service mode the operator can select one of several routines to read data registers or to program machine configuration information. This level is called the code level. Each of these paths is identified by a service code. The codes for the various paths are as follows.

ERROR ROUTINE	Error routine
TUBES PAYOUT	Coin payout routine (work only MDB)
TUBES FILLING	Tube fill routine (work only MDB)
VEND TEST	Test vend routine
PASS	Password required to access the protected menus

PROTECTED MENUES	CASH COUNTER	Cash counter routine
	SALE COUNTER	Sales counter routine
	CASH PRICES SETTING	Prices setting routine
	KEY PRICES SETTING	Prices setting cashless MDB (from V 0.21)
	SPACE TO SALE	Spaces to sales setting routine
	OPTION SETTING	Machine configuration setting routine
	MDB SETTING	MDB related setting
	LANGUAGE SETTING	Language selection
	TIME SETTING	Time and data routine
	LIGHT SETTING	Light control routine
	REFRIGERATION	Refrigeration control routine (not used)
	PAYMENT SETTING	Payment system
	VEND INHIBITION	Daily vending inhibit period
	AGE CONTROL	Daily age control period
DISCOUNT SETTING	Discount feature	
RETURN TO VEND	Return to unprotected menu	

The password is the sequence of selection buttons 4 - 2 - 3 - 1 (followed by 4). The purpose of this password is to **prevent** accidental reprogramming by the operator.

4.1 Error Routine

If the ENTER button is activated at the "**ERROR ROUTINE**" prompt the VMC will enter in the error routine. If no errors have occurred since the last error reset the display will show a "**NONE**" message. If an error has been detected since the last error reset the display will show the first summary level error code that has occurred, such as "**LIFT**", which would indicate a lift jam error. Using the UP or DOWN buttons will cycle through the various summary level error. On the appendix A (map of internal menu) you find all the error that the machine can generate.

Activation of the BACK button while summary level error code is displayed will return the VMC to the "**ERROR ROUTINE**" prompt.

Activation of the BACK button at "**ERROR ROUTINE**" prompt returns the VMC to the normal mode door open state.

4.1.1 Lift Error Routine

If the ENTER button is activated at the "**LIFT**" prompt the VMC will display a "**ERRxx**" message where **XX** indicates the kind of error that have been detected as being jammed. Using the UP and DOWN buttons will cycle through all jammed columns. If the ENTER button is pressed and held for two seconds during the display of any error code, that code will be cleared.

After clearing, VMC will display the next existing column jam error, or "**NONE**" if no other error. Activation of BACK button will return the VMC to the code level at the "**ERROR ROUTINE**" message.

Lift Error List

- ERR01** Jamming or speed error on the Y vertical motor
- ERR02** Home switch Y not found or connected
- ERR03** Optical Y sensor doesn't found shelves position
- ERR04** Jamming or speed error on the X horizontal motor
- ERR05** Home switch X not found or connected
- ERR06** Optical X sensor doesn't found columns position
- ERR07** Slave unit error or initialisation missing
- ERR08** Slave unit Memory error or initialisation corrupted
- ERR09** Vend error
- ERR10** Initialisation error or wrong shelves setting
- ERR11** Bucket jamming or missing signal
- ERR12** Lock error ,missing contact on the slave board
- ERR13** Slave door switch contact missing
- ERR14** Hopper switch error contact missing
- ERR15** Slave error power supply 24Vdc
- ERR16** Delivery Flap door remaining open or switch missing
- ERR17** Wrong shelves number detected

These potential errors will be automatically cleared at the door closing, then a new initialisation will be performed to check if the failure (error) is remaining or not.

4.1.2 FLAP Error List

OPEN	Open position missing, motor or switch close position missing
CLOSE	Close position missing, motor or switch close position missing
LOCK	locking error ,motor or detection switch missing
UNLOC	Unlocking error ,motor or detect switch missing
DETEC	Product detection error

These potential errors will be NOT automatically cleared at the door closing, manual clearing is required.

4.1.3 Door Switch Error Routine

If the ENTER button is activated at the "**CTRL**" prompt the VMC will display a "**DS**" message indicating a door switch error was detected (door open for more than one hour). If the ENTER button is pressed and held for two seconds during the display of any error code, that code will be cleared.

After clearing VMC will display the next existing error or "**NONE**" if no other error.

Activation of BACK button will return the VMC to the code level at the "**ERROR ROUTINE**" message.

Be careful if door switch doesn't work the cooling system is disabled!

4.1.4 Selection Switch Error Routine

If the ENTER button is activated at the "**SEL**" prompt the VMC will display a "**SLXX**" message where "**XX**" indicates the first selection switch error (switch always close). Using the UP and DOWN buttons will cycle through all selection switch error. If the ENTER button is pressed and held for two seconds during the display of any error code , that code will be cleared.

After clearing VMC will display the next existing error, or "**NONE**" if no other error.

Activation of BACK button will return the VMC to the code level at the "**ERROR ROUTINE**" message.

4.1.5 Changer Error Routine

If the ENTER button is activated at the "**CHAR**" prompt the VMC will display a "**CC**" message indicating a changer communication error a "**TS**" message indicating a tube sensor error, an "**IC**" message indicating an Inlet chute blocked error (no coins sensed in the acceptor for a supplier pre-determined number of hours, a "**TJ**" message indicating a tube jam error, or a "**CRCH**" message indicating a changer ROM checksum error. "**EE**" message indicating excessive escrow attempts (escrow to vends greater than a pre-determined supplier standard), and "**NJ**" message indicating a coin jam (sensed and reported by coin mechanism), "**LA**" message indicating a low acceptance rate , "**DIS**" changer disconnect "**ROUT**" coin rout error.

Using the UP or DOWN buttons will cycle through all acceptor errors. If the ENTER button is pressed and held for two seconds during the display of any error code , that code will be cleared.

After clearing VMC will display the next existing error, or "**NONE**" if no other error.

Activation of BACK button will return the VMC to the code level at the "**ERROR ROUTINE**" message.

4.1.6 Bill Validator Error Routine

If the ENTER button is activated at the "**BVAL**" prompt the VMC will display a "**BC**" message indicating a bill validator communication error, a "**BFUL**" message indicating that the bill stacker is full, a "**BILL**" message indicating a defective motor, a "**BJ**" message indicating that there is a bill jammed in the bill validator, a "**BRCH**" message indicating a checksum error, a "**BOPN**" message indicating an open cash box, or a "**BS**" message indicating a bill sensor error. The first column that has been detected with a home sense error. Using the UP or DOWN buttons will cycle through all bill validators errors. If the ENTER button is pressed and held for two seconds during the display of any error code that code will be cleared.

After clearing VMC will display the next existing error, or "**NONE**" if no other error.

Activation of BACK button will return the VMC to the code level at the "**ERROR ROUTINE**" message.

4.2 Coin Payout Routine (only In MDB)

If the ENTER button is activated at the "**CPO**" prompt the VMC will enter the coin payout routine. Upon entry into this routine the display will show the lowest coin value dispensable. Pressing the UP button will increase the display to the next highest coin value, the DOWN will decrease to the next lowest coin values. When the changer has only 3 tubes, the fourth value will display to 0, means don't exist the fourth tube.

Push button number 5 to the corresponding coin value and the display will show the number of coins in the tube reported by the changer .

Pressing the ENTER button will pay out the displayed coin type. Activation of the BACK button while a coin value is displayed will return the VMC to the "**CPO**" prompt.

Activation of the BACK button at the "**CPO**" prompt returns the VMC to the " normal mode door open state.

4.3 Tube Fill Routine (only In MDB)

If the ENTER button is activated at the "**TUFL**" prompt the VMC will enter the tube fill routine.

The purpose of this routine is to allow the operator to fill the tubes by entering them through the acceptor and thus have total coin accountability, if they so choose.

Upon entry into this routine the VMC will enable acceptance of any coin type that will be routed to an inventory tube and disable all others.

The VMC will count and display all inventoried coins and will not disable the acceptor from taking coins when the highest price setting is reached.

Activation of BACK button while a coin inventory is displayed will return the VMC to the "**TUFL**" prompt. Activation of the BACK button at the "**TUFL**" prompt returns the VMC to the normal mode door open state

4.4 Test Vend Routine

If ENTER button is pressed at the "TEST" prompt the VMC will enter the test routine. Upon entry into this routine the display will show the first test "SELE" the description of the test routines available are the follows:

"SELE"	Test of selection switch
"DRUM"	Delivery drum test
"POWER"	Power on off time &date
"VEND"	Test vends
"FAIL"	Historical of lift errors

4.4.1 "SELE" Selection swich test

Activation of the ENTER button (at the "SELE" routine) will show the last selection button pressed "SE Y" where Y is the number of the selection. Use this routine to test all the selection switch. From software version 0.08 there is the possibility to test the delivery eyelet switch, when you open the delivery flap the display show "DELIV". To come back to the "TEST" menu, keep pressed the first selection for two seconds.

