INSTALLATION MANUAL

CONSOLE MAGLINK 8T

INDEX

REVISION INDEX

DATE	REVISION NUMBER	DESCRIPTION	Firmware revision
10-11-14	0	INITIAL RELEASE	5.0.2

INTRODUCTION

The handbook gives all the instructions for installation and use of Maglink 16T console.

GENERAL WARNINGS

- Please read carefully the instructions given into this handbook before working on this equipment.
- The manufacture is not responsible of any operation performed but not mentioned in this handbook.
- In case any failure or faulty operations occurs, please refer to authorized people in charge for maintenance or directly to the manufacturer.
- The manufacturer refuses all responsibility for any eventual injury and/or damage to things caused by the missing observation of the safety requirements.
- The assigned personnel is required to know all the safety requirements relative to this equipment.
- In case any doubt occurs about functioning of the equipment please refer to authorized people for maintenance or directly to the manufacturer.
- Every tampering of the equipment relieves the manufacturer from any responsibility in front of competent authorities.

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

Note: Start Italiana Srl, in respect of its quality duties may modify its production and the data shown on this handbook. This manual cannot reproduced, neither partially, without authorization.

This product complies with EU Directive 2002/96/EC.
The crossed-bin symbol on the device indicates that the product, at the end of its lifecycle, should be disposed separately from household waste, must be brought to a collection point for electrical and electronic equipment.

DESCRIPTION

Console for monitoring level gauge and tanks alarm. Bus management up to 8 probes.
Can be connected with the major management systems located in petrol stations.

Main characteristics:	
Supply	100-240 VAC
Consumption	45 VA
Working temperature	-10°C / +40°C
Relative humidity	From 5% to 95% (non condensing)
Number of probes	8
Number of ON-OFF sensors type XLR	0
Number of slave display 2 ch	0
Relay output	0
Low power relay output	0
Serial communication with the probes	RS485
Host Communication	RS232
Communication with configuration	RS232
Communication with configuration	USB
Enclosure	Plastic box
Protection	IP41
Dimensions	200 x 150 x 80 mm

COMPATIBLE PROBES MODEL LIST

The following models of probes can be connected to MAGLINK16T console:

- XMT EXD 485
- XMT SI 485
- XMT SI RF

INSTALLATION

- If mixed with air, the flammable vapors may cause explosion. Hazardous areas may be originated therefore by the presence of gas or vapors.
- Explosions or fires may cause damage, even lethal.
- This console is not explosion proof.
- Do not install the console in hazardous area.

INSTALLATION SITE

About choosing of the installation site, it is necessary to consider the console must be protected against vibrations and extreme climatic conditions (in particular high/low temperatures, humidity, etc.) which may damage the electrical circuits.

START ITALIANA SRL

Via Pola, 6 – 20813 Bovisio Masciago (MB) ITALY

MAGLINK16T Serial nr: xxx

Voltage: *100-240V 50-60Hz*
Power: 45VA
FUSE: 250V 1A L

Working Temperature: -10°C + 40°C

CE

INSTALLATION PROCEDURE

Fix the console to the wall using the holes on the plastic enclosure. Please be sure it is installed into an area protected from humidity and sprinkles of water.

220Vac ELECTRICAL CONNECTION

To realize the electrical connection please proceed as follow:

- Switch off all the power switches on the electrical board panel.
- Connect the board panel to the console using the appropriate connectors.
- For connection to the driving force, please use cable with 3 wires whose section is at least 1,5 mm^2 (phase, neutral, earth) adequately protected.
- Be sure that the power plug used has earth round connection and that there is a protection device acting against short circuits and overloads.
- The power cable must be always easy recognizable and reachable since it has disconnecting function too.

About probes connection, please refer to chapter “Probes connection”.

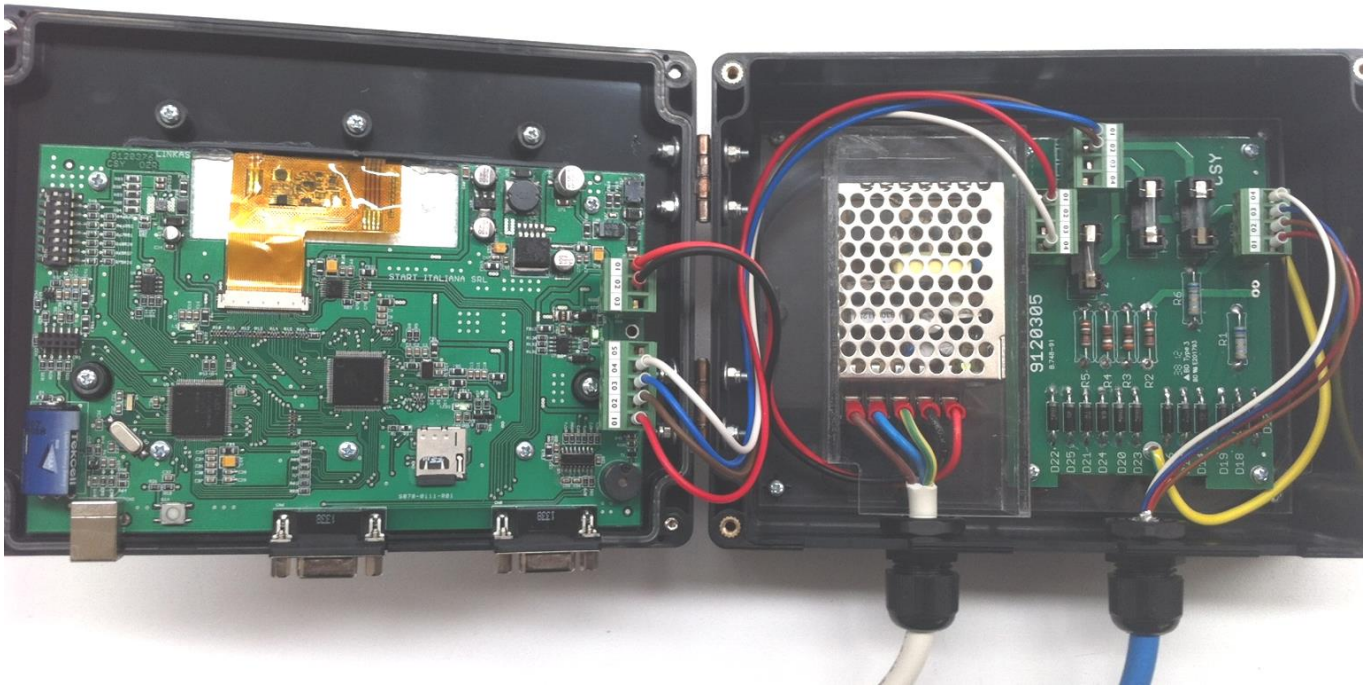
⚠

- There is high voltage into the console which may be lethal.
- The equipment installed in hazardous areas shall be explosion-proof or intrinsically safe according to the degree of protection required.

MAIN COMPONENTS

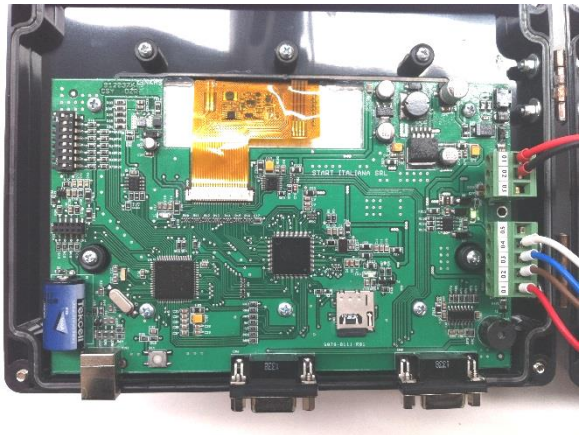
Main view:

Power supply, intrinsically safe barrier and CPU

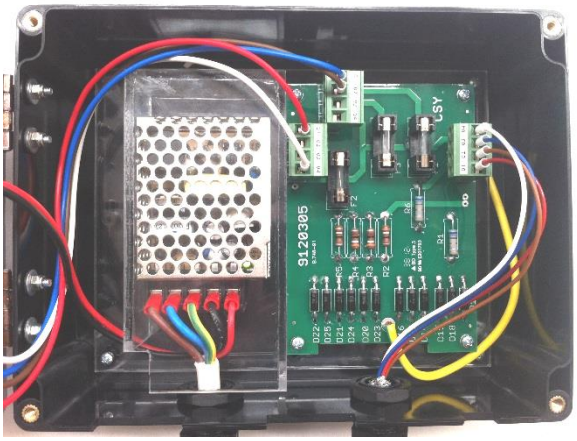


Details:

