

EL230 series surveymeter for the decomposition product of SF<sub>6</sub>

## The preferred instrument for SF<sub>6</sub> electrical equipment overhaul



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## Product Introduction

The series of EL230 series surveymeter for which is the decomposition product of surveymeter for SF6 electrical equipment is characterized with its one kind of the portable instrumentation portability with high accuracy and intellectualization. This surveymeter can quickly investigate and accurately locate the malfunction through detecting the contents of decomposition released by the internal malfunction decomposition unit of the equipment, such as breaker, mutual inductor, GIS, casing pipe and transformer of SF6. Its remarkable property of it's a high-precision and shortcut surveymeter convenient operation for overhauling SF6 electrical equipment leads to and its application in applicable for the industry of electricity, railways, metallurgy and petrification.



## The Main Application

1. Quickly and accurately detect the malfunction such as radioactive fault, the undesirability of arc extinguishing of the breaker arcing, overheating fault caused causing by poor contact of SF6, and then further. Furthermore, the detection of that whether the faults have affected the surrounding equipment can also be made.
2. Rapidly By examining survey the operating SF6 gas air chambers of

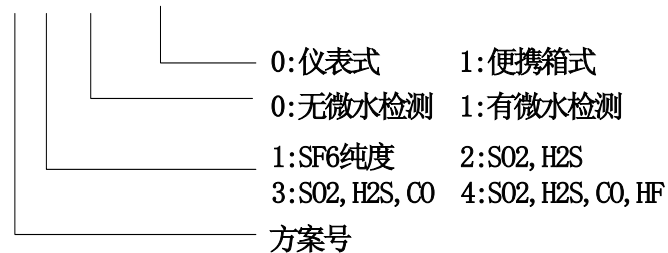


the operational SF6 which may have has the potential problems of containing the excessive over amount of the impurity and or water or any other hidden dangers. Then we can directly find , the incipient fault may be able to be directly found. Or or according to the first data, by means of reseting the reasonable time interval and making another examination retest it, we can still efficiently find the most of the operational incipient fault except the one causeding by sorbent invalidation could be found through by comparing the two sets of data.

3. The internal mechanical damage and the excursion of axle wire of SF6 which may caused by the nature disaster such as earthquake and typhoon can bring security problem to the new operation. However, they can be effectively and conveniently detected by we can densely examination survey it by using this device its fast-test ability in few days after the new reoperation. This method is considered as the most efficient and convenient way.

## Model Number

**EL 230 - 1**



## Product Features

- **The design with high degree of accuracy and stability**
  - Adopted by the advanced calibration technique. Users may adjust the calibration criteria in the software system comes with the device as requested. this can be used by the users or the third party units in calibrating the software on their own.



- With the our unique automatic Zero Technique, it can automatically do zero-adjusting, temperature-supplying and it after it's turned on and automatically supply the temperature, decide test the terminal of the estimation of the terminal to make sure the consistency of the repeatable examination survey.
- The technology that can automatically remove the interference between gases situation when the gas interferes itself can effectively avoid the mistakes which may take place happen when the single sensor reacts to two kinds of gas simultaneously. And this kind of technology can guarantee the authenticity of the data numbers.
- **Usability design**
  - Lower Gas Emission. Enter the gas mixture once, then Put the air in and meanwhile quickly test the decomposition product of SO<sub>2</sub> (SO<sub>2</sub>+ SOF<sub>2</sub>), H<sub>2</sub>S and CO can be examined in the mode of HF or Exposed Point.(we can choose HF and exposed point to test ) , It greatly reduces the gas emission output of the air.
  - Quick Cleaning and Zero Function. It can be quickly cleaned the zeroing design and because of its special tube clean technology, users can easily directly supervise the Zero zeroing situation of the air gas sensor according to the histogram showed on the liquid crystal display.
  - Design for Safety. The particular fast test design can provides the manual operation of the instrument in an innocuous circumstance.



without the poisoned gas and It guarantees the safety of the testers when carrying on the qualitative examination survey under the high-risk situation, which can guarantee the safety of the testers.