4.4.2 "DRUM" FLAP test function

Drum test allows to test and drive separate functions

"LOCK" Put the drum in lock position

"UNLOCK" Put the drum in unlock position

"OPEN" Put the drum in open position

Be careful to proceed the unlock position before using open and close test!

"CLOSE" Put the drum in locked position

Be careful to proceed the unlock position before using open and close test!

4.4.3 "POWER" Counter of power interruptions

-Show the power-on / off and date&time of the vendor
Press BACK button to return to the "TEST" main menu.

4.4.4 "VEND" Vend test with door closed

This function allows to make free test vends with outer door closed. Set the number of test vends (1 to 5) i.e. VEND = 5. After outer door is closed, five test vends are possible without inserting credit. Test vends are not recorded.

4.4.5 "FAIL" Historical counter of lift failures

Displays the historical data of the lift failures during vend process.

Press ENTER button to display the last 10 failures - Snn Hour / Minute/ Day

Press UP button to visualize the next failure. Press button 5 to clear all failures

(Failure clearing must be performed after software update from version 1.35d)

Press BACK button to return to the "TEST" main menu.

5 PROTECTED MENUS

5.1 Pass Routine

This routine is used to access at the protected menus.

At the "**PASS**" prompt press ENTER button, the display will be blank, press the following sequence of selection button **4 - 2 - 3 - 1** (password must be entered in 10 seconds) press enter to confirm (selection key 4) now you can see the first protected menu "**CASH**" (use UP and DOWN button to cycle on the available menu).

5.2 Cash Counter & Money Counter Routine (protected menu)

If the ENTER button is activated at the "**CASH & MONEY COUNTER**" prompt the VMC will enter the cash counter routine. It is possible to display **MONEY COUNTER** and **CASH COUNTER**

5.2.1 Money Counter (protected menu)

If the ENTER button is activated at the "**MONEY COUNTER**" prompt, the VMC will enter the money counter routine.

Upon entry into this routine the display will show a "**C BOX**" / "**XXXX**" / "**XXXX**" message where "**XXXX**" characters are the total money entered into the cashbox. Use up button to see the money counter submenu:

" C BOX " /	" XXXX "	" XXXX "	total money to cashbox
" C TUB " /	" XXXX "	" XXXX "	total money to the coinage tube
" C RET " /	" XXXX "	" XXXX "	total money returned as change.
" C MAN " /	" XXXX "	" XXXX "	total money returned via manual payout submenu.
" C BIL " /	" XXXX "	" XXXX "	total money introduced in bill validator
" C CAR " /	" XXXX "	" XXXX "	money paid using a card.

Money Counter Reset (from software V1.43)

Money counters can be reset as follows: Press button **0** at the "**MONEY COUNTER**" prompt, the display will show "**CLEAR**", press the selection buttons **2 - 3 - 1 - 4** in sequence within 10 seconds.

Reset of Money counters can also be performed in the same way as MIS counter reset using parameter **C5 Reset Counter Mode** in menu "**CONFY**".

5.2.2 Cash Counter (protected menu)

Upon entry into this routine the display will show a "**CASH**" / "**XXXX**" / "**XXXX**" message where "**XXXX**" characters are the historical total cash counters due to vends that have been recorded by the VMC.

The first quartet "**XXXX**-" are the highest digits and the 2nd "**XXXX**" is the lowest.

Using the UP and DOWN button at this point will change the display to "**CA n**" / "**XXXX**-" / "**XXXX**" to **Promo2** where **n** is the selection number followed by the cash counter for that selection. Use the UP and DOWN buttons to display the individual cash counters.

Activation of the BACK button while a selection counter is displayed will return the VMC to the "**CASH COUNTER**" prompt. Activation of the BACK button at the "**CASH & MONEY COUNTER**" prompt will return the VMC to the unprotected area.

CA_P1 Cash Promo1

CA_P2 Cash Promo2 (from V1.54)

Cash Counter Reset (from software V1.43)

Individual selection Cash counters can be reset as follows: At the "**CASH COUNTER**" prompt press button **0**, the display will show "**CLEAR**", press buttons **2 - 3 - 1 - 4** in sequence within 10 seconds.

Reset of individual selection Cash Counters can also be performed in the same way as MIS counter reset using parameter **C5 Reset Counter Mode** in menu "**CONFY**".

5.3 Sales Counter (protected menu)

If the ENTER button is activated at the "**SALE COUNTER**" prompt the VMC will enter the sales counter routine.

Upon entry into this routine the display will show a "**SALE**" "**XXXX**-" , "**XXXX**-" message where "**XXXX**" characters is the historical total sales counter.

The first quartet "**XXXX**-" are the highest digits and the 2nd "**XXXX**" are the lowest.

Using the UP and DOWN button will change the display to "**CO n**" / "**XXXX**-" / "**XXXX**" to **Promo2** where **n** is the selection number followed by the sales counter for that selection.

Use the UP and DOWN buttons to display the individual selection sales counters.

Activation of the BACK button while a selection counter is displayed will return the VMC to the "**SALE COUNTER**" prompt. Activation of the BACK button at the "**SALE COUNTER**" prompt will return the VMC to the unprotected area.

CO_P1 Sale Promo1

CO_P2 Sale Promo2

A PROMO SALE (2 products) is incremented by 1 each sale of 2 product

CASH & SALES COUNTER RESET (from software V1.43)

Individual selection Cash and Sale counters can be reset as follows: At the "**SALE COUNTER**" prompt press button **0**, the display will show "**CLEAR**", press buttons **2 - 3 - 1 - 4** in sequence within 10 seconds.

Reset of individual selection Cash and Sale counters can also be performed in the same way as MIS counter reset using parameter **C5 Reset Counter Mode** in menu "**CONFY**".

5.4 Price Setting Routine

5.4.1 For Cash Payments (protected menu)

FOR SELECTIONS AND GROUPS.

If the ENTER button is activated at the "**CASH PRICE SETTING**" prompt the VMC will enter the price setting routine. The display will show a "Pr 11" price on upper left column. Up to **GRP8 ,PROMO1 & 2**

An "*" symbol near the column means that this one is not installed.

In multi-price mode you can choose different price for each selection; using UP and DOWN buttons will cycle through available column (**11 – 79**) or "**ALL**", "**ALL**" is used to change the price for all selection (**excluding group 1 to 10**). Activation of the ENTER button will show the actual price using UP and DOWN button will increase or decrease the price by one lowest coin value respectively.

On this menu the buttons **5** and **6** (fast up, fast down) are active to increase or decrease selections by 8 positions (change tray) and to fast increase or decrease price value.

Is possible to copy current price to next selection pressing "**#**" button.

To clear price (set price = 0) press selection "**0**".

Activation of the ENTER button while the desired price is displayed will save that price.

Activation of the BACK button while a selection price is displayed, without doing an ENTER before will return the VMC to the selection display without saving the displayed selection price.

Activation of the BACK button while a selection is displayed will return the VMC to the "**CASH PRICE SETTING**" prompt. Activation of the BACK button returns the VMC to unprotected area.

If the VMC is working in Executive price holding mode (menu CONFY C2 = 2), the price menu is used to set the line of price holding (from software version 0.10).

NOTE FOR CASH & CASHLESS PRICE SETTING

Price setting includes a price setting for Group1 to Group10, if a selection is connected to a group, the selection price is disregarded, but the price set in the corresponding group is used

5.4.2 For Cashless Systems (protected menu, only in MDB)

This menu allows to set different vend prices for payments via cashless systems.

If the ENTER button is activated at the "**KEY PRICE SETTING**" prompt the VMC will enter the cashless vend price setting routine.

The method to program cashless prices is the same as for cash price setting routine.

5.5 Tray & Group Configuration (protected menu)

5.5.1 TRAY

This menu is used to set the configuration of the machine, you have to do it only when you change the control board.

Choice available is 2 Trays or 3 Trays

GF 6 / DR 6 = 2 trays per shelf (6 columns/selections)

GF 9 / DR 9 = 3 trays per shelf (9 columns/selections)

5.5.2 GROUP

The Group menu allows to assign selections to groups of selections (purpose is to dispense the same products placed in different shelves first in first out to prevent from ageing).

"**SEL xx**" will let to choose the selection number 11 to 79 to be connected to one of the 10 groups using the UP and DOWN button (NO means no connection to group) and GRP1 to Promo2 means connection to Group 1 to Promo2.

When selections are connected to a group, these selections are dispensing alternatively, independent from the selected selection number.

