

CONSOLE MAGLINK 32



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REVISION INDEX

DATE	REVISION N.	DESCRIPTION
04/2010	2	Revisione generale
09/2014	3	Maglink ultima versione – cambio scheda

INTRODUCTION

The handbook gives all the installation and use instructions for XMT and SMT level probes.

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.



This product is used in fuel tanks and in hazardous areas for risk of explosion and fire. Subterranean leakage of the fuel tanks may cause serious damages to environment and injury.

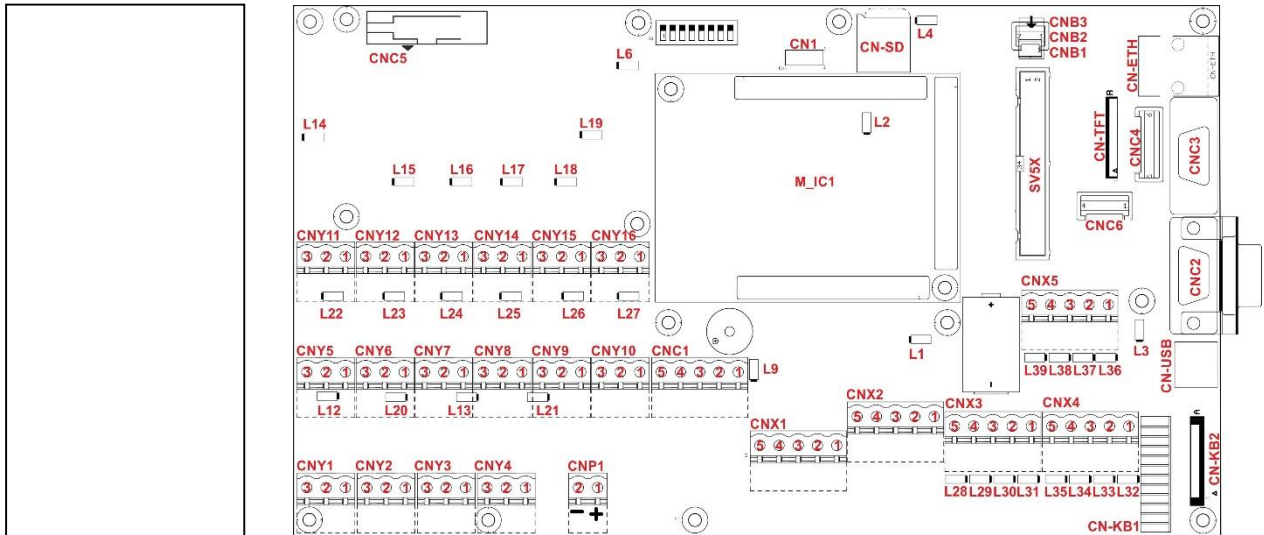
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DESCRIPTION

Console of level gauge monitoring and tanks alarms. Manage on the bus up to 32 probes and 16 SPDT programmable relay. Can be interfaced to the major management system located in the petrol station.

Main featuresi	
Power	100-240 VAC
Consumption	45 VA
Working temperature	-10°C / +40°C
Relative umidity	Da 5% a 95% (not condensing)
Number of probes	32
External on/off sensors	Up to a 16
Relay output	8/16/32
Low power relay output	4 to 12 MAX 33Vac/70Vdc 2A
Serial probes comunication	RS485
Host comunication	RS232, USB
Printer comunication	RS232
Configuration comunication	USB
Enclosure	Metal fire painted
protection	IP20
Dimension	320X240X130

MAIN COMPONENT

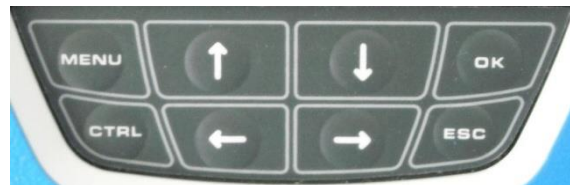
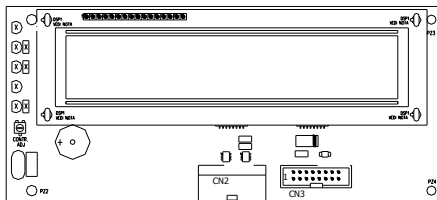


1

2

3

4



Pos	Component	
1	Power supply 12 V 2,1 A	
2	CPU main board	
3	Display operator	
4	Keyboard operator	

CPU MAIN BOARD

This main board manages all the functions and the various devices in field through its own interface.



