SERIAL INTERFACE CONV32
USB / RS-485

Ver.01

CONV32V01-02T-11032

1. DESCRIPTION

Full Gauge's **CONV32 INTERFACE** allows for Full Gauge controllers, equipped with serial communication, to be connected to a PC that has a USB® serial communication port. The interface then takes care of the transformation of the voltage levels used by the PC to RS-485 voltage levels used by the controllers.

Full Gauge uses a RS-485 network to make the communication between the controllers and Sitrad® Software more rugged and reliable. The communication is made over two wires (A and B), allowing to perform half-duplex communications, where the PC is master and controllers are slaves.

NOTE: USB port compatible only with USB 2.0 standard and Windows NT, 2000, 2003 or XP.

2. TECHNICAL SPECIFICATIONS

- Power: Through the USB® port
- Operating temperature: 0 to 50°C (32 to 122°F)
- Three indication Leds: one to signal that the interface is ON (⏻) and other two to indicate that serial transmission (**TX**) and reception (**RX**) are in progress.

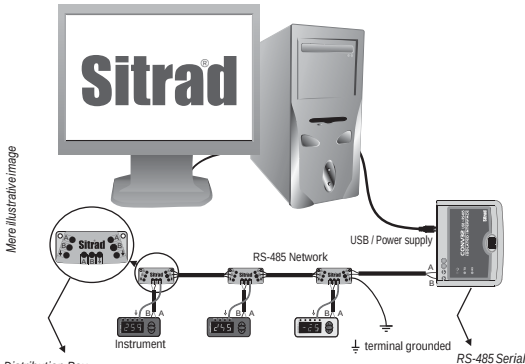
- One USB-B female connector for the connection to the PC, using the special cable supplied with the interface.
- One RS-485 connecting up to 32 controllers, without the need for terminating resistors.

3. CONNECTION SCHEMATIC OF CONV32 INTERFACE

- Connect terminals A and B of the interface to the respective A and B terminals in distribution boxes and instruments.
- Connect the USB serial cable to the computer;

NOTE:
- The length of RS-485 network must not exceed 1000m (3280 ft).
- Always use shielded USB cables, not exceeding 1.8 meters (6 ft) in length.

Integrating Controllers, RS-485 Serial Interface and Computer



Distribution Box
Used to connect more than one instrument to the Interface. The wire's connections must be made in agreement with the following rules: terminal A of the instrument connects to the terminal A of the distribution box, that must be connected with the terminal A of the Interface. Repeat the action for terminals B and ⏚, being ⏚ the cable shield.
The terminal ⏚ of distribution box must be connected to the respective terminals ⏚ of each instrument.

RS-485 Serial Interface
Device used to establish the connection Full Gauge Controls' instruments with the Sitrad®.

4. INSTALLING USB DRIVER

In order to use USB communication with CONV32 interface, the installation of a driver for Windows is required for Sitrad to be able to use USB communication.

USB communication works only in Windows versions that use NT technology (Windows NT, 2000, 2003 or XP). To install the driver, put Sitrad® installation CD, supplied with the interface, into the CD-ROM driver unit and follow the step-by-step instructions provided beside (example based on Windows XP).

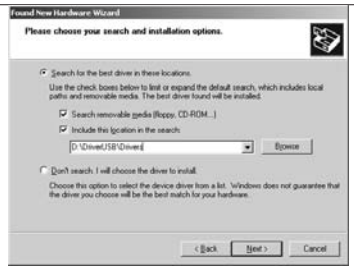
1

Connect USB cable to CONV32 interface and to one USB port in your computer.
When the screen above is displayed, select "No, not this time" and click "Next".

2

In the screen above, select "Install from a list or specific location (advanced)" and click "Next" to proceed.

3



In this screen, check the option "Search removable media (floppy disk, CD-ROM...)" or "Include this location in the search:" selecting the path "D:\USBDriver\Drivers", where "D:" is the letter corresponding to the CD-ROM driver unit in your computer.
Please note that one option alone is enough to install the driver.
After configuring this screen, click "Next" for Windows to locate the drivers.

4

If the screen above is displayed, click "Continue anyway" to proceed.
When the installation is finished, the screen shown in panel 5 must be displayed to confirm driver installation.

5

Click "Finish" to conclude the installation.
Your CONV32 interface is now ready to be used with the USB cable.

For further information on how to configure Sitrad® to access USB port, please refer to the USB driver manual, which can be found in the installation CD supplied with CONV32 through the path "D:\USBDriver\AjudaUSB_ING.exe", where "D:" is the letter corresponding to the CD-ROM driver unit in your computer.