

# DATAVIEW

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User manual

SIN

SIM STRUMENTI SNC  
Via Merendi 42  
20010 CORNAREDO (MI)  
Tel +39 02 97003039  
Fax +39 02 97270167  
[www.simstrumenti.com](http://www.simstrumenti.com)  
[sim@simstrumenti.com](mailto:sim@simstrumenti.com)



# DATAVIEW 2.x – User Manual

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## INTRODUCTION

The manual readout unit DATAVIEW is a compact and light reading system, connectable to the whole range of instruments produced by SIM. The DATAVIEW readout unit is equipped internally with a rechargeable battery.

The DATAVIEW is equipped with a membrane keyboard and an LCD display that visualizes besides the instrument data also the maximum and minimum values. The unit also has two input channels, the HOLD and the OFFSET function, and the possibility to memorize up to 99 data comprehensive of date and time, as well as a 4-digit tag for the easy identification of the performed measurement.

The unit has eight GAINS for the conversion of the data into physical units (one fixed and 7 programmable). The basic model (DWS-BS) allows the reading of a single type of input (one at choice), while the advanced model allows the reading of all the types of electric input signal.

The DATAVIEW readout unit (DWS-AD) comes with a RS232 serial port for an easy setting and data transfer to the PC.

## TECHNICAL FEATURES

Internal power supply	Rechargeable battery 12V 2.1Ah
External power supply	12V Power supply
Consumo	125mA
Converter	40000 points
Available Scales *	1. 2mV/V 2. $\pm 20\text{mV}$ 3. $\pm 200\text{mV}$ 4. $\pm 2\text{V}$ 5. $\pm 10\text{V}$ 6. $4 \div 20\text{mA}$
Operating Temperature	$-20 \div +70^\circ\text{C}$
Dimensions	207X160X92
Weight	1950g
Protection	IP65

\* In the DWS-AD units all scales are available



## SOFTWARE

The **DATAVIEW** software is used to setup and to download the data stored in the readout unit.

### INSTALLATION:

The **DATAVIEW** software is on a CD.  
To start the installation select:

#### Start

#### Risorse del computer

#### DATAVIEW 2.x (D:)

In the CD click twice on the file **dataview\_2.x\_setup** (pic. 1)

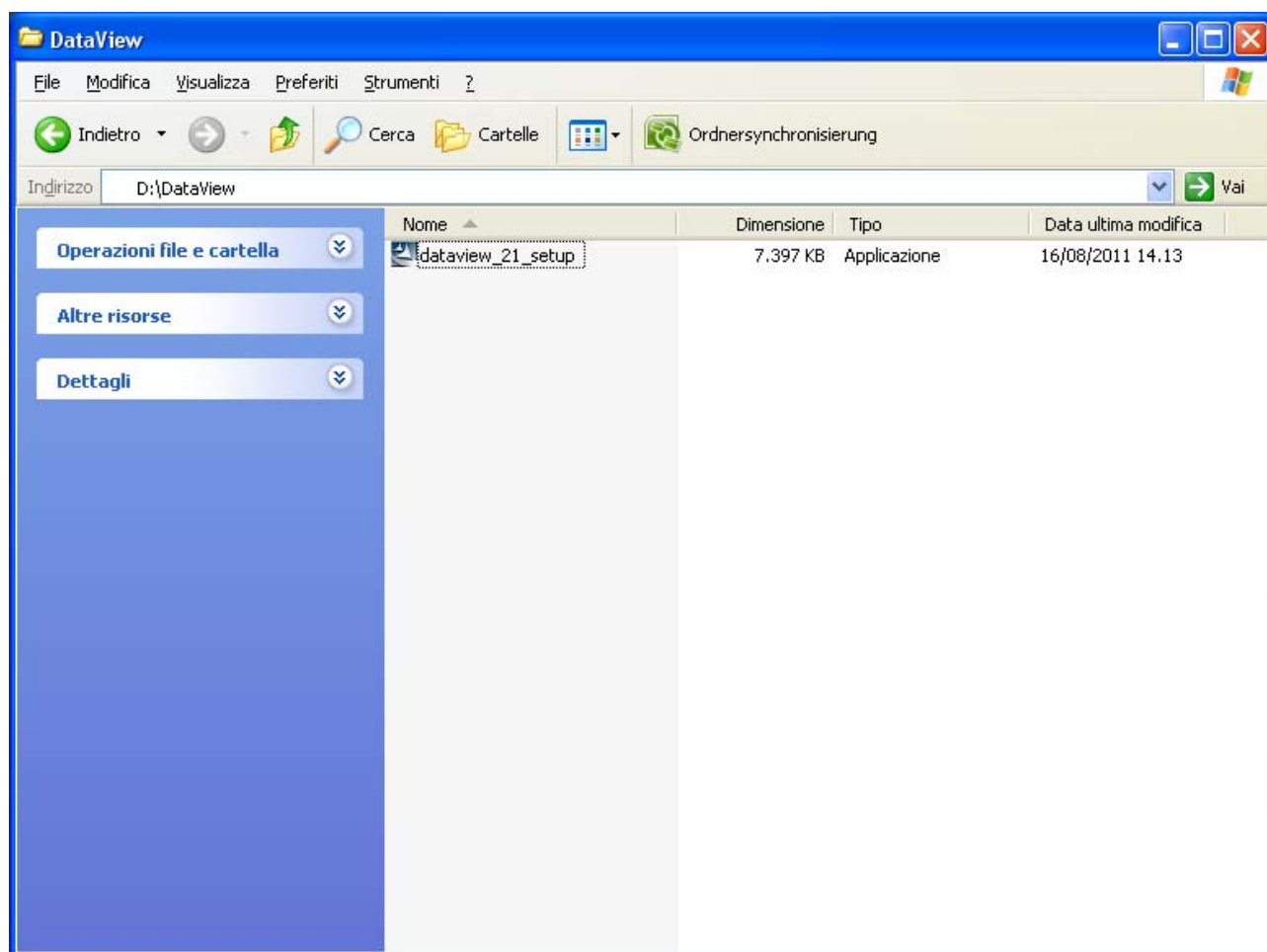
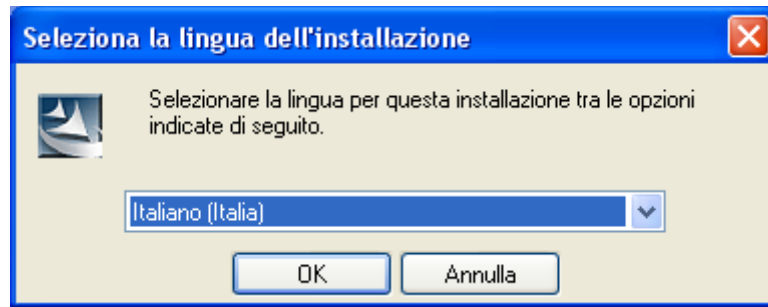


