User Manual

CE

CONTENTS

STORICO REVISIONI			
Revisione n°	**Data**	**Modifica**	**Note**
2.00 Creazione nuova versione	13.02.20	Creazione	Fw: u3.1A +

1. TECHNICAL SPECS:

This AL66 FG coin acceptor is available in the following versions:

S = rejected coin sorted from slot low front end, dropping slot at upper front end

V = rejected coin sorted from bottom rear slot, accepted coin sorted from bottom front slot

I = rejected coin sorted from bottom front slot, accepted coin sorted from bottom rear slot

Technical specs	
Mechanical features	
Format	3½" standard
Size	88 x 102 x 52 mm
Weight	212 g
Electrical features	
Supply voltage min.	12 V DC (min. 10 V DC)
Supply voltage max.	24 V DC (max. 26 V DC)
Power consumption:	
in acceptance	max. 350 mA(*30 ms*)/100 mA
in reading	≤30mA
in Standby	≤25mA
Standard power save	≤5mA
Self-wake up	≤6mA
Output type	Open collector Darlington
Saturation output voltage	≤1 V
Output voltage max.	50 V (Active Low)
Output current max.	250 mA
Input trigger voltage min.	3 Vdc / 24 Vdc (Active High)
Input voltage max	50 V
Input impedance	≈55 kfi
Coin acceptance	
Coin channels number	16
Coin diametre min.	16 mm
Coin diametre max.	32 mm
Coin thickness	1 to 3,4 mm
Speed	3 coins/sec. (V) – 4 coins/sec. (S, K, I)
Communication modes	
Pulse	switching by Dip-Switch or by
Modifiable ccTalk	programming software
Timing data	
Power-up recovery time	≤ 200 ms
Wake-up recovery time	≤ 50 ms
Pulse or time out tolerance	± 2%
Ambient conditions	
Working ambient temperature	0°C to 60°C
Storage temperature	- 30°C to 70°C
Humidity	up to 75% (*non condensing*) for standard
	up to 95% for tropicalized version
EMC performance	
This product is compliant with EN55014-1 and EN55014-2 test specification	

> 8-bit top-performing microcontroller with 36 KB Flash-memory, highly immune to magnetic interference and to environmental conditions.
> 13 discriminating parameters.
> Six magnetic sensors and two optic detectors combine to guarantee the most accurate capacity of discrimination. Data-digitizer interface designed to cope at best with bi-metal and magnetized coins. The system sharpens selectivity and security, and makes the programming process easy and faster.
> One wire-shearer and two wire-tearers in version V provide mechanical shielding against fishing-fraud. Coin-Guard anti-cheat system, based on the synergy of 3 suitably positioned optic sensors.

S

V

I

INGRESSO MONETA COIN ENTRY

MONETA VALIDA VALID COIN

MONETA RIFIUTATA REJECTED COIN
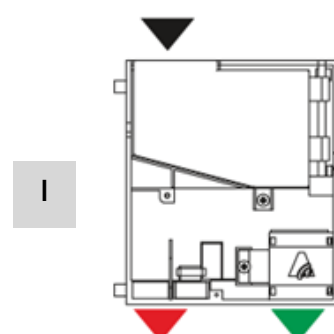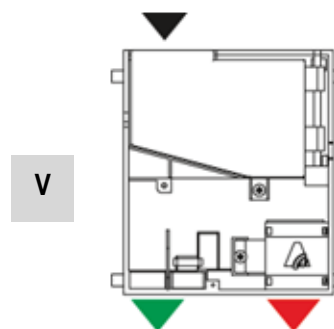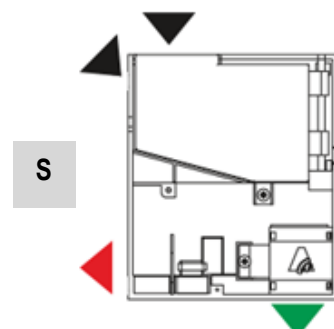
2. CONNECTIONS

The selector connects to other peripherals and to the main board by the following sockets:

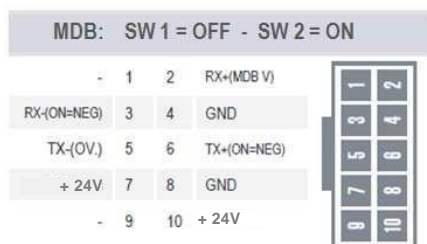**X1. PULSE or MDB interface.** Connector X1 is an IDC 10-p socket.

