



## GDSF-411CPD SF<sub>6</sub> Gas Analyzer



### General information

GDSF-411CPD SF<sub>6</sub> gas comprehensive analyzer is a portable device designed to measure SF<sub>6</sub> gas dew point, purity and decomposition product. The core component with chilled mirror method is used to test dew point, European sensor with infrared method to test SF<sub>6</sub> gas purity and electrochemical sensor from Membrapor to test SF<sub>6</sub> gas decomposition product. Besides, we also adopt professional hardware chips and excellent software algorithms of STMicroelectronics.

### Application

- Analysis of trace moisture, purity and decomposition products of SF<sub>6</sub> gas electrical equipment for electric power

- SF<sub>6</sub> gas cylinder gas quality test
- Quality test of SF<sub>6</sub> gas for recovery and reuse
- High purity gas manufacturing
- Semiconductor industry dry gas supply
- Research and development use
- Clean room/dry house monitoring
- Metal heat treatment site and laboratory industrial gas humidity detection, such as air, CO<sub>2</sub>, N<sub>2</sub>, H<sub>2</sub>, O<sub>2</sub>, SF<sub>6</sub>, He, Ar and other inert gases.

### **Features**

- With imported high-precision sensor and self-calibration function, test results are more accurate all year round.
- With polymer material design throughout gas pipeline from Legris, Camozzi and Swagelok, ensure no wall-clinging condition, and fast test speed.
- Oil-free stainless steel regulating valve is adopted to ensure test accuracy.
- Advanced software algorithm improves the test accuracy of imported sensors.
- With flexible case configuration. User can assemble spare parts more easily.
- Power on to detect, no need for oscillation.
- Temperature conversion and pressure data correction.
- Fuzzy computing technology.
- High-power lithium power supply system can realize AC DC double power supply. No need for on-site AC power supply. Lithium battery can work continuously for more than 8 hours alone.
- Anti-electromagnetic interference circuit design, to ensure the reliability of products.
- USB communication, serial communication and wireless communication modules can be extended to realize PC communication and printing functions. (optional)
- Mass storage, which can realize the storage function of 1000 groups of data.
- Gas path pretreatment function can purify the test pipeline before the field test work, which shortens the test time. (optional)
- With environment protection function. The instrument has a test gas recovery function, which can recycle the measured sulfur hexafluoride gas. (optional)
- The test data is stable. Standard dew point value and the converted dew point value under 20°C can be provided at the same time.

- The purity measurement accuracy is 0.5% in the full range, which can be applied to measure high concentration SF<sub>6</sub> gas.
- The display of the best test flow area is clear and intuitive. Users can adjust the gas flow directly and quickly.
- The air inlet adopts the design of miniature self-sealing joint, so the measured air path will not leak when it is broken.

## Specification

### SF<sub>6</sub> humidity

Measurement method	Chilled mirror method (Stirling Refrigeration)
Measurement range	Dew point -100°C--+20°C(90s for single point measurement), error: better than ±0.2°C
Repeat-ability	± 0.1 °C
Resolution	0.01°C
Display unit	°C, ppm, °C P20(converted value at 20°C)

### SF<sub>6</sub> purity

Measurement method	Infrared Measurement Principle (NDIR series sensors)
Measuring range	0 ~ 100% SF <sub>6</sub> , error: better than ± 0.3%F.S.
Response time	[90%] 60s
Repeatability	± 0.3%
Resolution	0.01%
Display unit	%

### SF<sub>6</sub> decomposition products

Measurement method	Electrochemical Measurements Principle (Electrochemical series sensors from Membrapor)
Measurement range	SO <sub>2</sub> : 0 ~ 200ppmv H <sub>2</sub> S: 0 ~ 200ppmv CO: 0 ~ 500ppmv HF: 0 ~ 50ppmv
Accuracy	SO <sub>2</sub> : <10ppmv ±0.3PPmv; >10ppmv ±3% H <sub>2</sub> S: <10ppmv ±0.3ppmv; >10ppmv ±3% CO: <50ppmv ±2ppmv; >50ppmv ±4% HF: <10ppmv ±0.3ppmv; >10ppmv ±3%
Repeat-ability	SO <sub>2</sub> : <10ppmv ±0.2PPmv; >10ppmv ±2% H <sub>2</sub> S: <10ppmv ±0.2ppmv; >10ppmv ±2% CO: <50ppmv ±2ppmv; >50ppmv ±2% HF: <10ppmv ±0.2ppmv; >10ppmv ±2%
Resolution	0.01ppmv
Display unit	ppmv

### General parameters

Power supply	220VAC±10%, 50Hz, AC/DC use, continuous working is more than 8 hours.
Use environment temperature	-20--+60°C
Environment humidity	90%RH

Measurement value influence	No effect of pressure and flow
Dimension	570*420*280mm
Weight	Not more than 20kg.

### Accessories

Main Tester	1 piece
Adapter	1 set
Teflon pipe (include flow adjustment valve and fast connector)	1 set
Tail pipe	1 set
Spare parts	1 set
Charger	1 piece
User's Guide	1 piece
Test Report	1 piece