

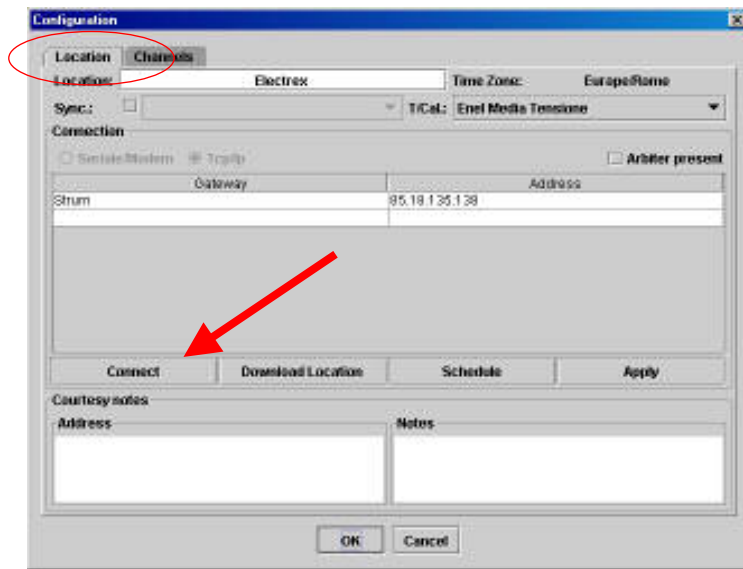
New functions implemented in Energy Brain version 4.0

On-line readings display for instruments type X3M, X3M-D Flash N, Flash-D, Fast

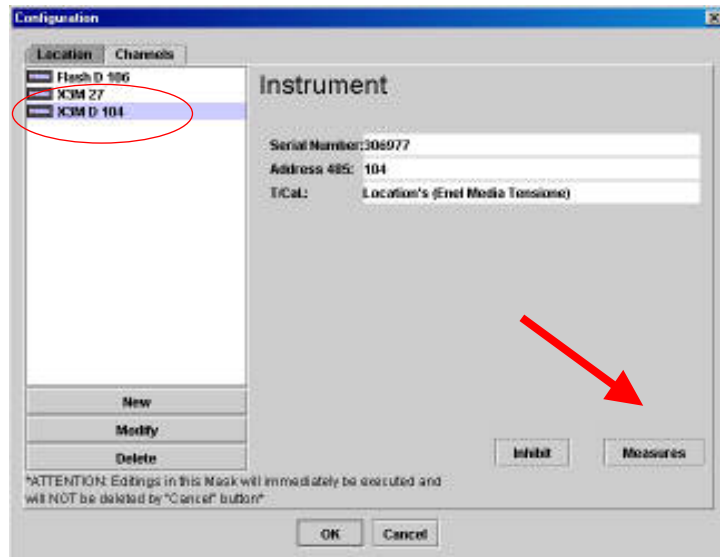
In order to view the on-line readings supported by the meters, proceed to the configuration window likewise done when configuring the instrument and:



- connect the location



- select the channel to view



- Click the  button

The following readings page is prompted showing the complete set of readings transmitted by the selected instrument.

The readings are grouped into sections as below indicated:

The screenshot shows a 'Measures' window with a table of electrical readings. Red arrows point from numbers 1 to 7 to specific sections of the table:

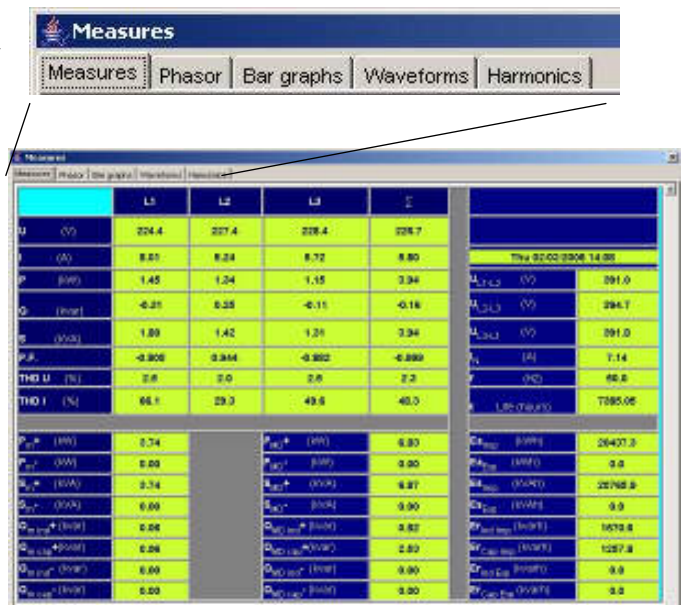
- 1: Points to the first four columns (L1, L2, L3, Σ) of the main table.
- 2: Points to the 'Date/Time' field (Thu 02/03/2006 14:08).
- 3: Points to the 'Complementary readings' section (U_{L1-L2}, U_{L2-L3}, U_{L3-L1}, I_N, f, t).
- 4: Points to the 'Instrument lifetime' field (Life (hours)).
- 5: Points to the 'Average power' section (P_{m+}, P_{m-}, S_{m+}, S_{m-}, Q_{m ind+}, Q_{m cap+}, Q_{m ind-}, Q_{m cap-}).
- 6: Points to the 'Maximum Demand' section (P_{MD+}, P_{MD-}, S_{MD+}, S_{MD-}, Q_{MD ind+}, Q_{MD cap+}, Q_{MD ind-}, Q_{MD cap-}).
- 7: Points to the 'Energy values' section (E_{imp}, E_{exp}, E_{imp}, E_{exp}, E_{ind imp}, E_{cap imp}, E_{ind exp}, E_{cap exp}).