PULSE (set Dip-switches 1=2=OFF) pin-out is shown in the grid aside:
it consists of: 2 power supply pins (*pin 1 = ground & pin 2 = +*), 1 input (*pin 6, normally used to inhibit acceptance of coins*), and 7 "open collector" outputs (*pins 3,4,5,7,8,9 & 10*), one of which (pin 5) is normally used for the multi-pulse totalizer signal ("open collector" output), or else as additional input (i.e. for credit request).

OUTPUTS ACTIVE STATE = LOW (reversible)
INPUTS ACTIVE STATE = HIGH (reversible)

no.	Description
1	Gnd
2	+10-26 Vdc
3	Out 5 / sorter coil B
4	Out 6 / sorter coil A
5	Out 7 (totalizer) / In 2
6	In 1 (inhibit)
7	Out 1
8	Out 2
9	Out 3
10	Out 4 / sorter coil C

MDB (set Dip-switches 1=OFF, Dip-Switch 2 = ON) pin-out is shown below:

MDB: SW 1 = OFF - SW 2 = ON

-	1	2	RX+(MDB V)
RX-(ON=NEG)	3	4	GND
TX-(OV.)	5	6	TX+(ON=NEG)
+ 24V	7	8	GND
-	9	10	+ 24V

Pin	Signal	Function	Pin	Signal	Function
1	NC	Not connected	6	TX +	Tx (Active low)
2	RX +	Rx (+V MDB)	7	Vcc	+ 24 Vdc (Power supply)
3	RX -	Rx (Active low)	8	Vss	GND (Power supply)
4	GND	GND	9	NC	Not connected
5	TX -	Tx (0V MDB)	10	Vcc	+ 24 Vdc (Power supply)

MDB 10p pin-out to 6p plug

When setting the reader for MDB protocol (see 4.3.4 Dip-Switch Settings), the 10p outputs must be converted to the 6p MDB standard cable from the master pcb of the machine.
Adapting cable is available (ref. S-031005-000).

CABLAGGIO ADATTATORE MDB

1 +V
2 GND
4 MR Master receive (in)
5 MT Master transmit (out)
6 GND (comm. common)
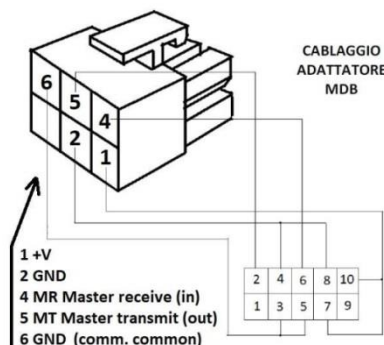
X2. SPI Display or SPI Sorter.

Socket X2 (8 pins) is meant for display connection. Displays with SPI or I²C bus protocols are supported (see aside).

8 PIN SPI (X2) [*]

DATA OUT	1	2	CLOCK
SELECT	3	4	DATA IN
GND LOGIC	5	6	+5 Vdc
GND	7	8	+24 Vdc C

The acceptor must be preset by Alberici to host the display (AA-0410-0900). The display functions can later be modified using the 'AlbericiCoinSelector' software.

X4. USB Mini-B (option – activation must be requested when placing the order).
To be able to operate, the USB acceptor must be powered through pins 2 and 4 in X3.
The USB port allows to drive the acceptor directly from the USB port of a PC Mother Board.
The USB port provides only the communication channel: for the communication itself make use of the serial MDB protocol, that must therefore be implemented in the Host software.
This socket will be enabled only after installation of the USB drivers, unless Host is Win10 (See below).

USB installation notice

- Install the drivers using the relevant exe file (i.e.: for Windows 7 64bit: "VCP_V1.5.0_Setup_W7_x64_64bits.exe"), available in the Alberici web site (FG coin acceptor page). Windows 10 generally includes the drivers by default.
- *Only after* the drivers ("STMicroelectronics Virtual COM Port") are installed, connect the coin acceptor through the USB; Windows will automatically start the installation of the driver;
- At the end of the installation process, a dialogue window will confirm "STMicroelectronics Virtual COM Port (COMxx)".
- It is now possible to connect 12/24V power to the pins 2 (GND) and 4 (+) of the X3 socket.

NOTICE: The coin selector can acknowledge 16 different coin pieces, even if some among them belong to the same denomination; one piece for each of the 16 available channels. Coins can also be manually programmed by the 2 Dip-Switch Rows SW1 and SW2 located on the acceptor rear side (see below 'AL66 FG MANUAL AUTO-PROGRAMMING INSTRUCTIONS').

