Model DS1200-AMT-Ex Dewpoint Hygrometer has been designed specifically for continuous measurement of moisture in dry process gases in Hazardous Areas.

**Fast Response - Stable - Reliable - Accurate - Easy to Install**

The Model DS1200-AMT-Ex incorporates a 3 wire 4-20mA powered transmitter. With excellent sensitivity, repeatability and response speed, this Ex Hygrometer has proven to be the popular choice for hazardous area dewpoint measurements.

**FEATURES**

- User Friendly & Advanced Functionality
- Powerful up to date software
- DISPLAY in °C Dewpoint & °F Dewpoint, ppm(v), ppb(v), g/m³ or lbs/MMSCF
- 22V – 253V AC or DC Operation
- Linear 4-20mA Retransmission Signal
- 2 Independent, Fully Programmable Alarm Relays
- “AUTOCAL” CALIBRATION FEATURE
- Fast Response
- Long Term Stability
- IP66 / NEMA4 Weatherproof Protection
- Calibration to National & International Standards

Model DS1200-AMT-Ex is ATEX certified and provides an Intrinsically Safe Dewpoint Transmitter for hazardous area use when installed with the appropriate isolator. See Illustration also ordering information.

The transmitter also incorporates an Automatic Calibration (AUTOCAL) feature, which allows the user to carry out a field calibration / span check. The AUTOCAL feature is operated by two small button switches built within the transmitter enclosure. To avoid tamper, the switches are locked in normal use and can only be activated by following a special routine.

The integral RISC microprocessor circuitry of the Model DS1200-AMT-Ex transmitter allows high resolution with advanced self diagnostics for fault conditions. It also enables periodic re-calibration of the moisture sensor, storing calibration data within the fully self contained unit.

The mechanics of the Model DS1200-AMT-Ex transmitter have been designed to cope with extreme environmental conditions. The rugged stainless steel construction offers protection to IP66 (NEMA4X), with the transmitter electrical connections made via a secure industrial connector.

Model DS1200-AMT-Ex transmitter can withstand up to 35,000 kPa (350bar) maximum pressure and by employing a low resistance cable, the transmitter can be located at significant distances, in excess of 1000 metres, from the control room.

The Model DS1200-AMT-Ex transmitter is supplied with a Certificate of Calibration, an instruction manual and standard 2m connecting cable.
Specifications

MODEL AMT-Ex Dewpoint Transmitter only

TRANSMITTER TYPE: 3 Wire, 4-20mA Loop Powered Transmitter

OUTPUT SIGNAL: 4 to 20mA Linear


SENSING ELEMENT: Ultra High Capacitance - Aluminium Oxide Type

RANGES: See How to Order Step 1 Below

INTRINSIC SAFETY CERTIFICATION STANDARDS:
EN 60079-0     EN 60079-11

AUTOCAL: operated via two button switches on the Transmitter body. Locked in normal operating mode to avoid tamper.

FACTORY CALIBRATION: Supplied with Certificate of Calibration traceable to NPL / NIST

ACCURACY:
- Better than ±0.3°C dewpoint
- ±2°C dewpoint (NPL/NIST) for range -90°C to +20°C

TEMPERATURE COEFFICIENT: Temperature compensated for operating range.

REPEATABILITY: Better than ±0.3°C dewpoint

OPERATING TEMPERATURE: -20°C to +60°C

STORAGE TEMPERATURE: -20°C to +70°C

OPERATING PRESSURE: From 1kPa (0.01 barA) to Maximum 35,000kPa (350 barA)

OPERATING HUMIDITY (External): Maximum - 95% RH


DISPLAY:

- 4 digit, 14 segment LED indicator. Red characters
- Factory set to display in °C, °F, ppm(v), ppb(v), g/m³ or lbs/MMSCF

PROGRAMMABLE SIGNAL RANGES:
- See How to Order Step 1 Below

MECHANICAL CONNECTION: 3/4" UNF (16tpi) with integral Viton “O” ring seal.

MECHANICAL WARRANTY: 24 months in case of faulty workmanship and defective parts.

CALIBRATION WARRANTY: 12 months.

