

Model DS1200-AMT Dewpoint Transmitter

Single Channel. 4-20mA.

Ranges available between -184°F to +68°F (-120°C to +20°C) dewpoint

The **Model DS1200-AMT** is a single channel user friendly solution for continuous on-line dewpoint measurement in dry process gases and dry compressed air, offering powerful functionality and simple interface through advanced digital technology.

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

The panel mounted ½ DIN dewpoint meter, providing panel protection to NEMA4X (IP66), combines with the Model AMT range of ultra high capacitance sensors for accurate trace moisture measurement.



FEATURES

- User Friendly & Advanced Functionality
- Factory set in either °F or °C 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 INCLUDED
- Fast Response
- Long Term Stability
- NEMA4 (IP66) Weatherproof Protection
- Calibration traceable to National & International Standards

Combination of advanced digital technology of the display electronics and the transmitter, makes this the system of choice for a wide range of applications where precise indication, control and monitoring is critical.

Model DS1200-AMT system can be factory configured to read in °F dewpoint, °C dewpoint, ppm(v), ppb(v), g/m³ or lbs/MMSCF. The measured value is displayed on a large 4 digit, 0.150” (13.8mm) high, fourteen segment LED display. **Model DS1200-AMT Dewpoint Hygrometer** is fully configured to the customer's specifications.

The instrument offers two fully programmable alarm relays, which can be independently set across the full operating range. An optically isolated analogue signal, linear with the measured unit is also available (to interface with any external device).

Model DS1200-AMT can be supplied with any one of a range of dewpoint transmitters, which have all been specially manufactured to provide long term stability, so ensuring a long and trouble free service life.

The long lasting sensing element offers excellent sensitivity, repeatability and response speed - especially on dry down. Integrated electronics in each transmitter allow calibration data to be stored within its memory, making transmitters completely field interchangeable.

Each transmitter is calibrated to provide overall system accuracy of better than ±3.6°F (±2°C) dewpoint and supplied with a certificate of calibration traceable to international humidity standards NIST & NPL.

Model DS1200-AMT also incorporates the invaluable “AUTOCAL” feature for easy field verification of the system response, without recourse to any additional equipment. Accidental or unauthorised operation is prevented by a simple initiation routine.

The system allows the display unit to be sited in excess of 3300 feet (1000m) from the transmitter, connected by a simple twisted pair cable.

Specifications

MODEL DS1200-AMT Dewpoint Hygrometer

DS1200 DISPLAY INDICATOR SPECIFICATIONS

ENCLOSURE: 1/8 DIN panel mounting ABS case
DISPLAY: 4 digit, 14 segment LED indicator. Red characters 0.150" (13.8mm) high. Factory set to display in °F, °C, ppm(v), ppb(v), g/m³ or lbs/MMSCF
SUPPLY VOLTAGE: Universal 22Vac - 253Vac 50/60Hz & 20Vdc - 300Vdc 150mA to 15mA
POWER CONSUMPTION: 3.5W Maximum
OUTPUT SIGNAL: Linear 4 to 20mA, fully isolated. Maximum load 800Ω / 16Vdc
ISOLATION: Voltage Test / Operation - 2.3kVac / 250Vac
ALARM RELAYS: 2 independent fully programmable switched contacts. Rated 2A @ 250Vac / 1A @ 24Vdc.
ANNUNCIATORS: AL1 & AL2 LED's on front panel indicating status of each alarm
ELECTROMAGNETIC COMPATIBILITY (EMC):
Emission & Immunity: Complies with EN 61326
LVD 73/23/EEC: Complies with EN 61010-1
UL, STANDARD OF SAFETY: Certified to UL508
WEATHERPROOF CLASSIFICATION: Front panel only - NEMA4X (IP66).
WEIGHT: 230 grams

TRANSMITTER & GENERAL SPECIFICATIONS

SENSOR TYPE: Model AMT Dewpoint Transmitter
SENSING ELEMENT: Ultra High Capacitance - Aluminium Oxide Type
RANGES: See Step 1 below.
AUTOCAL: Field calibration / Span check facility. Activated and operated via two button switches on the Transmitter body. Locked in normal operating mode to avoid tamper.

