1. INTRODUCTION OF TOPVIEW SOFTWARE

The **TopView** is a professional software designed for the management of data relative to multipurpose safety instrument of HT ITALIA and going to gradually replaced dedicated programs such as TopLink and EuroLink whose development is finished to the Win XP 32 bit platforms

Main features (reference 2.1.0.5 release)

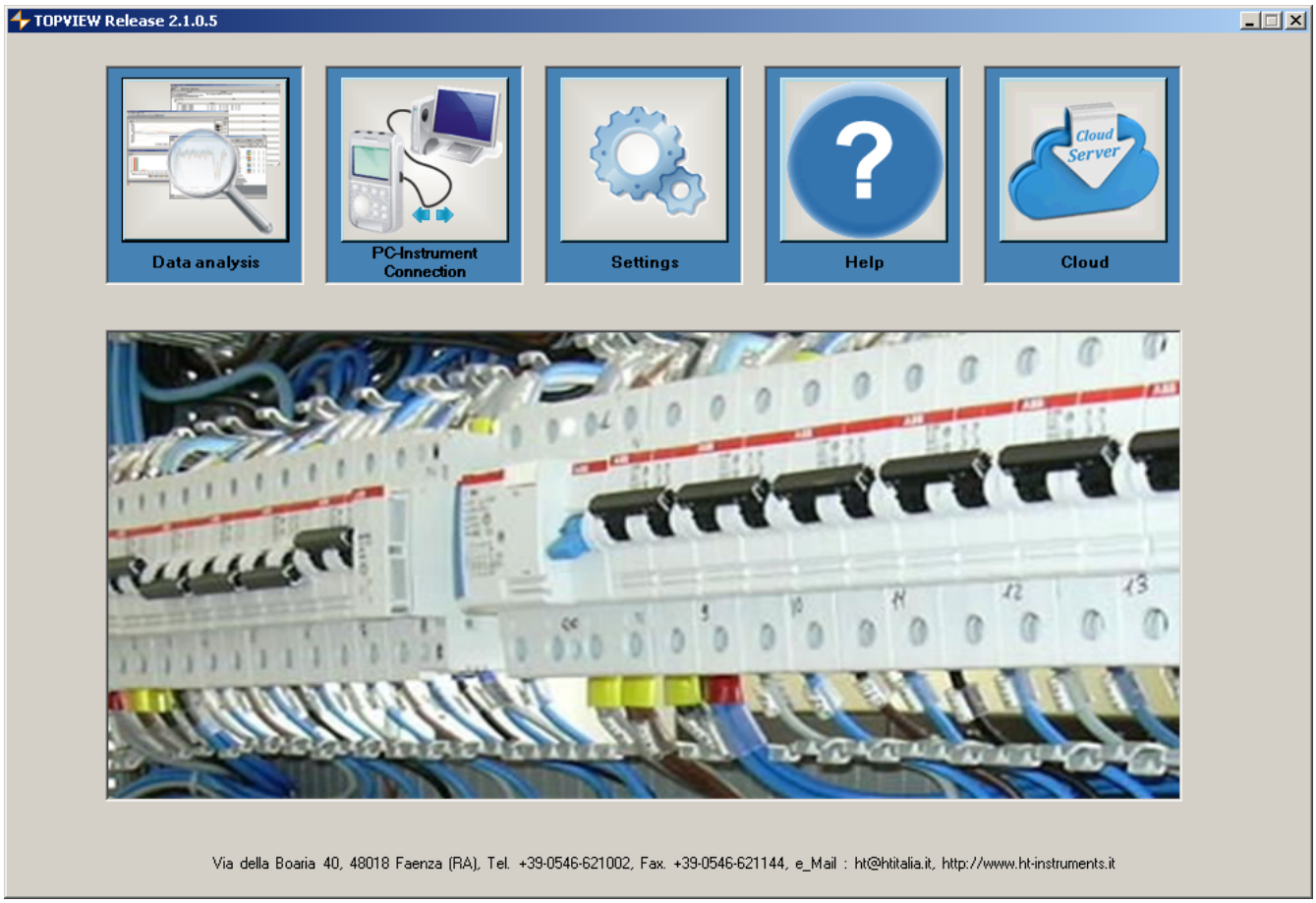
- Management of data transfer from instrument to PC
- Analysis of downloaded data from multipurpose instruments
- Numerical/graphics visualizations od measured data
- Real-time connections with instrument in USB and WiFi modes
- Creation of final reports in XLS and PDF format files
- Customization of user data profiles
- Automatic search of updates
- On-line update directly from the program
- Management of HT Cloud system for protection data
- Compliance with Win7 and Win 8 32 bit and 64 bit platforms
- Contextual help on line

Instrument not managed by TopView software (reference 2.1.0.5 release)

The TopView can manage the almost totality of multipurpose instrument of HT ITALIA also of not recently constructions and/or out of production, considering the herewith exceptions:

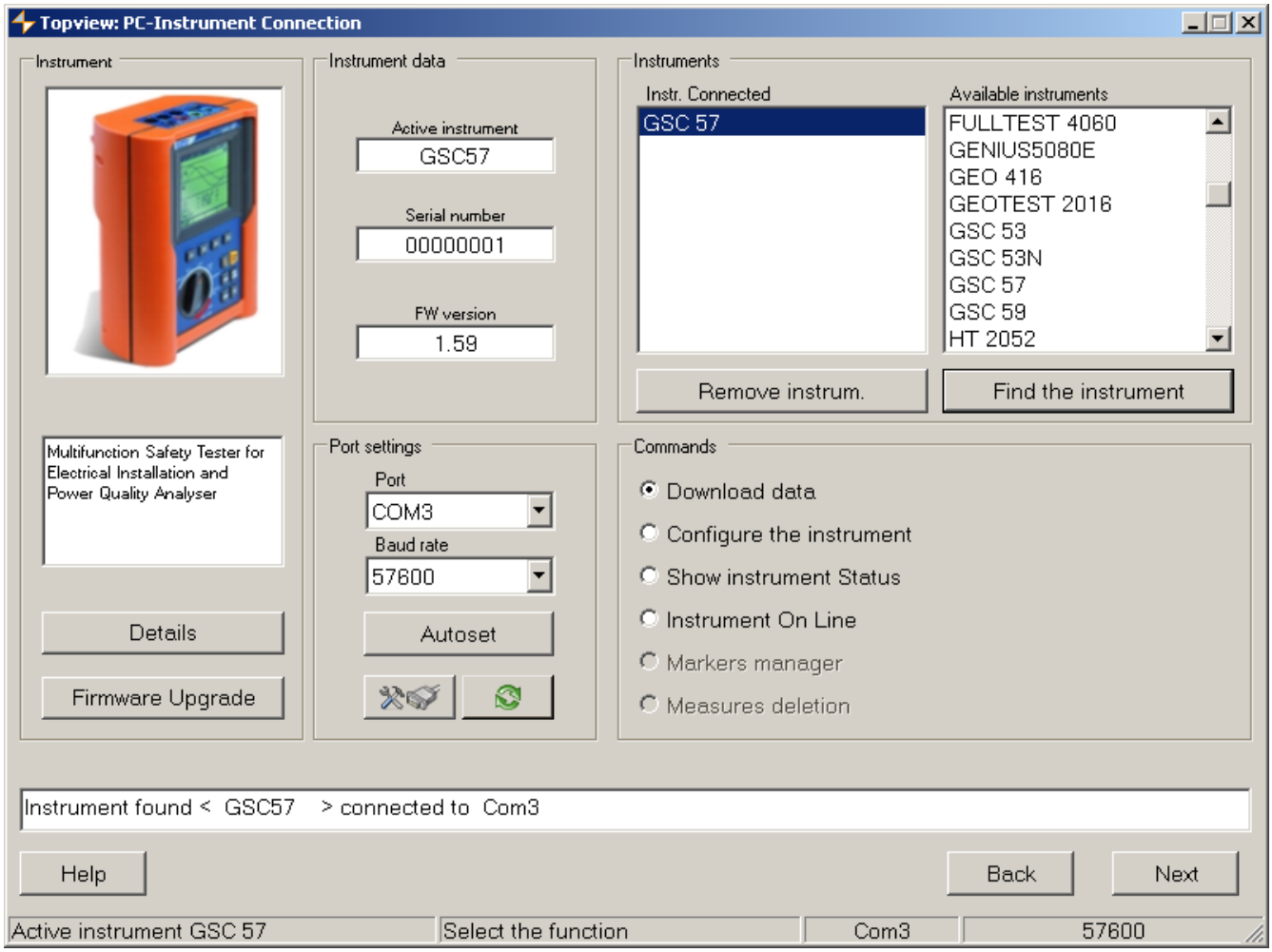
- GENIUS HT5080 / HT5060 → Use of PR50 software compliance up to Win XP 32 bit systems
- MACROTEST 5030 → Use of PR50 software compliance up to Win XP 32 bit systems
- SKYLAB 9030 / 9020 → Use of SKYLINK software compliance up to Win XP 32 bit systems
- ENERGYTEST 2020 → Use of ENERGYLINK software compliance up to Win XP 32 bit systems