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, humidity, etc.) which might damage the electrical circuits.

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 humidity.
2. Connect the sensor as indicated in the charter "electrical connection schema".

ELECTRIAL 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 MAGLINK32 console can be connected the following probes type:

- XMT EXD 485
- XMT SI 485
- XMT SI RF trough proper receiver.

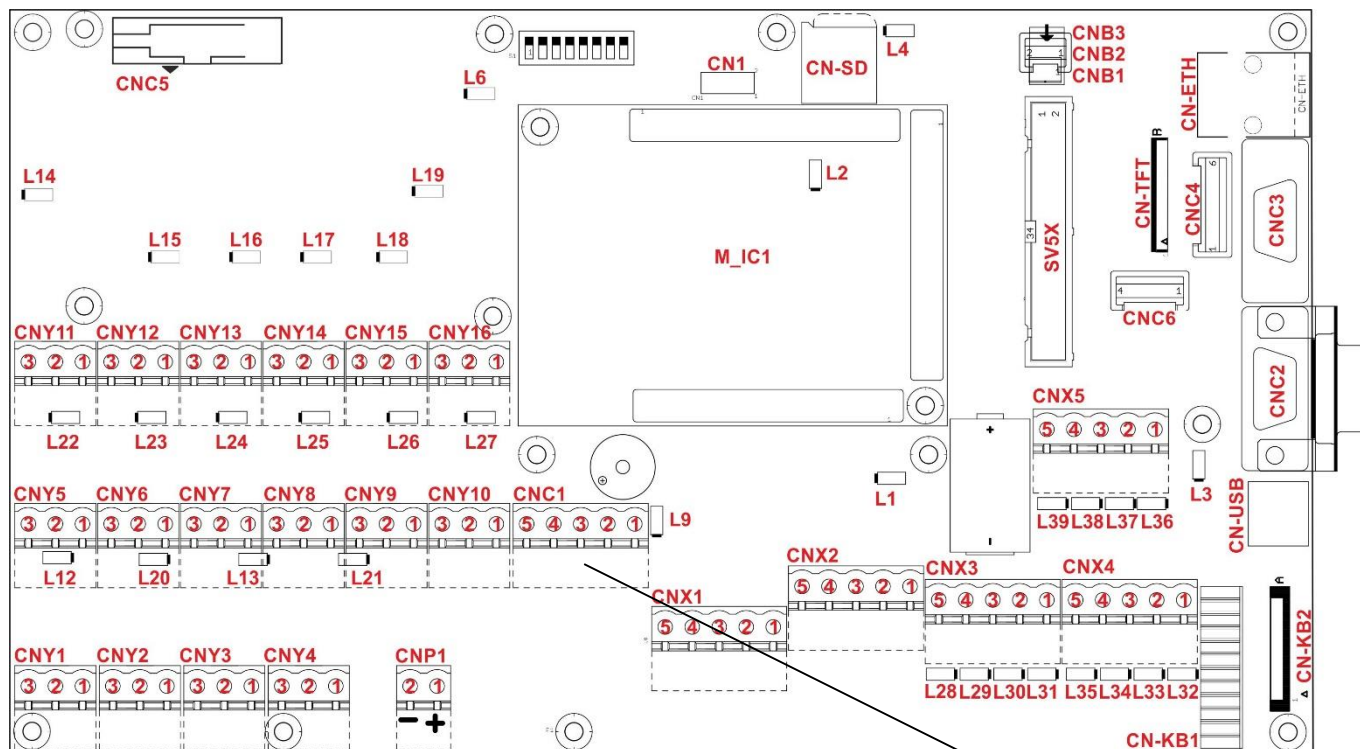
Refer to their own manual for mechanical and electrical installation.

