

CONSOLE MAGLINK 16T





INTRODUCTION

The handbook gives all the installation and use instructions for Maglink16T console.

GENERAL WARNINGS

• Before the installation and use of the equipment please carefully read the instructions given in this handbook.

• The manufacturer is not responsible of any possible operation not mentioned in this handbook

• Any failure or faulty operation would occur to the equipment, please refer to the authorized personnel for

maintenance or directly to the manufacturer only.

• The manufacturer refuses all responsibility for any eventual injury and/or damage to things caused to the non observance

of the safety regulations.

• The assigned personnel is required to know all the safety regulations relative to the hereby described equipment.

• Any doubt may occur about the equipment running please refer to the authorized personnel for maintenance or

directly to the manufacturer.

• Tampering releases the manufacturer from any responsibility in front of the competent authority.

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DESCRIPTION

Console of level gauge monitoring and tanks alarms. Manage on the bus up to 16 probes, 28 ON-OFF sensors with RS485 model XLR and 8 SPDT programmable relay. Can be interfaced to the major management system located in the petrol station.

Main feature		
Power	100-240 VAC	
Consumption	45 VA	
Working temperature	-10°C / +50°C	
Relative umidity	Da 5% a 95% (not condensating)	
Number of probes	16	
Number of ON-OFF sensors type XLR	28	
DCD remote connection	1	
Relay output	16 + additional slave relay cards module 16	
Low power relay output	MAX 33Vac/70Vdc 2A if installed	
Serial probes comunication	RS485	
Host comunication	RS232	
Printer/Configuration communication	RS232	
Configuration communication	USB	
Enclosure	Metallic painted	
Protection	IP20	
Dimension	355x260x110 mm	



MAIN COMPONENT



Power supply, Intrinsecally safe barrier and main board.





INTERNAL CONNECTION IF EX-PROOF PROBES ARE CONNECTED







INTERNAL CONNECTION IF INTRINSECALLY SAFE PROBES ARE CONNECTED TO BRA-SIP

If sensors to be connected are less then 9 only 1 BRA-SIP is inserted

If sensors to be connected are between 9 to 16 nr. 2 BRA-SIP are inserted

If sensors to be connected are more than 16, then 2 BRA-SIP are inserted and additional external barrier must be used since 1 Barrier can supply up to 8 sensors only.





INTERNAL CONNECTION IF INTRINSECALLY SAFE PROBES ARE CONNECTED TO BRA-2SIP

If sensors to be connected are more than 16, then additional external barrier must be used since 1 Barrier can supply up to 8 sensors only on channel 1 and up to sensor only to channel 2.





CPU MAIN BOARD

This main board manages all the functions and the various devices in field through its own interface. In the drawing are indicated all functions, some of them are standard and some of them are optional.

For example, inputs, modem, can-bus are optional.



- CN6 is the RS485 bus connector. If the MAGLINK16 is connected to ex-proof probe connect probes directly here. If the MAGLINK16 is connected to intrinsically safe probe connect trough Intrinsecally Safe barrier. At this connector must be connected the slave relay card if present.
- CN2: micro SD card slot. If SD card is not present, warning is displayed on the initial screen and functionality of delivery, leakage, alarm history are lost.
- CN5: USB programming with Console_Config, install driver before.
- CN4: RS232 programming with Console_Config, local printer, DCD connection, or double Gilbarco protocol (9600N81) selectable via DIPSW1
- CN3: RS232 Host connection, refer to protocol list.
- CN10: pin 6, input1. This input is used for remote print command. Give 12V to print on connected remote printer.