CPU

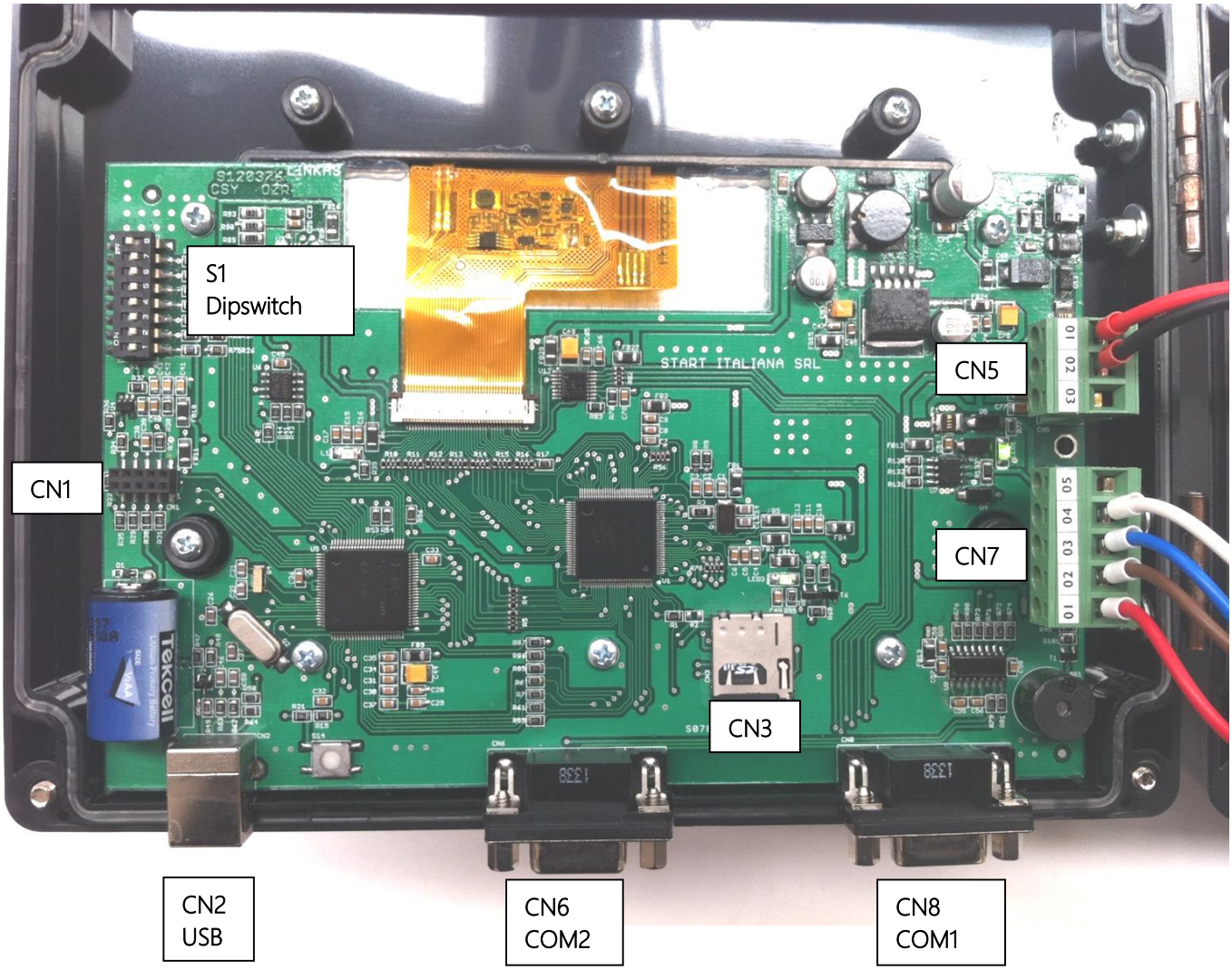


Power supply and Intrinsically safe barrier



CPU MAIN BOARD

The main board manages all the functions of the console and various field devices through its own interface.
Below are indicated all possible functions.



CN7 is the RS485 bus connector.

The following products can be directly connected to this connector:

- ex-proof probes
- RF receiver
- BRA-SIP in case of intrinsically safe probes

CN3: micro SD card slot. If SD card is not present, date and time are red highlighted and all functionality of delivery, leakage and alarm history are not available.

Connectors functions:

CN1 : JTAG programming connector
CN3 : SD card connector
CN8 : COM1 and ISP programming port
CN6 : COM2 port
CN2 : USB port
CN7 : RS485 port

1- Probe power output (RED or black)
2- RS485-B (Brown)
3- RS485-A (Blue)
4- GND (White)
5- Not used

CN5 : MAGLINK16 power input (+12V)

1- +12V
2- GND

S1 : Dip switches

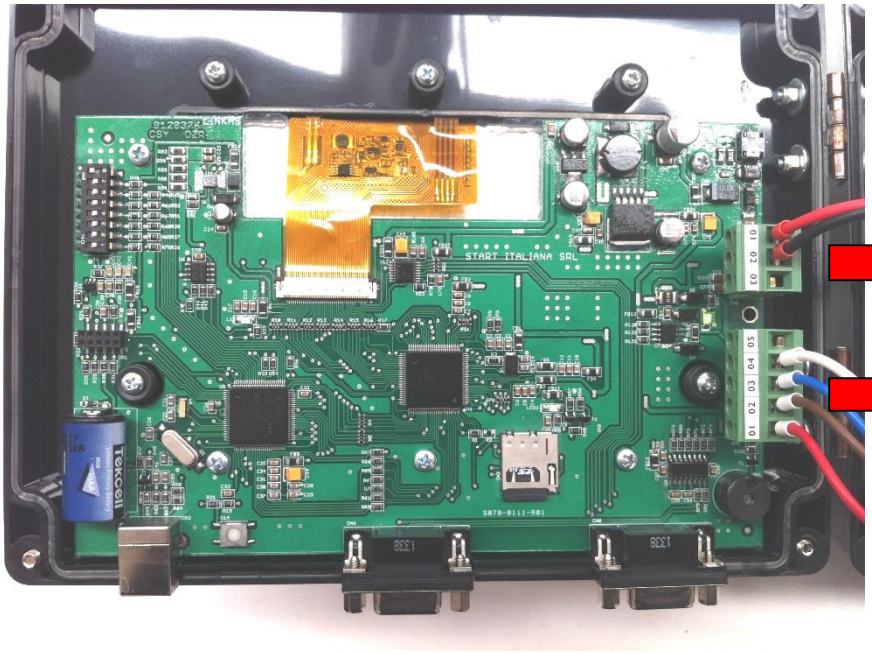
DIP SWITCH SETTINGS

S1: DIPSWITCH

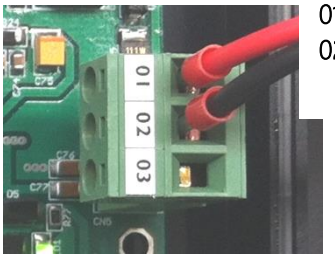
- DIPSW1 OFF = Console Config
- DIPSW1 ON = Double Gilbarco protocol enabled for Site Manager web application
- DIPSW2 OFF = normal operation
- DIPSW2 ON = leakage control disabled
- DIPSW3 ON = spare for future use
- DIPSW3 OFF = spare for future use
- DIPSW4 ON = spare for future use
- DIPSW4 OFF = spare for future use
- DIPSW5 ON = spare for future use
- DIPSW5 OFF = spare for future use
- DIPSW6 ON = all memory cleared with default value at the power up system reset
- DIPSW6 OFF = normal operation
- DIPSW7 ON = firmware update enabled
- DIPSW7 OFF = firmware update disabled (normal operation)
- DIPSW8 ON = watchdog enabled (normal operation)
- DIPSW8 OFF = watchdog disabled to allow firmware update

PROBES CONNECTION

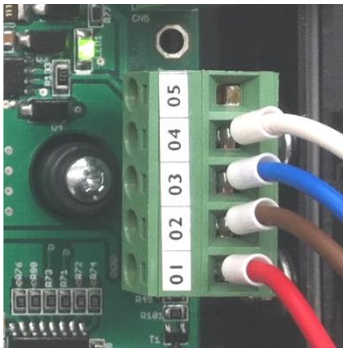
CONNECTION TO XMT AND XMT-SI-RF PROBES



12V from
Power supply



01. +12V
02. -0V



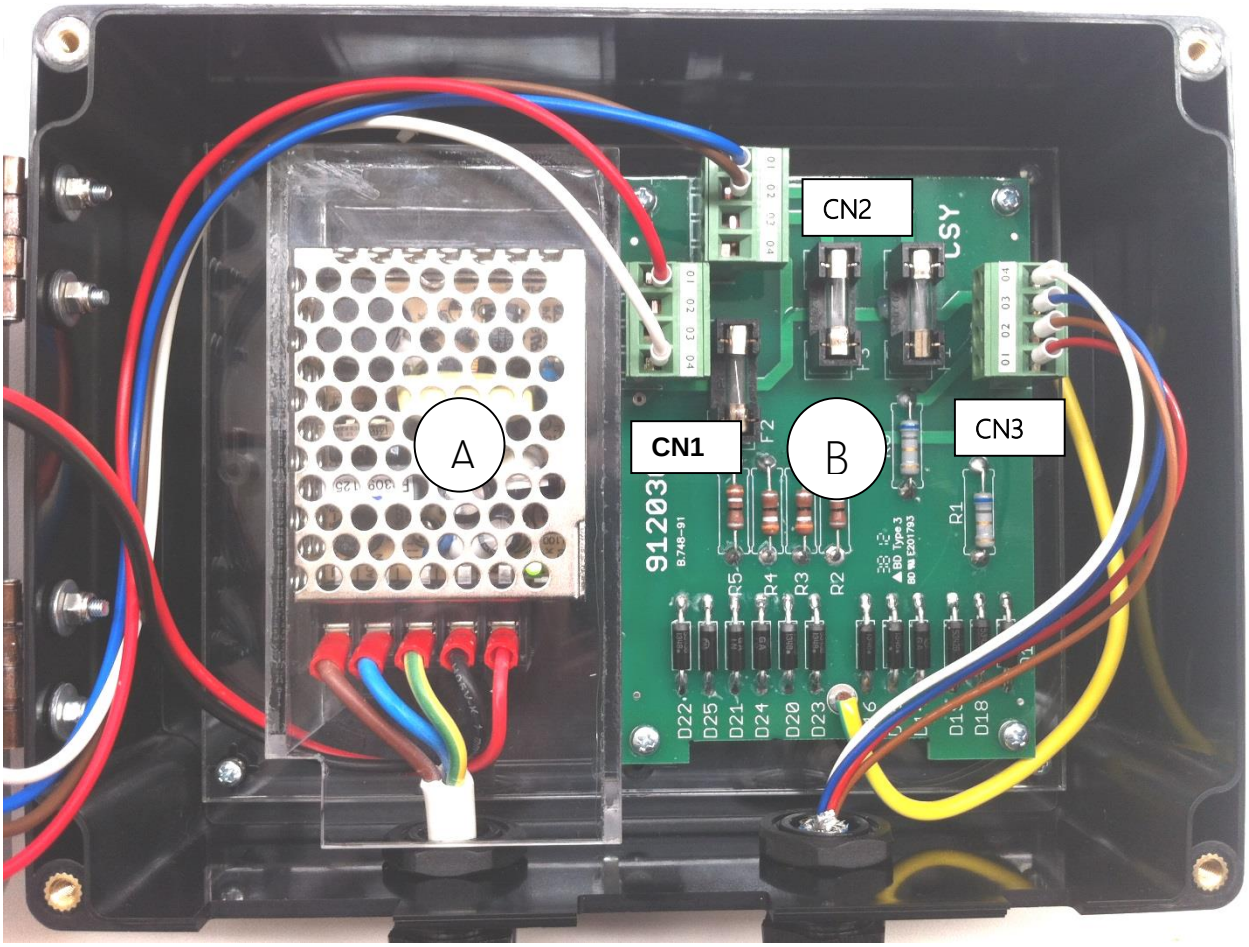
05. not used
04. GND (White)
03. RS485-A (Blue)
02. RS485-B (Brown)
01. Probe power output (Red or Black)

