



F3.60M USB interface

Instruction Manual

EN 12-09

1. Sensor Calibration

After making the USB connection press the button "connection".

Before connection, it's possible to choose the language (English or Italian).

1.1. Settings

Summary of all main calibrations of the F3.60. The information are: serial number, full scale, pipe diameter and type of output (switch dependent), filter average, filter sensitivity, cut off, digital filter, and if the instrument is set mono or bi-directional.

1.2. Calibration

In this menu it's possible to set the following parameters of the instrument:

Full Scale: the magmeter provide a frequency output of 0-500 Hz proportional to the flow velocity. The instrument give the opportunity to change the full scale between from 2 to 8 m/sec.

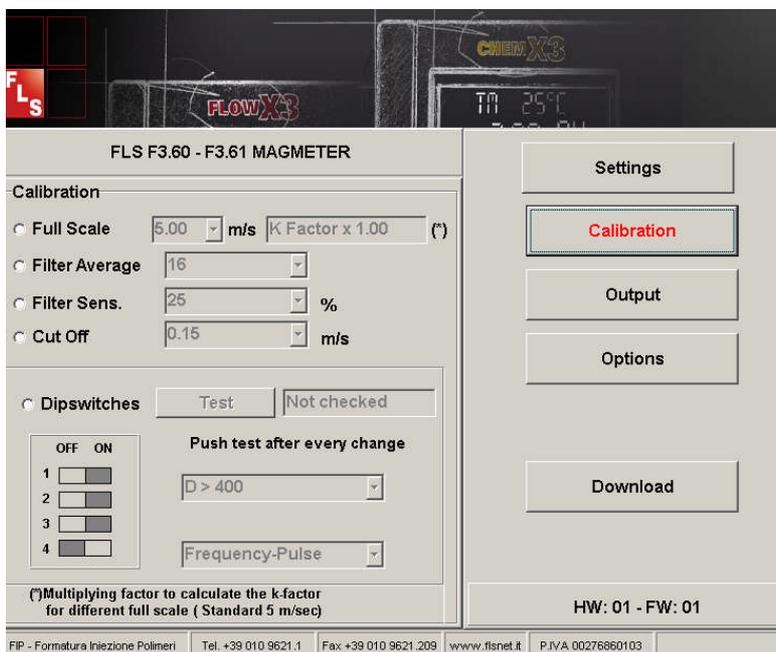
N.B. if the full scale is different of 5 m/sec the K-Factor value on the instruction manual has to be multiply by the constant as indicated into window closed to full scale value.

which the output is mediated.

Filter Sensitivity: set the rate of change of flow necessary to exclude the average function to get the new flow rate

Full Scale: below this flow velocity the magnetic responds as if the flow rate was nothing.

Dipswitches: box used to check the position of the switches for each diameter and type of output available. Press the Test button to check if there is congruence between switches set on the instrument PCB and simulated the PC interface. If there is inconsistency will be forbidden to make the data download.



1.3. Output

Set the type of output if frequency or pulse volume.

Frequency: The sensor generates a frequency 0-500 Hz proportional to the flow velocity.

Volumetric Pulse: output generates a pulse when the set volume has passed through the sensor.

With the pulse output you must set the following parameters:

K-Factor (pulses per liter, for different full scale than 5 m/sec the value in the table has to be multiplied by the closed coefficient).

