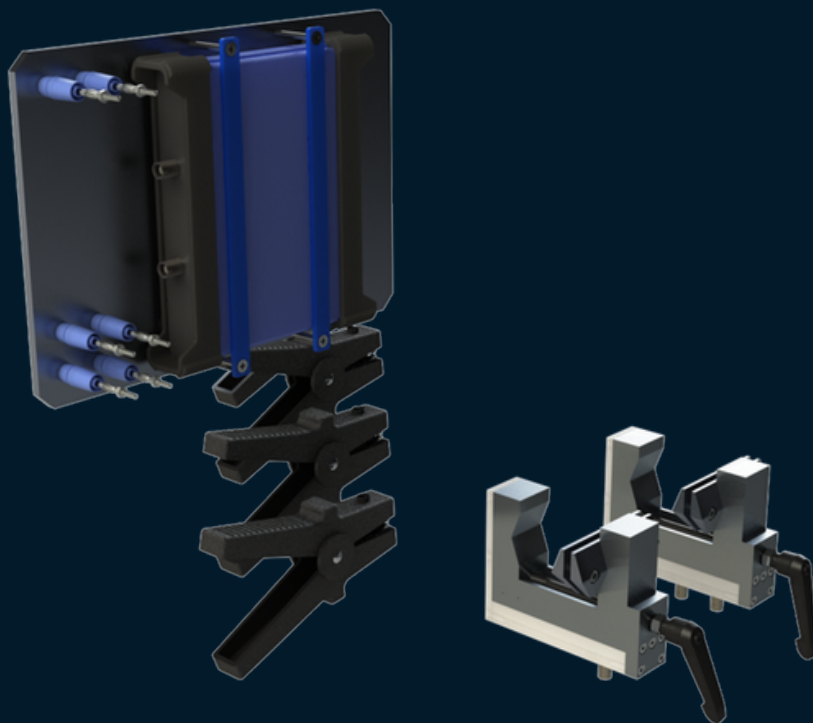


FRA

FREQUENCY RESPONSE ANALYZER

Standards

IEEE Std C57.124, IEEE Std C57.113, IEEE Std 1434, IEC 60270, IEC 60060,
IEEE Std. 400 and NBR 5356



FRA

Description

Frequency Response Analysis (FRA) is a technique employed in the analysis of linear systems. It involves presenting the behavior of the analyzed system across a wide range of frequencies.

Measurement techniques for transformer frequency response can be classified into two main groups, according to the philosophy of obtaining the data. These are: time-domain techniques and **frequency-domain** techniques, with the latter being the method used in HVEX's solution.

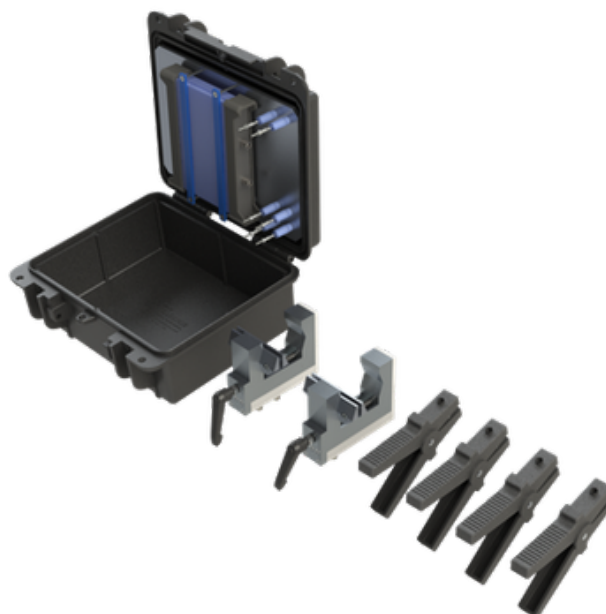
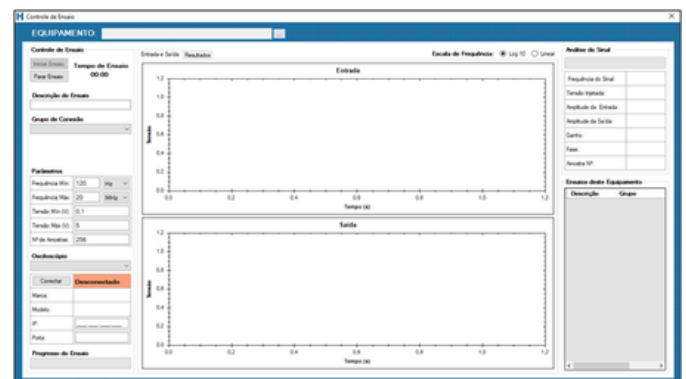
Types of measurement:

- Spectral signature analysis;
- Open-circuit measurement;
- Short-circuit measurement;
- Capacitive measurement;
- Inductive measurement.

HVEX's FRA testing system is compacted into a mobile unit equipped with an oscilloscope, amplifier, connection terminals, and a computer with supervisory software.

Analysis Software

HFRA is the software used for the control and analysis of Frequency Response Analysis (FRA) tests. Through **HFRA**, it is possible to configure test parameters, visualize graphs, register equipment, generate automatic reports, and manage databases for storing and viewing historical data.



Technical Specifications

Power supply	127 V / 220 V, 60 Hz	
Function generator	Band width	25 MHz
	Output voltage	Two versions: 5 Vpp and 50 Vpp
Amplifier	Power	4 Ω - 500 Wrms per channel
		8 Ω - 290 Wrms per channel
	Input sensitivity	775 mV
	Impedance: input / cable	30 k Ω (input); 50 Ω (cable)
	Signal/Noise	> 100 dB
	Output voltage	50 Vpp (amplified version)
Software	12 bits	
Operating temperature	Up to 50°C	
Relative humidity	Up to 95% non-condensing	

We provide solutions for improvement of electrical energy generation, transmission and distribution efficiency, quality and reliability. With a highly specialized and experienced team in research, development and innovation, HVEX develops tailor-made solutions for Brazilian and foreign markets. Wide range of products with solutions focused on signal transduction, measurement, monitoring and protection.



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