MODEL DS1200 Display only

DS1200 DISPLAY INDICATOR SPECIFICATIONS

ENCLOSED: 1/8 DIN panel mounting ABS case

DISPLAY: 4 digit, 14 segment LED indicator. Red characters

- 13.8mm high. Factory set to display in °C, °F, ppm(v), ppb(v), g/m³ or lbs/MMSCF
- Supplied with Certificate of Calibration

RANGE:
- Temperature compensated for
- 0°C to +20 0C dp
- -80°C to +60°C dewpoint
- -80°C to -20°C (NPL/NIST) for range -90°C to +20°C
- -110°C to -20°C dewpoint
- -120°C to +20°C dewpoint

ERROR DETECTION:
- Voltage Test / Operation - 2.3kVac / 250Vdc
- Universal 22Vac - 253Vac 50/60Hz & 20Vdc - 500VA
- 2 independent fully programmable switched contacts. Rated 2A @ 250Vac / 1A @ 24Vac.
- AL1 & AL2 LED’s on front panel indicating status of each alarm

WEATHERPROOF CLASSIFICATION:
- IP66 / NEMA4X when Connector mated to Transmitter.

For more details on any of our Ex products please visit our new website www.amsystems.co.uk

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How to Order - Step 3 of 4
Select a transmitter holder below
Comes complete with mounting plate.
2 grades available: 303 or 316 Stainless Steel

**ADSH-AMT 303 +**
**ADSH-AMT 316 +**

Pipe Fittings

[X] [X]

X = Choose INLET Pipe Fitting
0 = None 1/8" NPT Port
4 = 1/4" - Pipe OD
8 = 1/8" - Pipe OD
6 = 6mm - Pipe OD

X = Choose OUTLET Pipe Fitting
0 = None 1/8" NPT Port
4 = 1/4" - Pipe OD
8 = 1/8" - Pipe OD
6 = 6mm - Pipe OD

Order Example:- For Transmitter Holder 303 grade with 2 x 1/4 fittings Order ADSH-AMT 303 - 4 - 4

How to Order - Step 4 of 4
Order an Isolator for the safe area
Part No. PR5104BB2A - Single Channel
Part No. PR5104BB2B - Dual Channel

See Page 4 for wiring diagrams

**RELATED PRODUCTS**

**Basic Sample System**
**Made to Order Sample Systems**
**Large Range of Accessories**

**Model SS-B**
Built for multiple applications
Ideal Gases
Natural Gas
Aggressive Gases

High quality components that are built to last. See our website for more.

**Dimensions**

**Model AMT-Ex Dewpoint Transmitter**

```
0 27mm (1.065")
0 113.5mm (4.47")
0 76mm (3.0")
```

Pipe Fittings

© Alpha Moisture Systems Ltd.

**Model ADSH-AMT-Ex Transmitter Holder**
Flow Through Sample Cell

```
46mm
38mm
```

4 Mounting holes 5.5mm

Note: The Assembly is shown with 1/4" OD tube fittings. The dimensions across the tube fittings will vary for all other size fittings.

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Model AMT-Ex Dewpoint Transmitter Using PR5104BB2A Single Isolator and Model DS1200 Display

HAZARDOUS AREA

Ex ia IIC T4    Ex iaD 20 T135ºC (–20ºC ≤ Ta ≤ +60ºC)
ATEX II 1GD

SAFE AREA

4/20mA Output Connections

DS1200 Display Unit

Input Connections

Alarm Relay Connections

Power Supply Connections

NOTE

Terminals for mA output, alarm relays and power supply are identified on the instrument label.

Model AMT-Ex Dewpoint Transmitter Using PR5104BB2B Dual Isolator and Model DS1200 Display

HAZARDOUS AREA

Ex ia IIC T4    Ex iaD 20 T135ºC (–20ºC ≤ Ta ≤ +60ºC)
ATEX II 1GD

SAFE AREA

4/20mA Output Connections

DS1200 Display Unit

Input Connections

Alarm Relay Connections

Power Supply Connections

NOTE

Instrument terminals for mA output, alarm relays and power supply are identified on the instrument label.

Power Supply

20 to 250VDC / 300-330mA
24 to 240VAC / 50-60Hz / 6.5W
Corrosive Gases: The Sensor should not be exposed to corrosive gases (or corrosive contaminants in the gas sample) as these can chemically attack the sensor, impairing calibration accuracy and/or damaging it beyond economic repair. Examples of such gases are mercury (Hg), ammonia (NH₃), chlorine (Cl₂) etc. Strong oxidising agents such as ozone (O₃) should also be prevented from coming into contact with the sensor.