DIP SWITCH SETTINGS

S1: DIPSWITCH

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- DIPSW1 OFF = Console Config, Printer or DCD connection
 - DIPSW1 ON = double Gilbarco protocol enabled for Site Manager web application
- DIPSW2 ON = listen mode for probe in push mode
- DIPSW2 OFF = request mode for probe in polling mode
- DIPSW3 ON = reconciliation and automatic leak detection enabled (only if protocol is Gilbarco, DOMS, Tokheim with extended B, C, D commands).
- DIPSW3 OFF = reconciliation disabled
- DIPSW4 ON = inverse relay activated
- DIPSW4 OFF = normal relay activated
- DIPSW5 ON = time out if in push mode, 30 min
- DIPSW5 OFF = time out if in push mode, 2 min
- DIPSW6 ON = at power up system reset, all memory cleared with default value
- DIPSW6 OFF = normal operation



Connector meaning.

CN1 CN2 CN3 CN4	: JTAG program connector : SD card connector : COM1 and ISP programming port : COM2 port
CN5	: USB port
CN6	: RS485 port
	1- Probe power output (RED or BLACK)
	2- RS485-A (BOWN)
	3- RS485-B (BLUE)
	4- GND (WHITE)
	5- EARTH
CN7	: MAGLINK16 power input (+12V) 1- +12V
	2- GND
CN8	: Relay1 connector
	1- Normaly open
	2- Common
	3- Normaly closed
CN9	: Relay2 connector
	1- Normaly open
	2- Common
	3- Normaly closed
CN10	: Inputs connector
	1- Input 6
	2- Input 5
	3- Input 4
	4- Input 3
	5- Input 2
	6- Input 1
	7- GND
CN11	: Relay3 connector
	Normaly open
	Common
	Normaly closed
CN12	: Relay4 connector
	1- Normaly open
	2- Common
	3- Normaly closed
CN13	: Relay5 connector
	1- Normaly open
	2- Common
	3- Normaly closed
CN14	: Relay6 connector
	1- Normaly open
	2- Common
	3- Normaly closed

CN15 CN16	: TFT flex connector
ONTO	1- Normaly open
	2- Common
	3- Normaly closed
CN17	: Pelay& connector
	1- Normaly open
	2- Common
	2 Normaly closed
CN18	: Pelay@ connettore
CINIO	1- Normaly open
	2- Common
	2 Normaly closed
CN10	: Polov10 connettor
CINIS	1- Normaly open
	2- Common
	2 Common 2- Normaly closed
CN20	: Pelav11 connettor
01120	1- Normaly open
	2- Common
	3- Normaly closed
CN21	· Relav12 connettor
01121	1- Normaly open
	2- Common
	3- Normaly closed
CN22	: Relay13 connettor
	1- Normaly open
	2- Common
	3- Normaly closed
CN23	: Relay14 connettor
	1- Normaly open
	2- Common
	3- Normaly closed
CN24	: Relay15 connettor
	1- Normaly open
	2- Common
	3- Normaly closed
CN25	: Relay16 connettor
	1- Normaly open
	2- Common
	3- Normaly closed



L1	: Working led
L4	: Relay1 status led
L5	: Relav2 status led
L6	: Probe power status led
L7	: Relay3 status led
L8	: Relay4 status led
L9	: Input6 status led
L10	: Input5 status led
L11	: Input4 status led
	-

- L12 : Input3 status led
- : Input2 status led L13

L14 : Input1 status led L15 : Relay5 status led L16 : Relay6 status led : Relay7 status led : Relay8 status led L17 L18

- : Dip switches : Buzzer S1
- SG1
- SV1 : Modem connector
- SV2 : Can-bus connector
- SV3 : TFT-LCD panel connector



INSTALLATION

- If mixed with air, the inflammable vapours may cause explosion. Hazardous areas may be originated therefore by the presence of gas or vapours.
- Esplosions or fire may cause damages, even lethal.
- This console is not explosion proof
- Do not install the console in hazardous area

Installation site

Into choosing the installation site, is necessary evacuate that the console must be protected against vibrations and extreme climatic conditions (in particular, high/low temperature, umidity, etc..) which might damage the electrical ciruits.

Installation procedure

Fix the console to the wall using the bracket of the console.

- 1. Fix the console in a zone protected against water and umidity.
- 2. Connect the sensor as indicated in the charter "electrical connection schematics".