CONFIGURAZIONE DIPSWITCH

DIPSWITCH1:	ON=double Gilbarco
DIPSWITCH2:	not used
DIPSWITCH3:	ON=reconciliation
DIPSWITCH4:	ON= relay inverion
DIPSWITCH5:	ON=Gilbarco, send last 10 delliverys
DIPSWITCH6:	ON=system reset

PROBES AND SENSOR CONNECTION

On the main board there is CN14 connector for the bus RS485 probes connection.

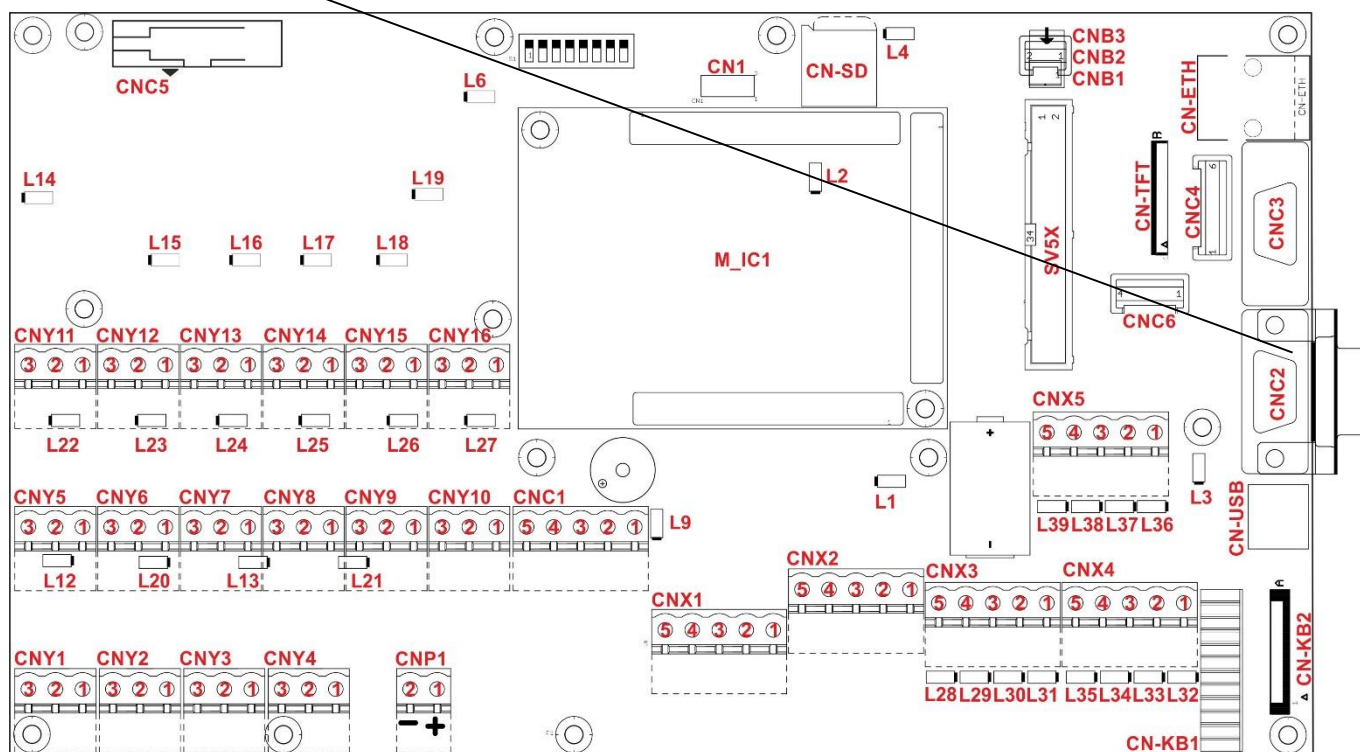


CN 14: PROBES CONNECTION RS485 o RECEIVER RF
PIN 1: SHIELD
PIN 2: -0Vcc (WHITE)
PIN 3: RS 485 A (BROWN)
PIN 4: RS 485 B (BLUE)
PIN 5: +12Vcc,1.5A (RED/BLACK)

CONSOLE CONNECTION VIA RS232 FOR HOST CONNECTION

For distances up to 15 mt the remote connection between MAGLINK32 and host can be done using serial link RS232C.

