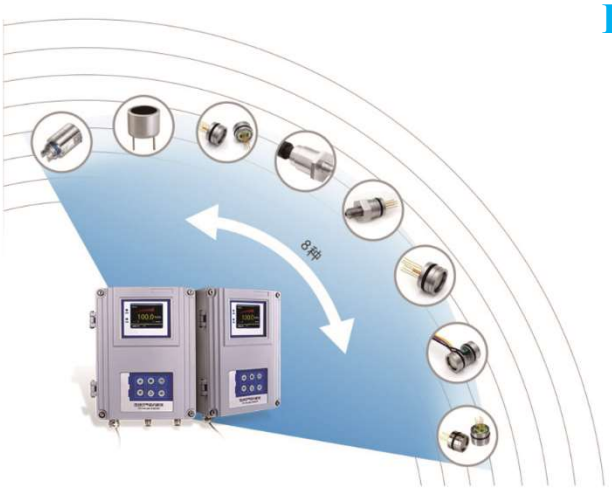
West Lake Bay

GDP online dew-point instrument



Product overview

The GDP online dew-point instrument is capable of preventing dust, dirt and water splashing based on the structure design and can be used in harsh environments. It's of excellent long-term anti-condensation stability and durability, thus minimal maintenance is required. It's an ideal choice for industrial application and mainly used for air and plastic desiccant, drying room, drying gas and high-voltage breaker. In bad conditions (such as comprehensive influence of low humidity and high air temperature), the measurement result is also accurate and reliable. It's mainly used for petrochemical engineering, natural gas, industrial gas, semiconductor industry, drying industry, food industry, power sector, machine manufacturing, air separation industry, pharmaceutical industry, lithium battery new energy industry, etc.

Product features

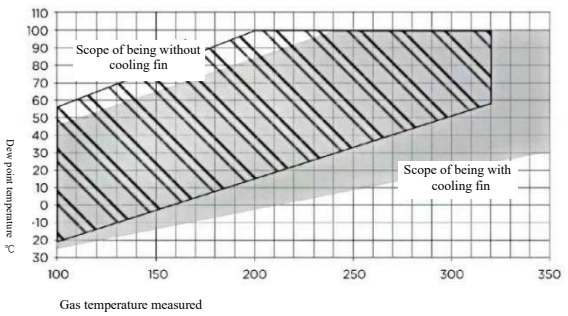
- Many output parameters: Display various humidity parameters, such as dew point/frost point temperature, relative humidity, ppmv(volume of moisture/dry gas volume) and environment temperature;
- The measurement data is displayed numerically or graphically on the LCD display screen and the output readings can be converted into real-time graphics by a key;
- The user interface is easily used, and the fixed keys refer to the graph, hold/save and record keys;
- The structure is light and firm with waterproof and dustproof enclosure protection. It can be used stably in an extremely hostile environment and is suitable for various occasions.

Technical indicators

- Measuring performance

Dew point	
Sensor:	GDP-M350
Measuring range:	-25···+100°C(-13···+212°°F)
Accuracy:	±2°C(±3.6°°F)Td/f
Response time: 63% [90%]	
From wet to dry:	5s-15s
From wet to dry:	45s [5min]
Mixing ratio	
Measuring range (typical): 0··1000g/kg(0··7000 gr/lbs)	
Accuracy:	Reading+-12%
Probe operating temperature scope	0···+350°C(+32···+662°°F)
Operating temperature scope of the body for connection on the probe	-40···+80°C(-40···+176°°F)