TAKE CARE! The coin selector must be installed 90°-95° with respect to level plane. Because of the built-in advanced security system, it is essential that the whole coin path gets not hindered.
Alberici is not responsible for any malfunctioning due to lack of compliance with such recommendations.

Dimensions
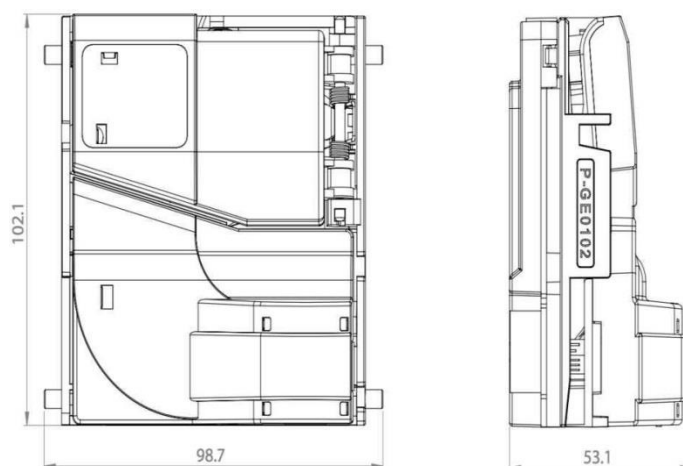
3. DIP-SWITCH SETTINGS:

DISABLE PROGRAMMED COINS

	dip-switch nr. in row SW1	Channel (CH) nr.
TO INHIBIT ANY COINS, MOVE TO POSITION ON THE DIP-SWITCH CORRESPONDING TO THE CHANNEL IN WHICH THE COIN IS PROGRAMMED (see grid aside). THEN SWITCH OFF AND ON AGAIN.	1	1
	2	2
	3	3
TO FIND THE CHANNEL THAT CONTAINS THE COIN TO BE DISABLED, PLEASE CHECK THE "*CH*" COLUMN IN THE SELECTOR LABEL GRID.	4	4
	5	5
	6	6

SET THE ACCEPTANCE TOLERANCE LEVEL

	Position of dip-switch 6 (row SW2)	Discrimination capacity
THE DISCRIMINATION CAPACITY OF THE ACCEPTOR CAN BE INCREASED BY MOVING THE DIP-SWITCH 6 IN ROW SW2 TO POSITION 'ON'.	ON	HIGH discrimination
	OFF	STANDARD discrimination

SETTINGS by SW1 ROW

SW1 Dip-Switch Row	DS1	DS2	DS3	DS4	DS5	DS6
ON	Enable CH1 (ex. 2€)	Enable CH2 (ex. 1€)	Enable CH3 (ex. 0,50€)	Enable CH4 (ex. 0,20€)	Enable CH5 (ex. 0,10€)	Enable CH6 (ex. 0,05€)
OFF	Disable CH1 (ex. 2€)	Disable CH2 (ex. 1€)	Disable CH3 (ex. 0,50€)	Disable CH4 (ex. 0,20€)	Disable CH5 (ex. 0,10€)	Disable CH6 (ex. 0,05€)

SETTINGS by SW2 ROW

SW2 Dip-Switch Row	DS2 OFF	DS2 ON	DS4 OFF	DS4 ON	
DS1 OFF	PULSE	MDB			
DS1 ON	CCTALK (*)	SAS (*)			(*) Not available in this version.
DS3 OFF					Multi-pulse totalizer, OUTPUT as pe
DS3 ON					Multi-pulse totalizer on OUTPUT 3
DS5 OFF	Modify credit value		x 1	x 4	
DS5 ON			x 2	: 10	
DS6 OFF					STANDARD Discrimination (L / SLC)
DS6 ON					HIGH Discrimination (H / SLC)

4. MANUAL AUTO-PROGRAMMING (SELF-TEACH):

A) HOW TO TEACH (NEW) COINS

1) Take note of the positions of the dip-switches.
2) Power off the coin acceptor.
3) Set all the dip-switches in SW1 row to OFF.
4) Move the dip-switch 2 of the SW2 row to ON.
5) Power up the coin acceptor: start of the auto-programming mode is confirmed by single coil activation.
6) In SW1 row, move to ON the dip-switch corresponding to the channel in which the coins will be teached.
7) Drop 10 such coins into the acceptor: double coil activation will confirm that the coins have been programmed.
8) Power off the coin acceptor and set the dip-switches according to the desired operation.