Electrical connection

To realize the electrical connection procede as follow:

- Switch off all the power switch in the electrical board panel.
- Make the connection between board panel and console using the proper connection
- To Power connection using cable with 3 wires whose section is at least 1,5mm2 (phase, neutral, heart) protected.
- Be sure that the power plug used has heart round connection and be sure that there is a protection device acting against short circuit and overloads.
- The power cable must be always easy recognizable and reachable since it has disconnecting function too.
- For the probes connection see the charter "Probes and sensor connection".



In the console there is high voltage which might be letal.

MODEL OF CONNECTING PROBES

To MAGLINK16 console can be connected the following probes type:

- XMT EXD 485 polling mode (DIPSW2 pos OFF)
- XMT SI 485 polling mode (DIPSW2 pos OFF)
- XMT SI 485 push mode (DIPSW2 pos ON)
- XMT SI RF push mode (DIPSW2 pos ON) trough proper receiver.
- XLR SI 485 polling mode (DIPSW2 pos OFF)

In push mode select DIPSW5 for timeout functionality:

- DIPSW5 OFF = 2 min
- DIPSW5 ON = 30 min

Do not mix sensor in polling mode with other sensors in push mode.

Refer to their own probes manual for mechanical and electrical installation.



CONSOLE CONNECTION VIA RS232 FOR HOST CONNECTION

For distances up to 15 mt the remote connection between MAGLINK16 and host can be done using serial link RS232C.



- CN5: USB programming with Console_Config, install driver before.
- CN4: RS232 programming with Console_Config, local printer, DCD connection, or double Gilbarco protocol (9600N81) selectable via DIPSW1
- CN3: RS232 Host connection, refer to protocol list and below cabling connection.

RS232 extension cable must be realized on field following the schematic of the next page since the DB9 connector will not pass trough the cable gland.



TO MANAGEMENT SYSTEM CONNECTION

MAGLINK16T can be connected to several management systems (GILBARCO;TOKHEIM;DRESSER;TOPLEVEL (probe emulation); DIALOG; RETALIX; DOMS; ORPAK) via serial port RS232 (CN 3)

ES:

DRESSER WAYNE SINP AND TOPLEVEL (9600 N81)

	Z COLLEGAMENTO SINP L
CONSOLESYSTEMPIN 2>PIN 3>PIN 3>PIN 5>	centralina Connettore JB9 Connettore JB9 Connettore JB9 Connettore DB9 Gestionale
TOKHEIM and DIALOG (9600 7O1):	
	S COLLEGAMENTO TOKHEIM L O O
CONSOLESYSTEMPIN 2>PIN 3>PIN 3>PIN 5>PIN 4 >PIN 6	centralina Connettore DB O 2 3 5 2 3 5 Connettore DB Connettore DB Gestionale
GILBARCO Passport Europe (9600 701):	
	∑ COLLEGAMENTO GILBARCO 4
CONSOLESYSTEMPIN 2>PIN 3>PIN 3>PIN 5>PIN 4	centralina onnettore DBS 2 3 5 2 3 5 6 stionale

DOMS (9600 7E1)



PRINTER CONNECTION VIA RS232

Printer can be connected to the console for distances up to 15 mt.

Print command can be issued from front panel display for local usage or giving 12V on CN10 terminal 6 for remote printing control.

Printer must be powered via 220Vac socket.

CN4: RS232 serial print connection. For print operation be sure that DIPSW1 is OFF.

Printer can be connected to Console only after having finished the programming via Console_Config.

RS232 CX extension cable must be realized on field. Use DB9 Male connector with the following connections:

DB9M	DB9M
Console side	Printer side
2	3
3	2
5	5



If remote print control is needed then connect the supplied button to connector CN10 terminal 6 and +12V.



Button is an option for remote command printing.





PROGRAMMING

Console programming must be done using Console Config software downloadable on our web site at the following link:

 $\underline{http://win.startitaliana.com/public/Software/ConsoleConfig\%20Maglink16_TFT.exe}$



USB connection

Console programmino has to be done using USB port or RS232.

