

# Dew Point Sensor – A Series

For refrigerant or desiccant dryers with dew point of  $-70^{\circ}\text{C}$  or  $-40^{\circ}\text{C}$

## Key Features

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- Dew Point Range:
  - $-110^{\circ}\text{C}$  to  $+20^{\circ}\text{C}$  |  $-166^{\circ}\text{F}$  to  $+68^{\circ}\text{F}$  or
  - $-80^{\circ}\text{C}$  to  $+20^{\circ}\text{C}$  |  $-112$  to  $+68^{\circ}\text{F}$
- IP65 rating
- Accuracy:
  - $\pm 2^{\circ}\text{C}$  for dew points between  $+20$  to  $-80^{\circ}\text{C}$
  - $\pm 3^{\circ}\text{C}$  for dew points between  $-80$  to  $-110^{\circ}\text{C}$
- Power Supply: 10 ... 30 VDC
- Output:
  - Digital - Modbus and
  - Analog - 4-20mA
- Measure:
  - Pressure Dew Point (PDP), Relative Humidity (RH) and Temperature.
  - Optional: Pressure
- Alarm relay – only available on the 'Dew Point Sensor with Display'



## About

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This precision dew point sensor is ideal for compressed air and inert gas systems up to 4 Mpa (600psi). The optional integrated pressure sensor makes measuring simpler and easier to manage, reducing wiring and installation costs.

The alumina sensor is suited to dew points down to  $-110^{\circ}\text{C}$  ( $-166^{\circ}\text{F}$ ). It has excellent accuracy, response speed, long-term stability and anti-pollution ability.

The innovative temperature compensation algorithm and multi-point temperature compensation calibration reduced sensor drift, ensuring high-accuracy measurements over a wide temperature range.

## Applications

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- Manufacturing and industrial use
- Gas systems up to 4 Mpa (600psi)
- Permanent or temporary measurement
- Gas pressure up to 50 bar (725 psi)

# Specifications

## Sensor

Sensor Technology	Alumina sensor
Sensor Filter	Stainless steel mesh filter (filter level 70 um)

Contact us for other filter options

## Measurement Range

Pressure Dew Point Range	-80 to +20 °C (-112 to +68°F) -110 to +20°C (-166 to +68°F)
Gas Temperature Measurement Range	-40 to +100 °C -40 to +212°F

Pressure Measurement Range	
• with pressure sensor	0 to 17 bar
• without pressure sensor	0 to 50 bar

## Accuracy

Dew Point Accuracy	
• +20 to -80°C	±2%
• -80 to -110°C	±3%
Temperature Accuracy	
• 0 to + 50°C	±0.3°C
• -40 to 0°C and +50 to +100°C	±0.5°C
Pressure Accuracy (@23°C)	±0.3% F.S
Pressure changes with temperature	±0.01 bar / 10°C

## Dew Point Measurement Response Time

-50 to +20 °Ctd	20 sec [40 sec]
+20 to -50 °Ctd	1 min [3 min]
Reference Conditions: 63% [90%], 20 °C, 1bar(a), 4L/min	

## Working Environment

Operating Temperature	-30 to +70°C -22 to +158°F
Relative Humidity	0 to 95% RH
Minimum gas flow	> 1L /min

## Output

Outputs	4-20 mA (3 wire) Modbus RTU (RS485)
Current Output Resolution	0.002 mA
Current Output Temperature Drift	0.01% of span/°C
Current Output Load	Max 500 ohm
Alarm Relay Output	
• Standard Dew Point Sensor	Not available
• Sensor with Display	Normally open 32 VDC/500 mA
Connector	
• Standard Dew Point Sensor	1 x 5 pin M12, female
• Sensor with Display	2 x 5 pin M12, female

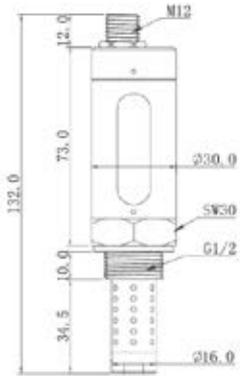
## Power Supply

Power Requirement	10 ... 30 VDC
• Standard Dew Point Sensor	Max 50 mA @ 24 V
• Sensor with Display	16 ... 30 VDC Max 150 mA @ 24 V
Electromagnetic Compatibility	Meets IEC 61326-1

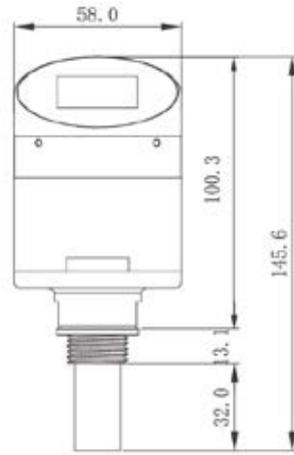
## Other

Process Connection	G1/2" thread
Contact us for UNF process connection	
IP Rating	IP65
Casing	
• Standard Dew Point Sensor	Stainless Steel
• Sensor with Display	Anodised Aluminium
Display	
• Standard Dew Point Sensor	NA
• Sensor with Display	1.5" touch screen
HS Code	9025.80.40

