



MOISTURE METERS

Superdew 3 WP Dewpoint Hygrometer

The Superdew 3 WP from Shaw Moisture Meters is a robust, single-channel inline dewpoint hygrometer engineered to deliver accurate dewpoint measurements in process gases and compressed air. Housed in a wall mount, weatherproof enclosure with IP65 (NEMA 4X) rated panel protection. The Superdew 3 WP is built for reliable performance, even in demanding environments.

At its core, the Superdew 3 WP combines the proven precision and repeatability of the SHAW dewpoint sensor with advanced digital electronics, making it the preferred choice for applications that demand accurate trace moisture measurement and monitoring.

Every sensor is individually calibrated, ensuring an overall system accuracy better than ± 2 °C (± 3.6 °F) dewpoint. Each unit is supplied with a certificate of calibration traceable to National & International Humidity Standards at NPL, providing complete confidence in your measurements.

The Superdew 3 WP is fully user configurable, allowing readings to be displayed in °C, °F, ppm(V) or lb/MMSCF on a bright, five-character LED display. It features two fully programmable alarm relays, each independently adjustable across the sensor's full operating range. Set points can be conveniently viewed and adjusted using the intuitive front panel keypad.

Standard features include an isolated 4–20 mA analogue output, with a span customisable to the sensor's range. For added flexibility, the system allows the Superdew 3 WP instrument to be installed over 1,000 metres from the dewpoint sensor, enabling convenient placement in your facility.

Supplied as a complete package, the Superdew 3 WP dewpoint hygrometer includes the dewpoint hygrometer, wall mount brackets, SHAW dewpoint sensor, sensor holder and two metres of sensor cable and configured to your exact requirements.



Features


- Wall mount enclosure
- Weatherproof rating - IP65 (NEMA 4X)
- User selectable digital indication in °C, °F, ppm(V) or lb/MMSCF
- Accuracy ± 2 °C (± 3.6 °F) dewpoint
- Various ranges: overall range -100 °C to +20 °C (-148 °F to +68 °F) dewpoint
- Universal input: 90 V to 250 V AC (24 V DC option available)
- AutoCal (automatic calibration) feature
- Large clear digital display with back light
- Linear isolated 4-20 mA retransmission signal, adjustable span
- Two alarms (view/adjust setpoints from front panel)
- Fully interchangeable SHAW dewpoint sensors and ranges
- Two years guarantee on dewpoint hygrometer and dewpoint sensor
- User friendly and advanced functionality
- Supplied with a Certificate of Calibration traceable to National & International Humidity Standards at NPL



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Specifications

Superdew 3

- **Sensor**
SHAW Ultra High Capacitance Aluminium Oxide Sensor
- **Ranges**
P (Purple): -100 °C to 0 °C dewpoint 0-6,000 ppm(V)
S (Silver): -100 °C to -20 °C dewpoint 0-1,000 ppm(V)
G (Grey): -80 °C to 0 °C dewpoint 0-6,000 ppm(V)
R (Red): -80 °C to -20 °C dewpoint 0-1,000 ppm(V)
B (Blue): -80 °C to +20 °C dewpoint 0-23,000 ppm(V)
- **Approvals**
CE and UKCA

- **AutoCal**
Field calibration/span check facility. Activated and operated via potentiometer underneath the terminal cover of the instrument.
- **Factory Calibration**
Supplied with Certificate of Calibration traceable to the National Physical Laboratory (NPL)
- **Accuracy**
±2 °C (±3.6 °F) dewpoint
NPL traceable -90 °C to +20 °C (-130 °F to +68 °F)
- **Resolution**
0.1 °C, 0.1 °F dewpoint or 0.1 ppm(v)
- **Repeatability**
Better than ±0.3 °C (±0.54 °F) dewpoint
- **Operating Temperature**
-20 °C to +60 °C (-4 °F to +140 °F)
- **Storage Temperature**
-20 °C to +70 °C (-4 °F to +158 °F)
- **Response Times**
Wet to dry: -20 °C to -60 °C - less than 120 secs
Dry to wet: -100 °C to -20 °C - less than 20 secs
- **Sample Flow Rate**
Flow independent but ideally 2 - 5 litres per minute
Max: 25 litres/min
- **Calibration Warranty**
12 months from date of dispatch