If a selection is assigned to a group, the vend price is not the selection price but the price set for the group (see point 5.4 Price setting routine)

(from V.1.55)The group Promo1 & Promo2 allows to deliver 2 products alternatively with a special price (This group works only in MDB)

The price to apply is the price set in Promo1 or Promo2

During a promo vend if the first product is no delivered ,the credit is return and promo is cancelled

If the second product is no delivered ,the final price will be the individual price of the first product delivered

In previous both case ,prior to return and cancel the vend, in case of empty column the machine will check for other columns of the same promo group

5.5.3 V-POS

Parameter to adjust the bucket height (product delivery position) at the delivery flap.

V-POS value can be set in steps of 1mm from 0 to 5 mm

5.6 Machine Configuration Setting Routine (protected menu)

If the ENTER button is activated at the "**OPTION SETTING**" prompt the VMC will enter the machine configuration setting routine. The display will show a "**C1**" message where the "**1**" indicates configuration setting number 1. Using UP and DOWN button will cycle through the available configuration setting numbers. Activation of the ENTER button while a configuration setting number is displayed will allow access to the current setting number of the displayed configuration setting.

Activation of the ENTER button will save the displayed configuration.

Activation of the BACK button while configuration is displayed, without doing an ENTER before, will return the VMC to the "**OPTION SETTING**" display without saving the displayed configuration. Activation of the BACK button returns to unprotected area.

The Following Information's Describes Various Machine Configuration Settings

5.6.1 ~ "C1" Reserved For Future Use

5.6.2 ~ "C2"&"C3" Not Used on this Version of the Software

Parameter only available when Drink Master & Snack Slave software is installed

5.6.3 ~ "C4" Open Door Display Mode

This parameter is used to change the MIS data information that you can read when the door of VMC is open:

C4 = 0 Display only the Existing Error or NONE

C4 = 1 Display total Sales, total Cash and Existing Error or none (default).

5.6.4 ~ "C5" Reset Counter Mode

This parameter determines the MIS internal counter reset method:

C5 = 0 All resettable counter will be reset only using a reset command on MIS communication mode (default).

C5 = 1 All resettable counters will be reset after each DEX reading.

Reset Counter Mode Before Software V 1.40

C5 = 0 All resettable counter will be reset only using a reset command on MIS communication mode (default).

C5 = 1 All resettable counter will be reset when you open the door, read one of the resettable counter and close the door.

5.6.5 ~ "C6" Not Used on this Version of the Software

Parameter only available when Drink Master & Snack Slave software is installed

5.6.6 ~ "C7" Save Credit Mode

This parameter determines how the VMC have to manage the credit:

C7 = 0 Clear the credit if nothing happens in the last five minutes (default).

C7 = 1 Keep the credit indefinitely.

5.6.7 ~ "C8" Forced Vend

This parameter is used to prevent the use of the machine as a coin changer. When forced vend is enabled you can obtain escrow only in the following cases:

- If coins are inserted and a selection is made (full or empty selection is the same).
- If you insert a coin that you can obtained through escrow (coins that go to the tube of the coinage) and you don't reach the maximum price.

C8 = 0 Forced vend disabled (default)

C8 = 1 Forced vend enabled.

Note: If a cashless system with reload facility is used Forced Vend is automatically disabled.
From version 1.40 of the software the Forced vend can be enabled with a cashless system with reload facility.

5.6.8 ~ "C9" Multi Vend

This parameter enables or disables automatic change process:

C9 = 0 Multi Vend disabled (change dispensed automatically after vend) (default)

If C9 is set to 0, the max coin acceptance = maximum selection price

C9 = 1 Multi Vend enabled (you can use your change to make another selection, or to press the coin return button to get your change)

If C9 is set to 1, the max. coin acceptance level must be set in MDB SETTING >>>

ACC

5.6.9 ~ "C10" Bill Escrow Mode

This parameters allows the escrow of bill. If enabled and the last bill inserted takes the credit over the maximum price, the bill be held in the escrow position, and can be returned as escrow. If the function is disabled, bills go always to the stacker. The valid values are:

C10 = 0 Bill escrow enabled (default)

C10 = 1 Bill escrow disabled.

5.6.10 ~ "C11" Event Reporting Mode (from software V1.40)

C11 = 0 The Events (EA1&EA2) are reported during a normal DEX readout session.

C11 = 1 As an Event occurs, the VMC will send ENQ to advise a new EVENT is available, the ENQ will be send every second until DL 0 is received or a DEX readout session has been performed.

Refer to chapter **Event Table** on page 45

5.6.11 ~ "C12" Dynamic PA Reporting Mode (from software V1.53)

C12 = 0 The PA reporting is fixed and not depending shelves number

C12 = 1 The PA reporting is depending of shelves number

5.7 Correct Change Only Control (protected menu)

If the ENTER button is activated at the "**MDB SETTING**" prompt the VMC will show the following submenu available:

5.7.1 "CONx"

If you press ENTER button at the "**CONX**" the VMC will show the actual overpay status, use UP or DOWN to change **X** value where **X** is 0 (overpay not allowed) or 1 (overpay allowed).

If CON = 0 (means the VMC automatically manages the changer settings)

If changer is able to give the change back (**CCU** (correct change value) + Maximum Price) correct change LED is OFF. Otherwise correct change LED is ON

If correct change LED is ON or OFF the VMC automatically accepts only coins than can be returned or can return the equivalent credit with other coins.

ACC (Unconditional acceptance value) is automatically managed equal to the Maximum price.

If CON = 1 (means the VMC manages the changer setting according to **CONFY** setting)

Correct change LED is set regarding the **C2** (Low change equation) and **C3** (minimum coins Tube level).

If correct change LED is OFF VMC accept coins set in **C06** and **C07**

If correct change LED is ON VMC accept coins set in **C08** and **C09**

ACC (Unconditional acceptance value) is automatically managed equal to the Maximum price.

5.7.2 "CCU"

If you press ENTER at the "**CCU**" prompt, the display show the actual maximum value used by VMC to work in correct change situation, you can change the value using UP or DOWN button.

5.7.3 "ACC"

If you press ENTER at the "**ACC**" prompt, the display show the actual maximum value accepted, even if the VMC doesn't know if it has the change, you can change the value using UP or DOWN button (see OPTION SETTING>>>C9)

5.7.4 “MCARD”

If ENTER is pressed at the “**MCARD**” prompt, the display show the actual maximum revalue amount accepted. Parameter MCARD is used to limit the credit accepted with cashless systems.

Maximum credit on cashless systems is managed as follows:

Revalue

If amount of inserted cash + actual cashless credit > MCARD value
Revalue is prohibited.

If amount of inserted cash + actual cashless credit < MCARD value
Revalue is allowed.

Cashless Vend

If cashless credit > MCARD value Vend is prohibited.

If cashless credit < MCARD value Vend is allowed.

If **MCARD** is set to 0 control on revalue or cashless vend is disabled.

Is set to 65535 the revalue is inhibited (from version 1.53)

5.7.5 “CONFY” Configuration

This menu and submenu are used by VMC only if overpay is allowed MDB SETTING
CON = 1.

If enter is pressed at the “**CONFY**” prompt, the display show “**C1**”.

Using up or down button you can choose the other submenu (“**C1**”-“**C11**”), which have this function:

5.7.5.1 ~ “C1” Keypad activation (Coinage)

C1 = 0 Coinage key pad disabled

C1 = 1 Coinage key pad enabled

5.7.5.2 ~ “C2” Low Change Equation

MDB MODE

This parameter defines the exact change equation. The combination of the empty states assume the exact change state

A is the lowest coin value reported in the tubes

D is the highest coin value reported in the tubes

If tubes are empty according to these equations the **CORRECT CHANGE LED is ON**

- 0 : TUBE A and TUBE B and TUBE C and TUBE D
- 1 : TUBE A or TUBE B or TUBE C
- 2 : TUBE A only
- 3 : TUBE B only
- 4 : TUBE C only
- 5 : TUBE D only
- 6 : TUBE B or TUBE C or TUBE D
- 7 : TUBE A and TUBE B or TUBE C
- 8 : TUBE A and TUBE B or TUBE D
- 9 : TUBE A and TUBE C or TUBE D
- 10 : TUBE B and TUBE C or TUBE D
- 11 : TUBE A and TUBE D or TUBE C
- 12 : TUBE B and TUBE D or TUBE A
- 13 : TUBE A or TUBE C
- 14 : TUBE A or TUBE B and TUBE C
- 15 : TUBE A or TUBE B

ATTENTION:

When using **EXECUTIVE:**

C2 = 0 Normal Executive mode

C2 = 1 "**Price holding**"

EXECUTIVE MODE (PRICE HOLDING)

If you set C2 = 1 and payment system is set to executive, the machine works in price holding mode; it means that the price is stored on payment system. In this mode each time you press a selection the machine sends to the payment system the n.° of selection pressed in this way:

Sel 11 pressed – send 1 to payment system

Sel 18 pressed – send 8 to payment system

Sel 21 pressed – send 9 to payment system

...