CN 13
SERIAL PORT RS 232 FOR MANAGEMENT EXTERNAL SYSTEMS



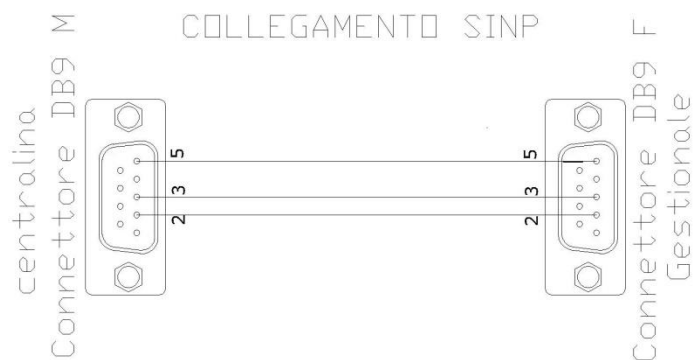
TO MANAGEMENT SYSTEM CONNECTION

MAGLINK32 can be connected to several management systems (GILBARCO; TOKHEIM; DRESSER; TOPLEVEL) via serial port RS232 (CN 13).

ES:

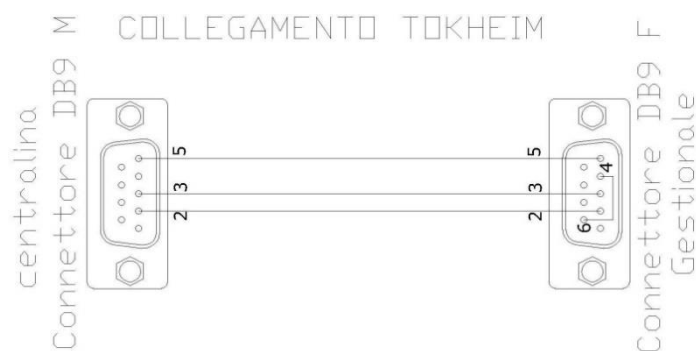
DRESSER WAYNE SINP E TOPLEVEL:

CONSOLE		SYSTEM
PIN 2	>	PIN 2
PIN 3	>	PIN 3
PIN 5	>	PIN 5



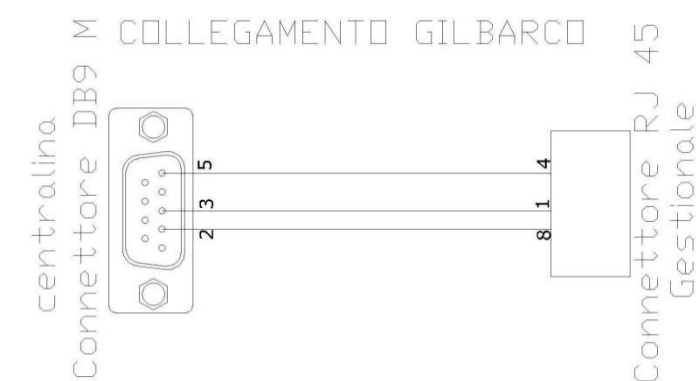
TOKHEIM:

CONSOLE		SYSTEM
PIN 2	>	PIN 2
PIN 3	>	PIN 3
PIN 5	>	PIN 5
		PIN 4 > PIN 6



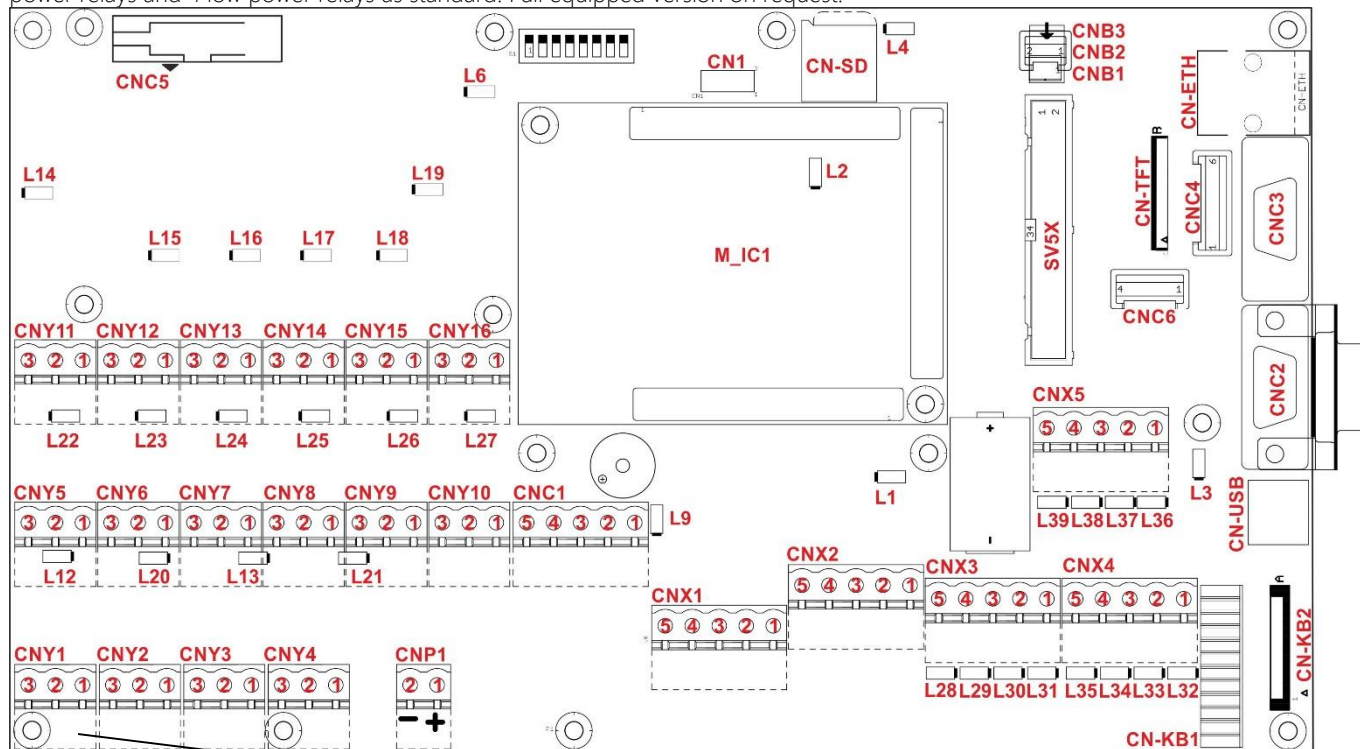
GILBARCO:

CONSOLE		SYSTEM
PIN 2	>	PIN 8
PIN 3	>	PIN 1
PIN 5	>	PIN 4



RELAYS CONNECTION

This main board allows to activate relays associate to alarms programmed during setup phase. The console is equipped with 4 power relays and 4 low power relays as standard. Full equipped version on request.



CNY1 – 16 → Relay 1 - 16

Low power relay MAX 33Vac/70Vdc 2A
CN 28; CN 29; CN 30; CN 31

PIN 1: NC
PIN 2: COMMON
PIN 3: NA

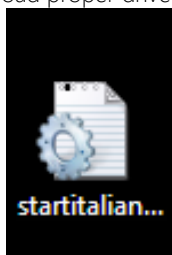
PROGRAMMING

Console programming must be done using Console Config software downloadable on our web site.

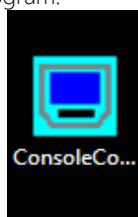


USB CONNECTION

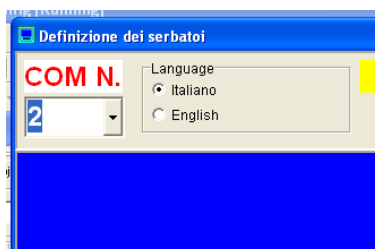
Console programming can be done using USB port. For the first connection before connecting USB cable to the PC install the driver. Download proper driver from our web site.