WARNING:

XMT-SI-485 probes cannot be connected directly to the console – please refer to page 10

CONNECTION TO XMT-SI-485 PROBE THROUGH SINGLE BARRIER MODEL BRA-SIP

It is possible to connect up to 8 probes to the barrier.



Connection cables colors:

A Power supply

Input 220Vac
Output +12 Vdc 1,3A

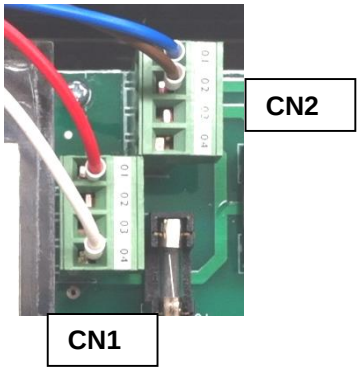
B

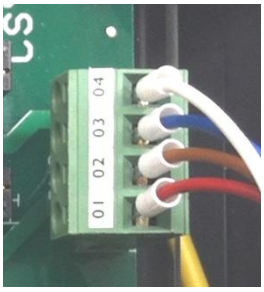
CN1-1: Red (+12V)
CN1-4: White (GND)

CN2-1: Blue (RS485-A)
CN2-2: Brown (RS485-B)

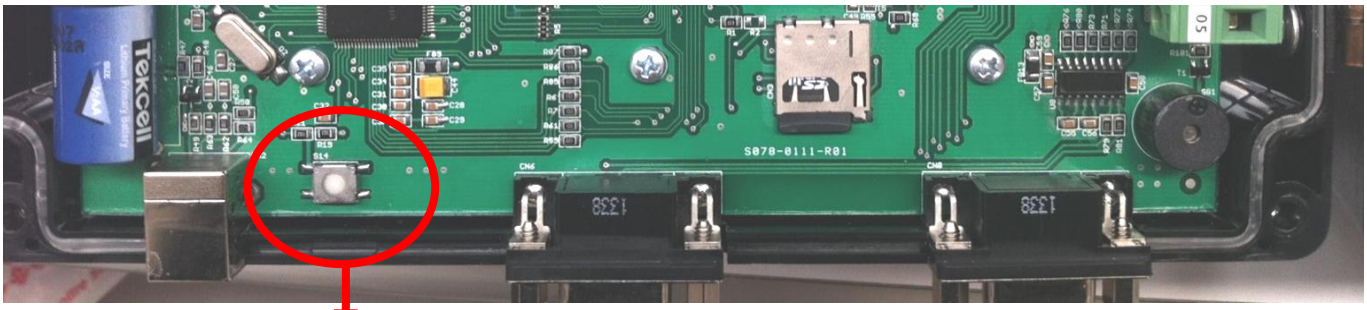
CN3
PROBE CONNECTION

CN3-4: White (GND)
CN3-3: Blue (RS485)
CN3-2: Brown (RS485)
CN3-1:Red (+12V)

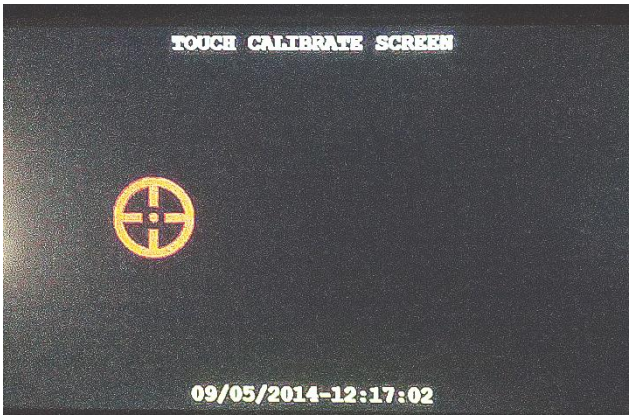




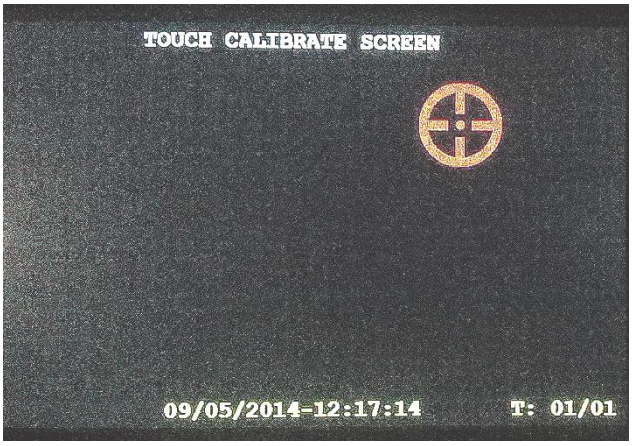
TOUCHSCREEN CALIBRATION



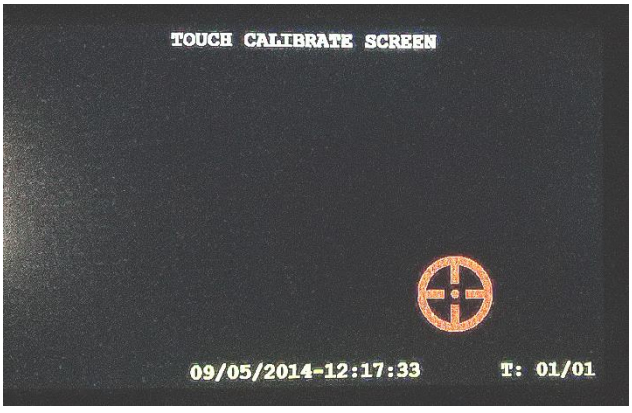
PRESS BUTTON TO ACCESS TOUCHSCREEN CALIBRATION MODE



Tap the red point at the centre of the image to calibrate point 1



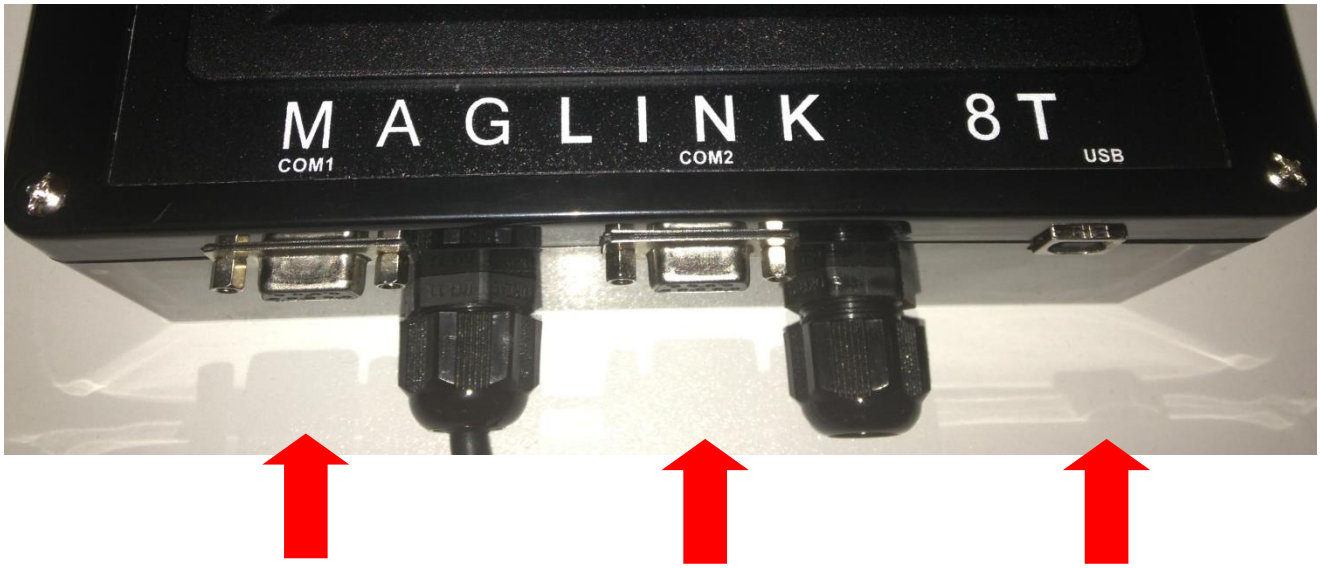
Tap the red point at the centre of the image to calibrate point 2



Tap the red point at the centre of the image to calibrate point 3

CONSOLE VIA RS232 HOST CONNECTION

For distances up to 15 mt the remote connection between MAGLINK16 and host can be done using serial link RS232C as per the indications given by the system to which it is connected.



