

武高所专业提供局放超声自动定位系统

产品名称	武高所专业提供局放超声自动定位系统
公司名称	南澳电气（武汉）有限公司
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规格参数	品牌:南澳电气(武汉)有限公司 型号:NAJF-03 输入通道数:8通道
公司地址	武汉市东湖高新技术开发区光谷大道60号光谷科技产业园8栋
联系电话	027-87677658 15327206266

产品详情

NAJF-03局部放电超声自动定位系统

NAJF-03 automatic positioning system for PD discharge

长期以来，运作中大型变压器的故障检测及定位始终是电气工程师们关注的焦点问题。“七五”重点科技攻关项目“大型变压器局部放电超声定位方法及装置的研究”课题中研制的NAJF-03系统为解决这一问题提供了有效手段。

NAJF-03系统先后在葛州坝500kV开关站、武汉凤凰山500kV变电站、上海变压器厂、合肥变压器厂、衡阳变压器厂、广州供电局、武汉供电局、湖南电力局、重庆变压器厂、武钢等处对数百台变压器，电抗器进行局部放电超声测量。该系统工作可靠、操作方便，满足测量要求。作为电力部“八五”重点推广项目之一，目前该电装置已广泛应用于东北、华中、华东、华北和西北等有关单位的电力测试研究及现场测量。

NAJF-03超声定位系统集成高性能计算机、高灵敏度局放声测探头、程控放大滤波、高速A/D转换器、瞬态波形记录、信号分析、故障定位计算机软件于一体，适用于大型变压器和充油高电压电器设备以及GIS和其他电力运行设备中局部放电超声信号的采集、测量、分析和定位以及在线监测。

NAJF-03超声定位系统对通常产生的变压器围屏、引线、金属件及高压线圈表面的放电能迅速判明故障位置。定位误差小于250mm，整套测量系统能检测出小于1000pC局部放电量的超声信号。

功能与特点：

- 1、基于Windows平台下的软件，使局部放电超声波探测的操作、分析更简捷。
- 2、超声波传感器具有低噪声、高灵敏度和抗干扰性能，使信号的获取更可靠。

- 3、具有局部放电超声波信号的电-声定位和声-声定位功能，使现场测量更灵活。
- 4、任意选择超声波信号的球面定位计算或双曲面定位计算，使定位结果更精确。
- 5、用立体几何图形展现超声波探头和定位点的坐标位置。
- 6、方便建立测量和定位的数据库，便于进一步分析和管理的。
- 7、本仪器还可以作为局部放电在线监测仪使用，可监测电力设备的局放产生和发生发展。

技术参数：

超声探头灵敏度：-150dB

输入通道数：6/8

A/D转换精度：8bit \pm 1/2LSB

采样长度：32k/通道

可测放电量：< 50pC(实验室) < 300(1000)pC (现场)

定位误差：< 50mm(实验室) < 250mm (现场)

NAJF-03 Type Local Discharge Ultrasonic Automatic Positioning Device

The failure testing and positioning of operating the medium and large sized transformers have always been the points that electrical engineers focus for a long time. The NAJF-03 system, manufactured in the large-sized transformer local discharge ultrasonic position method and equipment research subject which is one of the national key scientific and technological project has provided an effective solution.

The NAJF-03 system has carried the ultrasonic measurement to the local discharge of the hundreds of transformers and reactor in Gezhou Dam 500kV switch station, Wuhan Phoenix Mountain 500kV transformer substation, Shanghai transformer factory, Hefei transformer factory, Hengyang transformer factory, Guangzhou power supply bureau, Hunan electricity generating board, Chongqing transformers factory and Wuhan steel. This system has the advantage of operation reliable and easy to operate. It can meet the needs of measurement. As one of the key items of the of eight-five project, this electrical device has been widely used for the spot test and research in the related unit in the north, east, central and northwest parts of China.

The NAJF-03 ultrasonic positioning system which is including the high performance computer, high-sensitivity local discharge sound probe, programmed amplified filter, high-speed A/D transducer, transient waveform recording, signal analysis and fault location software is applied for acquiring, measuring, analyzing, positioning and spot observing the local discharge ultrasonic signal in the large-sized transformer, oil-immersed high voltage electrical apparatus and the GIS electrical operation equipment.

The NAJF-03 ultrasonic positioning system can position the fault and the error is less than 250mm. The whole measuring system can find out the local discharge ultrasonic signal which is less than 1000pC.

Functions and characteristics:

- (1) Making the detecting operation of local discharge ultrasonic more convenient and the analyzing more simple under the platform of the windows.
- (2) Making the signal acquired more reliably for the ultrasonic sensor has the performance of low noise, high-sensitivity and anti-jamming.
- (3) Making the spot testing more flexible with the local discharge ultrasonic signal electrical-acoustical position and acoustical-acoustical position functions
- (4) Making the result of the position more precisely by choosing freely the spherical position calculation and the hyperboloid position calculation of the ultrasonic signal.
- (5) Showing the position coordinates by ultrasonic probe and the locating point by solid geometric drawing.
- (6) Convenient for building the measuring and positioning database for further analyzing and managing.
- (7) Be the local discharge on-line detecting instrument which is useful for detecting the local generating and developing.

Technical parameter:

The sensitivity of the ultrasonic probe: -150dB

A/D conversion accuracy: 8bit \pm 1/2LSB

Sample length: 32k/channel

Minimum detectable discharge: < 50pC (laboratory) < 300(1000)pC (spot)

Minimum positional error: < 50mm(laboratory) < 250mm (spot)