

VIP SYSTEM3 KIT FULL OPTIONAL Professional Power & Harmonics Analyser

82 instruments in 1



VIP-SYSTEM3 is a power&harmonics analyser for professional use. Portable, lightweight and with built-in printer, the Vip System3 takes full three-phase measurements and calculates the equivalent three-phase values.

The VIP-SYSTEM3 measures and prints 82 parameters including voltages, currents, power levels, $\cos\phi$ and waveform distortion. It measures total and time-band energy consumption. Further to instantaneous measurement readings it also provides average values and records maximum values for powers and distortion. Using the included BLACK BOX HARMONICS, Vip System3 is capable of performing FT Harmonic Analysis up to the 25th harmonic order, providing data in graphical, numerical and statistical formats. Further, optional Black Box expansions are available adding further functions to Vip System3, as for example leakage current measurement or cogeneration (4 quadrant) energy counters. All measured parameters can be displayed on the Vip System3's backlit, graphical LCD display. The built-in printer can provide automatic and manual print-outs of parameter trends and alarm states in graph form. Additionally, the measured data can be stored into removable MEMORY PACKS for later evaluation using the included PC Software. Memory Packs can also be programmed (locally or remotely) to carry out automatic measurement surveys.

- AC and DC Measurements
- Built-in printer for measurements, alarms and microinterruptions
- Graphic representation of measurements
- Rs232 port for PC connection
- Windows software included
- High accuracy (class 0,5)
- Expandable to other measuring functions using special Black Boxes
- Black Box Harmonics included
- Automatic measurement campaigns programming and storage on removable Memory Packs
- Memory Pack 512k included
- MP-PI-1 parallel interface for Memory Pack download
- 2 Relay alarm outputs

Main Technical Data:

- Power supply
Mains: $230 \pm 10\%$ at 50 Hz or 60 Hz (115V version available)
Internal: Rechargeable 1300mAh Ni-Cd battery.
Expected lifetime: 500 cycles
Recharge time: 48h
Autonomy: 3h
- Inputs
Voltage: L1 - L2 - L3 - N: 600 Volt AC between phase and neutral @ $20 \div 1000$ Hz; or 600 Volt DC
Input Impedance: 4M Ω

Current: L1 - L2 - L3: 1 Volt AC at $20 \div 1000$ Hz; or 1 Volt DC
Auxiliary: AUX 1V/1mA
Input Impedance: 6k Ω
- Display
Multiplexed LCD with backlight. 256x64pixels; 8 lines, 40 columns.
- Accuracy Class 0.5 (EN 62053-21)
- Overload of voltage inputs: Max 720 Vrms - Surge voltage 1200 Volt (cut-out tripped at 720 Vrms)
- Overload of current inputs: 5 times full scale value (cut-out tripped at limit values)
- Relay outputs: 2 - Type A - Contacts for 30 Volt / 0,5 A / 10 W
- Number of scales: 4 voltage scales 4 current scales
- Automatic scale change
- Scale change response time: 1 sec.
- Display refresh rate: 1 sec.
- Instrument dimensions: 240 x 220 x 115 mm.
- Weight 2.250 Kg.
- Operative temperature range: $+5^{\circ}\text{C}$ $+40^{\circ}\text{C}$
- Storage temperature range: -20°C $+60^{\circ}\text{C}$
- Relative Humidity Range (RH%): 20% - 80%
- Condensation: not allowed

VIP SYSTEM3 SOFTWARE

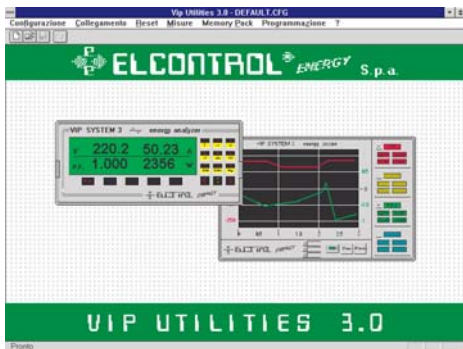


Fig. 2: Energy Analyzer Mode

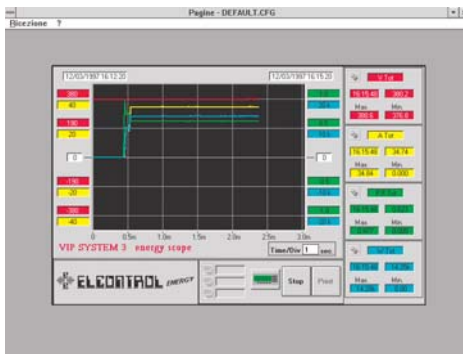
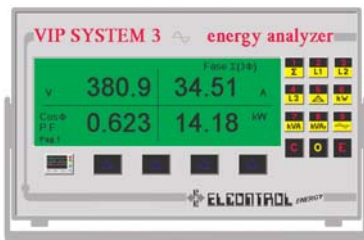
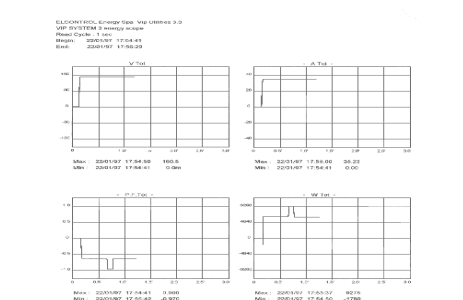