2. MAIN SCREEN OF TOPVIEW SOFTWARE



- **Data Analysis** → allows to open a file of saved data for further analysis
- **PC Instrument-Connection** → allows to perform the download of data from the instrument via RS-232, USB or WiFi (actually for MACROTESTG3 and PQA820)
- **Settings** → allows to define a user profile, enable the notification of software updates and choose the language
- **Help** → allows the access to the help on line of the program
- **Cloud** → allows the access to HTCloud database in which is possible to save the downloaded data in protection way (actually for PQA820)

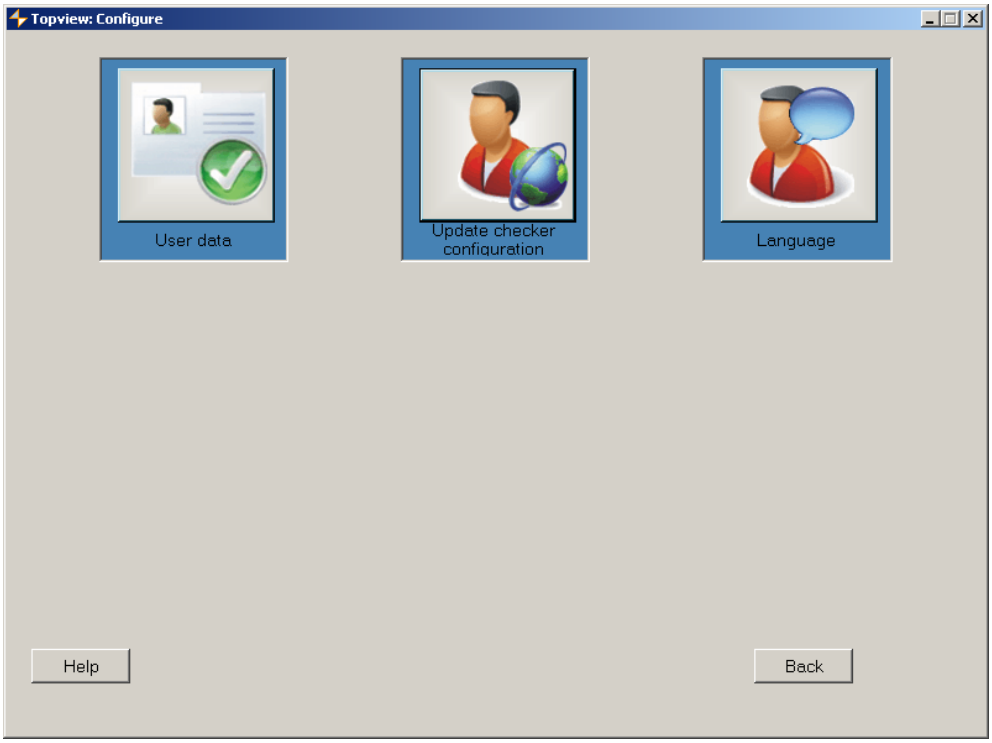
Section PC-INSTRUMENT CONNECTION



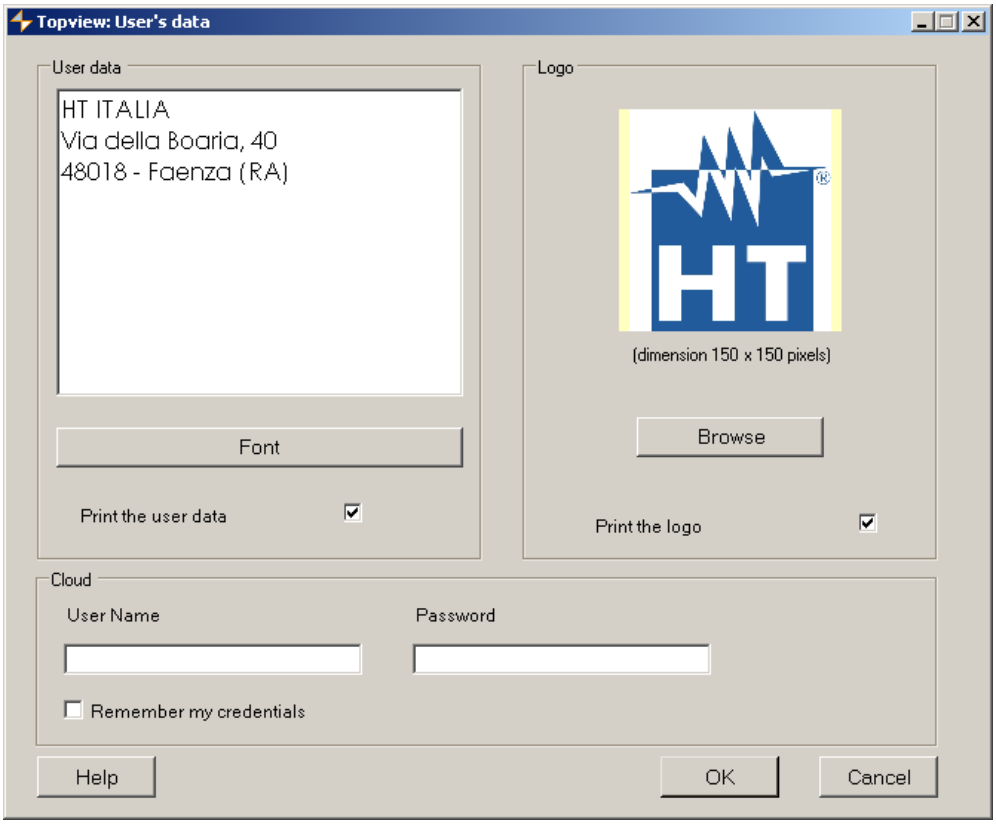
Features

- Detection of instrument connected to PC
- Visualization of internal parameter of the connected instrument
- Real time acknowledgment of available COM ports
- Access to the “Management devices” of the PC
- Access to reserved area of HT website for download of the latest Firmware version
- Wizard steps to capture data from the instrument
- Possibility to setting the internal parameters of the instrument by software
- Visualization of the internal status of the instrument with start/stop recordings
- Real time visualization of parameters (multimeter, waveforms) for recording models
- Management of internal markers (for dedicated instruments)
- Delete of measurements saved on instruments (actually for PQA820)