B) HOW TO RESET the Auto-programmed configurations

1) Take note of the positions of the dip-switches.
2) Power off the coin acceptor.
3) Set all the dip-switches in SW1 row to OFF.
4) Move the dip-switch 2 of the SW2 row to ON.
5) Set to ON both dip-switches 1 and 6 of the SW1 row.
6) Power up the coin acceptor: after few seconds, triple coil activation will confirm that the coins/channels that have been manually programmed have been cancelled, and that the previous configuration as been restored.
7) Power off the coin acceptor and set the dip-switches according to the desired operation.

5. PROGRAMMING BY PC SOFTWARE :

> **THIS IS DONE THROUGH THE K-P1C-000009 PROGRAMMING KIT AND THE
> "Programming sw 66 v. 2 - Alberici coin selector" SOFTWARE.**
> THE SOFTWARE ITSELF AND ITS MANUAL, CONTAINING INSTRUCTIONS FOR KIT CONNECTIONS AND PROGRAMMING
> PROCEDURES, ARE BOTH AVAILABLE FREE FOR DOWNLOAD ON OUR WEBSITE www.alberici.net.

1	Download the application "Programming sw 66 v. 2 - AlbericiCoinSelector.exe" and the drivers for the programming interface tool from our web site http://www.alberici.it, "Downloads" section at the bottom of the coin acceptor page).
2	Install the drivers into your PC, then install the application in your desktop or in a different convenient place
3	Make use of the programming-testing-power tool K-P1C-000009.
4	Make sure that voltage supply is off.
5	Connect the USB port of the PC to the USB A port of the interface.
6	Connect the 4pin cable between the ccTalk output of the interface and the 4-pin socket (X3) of the acceptor.
7	Connect the 10pin flat cable between the STD output of the interface and the 10pin socket (X1) of the acceptor:

4p/4p cct cable

10p/10p flat cable
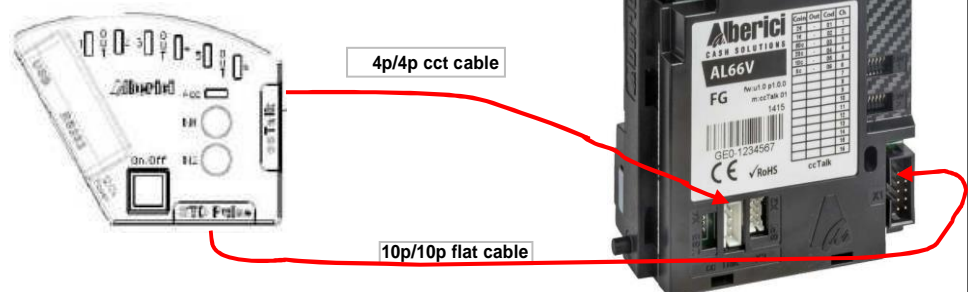
8	Power the selector (green pushbutton on the interface tool).
9	Launch the application and modify the acceptor's data appearing on the screen according to your needs. The software interface is very simple and user-friendly; in case, its Instruction Manual is available on the same page of our web site.
10	Download the new configuration to the coin acceptor, switch power supply to selector off and then on again.
11	Test that operation corresponds to the new configuration programmed.
12	Switch power off and disconnect the selector from the PC USB port.

6. AL66 FG MDB COMMANDS:

Please find following the commands relevant to the operation of the AL66 FG coin acceptor.
For further details, please refer to the document "Multi-Drop Bus / Internal Communication Protocol MDB/ICP (Version 4.2 - February, 2011)", Section 5 "Coin Acceptor/Changer VMC/Peripheral Communication Specifications"

The following set of commands has been implemented in the AL66 FG MDB version:

Command	Byte1	Byte2	Data no. bytes expected	Data no. bytes returned
Reset	0x08		0	ACK
Status	0x09		0	23
Poll	0x0B		0	1..16
Coin Type	0x0C		4	ACK
Expansion Command: Identification	0x0F	0x00	0	33
Expansion Command: Diagnostic Info	0x0F	0x05	0	2…16

Examples:

Please Note: the mark "" indicates 'mode bit set'; "_" indicates 'mode bit not set'.*

// Reset

TX> *08 _08
RX< *00

// Status

TX> *09 _09
RX< _03 _19 _78 _01 _02 _00 _00 _C8 _64 _32 _14 _0A _05 _00 _00 _00 _00 _00 _00_00 _00 _00 _00 *18
TX> _00

        z1=03 : level 3
        z2,z3=1978 : euro
        z4=01 : coin scaling factor
        z5=02 : decimal places
        z6,z7=0000
        z8=C8 : coin type 0 has value 200
        z9=64 : coin type 1 has value 100
        z10=32 : coin type 2 has value 50
        …
        z13=05 : coin type 5 has value 5
        z14=00 : coin type 6 is unused
        …