Fig. 5: Measures

	L1	L2	L3	Tot	N	L1-L2	L2-L3
1 V	220.0	220.1	219.9	381.1		381.1	381.1
2 A	44.8	60.8	0.000	34.47	71.58		
3 P.F.	0.418	0.750	0.000	0.622			
4 W	4.12k	10.04k	0.000m	14.16k			
5 Avg W	2882	7060	0	6942			
6 Max W	8300	8315	8360	24.94k			
7 VA	9.86k	13.38k	0.00k	22.75k			
8 Avg VA	6870	9425	0	16.30k			
9 Max VA	8300	9425	8375	24.95k			
10 VAR	8.95k	8.84k	.0000m	17.80k			
11 Avg VAR	6240	6240	0	12.48k			
12 Max VAR	6240	6240	57.55	12.48k			
13 %	1.06	0.34	0.00	0.46			
14 Avg %	0.78	0.45	0.00	0.41			
15 Max %	5.92	1.31	0.23	2.08			
16 kWh	124.421178	70.038324	48.647504	243.10761			
17 kVAh	13.908917	08.318883	00.025214	22.253014			
18 Avg P.F.	0.994	0.983	1.000	0.996			



Vip Utilities3.0 - VIP SYSTEM 3 Management Software for Windows 9X/NT/2000/XP 9x 9x/NT/2000/XP

VIP UTILITIES 3.0 is a software package developed by ELCONTROL ENERGY NET that realizes continuous bi-directional communication between a Personal Computer and the VIP SYSTEM3 power analyzer.

VIP SYSTEM3 is equipped with a RS232 communication port that makes it possible to control the instrument via PC. This operating mode is particularly useful when VIP SYSTEM3 is performing measurements in a point of the installation of difficult access. VIP UTILITIES makes it possible to perform many important operations by transferring all functions of the instrument to the PC's keyboard.

VIP UTILITIES 3.0 can work with VIP SYSTEM3 basing on 2 different operating modes: ON-LINE, OFF-LINE.

ON-LINE:

Complete operative control from PC over RS232 direct connection and MODEM.

The following operations can be performed:

- o Display of all measurement pages of the "Energy Analyzer" mode (Fig. 2)
- o Display of measurement graphs in "Energy Scope" mode (Fig. 3)
- o Printout of measurement graphs in "Energy Scope" mode (Fig. 4)
- o Display and printout of all measures (Fig. 5)
- o Display and printout of settings
- o Real-time data acquisition and storage on hard disk of the data from automatic measurement campaigns (Fig. 6)
- o Transfer of programming
- o Keyboard enabling / disabling
- o Reset

OFF-LINE:

- o MEMORY PACK transfer
- o Instrument programming
- o Memory Pack campaign programming
- o Measurement campaign processing
- o Configuration

When VIP SYSTEM3 is equipped with MEMORY PACK, VIP UTILITIES can be used to program measurement campaigns; after the campaigns have been performed, all data and measures can be downloaded to PC, displayed, printed and exported to files for further processing. The same functions can be performed remotely on a VIP SYSTEM3 connected to a PC via Modem and telephone line.