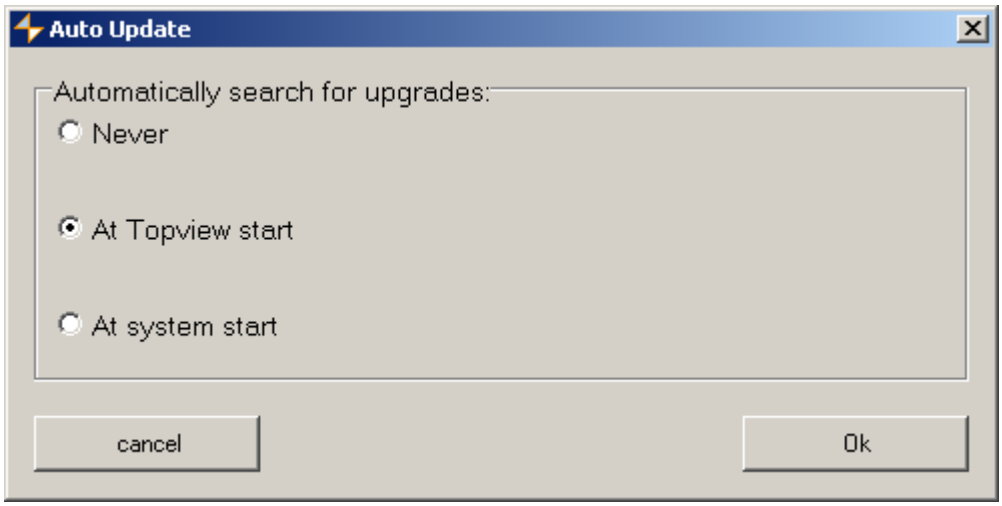
Section SETTINGS



USER'S PROFILE

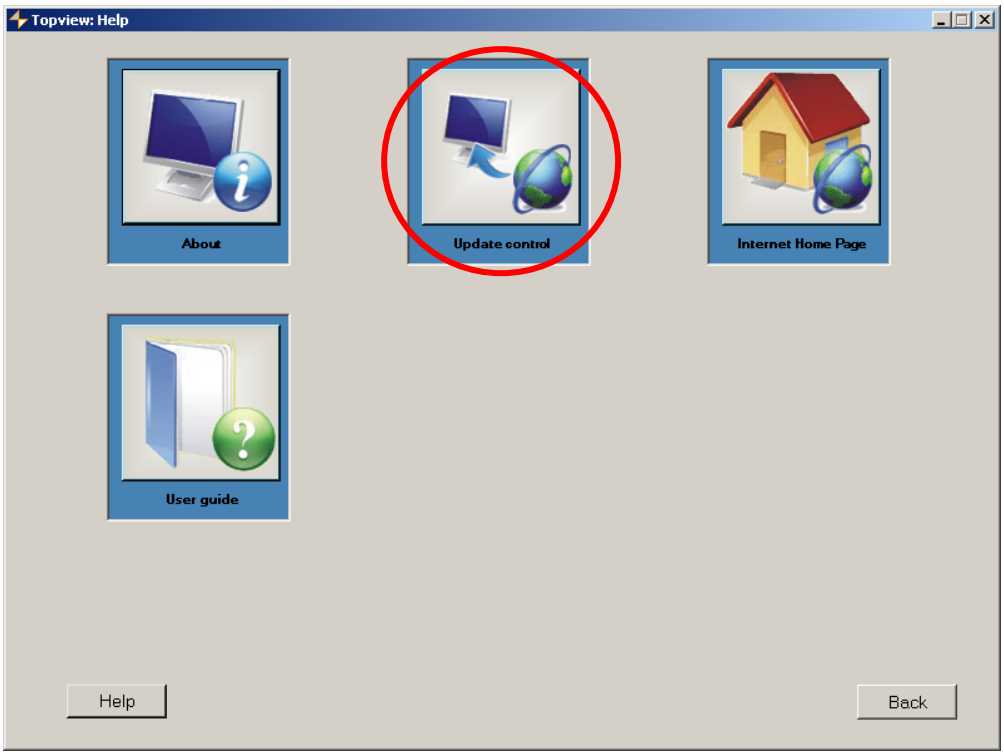


AUTOMATIC UPDATE SEARCH



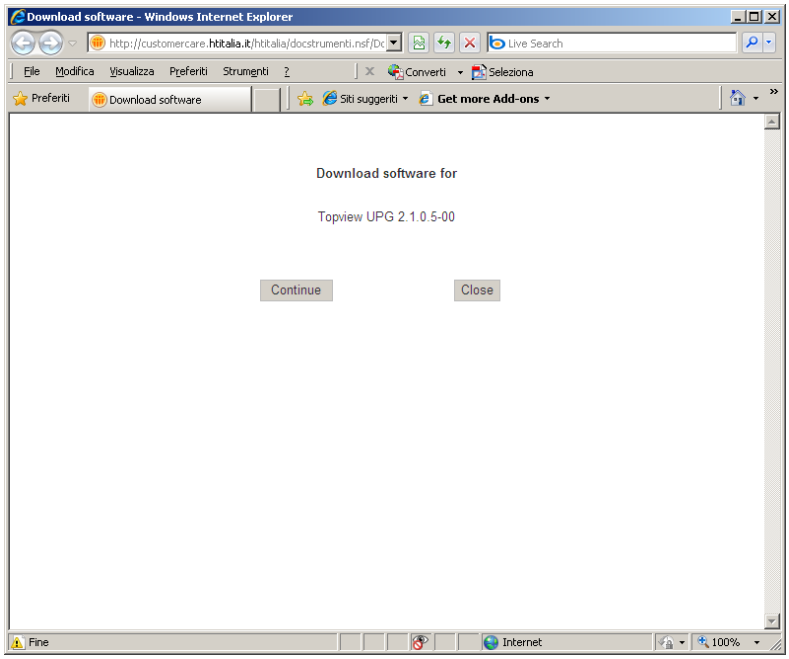
LANGUAGE SELECTION

Section HELP

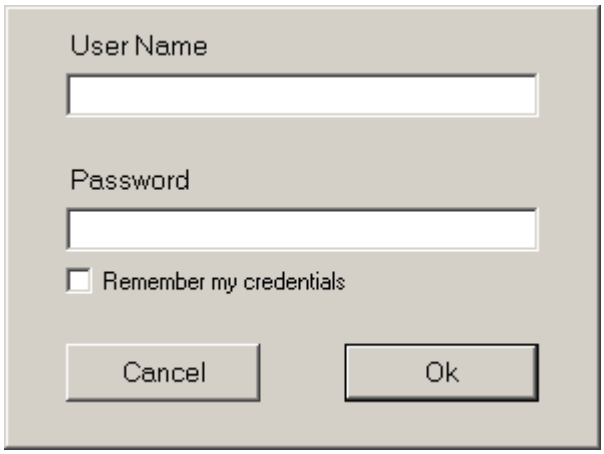


Features

- Information regarding the installed version of software
- Verify of the latest available upgrading of the software and real time download of it
- Link to the homepage of the **www-ht-instruments.com** website
- Access to contextual help on line



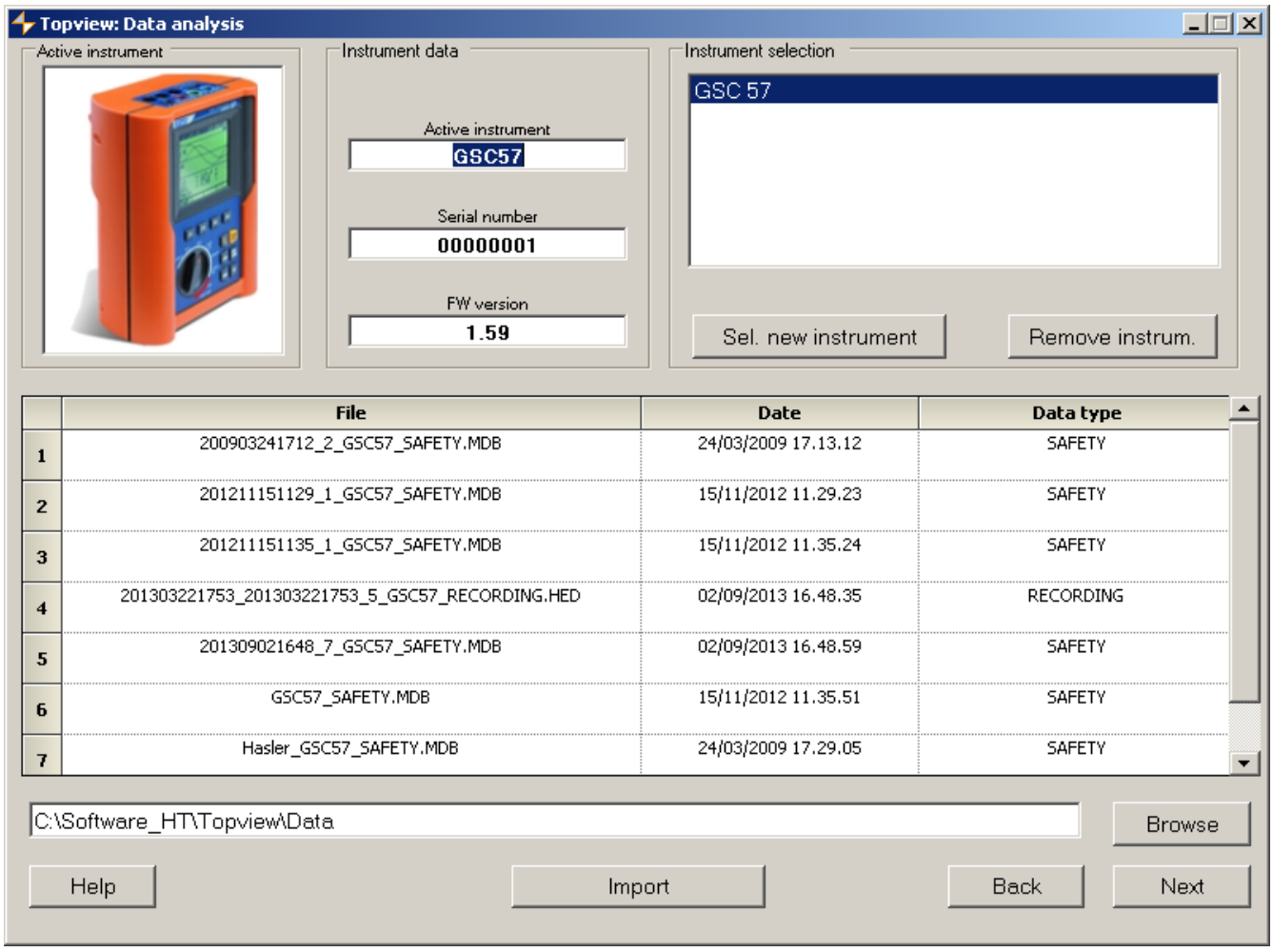
Section CLOUD



Features

- Access to the protected HTCloud database for authorized users
- Download of saved data from the instrument (actually PQA820) connected to tablet/smartphones by means the use of HT Analysis APP
- Management data saved inside HT Cloud database