- **Human-computer Interface.** With the function of Chinese menu operation on a Support Chinese menu display on a large LCD screen. Users can easily use this device by referring to the Help document in the system. With the help of the function of data-searching-and-analyzing, users are able to search and count specific data. The password protection prevents unauthorized delete and calibration adjustment, which guarantee the data security and fairness., the help of randomly use of the built-in and the ability of searching and analysis the built-in data, the users can search and count the needed data on this machine, internally set the data deletion ability and the protection of the password, calibrate the password so it can make sure the fairness and the safety of the data.
- It can generate make the history data of the facilities and the for PC analysis in PC system according to the users' needs of the users.

### Main Technical Specifications

- **Sensitivity**  $SO_2 \leq 0.01\mu l/L$  ( $SO_2 + SOF_2 \leq 0.01\mu l/L$ )  
 $H_2S \leq 0.01\mu l/L$   $CO \leq 0.1\mu l/L$
- **Measuring Range**  $SO_2$  ( $SO_2 + SOF_2$ ),  $H_2S$ :  $0 \sim 100 \mu l/L$  ;  $CO$ :  $0 \sim 1000\mu l/L$
- **Error** repetitive error  $\leq 2\%$  general measuring error  $\leq 5\%$

# EL230 series surveymeter for the decomposition product of SF<sub>6</sub> in the electrical equipment



- **Using environment** temperature : -20~+45℃; humidity : 15~90%RH
- **Input pressure** ≥1.0 Mpa
- **Gas-flow rate** 120-200ml/min (according to the way of measurement)
- **Power supply source** It performs a double service of DC and AC, and the internal battery can be continuously used over 12 hours after it' s charged.
- **Protection:** the protection of over consistency, under voltage, over flow-rate and the data password
- **Data storage** it can store 1000 groups of test data
- **Communication mode** it can be transferred to the computer through the USB bus
- **Back group software** data export, the production of the statistics report, the diagnoses of system by the expert (custom-made)
- **Demarcation way** the demarcation of SF<sub>6</sub>、N<sub>2</sub> gas software, one time a year
- **Outlook specification** long372mm xwide268mm xhigh136mm
- **Instrument weight** net weight3.5 kg

中国计量科学研究院 

## 测试证书

证书编号: MQt2009-2835

客户名称: 福州亿龙电子科技有限公司

器具名称: SF<sub>6</sub>电气设备分解产物检测仪

型号/规格: EL230-1

出厂编号: EL090730

生产厂商: 福州亿龙电子科技有限公司

客户地址: /

测试日期: 2009-07-30

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## 测试结果

1. 分别通入 SO<sub>2</sub>/N<sub>2</sub>、H<sub>2</sub>S/N<sub>2</sub>、CO/N<sub>2</sub> 气体标准物质, 测试结果如下

	标准值 (×10 <sup>-6</sup> mol/mol)	仪器示值 (×10 <sup>-6</sup> mol/mol)	响应时间	重复性
二氧化硫	1.99	2.06	≤60s	<2%
	15.9	16.5		
	19.9	20.8		
硫化氢	2.00	2.08	≤60s	<2%
	14.9	14.9		
	20.0	19.9		
一氧化碳	20.0	21.3	≤60s	1%
	80.0	78.5		
	120	115		

2. 配置一定浓度的 N<sub>2</sub> 中 SO<sub>2</sub>、H<sub>2</sub>S、CO 混合气体, 分别通入仪器三次, 其测试结果的平均值如下:

	标准值 (×10 <sup>-6</sup> mol/mol)	仪器示值 (×10 <sup>-6</sup> mol/mol)	响应时间	重复性
二氧化硫	10.0	10.5	≤60s	<2%
硫化氢	10.0	12.0	≤60s	<2%
一氧化碳	20.0	21.4	≤60s	1%

以下空白

测试员: 王振 核验员: 范永华

2008-05

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### The standard of measuring execution

The production is in accord with JJG551-2003 National metrological  
verification of sulfur dioxide gas  
The production is in accord with JJG695-2003 National metrological  
verification of hydrogen sulfide gas  
The production is in accord with JJG915-2008 National metrological  
verification of Carbon monoxide gas

### Service

- We provide the product testing of the product before it' s is sold and the examination service of examination
- We provide the help of analyzing the testing data.
- We provide the service of the demarcation, upgrade, guarantee and maintenance of the product.
- We provide the assistance for the users to handle the ability of demarcating this product in local place.
- We provide the 5-year guarantee and the free service of demarcation.

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