

Model ADHT

Dewpoint Transmitter

Features :-

- **4 Wire, 4-20mA, 24V Dewpoint Transmitter**
- **Overall Range -110°C to +20°C Dewpoint**
- **Accuracy $\pm 2^\circ\text{C}$ Dewpoint (or equivalent)**
- **Calibrated In $^\circ\text{C}$, $^\circ\text{F}$ or ppm(v)**
- **Polarity Protected Input**
- **Weatherproof Rating - IP65**
- **Open / Short Circuit Detection**
- **Maximum Cable Length - 1000m**
- **Built-In Temperature Compensation**
- **High Resolution Measurement Circuitry**
- **Calibration Traceable To National & International Standards**



The Alpha Moisture Systems **Model ADHT** is a 4 wire, 4-20 mA, 24V powered dewpoint transmitter. The unit is fully self contained in a robust stainless steel casing with weatherproof protection to IP65, making it ideal for use in heavy industrial environments.

Designed with the operator in mind, **Model ADHT** is extremely easy to use and the digital **dewSMART™** technology ensures accurate and reliable readings with little or no maintenance.

Various ranges are available covering an overall range from -110°C to $+20^\circ\text{C}$ dewpoint. The **Model ADHT** can derive its power from 18-30V DC non-isolated power source and it is configured to give a linear 4-20mA signal for the chosen range.

The 4-20mA output signal can be transmitted up to 1000 meters to either DCS, SCADA system or any other suitable equipment with an input impedance of less than 500Ω (@ 24V).

Model ADHT is supplied ready for use, with calibration certificate traceable to National & International Humidity standards, instruction manual and 2 metres of connecting cable.

Model ADHT - Dewpoint Transmitter

Specifications

Sensor

MODEL

ADHT Aluminium Oxide, Ultra High Capacitance **dewSMART™** sensor with IP65 connector.

RANGE

Overall Range -110°C to +20°C dewpoint or 0.01 to 23000ppm.

ACCURACY

± 2°C Dewpoint (3 Sigma RSS)

OPERATING TEMPERATURE RANGE

-20°C to +60°C

STORAGE TEMPERATURE

-40°C to +80°C

TEMPERATURE COEFFICIENT

Temperature compensated for operating range.

PRESSURE

Maximum sensor pressure 50 barg (optional high pressure version (400 barg) available).

RESPONSE TIME

Wet to Dry : -20°C to -60°C - less than 60 secs
Dry to Wet : -110°C to -20°C - less than 20 secs

SAMPLE FLOW RANGE

Flow independent but ideally 2 to 5 litres/min

CALIBRATION

Supplied calibrated with traceability to NPL. (NPL traceability for

range -76°C to +20°C)

RECOMMENDED RECALIBRATION PERIOD

1 Year

REPLACEMENT SENSOR

Completely interchangeable

Electrical

TRANSMITTER TYPE

4 Wire Type Transmitter

OPERATING VOLTAGE

18V DC to 30V DC. Reverse polarity protected.

OUTPUT SIGNAL

4 to 20mA Linear - Suitable for external equipment with a maximum input impedance of 500 Ω (@ 24V)

MAXIMUM CABLE LENGTH

1000m

CABLE TERMINATIONS

IP65 rated connector at the sensor and other end terminated with bootlace ferrules.

ELECTROMAGNETIC COMPATIBILITY (EMC)

Immunity : Complies with EN 50082-1 : 1992

Emissions : Complies with EN 50081-1 : 1992

WARRANTY

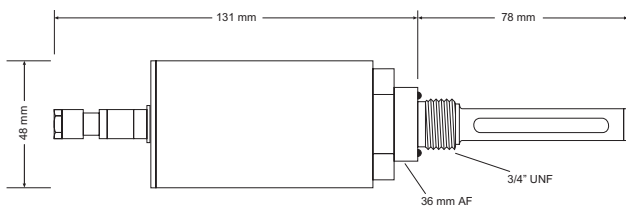
2 years for faulty workmanship and defective parts.

Corrosive Gases

The Sensor should not be exposed to corrosive gases (or corrosive contaminants in the main gas sample) as they would chemically attack the sensor and render it useless. Examples of such gases are mercury (Hg), ammonia (NH₃), chlorine (Cl₂) and wet acid vapours i.e. acid vapours in gas with moisture content greater than 100ppm (v). Strong oxidising agents such as ozone (O₃) should also be prevented from coming into contact with the sensor.

Weights and Dimensions

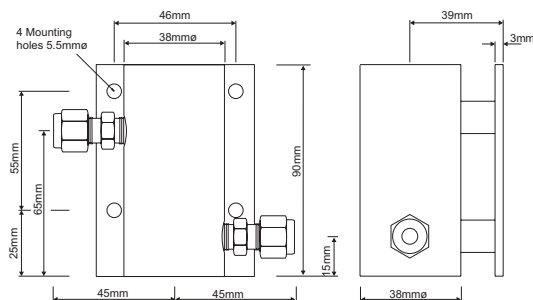
SENSOR



Allow a minimum of 60mm above the sensor body for plug and cable.

Weight : 480gms

SENSOR HOLDER



Weight : 800g
Packed Weight : 1Kg

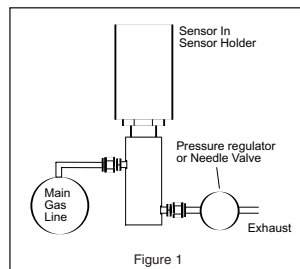


Figure 1

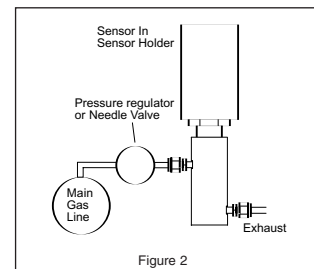


Figure 2

As illustrated above, the sensor may be installed at line pressure (fig.1) or at atmospheric pressure (fig.2). We recommend installation at atmospheric pressure because the sensor is then protected from condensate.

Note: Samples should be taken from the upper surface of the main line to prevent any risk of condensate reaching the sensor. Additional components may be required for specific applications - refer to **Accessories and Sampling System** specification sheets. Use stainless steel, nickel or copper piping wherever possible.

Ordering Information

SENSOR

Model ADHT -

RANGE

PURPLE -110 to +20°C
SILVER -110 to -20°C
BLUE -80 to +20°C
GREY -80 to 0°C
RED -80 to -20°C
YELLOW -60 to 0°C
GOLD -50 to +20°C
GREEN -30 to +20°C

PL
SR
BL
GY
RD
YW
GD
GN

Example : If your requirement is for Dewpoint Transmitter with a range of -80°C to -20°C dewpoint then please order as : **Model ADHT-RD**

SENSOR HOLDER (OPTIONAL)

Model ADSH-

FITTINGS

1/4" OD PIPE 4
6mm OD PIPE 6
1/8" OD PIPE 8

WITH PORT FOR
PRESSURE GAUGE P

Product specification may be subject to change, without prior notice, as part of our ongoing product development programme.