GDP-M350



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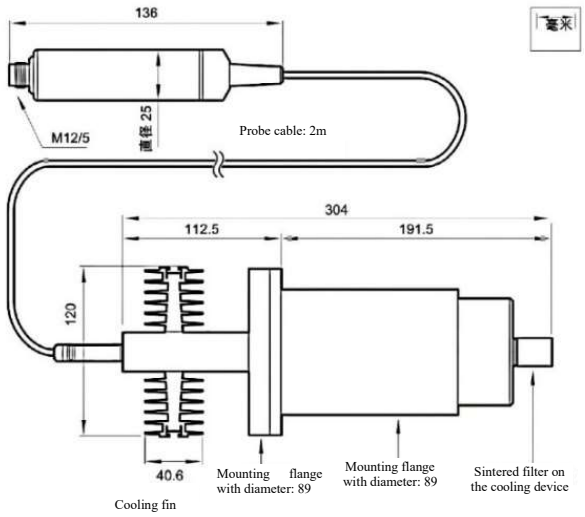
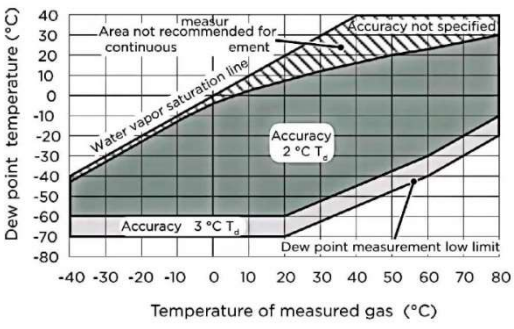
Storage temperature	-40···+80°C(-40···+176°°F)
Measuring environment: Air, nitrogen, hydrogen, argon, helium and oxygen	
IP protection level	IP66

● Input and output	
Operating voltage	15··30 VDC
Current consumption	10mA (typical value), 500Ma (maximum value)
Digital output	RS-485, non-isolated
Protocol	Modbus RTU
Output parameters	
Dew point temperature, mixing ratio, water concentration, vapour pressure and water mass fraction	
● Machinery specification	
Connector joint	M125 pointer A standard
Probe cable length	2m
Material	
Probe	Stainless steel AISI316L
Probe body	Stainless steel AISI316L
Cable enclosure	Plastic FEP
Cooling device	Stainless steel and aluminum



GDP-M350 size with cooling equipment

GDP-M80



● Measurement parameter	
Sensor	GDP-M80 multiparameter sensor
Dew point accuracy	±2°C(±3.6°°F)
Pressure accuracy at 23°C (73.4°F)	±0.4%FS
Pressure and temperature dependence bar/10°C(18°F)	±0.01
ppm Accuracy (7 bar)	± (12％ of 14ppm + reading)
Dew point	70··+30°C(-94···+86°°F)
Pressure, absolute	1···12 bar(14.5···174 psi)
Temperature (available only when the output RS-485 is chosen)	-40···+80°C(-40···+176°F)
ppm moisture value (based on the volume)	1···40 000 ppm

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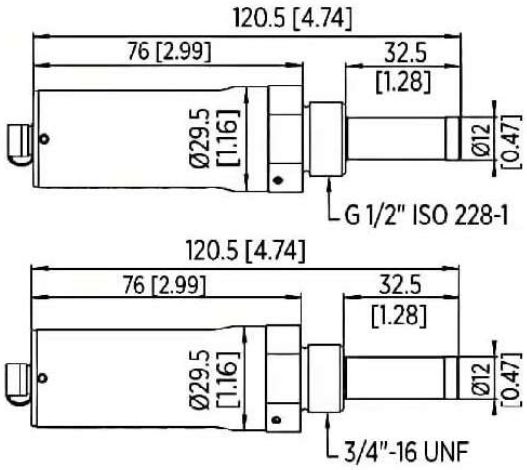
Dew point, having been converted into atmospheric pressure	-75···+30°C(-103···+86°°F)

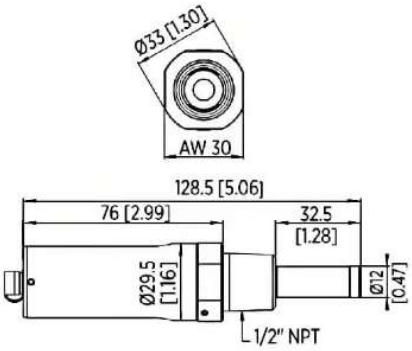
● Measuring performance

Operating temperature of electron device	40···+60°C(-40···+140°°F)
Operating pressure	1···12 bar(14.5··174 psi)
Mechanical temperature resistance	0··50 bar(0··725 psi)
Relative humidity	0··100%
Measured gas	Air/non-corrosive gas
Sampling gas velocity	No effect on measurement precision
Storage temperature	
Only transmitter	-40···+80°C(-40···+176°F)
Temperature accuracy	
0…40°C(+32···+104°°F)	±0.5°C(±0.9°°F)
0-40···80°C(-40···+176°°F)	±1°C(±1.8°°F)
Sensor response time	
Pressure response time	≤1s
Shipping and packaging	-20···+80°C(-4···+176°°F)
Dew point response time: 63% [90%] under the condition of 20°C and 1bar	
-50	5s [10s]
-10→-50°C Tdf	10s [2.5min]