COM1 / CN8 : RS232 Host connection, refer to protocol list.

COM2 / CN6 : RS232 programming through Console_Config

USB / CN2 : programming through Console_Config, the prerequisite is to install appropriate driver before operating, it is available on the download area of our website (www.startitaliana.com)

Here below some examples of management systems common connections.

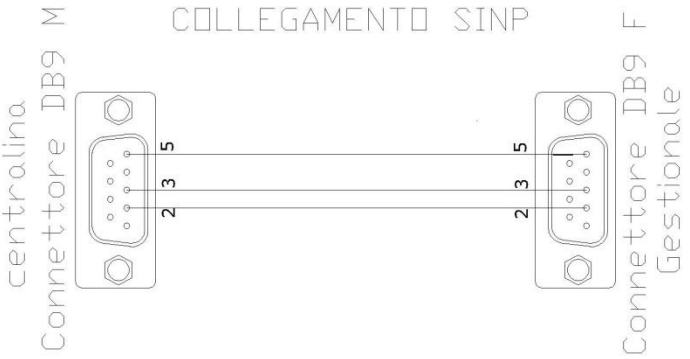
MANAGEMENT SYSTEMS COMMON CONNECTION

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:

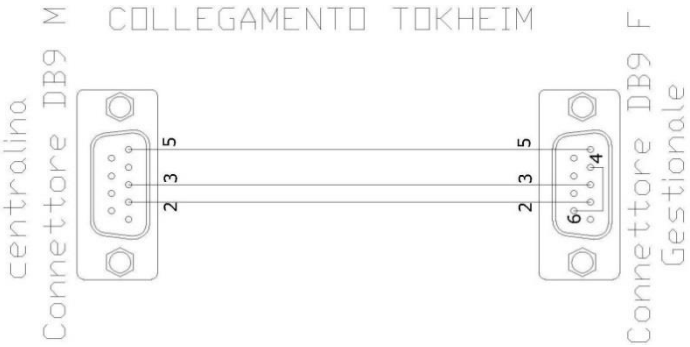
DRESSER WAYNE SINP e TOPLEVEL:

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



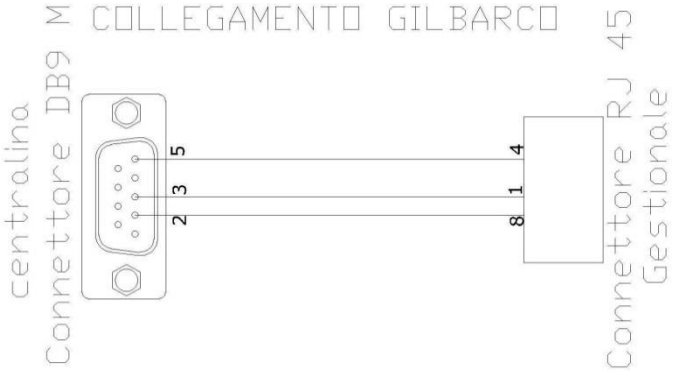
TOKHEIM and DIALOG:

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



GILBARCO Passport Europe (9600 7O1):

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

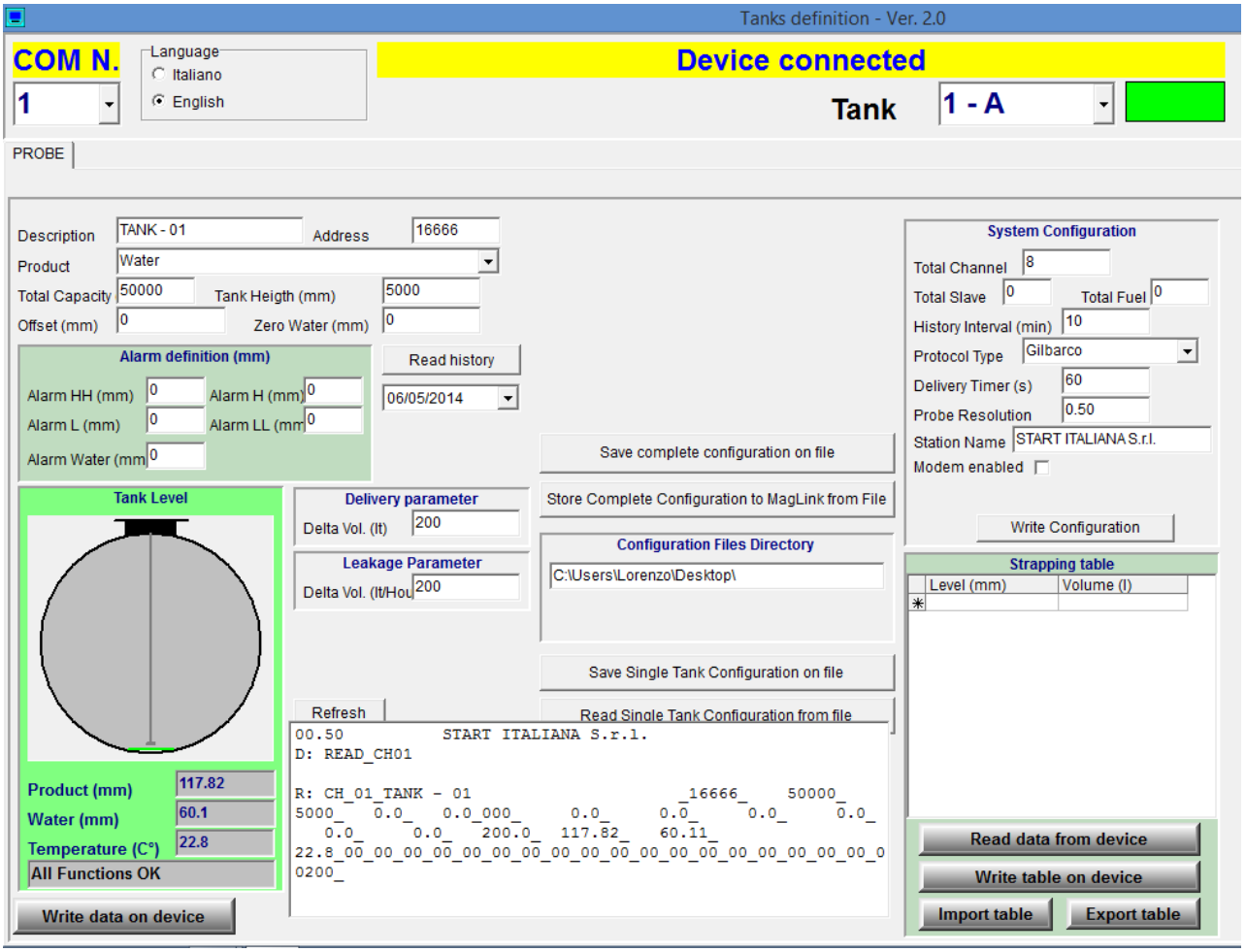


DOMS (9600 7E1)
DIALOG (1200 N81)

PROGRAMMING

Console programming has to be done using USB or RS232 port.
For USB programming before connecting USB cable to the PC please install the driver
After that, run software Console_Config and select the corresponding COM Port number. If the COM port is correct, program will start uploading the data from the console.

The driver and Console_Config software are available for downloading at www.startitaliana.com website inside our Download section.



For each tank user must set appropriate parameters.

Tank: it is possible to select from 1 to 8 available tanks.

Description: Description of the tank name which will appear on the display, for example: **DIESEL 01**

Address: unique serial number written on the probe head.

Product: select the type of product contained into the tank where is installed the level sensor referred to the S.N. selected on the channel.

Tot. capacity.: Total capacity in liters of the tank, data provided by tank strapping table.

Tank Height: height of the tank in mm, data provided by tank strapping table

Offset: Offset product float (-30000 +30000 mm): value shown in mm with ±1mm resolution to align the measure of the product float's height.

Zero Water: Offset water float (30000 mm): value shown in mm with 1 mm resolution with an absolute value, under which the measure of the water float's height is zero.

ALARM DEFINITION

Into the alarm definition section it is possible to set various alarm trip point for each level 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: presence of water alarm point in mm.

DELIVERY PARAMETER

Minimum average value of rate lt/min for delivery detection.

LEAKAGE PARAMETER

Value in liters for leakage detection.

TANK LEVEL

Into the section Tank level it is shown the current situation of the tank referred to the selected channel.

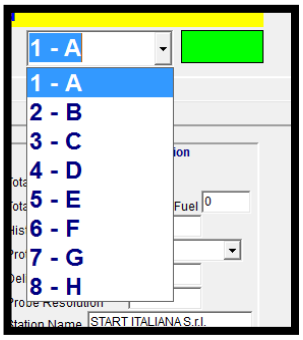
Product (mm): Product measured by the probe.
Water (mm): Water measured by the probe
Temperature (C°): Product temperature measured by the probe selected channel.