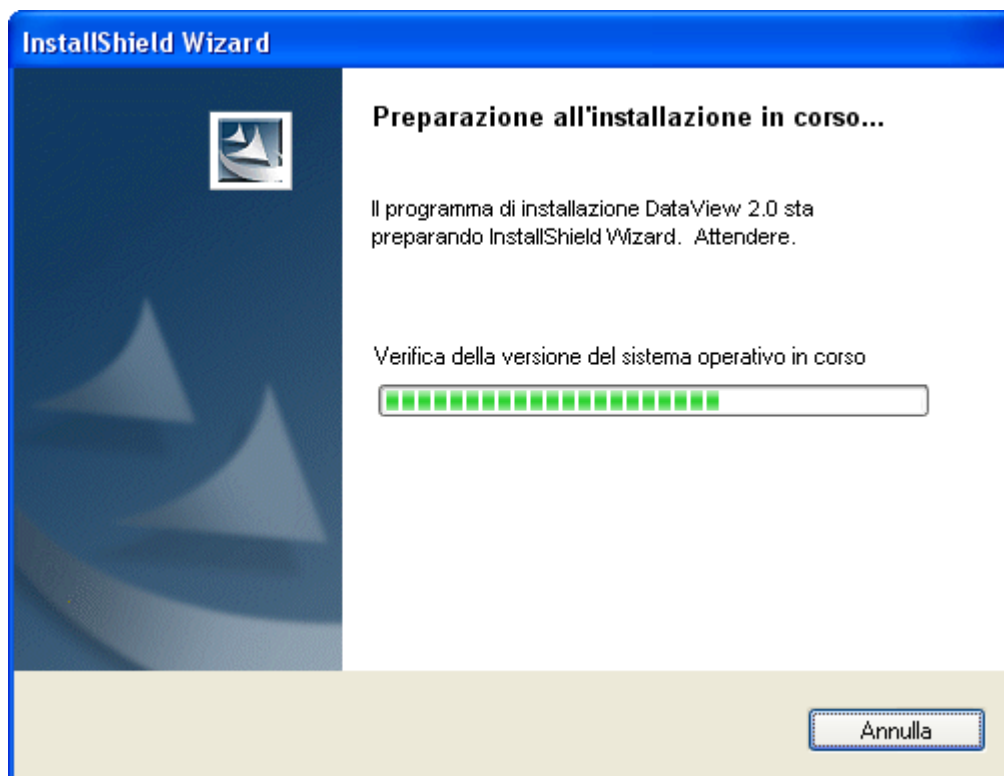
fig 1

A window will open (pic. 2) where the language can be chosen, press **OK** to continue.



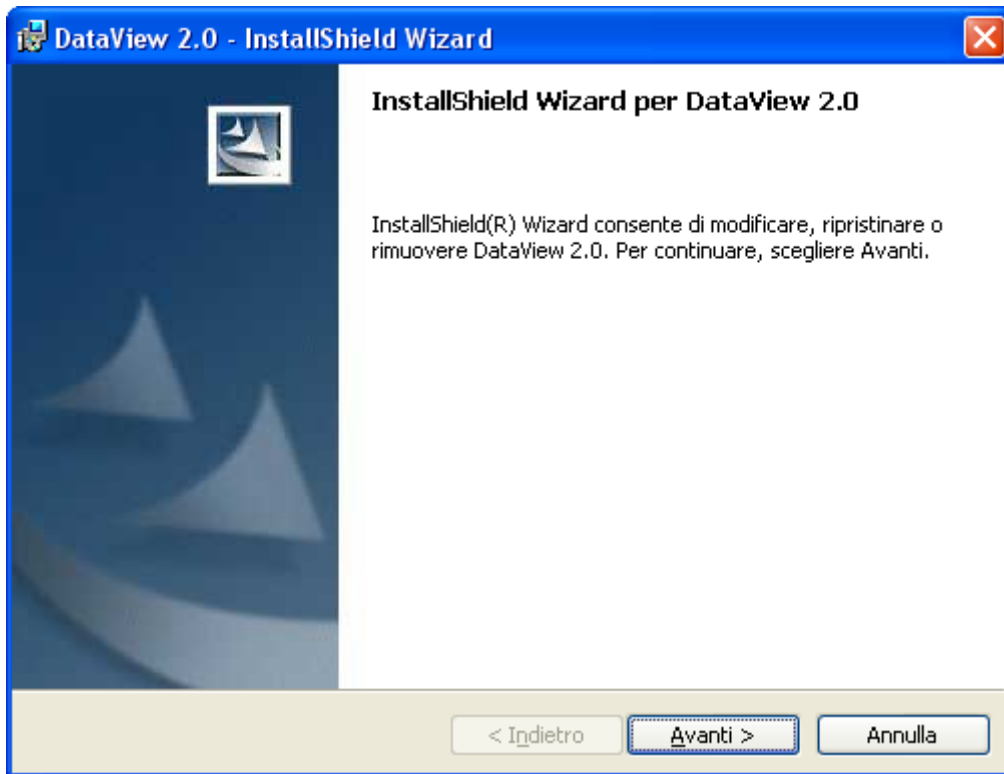
pic. 2

The install window will follow (pic. 3).



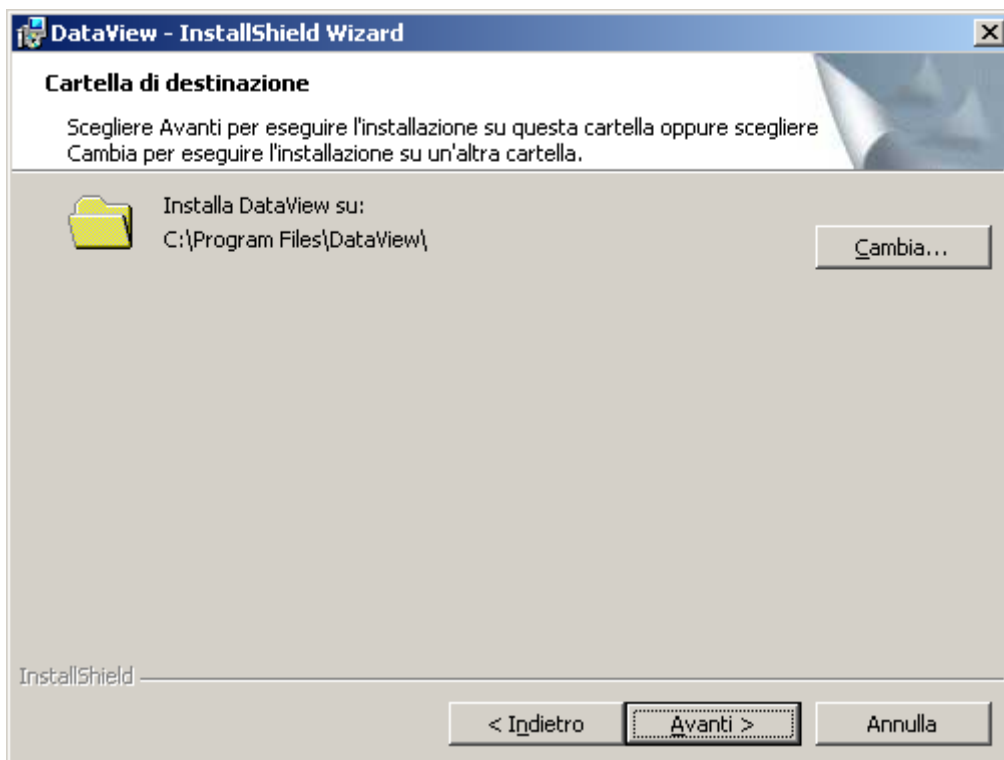
pic. 3

Press **Next** (pic. 4) to continue the installation or press **Cancel** to stop.