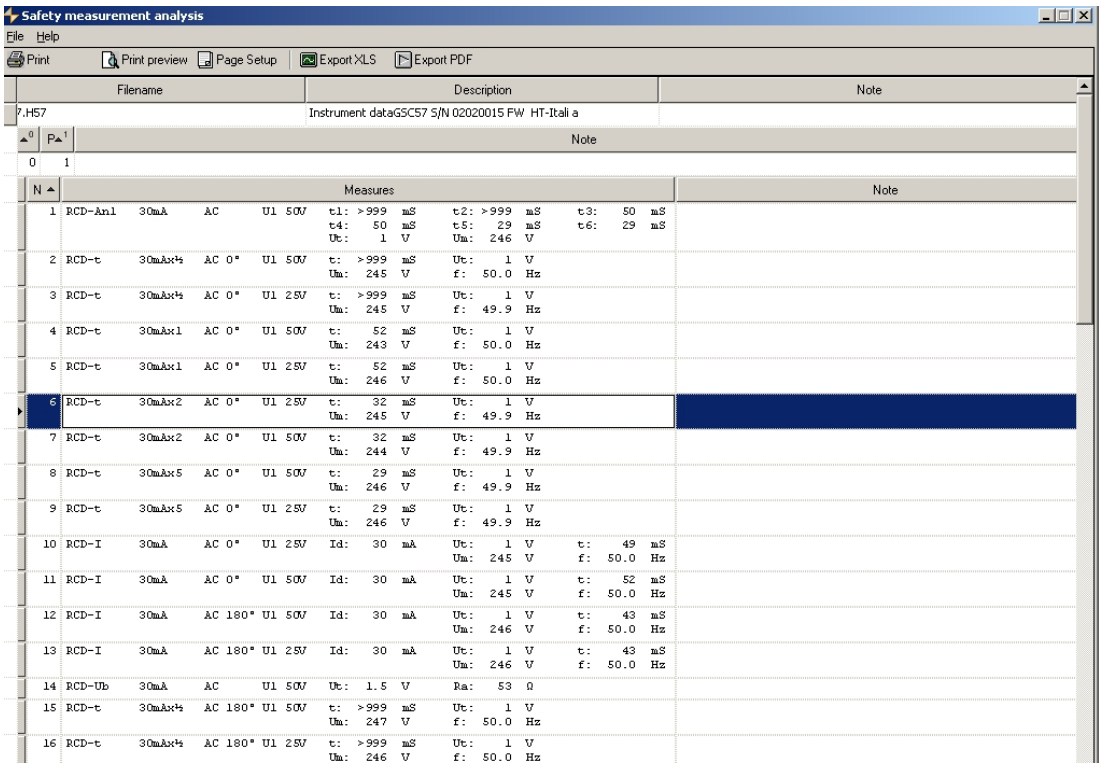
Section DATA ANALYSIS



Features

- Import file from PC folders
- Wizard procedure during a open file downloaded from a meter
- Management of data with final report creation

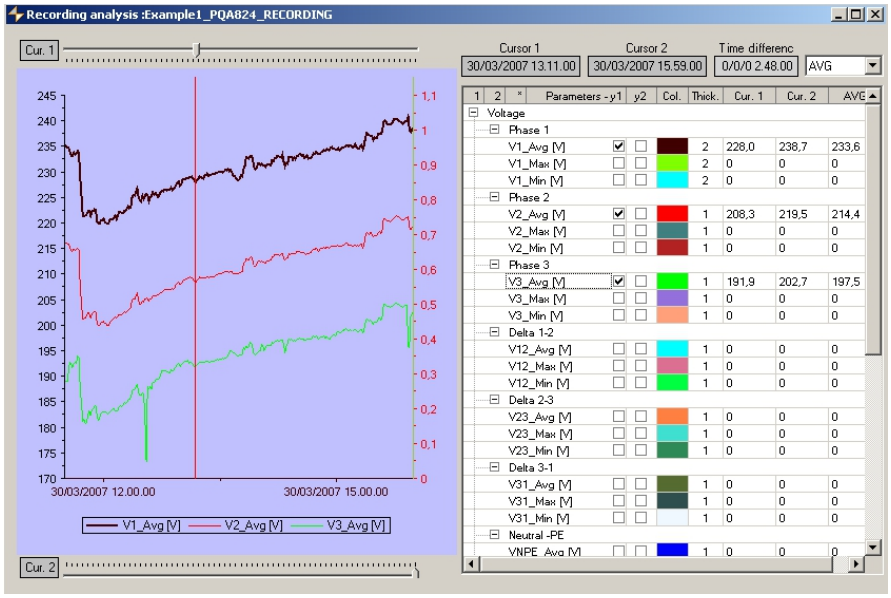
DATA ANALYSIS – **SAFETY** SECTION



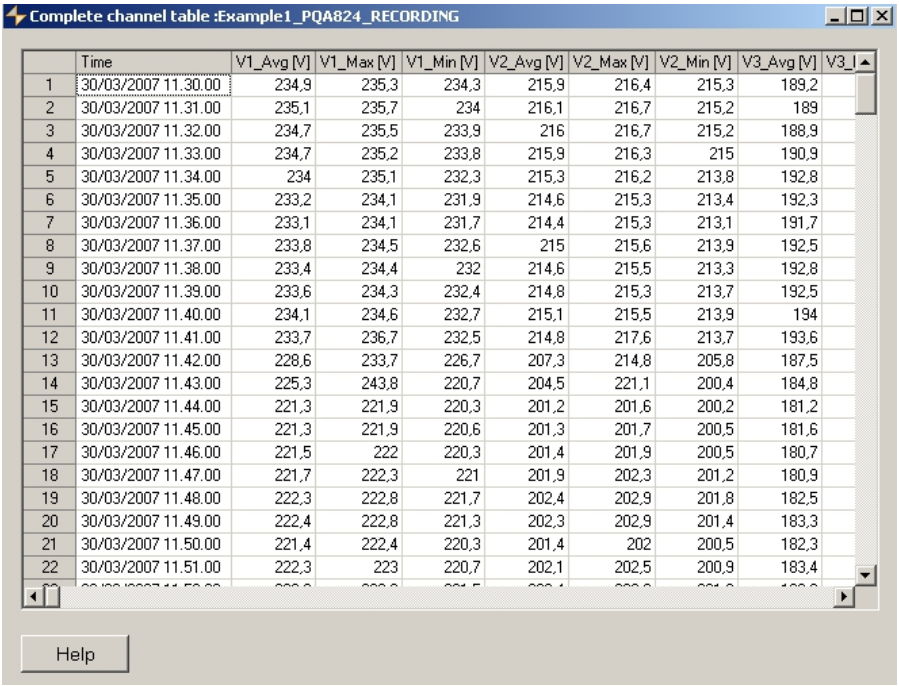
N	Measures	Note
1	RCD-Anl 30mA AC U1 50V t1: >999 mS t2: >999 mS t3: 50 mS t4: 50 mS t5: 29 mS t6: 29 mS Ut: 1 V Um: 246 V	
2	RCD-t 30mA x½ AC 0° U1 50V t: >999 mS Ut: 1 V Um: 245 V f: 50.0 Hz	
3	RCD-t 30mA x½ AC 0° U1 25V t: >999 mS Ut: 1 V Um: 245 V f: 49.9 Hz	
4	RCD-t 30mA x1 AC 0° U1 50V t: 52 mS Ut: 1 V Um: 243 V f: 50.0 Hz	
5	RCD-t 30mA x1 AC 0° U1 25V t: 52 mS Ut: 1 V Um: 246 V f: 50.0 Hz	
6	RCD-t 30mA x2 AC 0° U1 25V t: 32 mS Ut: 1 V Um: 245 V f: 49.9 Hz	
7	RCD-t 30mA x2 AC 0° U1 50V t: 32 mS Ut: 1 V Um: 244 V f: 49.9 Hz	
8	RCD-t 30mA x5 AC 0° U1 50V t: 29 mS Ut: 1 V Um: 246 V f: 49.9 Hz	
9	RCD-t 30mA x5 AC 0° U1 25V t: 29 mS Ut: 1 V Um: 246 V f: 49.9 Hz	
10	RCD-I 30mA AC 0° U1 25V Id: 30 mA Ut: 1 V t: 49 mS Um: 245 V f: 50.0 Hz	
11	RCD-I 30mA AC 0° U1 50V Id: 30 mA Ut: 1 V t: 52 mS Um: 245 V f: 50.0 Hz	
12	RCD-I 30mA AC 180° U1 50V Id: 30 mA Ut: 1 V t: 43 mS Um: 246 V f: 50.0 Hz	
13	RCD-I 30mA AC 180° U1 25V Id: 30 mA Ut: 1 V t: 43 mS Um: 246 V f: 50.0 Hz	
14	RCD-Ub 30mA AC U1 50V Ut: 1.5 V Ra: 53 Ω	
15	RCD-t 30mA x½ AC 180° U1 50V t: >999 mS Ut: 1 V Um: 247 V f: 50.0 Hz	
16	RCD-t 30mA x½ AC 180° U1 25V t: >999 mS Ut: 1 V Um: 246 V f: 50.0 Hz	