TRANSMITTER ENCLOSURE: 316 Stainless steel body with size C, DIN EN 175301 connector.
SENSOR PROTECTION: 316 Sintered stainless steel filter - 50 micron
OPERATING PRESSURE: From 0.145PSIA (0.01 barA) to Maximum 5,076PSIA (350barA)
SAMPLE FLOW RATE: Flow independent but ideally 2 to 5 standard litres per minute. Max: 25 litres/min
WEATHERPROOF CLASSIFICATION: NEMA4X (IP66) when connector mated to transmitter.
MECHANICAL CONNECTION: 3/4" UNF (16tpi) with integral Viton "O" ring seal.
WEIGHT: Transmitter and connector - 175grams
CABLE: Supplied with 6.6ft (2 meters) length standard two core cable. Nominal diameter 0.13 inches (3.4mm), 92ohms/km at 68°F (20°C)
TEMPERATURE COEFFICIENT: Transmitter temperature compensated for operating range.
REPEATABILITY: Better than ±0.54°F (±0.3°C) dewpoint
FACTORY CALIBRATION: Supplied with Certificate of Calibration traceable to NIST / NPL
ACCURACY: Better than ±3.6°F (±2°C) dewpoint (NIST / NPL traceable for range -130°F to +68°F / -90°C to +20°C)
OPERATING TEMPERATURE: -4°F to +140°F (-20°C to +60°C)
STORAGE TEMPERATURE: -4°F to +158°F (-20°C to +70°C)
OPERATING HUMIDITY (External): Maximum - 95% RH Non-condensing
WARM UP TIME: 10 seconds
MECHANICAL WARRANTY: 24 months in case of faulty workmanship and defective parts.
CALIBRATION WARRANTY: 12 months (not valid if transmitter is subject to corrosives or mis-use)

How to Order - Step 1 of 3

Select from a standard range below

Range Code	Model AMT + [xxxx]	Resolution
RDF:	-112°F to -4°F (-80°C to -20°C) dewpoint	0.1°F / °C
SRF:	-166°F to -4°F (-110°C to -20°C) dewpoint	
GYF:	-112°F to +32°F (-80°C to 0°C) dewpoint	
PLF:	-148°F to +32°F (-100°C to 0°C) dewpoint	
BLF:	-112°F to 68°F (-80°C to +20°C) dewpoint	
SDF:	-148°F to +68°F (-100°C to +20°C) dewpoint	
SSRF:	-184°F to +68°F (-120°C to +20°C) dewpoint	
LDF:	-184°F to +68°F (-120°C to +20°C) dewpoint	
SHDF:	-85°F to +32°F (-65°C to 0°C) dewpoint	
HDF:	-85°F to +68°F (-65°C to +20°C) dewpoint	
RDC:	-80°C to -20°C (-112°F to -4°F) dewpoint	
SRC:	-110°C to -20°C (-166°F to -4°F) dewpoint	
GYC:	-80°C to 0°C (-112°F to 32°F) dewpoint	
PLC:	-100°C to 0°C (-148°F to 32°F) dewpoint	
BLC:	-80°C to +20°C (-112°F to 68°F) dewpoint	
SDC:	-100°C to +20°C (-148°F to 68°F) dewpoint	
SSRC:	-120°C to -20°C (-184°F to -4°F) dewpoint	
LDC:	-120°C to +20°C (-184°F to 68°F) dewpoint	
SHDC:	-65°C to 0°C (-85°F to 32°F) dewpoint	
HDC:	-65°C to +20°C (-85°F to 68°F) dewpoint	
GYP:	1 to 6000 ppm(v) resolution = 2ppm	0.01 lbs/MMSCF
SP:	1 to 1000 ppm(v) resolution = 1ppm	
MP:	0.1 to 100.0 ppm(v) resolution = 0.1ppm	
LP:	0.01 to 10.00 ppm(v) resolution = 0.01ppm	
PB:	1 to 1000 ppb(v) resolution = 1ppb	
HG:	0.01 to 10.00 g/m ³ resolution = 0.01g/m ³	
LG:	0.001 to 1.000 g/m ³ resolution = 0.001g/m ³	
LLB:	0.1 to 10.0 lbs/MMSCF	
SLB:	0.1 to 25.0 lbs/MMSCF	
HLB:	0.1 to 50.0 lbs/MMSCF	
VHLB:	0.1 to 300.0 lbs/MMSCF	

