



TEST SYSTEM DV1512A2NCI



- ☐ Single Current Generator
- ☐ Maximum current 15 A_{rms} in continuity and 30 A_{rms} per 1 s
- ☐ Single Voltage generator 150 V_{rms}
- ☐ Programmable phase between Current and Voltage
- ☐ Programmable frequency up to 500 Hz (optional)
- ☐ High quality and precision signal
- ☐ DSP signal generation
- ☐ Four relay output: normally open — normally closed
- ☐ Four digital input 48 or 110 V (order specified)
- ☐ Signal ramp Generator
- ☐ Sequence generator
- ☐ COMTRADE playback (optional)
- ☐ Waveform generator
- ☐ Automatic testing for custom protection available on demand (51, 51N, 59, 67, 79 81, 81R etc)
- ☐ Single insulated channel
- ☐ Overload and overtemp protection
- ☐ Self Diagnostic



Preface

DV1512A2NCI born to satisfy ENEL requirement concerning automatic protection relay testing system. LogicLab developed an equipment capable to satisfy the requirements of all modern protection system.

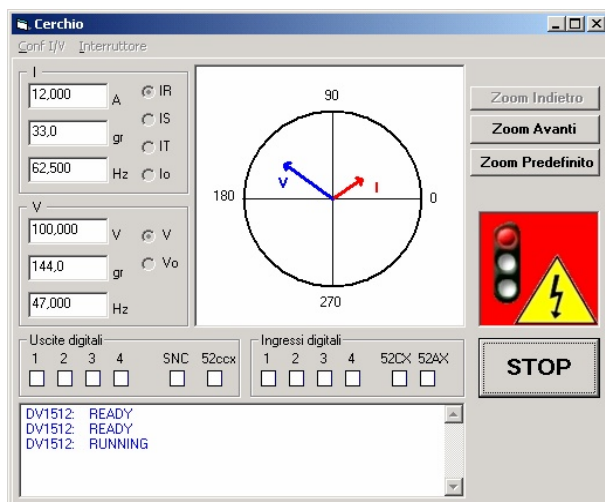
The test system is equipped with one current generator and one voltage generator, capable to redirect the current signal to four different output (I_O , I_R , I_S e I_T) and voltage signal to two different output (V_R e V_O); The equipment is also equipped with four digital input and four digital output.

DV1512A2NCI is provided with a complete set of cable and control software program that is capable to combine different operating modality: waveform generator, sequence generator, ramp generator and Comtrade playback.



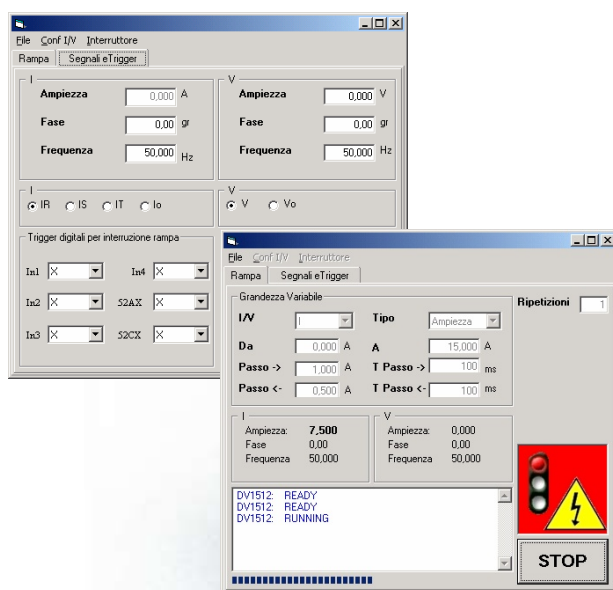
ManualPrg

Following will be described the main operative functionality available by software program. You must also consider self diagnostic capability and firmware upgrade via RS232.



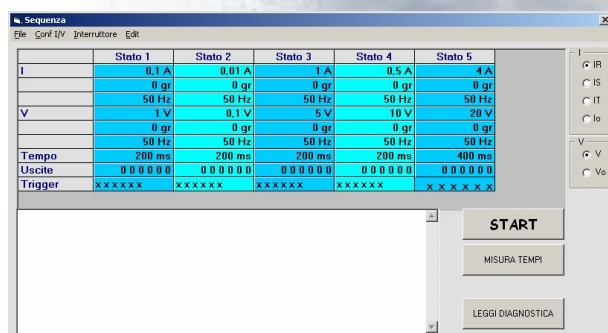
Signal direct access

- ☐ Programmable current, voltage, frequency and phase angle;
- ☐ Programmable output selection (four different output for current and two different output for voltage);
- ☐ Vectorized graphical presentation and setting of current and voltage signal
- ☐ Digital output setting;
- ☐ Digital input monitoring;