WRITE DATA ON DEVICE

This button allows to transfer information defined on the software of the console.

This operation must be repeated for each channel to be settled. If the channel is changed without transferring data to the console those new data will be lost.

TANK



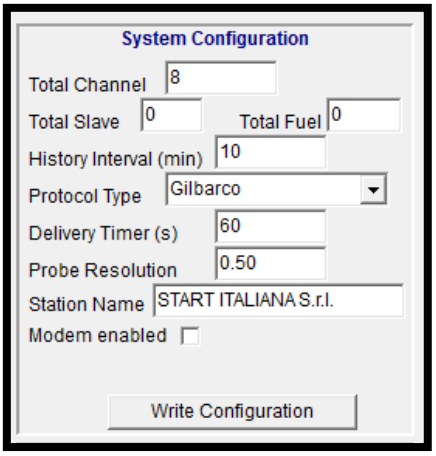
Select channel (tank) to be configured.
After connection the rectangle on the right must be green. This shows proper connection.
During data downloading the rectangle becomes red to show communication in progress.
At the end of downloading the rectangle will become green again.

SYSTEM CONFIGURATION

TOTAL CHANNEL: Write the total number of channels from 1 to 8.

TOTAL SLAVE: not available for this version (leave '0' as default value)

TOTAL FUEL: not available for this version (leave '0' as default value)



HISTORY INTERVAL (min): Elapsed time for historical writing on the Micro SD card (if present). All data, alarms, movements, delivery, leakage are written into a txt file inside the SD card internally located. Configure at 10 minutes in order not to have too many data to be managed which could cause an excessive slow down.

PROTOCOL TYPE: Protocol type enabled on the RS232 for management system connection. Common available protocols are: GILBARCO, TOKHEIM, NUOVO PIGNONE, TOPLEVEL, Probe emulation, RETALIX, DIALOG, ORPAK.

DELIVERY TIMER (S): Linked to delivery liter parameter, configure at 60 secs to have liter/min in calculation.

PROBE RESOLUTION (mm) Parameter used for leakage detection. Modify this parameter if false alarms occur.

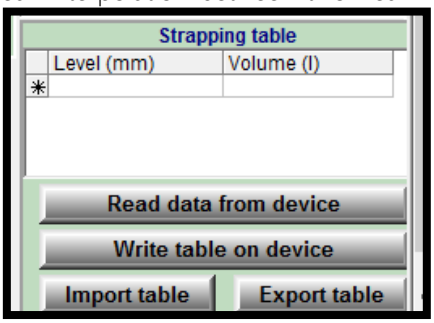
STATION NAME: write the name of the station.

WRITE CONFIGURATION ON DEVICE: allows to transfer the information that have been configured into section System Configuration of the software and updates time and date showing the same as the connected computer.

MODEM ENABLED: not available for this version

STRAPPING TABLE:

The console has the facility to calculate the volume starting from the height as linear interpolation between two near points. In order to do that operation the strapping table (correspondence mm – lt) must be downloaded into the console.
It is necessary to follow few rules in order to download correctly the table to the console:



- Values in **millimeters** and liters
- Maximum number of points: **250**
- Table has to be written in Excel or Note Pad and saved as **.csv** or **.txt**.
- Only **integer mm values** can be downloaded

The .csv format allows to save the data filled into the Excel table separating them with symbol semicolon (;).
Opening the .csv file with Note Pad it will be possible to read data as the example shown below. Otherwise it is possible to complete the table manually into program Note Pad separating the values with semicolons.

The strapping table cannot be modified once imported into Console Config.

READ DATA FROM DEVICE: read the table currently programmed into the console for the selected channel.

WRITE TABLE ON DEVICE: download the table referred to the selected channel, which is shown into the above window.

IMPORT TABLE: import .txt or .csv file. After the download the table must be visible into the above window. If nothing appears it means that an error occurred into the file format.

EXPORT TABLE: import .txt or .csv file.

Perform this operation for each channel.
It is possible to import the same strapping tables for the other channels.

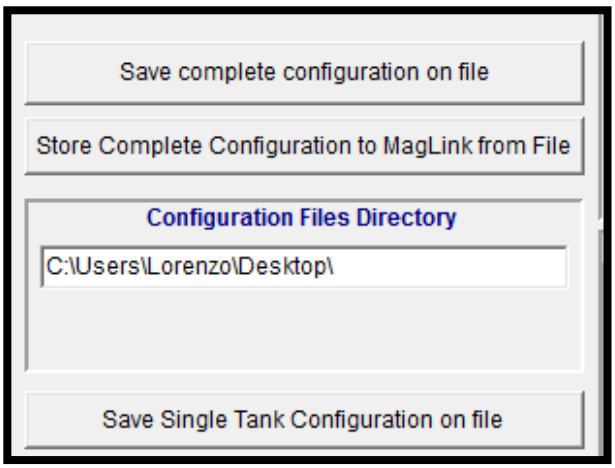
Examples of strapping tables:

	A	B
1	0	0
2	10	19
3	15	28
4	20	37
5	25	53
6	30	68
7	35	86
8	40	104

.csv

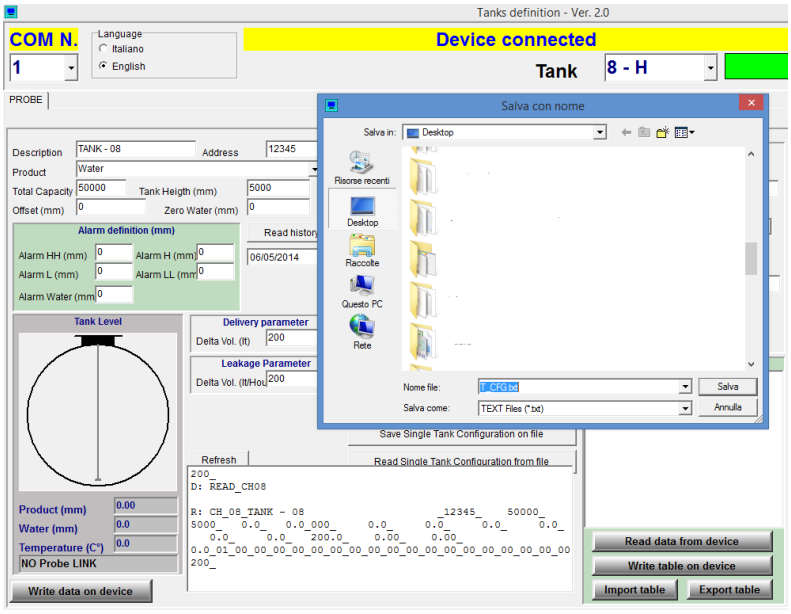
```
0;0
10;19
15;28
20;37
25;53
30;68
35;86
40;104
```

.txt



Once the configuration of the console has been completed, it is possible to do a backup of the console parameters clicking "Save complete configuration on file" button.

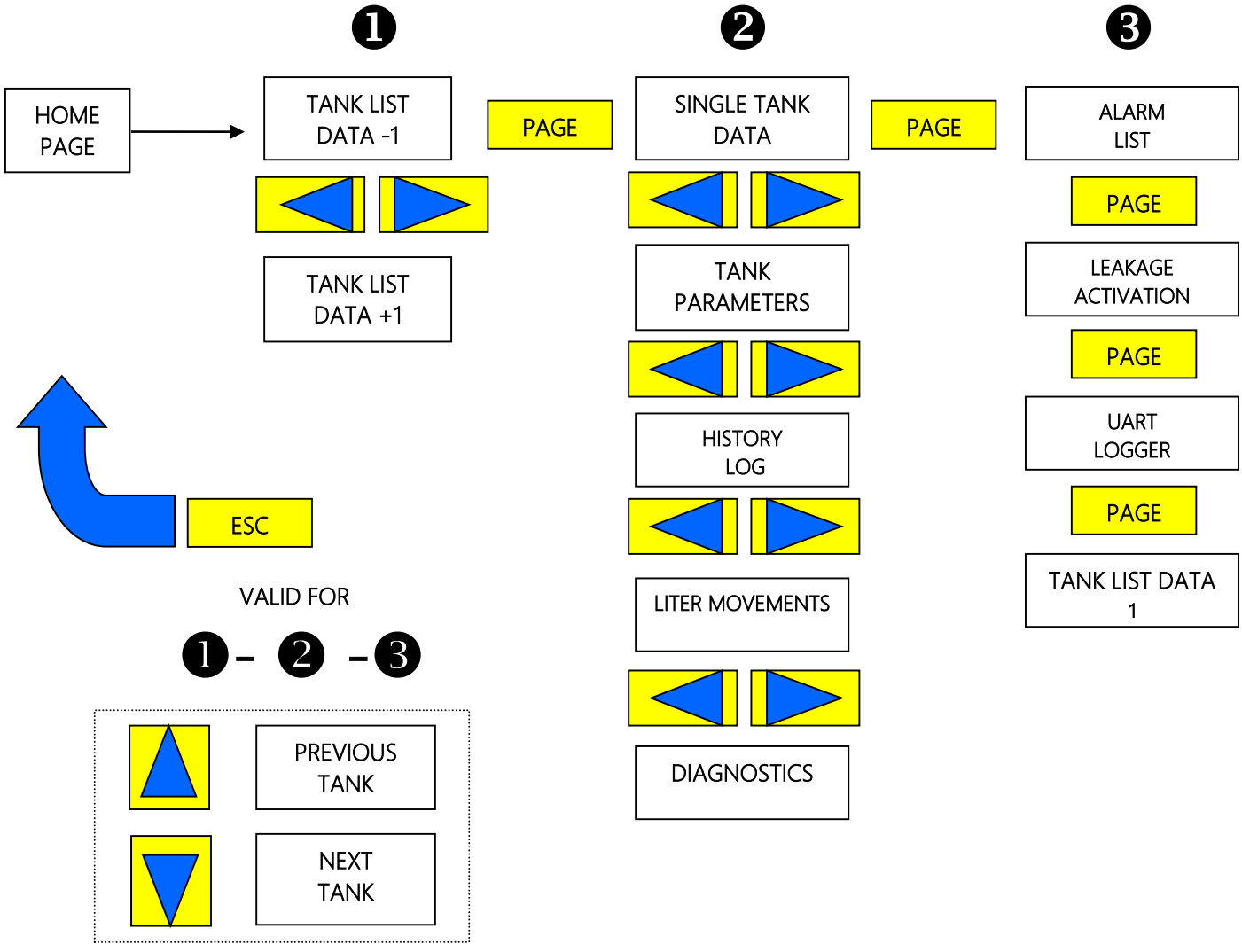
After that, the program will ask to specify the path for file storage:



OPERATOR PANEL

The operator panel has 6 keys:

These are touch buttons, for each button pressed a beep is alerted.