NOTE: ppm, ppb, g/m³ & lbs/MMSCF ranges are stated at atmospheric pressure. Model AMT Transmitter can be configured to provide corresponding ranges for operation at other constant pressure. This must be stated at time of order.

Order Example:- Dewpoint Transmitter Model AMT-GYF = -112°F to 32°F dewpoint range.

How to Order - Step 2 of 3

Select a longer cable below

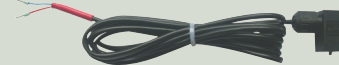
CAB069-AMT + [XX]

Your AMT Transmitter comes complete with 2 metres (6.6ft) of connecting cable as standard. To order a longer length in metres, add number after this part number.

Example: CAB069-AMT-10 for 10 metres (32.8ft). Non-Standard off the shelf cables are also available in:

3 = (9.8ft) 12 = (39.4ft)
 4 = (13.1ft) 15 = (49.2ft)
 5 = (16.4ft) 25 = (82.0ft)
 10 = (32.8ft) For longer lengths please call.

AMT Standard Cable 2 Meters Part No. CAB069-AMT



How to Order - Step 3 of 3

Select a transmitter holder below

Comes complete with mounting plate.
 2 grades available: 303 or 316 Stainless Steel

ADSH-AMT 303 + [X][X] ADSH-AMT 316 + [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

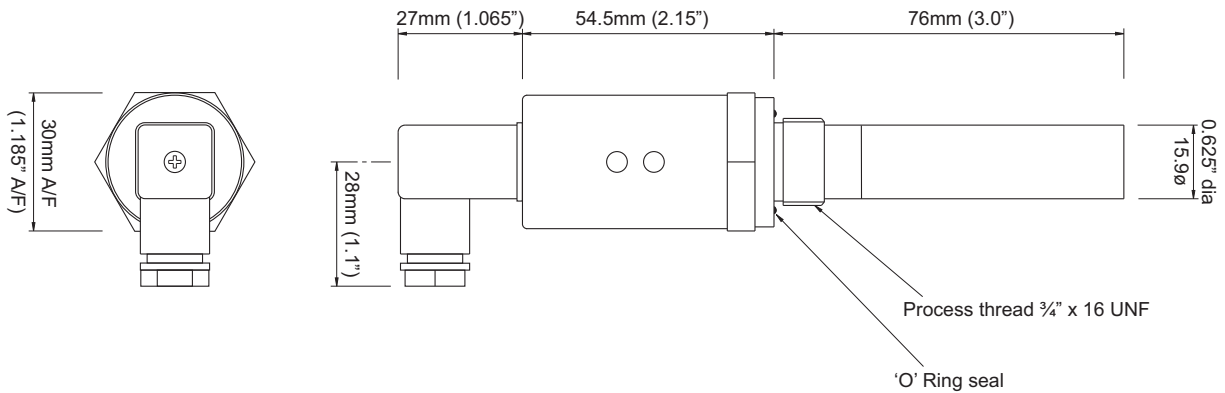
Order Example:- For Transmitter Holder 303 grade with 2 x 1/4 fittings Order ADSH-AMT 303 - 4 - 4