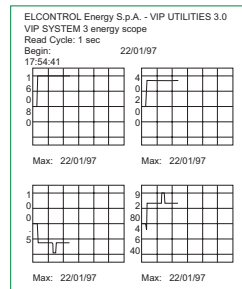


Fig. 6: Energy Scope

	Hh	V1	V2	V3	VT	V L1-L2	V L2-L3	V L3-L1	A1
13/03/97	14.03.02	50.0	217.30	217.40	217.50	376.50	376.50	376.50	26.60
13/03/97	14.03.17	50.0	215.50	215.90	215.40	373.40	373.60	373.50	26.470
13/03/97	14.03.32	50.0	215.50	215.70	215.70	373.50	373.40	373.60	26.480
13/03/97	14.03.47	50.0	215.60	216.0	215.60	373.70	373.80	373.40	26.480
13/03/97	14.04.02	50.0	216.10	216.10	215.20	373.80	374.30	373.50	26.520
13/03/97	14.04.17	50.0	216.0	215.80	215.60	373.80	373.90	373.60	26.510
13/03/97	14.04.32	49.90	216.30	216.50	216.20	374.70	374.80	374.70	26.520
13/03/97	14.04.47	49.90	215.30	215.40	214.90	372.80	373.0	372.70	26.470
13/03/97	14.05.02	50.0	216.0	216.10	215.50	373.90	374.20	373.80	26.480
13/03/97	14.05.17	50.0	215.90	215.70	215.50	373.80	373.80	373.40	26.500
13/03/97	14.05.32	50.0	215.90	216.10	215.80	374.0	374.10	374.0	26.520
13/03/97	14.05.47	49.90	217.60	217.90	217.0	377.0	377.20	376.80	26.620
13/03/97	14.06.02	49.90	220.60	221.10	220.90	382.60	382.50	382.80	26.830
13/03/97	14.06.17	49.90	220.30	220.40	220.40	381.70	381.60	381.70	26.830

ACCESSORIES

CURRENT CLAMPS FOR PORTABLE ANALYSERS

Types	Ref.	Description	Star3 Din	Dmm3	Ed39 Din	Sirio	Vip Energy	Vip Mem	Star 3	Vip 396	Vip 96	Vip 96 Plus	JUPITER	Vip System3	Microvip3 Plus	Microvip3	Nanovip-Plus	Nanovip-Plus Mem
PINZA-10A/1VAC	4AABM	CLAMP CT 10A/1V-AC											●	●	●	●	●	●
PINZA-200A/1VAC	4AAR1	Clamp CT 200A/1V-AC											●	●	●	●	●	●
PINZA-1000A/1VAC	4AAWS	Clamp CT 1000A/1V-AC											●	●	●	●	●	●
PINZA-3000/1-D6	4AAC3	Clamp CT 3000A/1A-AC (to be used with INTA/1)											●	●	●	●	●	●
PINZA-400A/0.4V-40A/0.4V-AC-DC	4AABU	Clamp CT 400A/1V-AC/DC (to be used with ADAPTA)												●	●	●	●	●
PINZA-1000A/1V-100A/1V-AC-DC	4AABW	Clamp CT 1000A/1V-AC/DC (to be used with ADAPTA)												●	●	●	●	●
AMPFLEX-1000A/1VAC-45CM	4AAQB	Flexible Current Transformer 1000A - length 45 cm											●	●	●	●	●	●
AMPFLEX-1000A/1VAC-80CM	4AAQC	Flexible Current Transformer 1000A - length 80 cm											●	●	●	●	●	●
AMPFLEX-3000A/1VAC-80CM	4AAQD	Flexible Current Transformer 3000A - length 80 cm											●	●	●	●	●	●
AMPFLEX-3000A/1VAC-120CM	4AAQE	Flexible Current Transformer 3000A - length 120 cm											●	●	●	●	●	●
3 AMPFLEX-1000A/1V	4AABN	Set of three Flexible Current Transformer 1000A L=61cm. one amplifier											●	●	●	●	●	●
PINZA_LMA-DIAM55	4AADM	Clamp CT for leakage current measurement												●				
PINZA-10/1V-AC-DC	4AASA	Clamp CT PR20 (to be used with ADAPTA)												●	●		●	●

INTERFACES AND ADAPTERS FOR MEASURES INPUTS

ADAPTA-1V/1V	4AACQ	Clamp CT connectors adapter 1V/1V											●	●	●	●	●	●
INTA/1	4AABB	Converter 1A to 1V for CT with 1A output											●	●	●	●	●	●
INTA/5	4AABD	Converter 5A to 1 V for CT with 5A output											●	●	●	●	●	●
SEPA/5X1	4AAER	Galvanically isolated converter 5A/1V											●	●	●	●	●	●
DSC-400VAC	4AANY	Delta Star CONVERTER input max 400V											●	●	●	●		
DSC-MT	4AAC4	Delta Star CONVERTER for input max 100V for PT output											●	●	●	●		
DSCD 2	4AAHG	Delta Star CONVERTER input max 700V din rail											●	●	●	●		

ACCESSORIES AND CONVERTERS FOR SERIAL COMMUNICATION

INTERFACE-OF-RS232	4AAFH	Kit with 5m of OF fibre+Adapter 25/9 pin + converter OF/232															●	
CONVERT.OF/RS232-9P	4AAFQ	MONODIRECTIONAL RS232-OF SIGNAL CONV.															●	
RS485-SIGNAL REPEATER	4AAJY	bi-directional amplifier for RS485 serial line	●	●	●	●	●	●	●	●	●	●						
PC-485-BOX 220 VAC	4AAK4	RS232-RS485 signal converter	●	●	●	●	●	●	●	●	●							

