HENGKO®

Sense a Better World !

HG808-A

Dew Point Transmitter

For Ultra-high Temperature Environment

Product List

HENGKO Technology Co., LTD

Catalog

1 Product Introduction

1.1 Product Overview

HG808-A Series Ultra-High Temperature Online Dew Point Meter is specifically designed for humidity measurement in high-temperature drying environments. It features a robust cast aluminum housing and stainless steel sensor components, ensuring continuous and precise monitoring of temperature and dew point even in extreme high-temperature industrial conditions.

- **Some Typical Applications for HG808-A**

HG808-A series is equipped with an ultra-high temperature resistant dew point sensor and real-time online monitoring functionality, making it widely applicable across food, pharmaceutical, chemical, high-temperature drying, and environmental monitoring industries.

✧ Food industry: Used in ultra-high temperature drying ovens for monitoring the drying conditions of dehydrated vegetables, dried fruits, and other food products to ensure quality.

✧ Pharmaceutical industry: During the high-temperature drying and disinfection process of drug raw materials, monitor dew point data to prevent drug moisture or contamination, and ensure the quality and purity of drugs;

✧ Chemical industry: Some chemical reactions require high-temperature drying conditions. By using the A series to monitor the high-temperature dew point, the influence of moisture on the chemical reaction can be avoided, and the yield and quality of the product can be improved;

✧ High temperature drying: Precisely monitors the dew point of source gases in high-temperature drying systems, helping to improve drying efficiency and

optimize energy consumption.

✧ Environmental monitoring: Used in combustion flue gas emissions, chimney discharge monitoring, and other applications to ensure emission standards are met, aiding in scientific environmental pollution management.

- **Product Feature of HG808-A**

The corrosion-resistant sensor in the A Series is highly durable and un affected by oil vapor, dust, fine particles, and most chemical gases. This m akes it suitable not only for ultra-high temperature conditions (<180°C) but also for extreme industrial environments, such as waste gas emissions in p etrochemical plants and recirculating gases in catalytic reforming units of re fineries, where corrosive gases pose a significant challenge.

The A Series Ultra-High Temperature Online Dew Point Meter adopts the standard Modbus-RTU protocol, enabling seamless integration with PLC, DCS, and various industrial configuration software. Besides being a standal one online monitoring instrument, it can also function as an accessory for high-heat process engineering systems, industrial high-temperature drying sys tems, high-temperature constant temperature and humidity test chambers, and other ultra-high temperature monitoring and control systems to provide de w point and temperature measurement data.

If the HG808-A series products fail to meet your measurement needs, please feel free to request other series of temperature and humidity measure ment products from our customer service. Thank you again for your revie w!

1.2 Function Features

- Split type probes with strong anti pollution and oil resistance capabilities.
- Simultaneously supporting RS485 output and two analog outputs.
- Analog output with 15 high-resolution bits, digital output with optional resolution of 0.1 or 0.01.
- Supports single register and multi register reading.
- Equipped with anti condensation function, it can keep the sensor synchronized in high humidity environments
- Digital output can simultaneously read dew point, humidity, temperature, and PPM values
- Adopting the standard Modbus RTU protocol, it can easily achieve interconnection with PLC, DCS, and various configuration software.
- 10V~28V ultra wide voltage input, over current protection, power polarity protection, industrial grade ESD safety protection, and power supply anti reverse connection function.