Sel 46 pressed – send 30 to payment system

...

Sel 88 pressed – send 64 to payment system

If C2 = 0 the prices are stored on vending machine, and they are sent to payment system.

If C2 = 2 (from version 0.10) the machine works in price holding and the line of the price must be programmed on the "PRICE" menu the machine show the price stored on the payment system if it's support the price show feature.

5.7.5.3 ~ "C3" LOW CHANGE LEVEL

MDB MODE

This number will be deducted to the coins tubes number reported by the changer in order to calculate according to the low change equation the **CORRECT CHANGE** status

EXECUTIVE MODE (WAITING TIME AFTER VEND REQUEST)

This parameter is used to add extra time after vend request for long answers from Executive cashless systems. Setting range: 0 up to 250 sec.

From Software Version 1.41 not used. Waiting time is fixed to 250 sec.

5.7.5.4 ~ "C4" Bills accepted (Equal to "c6" and "c7")

Accepted bills when "CORRECT CHANGE" LED is OFF

5.7.5.5 ~ "C5" Bills accepted in low change condition (Equal to "c7" and "c8")

Accepted bills when "CORRECT CHANGE" LED is ON

5.7.5.6 ~ "C6" + "C7"

PARAMETERS ARE USED TO DETERMINE UP TO 16 COINS TO BE ACCEPTED.

C6 = coins 1 to 8

C7 = coins 9 to 16

Coin 1 is assumed to be the smallest coin, and coin 16 the highest in value.

Each coin has a binary value as:

C6:	coin 1	=	1		C7:	coin 9	=	1
	coin 2	=	2			coin 10	=	2
	coin 3	=	4			coin 11	=	4
	coin 4	=	8			coin 12	=	8
	coin 5	=	16			coin 13	=	16
	coin 6	=	32			coin 14	=	32
	coin 7	=	64			coin 15	=	64
	coin 8	=	128			coin 16	=	128

EXAMPLE: If you want to accept coin 1 – 2 – 3 – 4 – 13 – 15 you must add the correspondent values:

$$C6 = 1 + 2 + 4 + 8 = \mathbf{15}$$

$$C7 = 16 + 64 = \mathbf{80}$$

5.7.5.7 ~ "C8" + "C9"

PARAMETERS ARE USED TO DETERMINE COINS TO BE ACCEPTED WHEN THE VMC IS IN LOW CHANGE CONDITION.

The values of these submenus are calculated in the same way as "C6" + "C7" submenu.

5.7.5.8 ~ "C10" Reset to the Factory Setting (Default Values)

Be careful when using this option; All parameters are reset to factory setting, all counters (also the total counter) are reset to 0 and you also lose the configuration of the vending trays, therefore it is necessary to make an auto configuration (see "STOS" menu).

"C10" = 18 Reset value

Put value **option** on the **CONFY** "C10" submenu and press button **4** to confirm.

Turn off the machine: Press and keep pressed the button on the board and turn on the machine and wait until the end of initialisation of the board (when you read message "RESET" on the display). Release the button on the board.

Now you have to reprogram all parameters.

5.7.5.9 ~ "C11" Marketing Feature "Product Hand Movement"

This feature is only enabled when no credit is inserted and the machine is not in out of order status.

An interval time in minutes between the movements can be set:

C11 = 0 Feature disabled

C11 = 1 to 256 minutes: Lift / Product hand moving every C11 value in minutes.

5.7.5.10 ~ "C12", "C13", "C14", "C15" and "C16" RESERVED (do not modify)

5.7.5.11 ~ "C17" CASH SALE COMMAND MODE (from version 1.59)

C17 = 0 Cash sale is sent if cashless is connected and supporting this command (reported by cashless setup bit)

C17 = 1 Forced cash sale is send even no cashless is reported on address 0x13 and 0x63

5.7.5.12 ~ "C18 " RESERVED

5.7.6 Asset Number ID 106

If enter is pressed at the "**ID106**" prompt, the display show the actual Asset number

Use button 2 & 3 to change the value at the prompted number

Use button 4 & 5 to change the prompted number

5.7.7 Token

If enter is pressed at the "**TOKEN**" prompt, the display show the actual Token value for 1 Bill, this value will increment the credit when a special bill is accepted from the validator.

Use button 2 & 3 to change the value at the prompted number

Use button 4 to Confirm

5.8 Language Configuration (protected menu)

If ENTER button is activated at the "**LANGUAGE SETTING**" prompt the VMC will show:

VEND: For setting the language for customer information

PROG: For setting the language for the service program

For both can be chosen the actual language used by VMC. Use up or down buttons to toggle through the available languages:

"CUSTO."	Customized language to be set with WinDEX
"ENGL"	English
"ITAL"	Italian
"FREN"	French
"SPAN"	Spanish
"GERM"	German
"DUTC"	Dutch
"PORT"	Portuguese

Press ENTER to confirm the new language or escape to return to the "**LANGUAGE SETTING**" prompt.

NOTE: To remove customized messages automatically in case of wrong programming proceed as follows:

- Switch off the power supply to the machine.
- Press button **0** and keep it pressed while you switch on the power supply.
- Wait a few seconds until you release button **0**.
- All programming message will be restored in English.
- It is possible to set different languages for customer information and service program.

5.9 Time Configuration (protected menu)

If ENTER button is activated at the "**TIME SETTING**" prompt the VMC will enter the machine on the time setting routine with the follow submenu:

- "ENBX"** Time status (X = 0 time menu disabled, X = 1 time menu enabled), press ENTER to modify X value,
- "YEAR"** Press ENTER show actual year, use UP or DOWN buttons to modify value, press ENTER to confirm, or press BACK to return to **"ENBX"** message,
- "NTH"** Press ENTER show actual month, use UP or DOWN buttons to modify value, press ENTER to confirm, or press BACK to return to **"ENBX"** message
- "DATE"** Press ENTER to show actual date, use UP or DOWN buttons to modify value, press ENTER to confirm, or press BACK to return to **"ENBX"** message
- "HOUR"** Press ENTER to show actual hours - minutes, use up and down buttons to modify hours and minutes, press ENTER to confirm, or press BACK to return to **"ENBX"** message
- "DST "** Daylight saving time, press ENTER to modify the country, available values are:
- | | |
|---------------|-------------------------|
| "AUS " | Australian rules |
| "EU " | European rules |
| "NA" | North America rules |
| "OFF" | No daylight saving time |

5.10 Light Control (protected menu)

If ENTER button is activated at the "**LIGHT SETTING**" prompt the VMC will enter the machine on the light control routine with the follow submenu:

- "ENB X"** Used to enable (X = 1) or disable (X = 0) the light control,
- "STRT"** Set the start time using the follow submenu:
- "DAY"** Select the days, press ENTER to change the status of the day (0 =not selected, 1= selected)
- "HOUR"** Press ENTER to change the start hour and minute for selected day.
- "STOP"** Set the stop time using the follow submenu:
- "DAY"** Select the days of the week for stop function, press ENTER to cycle through the days, press ENTER to change the status of the day (0 = not selected, 1 = selected)
- "HOUR"** Press ENTER to change the stop hour and minute for selected day.

5.11 Payment System (protected menu) [Extended Menu]

Pressing button 4 at the "**PAYMENT SETTING**" prompt the VMC will enter the payment system configuration routine. The display will show "**MDB**" for multi drop bus or "**EXE**" for Executive protocol. Choose the payment system using up or down, and confirm by pressing enter; the machine will restart.

When you change this parameter to Executive, do not move the DIP-switch on the control board placed between the "MDB" and "EXE" connector.
These DIP-switch must stay all the time in MDB position.

For Executive payment systems an interface (P/N 141216) is required. The power supply on the 15 pin Molex1991 connector is 24VDC (not anymore 24VAC)

In Executive the DEX/UCS data exchange protocol is not supported. However, the DIP-switch DEX/UCS- JACK must be in position DEX/UCS

5.12 Daily Vend Inhibited Period (protected menu) [Extended Menu]

It is used to inhibit the vend on certain trays, for up to 6 periods each day. If ENTER button is activated at the "**VEND INHIBITION**" prompt the VMC will enter the daily vend inhibit period control routine with the follow submenu:

- "ENB X" Used to enable (X = 1) or disable (X = 0) the inhibited period function,
- "START1" Set the start time (HH mm) of the first inhibited period of the day
- "STOP1" Set the STOP time (HH mm) of the first inhibited period of the day
- "START2" Set the start time (HH mm) of the second inhibited period of the day
- "STOP2" Set the STOP time (HH mm) of the second inhibited period of the day
- "START3" Set the start time (HH mm) of the third inhibited period of the day
- "STOP3" Set the STOP time (HH mm) of the third inhibited period of the day
- "START4" Set the start time (HH mm) of the fourth inhibited period of the day
- "STOP4" Set the STOP time (HH mm) of the fourth inhibited period of the day
- "START5" Set the start time (HH mm) of the fifth inhibited period of the day
- "STOP5" Set the STOP time (HH mm) of the fifth inhibited period of the day
- "START6" Set the start time (HH mm) of the 6th inhibited period of the day
- "STOP6" Set the STOP time (HH mm) of the 6th inhibited period of the day
- "TRAY" Choose the tray to be inhibited
- "LIT X" 1 to turn off the light during inhibit period, 0 to leave the light on

If a customer wants to purchase from an inhibited selection the message "NO VEND UNTIL hh:mm" is displayed.