Dimensions

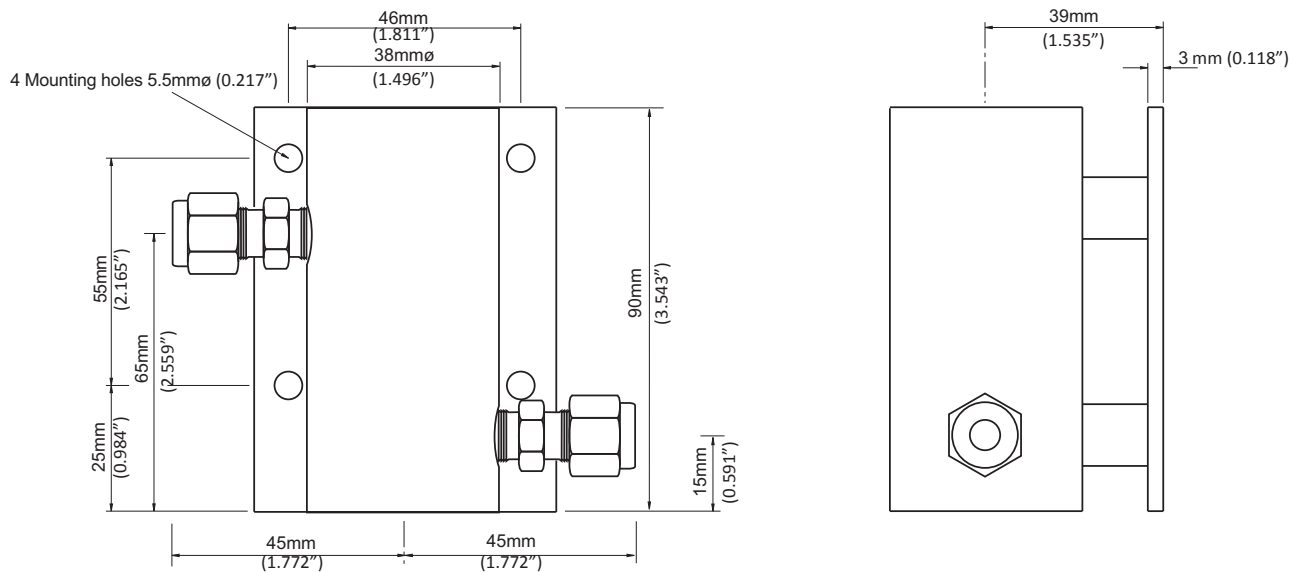
Model AMT Dewpoint Transmitter

4-20mA Loop Powered Transmitter



Model ADSH-AMT Transmitter Holder

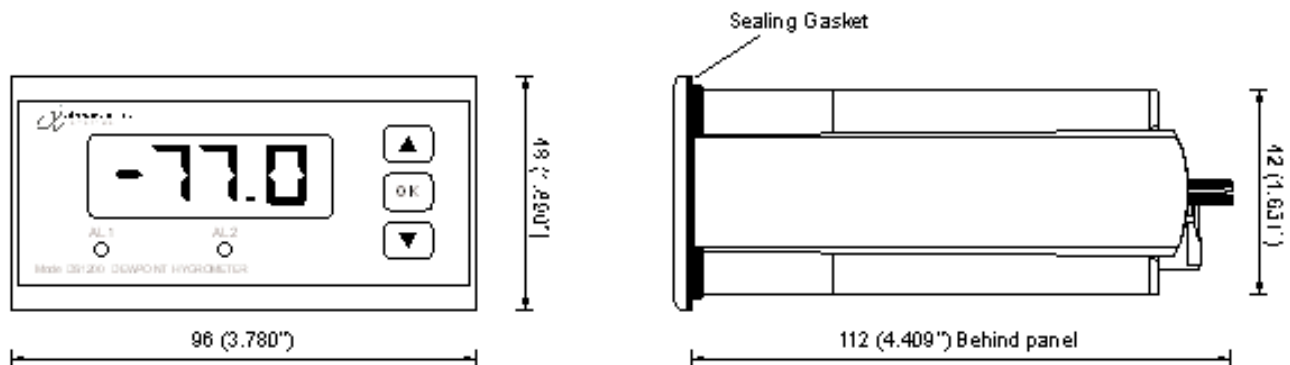
Flow Through Sample Cell



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

Model DS1200 Display

Stable, Accurate and Reliable Alarmed Monitor



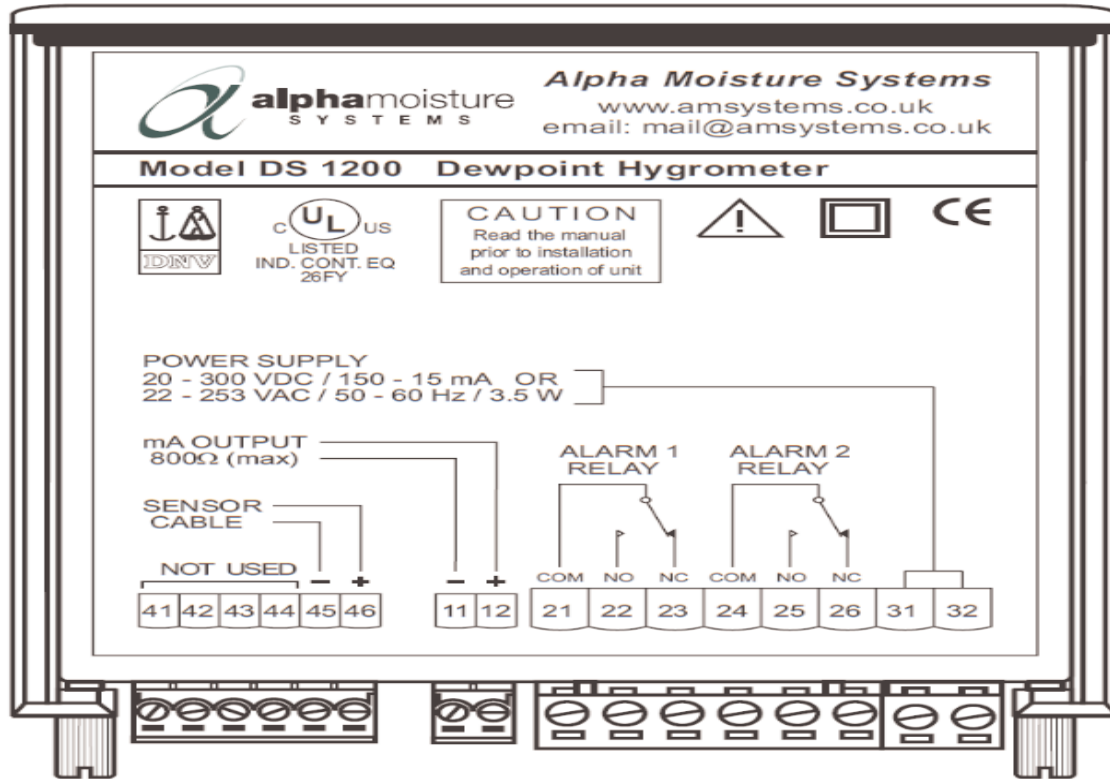
Panel cut-out: 44.5 x 91.5 (1.752" x 3.602")

Maximum panel thickness: 10mm (0.394")

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

Application Wiring Diagrams

Model DS1200 Display Connection Details



Note: The Model AMT is not suitable for Ammonia (NH_3), Chlorine (Cl_2) - (See Model EDM data sheets) and Hydrogen Chloride (HCl). SF_6 can be monitored with no effect to the sensor element. Sulphur Dioxide (SO_2) can be monitored if the moisture content is low, less than 100ppm(v).

Distributor Information

Distributed in USA / Canada by:



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North American Distributor

Instrumentation Solutions For The Process Industry

Northvale, NJ 07647 DeltaInstrument.com Phone (201) 768-7200

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