1. Readings of a three-phase 4-wire system. For instruments with different wiring configurations the non-applicable readings (example: phase-neutral voltages for a 3-wire configuration) are shown as “NaN” (Not a Number) per Modbus standards.
2. Instrument Date/Time.
3. Complementary readings.
4. Instrument lifetime.
5. Average power (rolling average) values on the 4 quadrants. For instruments set to import mode only, the non-applicable readings are shown as “NaN”.
6. Maximum Demand values on the 4 quadrants. For instruments set to import mode only, the non-applicable readings are shown as “NaN”.
7. Energy values on the 4 quadrants. For instruments set to import mode only, the non-applicable readings are shown as “NaN”.

On-line readings display *for instruments type X3M-H, X3M-DH Flash-NH, Flash-DH and X3M, X3M-D Flash-N, Flash-D (with FFT Harmonics option)*

The readings page for these instruments, prompts additional folder tabs, enabling to view additional readings pages and on-line graphs as indicated.

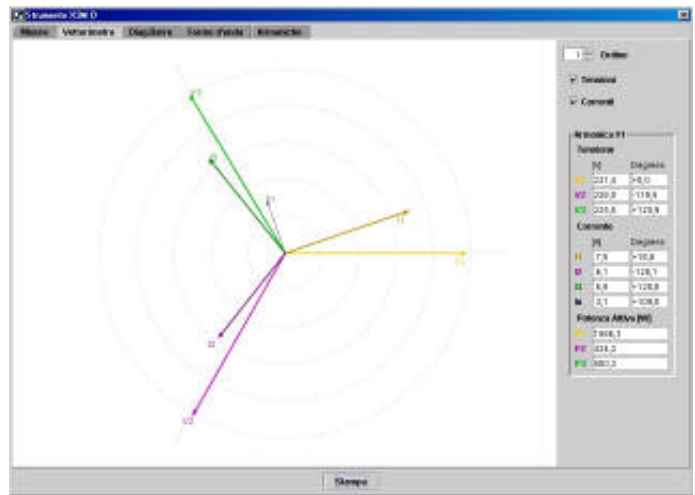
On line readings



Vectors

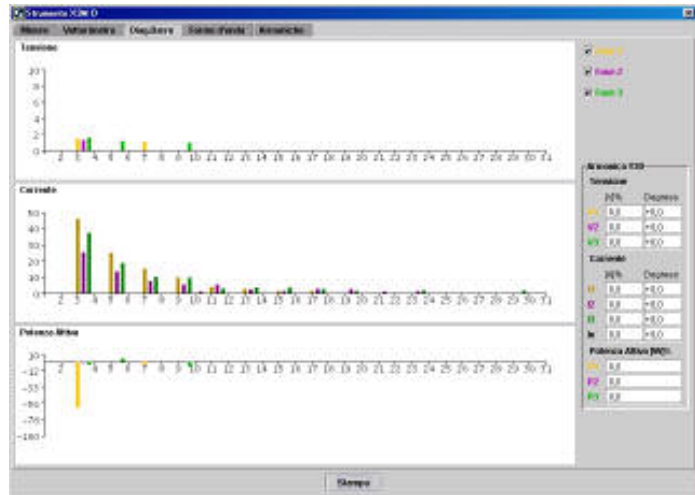
Harmonics order and vector (voltage/current) selection is made by the upper-right check boxes.

The applicable values show on the readings field on the right.



Harmonics bar graphs

Phase selection is made by the upper-right check boxes. The applicable values show on the readings field on the right.

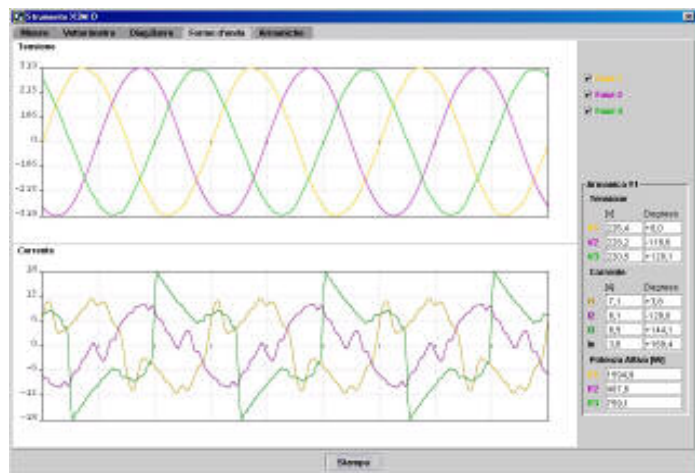


NB.