For USB programming before connecting USB cable to the PC install the driver. Download proper driver from the following link:

http://www.startitaliana.com/public/startitaliana_usb_driver.zip

Then connect the console to PC and run Console Config program.



Select the COM port associated after connection. Refer to Control Panel, system, hardware, to check the COM port number. Select the desired language



If the COM port is correct, program will start uploading the data from the console.



For each tank user must set appropriate parameter.

Channel: is possibile to select 1 of the 16 available channel.

Description: description of the tank name which will appear on the display

Address S.N.: Serial number unique written on the probe head.

Product: select the product type which is in the tank. This is used for compensated volume calculation

Capacity Tot.: Total capacity in It of the tank

Tank Height: height in mm of the tank, which is the last value of the stripping table.

Offset: Offset product float: value in mm with sign (+o-) to align the probe reading to the dipstick mechanical reading.

Zero Water: . Offset water float in mm below which is subtracted to the water float measure for water adjustment.

Tank connected: number of dispencer connected to this tank. Used for reconciliation feature, only available if the protocol type is Gilbarco Passport Europe with reconciliation enabled



ALLARM DEFINITION

In alarm definition section is possible to set various alarm trip point for each channel (probe).

Alarm HH: very high alarm point in mm

Alarm H: high alarm point in mm

Alarm L: low alarm point in mm.

Alarm LL very low alarm point in mm.

Alarm Water: water alarm point in mm.

DELIVERY PARAMETER

Minimum It/min for which the delivery event is detected

LEAKAGE PARAMETER

Liter for leakage detection

TANK LEVEL

In this section is shown the actual tank situation of the selected channel pressing refresh button.

RELAY DEFINITION

If relay are installed:

In this section relay from 1 to 32 are programmed for their own function. The relay can be managed single per channel or grouped, one relay for multiple cannel.

Relay up to 16 are integrated into the main board. Additional 17 to 32 relay are located in the expansion slave relay card to be connected on the probe bus connector CN6 just on the main board of the console. Do not connect slave relay card after BRA-SIP card.

PS: when salve relay card is connected, during installation check proper communication using Relay test functionality.



WRITE DATA ON DEVICE

With this button the settings are transferred to the console. Perform this action for each channel. If the channel is changed without transferring data to console they are lost.

CHANNEL

Select channel (tank) you want to configure

After connecting the rectangle must be green. This shows proper connection.

During data downloading the rectangle will become red. This shows proper communication.

At the end of downloading the rectangle must be green.

connected		
Tank	1 - A	•

SYSTEM CONFIGURATION

TOTAL CHANNEL: Write total channel number from 1 to 16.

TOTAL SLAVE: Write total slave number if present (optional cards up to 4)

TOTAL FUEL: number of dispencer connected to system in order to have reconciliation feature. This option is available if the protocol type is Gilbarco Passport Europe with reconciliation enabled

TOTAL SENSORS: number of ON-OFF sensor used for man-hole, sump, ..., up to 28 connected on the same probe bus.

HISTORY INTERVAL (min): Elapsed time for hystorical writing on SD card if inserted in the console. All data, alarms, movement, delivery, leakage, are written in txt file inside SD card located internally. Place 10 min in order to not have too many data.

PROTOCOL TYPE: Protocol type enabled on the RS232 for management system connection. (GILBARCO,TOHKEIM,NUOVO PIGNONE,TOPLEVEL, Probe emulation, RETALIX, DIALOG, ORPAK, DOMS), With Gilbarco, DOMS, Tokheim, Orpak protocol reconciliation and automatic leak detection are enabled if command B, C, D are received.

Otherwise only static leak detection is available, activation by front button.

DELIVERY TIMES (S): linked to delivery liter, place 60 secs to have liter/min in calculation.

PROBE RESOLUTION (mm) used for leakage detection. Modify this parameter if false alarm occour.

STATION NAME: write station name

MODEM ENABLED: only if GSM modem is installed. Write tel number for SMS alarm notification.