→ List of measures downloaded from the instrument with results and selected parameters
→ Print of measured results with possible including of logos, user data and preview
→ Possible export of the data in PDF or XLS format files

DATA ANALYSIS – **ANALYZER** SECTION

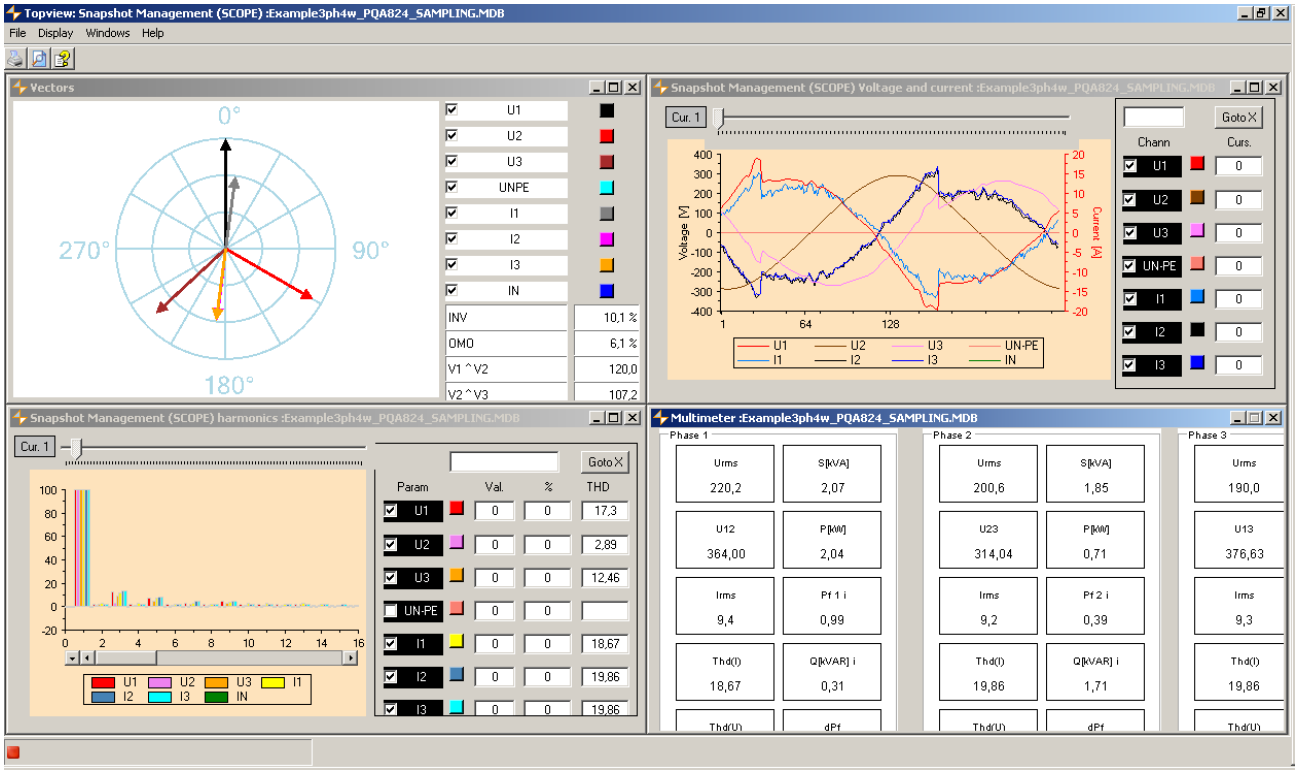


Graphic visualization of electrical parameters of a recordings with selection tree structure

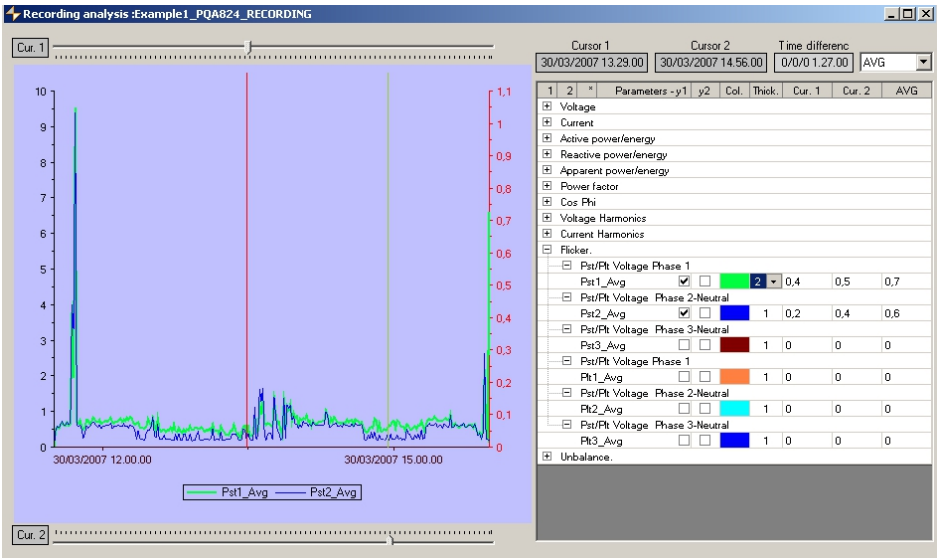


	Time	V1_Avg [V]	V1_Max [V]	V1_Min [V]	V2_Avg [V]	V2_Max [V]	V2_Min [V]	V3_Avg [V]	V3_I
1	30/03/2007 11.30.00	234,9	235,3	234,3	215,9	216,4	215,3	189,2	
2	30/03/2007 11.31.00	235,1	235,7	234	216,1	216,7	215,2	189	
3	30/03/2007 11.32.00	234,7	235,5	233,9	216	216,7	215,2	188,9	
4	30/03/2007 11.33.00	234,7	235,2	233,8	215,9	216,3	215	190,9	
5	30/03/2007 11.34.00	234	235,1	232,3	215,3	216,2	213,8	192,8	
6	30/03/2007 11.35.00	233,2	234,1	231,9	214,6	215,3	213,4	192,3	
7	30/03/2007 11.36.00	233,1	234,1	231,7	214,4	215,3	213,1	191,7	
8	30/03/2007 11.37.00	233,8	234,5	232,6	215	215,6	213,9	192,5	
9	30/03/2007 11.38.00	233,4	234,4	232	214,6	215,5	213,3	192,8	
10	30/03/2007 11.39.00	233,6	234,3	232,4	214,8	215,3	213,7	192,5	
11	30/03/2007 11.40.00	234,1	234,6	232,7	215,1	215,5	213,9	194	
12	30/03/2007 11.41.00	233,7	236,7	232,5	214,8	217,6	213,7	193,6	
13	30/03/2007 11.42.00	228,6	233,7	226,7	207,3	214,8	205,8	187,5	
14	30/03/2007 11.43.00	225,3	243,8	220,7	204,5	221,1	200,4	184,8	
15	30/03/2007 11.44.00	221,3	221,9	220,3	201,2	201,6	200,2	181,2	
16	30/03/2007 11.45.00	221,3	221,9	220,6	201,3	201,7	200,5	181,6	
17	30/03/2007 11.46.00	221,5	222	220,3	201,4	201,9	200,5	180,7	
18	30/03/2007 11.47.00	221,7	222,3	221	201,9	202,3	201,2	180,9	
19	30/03/2007 11.48.00	222,3	222,8	221,7	202,4	202,9	201,8	182,5	
20	30/03/2007 11.49.00	222,4	222,8	221,3	202,3	202,9	201,4	183,3	
21	30/03/2007 11.50.00	221,4	222,4	220,3	201,4	202	200,5	182,3	
22	30/03/2007 11.51.00	222,3	223	220,7	202,1	202,5	200,9	183,4	