Ramping

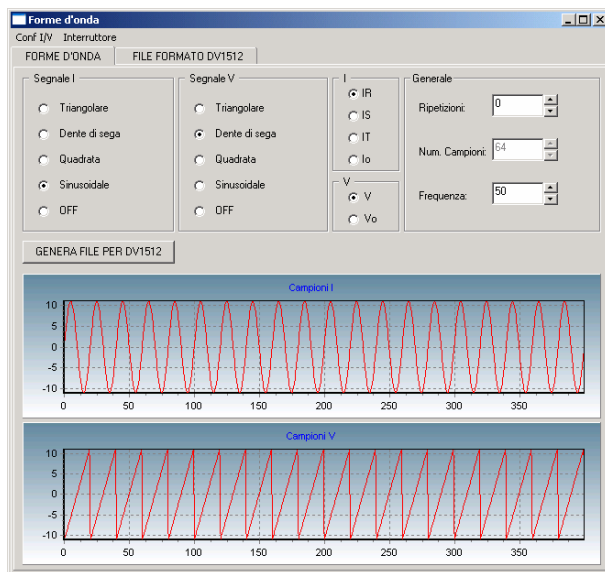
- ☐ Variable amplitude generation from a starting value to a stop value (step time setting and signal amplitude setting)
- ☐ Signals generation with variable ramp phase angle
- ☐ Capability to ramp one signal and set to a fixed value the other channel;
- ☐ Trigger stop condition setting;
- ☐ Time measurement and error calculation on digital trigger input.



Sequence

- ☐ Capability to generate time sequence generated analog and/or digital signal ;
- ☐ Up to 50 different state free programmable
- ☐ Digital input time measurement ;
- ☐ Sequence file saving;
- ☐ Sequence editing;



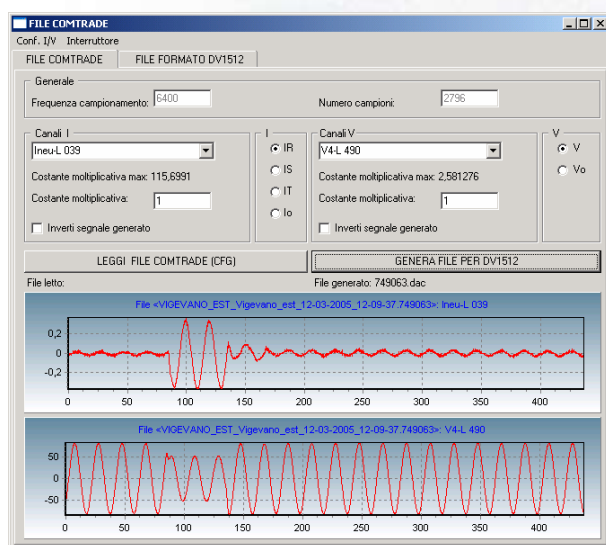


Waveform

- ☐ Simultaneously generation of two different waveform signal ;
- ☐ Square wave, triangle wave, sinusoidal wave, saw-tooth wave;
- ☐ Signal and phase setting ;
- ☐ Frequencies selectable up to 150 Hz with no distortion;
- ☐ Waveform time duration setting;
- ☐ File saving of generated waveform;
- ☐ Waveform Graphical preview

Optional module *Plus*

With this optional module it is possible to playback one current and one voltage arbitrary waveform specified by COMTRADE file format.



COMTRADE *Plus*

- ☐ Simultaneous generation of voltage and current ;
- ☐ Signal selection between all signal present in Comtrade file;
- ☐ Arbitrary scaling/amplification of signals;
- ☐ Phase inversion capability;
- ☐ Graphical preview;





Technical specification

Power supply

Voltage: 220 V_{AC}
Stand-by power consumption: <50W
Full charge power consumption: <300W

Dimensions

Height: 6,0 cm
Width: 44,0 cm
Depth: 46,5 cm

Current channel

Output selectable by software (I_O , I_R , I_S e I_T)
Continuous Maximum current: 15A_{rms}
Maximum current for 1s : 30A_{rms}
Maximum power 50 VA @ 15A_{rms}
Error: <0,2% ± 500 µA
Total Harmonic Distortion + noise (THD+n):
 $I < 1 \text{ A} \rightarrow \text{THD} < 2\%$
 $I > 1 \text{ A} \rightarrow \text{THD} < 0,2\%$
Frequency accuracy: 100 ppm
Phase accuracy: < 0,3°
High phase stability
Overload and open-circuit protection
Over temperature protection

Voltage Channel

Output selectable by software (V_R e V_O)
Maximum voltage: 150V_{rms}
Maximum power: 30 VA @ 130V_{rms}
Error: <0,2% ± 1 mV
Total Harmonic Distortion + noise (THD+n):
 $I < 1 \text{ V} \rightarrow \text{THD} < 2\%$
 $I > 1 \text{ V} \rightarrow \text{THD} < 0,2\%$
Frequency error: 100 ppm
Phase accuracy: < 0,3°
High phase stability
Over current protection
Over temperature protection

Digital input

Input voltage 24 - 110V
Anti dump filter
Over voltage protection

Outputs

Nominal Voltage: 110V
Maximum voltage: 230 Vac
Nominal current: 5A
Maximum switching current (L/R=40ms) 0,2A@110V

Communication

Serial RS232
USB-RS232 adapter (Optional)

Option *Plus*

Programmable Frequency 5 - 500 Hz
COMTRADE playback

Conformity

CEI EN 61000-6-2 .
CEI EN 61000-6-4.





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