WRITE CONFIGURATION

Press to store the system configuration in the Maglink16. With this operation the time of MAGLINK16 will be updated to the clock time of the PC.

·	
ta corr	ettamente
Cana	le 1 - A 🔄
	Configurazione sistema
•	Total Channel 8 Total Fuel 0
-	Total Slave 0 Total Sensors 8
<u> </u>	History Interval (min) 10
	Protocol Type Pignone
-	Delivery Timer (s) 60
	Probe Resolution 0,50
-	Station Name START_ITALIANA
-	Modem enabled 🕅
•	
-	Write Configuration



STRAPPING TABLE:

The Console has the facility to calculate the volume starting from the height as linear interpolation between two near points. To do so you have to download the table.

You have to follow few rules in order to download correctly the table: The maximum number of points is 200

The table has to be written in excel or in notepad as txt document. Table is not modifiable inside Console Config.

If you write in excel remember to save it in csv (MS-DOS) format or in text (MS-DOS separated) format, and then check if the format is the one as shown above.

READ DATA FROM DEVICE: upload table which is inside MAGLINK16 for that channel

WRITE TABLE ON DEVICE: download table to MAGLINK16 for that channel

IMPORT TABLE: import txt or csv file

EXPORT TABLE: export txt or csv file

Perform this operation for each channel.

RELAY DEFINITION:

If relay are installed program their functionality. If alarm occour the programmed relay will be activated.

Relay can be used in OR combination with other channel.

Relay up to 16 are integrated into the main board. Additional 17 to 32 relay are located in the expansion slave relay card to be connected on the probe bus connector CN6 just on the main board of the console. Do not connect slave relay card after BRA-SIP card.

PS: when salve relay card is connected, during installation check proper communication using Relay test functionality.

	Probe Resolution	0,50	
	Station Name STAR	HALIANA	
-	Modem enabled		
Ţ			
		1	
	Write C	configuration	
<u> </u>	Strapping table		
-	Level (mm)	Volume (I)	
	• 0	0	
	1000	23000	
-	2000	44000	
	3000	60000	
	4000	10000	
•	*	100000	
.o_ o_ o_ o_			
	Read data from device		
	Write table on device		
	Import table Export table		

Relay definition		
1.1	Notused	•
1.2	Not used	•
1.3	Notused	-
1.4	Not used	-
.5	Notused	-
1.6	Notused	•
1.7	Notused	~
1.8	Notused	•
.9	Notused	•
.10	Notused	-
.11	Notused	•
.12	Notused	•
.13	Notused	~
1.14	Notused	×
.15	Notused	•
1.16	Not used	*



RECONCILIATION FUEL DISPENCER CONFIGURATION

On this folder is possible to configure the Dispencer for the reconciliation features. This is available only if DIPSW3 is ON and if the protocol enabled is Gilbarco with reconciliation command B,C,D are enabled.

ConsoleConfig - V. 21.0.0.0				
COM N. Language () Italiano	Centralina collega	ata correttamente		
1 C English		Canale 1 - A		
PROBE SLAVE FUEL ON/OFF				
Dispenser N	•			
Meter number tt_s1				
Meter ID 1	Meter ID 2	Meter ID 3		
lank	Tank	Тапк		
Tank - 1 -	Tank - 1 -	Tank - 1 🕤		
Meter ID 4	Meter ID 5	Meter ID 6		
	Tank	Tank 1		
Write data				
R: OK D: WRITE S	YSTEM: 8 0 0 10 0 2012 2 29 16 14 6			
8	-1 0 0.50 START_IT	ALIANA		
R: OK				
D: \$\$\$\$ R: Configu:	ration stored in Flash			

Each dispencer can have up to 6 meter installed inside. In this section is possible to match the meter ID with the tank from which the fuel is taken.



ON-OFF SENSOR CONFIGURATION

On this folder is possible to configure the on-off sensor connected on the same bus of the probe. Here are activated the sensor number configured in the system configuration in the Sensor number section.