// Poll

TX> *0B _0B
RX< _00 *00 // just reset
TX> _00

TX> *0B _0B
RX< *00 // ack

TX> *0B _0B
RX< _01 *01 // flight deck open (escrow lever activation)
TX> _00

TX> *0B _0B
RX< _05 *05 // double arrival
TX> _00

```
TX> *0B _0B
RX< _21 *21 // slug
TX> _00

TX> *0B _0B
RX< _22 *22 // two slugs since last poll
TX> _00

TX> *0B _0B
RX< _41 _00 *41 // coin type 1 accepted
TX> _00

TX> *0B _0B
RX< _40 _00 *40 // coin type 0 accepted
TX> _00

TX> *0B _0B
RX< _21 _40 _00 *61 // slug + coin type 0 accepted
TX> _00

TX> *0B _0B
RX< _41 _00 _40 _00 *81 // coin type 1 accepted + coin type 0 accepted
TX> _00
```

// Coin Type

```
TX> *0C _00 _03 _00 _00 _0F
RX< *00
```

        y1/y2=00 03 : coin type 0 and 1 enabled; all the others are disabled

// Expansion Command: Identification

```
TX> *0F _00 _0F
RX< _41 _4C _42 _30 _30 _30 _30 _30 _31 _32 _33 _34 _35 _36 _37 _43 _53 _20 _50 _43 _4D _20 _30 _31
_20 _20 _20 _09 _99 _00 _00 _00 _02 *46
TX> _00
```

        z_1,z_2,z_3=414C42 : "ALB" manufactur code
        $z_4..z_{15}$=303030303031323334353637 : serial nuber=000001234567
        $z_{16}..z_{27}$=43532050434D203031202020 : model number="CS PCM 01"
        $z_{28}..z_{29}$=0999 : sw version=9.99
        $z_{30}..z_{33}$=00000002 : b_1=1 extended diagnostic command supported

// Expansion Command: Diagnostic Info

```
TX> *0F _05 _14
RX< _06 _00 *06 // (06,00)=Inhibited by VMC
TX> _00

TX> *0F _05 _14
RX< _03 _00 *03 // (03,00)=OK
TX> _00

TX> *0F _05 _14
RX< _11 _10 *21 // (11,10)=flight deck open
TX> _00

TX> *0F _05 _14
RX< _11 _00 *11 // (11,00)=general internal error (eg: sensor/optic fault)
TX> _00

TX> *0F _05 _14
RX< _11 _00 _06 _00 *17 // = general internal error + Inhibited by VMC
TX> _00
```
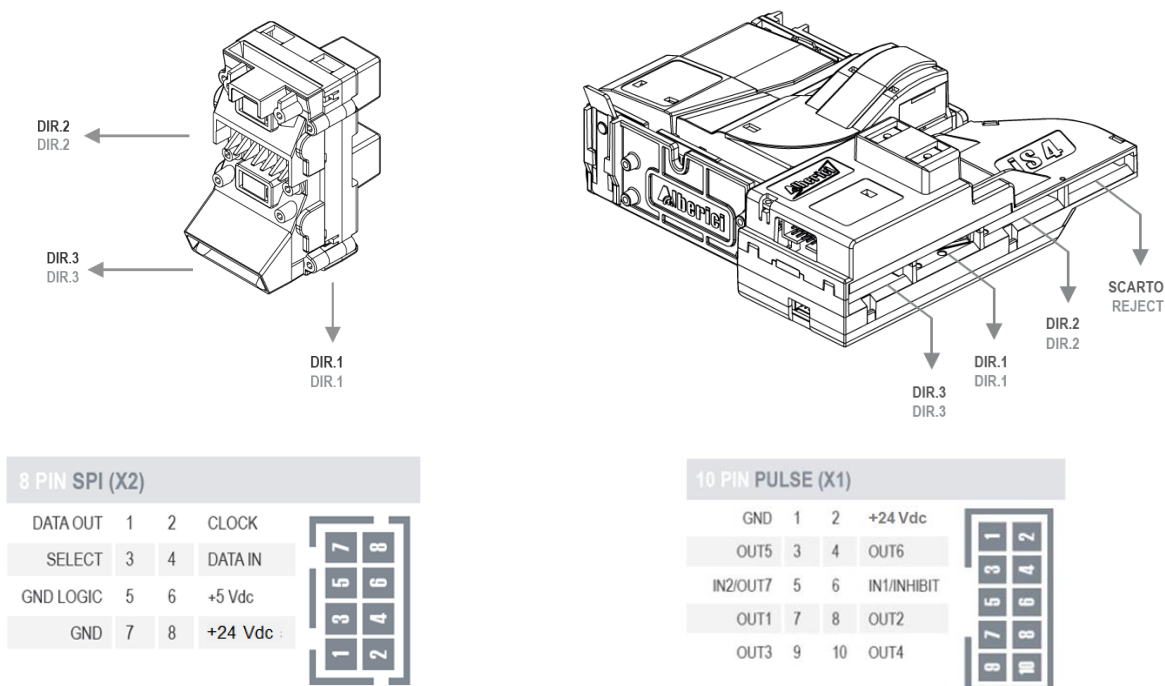
7. DRIVING IS3 and IS4 SPI SORTERS:

To attribute the appropriate sorting commands, please refer to the output paths shown below, and to the directions given in the description below "**7SPI DISPLAY AD01 SERIAL PROTOCOL**".

8 PIN SPI (X2)

DATA OUT	1	2	CLOCK
SELECT	3	4	DATA IN
GND LOGIC	5	6	+5 Vdc
GND	7	8	+24 Vdc

10 PIN PULSE (X1)

GND	1	2	+24 Vdc
OUT5	3	4	OUT6
IN2/OUT7	5	6	IN1/INHIBIT
OUT1	7	8	OUT2
OUT3	9	10	OUT4

SPI DISPLAY AD01 SERIAL PROTOCOL

The Alberici display AD01 consists of standard 16x2 characters LCD module with parallel interface, background light, equipped with a small controller pcb for SPI communication with the host. It has been designed to be used as a display accwessory for AL66 FG coin selectors, but it can be used with any other host capable to interface through SPI.

7.1 Communication specifications

Slave mode operation
8 bit rate
Maximum Clk freq. = 2 MHz
Clk phase = 0; Transfer on the first clock edge
Clk polarity = 0; Transfer on clock transition low to high

7.1.1 Clock frequency

Clock frequency is not critical but if it is to low thandisplay will blink whennewdata or refresh of the olddata is done. Maximum frequency is limited with connection cable capacity and should be max 2 MHz for short connection(less *than 300 mm*).Recommended frequency is above 100 KHz till 1 MHz.

7.1.2 Power supply

The background light of the display must be powered by 8-26 Vdc. The logic circuit must be powered by 5 Vcd. See connector in section 1.3.

7.1.3 Connection (SPI Interface)

DATA OUT	1	2	CLOCK
SELECT	3	4	DATA IN
GND LOGIC	5	6	+5 Vdc
GND	7	8	+12/24 Vdc
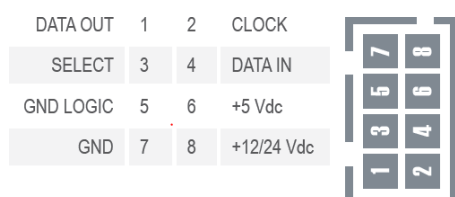
The connector is pin-to-pin compatible with the one on the AL66 FG coin selectors

7.2   Message structure

The display can work only as slave and does not reply to any of the command messages sent by the host. There are two different sets of commands:
- Display coin selector data
- Display message

First set is used to show specific coin selector data and second is used to show any display message.

7.2.1   Display coin selector data

The coin selector will send to the display controller the following command string:

[0xC0]
[0x08]
[Display mode]
[Display multiplier and decimal position]
[Display light int.]
[Accumulated credit]
[Accumulated value]
[Time in minutes]
[Time in sec.]
[Display warnings]

The first byte **0xC0** in message string means the type of message. The Hex code **0xC0** displays specific data of the coin selector.
The second byte is always **0x08** and represents the 8 bytes of data in the string.

Display mode is the code for showing further and different coin selector data. It is not possible to show all the data of the coin selector at the same time.
Table 2 shows ossible combinations and codes:

A special case of message is when this byte is **0x00** and there are no other of data to consider. It is used to turn off the background light of the display, stop the operation of the display device, and set to power saving mode (*stop mode*) the MCU communication.
Details concerning such data are not described in this document.