ELECTRICAL

- **Electromagnetic Compatibility (EMC)**
Immunity: Complies with EN 61326:2021
Emissions: Complies with EN 61326:2021
- **Warm Up Time**
5 seconds
- **Fault Conditions**
Short circuit/over range: display reads "Short" and output drives to 20.25 mA
- **Output Signal**
Isolated 4 - 20 or 0 - 20 mA Linear
- **Operating Voltage**
90 to 250 V AC 50/60 Hz or 24 V DC
- **Display**
5 character LED
- **Alarms**
Two single pole changeover contacts (NO/C/NC), rated at 10 A at 240 V AC. Alarm trip at set point with 0.1 °C (or equivalent) hysteresis to eliminate relay chatter
- **Cable**
Supplied with two metre low loss coaxial cable

MECHANICAL

- **Operating Pressure**
From 1kPa (0.01 barA) to maximum 35,000 kPa (350 barA)
- **Operating Humidity (External)**
Maximum - 95% RH non-condensing
- **Enclosure**
164.5 mm wide, 186.5 mm high by 88.5 mm deep PC case
- **Mounting**
Wall or DIN rail (type EN 60715 35 x 7.5 mm) mount
- **Sensor Protection**
316 sintered stainless steel filter - 50 micron
- **Probe Material (Wetted Parts)**
316 stainless steel
- **Weatherproof Classification**
IP65
- **Mechanical Warranty**
24 months in case of faulty workmanship and defective parts

Ordering Information

Superdew 3 WP

Superdew 3 WP - (R) - (U) - (V) - (F)

(R) - Choose the required range

P (Purple): -100 to 0 °C dewpoint 0-6,000 ppm(V)
S (Silver): -100 to -20 °C dewpoint 0-1,000 ppm(V)
G (Grey): -80 to 0 °C dewpoint 0-6,000 ppm(V)
R (Red): -80 to -20 °C dewpoint 0-1,000 ppm(V)
B (Blue): -80 to +20 °C dewpoint 0-23,000 ppm(V)

(U) - Choose the required units

C: °C dewpoint **F:** °F dewpoint
P: ppm(V) **L:** lb/MMSCF

(V) - Choose the required power supply

AC: 90 to 250 V AC 50/60 Hz or 24 V DC
DC: 24 V DC

(F) - Choose the fitting size for the sensor holder

4: 1/4" **8:** 1/8" **6:** 6 mm

Example:

To order a Superdew 3 WP with a measuring range of -80 to 0 °C dewpoint (grey sensor), specifying °C as units, selected power supply and 1/4" fitting, please order as **SD3-WP-G-C-AC-4**

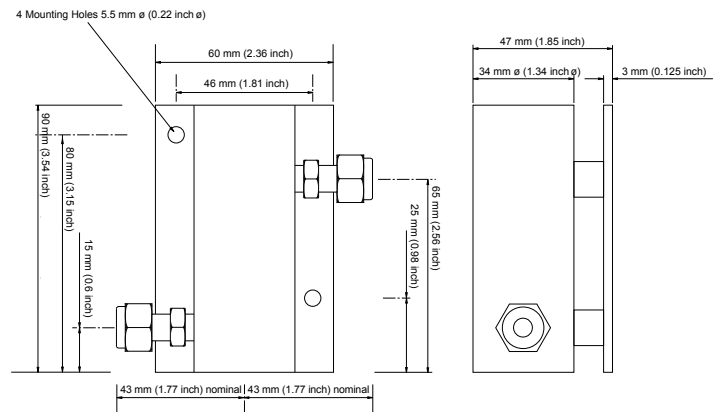
Related Products

SU4 - Sample Conditioning Unit

The SU4 sample conditioning unit provides ideal sampling conditions, reducing the pressure from the dryer to give a pressure and flow suitable for measurement. The SU4 combines a pressure regulator, sensor holder and a flow meter mounted on a stove enamelled back plate and comes with pneumatic connections with a choice of 1/8", 1/4" or 6 mm compression fittings for inlet and outlet.



Sensor Holder Assembly Diagram



The Superdew 3 WP kit includes as standard: Superdew 3 WP hygrometer, wall mount brackets, dewpoint sensor, sensor holder (including fittings), two metres coax cable, pressure calculator, screwdriver, instruction manual and a Certificate of Calibration.

General Assembly Diagram