2 Technical Parameter

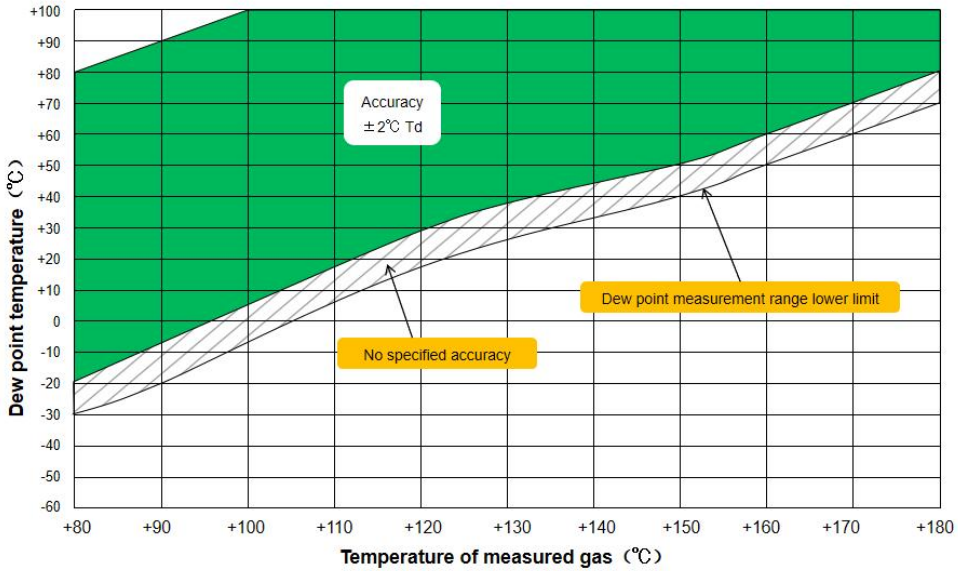
2.1 Specifications

Range and Accuracy	
Dew point Range	-20 ~ +100℃ （Adjustable within this range）
Temperature Range	+80 ~ +180℃
Dew point Accuracy	±2℃ (± 3.6°F) Td (Refer to the dew point accuracy table for details)
Temperature Accuracy	±0.3℃（@85℃） (Refer to the temperature accuracy table for details)
Input and Output	
Power supply	DC 10V ~ 28V
Power consumption	<0.5W
Analog Outputs	**Dew Point + Temperature**
	4~20mA /0-5V /0-10V （One out of three）
RS485 Digital Output	Temperature, humidity, dew point, PPM (read simultaneously)
	resolution ratio：0.01°C / 0.1°C (optional) 0.01%RH /0.1%RH (optional)
Baud rate	1200, 2400, 4800, 9600, 19200, 115200 can be set, The default is 9600 bps
Acquisition frequency	The fastest response is 1 second, other settings can be set according to PLC
Byte format	8 data bits, 1 stop bit, no check
Pressurization	16 bar
Working temperature (Transmitter body)	- 20 ~ +60℃, 0%RH ~ 95%RH (Non condensation)
(Humidity and PPM value for reference only)	

2.2. Measurement values

Dew Point	
Measurement range	-20 ~ +100°C
Accuracy	±2°C (± 3.6 °F) Td

Accuracy within the dew point range

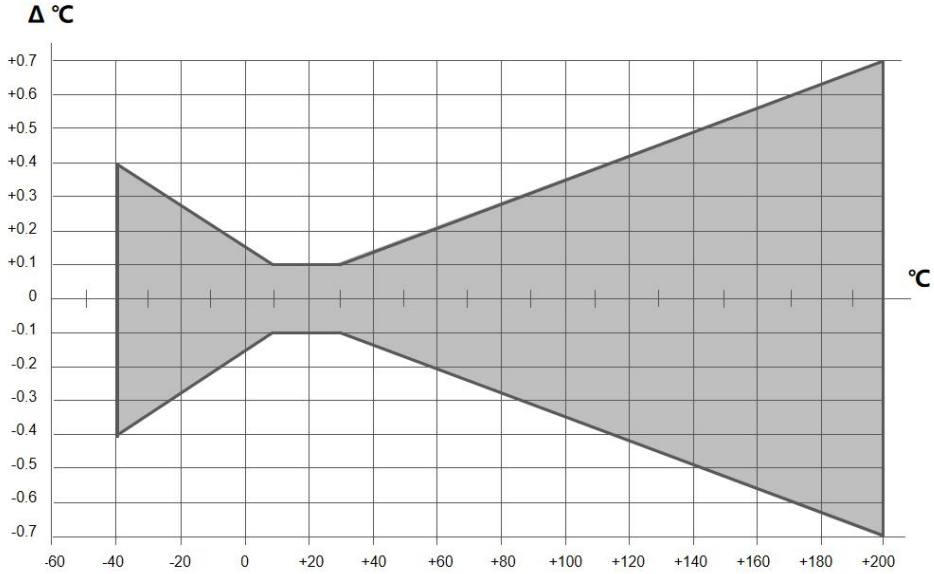


*Dew point measurement, it is recommended to measure the ambient temperature of +80 ~180 ℃

Temperature

Measurement range	+80 ~ +180℃
Accuracy	±0.3℃（@85℃）

Accuracy of temperature



3 Product Selection

	HG808-A		
Probe Type	Split 0 (With a protective cover, the total length is 40mm)		Split 8 (With a protective cover, the total length is 103mm)
	0		**8**
Analog signal output(+485)	4~20mA	0-5V	0-10V
	4	**5**	**1**
Probe protection cover	**Stainless steel sintering**		**Stainless steel grid**
	A		**B**

HG808 - A □ Y □ - □

- Probe protection cover
- Analog signal output
- Probe type

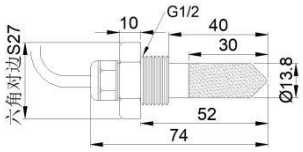
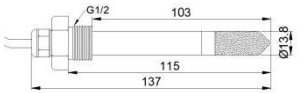
e.g:

HG808-A8Y4-B indicates a dew point transmitter for ultra-high temperature environments, equipped with split-type probe 8 (rod length: 103 mm), analog output 4–20 mA, and a type B stainless steel mesh probe cover.