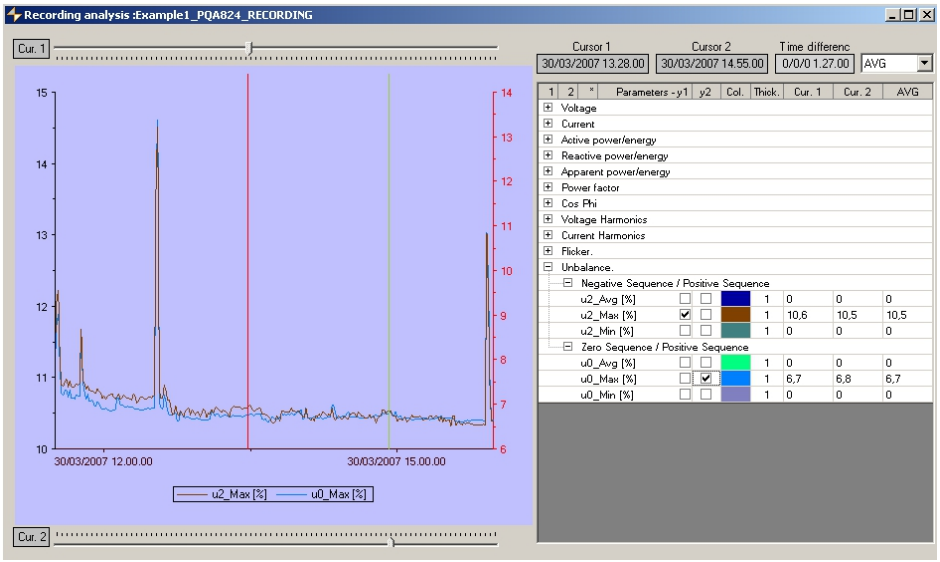
Numerical complete visualization of recorded data divided per integrated period



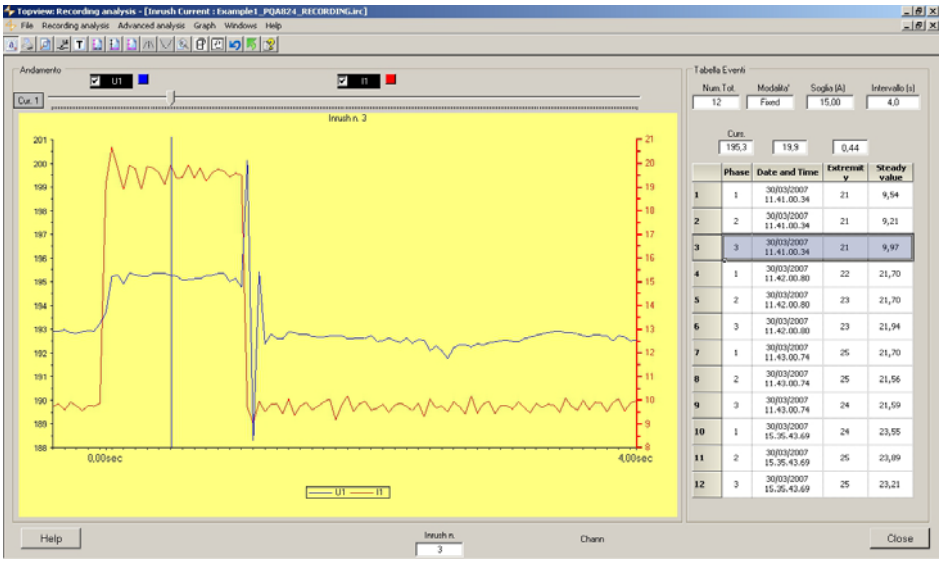
Real time visualization of waveforms, numerical values, voltage/current harmonic histograms and vectorial diagram for each captured sample



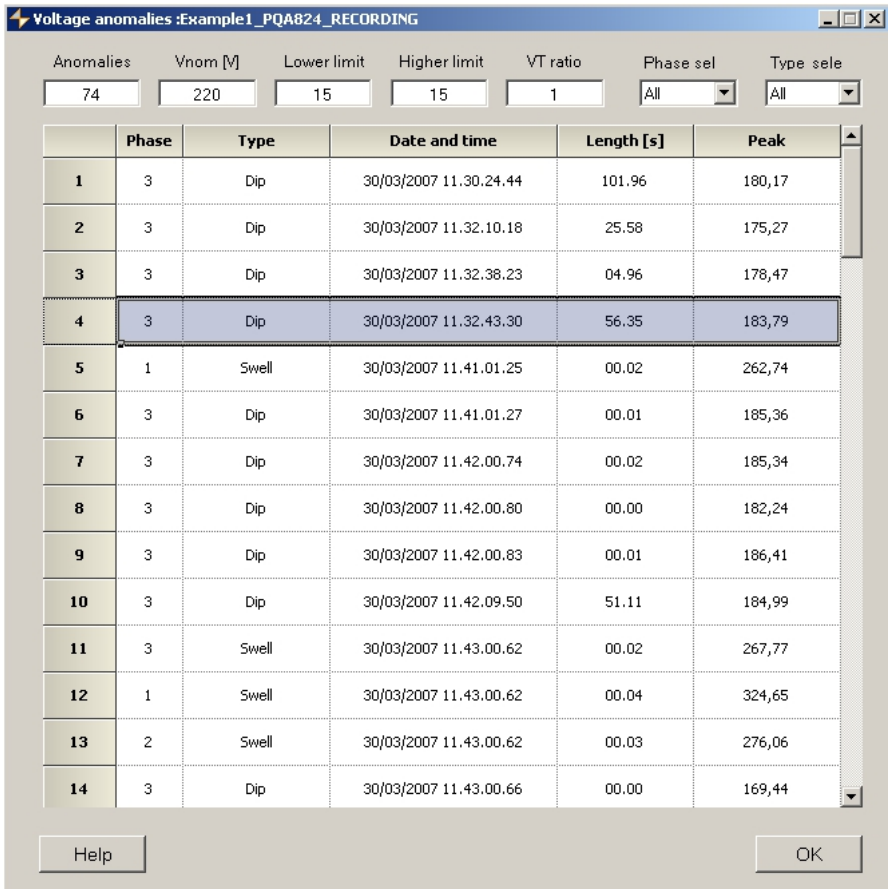
Numeric/graphic visualization of Flicker parameters on input voltages (PQA823, PQA824, SOLAR300N instruments)



Numeric/graphic visualization of unbalance parameters on input voltages

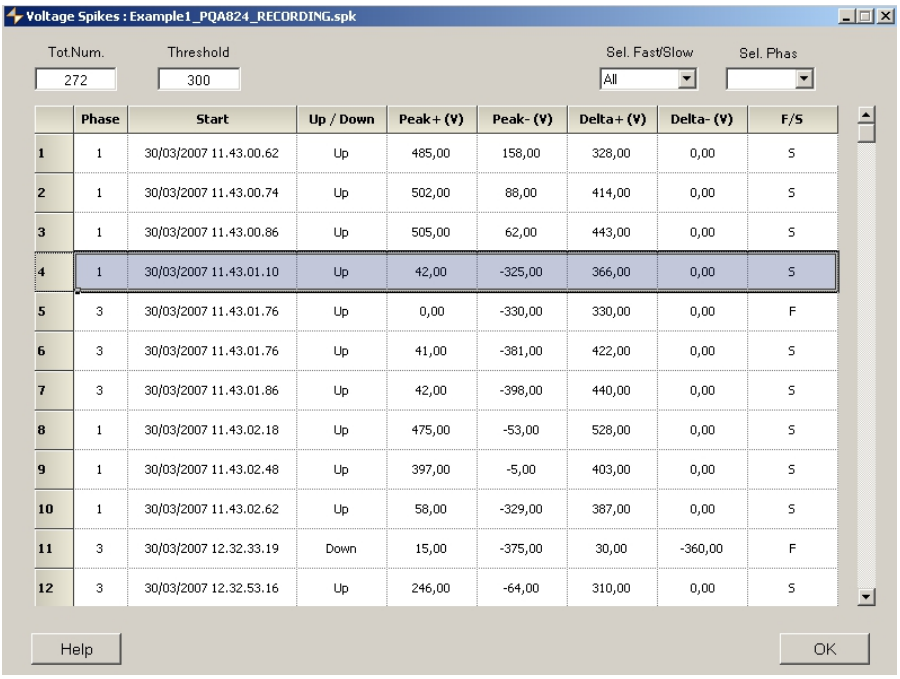


Numeric/graphic visualization of inrush current with 10ms resolution (PQA823, PQA824, SOLAR300N, HT9022 instruments)