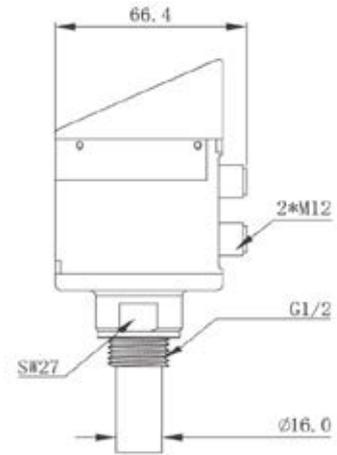
# Dimensions



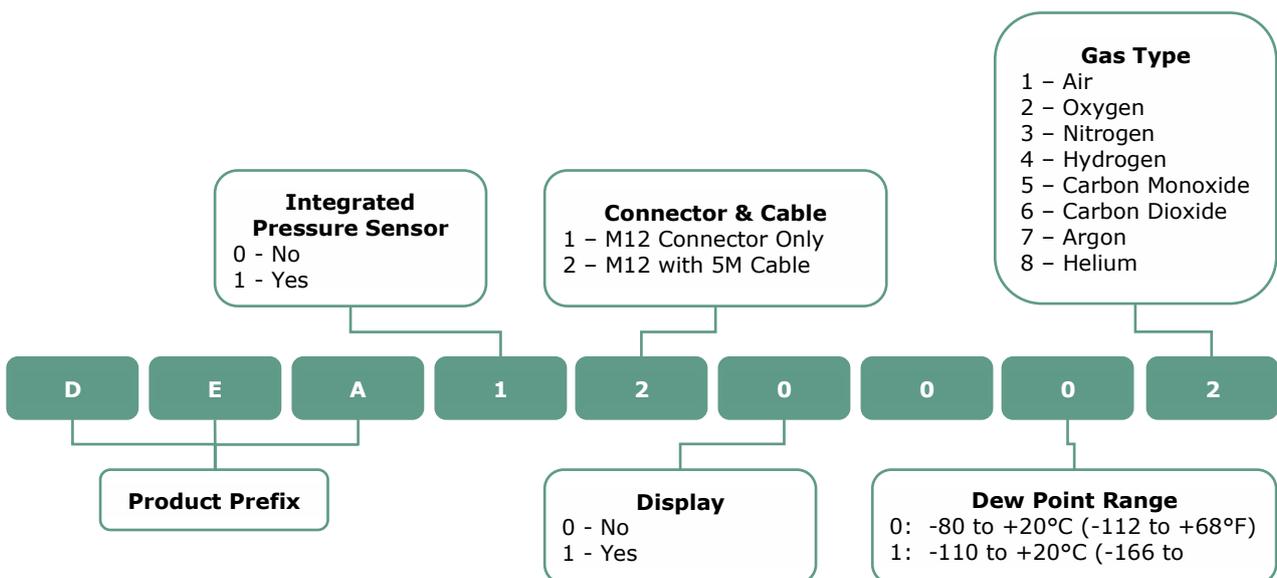
Standard Dew Point Sensor  
(no display)



Dew Point Sensor with Display



# How to Order



## Other Dew Point Sensors

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### W Series Dew Point Sensor

Wall mount dew point monitor. Comes with a large display and alarm (red/green light, siren)

#### Pressure Dew Point Range

-110°C to +20°C (-166°F to +68°F) or

-80°C to +20°C (-112°F to +68°F) or

-60°C to +60°C (-76°F to +140°F)

#### Gas Contamination

Minimal to moderate contamination

#### Outputs

4-20mA and alarm relay

#### Technology

Alumina-Oxide or Polymer sensor (depending on dew point range)

#### Options

Integrated pressure sensor

Power Plug (USA, Euro, UK or Australian plug)



### A Series Dew Point Sensor

Ideal for very low dew points

#### Pressure Dew Point Range

-110°C to +20°C (-166 °F to +68°F) or

-80°C to +20°C (-112°F to +68°F)

#### Gas Contamination

Minimal contamination

#### Outputs

Modbus & 4-20mA

#### Technology

Alumina-Oxide sensor

#### Options

Integrated pressure sensor, in-built display, data cable, outdoor casing (IP67 rating)



### K Series Dew Point Sensor

Robust sensor, suitable for harsh conditions

#### Pressure Dew Point Range

-60°C to +60°C (-76°F to +140°F)

#### Gas Contamination

Moderate levels of contamination

#### Outputs

Modbus & 4-20mA

#### Technology

Polymer sensor

#### Options

Integrated pressure sensor, in-built display, data cable, outdoor casing (IP67 rating)



### Mini Dew Point Sensor

Entry level sensor. Compact design. Can be used in small spaces

#### Pressure Dew Point Range

-60°C to +60°C (-76°F to +140°F)

#### Gas Contamination

Moderate levels of contamination

#### Outputs

Modbus & 4-20mA

#### Technology

Polymer sensor

#### Options

Stainless Steel or Aluminium casing

Note: No integrated pressure or in-built display option available



### H Series Dew Point Meter

Portable / Handheld dew point meter. Ideal for temporary measurement

#### Pressure Dew Point Range

-110°C to +20°C (-166°F to +68°F)

-60°C to +60°C (-76°F to +140°F)

#### Gas Contamination

Minimal to moderate contamination

#### Outputs

None. Stand alone unit

#### Technology

Alumina-Oxide or Polymer sensor (depending on dew point range)

#### Options

None – comes with integrated pressure sensor and measurement chamber



## Strength

- We export to almost 100 countries.
- We have more than 2000 global customers.
- We can provide a total filtration solution.

- Filter-Online & Nordic Filtration offers a wide selection of filtration products for Domestic and Industrial Application.

- You can buy our products on our websites or by contacting us by phone or e-mail. Information about our products as well as brochures and manuals can be found on our websites:

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We distribute many of our products from our stock in Denmark. Some products are shipped from remote stock.



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