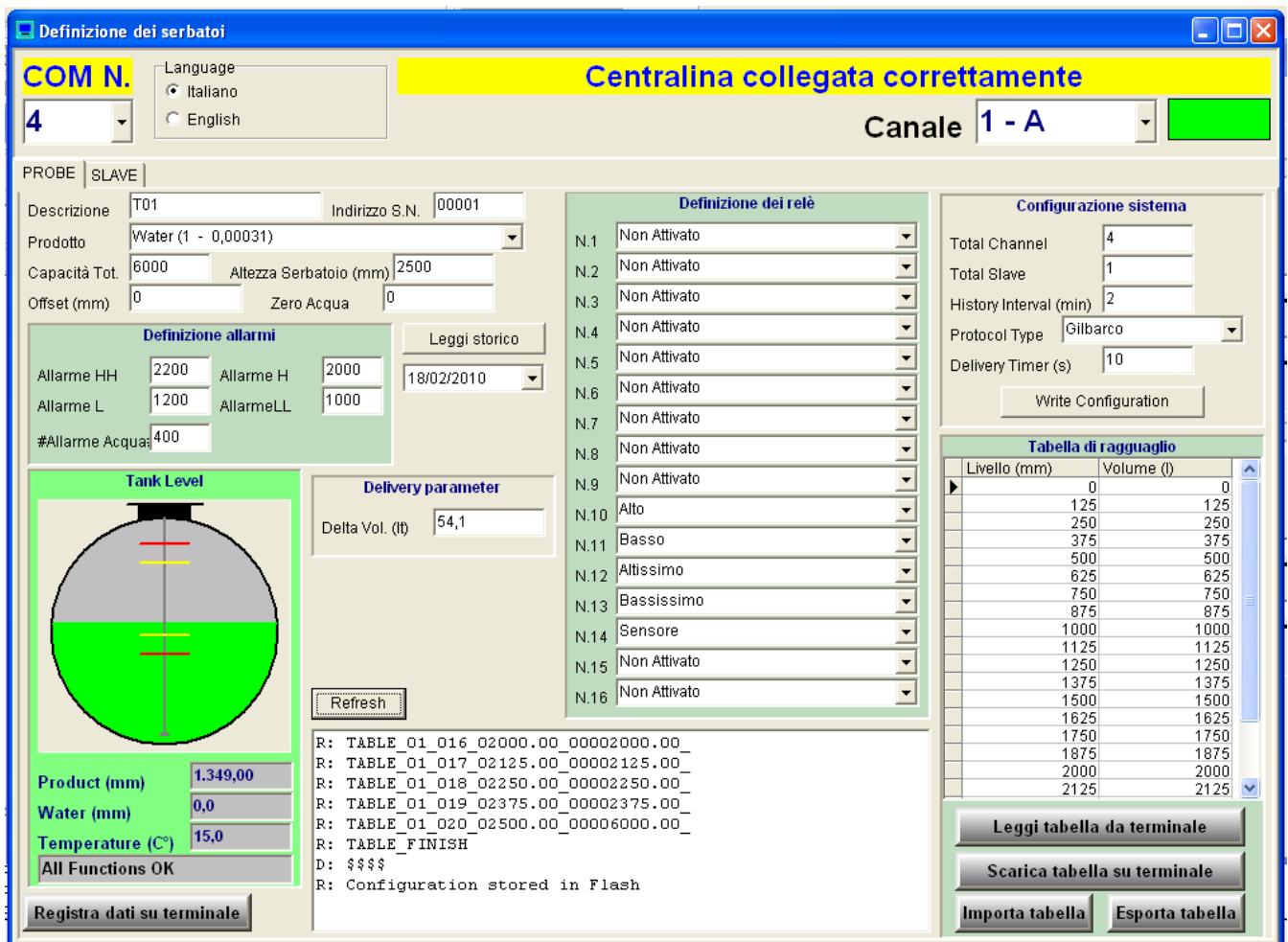
Then connect the console to PC and run Console Config program.