	Phase	Type	Date and time	Length [s]	Peak
1	3	Dip	30/03/2007 11.30.24.44	101.96	180,17
2	3	Dip	30/03/2007 11.32.10.18	25.58	175,27
3	3	Dip	30/03/2007 11.32.38.23	04.96	178,47
4	3	Dip	30/03/2007 11.32.43.30	56.35	183,79
5	1	Swell	30/03/2007 11.41.01.25	00.02	262,74
6	3	Dip	30/03/2007 11.41.01.27	00.01	185,36
7	3	Dip	30/03/2007 11.42.00.74	00.02	185,34
8	3	Dip	30/03/2007 11.42.00.80	00.00	182,24
9	3	Dip	30/03/2007 11.42.00.83	00.01	186,41
10	3	Dip	30/03/2007 11.42.09.50	51.11	184,99
11	3	Swell	30/03/2007 11.43.00.62	00.02	267,77
12	1	Swell	30/03/2007 11.43.00.62	00.04	324,65
13	2	Swell	30/03/2007 11.43.00.62	00.03	276,06
14	3	Dip	30/03/2007 11.43.00.66	00.00	169,44

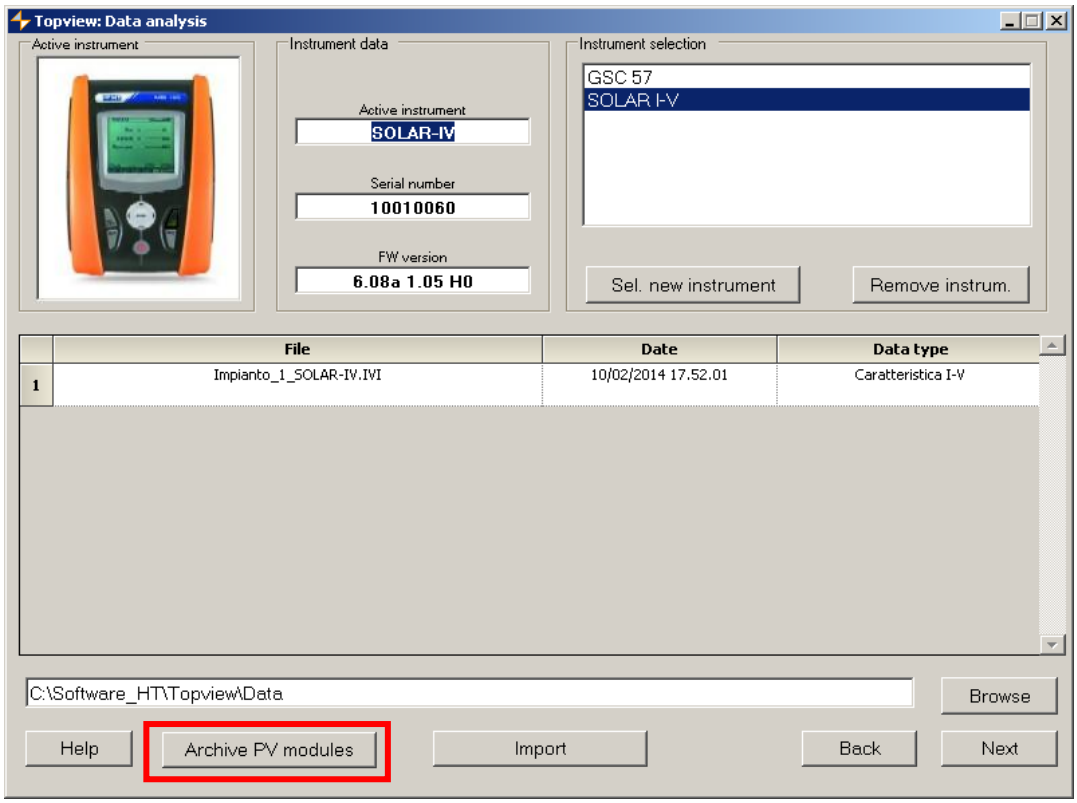
Numeric visualization of voltage anomalies (dips, swells) with 10ms resolution



	Phase	Start	Up / Down	Peak+ (V)	Peak- (V)	Delta+ (V)	Delta- (V)	F/S
1	1	30/03/2007 11.43.00.62	Up	485,00	158,00	328,00	0,00	S
2	1	30/03/2007 11.43.00.74	Up	502,00	88,00	414,00	0,00	S
3	1	30/03/2007 11.43.00.86	Up	505,00	62,00	443,00	0,00	S
4	1	30/03/2007 11.43.01.10	Up	42,00	-325,00	366,00	0,00	S
5	3	30/03/2007 11.43.01.76	Up	0,00	-330,00	330,00	0,00	F
6	3	30/03/2007 11.43.01.76	Up	41,00	-381,00	422,00	0,00	S
7	3	30/03/2007 11.43.01.86	Up	42,00	-398,00	440,00	0,00	S
8	1	30/03/2007 11.43.02.18	Up	475,00	-53,00	528,00	0,00	S
9	1	30/03/2007 11.43.02.48	Up	397,00	-5,00	403,00	0,00	S
10	1	30/03/2007 11.43.02.62	Up	58,00	-329,00	387,00	0,00	S
11	3	30/03/2007 12.32.33.19	Down	15,00	-375,00	30,00	-360,00	F
12	3	30/03/2007 12.32.53.16	Up	246,00	-64,00	310,00	0,00	S

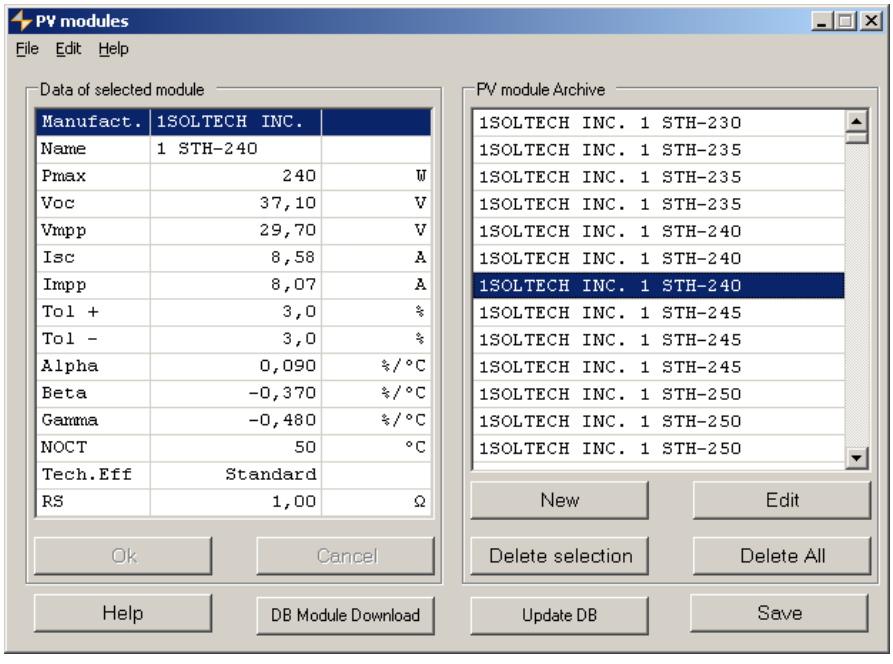
Numeric visualization of voltage spikes with 5µs resolution (PQA824, SOLAR300N)