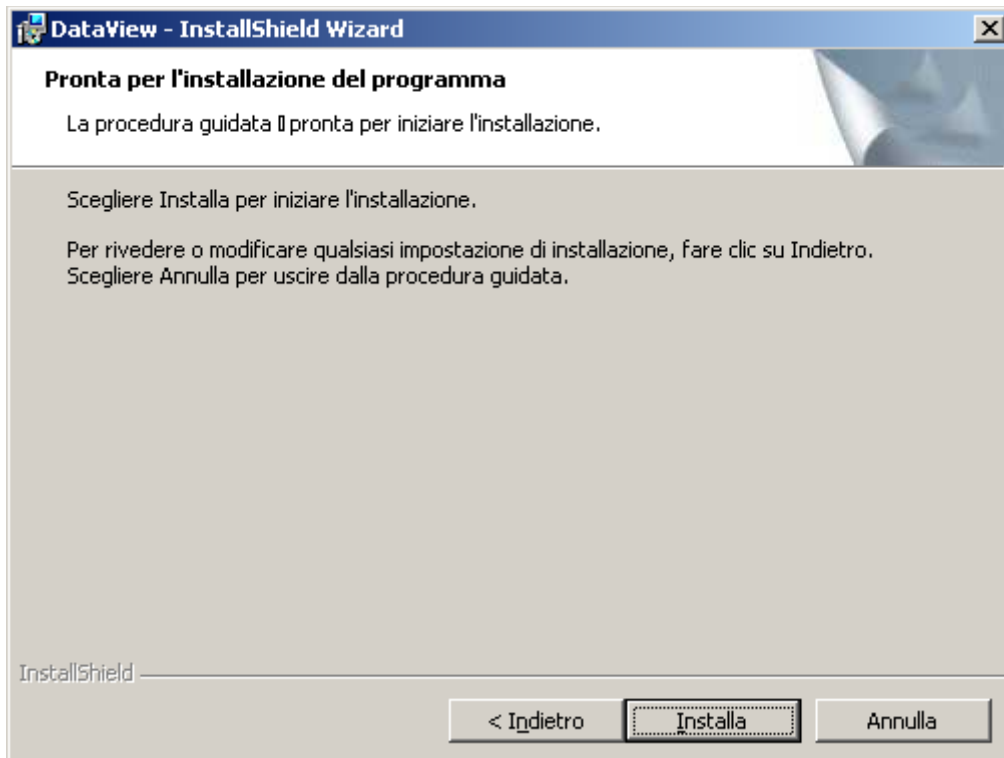


pic. 4

By clicking **Next** a communication window will be displayed (pic. 5) where the local directory (where the program is installed) can be changed/chosen.