5.13 Age Control (protected menu) (require additional hardware to read identity card)

This function is used to permit some selection only to authorized person (about age discrimination or use of special validation card, depending of the hardware kit used); this validation can be enable only on some period of the week.

The programming function are:

“ENB X” Used to enable (X=1) or disable (X=0) Age control,

“START” Set the start date and time of Age control request using the following submenu:

“DAY” Select the days of the week for start function, press ENTER to cycle through the days, press ENTER to change the status of the day (0 =not selected, 1= selected). Pressing ENTER it is possible to select a day.

MON	=	Monday	FRI	=	Friday
TUE	=	Tuesday	SAT	=	Saturday
WED	=	Wednesday	SUN	=	Sunday
THU	=	Thursday	ALL	=	All days

In addition to the days (abbreviated in English) there is a submenu **“ALL”** that selects and changes all the days of the week.

“HOUR” Press ENTER to change the start hour and minute for selected day.

“STOP” Set the end date and time of Age control request using the follow submenu:

“DAY” Select the days of the week for stop function, press ENTER to cycle through the days, press ENTER to change the status of the day (0 =not selected, 1= selected), pressing ENTER again it is possible to select a day.

In addition to the days (abbreviated in English) there is a submenu **“ALL”** that selects and changes all the days of the week.

“HOUR” Press ENTER to change the stop hour and minute for selected day.

“TRAY x” Choose the tray on the master to be controlled, pressing enter:

“ALL” To program all the selection of this tray (OFF=not selected, ON=selected)

“CO xx” To program the single selection (OFF=not selected, ON=selected)

5.14 Discount Setting (protected menu) (from software V1.45)

This function is used to permit discount sales from some selections.
Discount period can be enabled only on some days of the week.

The programming functions are:

"ENB X" Used to enable (X = 1) or disable (X = 0) Discount.

"START" Start date and time of discount.

"DAY" Select the days of the week to start discount period, press ENTER to cycle through the days, press ENTER to change the status of the day (0 = not selected, 1 = selected).

Pressing ENTER it is possible to select a day.

MON	=	Monday	FRI	=	Friday
TUE	=	Tuesday	SAT	=	Saturday
WED	=	Wednesday	SUN	=	Sunday
THU	=	Thursday	ALL	=	All days

In addition to the days (abbreviated in English) there is a submenu **"ALL"** that selects and changes all the days of the week.

"HOURL" Press ENTER to change the start hour and minute for selected day.

"STOP" Set the end date and time of discount period.

"DAY" Select the days of the week for stop function, press ENTER to cycle through the days, press ENTER to change the status of the day (0 =not selected, 1= selected), pressing ENTER again it is possible to select a day.

In addition to the days (abbreviated in English) there is a submenu **"ALL"** that selects and changes all the days of the week.

"HOURL" Press ENTER to change the stop hour and minute for selected day.

"DISC CA" Discount Amount if paid by cash

"DISC KE" Discount Amount if paid by key or cashless payment system

"TRAY X" Choose the tray on the Master to be controlled, press ENTER:

"ALL" To assign all selections of this tray (OFF = not assigned, ON = assigned)

"CO XX" To assign single selections (OFF = not selected, ON = selected)

5.15 Return To Open Door Mode

If the ENTER button is activated at the **"RETURN TO VEND"** prompt the VMC will exit to normal open door routine.

6 TEMPERATURE ADJUSTMENT

The cooling unit is managed by an independent control unit, including LED display and buttons.

If a different temperature is required inside the refrigerated cell, it is sufficient to change the set-point on the electronic control unit, always keeping present the small variation of temperature caused by the starting and stop cycles.

Example:

If an average product temperature of 8°C is needed, program the “set-point” at 7°C

6.1 Electronic Cooling Unit Control CAREL USED FROM MARCH 2010

6.1.1 Description and function of control unit CAREL

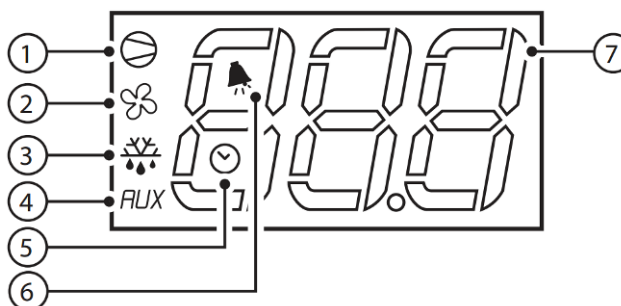
The electronic control unit EASY CAREL regulates and controls the refrigerant system and all its components: The compressor, the fans, the defrosting, and is independent of the control of the board SF01, which control the electronics of the distributor.



On the front of the control unit are: 3 digits, 6 LED indicators that show the operating conditions and 3 buttons.

6.1.2 Display

1. Compressor led
2. Fan led
3. Defrost led
4. Auxiliary exit
5. Watch
6. Alarm
7. Numbers



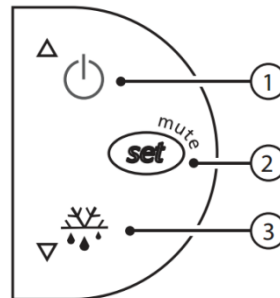
The LED light on the display show the operation of the cooling system.

- 1 Compressor LED: indicates the status of the compressor.
 - LED is lit, the compressor is ON
 - LED blinks, the compressor is waiting before starting (check ES)
 - LED OFF, the compressor is OFF.
- 2 Fan LED: indicate the status of the evaporator.
 - LED is lit, the fans are running
 - LED blinks, the fans are waiting before starting
 - LED OFF, The fans are turned off

- 3 Defrost LED: indicate the status of the defrost.
 - LED is lit, The defrost mode is ON
 - LED blinks, is in drip mode after defrost
 - LED OFF, defrost is OFF.

- 4 Auxiliary exit: not used in this vendor.

6.1.3 Key board



Key 1 "**UP**", in normal function if pushed for more than 1 second, it visualizes the temperature of probe 2 (evaporator). If pushed during the visualization of the set point it increases the set value.

Key 2 "**SET**", pushed more that 1 second allows the visualization and setting of the set point

Key 3 "**DOWN**", pushed for more than 3 seconds starts or stops the defrost, and if it is pushed during the visualization of the set point it decreases the set value.

6.1.4 Set the temperature

The setting of the internal temperature is performed via the control unit in the following manner:

Press for more than 1 second the button 2 "**SET**", the display show the set point temperature setting.

To increase or decrease the value press button 1 "**UP**" or 3 "**DOWN**".

Press button 2 "**SET**" to confirm the new value.

6.1.5 Quick defrost

You can start a defrost without changing the interval set on the controller.

If the gasket is damaged or the delivery door remains open too long (for example is blocked by an object) the hot air enters into the cold store thus creating ice above the evaporator which blocks the passage of air.

To solve the problem you need to initiate an additional defrost action that may be performed in a few steps:

To start the defrost press and hold for 3 seconds the button 3 "**DOWN**". To stop the process, press again the button 3 "**DOWN**".

6.1.6 Description of the main signals and alarms

The error codes are displayed on the display alternating with the temperature gauge.

ERROR	DESCRIPTION
ES	The compressor has a timing delay when starting, therefore the LED of the compressor on the display starts to flash.
E0	Still or flashing means an adjusting probe error: <ul style="list-style-type: none"> • probe not working, the probe signal is interrupted or in short circuit; • probe is not compatible with the instrument; The E0 alarm signal is stable if it is the only alarm present (the temperature value is no longer shown), it flashes if there are other alarms or if the second probe is shown
E1	Flashes evaporator probe error: <ul style="list-style-type: none"> • probe not working, the probe signal is interrupted or in short circuit; • probe is not compatible with the instrument;
EE	Visualized during functioning or activation Error in reading of the machine parameters. See memorised data errors.
EF	Visualized during functioning or activation Error in reading of the working parameters. See memorised data errors.
ED	The last defrosting finishes when exceeding the maximum time. The indication disappears if the next defrost is finished correctly.
DF	Defrosting in course: <ul style="list-style-type: none"> • it is not an alarm signal but an indication that the instrument is doing a defrosting.
DISPLAY BLINKS	The control unit display and all the led's are flashing: <ul style="list-style-type: none"> • indicates that the door is open, or that the door switch is not working correctly • it is activated when the door remains open for more than one hours

6.1.7 Function

When switching on the control unit for the first times there will be a delay of three minutes in the compressor and evaporator fan starting.