Code	Function
0x00	stop display
0x01	display Credit
0x02	display Value
0x03	display Credit and Value
0x04	display Time
0x05	display Credit and Time
0x06	display Value and Time
0x08	display Warning messages
0x09	display Credit and Warnings
0x0A	display Value and Warnings
0x0C	display Time and Warnings

Table 2 AD01 - Coin selector display modes

The **Display multiplier and decimal position** code must be used when the inserted value must be displayed.
Coin selectors use relative coin value for their programming   - but this is not at all a practical information to be displayed for Users.
Because of that, this value must usually be multiplied and decimals must be set.
For instance: if the 50 cent coin has been programmed with relative value = 1, in order to display its value as an understandable 0,50 €, the relevant value 1 must be multiplied by 50. For this reason, 2 decimal positions must be made available.
Tables 3a and 3b show the codes corresponding to the various multipliers and to the decimal positions.

Code hex	Multiplyer
0X	1
1X	1
2X	2
3X	4
4X	5
5X	10
6X	20
7X	25
8X	50
9X	100
AX	200
BX	250
CX	500
DX	1000
EX	1000
FX	1000

Table 3a Value multiplier codes

Code hex	Dec possition
X**0**	No decimal
X**1**	One dec. place
X**2**	Two dec. place
X**3**	Three dec. places

Table 3b Decimal places codes

The **Display light intensity** byte allows to set the duty cycle of the driver of the light brightness (*Pulse Width Modulation*).

When the display is connected to the coin selector, the intensity of its background light will then be stored into the coin selector NV memory (*FLASH*), and it will remain stable even if power supply is changed.

> *Warning: when the host sends the brightness value to the display, be aware that high power supply can damage the light driver or the background LED-s if a high brightness value has been set.*

The **Accumulated credit** byte represents the amount of the accumulated credit for the coin selectors that are programmed for releasing the credit signal only after the "Request" command has been activated.

The **Accumulated value** can be the coin value inserted in the coin selector, or the credit value remaining after the credit impulse has been activated, or the remaining time after the timer count-down has been activated. The accumulated value will be displayed according to the multiplier and decimal position code!

The **Time** is displayed in format: 'mm : ss'. The coin selector will refresh the display every second as long as the timer output is active.

The **Display warnings** can show the status of the coin selector or other warnings. Warnings and relevant codes are shown in table 4.

Code hex	Warnings
00	Ready
01	Hardware error
06	Coin error
10	Rest value
20	Credits
40	Time out

Table 4 Warning codes

Any other code sent will produce no result on the display, so this one will be blank.

7.3 Display message

The Host can send commands to show any text on a 16x2 digits display. The following command strings must be used:

[0xC1]
[number of bytes] [Character address] [Data 1]
[Data 2]
……
 [Data n]

First byte **0xC1** string means the type of message. The Hex code 0xC1 is for general message.
The second byte means the amount of **data bytes (n)** in the message, including the address (n+1).
The third byte corresponds to the character address: it starts by 0x00 for the beginning of the first digit on first line (top), and finishes by 0x1F for the last digit on second line (bottom). T
he second line begins by address 0x10.
The bytes that follow share the same structure of the character codes of the Display table (Table 4).

8. MAINTENANCE:

To ensure proper functioning, clean the coin path approx. every 10.000 dropped coins.
Take special care to the optical sensors.

1 Cleaning the coin path

Use a clean cloth moistened with glass cleaning product. Do not use smeary liquids.

2 Cleaning the optical sensors:

Insert a flatscrewdriver as in picture,t hen carefully force the lower cover up and out. Pay attention not to break the plastics, and take care not to stretch or break the copper wires of the electric coil.
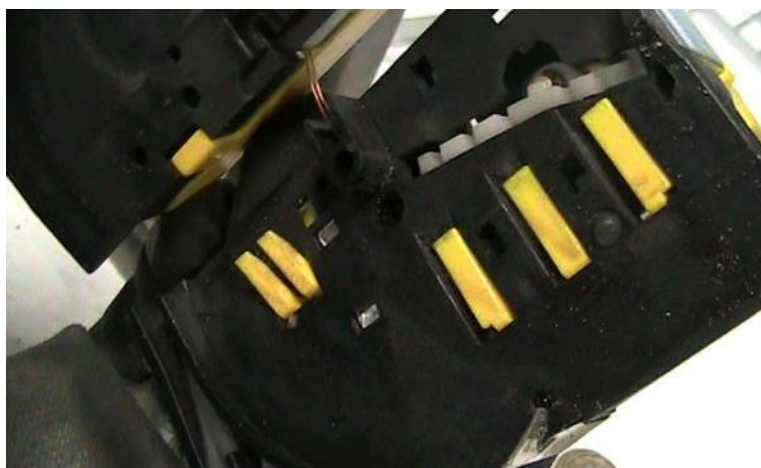
Remove dust and dirty particles from the

optical sensor prisms.