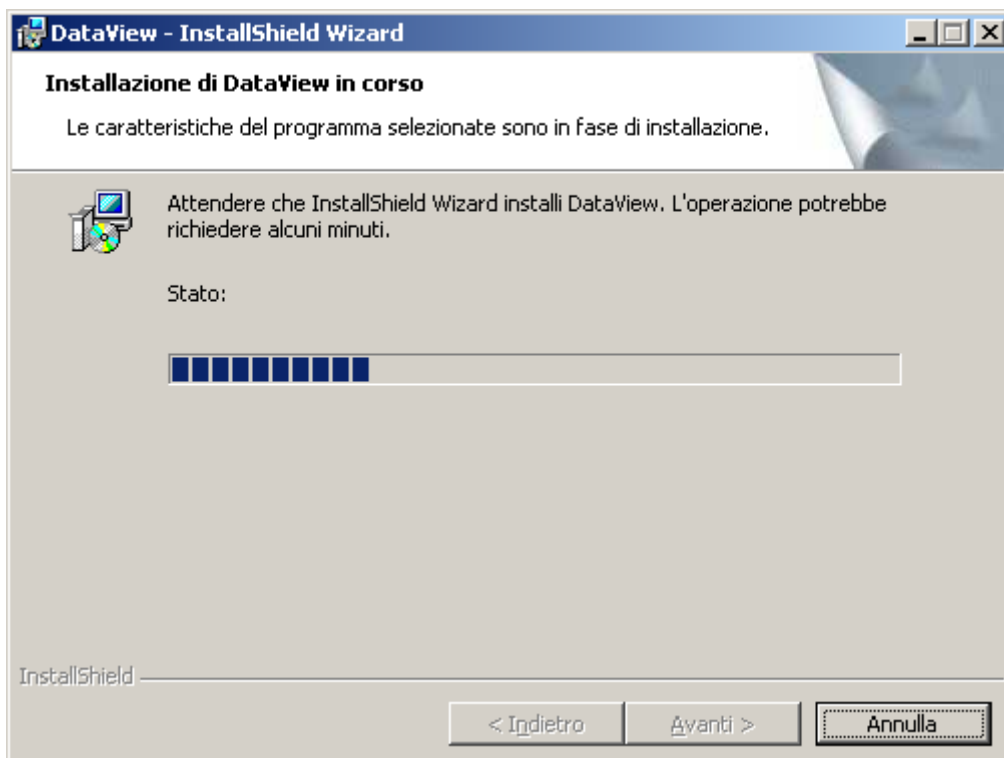


pic. 5



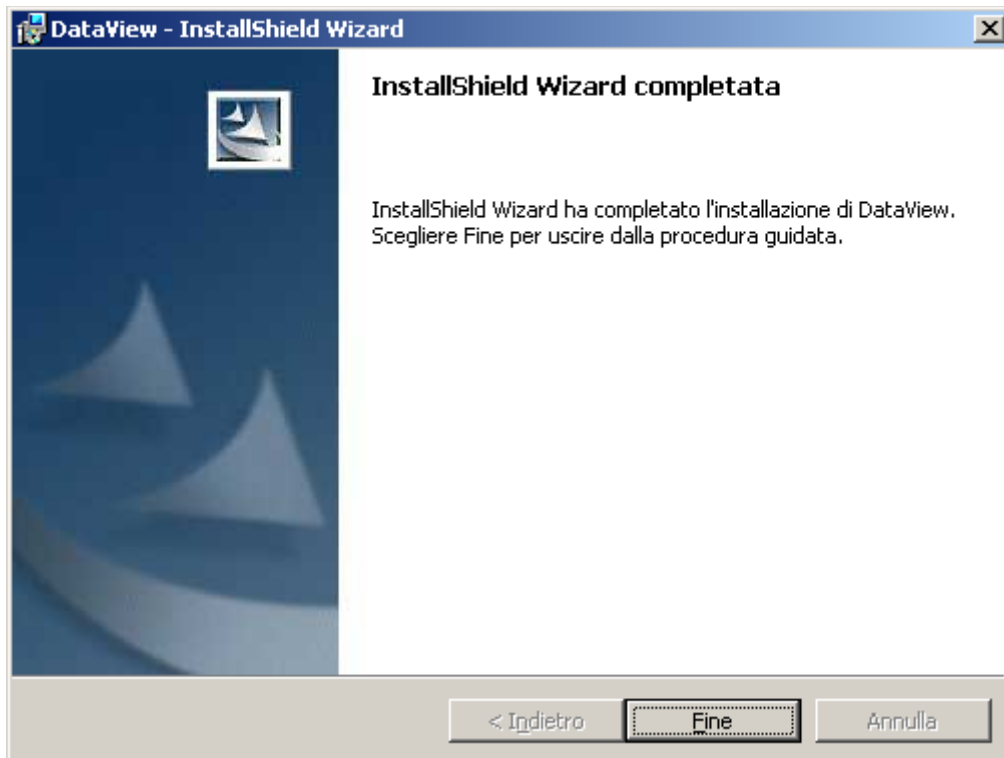
pic. 6

By pressing **Next** (pic. 5) another window will pop up (pic. 6); press **Install** to install the program in the directory previously chosen. During installation of the files a window with a progress bar is visible (pic. 7). To stop the installation process press **Cancel**.



pic. 7

At the end of the installation the final window is shown (pic. 8).



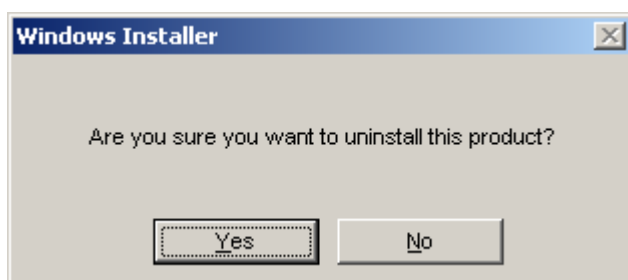
pic. 8

Press **Finish** to end the process. You can start the program **DATAVIEW 2.x n** now.

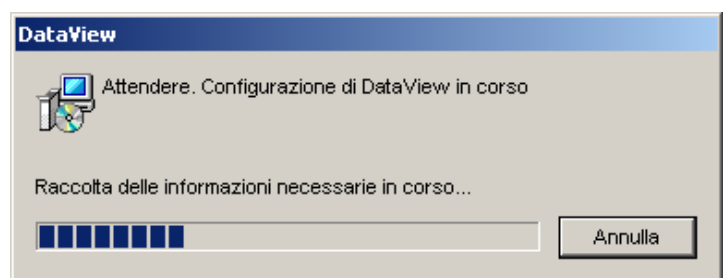
## UNINSTALL:

During installation an uninstallation program was inserted, which can be launched by clicking **UNINSTALL DATAVIEW 2.x**. To run it press:

**START → PROGRAMMI → DATAVIEW → UNINSTALL DATAVIEW 2.x**



pic. 9



pic. 10

For the program uninstall a window is displayed (pic. 9). Click **Yes**, to start removing all files, a window with a progress bar is visible (pic. 10).





## THE PROGRAM:

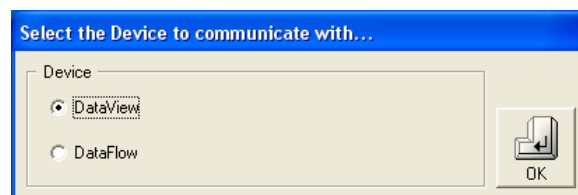
To start the **DATAVIEW** application click:

**START → PROGRAMS → DATAVIEW → DATAVIEW 2.x**



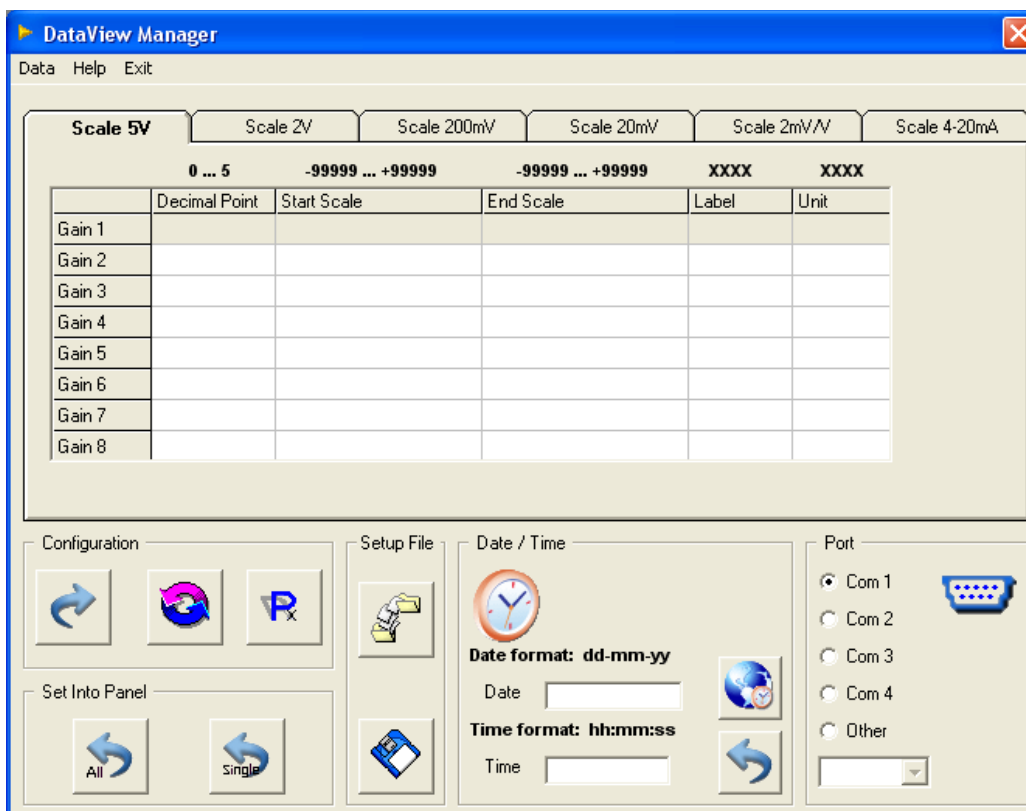
pic. 11

While the application is loading a splash screen is visible (pic.11) followed by the window asking the type of device (pic.12).