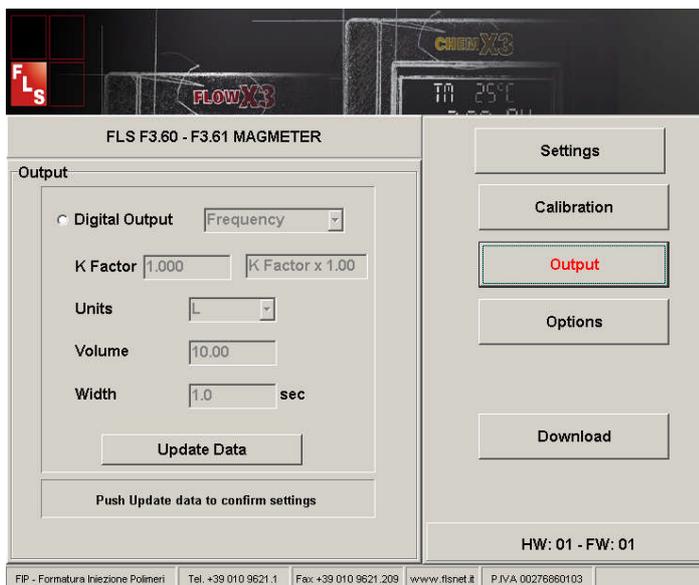
Unit (L, gallons or m3).

Volume (set value between from 0.01 to 999.99).

Width: pulse duration (set value between from 999.9 to 0.1 sec). Pulse duration must be shorter than timing of volume flow.

To accept any change you must press the update data button.

N.B. Screen is not available if the output type is set in the calibration is current.

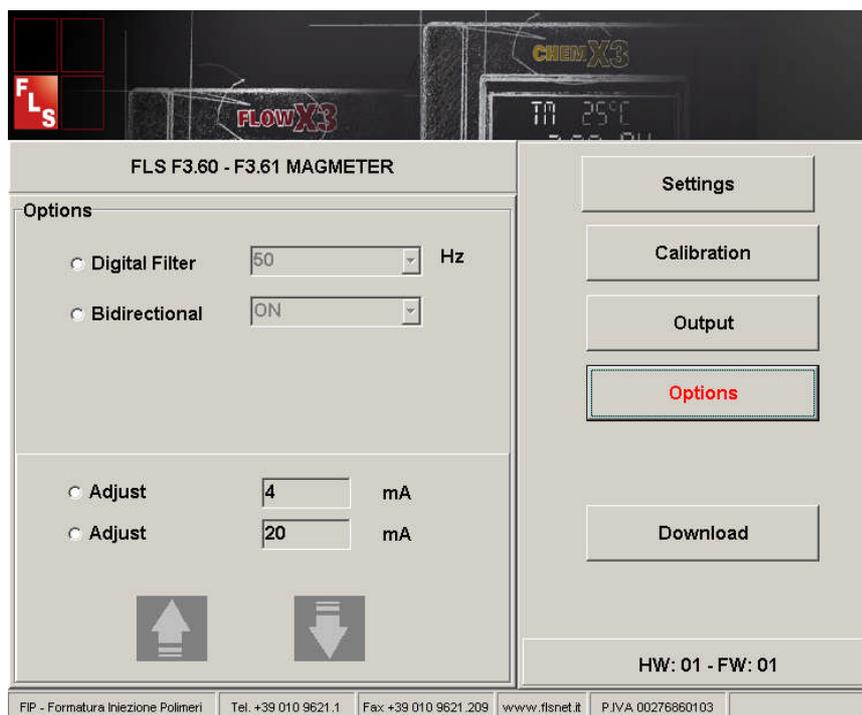


1.4. Option

Digital filter: frequency of net power supply (50/60 Hz)

