

Quality&Precise



MAXWELLON SDP6520

-65°C to 20°C
SF6 Chilled Mirror Dew Point Meter
2024

Maxwellon

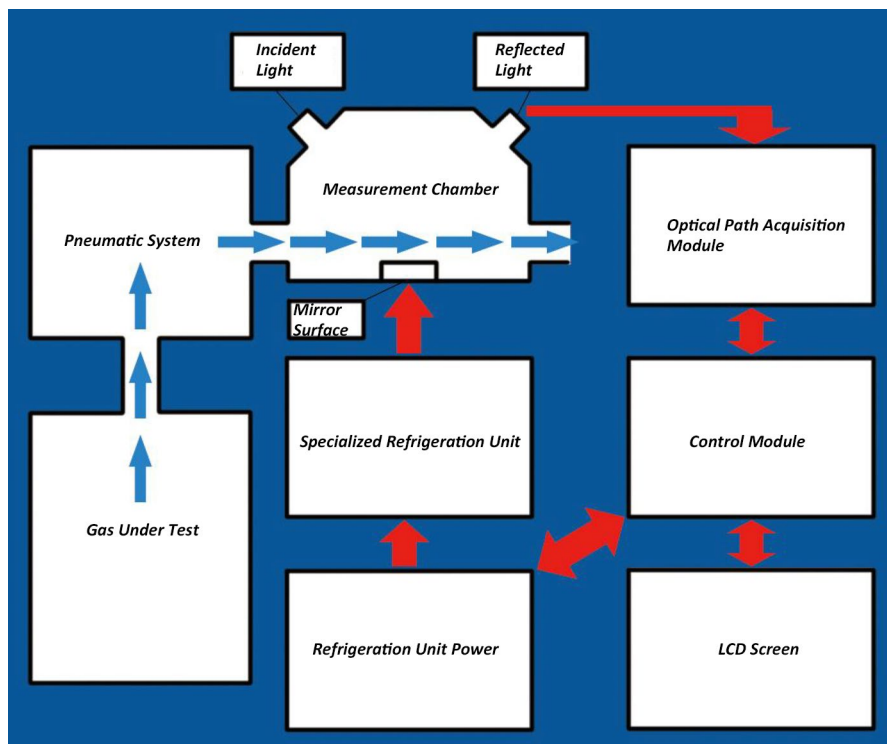
The chilled mirror hygrometer is a precision instrument developed and produced based on Maxwellon's proprietary Stirling micro-cooler. It is primarily used for automatically measuring the trace moisture content in gases. It utilizes a high-precision optical dew point method, suitable for the detection of dew point/moisture content in bulk inert gases.

Equipped with a dedicated control system, it can perform continuous measurement, mirror heating for cleaning, automatic saving of measurement results, and querying of historical records.

Over the past few years, through continuous updates and iterations, We has optimized the overall structure of the chilled mirror hygrometer. It adopts a dual optical path solution to compensate for measurement errors caused by changes in ambient temperature, significantly improving measurement accuracy, speed, and interference resistance. Additionally, it has reduced the overall weight and size of the device, enhancing its portability.

■ Working Principle

The Chilled Mirror Hygrometer operates based on photoelectric detection technology and is recognized as one of the most precise and stable types of dew point meters used as a standard in the metrology industry. Its working principle is as follows: the gas under test flows through the measurement chamber and over a mirror at a specified pressure. When the temperature of the mirror falls below the dew point (the saturation temperature of water vapor in the gas), the water vapor in the gas condenses into dew or frost. This condensation causes the light shining on the mirror to scatter diffusely. The system monitors changes in the intensity of the reflected light from the mirror and calculates the dew point temperature based on these changes.



■ Key Feature

- **Automatic Dew Point Measurement:** The device can automatically measure the dew point or frost point temperature in gases.
- **Continuous Measurement Cycle:** It continuously cycles through cooling, detecting, warming, and re-cooling during operation, ensuring constant monitoring.
- **Mirror Heating for Cleaning:** Features a heating function to clear any residual dew or frost from the mirror after measurements. The heating automatically stops once a predefined temperature is reached.
- **Data Management:** Allows for the automatic saving of results and export to a USB drive. Historical data can be easily accessed and reviewed.
- **User-Friendly Interface:** Equipped with a large touchscreen display that simplifies operation and enhances readability.

■ Specifications

Measurement Mode	Fully Automatic Continuous Measurement
Test Gas	SF6
Test Gas Flow Rate	600 ml/min
Temperature Resolution	0.1°C
Measurement Range	-65°C to 20°C
Temperature Accuracy	±0.3°C
Display Units	°C, ppm
Operating Environment Temperature	-20°C to 50°C
Operating Environment Humidity	≤85% RH
External Power Supply	AC 220V ±10%, 50Hz
Internal Power Supply	24V Lithium Battery
Data Interaction	USB 2.0 for data export, thermal printing, 4~20mA, RS485
Sampling Interface	Self-sealing quick-connect fitting (customizable)



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