4 Probe

4.1 Probe Type

The general probe structure of the HG808 transmitter is as follows in the table (can be customized as per customer requirements).

Type	Probe Description	Picture	Probe size
Split type probe 0	Compact and compact in structure, with optional hexagonal thread size, su itable for threaded fasteni ng work environments or installation through box walls, easy to install.		
Split type probe 8	Commonly used for mea suring temperature and h umidity in high-temperatu re pipeline facilities such as large-sized pipelines and smoke pipes, or in t he interior of wider box spaces, under pressurized or non-pressurized condi tions.		
Probe installation： The default thread is G1/2, and NPT1/2 or M20 thread is optional.			

4.1 Probe Type

Type	Picture	Selection instructions
Stainless steel sintering		When applied in environmen ts with high humidity, low dust, and easy condensation, grid style protective covers are more suita ble.
Stainless steel grid		

5 Model List

Model	Signal output	Temp. range	Dew Point Range	Picture
HG808-A0Y4-A	4~20mA +RS485	+80 ~ +180℃	-20 ~ +100℃	
HG808-A0Y5-A	0-5V +RS485			
HG808-A0Y1-A	0-10V +RS485			
HG808-A8Y4-A	4~20mA +RS485			
HG808-A8Y5-A	0-5V +RS485			
HG808-A8Y1-A	0-10V +RS485			
HG808-A0Y4-B	4~20mA +RS485			
HG808-A0Y5-B	0-5V +RS485			
HG808-A0Y1-B	0-10V +RS485			
HG808-A8Y4-B	4~20mA +RS485			
HG808-A8Y5-B	0-5V +RS485			
HG808-A8Y1-B	0-10V +RS485			

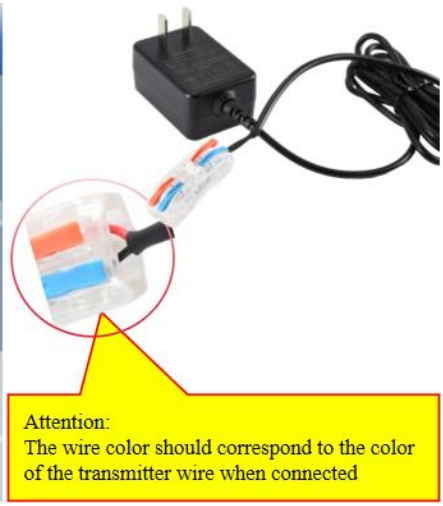
Signal output description				
Model	**Signal output**	**Output Value**		
HG808-A0Y4-A HG808-A8Y4-A HG808-A0Y4-B HG808-A8Y4-B	4~20mA	Temperature and Dew point		
	RS485	Dew point	Temperature	Humidity (for reference only)
HG808-A0Y5-A HG808-A8Y5-A HG808-A0Y5-B HG808-A8Y5-B	0-5V	Temperature and Dew point		
	RS485	Dew point	Temperature	Humidity (for reference only)
HG808-A0Y1-A HG808-A8Y1-A HG808-A0Y1-B HG808-A8Y1-B	0-10V	Temperature and Dew point		
	RS485	Dew point	Temperature	Humidity (for reference only)

6 Accessory Selection

a. 12V1A power adapter

—— Easy for customers to quickly connect power when there is no PLC or other weak power supply.

Please contact the salesperson for the selection of pin specifications.



b. 485 to USB module

—— Compatible with Windows series, Mac OS, Linux and other systems, easy and fast to read.

c.Gas Sampling Kits

——By using gas sampling kits, you can indirectly measurethe temperature,humidity and dew point data in theenvironment. The gas sampling kit can be used with differ.ent devices to solve the problem of measuring data underspecial working conditions, such as ultra-high temperature,ultra-high pressure, and harsh environments. The measure.ment inlet can be screwed directly into the probe or connect-ed to a threaded adapter for sealing.

（1）

（2）

（3）

Contact Us

HENGKO Technology Co., Ltd.

Address:

Building 65, No. 43, Fukang Road, Pinghu Street, Longgang District, Shenzhen, China

Contact number: 0086-0755-88823250

E-mail: ka@hengko.com

Website: www.hengkometer.com