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



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



Definizione dei serbatoi

COM N. **4** Language ☒ Italiano ☐ English

Centralina collegata correttamente

Canale **1 - A**

PROBE | SLAVE

Descrizione: T01 Indirizzo S.N.: 00001

Prodotto: Water (1 - 0,00031)

Capacità Tot.: 6000 Altezza Serbatoio (mm): 2500

Offset (mm): 0 Zero Acqua: 0

Definizione allarmi

Allarme HH: 2200 Allarme H: 2000

Allarme L: 1200 Allarme LL: 1000

#Allarme Acqua: 400

Leggi storico: 18/02/2010

Definizione dei relé

N.1 Non Attivato

N.2 Non Attivato

N.3 Non Attivato

N.4 Non Attivato

N.5 Non Attivato

N.6 Non Attivato

N.7 Non Attivato

N.8 Non Attivato

N.9 Non Attivato

N.10 Alto

N.11 Basso

N.12 Altissimo

N.13 Bassissimo

N.14 Sensore

N.15 Non Attivato

N.16 Non Attivato

Configurazione sistema

Total Channel: 4

Total Slave: 1

History Interval (min): 2

Protocol Type: Gilbarco

Delivery Timer (s): 10

Write Configuration

Tabella di ragguglio

Livello (mm)	Volume (l)
0	0
125	125
250	250
375	375
500	500
625	625
750	750
875	875
1000	1000
1125	1125
1250	1250
1375	1375
1500	1500
1625	1625
1750	1750
1875	1875
2000	2000
2125	2125

Tank Level

Product (mm): 1.349,00

Water (mm): 0,0

Temperature (C°): 15,0

All Functions OK

Registra dati su terminale

Delivery parameter

Delta Vol. (lt): 54,1

Refresh

R: TABLE_01_016_02000.00_00002000.00_

R: TABLE_01_017_02125.00_00002125.00_

R: TABLE_01_018_02250.00_00002250.00_

R: TABLE_01_019_02375.00_00002375.00_

R: TABLE_01_020_02500.00_00006000.00_

R: TABLE_FINISH

D: \$\$\$

R: Configuration stored in Flash

Leggi tabella da terminale

Scarica tabella su terminale

Importa tabella

Esporta tabella

Channel: is possibile to select 1 of the 32 available channel.

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

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

Product: select the product type which is in the tank.

Capacity Tot.: Total capacity in lt of the tank

Height tank: 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.

ALLARM DEFINITION

In alarm definition section is possibile 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.

TANK LEVEL

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

RELAY DEFINITION

In this section relay from 1 to 16 are programmed for their own function. The relay can be managed single per channel or grouped, one relay for multiple channel

WRITE DATA ON TERMINAL

With this button the settings are transferred to the console. Perform this action for each channel.

CHANNEL

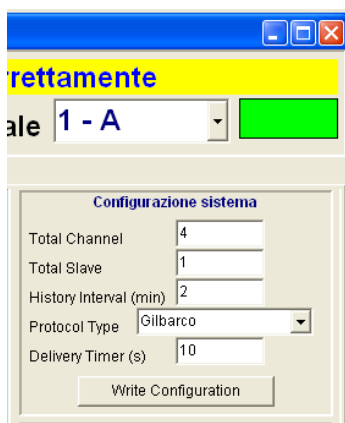
Select channel (tank) you want to configure



SYSTEM CONFIGURATION

TOTAL CHANNEL: Write total channel number from 1 to 32.
TOTAL SLAVE: Write total slave number if present (DIGIMON salve display)
HISTORY INTERVAL (min): Elapsed time for hystorical writing on SD card if inserted in the console
PROTOCOL TYPE: Protocol type enabled on the RS232 for management system connection. (GILBARCO, TOHKEIM, NUOVO PIGNONE, TOPLEVEL), With Gilbarco 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):



WRITE CONFIGURATION

Press to store the system configuration in the Maglink

STRAPPING TABLE:

The Console has the facility to calculate the volume starting from the height as linear interpolation between two subsequent 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 500

The table has to be written in excel or in notepad as txt document.

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.

Tabella di ragguglio	
Livello (mm)	Volume (l)
0	0
125	125
250	250
375	375
500	500
625	625
750	750
875	875
1000	1000
1125	1125
1250	1250
1375	1375
1500	1500
1625	1625
1750	1750
1875	1875
2000	2000
2125	2125

Leggi tabella da terminale

Scarica tabella su terminale

Importa tabella

Esporta tabella



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