DISPLAY PAGES

The first page will be displayed for 3 seconds at power up, showing the main system information such as:

HOME PAGE

- Firmware version
- Total number of channels enabled
- Selected protocol
- Date and time
- Press the tank number in the header to view single tank data

In all pages on the top of the display there is a section with some rectangles showing the status of each tank.

Possible colors are:

- White: probe not answering
- Green: no alarm
- Red: grave alarm, check the alarm page showing the typology
- Yellow: not grave alarm, check the alarm page showing the typology
- Violet: leakage alarm occurs

In all pages on the bottom of the display the following information are shown:

- Page number for reference
- Date and time
- Real time polling cycle
- Leakage control if activated

After few seconds the console shows the general page where the list of all tanks is displayed.

TANK LIST DATA 1

LEGENDA:

T = channel number

Addr. = probe address

Prod (l) = product (liters)

Water (l) = water (liters)

Temp = temperature

Ullage (l) = remaining liters to reach maximum capacity of the tank

Pressing LEFT or RIGHT buttons it is possible to switch between the pages to see the other values.

TANK LIST DATA 2

LEGENDA:

T = channel number

Addr. = probe address

Prod (mm) = product millimeters

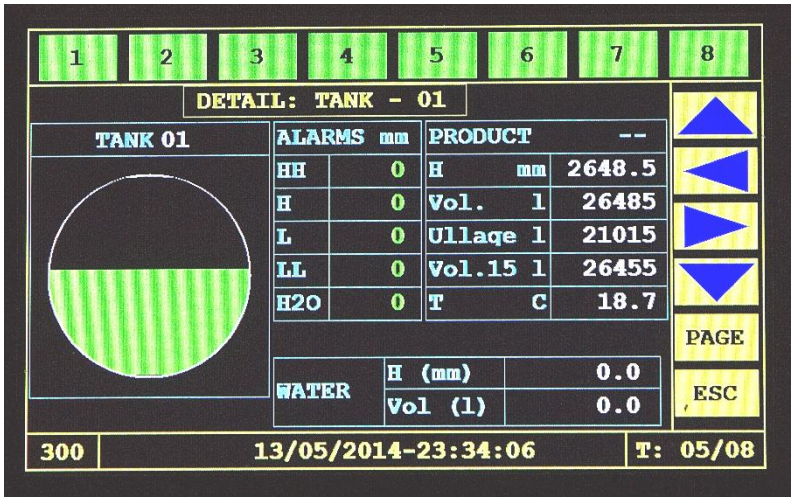
Water (mm) = water millimeters

Stat. = alarm status ('0' means no alarm present)

Last Answ = last answer from the probe

Pressing PAGE the page of a single tank is displayed:

SINGLE TANK DATA



LEGENDA:

ALARMS mm:

Tank = Tank description

HH = value in mm to enable High High alarm (ex.4500 mm)

H = value in mm to enable High alarm (ex. 4000 mm)

L = value in mm to enable Low alarm (ex. 1500 mm)

LL = value in mm to enable Low Low alarm (ex. 1200 mm)

H20 = water presence alarm

(ex. 300mm)

PRODUCT:

H = product value in mm

Vol. l = product value in liters

Ullage l = remaining liters to reach maximum capacity of the tank

Vol 15 (L) = compensated volume at 15 °C

T (C) = temperature measured by the sensor

WATER:

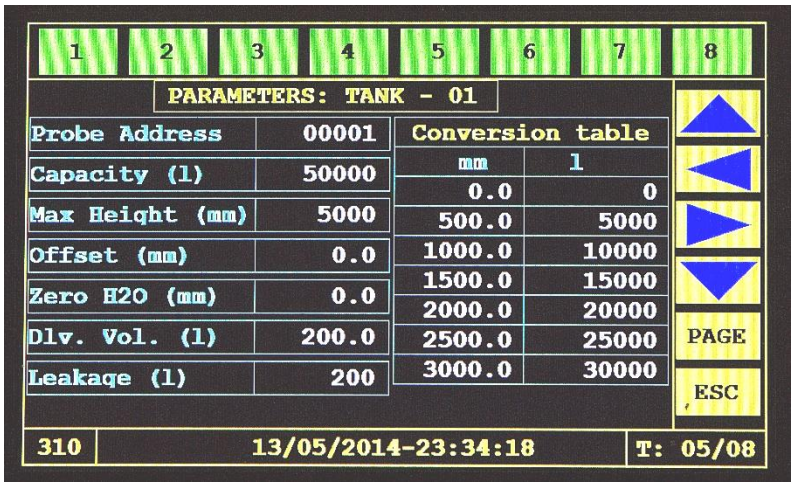
H (mm) = water presence in mm

Vol (l) = water presence in liters

Pressing UP and DOWN buttons the tanks are displayed in sequence.

Pressing RIGHT button the tank configuration details are displayed.

TANK PARAMETERS



LEGENDA:

Probe address = probe address

Capacity (l) = total capacity of the tank

Max Height (mm) = maximum height of the tank

Offset (mm) = difference between dipstick and measure detected by the probe

Zero H20 = zero water

Dlv. Vol. (l) = minimum range value (l/min)

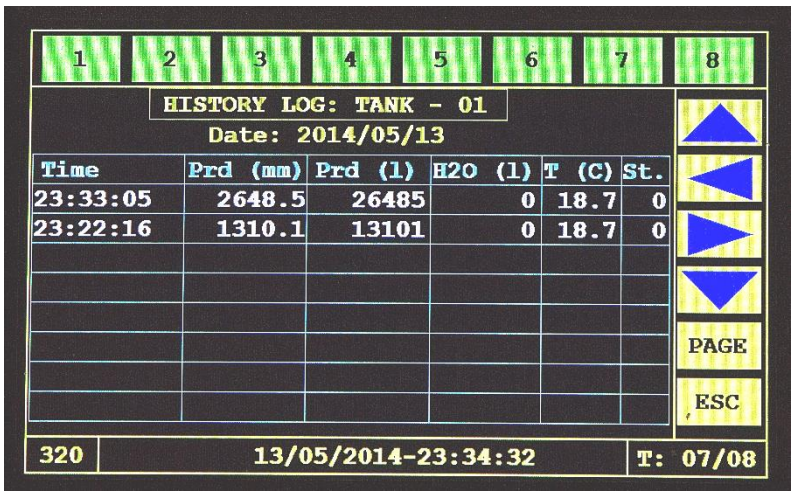
Leakage (l) = leakage value in liters

CONVERSION TABLE = mm/l conversion table

Pressing UP and DOWN button it is possible to scroll to display all the 250 linearization points.

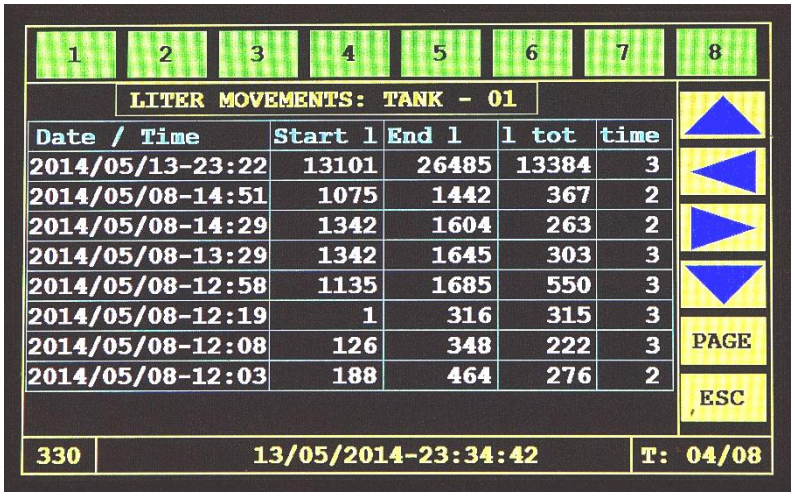
Pressing RIGHT button historical daily history for a single tank is displayed:

HISTORY LOG



Pressing RIGHT button Liter movements of the tank are displayed:

LITER MOVEMENTS

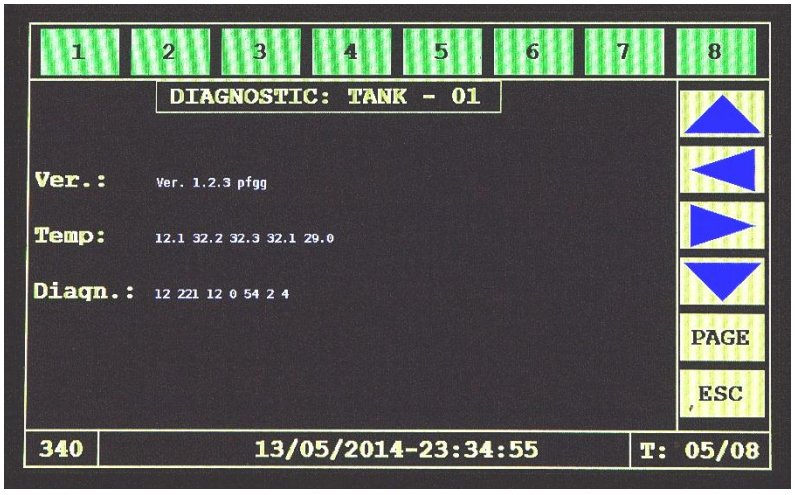


- Delivery is displayed with white lines
- Leakage is displayed with red lines

These data are retrieved from the SD card.