ConsoleConfig - V. 21.0.0.0	and the second second second		
COM N. Language © Italiano	Centralina colleg	gata correttamente	
C English		Canale 1 - A	•
PROBE SLAVE FUEL ON/OFF			
SENSOR ON/OFF	Reed - 7		
Descrizione Pozz	zetto 4		
Indirizzo S N 0002	1		
	10 4 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5		
	Write Data		
	8		
	R: OK		
	D: \$\$\$\$ R: Configuration stored in Flash		
	D: READ_SN07		
	R: SN_07_00021_Pozzetto 4		

Select sensor ON-OFF number, write description and sensor address.

Be sure that their address is unique and no double address must exist in the all connected sensors.



PANEL OPERATION AND DISPLAY

Panel has 6 arrow:



These are soft keys, for each key pressed a bip is alerted.









DISPLAY PAGE

HOME PAGE

At power up the first page will be displayed for few seconds in which there are main system information such as:

- Firmware version
- Total channel enabled
- Mode:
 - o Request for polling probes
 - o Listen for push probes
- Protocol selected
- Date and time



In all pages at the top is screen is displayed all the tank by a rectangle who can have different colour accordingly to the tank status.

The possible colour of the rectangle icon can be as follow:

- White: probe no reply
- Green: no alarm occour
- Red: alarm is occourring, check the alarm page
- Yellow: warning is occourring: check the alarm page.
- Violet: leakage occour.

In all pages at the bottom screen there are the following informations:

- Page number for reference
- Date and time
- Polling cycle and total probes to be polled
- GSM field if installed
- Leakage detection if activated
- Anti-theft if activated

From this page before it changes by itself, pressing Return soft key you can activate manual leakage detection and antitheft functionality.

The detection algorithm is the same, it starts after 10 minutes of registration and if antitheft the alarm is given as soon as a decreasing is registered, if leakage after 2 hours as EPA rules are specifying.

If reconciliation is enabled and Gilbarco or DOMS or Orpak or Tokheim protocol are enabled with extended commands set B, C, D, only the leak detection is activated automatically looking when there is no any dispencer in busy and results are given only if at least 2 hours are passing without any dispencer usage.



		START	ITALIANA	- TANK	LIST	
Т	Addr.	mm Prod	mm water	Status	Last Answ	
01	00001	1163.4	0	0	15:37:19	
02	00002	804.5	0	0	15:37:20	
03	00003	2153.5	0	0	15:37:16	
04	00004	2277.2	Ò	0	15:37:17	
05	00005	940.6	0	0	15:37:17	
06	00006	975.2	0	0	15:37:18	
97	00007	910.9	0	0	15:37:18	

After few sec Maglink16 goes in the general page where the list of all tanks is displayed.

Pressing left and right soft key is possible to switch between the pages, pressing up and down will scroll the tanks.

START ITALIANA - TANK LIST							
Т	Addr.	Lt Prod	Lt water	Тетр	Ullage		
01	00001	4654	0	15.0	4846		
02	00002	3218	0	15.0	6282		
03	00003	8614	0	15.0	886		
04	00004	9109	0	15.0	391		
05	00005	9406	0	15.0	38094		
06	00006	9752	0	15.0	37748		
07	00007	9109	0	15.0	38391		
050	9	2	9/02/2012	15:37:	16	T: G	5/08

Pressing RETURN soft key the display will arrive at these pages.



Pressing ENTER soft key a single tank page is displayed:

	DET	AIL: TAN	K - 01		
TANK 01	ALAF	RMS (mm)	PRODUC	T	
	HH	500	H (mm)	334.33	
	Н	400	Vol (l)	4179	
	L	300	Ullage (l)	5321	
	LL	200	Vol 15 (l)	4175	
A A A	h20	10	т (с)	18.3	
V 6 XY		ATCO	H (mm)	0.0	
		ATER	Vol (l)	0.0	
100	23/02/2012-10:08:16 T: 01/01				

Pressing up-down key Tanks are scrolled

Pressing right/left soft key tank details configuration is displayed:

	DETAIL:	TANK - 01	
Probe Address	05763	Conversi	ion table
Capacity (1)	10000	m	liter
Her Unight (mm)	800	0.00	0.00
Max Hergine (IIII)	000	800.00	10000.00
Offset (mm)	30.0	-1.00	-1.00
Zero H20 (mm)	30.0		
Dlv. Vol. (l)	20.0		
Leakage (l)	20		
110	23/02/201	12-10:13:43	T: 01/0

pressing up-down key Conversion table will scroll to display up to 200 linearization points.



