

DS1500-Exd Dewpoint Hygrometer

For Ex Hazardous Area Zones.



Enclosure: IP66 Rating.

Features and Benefits

- GUBH Flameproof Enclosure Ex II 2 G D
- Designed for installation in Ex Hazardous area Zones. Flameproof to ATEX and IECEx certification for use in potentially explosive atmospheres
- Offered with the DS1500 Advanced Display. Used with the AMT-Ex Intrinsically Safe Dewpoint Transmitter (**Ordered Separately**)
- Incorporates Signal Isolation within the Exd enclosure
- Heat-resistant toughened glass observation window

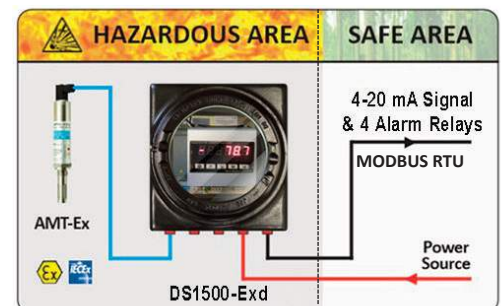
DS1500-Exd is a single channel, online hygrometer with built-in isolator designed to accurately measure trace moisture (dewpoint) in process gases utilising a range of dedicated, ultra high capacitance, field mountable AMT-Ex Dewpoint Transmitters.

The **DS1500-Exd** Dewpoint Hygrometer is located in the Hazardous Zone. The GUBH Flameproof Enclosure Ex II 2 G D is flame-proof to ATEX and IECEx Certification for use in potentially explosive atmospheres.

DS1500-Exd is connected to the Alpha Moisture Systems' AMT-Ex Dewpoint Transmitter. The AMT-Ex system incorporates an "Automatic Calibration (AutoCal)" function and encompasses measurement needs from -120 °C to +20 °C (-184 °F to +68 °F) dewpoint. The AMT-Ex Transmitter is highly sensitive and has been designed and conditioned for long term stability and accuracy.

DS1500-Exd contains four independent, fully user programmable alarm contacts accessed by means of five Hot Keys on the front panel of the display to provide all the versatility required for any application.

A digital communication channel is provided via a RS485 (MODBUS RTU Communication Protocol) serial connection for remote interrogation of measured values and status of alarms and instrument.



Specifications

DISPLAY - DS1500

Type:	Red 7-segment 6-digit primary display
Annunciators:	Alarms 1 to 4 status LEDs.
Power:	100 to 240 Vac/dc +/-10 %, 50/60 Hz

RELAY OUTPUT 1 AND 2

Contact Type:	Single pole, changeover (SPCO)
Rating:	10A resistive, 120/240V, 50/60Hz
Lifetime:	>100,000 operations at rated voltage/current
Isolation:	1000 Vrms

LINEAR (RE-TRANSMITTED) OUTPUT

Ranges Available:	0-20mA or 4-20mA linear in units selected
Accuracy:	±0.5% max of display value
Load Impedance:	500Ω max

SERIAL COMMUNICATIONS

Protocol:	MODBUS (RTU)
Data Format:	Number of databits: 8, without parity, and one stop bit.
Physical Layer:	RS485.

Specifications Continued

Maximum No. of addresses:	247.
Baud Rate:	Selectable – 1200, 2400, 4800, 9600, 19200, 38400 or 57600 bps

ENVIRONMENTAL

Approvals:	CE
EMC:	Certified to BS EN61326-1
Safety:	Complies with BS EN 61010-1
Instrument Front Panel Seal:	To IP54

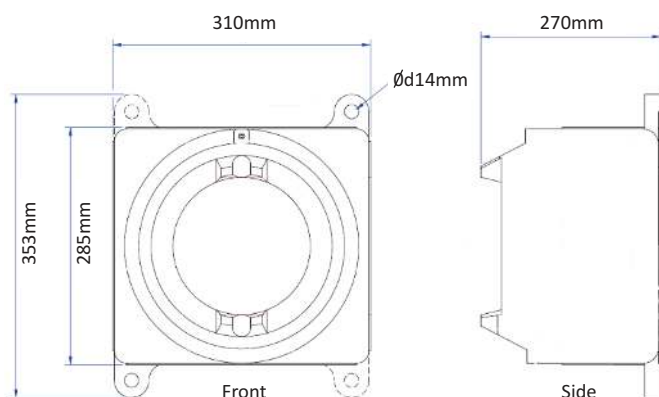
PHYSICAL (CONTROL UNIT)

Reference Conditions	
Supply Voltage:	90 – 250V, 50/60Hz or 24Vdc
Power Consumption:	AC=10VA/DC=4VA max
Operating Conditions	
Temperature:	5 °C to 50 °C
Relative Humidity:	0-90% non-condensing
Weight (Exd Only):	18.65 kg (41.15 lbs)

ENCLOSURE MATERIALS AND FINISH

	GUBH Flameproof II 2 G D
Body and Cover:	Copper free aluminium alloy LM25. (EN AC-42000), (BS EN 1706:1998) with less than 0.2% copper content.
Mounting plate:	Mild steel zinc plated (Passivated).
Window:	Heat resistant toughened glass.
Finish:	Chromate primed and polyester powder coated.
Earthing:	Enclosure is supplied with a 6mm stainless steel (18/8) internal and external earth stud as standard.
Cable Entries ports and Thread Sizes:	Available ISO metric M20. For other sizes please specify.

Dimensions



How to order

Order: **DS1500-Exd**

See also Additional Information below

Additional Information



Note: The intrinsically safe dewpoint transmitter connected to the DS1500-Exd is an AMT-Ex - pictured here. These are ordered separately. Please refer to the "How to Order" section on the AMT-Ex Datasheet, document reference number 1722.

Further details and datasheet download can be obtained from our website:
<https://amsystems.co.uk/products-and-services/online-dewpoint-transmitters-and-hygrometers/amt-ex-dewpoint-transmitter-for-hazardous-area/>

For more information on Hazardous and Zoned Area applications, please contact us.

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.

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Product specification may be subject to change.

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