



MOISTURE METERS

AcuTrak Inline Hygrometer

Shaw Moisture Meters AcuTrak is a single channel inline hygrometer designed to measure trace moisture in process gases and dry compressed air.

Featuring a 4-20 mA analogue output signal and RS485 digital communications for integration with the SHAW AcuDew dewpoint transmitter. This pairing maintains signal integrity from sample point to control system.

AcuTrak contains default settings however, there are various configuration parameters which can be altered to suit your needs: pressure - Pascal, psi and bar, moisture - °C dewpoint, °F dewpoint. Engineering units can be configured to display °C dewpoint, °F dewpoint, ppm(V), ppm(w), ppb(v), g/m³ or lb/MMSCF on the easy to read five character LED display.

For ppm(w) calculations, the AcuTrak allows selection of the gas type used at the sensor. Choose from the various gas types or enter a known molar mass using the keys on the front panel. The Natural Gas correlation can be switched off or on if required.

The AcuTrak hygrometer accepts a universal supply input of 90-250 V AC (a 24 V DC option is also available). The linear 4-20 mA signal retransmission is adjustable and can be configured across the range of the dewpoint transmitter. Various dewpoint ranges are available covering an overall range from -120 °C to +20 °C (-184 °F to +68 °F) dewpoint.

The hygrometer incorporates two independent, fully programmable alarm relays with LED indicators, which can be set across the full operating range of the connected dewpoint transmitter. For user friendly functionality, set points can be viewed and adjusted from the front four button keypad and hot key functions. The RS485 serial connection provides a digital communication channel for remote interrogation, allowing the user to set the address and baud rate used in communicating with a PC.

The panel mount enclosure provides panel protection to IP65 and the hygrometer can be sited in excess of 1,000 metres from the connected dewpoint transmitter. The AcuTrak inline hygrometer is easy to program and requires little or no maintenance.

When precise measurement and control are required, the AcuTrak combined with the SHAW AcuDew dewpoint transmitter, is the instrument of choice. Supplied ready to use with instruction manual.



Features

- User selectable digital indication in °C, °F, ppm(V), ppm(w), ppb(v), g/m³ or lb/MMSCF
- Universal input: 90-250 V AC (24 V DC option available)
- Linear isolated 4-20 mA signal retransmission, adjustable span
- Two independent alarm relays with LED indicators, fully programmable from the front panel
- Onboard pressure dewpoint calculator, including data for Natural Gas
- Molecular mass preloaded for ppm(w)
- RS485 digital communications
- Large, clear, digital display with back light
- IP65 rated front panel
- Fully compatible with all SHAW dewpoint transmitters and ranges
- Various ranges: overall range -120 °C to +20 °C (-184 °F to +68 °F) dewpoint
- Accuracy ±2 °C (±3.6 °F) dewpoint (when paired with the AcuDew dewpoint transmitter)



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Specifications

Ordering Information

AcuTrak Hygrometer

ELECTRICAL

- **Electromagnetic Compatibility (EMC):**
Immunity: Complies with EN 61326-1:2013
Emissions: Complies with EN 61326-1:2013
- **Warm Up Time:** 5 seconds
- **Fault Conditions:** Short circuit/over range: display reads "Short" and output drives to 24.0 mA
- **Output Signal:** 4-20 mA or 0-20 mA
- **Operating Voltage:** 90-250 V AC 50-0 Hz or 24 V DC
- **Display;** 5 character LED
- **Alarm Relays:** Two single pole changeover contacts (NO/C/NC), rated at 10 A at 240 V AC. Lifetime: >100,000 operations at rated voltage/current. Isolation: 1000 Vrms. Alarm trip at set point with 0.1 °C (or equivalent) hysteresis to eliminate relay chatter
- **Annunciators:** AL1 and AL2 status LEDs
- **Load Impedance;** 500 Ω max
- **Serial Communications:**
Type: serial asynchronous, UART
Physical layer: RS485
Baud rate: 1200, 2400, 4800 or 9600
- **Power Consumption:** AC=10 VA/DC=4 VA max
- **Approvals:**