During normal working, the compressor will stop only after reaching the set point temperature and the evaporator fans will work always.


When opening the door (if there is a door switch) both the compressor (if working) and fans will stop.



When closing the door, the fans will start immediately, while the compressor will have a delay of three minutes from the last switching off, even if the door is closed before.

The cooling unit is controlled by various parameters inserted in the software of the control unit and unchangeable by the User, this avoids possible and unwanted modifications to the same parameters, that could cause a malfunctioning of the cooling unit. In any case, for any particular needs it is possible to contact the technical assistance service that will assist you in various problems.

6.2 Cooling Unit Control SERETEC DSM 5030 USED UNTIL FEBRUARY 2010

The temperature adjustment can be done in a very simple and direct way through the electronic control unit. Please proceed as follows:

To visualize the set temperature, press and release  key, the set temperature appears on display with blinking mode for approx. 10 seconds.

If you wish to modify this value, while it is blinking, press  key to increase, or press  key to decrease it. Wait till the controller exits from the programming mode and return to the operating mode (showing the internal temperature of the cell), which is registered automatically.

The so-called set-point is the temperature, which makes the compressor stop, because it reaches the ideal temperature to maintain the products loaded in the vending machine. The compressor will re-start when it exceeds the set-point temperature + parameter tDIF (delta temperature).

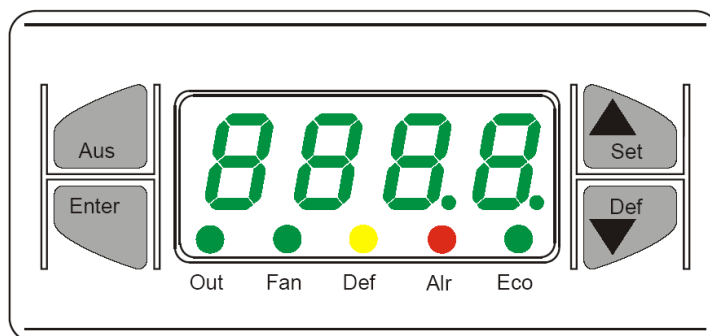


Photo 1

6.2.1 Description and function of the SERETEC.

The electronic control unit operates and commands the cooling system, it checks all the related components, compressor, fans and defrosting system and it is independent from the electronics that commands all the vending machine.

As shown in photo 1, the electronic control unit has a 4 digit 7-segment LED display, 5 colored signal LEDs and 4 command keys.

For this vending machine model, the keys normally used are on the right side, "set" arrow up and "def" arrow down.

The "set" key is used to show the set-point and to increase the set value, the "def" key is used to decrease the set-point value (as described in the previous paragraph) and also to do a forced defrosting, sometimes useful when inconveniences arise.

Example: an object remains jammed (a piece of paper, an empty product or other different objects) between the delivery chute and the door, causing a strange entry of air inside the refrigerated cell, which, depositing on the evaporator, freezes and blocks the air passage causing a malfunction.

To do a forced defrosting and not a programmed one, push the "Def" key for at least 5 seconds, and the defrosting cycle will start immediately.

The 5 colored LEDs, situated under the temperature display, indicate the operating status of the cooling system's components, as follows :

- Green LED light “**out**” indicates the status of compressors,
 - If the light is fixed, the compressor is on.
 - If the light blinks, the compressor is stand-by to start.
 - If the light is off, the compressor is off.

- Green LED light “**fan**” indicates the status of internal fans,
 - If the light is fixed, the fans are on.
 - If the light blinks, the fans are stand-by to start.
 - If the light is off, the fans are off.

- Yellow LED light “**def**” indicates the status of defrosting cycle,
 - If the light is fixed, the defrost cycle is on.
 - If the light blinks, it is stand-by to start defrost cycle.
 - If the light is off, the defrost is not activated.

- Red LED light “**alr**” indicates, that the door of the vending machine is open.
 - In this case, if the compressor and the fans were working when the door is opened, the electronic control unit will be turned off and put them in stand-by. To reactivate them just after the door closure, in order to avoid the cooling system to work in abnormal way, the display alternately shows the temperature and “A-di”.
 - In this case, the LEDs “out” and “fan” are blinking.

- Green LED light “**eco**” is not used for this model.

Moreover, the electronic control unit is able to show a malfunction of temperature sensors, by indicating the following messages on the display :

- “**E-P1**” probe for ambient temperature is down or disconnected.
- “**E-P2**” probe for evaporator is down or disconnected.

The cooling system is controlled by various parameters inserted in the software of the electronic control unit and cannot be modified by the users. This is to avoid any possible and unintentional modifications to the parameters, that may cause some malfunctions to the cooling system. In any case, for a special request, it is always possible to contact the technical assistance who may support you for various problems.

6.3 Control Unit CAREL ir33





The electronic control unit CAREL ir33 regulates and controls the refrigerant system and all its components: the compressor, the fans, the defrosting and is independent of the control of the board SVE01, which control the electronics of the distributor.

On the front of the control unit are: 3 digits, 7 LED indicators that show the operating conditions and 4 buttons.







ir33, ir33 DIN, ir33 power,
powercompact, powercompact small

6.3.1 Display

ICON	FUNCTION	DESCRIPTION	Normal operation			Start up
			ON	OFF	BLINK	
	COMPRESSOR	ON when the compressor starts. Flashes when the activation of the compressor is delayed by safety times.	Compressor on	Compressor off	Awaiting activation	
	FAN	ON when the fan starts. Flashes when the activation of the fan is prevented due to external disabling or procedures in progress.	Fan on	Fan off	Awaiting activation	
	DEFROST	ON when the defrost is activated. Flashes when the activation of the defrost is prevented due to external disabling or procedures in progress.	Defrost in progress	Defrost not in progress	Awaiting activation	
AUX	AUX	Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as AUX (or LIGHT in firmware version 3.6) is activated.	AUX auxiliary output active (version 3.6 light auxiliary output active)	AUX auxiliary output not active	Anti-sweat heater function active	
	ALLARM	ON following pre-activation of the delayed external digital input alarm. Flashes in the event of alarms during normal operation (e.g. high/low temperature) or in the event of alarms from an immediate or delayed external digital input.	Delayed external alarm (before the time 'A7' elapses)	No alarm present	Alarms in norm. operation (e.g. High/low temperature) or immediate or delayed alarm from external digital input	

Instructions for programming SF01 Board functions



ICON	FUNCTION	DESCRIPTION	Normal operation			Start up
			ON	OFF	BLINK	
	CLOCK	ON if at least one timed defrost has been set. At start-up, comes ON for a few seconds to indicate that the Real Time Clock is Y fitted.	If at least 1 timed defrost event has been set	No timed defrost event set	Alarm clock	ON if real-time clock present
	LIGHT	Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as LIGHT is activated (in Y malware version 3.6 it does not _ ash in anti-sweat heater mode and comes on when the dead band output is active).	Light auxiliary output on (version 3.6 dead band auxiliary output active)	Light auxiliary output off	Anti-sweat heater function active (version 3.6 does not flash in anti-sweat heater mode)	
	SERVICE	Flashes in the event of malfunctions, for example E2PROM errors or probe faults.		No malfunction	Malfunction (e.g. E2PROM error or probe fault). Contact service	
HACCP	HACCP	ON if the HACCP function is enabled. Flashes when there are new HACCP alarms stored (HA and/or HF alarm shown on the display).	HACCP function enabled	HACCP function not enabled	HACCP alarm saved (HA and/or HF)	
	CONTINUOUS CYCLE	ON when the CONTINUOUS CYCLE function is activated. Flashes if the activation of the function is prevented due to external disabling or procedures in progress (E.g.: minimum compressor OFF time).	CONTINUOUS CYCLE operation activated	CONTINUOUS CYCLE function not activated	CONTINUOUS CYCLE operation requested	
	DISPLAY	Shows temperature in range -50 to +150 °C. The temperature is displayed with resolution to the tenths between -19.9 and +19.9 °C. The display of the tenths can be disabled by setting a parameter.				