Pressing RIGHT button tank diagnostics is displayed:

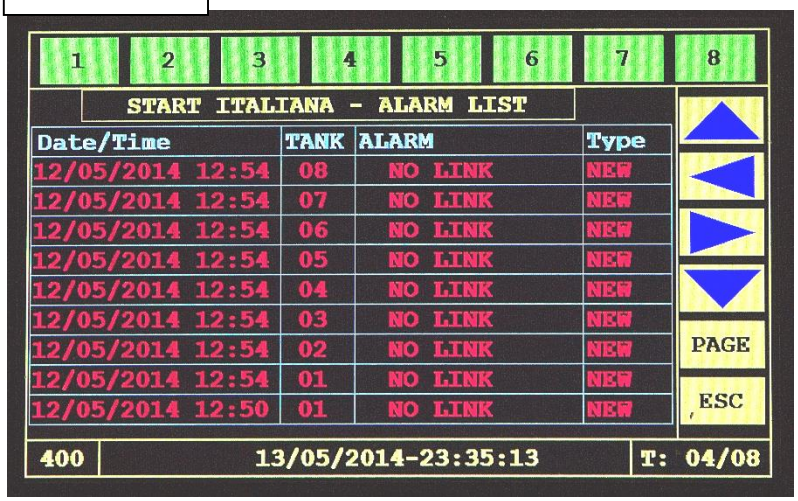
DIAGNOSTICS



Pressing RIGHT button one more time, the first page will be displayed again.

Pressing PAGE button alarms history is displayed:

ALARM LIST



When an alarm occurs a discontinuous beep is alerted and the event is stored into the SD card. Alarms can be acknowledged pressing ESC button. This action will store the ACK action into the SD card and the sound will be cleared.

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

Lines can be of 3 different colors:

- RED: alarm occurs NEW
- YELLOW: alarm acknowledge ACK
- GREEN: alarm cleared CLEAR

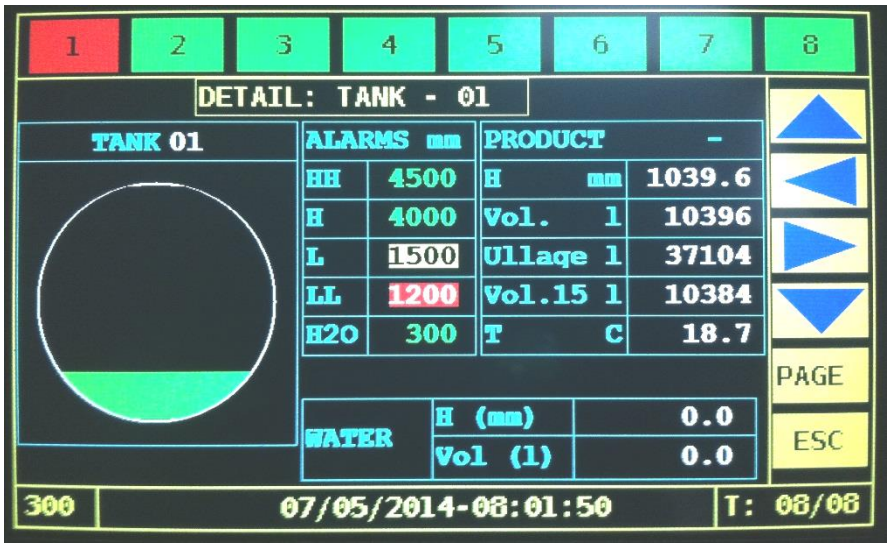
There is no limit to the alarms stored into the SD card.

Date, time, tank number, alarm code and status are stored into the SD card.

Alarm codes listed as follow:

01	No Probe Link	Probe not replying, check address or cabling
02	High	Product level is between H value and HH value (if different from 0)
03	Low	Product level is between L value and LL value (if different from 0)
04	Out of Range	Product level is over the last value of the strapping table. It is not possible to calculate the volume because data are missing
05	Probe	Probe is replying without valid measure. Check floats, bendings
06	High High	Product level is over HH value
07	Low Low	Product level is under LL value
10	Water	Water level is over the set value
00	No alarm	No alarm
12	Water + High	Water alarm + High product alarm combination
13	Water + Low	Water alarm + Low product alarm combination
16	Water + High High	Water alarm + High High product alarm combination
17	Water + Low Low	Water alarm + Low Low product alarm combination
100		Console has been powered up

When an alarm occurs into the tank detail display, the alarm field will change background color to show which alarm to show, as visible through the pictures below:



To ack an alarm press ESC button, beep will stop.

STATIC LEAKAGE CONTROL

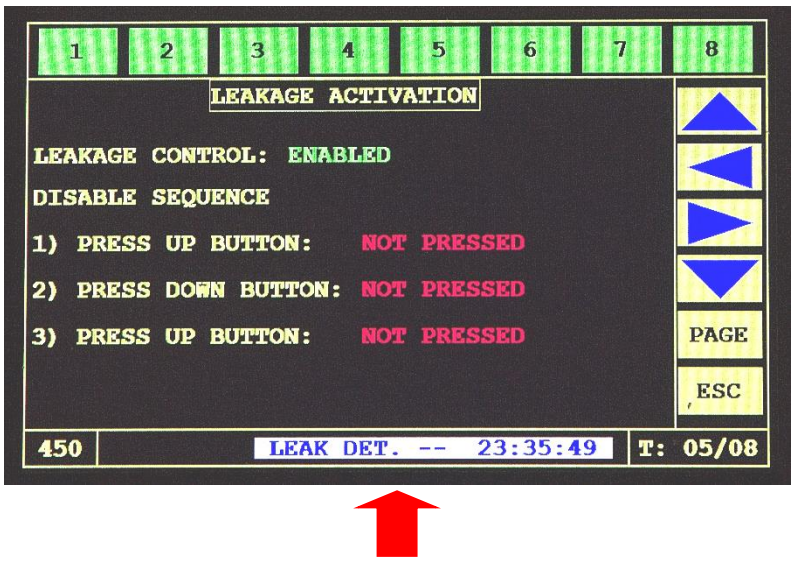
If SD card is not present this function is disabled.

To activate the Leak detection follow the procedure as shown on the display:

LEAKAGE ACTIVATION

Leak detection procedure is based on an algorithm which monitors the tank. It is mandatory that no external movements occur during the activation period.

Result will be available at least after 2 hours after the activation.



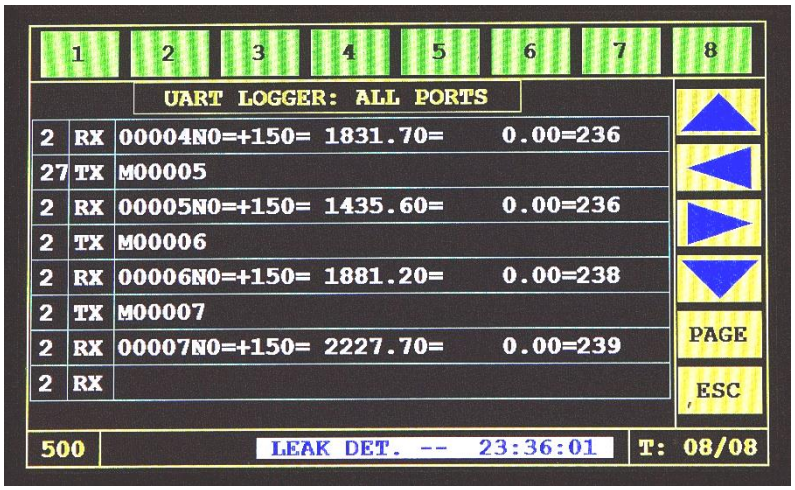
When this function is enabled, the Leakage control will show “ENABLED” in green and on every screen of the display the “LEAK DET.” Status will be highlighted in white.

To disable the function repeat the procedure as shown on the display

UART LOGGER

Into this page it is possible to see the activity of the serial link for diagnostics purposes.

UART LOGGER



Consorzio Europeo Certificazione

CE

Organismo Notificato n. 1131

[1] **CERTIFICATO D'ESAME CE DEL TIPO**

EC-TYPE EXAMINATION CERTIFICATE

[2] **APPARECCHIO INTESO PER L'USO IN ATMOSFERE POTENZIALMENTE ESPLOSIVE**
DIRETTIVA 94/9/CE - ATEX

Equipment intended for use in potentially explosive atmospheres – Directive 94/9/EC.