Pressing right/left soft key hystorical tank graph is displayed:

Ľ	History: TANK - 01 - Product (l) Date: 2012/02/29
120	29/02/2012-15:37:53 T: 06/08

pressing up-down other days are scrolled

Pressing right/left soft key diagnostic of probe is displayed:

	DIAGNOSTIC VALUES: TANK - 01	
Ver.:	3 516.3	
Temp:	150 181 150 150 150 150 150 150 150	150 150 0
Diagn.	: 00018.51 00304.33 08392.33 1.005 105	8 105 0



Pressing ENTER soft key print page is displayed:



It is possible to print also shorting with button CN10 pin 6-7, for remote printing purposes.

Pressing right/left soft key Liter movement of tank is displayed:

Delivery are displayed in white lines

Leakage are displayed in red lines

These data are retrieved from SD card

LITE	R MOVEME	NTS: TAN	K - 01]			
Date / Time	Start	End	Q.ty	Time			
2012/02/29-15:05	1683	5990	4307	4			
2012/02/29-14:59	1881	3416	1535	3			
2012/02/29-14:07	1188	8069	6881	5			
2012/02/23-10:14	4179	4870	690	4			
2012/02/23-09:20	2011	2358	346	3			
2012/02/21-09:41	3218	4752	1534	3			
2012/02/17-09:49	3762	3937	175	3			
2012/02/16-11:34	2227	2325	98	2573			
130	29/02/201	2-15:38:	03	T:	07/08		



Pressing ENTER soft key tank alarm is displayed:

	ALAR	MS LIST			
Date / Time	TANK	ALARM	Туре		
29/02/2012 15:16	01	PROBE	CLEAR		
29/02/2012 15:15	01	PROBE	NEW		
29/02/2012 15:15	01	HIGH HIGH	CLEAR		
29/02/2012 15:13	01	HIGH HIGH	ACK		
29/02/2012 15:13	01	HIGH HIGH	NEW		
29/02/2012 15:13	01	HIGH	CLEAR		
29/02/2012 15:12 01 HIGH			NEW		
29/02/2012 15:07 01 LOW LOW CLEAR					

When alarm occour a discontinuous beep is sounded and the event is stored in SD card.

Alarm needs to be acknowledge, go to alarm page and press LEFT soft key, this event will be stored in SD card and cleared the sound.

If alarm is restored by itself beep will finish and the event will be stored in SD card.

Lines can have 3 different colour:

- RED: alarm occour NEW
- YELLOW: alarm acknowledge, ACK
- GREEN: alarm cleared, CLEAR

With up/down soft key alarm list will scroll to display the last 150 stored alarms.

Data, time, tank number, alarm code and status are stored in SD card

Alarm codes are as follow:

01	No Probe Link	Probe is not reply, check address and cabling
02	High	Product level is above the alarm H value
03	Low	Product level is below the alarm L value
04	Out of Range	Product level is above the last value of the strapping table, control mm to It table
05	Probe	Probe is replying without valid measure, check floats, check bending
06	High High	Product level is above the alarm HH value
07	Low Low	Product level is below the alarm LL value
10	Water	Water level is above the water alarm
00	No alarm	No alarm
12	Water + High	Water alarm + H product alarm
13	Water + Low	Water alarm + L product alarm
16	Water + High High	Water alarm + HH product alarm
17	Water + Low Low	Water alarm + LL product alarm



When alarm occour in the tank detail display the alarm field will change background colour to show the activated alarm as visible in the next figure.