SOFTWARE

Energy Studio Manager		Software Energy Studo Manager. see description at page 3.	●	●	●	●	●	●	●	●	●	●						
STARLIGHT	4AAAX9	easy to use monitoring sw. 128 instr. WIN 9.x/2000/XP Italian-English	●	●	●	●	●	●	●	●	●	●						
VIP VISION - 32-IT/UK	4AATG	SCADA sw up to 32 instruments; Win 9.x/NT4	●	●	●	●	●	●	●	●	●	●						
VIP VISION-247- IT/UK	4AATH	SCADA sw up to 247 instruments; Win 9.x/NT4	●	●	●	●	●	●	●	●	●	●						
PQ STUDIO	4AAXT	Software for JUPITER Win 9X/NT/2000, 5 languages											●					
VIP SYSTEM3 SOFTWARE	4AATB	Software for VIP SYSTEM3 Win 9X/NT/2000, 5 languages												●				
NANOWIN	4AARQ	Software for NANOVIP PLUS Win 9.X, NT, 2000,XP ; 5 Languages															●	●
MICROWIN	4AASK	Software for MICROVIP3PLUS; Win 9.X, NT, 2000,XP ; 5 Lang.													●			

ACCESSORIES

CABLES

			Star3 Din	Dimm3	Ed39 Din	Sirio	Vip Energy	Vip Mem	Star 3	Vip 396	Vip 96	Vip 96 Plus	JUPITER	Vip System3	Microvip3 Plus	Microvip3	Nanovip-Plus Mem	Nanovip-Plus	
CONNET. CAVO DISPER.	4AAAM	SHIELDED CONNECTION CABLE for black box Ima												●					
CAVO-MISURA-1000V	4AABG	Voltage LEADSET for meas. up to 1000Vrms without crocodiles												●	●	●	●	●	●
CAVI-MISURA-1000+COCCOD	4AAQQ	Voltage LEADSET for meas. up to 1000Vrms with crocodiles												●	●	●	●	●	●
CAVO-RS232-EPSON	4AACW	Connection cable System3 to serial printer.												●					
CAVO-RS232-IBM-PC-XT	4AACF	PC Connection cable 25 pin												●	●	●	●	●	●
CAVO-RS232-IBM-PC-AT	4AAL5	PC Connection cable 9pin												●	●	●	●	●	●
CAVO-RS232-MODEM	4AACN	Connection cable VIP SYSTEM 3 with modem												●					
CAVO-ADAPT-25P-9P	4AACM	ADAPTER RS232 9pin female/25 pin male												●	●	●	●	●	●
CAVO CENTRONIC	E1ADV	CENTRONICS standard cable												●					

JUPITER ACCESSORIES

COMPACT FLASH 512Mb	4AA XV	Compact Flash Memory Card 512Megabyte												●					
COMPACT FLASH 1Gb	4AA XW	Compact Flash Memory Card 1Gigabyte												●					
ADD. BATTERY PACK	4AA XU	Package of 10 rechargeable NiMH batteries type AA												●					
AMPFLEX 1000A 80CM	4AA XX	Flexible Current Transformer 1000A-80cm, with direct connection												●					

BLACK BOXES AND MEMORY PACKS FOR VIP SYSTEM3

MEMORY-PACK-128K	4AABF	Memory for Measurements Surveys												●					
MEMORY-PACK-512K	4AADJ	Memory for Measurements Surveys												●					
MP-PI-1	4AAC P	Parallel Interface for Memory Pack Reading from Pc												●					
BLACK-BOX-CENTRONICS	4AAC X	Box for Connection To External Parallel Printer												●					
BLACK-BOX-COGENERAT.	4AAES	Measures of Exported Energy Counters (Cogeneration)												●					
BLACK-BOX-HARMONICS	4AADG	Harmonic Analysis												●					
BLACK-BOX-LMA	4AACA	Measures of Leakage Current												●					
BLACK-BOX-GEN.USE	4AAD3	Measurements from the Analog Inputs												●					

OTHER ACCESSORIES

COCCODRILLO-GRIP-C	4AAB Y	Voltage crocodile probe up to 1000V(AC-DC).												●	●	●	●	●	●
CORNICE VIP ENERGY	4AAF2	Flush mounting frame for panel meters 9 din	●	●	●		●												
CORNICE SIRIO	4AAF8	Flush mounting frame for panel meters 4 din				●													
ALIMENTATORE	4AAQ I	POWER SUPPLY for Nanovip Plus PLUS MEM																●	
FBC2	4AACT	Fast Battery charger 230VAC for Vip System 3												●					

CURRENT TRANSFORMERS

CURRENT TRANSFORMERS /5

wide range of current transformers 5 Amps output available.
Models : bus bar ; cables ; split core; summation; miniature.

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