● Input and output

Accuracy of analog output	±0.01V/±0.01 mA
Digital output RS-485, non-isolated, Modbus RTU protocol	
Connector	4-pin M 8
Operating voltage	
Current output	21···28 VDC
Voltage output and/or use at low temperature (-40··-20°C (-40···-4°°F))	20···28 VDC
Only RS-485	15···28 VDC
Analog output (two channels)	
Current output	0··20mA、4··20mA
Voltage output	0··5V,0··10V
Input current	
Carrying current in the conventional measurement process	20mA + negative
Carrying current in the self diagnosis process	300mA + negative
External load	
Current output	Maximum: 500Ω
Voltage output	Minimum: 10kΩ





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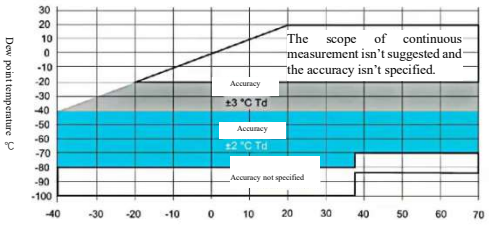
GDP-M70

Working environment	
Temperature	-40···+70℃(-40··+158°F)
Relative humidity	0···100％RH (maximum: +20℃/+68°°F)
Pressure	0··50 bar(725 psia)
Measuring environment: Used for air, nitrogen, argon, helium and oxygen1) Not suitable for measurement in the hydrogen or pure carbon dioxide	
Flow rate of sampled gas	No effect on measurement accuracy
Passing EMC certification	EN61326-1, industrial environment

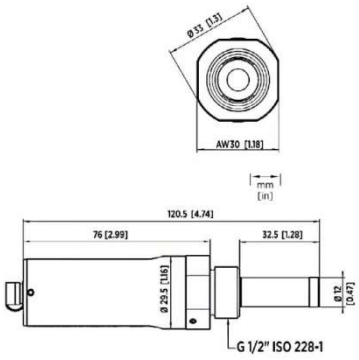
● Measurement parameter		Uncalibrated range	-100···+20℃(-148···+68°°F)Td
Sensor	GDP-M70	Typical response time: 63％ [90％] when the gas temperature is 20℃ (+ 68°°F) and the air pressure is 1bar	
Recommended calibration interval	2 years	-20··-80℃Td	0.5 min[7.5 min]
Dew point temperature 1)		-80··-20℃Td	2s[5s]
Measuring range:	-80··20℃(-112···4°F)Td	Typical long-term stability	Higher than 2℃ (3.6°F)/year
Accuracy		Volume concentration(Kg/m3)	
-80···40℃(-112···40°°F): ±2℃(3.6°°F)Td		Measuring range (typical)	0··500 ppm
-40··20℃(-40-··4°F): ±3℃(5.4°F)Td		Accuracy under + 20 ℃ (+ 68 °F) 1013 mbar: ± (20％ of 0.2ppm + reading)	

1) When the dew point temperature is lower than 0℃, the transmitter will output the dew point with Td as the unit.



Gas temperature measured　　Accuracy within the temperature scope

GDP-M70 dimension



● Input and output	
Two analog outputs (definable range) 4…20mA, 0…20mA (three-wire), 0…5V and 0…10V	
Digital output	RS-485 (two-wire)
Alarm level of analog signal indication	Selectable by the user
Chemical cleaning function information	5V, 10V, 20mA or LED
Accuracy of analog output	11+-0.01V/+-0.01mA
Operating voltage	
RS-485 output	11···28 VDC 1)
Voltage output	15···28 VDC 1)
Current output	21··28VDC
Supply voltage	
Conventional measurement	Load current20mA + load current
Self-diagnosis period	Maximum 220mA pulse
Mains ripple	Maximum: 0.3V
External load	
Voltage output	Minimum: 10kΩ
Current output	Maximum: 500Ω

● Machinery specification		Mechanical connection: ISO G1/2", NPT 1/2",UNF 3/4"-16",UNF5/8"-18"	
Enclosure material (wet parts)	ISI316L	IP protection level	IP66
Stainless steel mesh filter	Filter body AISI303, screen AISI316L, grade: 18μm	Storage temperature scope	0-40···+80℃(-40···+176°°F)

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