6.3.2 Keyboard



ir33, ir33 power

Icon	Normal operation		Start up	Automatic address assignment request
	pressing the button alone	pressing together with other buttons		
 PRG/MUTE	If pressed for more than 5 seconds, accesses the menu for setting the type "F" parameters (frequent). Mutes the audible alarm (buzzer) and deactivates the alarm relay	PRG+SET: if pressed together for more than 5 seconds, accesses the menu for setting the type "C" parameters (configuration) or downloading the parameters. PRG+UP/AUX: if pressed for more than 5s, resets any alarms with manual reset	If pressed for more than 5 seconds at start-up, activates the procedure for restoring the default parameters	If pressed for more than 1 second, starts the automatic serial address assignment procedure
 UP/AUX	If pressed for more than 1s, activates/deactivates the auxiliary output.	UP/AUX+DOWN/DEF: if pressed together for more than 5 seconds, activates/deactivates continuous cycle operation. UP/AUX +SET: if pressed together for more than 5 seconds, starts the report printing procedure (if the controller is connected to the printer interface). UP/AUX +PRG/MUTE: if pressed together for more than 5 seconds, resets any active alarms with manual reset.		
 DOWN/DEF	If pressed for more than 5 seconds activates a manual defrost	DOWN/DEF +UP/AUX: if pressed together for more than 5 seconds activates/deactivates continuous cycle operation. DOWN/DEF +SET: if pressed together for more than 5 seconds, displays a sub-menu used to access the parameters relating to the HACCP alarms ('HA', 'HAN', 'HF', 'HFN').		
 SET	If pressed for more than 1 second, displays and/or sets the set point.	SET+PRG/MUTE: if pressed together for more than 5 seconds accesses the menu for setting the type "C" parameters (configuration) or downloading the parameters. SET+DOWN/DEF: if pressed together for more than 5 seconds, displays a sub-menu used to access the parameters relating to the HACCP alarms ('HA', 'HAN', 'HF', 'HFN'). SET+UP/AUX: if pressed together for more than 5 seconds, starts the report printing procedure (if the controller is connected to the printer interface).		

6.3.3 Displaying and setting the set point

Press **SET** for more than 1 second to display the set point;

Increase or decrease the set point using the ▲ or ▼ buttons respectively, until reaching the desired value;

Press **SET** again to confirm the new value.

7 MENU DIAGRAM

MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4 th SUB MENU	DESCRIPTION
ERROR ROUTINE					Error routine
	NONE				No errors exits
	LIFT				Lift mechanism summary error
		ERRXX			See corresponding error
	CTRL				Control system summary error
		DS			Door switch
	SEL				Selection switch summary error
		SLXX			Selection switch error in switch XX (01 - 12)
	CHAR				Changer summary error
		CC			Changer communication error
		TS			Tube sense error
		IC			Changer inlet chute blocked
		TJXX			Tube pay out jam in coin type XX
		CRCH			Changer ROM check sum
		EE			Excessive escrow attempts
		NJ			Coin jam
		LA			Low acceptance rate
		DIS			Disconnected acceptor
		ROUT			Coin routing error
	BVAL				Bill validator summary error
		BC			Bill validator communication error
		BFUL			Bill validator stacker full
		BILL			Defective bill validator motor
		BJ			Bill validator jammed
		BRCH			Bill validator ROM check sum error
		BOPN			Bill validator stacker is open or out of position
		BS			Bill validator sensor error
	CRDR				Card reader summary error
		CRC			Card reader communication error
		CRXY			Card reader non-transient error; code X, sub-code Y
	DRUM				Drum summary error
		LOCK			Fail to lock
		UNLOCK			Fail to unlock
		OPEN			Fail to open
		CLOSE			Fail to close
TUBES PAYOUT					Coin Pay Out routine (only MDB)
	Tube 1-4 value				Display coin value
	Tube 1-4 value				Dispense coin while showing value
TUBES FILLING					Tube Fill routine (only MDB)
	Value on tube				Display tube count
VEND TEST					Test routine
	SELE				Selection switch test
		SL X			Where X is the selection number
	DRUM				FLAP Test functions
	POWER				Counter of power interruptions
	VEND				Vend test 1 to 5 test vends with door closed
	FAIL				Historical counter of lift failures

Instructions for programming SF01 Board functions



PASS			Password entry 10 seconds to enter 4-2-3-1-4	
CASH & MONEY COUNTER	MONEY COUNTER		Money counter	
		C-BOX	Money introduced in cash box	
		C-TUB	Money introduced in tubes	
		C-RET	Money returned	
		C-MAN	Money manually payout	
		C-CAR	Money paid with cashless	
		C-BIL	Money introduced in banknote reader	
		Clear	Press 0 + 2-3-1-4 to clear all Money counters	
	CASH COUNTER		Cash counter display	
		CA X	XXXX	Individual selection counters (resettable)
		Clear	Press 0 + 2-3-1-4 to clear selection Cash counters	
	SALE COUNTER		Sales counter display	
		COL X	XXXX	Individual selection counters (resettable)
		Clear	Press 0 + 2-3-1-4 to clear selection Sales counters	
	CASH PRICE SETTING			Price used for cash payed vends
PR 11			Price selection 11	
...			until	
PR 88			Price selection 88	
ALL			Same price for all selections	
GROUP 1			Price Group 01	
...			until	
PROMO2 dd.cc		Price Group 8, Edit price (00.00 - 99.99)		
KEY PRICES SETTING			Price list for cashless (only MDB)	
	PR 11		Price selection 11	
	...		until	
	PR 88		Price selection 88	
	ALL		Same price for all selections	
	GRP01		Price Group 01	
	...		until	
PROMO2 dd.cc		Price Group 10, Edit price (00.00 - 99.99)		
TRAY & GROUP SETTING			Space to sales routine	
	TRAY		Number of tray (2or3) per shelf	
		GF6 GF9		For model GF6 - DR6 For model GF9 - DR9
	GROUP		Group setting	
		SEL11 ... SEL88		
	V-POS		Delivery position adjustment	

Instructions for programming SF01 Board functions



OPTION SETTING		Configuration menu
	C1	Not used
	C2	Parameter only available when Master & Snack Slave software is installed
	C3	Parameter only available when Master & Snack Slave software is installed
	C4	Open door message 0=Error 1=counter & error
	C5	Counter reset mode
	C6	Parameter only available when Master & Snack Slave software is installed
	C7	Save credit 0=clear after 5 min. 1= no clearing
	C8	Forced vend 0=disable 1=enable
	C9	Multi vend 0=disable 1=enable
	C10	Bill Escrow 0= enable 1= disable
	C11	Event reporting mode
	C12	PA mode
MDB SETTING		Correct change only control
	CONx	Allow consumer overpay routine
	CONx	Edit mode (0/1)
	CCU	Correct change Value
	ACC	Unconditional acceptance value
	MCARD	Maximum cashless credit/ Revalue inhibition
	CONFY	Custom coinage configuration
	C 01	Changer Keypad 0-disable 1-enable
	C 02	Low change equation 0 to 14
	C 03	Low change level
	C 04	Accepted bills
	C 05	Accepted bills in low change condition
	C 06	Accepted coins 1 - 8
	C 07	Accepted coins 9 - 16
	C 08	Accepted coins in low change 1 - 8
	C 09	Accepted coins in low change 9 - 16
	C 10	Factory reset
	C 11	Mktg feature Lift / Hand movement
	C12-C16	reserved
	C17	Cash sale mode
	C18	reserved
	ID 106	Asset number
	TOKEN	Value for bill used as "token"
LANGUAG E SETTNG		Language selection routine
	VEND	Language for customer information
	PROG	Language for programming menu
TIME SETTING		Time and date routine
	ENBX	Current setting
	Enbx	Edit mode (0/1)
	YEAR	Year setting
	yy	Edit year, 00 - 99 (Y2K)
	NTH	Month setting
	mm	Edit month, 01 - 12
	DATE	Date setting
	dd	Edit date, 01 - 31
	HOUR	Hour and minute setting
	hhmm	Edit hour (00 - 24)
	hhmm	Edit minute (00 - 59)
	DST	Daylight saving time code
	OFF	No daylight saving used
	AUS	Australian rule