In 3P-3W and in 3P-3W-BAL wiring configuration, the readings of harmonic powers are not available.

Waveforms

Phase(s) selection is made by checking the relevant boxes on the right. The applicable values show on the readings field on the right.



NB.

In 3P-3W and in P-3W-BAL wiring configuration, the readings of harmonic powers are not available.

Harmonics readings

NB.

In 3P-3W and in P-3W-BAL wiring configuration, the readings of harmonic powers are not available.

	$U_1(V)$	$U_2(\phi^{\circ})$	$U_3(V)$	$U_4(\phi^{\circ})$	$U_5(V)$	$U_6(\phi^{\circ})$	$I_1(A)$	$I_2(\phi^{\circ})$	$I_3(A)$	$I_4(\phi^{\circ})$	$I_5(A)$	$I_6(\phi^{\circ})$
H1	230,4	0,0	230,4	-90,0	230,4	0,0	1,0	0,0	1,0	0,0	1,0	0,0
H2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H6	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H7	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H9	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H10	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H11	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H12	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H13	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H14	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H15	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H16	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H17	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H18	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H19	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H20	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H21	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H22	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H23	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H24	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H25	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H26	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H27	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H28	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H29	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
H30	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Click the **Event Configuration** button to modify the parameters that discriminate/trigger the data logging of the Events service.

The meaning of the Description fields is as follows:

Voltage Dip/Sag & Undervoltage Threshold

Events log-on for voltage values below setpoint (in V)

Voltage Dip/Sag & Undervoltage Restore Threshold

Events log-off for voltage values above setpoint (in V)

Voltage Dip/Sag Max Duration

Events with duration (in number of cycles) below setpoint are logged as *Voltage Dip/Sag*; events with duration above setpoint are logged as *Undervoltage*.

Voltage Swell & Overvoltage Threshold

Events log-on for voltage values above setpoint (in volt)

Voltage Swell & Overvoltage Restore

Events logoff for voltage values below setpoint (in volt)

Voltage Swell Max Duration

Events with duration (in number of cycles) below setpoint are logged as *Voltage Swell*; events with duration above setpoint are logged as *Overvoltage*.

Current Peak & Overcurrent threshold

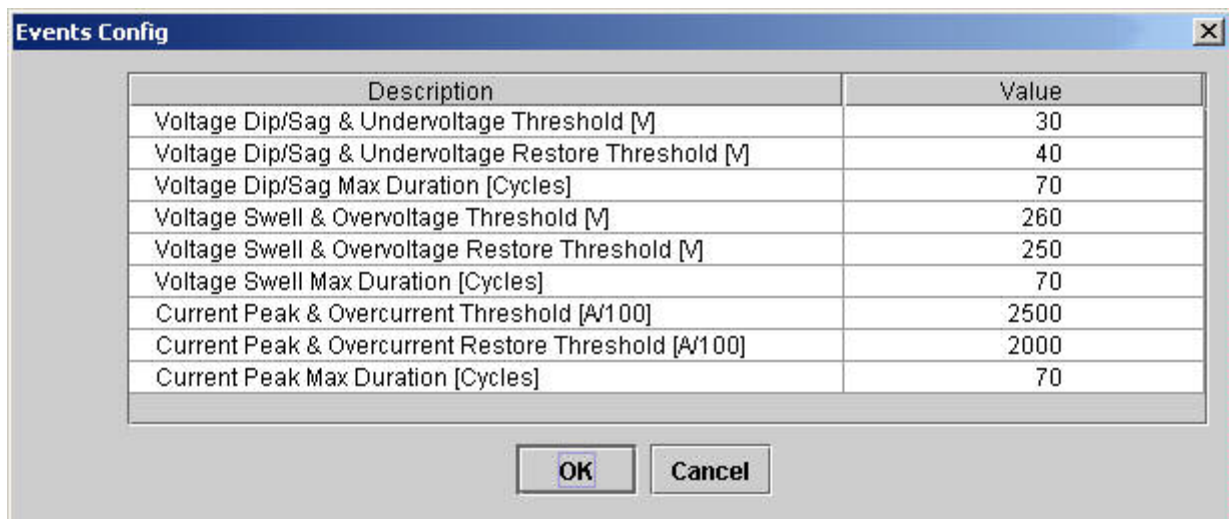
Events log-on for current values above setpoint (hundredths of A)

Current Peak & Overcurrent restore threshold

Events log-off for current values below setpoint (hundredths of A)

Current Peak Max Duration

Events with duration (in number of cycles) below setpoint are logged as *Current Peak*; events with duration above set point are logged as *Overcurrent*.



Modification of the setpoints can be operated as follows:

- 1 overwrite the required setting(s) in the Value fields on the right.
- 2 confirm the new entries by pressing the “Enter/Return” key of your PC.
- 3 click the **OK** button to transfer the new settings to the instrument and to exit the Events Configuration window.