	DET	AIL: TAN	K - 01		
TANK 01	ALAR	MS (mm)	PRODUC	T -/	
	HH	500	H (mm)	495.39	
	Н	400	Vol (l)	6192	
	L	300	Ullage (l)	3308	
M. ADA SCO	LL	200	Vol 15 (l)	6186	
	h2o	10	T (C)	18.1	
E Q XX		ATCO	H (mm)	42.7	
	W	ATER	Vol (l)	533.4	
100	23/0	2/2012-1	0:17:33	T: 01/0	91



TEST RELAY

From this page is possible to test relay manually to verify some external action.

Follow the instruction on the screen.

ON/OFF SENSOR - OK	PCB SLAVE RELAY - OK
RELAY SIT	TUATION
RELAY N. 01	RELAY N. 09
RELAY N. 02	RELAY N. 10
RELAY N. 03	RELAY N. 11
RELAY N. 04	RELAY N. 12
RELAY N. 05	RELAY N. 13
RELAY N. 06	RELAY N. 14
RELAY N. 07	RELAY N. 15
RELAY N. 08	RELAY N. 16
Tasto DESTRO per ent	trare in modo TEST
400 29/02/2012	-16:00:40 T: 02/08

When relay is activated is RED, when relay is not activated is GREEN.

On the exit from this page the relay functions are automatically set back as normal working.

At the top of the page, if the slave relay card is connected, PCB SLAVE RELAY CARD – OK is adviced to be sure that the slave card is under control.

PS: when salve relay card is connected, during installation check proper communication using Relay test functionality.





ON-OFF SENSOR

In this page is displayed the status of the external ON-OFF sensor connected to the console

ON/OFF SENSOR - ALARM 08							
START_ITALIANA - SENSOR LIST							
S	Addr.	Descr	Status				
01	00015	Pozzetto 1	NO LINK				
02	00016	Pozzetto 2	NO LINK				
03	00017	Erogatore 1	NO LINK				
04	00018	Erogatore 2	NO LINK				
05	00019	Pozzetto 3	NO LINK				
06	00020	Erogatore 3	NO LINK				
07	00021	Pozzetto 4	NO LINK				
500	9	29/02/2012-16:14	:14	SE:04/08			

Status can be: NO LINK OK ALARM

At the top of each page, is ON-OFF sensor are configured, always is displayed the number of sensor in alarm so the situation is under control from wherever page is displayed.

If alarm occour, the total number of ON/OFF alarm are displayed on the top of the display, a beep is alerting. To clear the beep from whatever page must press the return soft key.



STATIC LEAK DETECTION CONTROL

If SD card is missing this function is disabled.

From the home page, within 3 sec, if return is pressed Static Leak detection is enabled/disabled



Leak detection procedure is based on an algorithm which keeps under control the tank. It is mandatory that no any movement will occour in the tank during the activation period.

Result will be given at least after 2 hours of observation and whatever result is stored in SD card and displayed in the leak detection page for single tank.

If leakage occour after 2 hours Relay nr. 1 will be activated for 1 sec to advice of the alarm.



ANTITHEFT DETECTION CONTROL

If SD card is missing this function is disabled.

From the home page, within 3 sec, if return is pressed Antitheft detection is enabled/disabled



After 10-15 minutes the system is active and if leakage occour Relay nr. 1 will be activated for 1 sec to advice of the alarm.





UART LOGGER

In this page is possible to see the data activity of the serial link for diagnostic purposes

		UART LOGGER						
2	TX	M00005						
2	TX	M00006						
2	RX	00006=0=+150=09406=0000=222						
2	TX	M00006						
2	RX	00006=0=+150=09752=0000=227						
2	TX	M00007						
2	RX	00007=0=+150=09109=0000=224						
2	RX							
80	0	29/02/2012-15:37:07	T: 01/08					





REVISION INDEX

DATA	REV NUMBER	DESCRIPTION
1-3-12	1	INITIAL RELEASE
10-10-12	2	