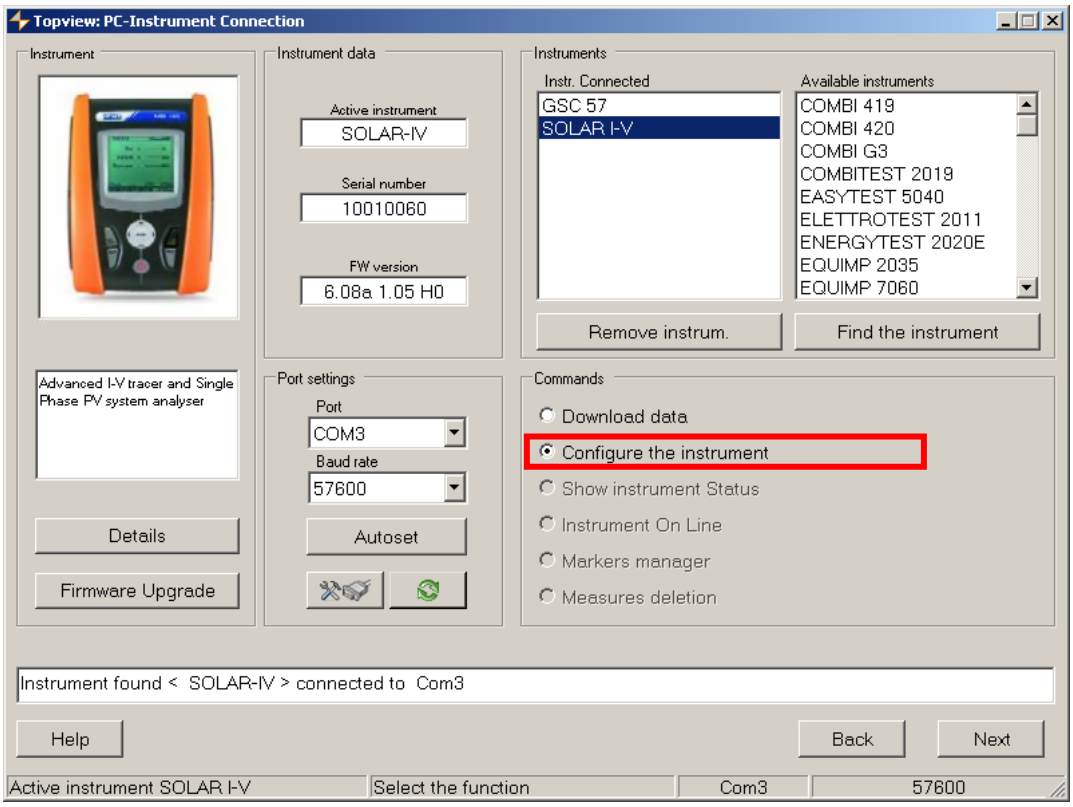
Section DATA ANALYSIS – PHOTOVOLTAIC TEST



Features

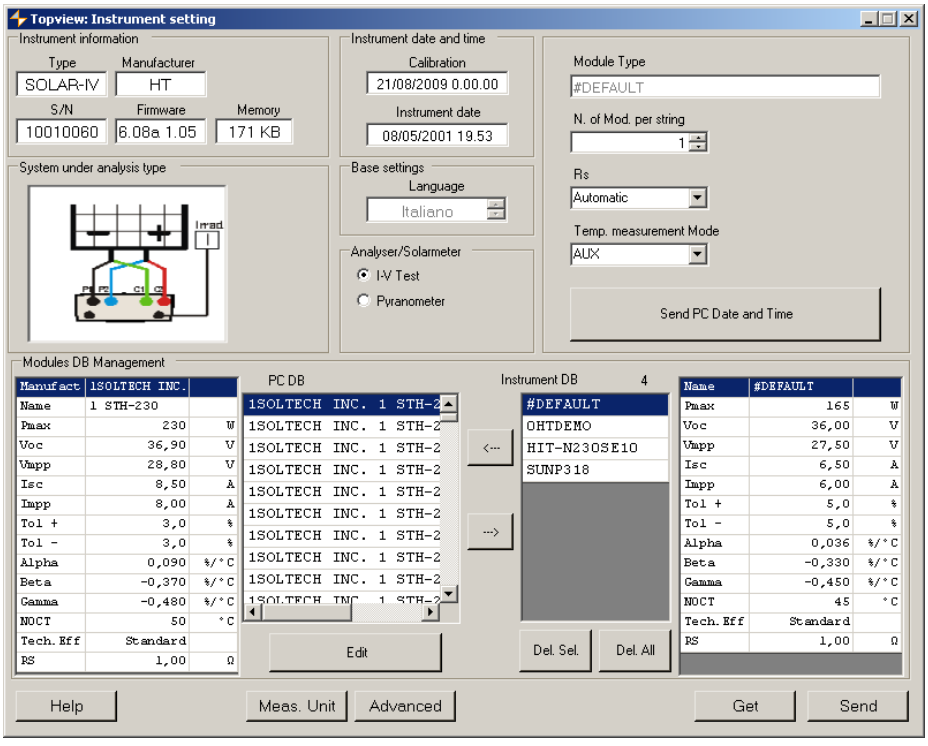
- Access to an archive of PV modules just included
- Possibility to download a database of PV modules periodically updated
- Creation of new PV modules and/or modify of existent ones

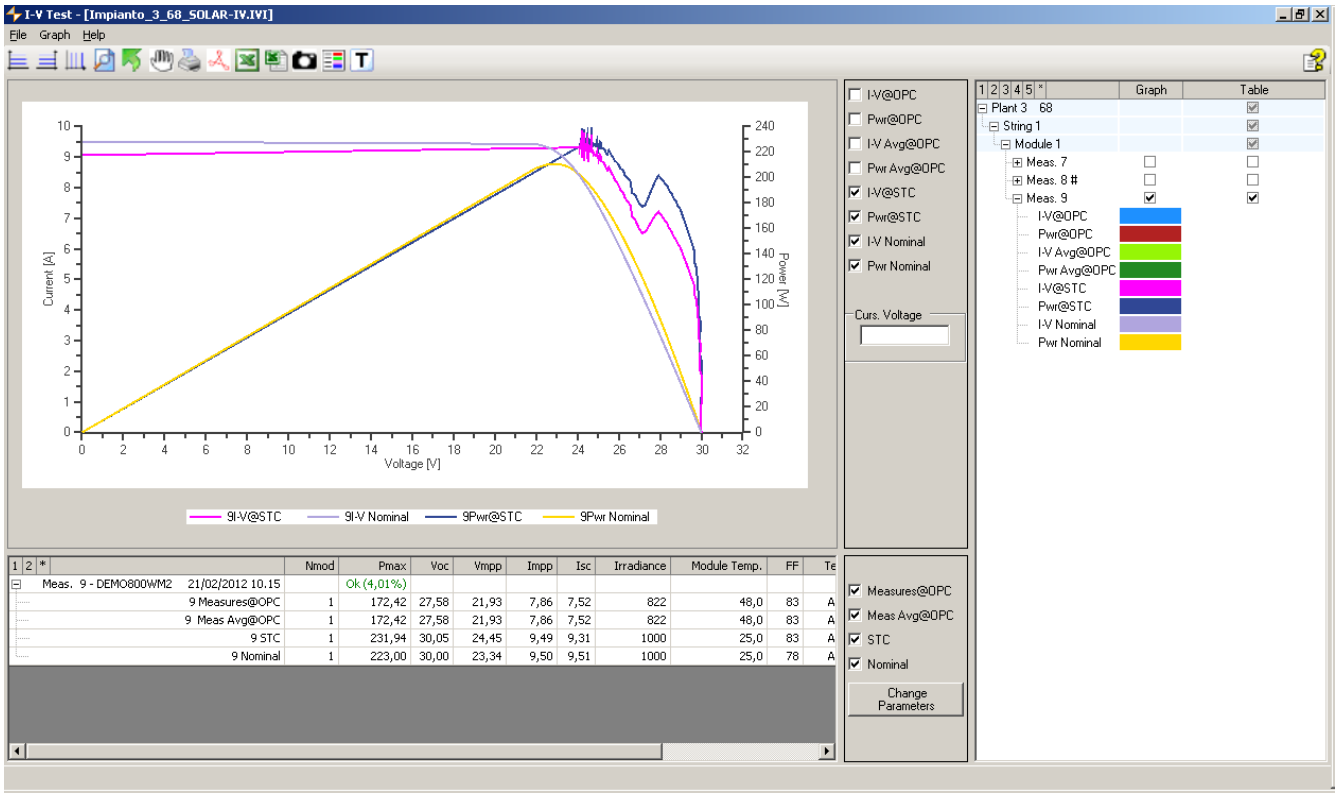




Features

- Possible configuration of the instrument by software
- Creation of a list of PV modules to send to the instrument (SOLARI-V, I-V400)
- Setting of parameters for I-V curve and Efficiency tests (SOLARI-V)





Features

- Visualization of I-V curve in both OPC and STC conditions (SOLARI-V, I-V400)
- Visualization of maximum power OPC and STC curves (SOLARI-V, I-V400)
- Results shown in numeric and graphic forms
- Customization and creation of final reports in PDF and XLS format files
- Possible modify of parameters and recalculation of results