If matt or scratched, the prisms must be replaced.

9. WARRANTY:

The manufacturer will fix malfunctions arising from production faults in this machine or parts of it within 12 months from the date of sale.

All communications referring to guarantee repairs or replacements must be accompanied by the product serial number and the copy of the sale invoice.
To obtain your guarantee repair, please send the part to the Dealer where you purchased the machine, together with the following documents:
- copy of the sale invoice
- delivery note stating "returned for guarantee repair"
- detailed report of the problem found and the circumstances in which it occurs.

Before sending the product, please get in touch with your Dealer or with Alberici S.p.a. (+39 051 944300); very malfunctions can be fixed via a simple phone call, saving you costs and time.

Alberici S.p.a. will verify that warranty is applicable, i.e. that problem is not caused by:
- transport damages
- damages from incorrect installation or wrong configuration
- installation in premises or areas not complying with the prescribed safety requirements
- intentional or unwilled tampering
- wrong or careless use or maintenance
- non-compliance with precautions prescribed (see Chapter 4. Caution)
- natural disasters, vandalisms, intentional or unintentional damage

Guarantee is considered automatically expired if outer and inner labels are missing.

Transport costs of repaired products are at the Customer's charge.

10. CUSTOMER SERVICE:

Alberici S.p.a. will be pleased to offer all the necessary information on use, ordinary maintenance and technical service. Please call (+39) 051 944300 and specify if your request concerns information on use or technical support.

Alberici®

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COMPLIANCE DECLARATION

$C\epsilon$

DIRECTIVE 2014/35/CE - DIRECTIVE 2014/30/UE

La ditta **Alberici S.p.A.**, avente sede in via **Ca' Bianca, 421, 40024 Castel San Pietro Terme (BO) – Italia,**

D I C H I A R A

Che il sistema classificato nella famiglia di prodotto **apparecchio elettrico d'uso domestico e similare – dispositivo elettronico: gettoniera,** finito di costruire ed assemblare il ___/___/_____, identificato univocamente da:

Modello	Configurazione		Protocollo		N° di Serie e/o matricola
AL66 FG	☐ V	☐ K	☐ **Aes256 DH**	☐ **ccTalk**	
	☐ S	☐ I	☐ **Aes2048 DH**	☐ **Standard**	_ _ _ _ _ _ _ _ _ _ _ _ _ _

Essendo realizzato conformemente al modello prototipo campione denominato AL66 FG V, finito di testare positivamente ai fini EMC e LVD (rapporto 7037CE-AL66.doc) il 25/09/2015, dalla STP S.r.l., con sede legale in via P.F. Andrelini, 42, 47121 Forlì (FC), Italia e sede operativa in via San Donnino, 4, 40127 Bologna (BO), Italia, risulta essere conforme a quanto previsto dalle seguenti direttive comunitarie:

a) le norme armonizzate (per i punti applicabili):
- CEI EN 55014-1 (CEI 110-1);   CEI EN 61000-3-3 (CEI 110-28);
- CEI EN 55014-2 (CEI 210-47);   CEI EN 61000-4-2 (CEI 210-34);
- CEI EN 55022 (CEI 110-5);   CEI EN 61000-4-3 (CEI 210-39);
- CEI EN 55024 (CEI 210-49);   CEI EN 61000-4-4 (CEI 210-35);
- CEI EN 60065 (CEI 92-1);   CEI EN 61000-4-5 (CEI 110-30);
- CEI EN 60335-1 (CEI 61-150);   CEI EN 61000-4-11 (CEI 110-29);
- CEI EN 60335-2-82 (CEI 61-226);   CEI EN 61000-6-1 (CEI 210-64);
- CEI EN 60950-1 (CEI 74-2);   CEI EN 62233 (CEI 61-251).
- CEI EN 61000-3-2 (CEI 110-31);

b) In conformità ai requisiti essenziali di sicurezza della Direttiva Bassa Tensione:
- L. 791 del 18 Ottobre 1977 e s.m.
- 2014/35/UE del 26 Febbraio 2014;

c) in conformità ai requisiti essenziali di sicurezza della Direttiva Compatibilità Elettromagnetica:
- D.Lgs. 194 del 06 Novembre 2007.
- 2014/30/UE del 26 Febbraio 2014;

Che conferiscono la presunzione di conformità alla Direttiva 2014/30/UE

Castel San Pietro Terme (BO), Italia lì,___/___/_____

Il Presidente