



**ΑΔΜΗΕ**

**Technical specification of a Device for SF6 DEW POINT DETECTION**

**Alternative, technical specifications of a combined operation device:  
Dew point, purity and decomposition products of SF6**

**Part I. Characteristics.**

**Part II. Technical Parameters.**

**Part III. Device Accessories.**

**Part IV. Alternative device technical characteristics of a combined operation device: dew point, purity and decomposition products of SF6**

**Part V. Special requirements**



### **Part I. Characteristics:**

1. Color LCD display (with real time parameter display).
2. Large data storage.
3. A.C. and D.C. operation (using rechargeable batteries (A.C. 240V-50 to 60HZ)).
4. Automatic zero calibration.
5. Electronic display of flow or flow regulation valve (0,5 to 0,9 l/min).
6. Printing capability of measured data.
7. Storage of Measured data.
8. PC interface with data transfer software and external printer connectivity (included in the device price).
9. Temperature of operation: -10° C to +40° C.
10. Quick connect of SF6 accessories.
11. Short waiting time for measurement (max 3min).
12. Device weight: < 15kgr.

### **Part II. Technical parameters:**

1. Dew point measurement range: -80 to +20° C.
2. Dew point accuracy:  $\pm 5^{\circ}$  C .
3. Repetitiveness:  $\pm 0,5\%$ .
4. SF6 gas flow: 0,5 to 0,9lit/min.

### **Part III. Device accessories:**

1. Sampling tube (4m) with braided steel shield, as well as an internal PTFE tube.
2. Brass or inox connectors DN20 and DN8.
3. Power cord (A.C.) 2m.
4. All the required cables for interconnection with external systems
5. Calibration certificate.
6. Operation instructions in English, Greek, in printed, CD and USB format.
7. Rugged Carrying case.



#### **Part IV : Alternative technical characteristics of a combined operation device for dew point, purity and decomposition products of SF6.**

If there is a market available device (within budget limits) with the additional ability of measuring (apart the dew point) the purity of SF6 as well as the decomposition products of SF6 inside the breaker, such as water, humidity, sulphur dioxide (SO<sub>2</sub>) or HydroFthorium (HF), then the required technical parameters are:

1. SF6 purity %
  - Measurement Value: 0 to 100%
  - Repeatability:  $\pm 0,5\%$
  
2. Decomposition products
  - Value of H<sub>2</sub>O: 1 to 2000 ppm
  - Value of SO<sub>2</sub>: 1 to 200 ppm
  - Value of HF: 0 to 15 ppm
  - Measurement accuracy:  $\pm 1$  ppm

#### **Part V. Special Requirements:**

1. After signing the contract, the supplier must:
  - 1.1. Να εγκαταστήσει πλήρως τη συσκευή.
  - 1.2. Prove the proper operation of the device in the laboratory, within one month after the arrival of the device in the laboratory of ADMIE..
  - 1.3. Prove the repeatability of each measurement, applying the requested methods for a satisfactory number of oil samples (at least 10).
  - 1.4. The device will be checked against the specified characteristics. In case of not fulfilling even one of the characteristics, then the device will not be accepted.
  - 1.5. The supplier will be obliged to provide full technical support for maintenance and proper operation of the device that will be installed in the physic-chemical laboratory.
  - 1.6. There will be full coverage of spare parts for a period of five years. The supplier will be obliged to supply ADMIE with all the requested spare parts, within two months upon request.
  - 1.7. The device will need to be supplied with CE certification and the manufacturer must also be certified accordingly.
  
2. The supplier will be obliged to deliver, along with the device, the manuals in both English and Greek language. The manuals must include full description of the device operation, as well as maintenance and tuning in case of improper operation.
  
3. After the successful installation and inspection of the device, the contracted price will be paid and the guarantee period will be initiated. The guarantee period will be covered by a letter of guarantee of 10% of the contracted price. The letter of guarantee will be returned to the supplier after the expiry of the guarantee period, unless forfeited for any reason. The guarantee period will have a duration of at least two years.