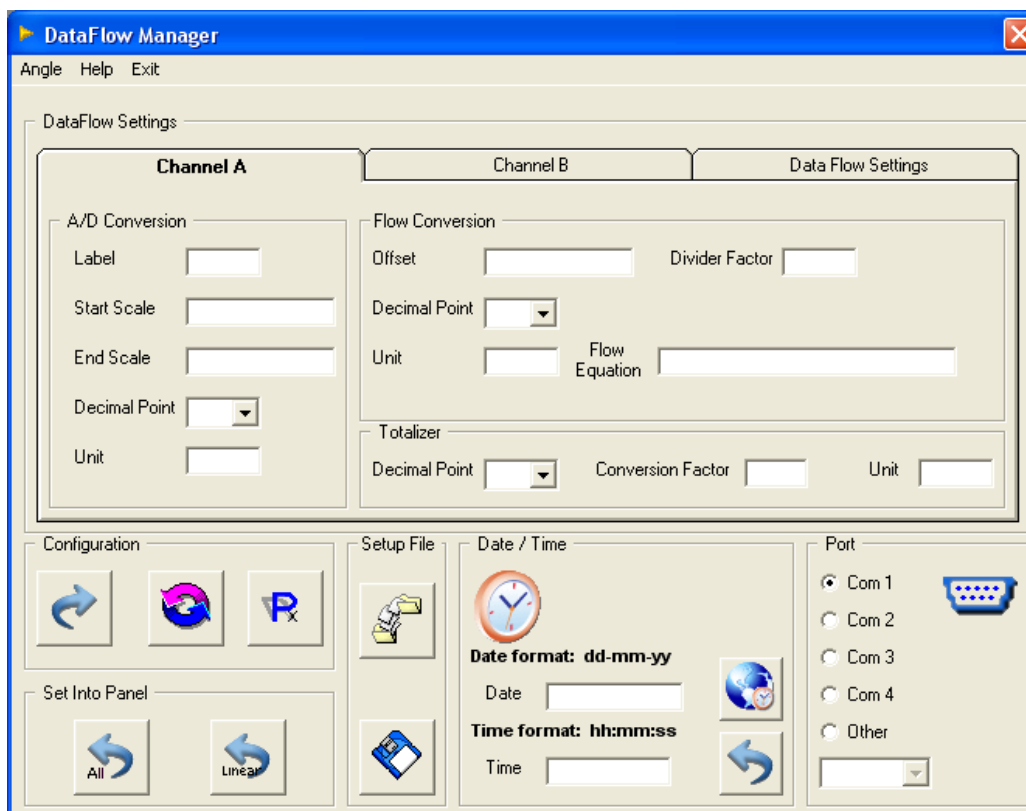


pic. 12

Select the device to connect at and click the OK button.  
The main window screen will start (pic.13, 14).



pic. 13



pic. 14

In the main screen there are placed the menu bar, data grids (one tab for each scale) and various buttons to set and receive data from the unit.



The buttons are:



For getting the configuration from the readout unit.



Loading the default data into the grids.



Opens the window for setting the programmable DataView keypads P1,P2, P3,P4.



Sets the readout unit with the data inserted in the grids.



Sets the readout unit with the data inserted in the selected grid.



Opens a configuration file.



Saves a configuration file.



Insert in the relative text boxes the system date and time.



Sets the date and time in the readout unit.

The menu bar includes the following items (DATAVIEW):

Data

▶ **Transfer**

Help

▶ **Help**  
▶ **About**

Exit

▶ **Exit**

The menu bar includes the following items (DATAFLOW):

Angle

▶ **Degrees**  
▶ **Radians**

Help

▶ **Help**  
▶ **About**

Exit

▶ **Exit**




## Comunication Port

In the right lower part of the screen, there is a frame where it is possible, if needed, to change the communication port.

## Date - Time



By clicking on the button , the date and time of the system will appear in the text boxes. To change the date and time of the device, it is possible to insert the data manually or using




the time of the pc. Click the button  to send the data into the device.

## Configuration

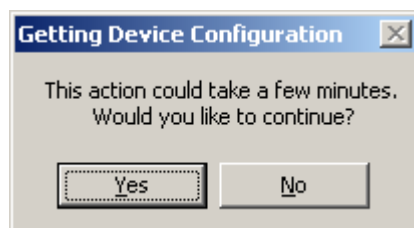
This section is dedicated to the set procedure of the parameters stored in the device.

## Getting



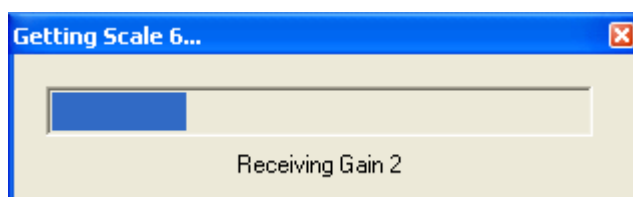
By pressing the button  it will activate the procedure of receiving all data stored in the DATAVIEW/DATAFLOW.

In case of a connection to a DATAVIEW, a communication window (pic.15) will appear, waiting for the user's input.



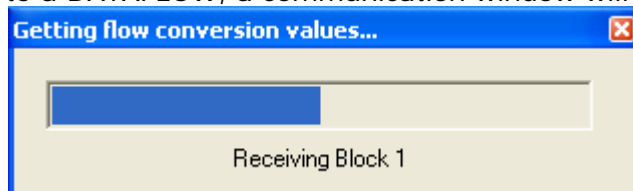
pic. 15

After confirming, a window will pop up (pic. 16), which will display the progress of the communication.



pic. 16

In case of a connection to a DATAFLOW, a communication window will appear (pic.17).



pic. 17

Once the procedure is finished, it will be possible to change the data.

In order to change the data, the value inside the box must be cancelled first, by pressing the BACK SPACE button on the keyboard.



**N.B.**

**The gain 1 in each scale, also displayed with a grey background, has default values that cannot be changed.**



Here below the data that can be set in a DATAVIEW:

Decimal Point	Shows the number of digits after the point. A value between 0 and 5 can be inserted.
Start Scale	Displays the conversion value for the beginning of the measured scale. It is possible to insert a value between -99999 and +99999.
End Scale	Displays the conversion value for the end of the measured scale. It is possible to insert a value between -99999 and +99999.
Unit	Shows the unit of measure. The user can insert up to 4 alphanumeric digits.
Label	Show the label connected to the gain (for an easy way of recognition). The user can insert up to 4 alphanumeric digits.

Here below the data that can be set in a DATAFLOW:

#### A/D Conversion

Label	Show the label connected to the gain (for an easy way of recognition). The user can insert up to 4 alphanumeric digits.
Start Scale	Displays the conversion value for the beginning of the measured scale. It is possible to insert a value between -99999 and +99999.
End Scale	Displays the conversion value for the end of the measured scale. It is possible to insert a value between -99999 and +99999.
Decimal Point	Shows the number of digits after the point. A value between 0 and 5 can be inserted.
Unit	Shows the unit of measure. The user can insert up to 4 alphanumeric digits.

#### Flow Conversion

Offset	Displays the value to offset the converted measurement. It is possible to insert a value between -99999 and +99999.
Divider Factor	Shows the value of dividing the converted measurement. It is possible to insert a value between 1 and 99.
Decimal Point	Shows the number of digits after the point. A value between 0 and 5 can be inserted.
Unit	Shows the unit of measure. The user can insert up to 4 alphanumeric digits.
Flow Equation	Shows the formula for converting the measurement into flow. The variable <b>X</b> stands for the measurement. It is possible to insert in addition other variables as wished by the user.