MECHANICAL

- **Operating Pressure:**
From 1kPa (0.01 barA) to maximum 35,000 kPa (350 barA)
- **Operating Humidity (External):**
Maximum - 95% RH non-condensing
- **Enclosure:** DIN style ABS case
- **Mounting:** Panel mount, press fit fixing
- **Weatherproof Classification:**
Front panel only - IP65 (NEMA 4)
- **Mechanical Warranty:**
24 months in case of faulty workmanship and defective parts
- **Operating Temperature:**
-20 °C to +60 °C
- **Dimensions (H x W x D):**
72 x 144 x 116 mm
- **Cut Out Dimensions (H x W):**
68.0 x 138.0 mm (DIN 43700)
- **Operating Temperature:**
-20 °C to +60 °C
- **Weight:** 0.47 kg (16.6 ounce)
- **Compatibility:** AcuDew Dewpoint Transmitter
Please refer to the AcuDew Specification Sheet for available dewpoint ranges

To Order an AcuTrak Hygrometer

AcuTrak - (R) Range - (U) Units - (V) Power

R - Choose the required range of the AcuDew dewpoint transmitter (please refer to the AcuDew Specification Sheet).

U - Choose the required units

- C:** °C dewpoint **F:** °F dewpoint
P: ppm(v) **L:** lb/MMSCF
b: ppb(v) **g:** g/m³

V - Choose the required power supply:

- AC:** 90-250 V AC 50/60 Hz
DC: 24 V DC

Example:

To order an AcuTrak with a measuring range of -80 to 0 °C dewpoint (grey sensor), specifying °C as units and selected power supply, please order as **AcuTrak-G-C-AC**

To order a Sensor Holder for use with the AcuDew

AcuDew - SEH (Sensor Holder) - F (Fitting Size)

F - Choose fitting size for sensor holder:

- 4:** ¼" **8:** ½" **6:** 6 mm

Example:

To order a Sensor Holder with ¼" fitting please order as **AcuDew-SEH-4**

Related Products

AcuDew Dewpoint Transmitter

The AcuDew is a compact, 2 wire, 4 - 20 mA, loop powered transmitter, used for the continuous measurement of trace moisture in industrial process gases or dry compressed air.

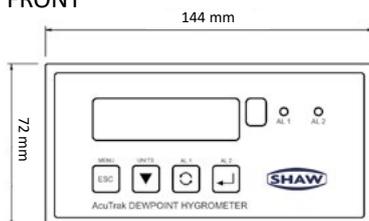
Utilising the ultra high capacitance SHAW moisture sensor technology, the AcuDew is a robust and reliable dewpoint transmitter. Offering excellent sensitivity, repeatability and speed of response. The dewpoint transmitter incorporates the unique AutoCal feature from SHAW and the 4-20 mA output is factory configurable in °C dewpoint, °F dewpoint, ppm(V), ppb(v), g/m³ and lb/MMSCF.

Easy to install and operate, the AcuDew requires little or no maintenance and is supplied ready to use, with a Certificate of Calibration traceable to National and International Humidity Standards, an instruction manual, screwdriver and two metres of cable.

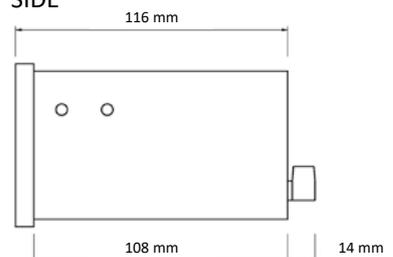


General Assembly Diagram

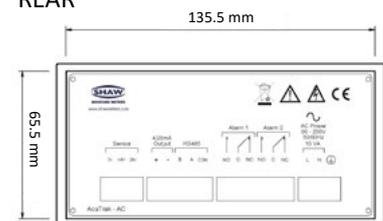
FRONT



SIDE



REAR



AcuTrak_Iss 1.2