Instructions for programming SF01 Board functions



	EU	European rule
	NA	North American rule
LIGHT SETTING		Lighting control routine
ENBX		Enable Light time manage
	ENBx	X current setting (0 disable/1 enable)
STRT		Start light off period
	DAY	Start day setting
		NONX
		...
		Mon, Tue, Wed, Thu, Fri, Sat, Sun, or ALL
		ALLX
		Edit mode (0/1)
	HOUR	Start hour and minute setting
		hhmm
		Edit hour (00 - 24)
		hhmm
		Edit minute (00 - 59)
STOP		Stop light off period
	DAY	Stop day setting
		NONX
		...
		Mon, Tue, Wed, Thu, Fri, Sat, Sun, or ALL
		ALLX
		Edit mode (0/1)
	HOUR	Stop hour and minute setting
		hhmm
		Edit hour (00 - 24)
		hhmm
		Edit minute (00 - 59)
PAYMENT SETTING		Payment system
	MDB	MDB
	EXE	Executive
VEND INHIBITION		Vend inhibit period (daily)
	ENB x	0 = disable - 1 = enable
	START1	Start 1°period
		hhmm
		Hours: minutes
	STOP1	Stop 1°period
		hhmm
		Hours: minutes
	START2	Start 2°period
		hhmm
		Hours: minutes
	STOP2	Stop 2°period
		hhmm
		Hours: minutes
	START3	Start 3°period
		hhmm
		Hours: minutes
	STOP3	Stop 3°period
		hhmm
		Hours: minutes
	START4	Start 4°period
		hhmm
		Hours: minutes
	STOP4	Stop 4°period
		hhmm
		Hours: minutes
	START5	Start 5°period
		hhmm
		Hours: minutes
	STOP5	Stop 5°period
		hhmm
		Hours: minutes
	START6	Start 6°period
		hhmm
		Hours: minutes
	STOP6	Stop 6°period
		hhmm
		Hours: minutes
	TRAY	Tray to be inhibited
		Tr.1 x-Tr.8 x
		ALL
		Set to 1 to chose the inhibit tray

Instructions for programming SF01 Board functions



	LIT X		0 leave the light on 1 turn off the light during inhibit
AGE CONTROL			Age control routine
	ENABLE	ENBx	Enable Age control X current setting (0 disable / 1 enable)
	START		Start age control period
		DAY	Start day setting
			NONX ... ALLX Mon, Tue, Wed, Thu, Fri, Sat, Sun, or ALL Edit mode (0/1)
		HOUR	Start hour and minute setting
			hhmm hhmm Edit hour (00 - 24) Edit minute (00 - 59)
	STOP		Stop age period
		DAY	Stop day setting
			NONX ... ALLX Mon, Tue, Wed, Thu, Fri, Sat, Sun, or ALL Edit mode (0/1)
		HOUR	Stop hour and minute setting
			hhmm hhmm Edit hour (00 - 24) Edit minute (00 - 59)
	TRAY		Connect the tray to Age control
		CO xx	Connect the columns xx of the tray to age control
	AGE		In MDB age control to set age 16 or 18 years
DISCOUNT SETTING			Discount control routine
	ENABLE	ENBx	Enable discount control X current setting (0 disable / 1 enable)
	START		Start discount control period
		DAY	Start day setting
			NONX ... ALLX Mon, Tue, Wed, Thu, Fri, Sat, Sun, or ALL Edit mode (0/1)
		HOUR	Start hour and minute setting
			hhmm hhmm Edit hour (00 - 24) Edit minute (00 - 59)
	STOP		Stop discount period
		DAY	Stop day setting
			NONX ... ALLX Mon, Tue, Wed, Thu, Fri, Sat, Sun, or ALL Edit mode (0/1)
		HOUR	Stop hour and minute setting
			hhmm hhmm Edit hour (00 - 24) Edit minute (00 - 59)
	DISC CA		Discount amount for cash
	DISC KE		Discount amount for cashless
	TRAY		Connect the tray to discount control
		CO xx	Connect the columns xx of the tray to discount control
	RETURN TO VEND		Return to unprotected area
RETURN TO VEND			Return to vend mode

8 EVENT TABLE - EVADTS 6.1
(FROM VERSION V1.40)

PA7*CA For Cash
PA7*DA*1 For Cashless price 1
PA7*DA*2 For Cashless price 2
PA7*DA*3 For Cashless price 3
PA7*TA*1 Token

Event Reporting EA1 & EA2 (EVADTS 6,1)

Event List reported DATE & TIME ,State active not active , Event Counter

LIFT ERROR	FLAP ERROR	SOLDOUT STATUS
EA1*EJM_1*111216*17095	EA1*EJE_1*111216*170957	EA1*ELB_1*111216*170957
EA2*EJM_1*7*7**0	EA2*EJE_1*7*7**0	EA2*ELB_1*7*7**0
EA1*EJM_2*111216*170957	EA1*EJE_2*111216*170957	until
EA2*EJM_2*13*13**0	EA2*EJE_2*7*7**0	EA1*ELB_64*111216*170957
EA1*EJM_3*111216*170957	EA1*EJE_3*111216*170957	EA2*ELB_64*7*7**0
EA2*EJM_3*7*7**0	EA2*EJE_3*7*7**0	
EA1*EJM_4*111216*170957	EA1*EJE_4*111216*170957	DOOR OPEN STATUS
EA2*EJM_4*7*7**0	EA2*EJE_4*9*9**0	EA1*EGS*111216*170957
EA1*EJM_5*111216*170957	EA1*EJE_5*111216*170957	EA2*EGS*7*7**0
EA2*EJM_5*13*13**0	EA2*EJE_5*7*7**0	
EA1*EJM_6*111216*170957	EA1*EJE_6*111216*170957	DOOR CLOSE STATUS
EA2*EJM_6*7*7**0	EA2*EJE_6*7*7**0	EA1*EGT*111216*170957
EA1*EJM_7*111216*170957		EA2*EGT*7*7**0
EA2*EJM_7*9*9**0	PAYMENT SYSTEM	
EA1*EJM_8*111216*170957	EA1*EGN*111216*170957	
EA2*EJM_8*7*7**0	EA2*EGN*7*7**0	
EA1*EJM_9*111216*170957	EA1*EAF*111216*170957	
EA2*EJM_9*7*7**0	EA2*EAF*7*7**0	
EA1*EJM_10*111216*170957	EA1*EAD*111216*170957	
EA2*EJM_10*10*10**0	EA2*EAD*7*7**0	
EA1*EJM_11*111216*170957	EA1*EAO*111216*170957	
EA2*EJM_11*13*13**0	EA2*EAO*7*7**0	
EA1*EJM_12*111216*170957	EA1*EAM*111216*170957	
EA2*EJM_12*7*7**0	EA2*EAM*7*7**0	
EA1*EJM_13*111216*170957	EA1*EAN*111216*170957	
EA2*EJM_13*7*7**0	EA2*EAN*7*7**0	
EA1*EJM_14*111216*170957	EA1*ENH*111216*170957	
EA2*EJM_14*7*7**0	EA2*ENH*7*7**0	
EA1*EJM_15*111216*170957	EA1*ENG*111216*170957	
EA2*EJM_15*7*7**0	EA2*ENG*7*7**0	
EA1*EJM_16*111216*170957	EA1*ENI*111216*170957	
EA2*EJM_16*9*9**0	EA2*ENI*7*7**0	
EA1*EJM_17*111216*170957		
EA2*EJM_17*7*7**0		

REVISION	DATE	TYPE OF REVISION
1.0	30 th Mar. 2009	
1.1	04 th May 2009	
1.2	18 th May 2009	
1.3	11 th June 2009	
1.4	18 th June 2009	Group of selections implemented
1.5	11 th Nov 2009	Age control – Money Counters implemented
1.6	05 th May 2010	MDB Age control - New Reset
1.7	22 th Sep 2010	Bucket position adjustment - Fail Historic
1.8	12 th Dec 2010	CONFY - C3 used in Executive
1.9	02 nd Feb 2011	CONFY - C11 used for marketing feature "Product hand movement"
1.11	May 2012	Modifications introduced with Software Version 1.40: - CON - C 8 Forced vend rule for cashless systems implemented. - CCOC New parameter MCARD in order to limit the credit accepted with cashless. - CCOC New menu ID106 to setup Asset number on the machine reported in ID106. - 2 additional cashless price lists (total 3) implemented. - CON - C 11 Event reporting mode implemented. - CON - C 5 Counter reset mode modified to be in line with EVADTS. - German menu-names corrected.
1.12	24 th May 2012	Modifications introduced with Software Version 1.41: - CCOC New parameter "Token" value for 1 bill i.e. 1 USD
1.13		For internal use only, not distributed
1.14	18.02.2013	Modifications introduced with Software Version 1.43: - Money counter and individual Cash and Sales counter reset - Vend test description modified
1.15		For internal use only, not distributed
1.16	03.04.2013	- Discount feature introduced with software version 1.45
1.17	17.12.2013	Change Layout Update service center page Update point 1 General warnings Change DRUM with FLAP Update point 4.6 Changer Error Routine Change position of cooling unit setting Add cooling unit control SERETEC Adjusted menu names in the descriptions. Remove Option Setting C2, C3 and C6 Update point 7 Menu Diagram
1.18	23.06.2014	Modification 1.53 & 1.54 - PA mode report C12 - Group are 8 + 2 promo group - Mcard Revalue inhibition Add control unit CAREL ir33
1.19	24.03.2015	Added from version 1.59 CONFY/C17 Cash sale command mode