#### Totalizer

Decimal Point	Shows the number of digits after the point. A value between 0 and 5 can be inserted.
Conversion Factor	Indica il valore di conversione del totalizzatore. It is possible to insert a value between -99999 and +99999.
Unit	Shows the unit of measure. The user can insert up to 4 alphanumeric digits.



## **Default**




By pressing the button  the default values for each scale and gain will be inserted in the grid and in the relative text boxes.

## **Sending**


In the lower left frame named **SET INTO PANEL**, are placed the buttons needed to set the values into the device.

DATAVIEW connection:




By pressing the button  it can be set a single scale (the one displayed). It will appear a communication window with a progress bar (pic.16).




By pressing the button  it can be set in the DATAVIEW all scales. It will appear a communication window with a progress bar (pic.16).

DATAFLOW connection:




By pressing the button  it can be set in the DATAFLOW the entire setup of the A and B channels with the Totalizer values.. It will appear a communication window with a progress bar (pic.17).

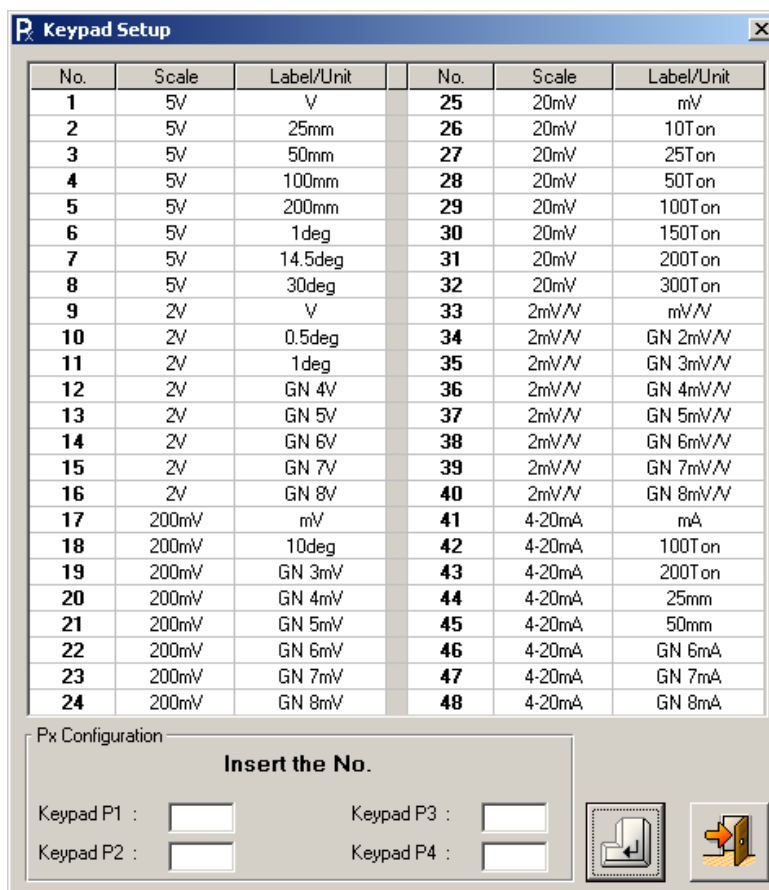


By pressing the button  the linearization values can be sent into the device (flow conversion).

## **Px**



By pressing the button  the programmable keypad buttons P1...P4 can be set. A communication window will popup (pic.18).




pic. 18

In the above window there are 3 columns for 48 rows.

Each row is associated to a specific scale/gain combination. There are 6 scales and 8 gain for each one of them.

In order to set the keypad P1 with the scale 5V and the gain 25mm, it must be inserted in the relative text field the row number of the chosen value. In this case it will be the row no. **2**. For the other keypad, it should be followed the same procedure.




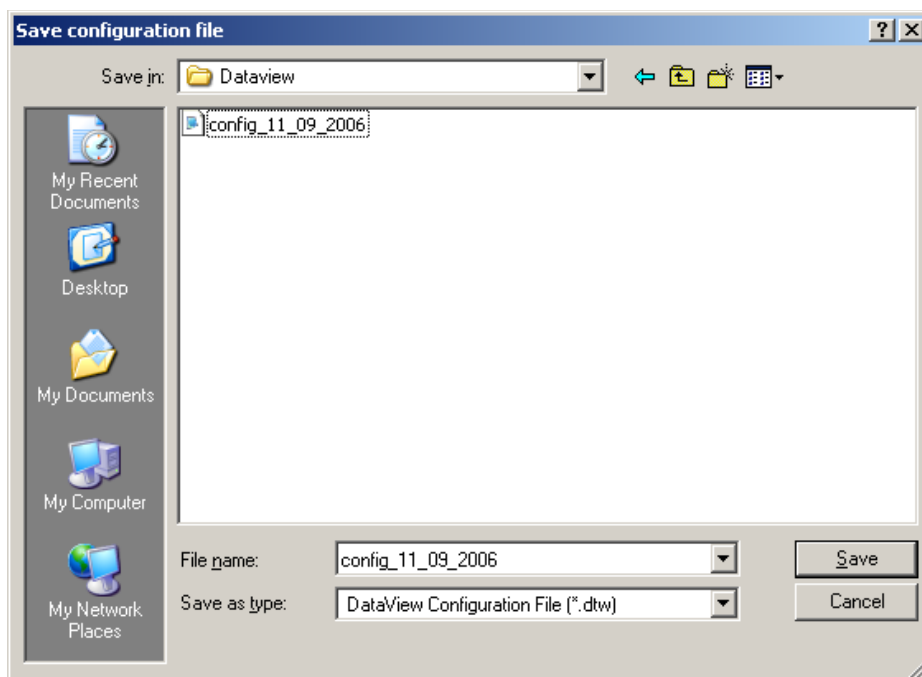
Click the  button, to send the new configuration to the device.

## File

The programs allows the user to save the configuration data inserted, in order to provide backup and an easy restore of the device.




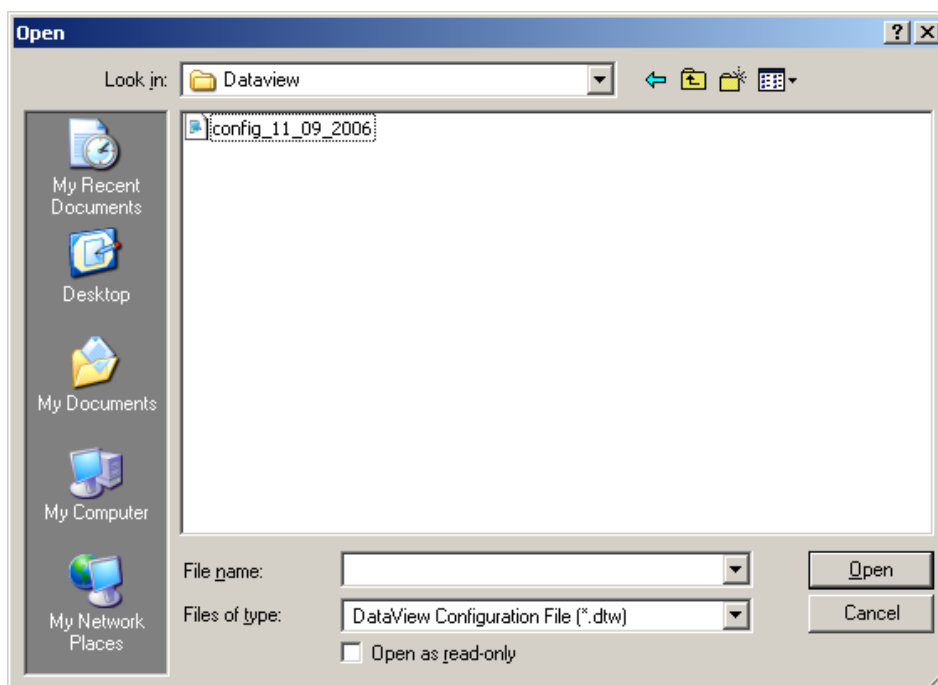
To save, press the  button. A communication window will popup (pic.19) asking for the location and the file name.



