

DMP8 Dew Point and Temperature Probe

Features/Benefits:

- Uses Vaisala DRYCAP® sensor technology for superior accuracy and stability
- Dew point measurement range of $-70 \dots +80 \text{ }^\circ\text{C}$ ($-94 \dots +176 \text{ }^\circ\text{F}$) with accuracy up to $\pm 2 \text{ }^\circ\text{C}$ ($\pm 3.6 \text{ }^\circ\text{F}$)
- Operating pressure rated between $0 \dots 40 \text{ bar}$. Pressure compensation setting available
- Probe installation depth can be freely adjusted with optional sliding NPT or ISO threading
- Plug & play compatibility with all Vaisala Indigo Transmitters (Indigo520, Indigo510, Indigo300, Indigo201, Indigo202, Indigo80) for analog outputs, local display, and/or additional features
- Digital communication - Modbus® RTU protocol over RS-485
- Sensor purge and auto-calibration functionalities provide superior chemical resistance for harsh conditions and help to maintain measurement accuracy between calibration intervals
- Electronics protected by IP66 rated probe body housing
- Compatible with Vaisala's [Insight PC Software](#) through USB connection
- Traceable calibration certificate included



DMP8 Probe (top), DMP8 with Indigo520 Transmitter

Summary:

Dew point probe is designed for pressurized applications where easy insertion and removal and adjustable installation depth are desired. Probe shall incorporate a thin-film polymer capacitive DRYCAP® 180M sensor to measure dew point temperatures between $-70 \dots +80 \text{ }^\circ\text{C}$ ($-94 \dots +176 \text{ }^\circ\text{F}$). Accuracy of the measurements must be to $\pm 2 \text{ }^\circ\text{C}$ ($\pm 3.6 \text{ }^\circ\text{F}$). Sensor purge and auto-calibration functionalities must be available to provide superior chemical resistance for harsh conditions and help to maintain measurement accuracy between calibration intervals. Dew point T_{63} response time to be 5 s from dry to wet and 45 s from wet to dry. Incorporated temperature sensor must be platinum $100 \ \Omega$ RTD with accuracy up to $\pm 0.2 \text{ }^\circ\text{C}$ ($\pm 0.36 \text{ }^\circ\text{F}$), measuring between $0 \dots +80 \text{ }^\circ\text{C}$ ($+32 \dots +176 \text{ }^\circ\text{F}$). Electronics housing shall be rated to be IP66. Operating temperature range must be $-40 \dots +80 \text{ }^\circ\text{C}$ ($-40 \dots +140 \text{ }^\circ\text{F}$). Operating absolute pressure of probe head shall be $0 \dots 40 \text{ bar}_a$ ($0 \dots 580 \text{ psi}_a$). Pressure compensation for measurements must be available. Probe installation depth can be freely adjusted with optional sliding NPT or ISO threading. Optional ball valve installation kit shall be available. Probe to be powered by $15 \dots 30 \text{ VDC}$ with Modbus® RTU communication protocol over RS-485. Suitable for use in air, nitrogen, hydrogen, argon, helium, oxygen, and vacuum. Sensor is to be immune to particulate contamination, water condensation, oil vapor, and most chemicals, and is insensitive to the flow rate. Transmitter must be able to fully withstand getting wet, then fully recover once drying out. Probe shall be able to calculate and directly output dew/frost point temperature, water concentration (ppm by volume), relative humidity ($0 \dots 70 \text{ \%RH}$), dry/wet bulb temperature, absolute humidity, enthalpy, mixing ratio, water mass fraction, water vapor pressure, water vapor saturation pressure. Traceable calibration certificate included.