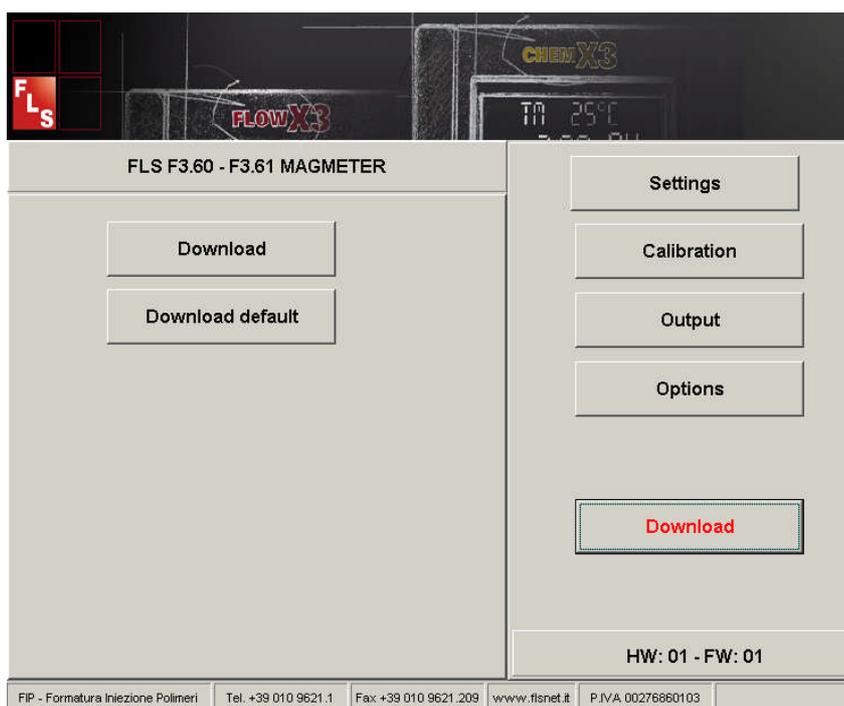
Bidirectional: ON the instrument measures in both directions, OFF the instrument measures only in the direction of the arrow positioned on the box.

Adjust: accurate adjustment of 4 mA and 20 mA



1.5. Download Data

Pressing the Data Download all settings are updated onto the instrument. If you unplug the tool before the downloading data all settings will be lost. To return to the factory settings press download default.



2. Troubleshooting

Interpretation of error messages on PC

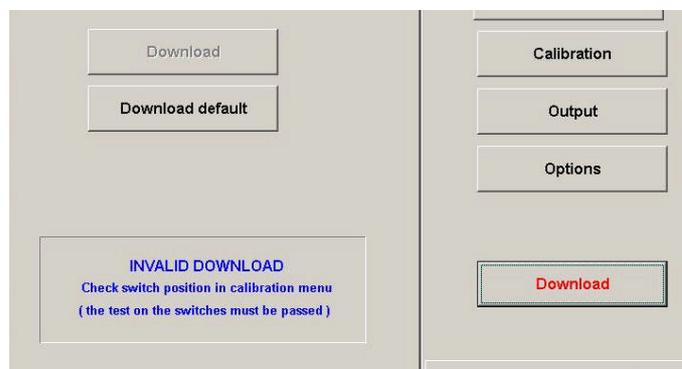


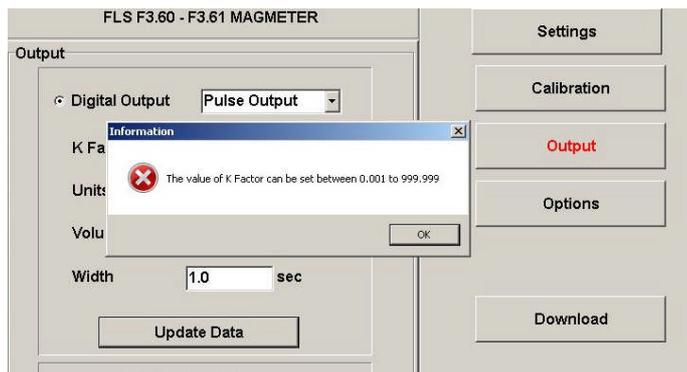
Error connection between PC and F3.60. Check the connection if it's done correctly.

Mismatch: positioning of switches on the PC side and the F3.60 are not positioned in the same way. If the message Mismatch appears, it's not possible to download settings on the instrument.