pic. 19



By pressing the button  a window will appear (pic.20) asking for the location and the file to load.



pic. 20





## **Data**

As explained in page 19, the DATAVIEW and DATAFLOW devices can store up to 9999 readings.

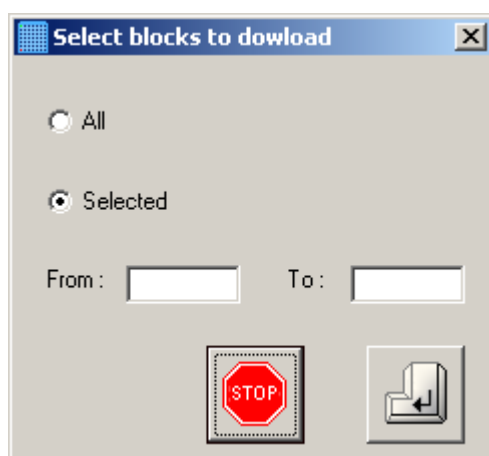
The communication software allows to access this data extremely easy, creating a textual file.

In case of a connection to a DATAVIEW, click **Data** → **Transfer** in the menu place in the upper corner of the main screen.



In case of a connection to a DATAFLOW, click on the button placed in the **DataFlow Settings** tab.

A communication window will be displayed (pic.21), which allows to insert the number of memory blocks that wished to be downloaded from the device.



pic. 21

In the above window there are two requested fields: **From** and **To**, that are the first and last memory blocks.

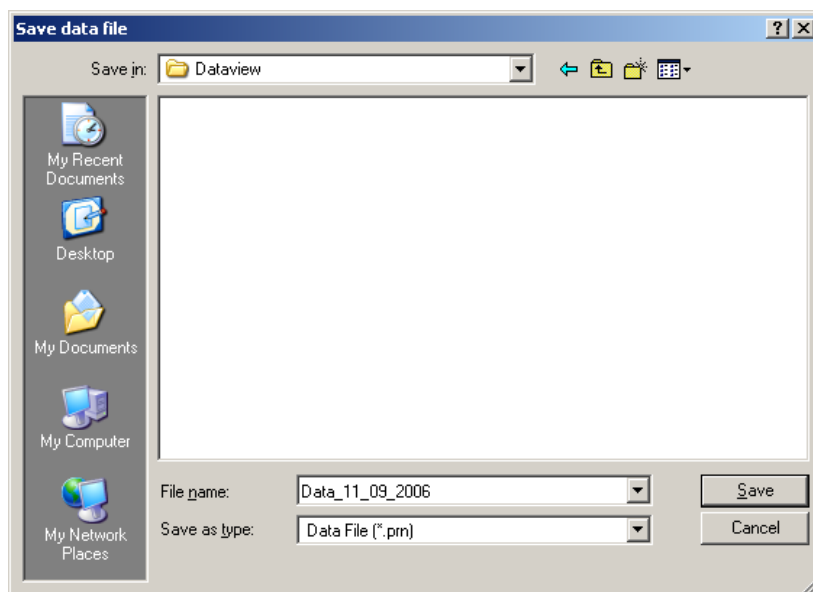
In addition there are two options: **All** and **Selected**. When the first is chosen, it will insert all values that were already recorded. The second option allows the user to insert the values manually.



By pressing the button, it is possible to terminate the download procedure.



Click the button to confirm the selection and proceed with the download. A window will appear (pic.22) requesting the location and the file name.



pic. 22

## Help

Click **Help** on the menu toolbar, will open the below popup.

- ▶ Contents
- ▶ About

Click **Contents** will display the user software and hardware user manual

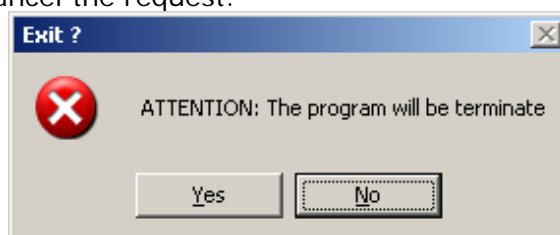
Click **About**, will open the window (pic.23) displaying the data for the installed software version.



pic. 23

## Exit

Click **Exit** to terminate the program. A confirmation window will appear (pic.24). Click **Yes** to end the program, **No** to cancel the request.

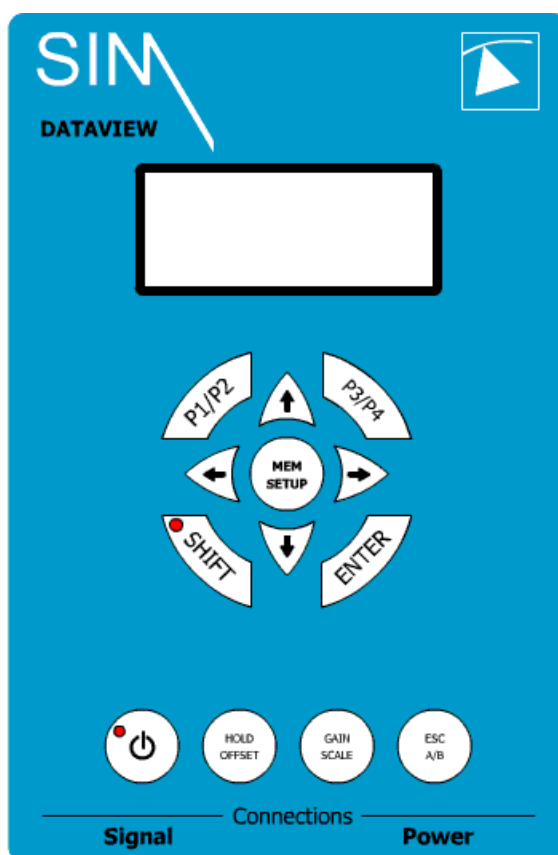


pic. 24

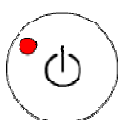


## LA TASTIERA:

La tastiera di comando e controllo della centralina **DATAVIEW** è la seguente:



### Accensione:



All'accensione il display mostrerà la schermata di inizializzazione e successivamente compariranno sul display la data e l'ora.