[3] **CERTIFICATO DI ESAME CE DI TIPO Nr.:** **CEC 10 ATEX 025 rev.2**
EC-Type examination certificate number: **09/2093 – AET 637 rev.2** **Foglio 1 di 3**

[4] **APPARECCHIO** **Barriera a sicurezza intrinseca Tipo BRA-SIP, BRA-SI e BRA-2SIP**
Equipment Intrinsic safety barrier type BRA-SIP, BRA-SI and BRA-2SIP

[5] **FABBRICANTE** **START ITALIANA S.r.l.**
Manufacturer

[6] **INDIRIZZO** **Via Pola, 6**
Address **20813 Bovisio Masciago (MB) – Italy**

[7] **Questo apparecchio ed ogni sua variante approvata sono descritti nel presente certificato e nei documenti in esso richiamati.**
This equipment and any acceptable variation are specified in the schedule to this certificate and in the documents that there are referred to.

[8] **Il CEC, Organismo notificato numero 1131 in accordo all'Articolo 9 del Consiglio Direttivo 94/9/CE del 23 Marzo 1994, certifica che questo apparecchio è risultato conforme ai requisiti essenziali in materia di Sicurezza e Salute, in relazione al progetto ed alla fabbricazione degli apparecchi intesi per funzionare in atmosfere potenzialmente esplosive come specificato in Allegato II della direttiva.**
CEC, notified body number 1131 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

[9] **La conformità con i Requisiti essenziali in materia di Sicurezza e Salute è garantita dall'osservanza dei requisiti per gli apparecchi e i sistemi di protezione come disposto nell'Allegato II della direttiva e dall'osservanza totale o parziale delle seguenti normative:**
Compliance with the Essential Health and Safety Requirements has been assured by compliance with requirements for equipment and protective system given in Annex II to the Directive and by fully or partial compliance with:

EN 60079-0: 2009; EN 60079-11: 2007

Nel caso in cui tra le norme tecniche citate fossero presenti norme non armonizzate, la conformità ai Requisiti essenziali in materia di Sicurezza e Salute è comunque stata verificata.
If standards not listed in the list of Atex harmonised standards are used, conformity to Essential Health and Safety , requirements is verified however

[10] **Il segno X dopo il numero di certificato, se presente, indica che l'apparecchio è soggetto a condizioni speciali per l'uso sicuro come specificato nei documenti di questo certificato.**
If the sign "X" is placed after the certificate number, it indicates that the equipment is subjected to special conditions for safe use specified in the schedule to this certificate.

[11] **Questo Certificato di esame di Tipo CE si riferisce solo al progetto, esami e prove sull'apparecchio specificato o sui sistemi di protezione, eseguiti conformemente alla Direttiva 94/9/CE. Requisiti ulteriori della Direttiva che si applicano al Processo di Fabbricazione ed al Fabbricante di questo sistema di protezione non sono coperti dal presente certificato.**
This EC-Type Examination Certificate relates only to the design, examination and test of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] **La marcatura dell'apparecchio comprende le seguenti indicazioni:**
The marking of the equipment shall include the following:

II (1) G [Ex ia] IIB

Legnano, 09 gennaio 2012

CONSORZIO EUROPEO CERTIFICAZIONE
L'ORGANO DELIBERANTE
Il Direttore Tecnico (A. FUGAZZI)
Il Direttore Generale (M. SCASSO)

CEC – Consorzio Europeo Certificazione

Certificato di esame CE del tipo n. CEC 10 ATEX 025 rev.2 Pag 2 di 3

CE

Organismo Notificato n. 1131

[13] ALLEGATO – SCHEDULE

[14] **CERTIFICATO DI ESAME CE DI TIPO N. CEC 10 ATEX 025 rev.2**
EC-Type Examination Certificate n. CEC 10 ATEX 025 rev.2

[15] **DESCRIZIONE**

Il dispositivo BRA-SIP è una barriera passiva a sicurezza intrinseca per alimentare e scambiare dati con dispositivi siti in zona pericolosa. La BRA-SIP è dotata di un canale per l'alimentazione e di un doppio canale per l'interfaccia RS485.

The BRA-SIP device is an intrinsic safety passive barrier which is used to power and to exchange data with devices in the hazardous zone. The Bra-SIP has a channel for power supply and it has a dual-channel for the RS485 interface.

Alimentazione/Power = 14 Vmax

- Um= 250 V
- Io= 100 mA
- Lo= 1.5 mH
- Po= 0.153 W
- Uo= 14 Vmax
- Co= 3.55 µF

Ree (5-3) = 15.3 Ω

DATA I/O = 6 Vmax

- Um= 6 V
- Io= 100 mA
- Lo= 6 mH
- Po= 0.126 W
- Uo= 6 Vmax
- Co= 40 µF

Ree (8-1) = 12.6 Ω

Il dispositivo BRA-SI è una barriera completamente isolata galvanicamente per alimentare e scambiare i dati con dispositivi siti in zona pericolosa. Un dispositivo tipico è, ad esempio, un trasmettitore di dati di processo con alimentazione a 12 Vdc ed interfaccia RS485.

The BRA-SI device is a completely galvanically isolated barrier which is used to power and to exchange data with devices in the hazardous area sites. A typical device is, for example, a process data transmitter with a 12 Vdc power supply and a RS485 interface.

Alimentazione/Power = 18...25 Vmax

- Um= 400 V
- Io= 100 mA
- Lo= 1.5 mH
- Po= 0.153 W
- Uo= 14.05 Vmax
- Co= 3.55 µF

DATA I/O = 12 Vmax

- Um= 12 V
- Io= 100 mA
- Lo= 6 mH
- Po= 0.126 W
- Uo= 6 Vmax
- Co= 40 µF

Il dispositivo BRA-2SIP è una barriera passiva a due canali per alimentare e scambiare dati con dispositivi siti in zona pericolosa. La barriera è costituita da due unità identiche aventi le stessa configurazione della barriera singola BRA-SIP.

The BRA-2SIP device is a dual-channel passive barrier which is used to power and to exchange data with devices in the hazardous zone. The barrier consists of two identical units (UNIT1 and UNIT2) with the same configuration of the single barrier BRA-SIP.

Routine test IEC EN 60079-11 §11.1

[16] Report: **CEC 10/2084 – RET 002**

CEC – Consorzio Europeo Certificazione

Certificato di esame CE del tipo n. CEC 10 ATEX 025 rev.2 Pag.3 di 3

CE

Organismo Notificato n. 1131

[17] **CONDIZIONI PARTICOLARI PER L'USO SICURO**

L'efficacia e l'affidabilità di questi apparecchi sono garantite seguendo le istruzioni del Manuale d'uso. Non sono ammesse modifiche non autorizzate rispetto al fascicolo tecnico agli atti.

Special conditions for safe use depends on correct following of manufacturer's manual.
Further modification are not allowed.

[18] **Requisiti Essenziali in materia di Sicurezza e Salute**

Riguardo all' ESR questo documento verifica la conformità solo agli standard Ex. La dichiarazione di Conformità del Produttore dichiara la conformità con altre Direttive pertinenti.

Essential Health and Safety Requirements
Concerning ESR this schedule verifies compliance with the Ex standards only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

Documentazione allegata

Rapporto riservato a disposizione solo delle autorità competenti n.10/2084 – RET 002
Fascicolo tecnico

L'ISPETTORE INCARICATO
Dott. Ing. Giuseppe TERZAGHI

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CESI-ATEX

Schema di certificazione

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO
PRD N. 018B
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

ATEX E N 021-1 - 1

NOTIFICATION

[1] **PRODUCTION QUALITY ASSURANCE NOTIFICATION**

[2] **Equipment or Protective System or Component intended for use in potentially explosive atmospheres Directive 94/9/EC**

[3] Notification number:

CESI 06 ATEX 031 Q

[4] Equipment or component type: Transmitters and level switches
Capacitive sensors for continuous liquid level measurement and discriminative function for different
Terminal boxes
Magnetostrictive level sensors
Galvanically isolated barriers

Protection concepts: Flameproof enclosures "d"
Intrinsic safety "i"
Encapsulation "m"
Dust ignition protection "tD"
Mechanical protection by constructional safety "c"

[5] Applicant: START Italiana S.r.l.
via Pola, 6
20813 Bovisio Masciago - MB

[6] Manufacturer: START Italiana S.r.l.
via Pola, 6
20813 Bovisio Masciago - MB

[7] CESI, notified body n. 0722 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, notifies to the applicant that the actual manufacturer has a production quality system which complies to Annex IV of the Directive.

[8] This notification is based on audit report n. EX-B2007677 issued the 17/03/2012.

This notification can be withdrawn if the manufacturer no longer satisfies the requirement of Annex IV.

Results of periodical re-assessment of the quality system are a part of this notification.

[9] This notification is **valid until 17/03/2015** and can be withdrawn if the Manufacturer does not satisfy the production quality assurance re-assessment.

[10] According to Article 10 [1] of the Directive 94/9/EC the CE marking shall be followed by the identification n. 0722 identifying the notified body involved in the production control stage.

Date of 1st issue
17th March 2006

Date of renewal
17th March 2012

Translation issued 17th March 2012

Prepared	**Verified**	**Approved**
Tiziano Cola	Mirko Balaž	Fiorenzo Bregani

Page 1/1

CESI S.p.A.
Testing & Certification Division

Prot. B2007684 P: 1 Rin: 2

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