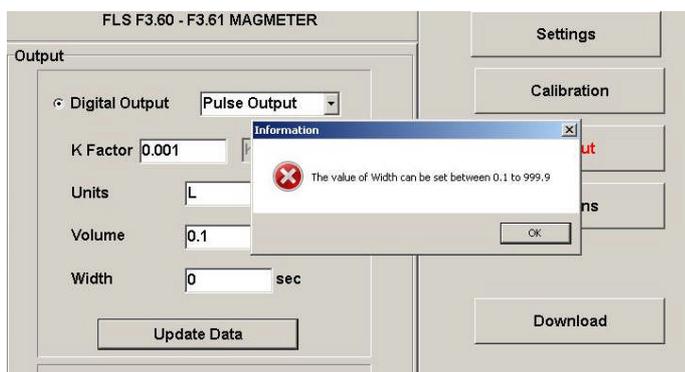
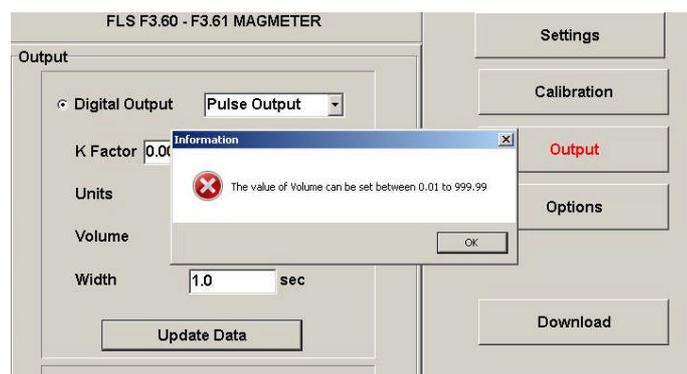
Unable to download data: in this case you can not download the data (only the default), return to the calibration menu and check the position of the switches and take the test whose result must be checking OK.





The value of K-Factor must be between from 999,999 to 000.001.

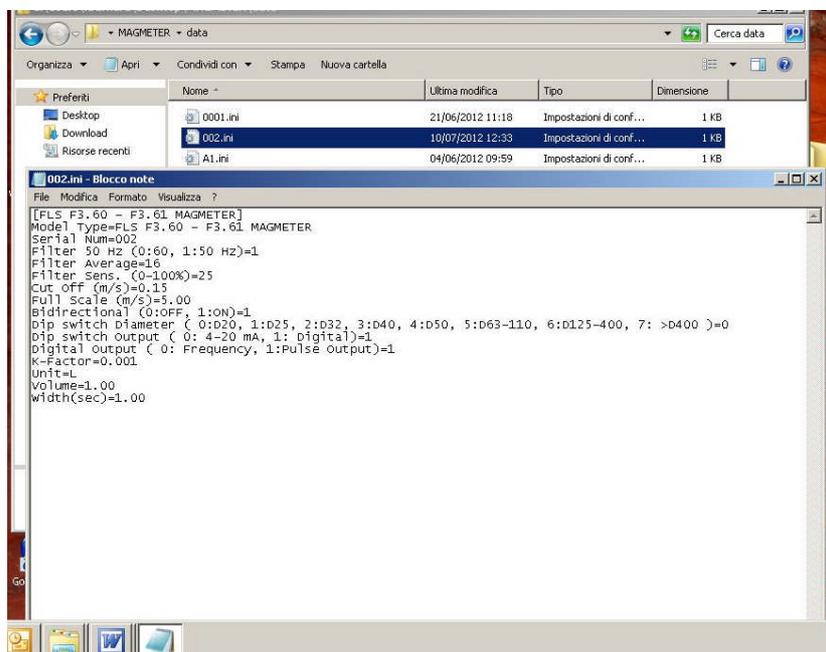
The volume must be between from 0.01 to 999.99.



The value of the Width must be between from 0.1 to 999.9.

3. Data File

After the downloading of the parameters the USB interface creates a folder with a file .ini where there are a summary of the all calibration done on the magmeter.



If Dip switch Diameter = -1 means that it's not been done the comparison between the PC and the Magmeter.