WELCOME DATAVIEW	
---------------------	--

DATA	28/06/06
VIEW	12:51:14



Questo tasto permette di effettuare per un determinato tasto l'operazione in basso (dove il tasto lo preveda).

Per esempio: premendo il tasto **GAIN/SCALE** si abilita la funzione Gain, premendo il tasto Shift e poi il tasto **GAIN/SCALE** si abilita la funzione Scale



Questo tasto permette di abbandonare una funzione oppure tornare al passo precedente



## Acquisizione:



Per passare direttamente alla fase di lettura premere questo tasto. Comparirà sullo schermo l'ultimo settaggio usato (SCALE e GAIN), per confermarlo premere **ENTER** di nuovo. Si passerà quindi alla lettura dello strumento. Per modificare GAIN e SCALA invece bisognerà utilizzare un altro tasto, spiegato più avanti.

```
SCALE: 20mV   C:A
GAIN:  X1    mV
```

```
C:A -0.1443mV
-01.447<>-01.441
```



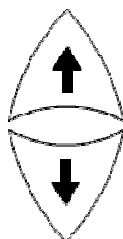
Premendo il tasto ENTER durante l'acquisizione si resetta le letture dei MIN e MAX

C:A – Indica il canale

La lettura in alto indica la lettura attuale con l'unità di misura corrispondente

La lettura in basso a sinistra indica la lettura MIN

La lettura in basso a destra indica la lettura MAX



Con le frecce è possibile selezionare la visualizzazione lettura oppure la visualizzazione dello stato della batteria

```
Batt.      28/06/06
+12.3V    13:06:07
```

Durante la fase di lettura sono possibili le seguenti operazioni:

**Hold** – fermare la lettura su un dato desiderato

**Offset** – togliere un offset desiderato dalla lettura

**Memorizzazione** – memorizzazione del dato

## OFFSET:



Premendo il tasto **SHIFT** e questo pulsante si potrà detrarre dalla lettura il valore appena misurato (TARA).

Sul visualizzatore lampeggerà in alto a sinistra la lettera **O**.

Per uscire e riportare il valore letto a quello precedente, premere nuovamente **SHIFT** + **GAIN/OFFSET** oppure premere il tasto **ESC**

```
C:A -0.1443mV  O
-01.447<>-01.441
```



Premendo **SHIFT** e questo tasto si passa dal canale **A** al canale **B** e viceversa.

Inoltre è possibile avere due programmazioni diverse per i due canali (scala e gain diversi).

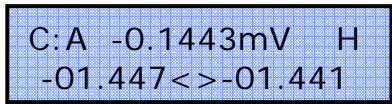


Premere questo tasto per uscire da questa funzione.

**HOLD:**



Premendo questo pulsante in fase di acquisizione, è possibile fermare la lettura, ovvero tenere fisso il dato visualizzato. Sul visualizzatore lampeggerà in alto a sinistra la lettera **H**. Se anche la funzione offset fosse attiva lampeggeranno contemporaneamente sia lettera **H** che la lettera **O**.

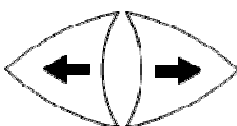
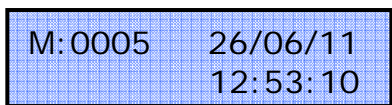


Premere questo tasto per uscire da questa funzione.

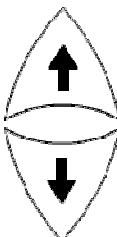
**Memorizzazione:**



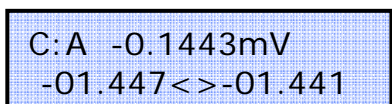
Premendo il seguente tasto si potrà memorizzare il dato visualizzato (vi sono 9999 locazioni di memoria). Il display visualizzerà una schermata di salvataggio del dato.



Premendo i seguenti pulsanti si potrà scegliere la locazione di memoria dove registrare il dato (premendo le frecce la locazione si sposterà man mano di un unità per volta in più o in meno, mentre premendo prima il tasto SHIFT e poi le frecce, la locazione si sposterà di decina in decina) Premere successivamente il tasto **ENTER** per confermare.



Con le frecce è possibile visualizzare gli altri dati relativi a questa locazione di memoria (canale, lettura, min, max)



Una volta scelta la locazione di memoria desiderata si potrà inserire una sigla di 4 caratteri (in basso a sinistra) che permetterà di ricordare più facilmente l'associazione dello strumento al dato memorizzato.

Con le frecce destra/sinistra si posiziona sul carattere da inserire mentre con le frecce su e giù si sceglie il carattere.

Per confermare premere il tasto **ENTER**.

Per tornare indietro nel menù premere **ESC**.



M: 0005	26/06/11
	12:53:10

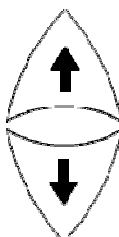
Per rivedere i dati memorizzati basterà accendere la centralina e premere il tasto **MEM**.

### GAIN/SCALE:



Nella centralina **DATAVIEW** per ogni scala\* di misura (tipo di ingresso analogico), vi sono 8 Gain selezionabili (scalatura del segnale analogico).

\* (Nelle centraline universali sono previste fino a 6 scale di misura in modo da poter collegare tutti gli strumenti forniti dalla SIM).



Con le frecce è possibile selezionare il Gain/Scale desiderato. Per confermare la selezione premere il tasto **ENTER**.

### SETUP:



Premendo il tasto **SHIFT** ed il seguente tasto si potrà entrare nella modalità di settaggio della centralina, dove è possibile cambiare la data e l'ora e i valori di conversione dei vari Gain.

Usare le frecce per selezionare prima la Scala e successivamente il Gain.

All'interno di ogni Gain vi sono i seguenti settaggi da impostare:

Punto decimale

Valore di conversione per inizio scala

Valore di conversione per il fondo scala

Unità di misura (4 caratteri)

Associare un tasto **P** in modo da avere per gli strumenti più usati una programmazione immediata.

### Programmazione:



Una volta settati tutti i dati è possibile registrare questa configurazione con quattro programmazioni, che sono facilmente richiamabili successivamente.

Premere il tasto della locazione desiderata per inserire la configurazione in memoria.



## CONNECTIONS

### POWER CONNECTOR

<b>PIN1</b>	=	+ Supply 12-13,8 Vcc External Battery
<b>PIN2</b>	=	- Supply
<b>PIN3</b>	=	N.C.
<b>PIN4</b>	=	N.C.

### SIGNAL CONNECTOR

<b>PIN1</b>	=	INPUT + CHANNEL A
<b>PIN2</b>	=	INPUT - CHANNEL A
<b>PIN3</b>	=	INPUT + CHANNEL B
<b>PIN4</b>	=	INPUT - CHANNEL B
<b>PIN5</b>	=	Ground
<b>PIN6</b>	=	+5Vcc
<b>PIN7</b>	=	+12Vcc





